8EHQ-0504-15577S

Sheryl L. Dolan
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ACTA
Chemical Product Development and Defense

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May 25, 2004

Via Hand Delivery

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Document Processing Center (7407M)
Office of Pollution Prevention and Toxics
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue, N.W.
Washington, D.C. 20460

Re: TSCA Section 8(e) Submission

8EHQ-04-15577

Dear TSCA Section 8(e) Coordinator:

On behalf of our client, we are submitting to the U.S. Environmental Protection Agency (EPA) three mammalian toxicity studies determined to be reportable under the Toxic Substances Control Act (TSCA) Section 8(e). Our client has just come into possession of these studies from its foreign parent company and is submitting them within the required 30 calendar day reporting period.

The submitting company is asserting confidentiality for the identity of both the company and the test substance. Substantiation for these confidentiality claims is attached to this letter.

The test substance for these studies is a research and development chemical intended for use as a pesticide. The submitting company has not yet filed an application for an experimental use permit or registration.

88040000015075

The Acta Group, L.L.C.
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Chemical Product Development and Defense

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The study reports are enclosed with this letter. Each study is accompanied by a one-page TSCA Section 8(e) report, which includes a summary of the adverse effects as well as submitter information. A set of sanitized summaries and studies also is enclosed.

Sincerely yours,

Sheryl Lindros Dolan

Sheryl Lindros Dolan

Enclosures

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TSCA SECTION 8(e) REPORT
SUBSTANTIATION FOR CONFIDENTIALITY CLAIMS

[redacted] asserts that the following information, which is included in the accompanying studies that are being submitted to the U.S. Environmental Protection Agency (EPA) under Toxic Substances Control Act (TSCA) Section 8(e), is confidential business information (CBI):

- Submitting company's identity; and
- Identity of the test substance.

The following information is provided to substantiate [redacted]'s CBI claims, in response to the standard TSCA Section 8(e) substantiation questions published by EPA.

1. *Is your company asserting this confidential business information (CBI) claim on its own behalf? If the answer is no, please provide company name, address, and telephone number of entity asserting claim.*

[redacted] is asserting this CBI claim on its own behalf. The company's contact information is included in the accompanying TSCA Section 8(e) summary reports.

2. *For what period do you assert your claim(s) of confidentiality? If the claim is to extend until a certain event or point in time, please indicate that event or time period. Explain why such information should remain confidential until such point.*

The submitting company asserts confidentiality for both its company identity and the identity of the test substance until the identity of the test substance is published, such as in a patent. The submitting company has invested considerable resources in the development of the test substance. Disclosure of the test substance identity would alert the competitors of the submitting company to a potentially profitable new product, thereby costing the submitting company both its investment and future market share. Additionally, disclosure of the chemical identity could jeopardize the patentability of this chemical substance for its intended uses. The submitting company asserts CBI protection for its identity to avoid alerting its competitors about the status of its research and development (R&D) efforts. Additionally, competitors knowledgeable of the submitting company's product lines might be able to deduce confidential information from the types of information disclosed in this submission, when that information is combined with the company's identity.

3. *Has the information that you are claiming as confidential been disclosed to any other governmental agency, or to this Agency at any other time? Identify the Agency to which the information was disclosed and provide the date and circumstances of the same. Was the disclosure accompanied by a claim of confidentiality? If yes, attach a copy of said document reflecting the confidentiality agreement.*

No, the information claimed as confidential has not been disclosed to EPA or any other governmental agency.

4. *Briefly describe any physical or procedural restrictions within your company relating to the use and storage of the information you are claiming CBI.*

The submitting company and its [redacted] have formal standard operating procedures designed to safeguard confidential information. These procedures include management safeguards for hard and electronic copies of information, as well as prohibitions on the public discussion of confidential information.

5. *If anyone outside your company has access to any of the information claimed CBI, are they restricted by confidentiality agreement(s)? If so, explain the content of the agreement(s).*

Nearly all testing on the chemical substance is completed internally, such that the chemical identity need not be disclosed to outside parties. In the limited cases in which the chemical identity has been disclosed to outside contractors, confidentiality agreements have been executed to protect CBI.

6. *Does the information claimed as confidential appear or is it referred to in any of the following:*

   a. *Advertising or promotional material for the chemical substance or the resulting end product;*

   b. *Material safety data sheets or other similar materials (such as technical data sheets) for the substance or resulting end product (include copies of this information as it appears when accompanying the substance and/or product at the time of transfer or sale);*

   c. *Professional or trade publications; or*

   d. *Any other media or publications available to the public or to your competitors.*

   If you answered yes to any of the above, indicate where the information appears, include copies, and explain why it should nonetheless be treated as confidential.

The information claimed as confidential has not been published or referred to in any of these types of materials.

7. *Has EPA, another federal agency, or court made any confidentiality determination regarding information associated with this substance? If so, provide copies of such determinations.*

No, no confidentiality determinations have been made about information associated with the chemical test substance.

8. *Describe the substantial harmful effects that would result to your competitive position if the CBI information is made available to the public. In your answer, explain the causal relationship between disclosure and any resulting substantial harmful effects. Consider in your answer such constraints as capital and marketing cost, specialized technical expertise, or unusual processes and your competitors' access to your customers. Address each piece of information claimed CBI separately.*

The chemical substance is a new, novel compound. The submitting company has invested (or will invest) approximately [redacted] to develop this chemical substance. If a competitor were to learn the identity of this chemical substance, the competitor would gain the benefit of this research without having to make a comparable investment. This disclosure would severely adversely affect the competitive position of the submitting company. Additionally, competitors knowledgeable of the submitting company's product lines might be able to deduce confidential information from the types of information disclosed in this submission, when that information is combined with the company's identity. The submitting company, therefore, asserts confidentiality for its identity, as well, until its identity and that of the test substance are published, such as in a patent.

9. *Has the substance been patented in the U.S. or elsewhere? Is a patent for the substance currently pending?*

No, the test chemical substance has not yet been patented. [redacted] has applied for patents in several countries, including the United States.

10. *Is this substance/product commercially available and if so, for how long has it been available on the commercial market?*

    a. *If on the commercial market, are your competitors aware that the substance is commercially available in the U.S.?*

    b. *If not already commercially available, describe what stage of R&D the substance is in, and estimate how soon a market will be established.*

c. *What is the substance used for and what type of product(s) does it appear in?*

The test chemical substance is not commercially available. It is intended for eventual commercial use as a [redacted]. It is in its [redacted] of being [redacted].

11. Describe whether a competitor could employ reverse engineering to identically recreate the substance.

The submitting company cannot definitively say that it would be impossible for a competitor to reverse engineer the chemical substance. Samples are closely safeguarded, however. Once ready for commercialization, there are other ways to protect the chemical substance, such as patent protection.

12. Do you assert that disclosure of this information you are claiming CBI would reveal:

a. *confidential processes used in manufacturing the substance;*

b. *if a mixture, the actual portions of the substance in the mixture; or*

c. *information unrelated to the effects of the substance on human health or the environment?*

If your answer to any of the above questions is yes, explain how such information would be revealed.

The confidential processes used in manufacturing the chemical substance are likely to be evident from an analysis of the chemical structure.

13. Provide the Chemical Abstract Service Registry (CAS) Number for the product, if known. Is your company applying for a CAS number now or in the near future? If you have applied for a CAS number, include a copy of the contract with CAS.

A CAS number is provided in the accompanying TSCA Section 8(e) summary reports.

14. Is the substance or any information claimed CBI the subject of Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) regulation or reporting? If so, explain.

The chemical substance is not yet subject to FIFRA regulation.

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[redacted]

TSCA SECTION 8(e) REPORT
SUBSTANTIAL RISK NOTIFICATION

INFORMATION REGARDING THE PERSON REPORTING INCIDENT

NAME

TELEPHONE

INFORMATION REGARDING SUBMITTER OF SECTION 8(e) REPORT

NAME [redacted]

JOB TITLE [redacted] COMPANY [redacted]

ADDRESS [redacted]

TELEPHONE [redacted]

PRODUCT/CHEMICAL SUBSTANCE INFORMATION

NAME [redacted]

CAS NUMBER [redacted]

TYPE OF INFORMATION

___ HUMAN INCIDENT
_X_ STUDY RESULTS
___ OTHER INFORMATION (SPECIFY: _____)

DESCRIPTION OF INFORMATION RECEIVED

Harvey, P. W., (November 2003) [redacted]: 28 day oral (dietary) administration study in the Han Wistar rat. Covance Laboratories Ltd., Report No. 0535/104. [redacted] was administered via the diet to groups of 5 male and 5 female rats for 4 weeks. Dose levels were 0, 500, 5000 or 2000 ppm (groups 1 through 4, respectively). High dose animals had decreased body weight gains. Increased liver weights were observed in group 3 and 4 males and females. Increased kidney weights and decreased heart weights were observed in high dose females. Hepatocytic and mycardial vacuolation was observed in groups 4 and 5, and renal vacuolation was observed at the high dose.

SOURCES OF INFORMATION AND SUPPORTING TECHNICAL DATA (ATTACHED)

A copy of the report is attached.

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[redacted]

TSCA SECTION 8(e) REPORT
SUBSTANTIAL RISK NOTIFICATION

INFORMATION REGARDING THE PERSON REPORTING INCIDENT

NAME

TELEPHONE

INFORMATION REGARDING SUBMITTER OF SECTION 8(e) REPORT

NAME [redacted]

JOB TITLE [redacted] COMPANY [redacted]

ADDRESS [redacted]

TELEPHONE [redacted]

PRODUCT/CHEMICAL SUBSTANCE INFORMATION

NAME [redacted]

CAS NUMBER [redacted]

TYPE OF INFORMATION

___ HUMAN INCIDENT
_X_ STUDY RESULTS
___ OTHER INFORMATION (SPECIFY: _____)

DESCRIPTION OF INFORMATION RECEIVED

Harvey, P. W., (Draft January 2004) [redacted]: 13 week oral (dietary) administration toxicity study in the rat with a 4-week treatment free period. Covance Laboratories Ltd., Report No. 0535/101. [redacted] was administered via the diet to groups of 10 male and 10 female rats for 13 weeks. Dose levels were 0, 100, 500, 2500 or 5000 ppm (groups 1 through 5, respectively). An additional 5 animals were included in groups 1 and 5 for a 4-week recovery phase. Group 5 males had decreased body weight gains. Group 5 males were observed with higher platelet counts and lower lymphocytes; females in this group had higher reticulocytes and platelets. Aspartate aminotransferase was increased in groups 4 and 5. Liver and kidney weights were increased in groups 4 and 5. Hepatic centrilobular hypertrophy was observed in groups 4 and 5. Myocardial necrosis was observed in all male treatment groups and in groups 4 and 5 in females. Muscle myopathy was noted in groups 4 and 5 in males and in all female treatment groups. All microscopic findings reversed to normal during the treatment free period.

SOURCES OF INFORMATION AND SUPPORTING TECHNICAL DATA (ATTACHED)

A copy of the report is attached.

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[redacted]

TSCA SECTION 8(e) REPORT
SUBSTANTIAL RISK NOTIFICATION

INFORMATION REGARDING THE PERSON REPORTING INCIDENT

NAME

TELEPHONE

INFORMATION REGARDING SUBMITTER OF SECTION 8(e) REPORT

NAME [redacted]

JOB TITLE [redacted] COMPANY [redacted]

ADDRESS [redacted]

TELEPHONE [redacted]

PRODUCT/CHEMICAL SUBSTANCE INFORMATION

NAME [redacted]

CAS NUMBER [redacted]

TYPE OF INFORMATION

___ HUMAN INCIDENT
_X_ STUDY RESULTS
___ OTHER INFORMATION (SPECIFY: _____)

DESCRIPTION OF INFORMATION RECEIVED

Harvey, P. W., (Draft January 2004) [redacted]: 13 week oral (dietary) administration toxicity study in the mouse. Covance Laboratories Ltd., Report No. 0535/103. [redacted] was administered via the diet to groups of 12 male and 12 female mice for 13 weeks. Dose levels were 0, 500, 1000, 5000 or 10000 ppm (groups 1 through 5, respectively). The high dose was reduced to 7500 ppm during days 12 to 14. Body weight gain was decreased in groups 4 and 5. Clinical pathological changes included lower hemoglobin concentration in males from all groups, increased reticulocytes in groups 3 to 5 males and females, and increased neutrophils in groups 3 to 5 females. Triglycerides were reduced in males from all treatment groups; and alkaline phosphatase, sodium and chloride were increased in groups 4 and 5. Liver weights were increased in groups 3 to 5. In the liver, centrilobular hypertrophy was observed in groups 3 to 5. In the kidney, cortical tubular nephropathy was observed in groups 3 to 5. Atrophy of the male and female genital tracts was noted in both sexes of groups 4 and 5.

SOURCES OF INFORMATION AND SUPPORTING TECHNICAL DATA (ATTACHED)

A copy of the report is attached.

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Final Report

Study Title	[redacted] 28 Day Oral (Dietary) Administration Study in the Han Wistar Rat
Author	P W Harvey
Sponsor	[redacted]
Study Monitor	[redacted]
Test Facility	Covance Laboratories Ltd Otley Road, Harrogate North Yorkshire HG3 1PY ENGLAND
Covance Study Number	535/104
Report Issued	November 2003
Page Number	1 of 173

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STATEMENT OF NO DATA CONFIDENTIALITY CLAIMS

[redacted] **28 Day Oral (Dietary) Administration Study in the Han Wistar Rat**

No claim of confidentiality is made for any information contained in this study on the basis of its falling within the scope of the United States Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act §10 (d) (1) (A), (B), or (C).

Company

Company Agent

Date

Title

Signature

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COMPLIANCE STATEMENT

[redacted]: 28 Day Oral (Dietary) Administration Study in the Han Wistar Rat

The study was conducted in compliance with:

United Kingdom Statutory Instrument 1999 No. 3106, The Good Laboratory Practice Regulations 1999.

OECD Principles on Good Laboratory Practice (revised 1997, Issued Jan 1998) ENV/MC/CHEM(98)17.

P. W. Harvey

P Harvey BSc (Hons), PhD, CBiol, MIBiol
Study Director
Covance Laboratories Ltd

11 NOV 2003
Date

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QUALITY ASSURANCE STATEMENT

[redacted] 28 Day Oral (Dietary) Administration Study in the Han Wistar Rat

The study described in this report was subject to audit by the independent Quality Assurance Department as indicated below. The report audit confirms that the methods, procedures and observations are accurately and completely described, and that the reported results accurately and completely reflect the raw data of the regulatory study.

The following inspections were conducted and findings reported to the Study Director and management as prescribed by Standard Operating Procedures. Critical procedures which are performed routinely in an operational area may be audited in accordance with a 'batch process' programme (B). This can be in addition to phases scheduled on an individual study basis (S)

Inspection programme	**Inspection date**	**Report date**
Protocol review	30 April 2003	1 May 2003
Food consumptions (S)	8 May 2003	8 May 2003
Diet formulation (B)	20 May 2003	20 May 2003
Haematology (B)	22 May 2003	22 May 2003
Formulations analysis (B)	28 May 2003	28 May 2003
Data review	July 2003	29 July 2003
Draft report review	July 2003	29 July 2003

A Fulford
Section Head Quality Assurance

11 November 2003
Date

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SIGNATURE PAGE

[redacted] 28 Day Oral (Dietary) Administration Study in the Han Wistar Rat

P.W. Harvey — 11 NOV 2003

P Harvey BSc (Hons), PhD, CBiol, MIBiol
Study Director
Covance Laboratories Ltd

Date

Signatures of contributing scientists:

U. Rehkemper — 11. November 2003

U Rehkemper Dr. med. vet. MRCVS
Study Pathologist
Covance Laboratories Ltd

Date

11-11-03

P Henderson BSc
Senior Experimental Officer, Formulations Analysis
Covance Laboratories Ltd

Date

Scientific reviewer:

11 November 2003

E A L Simpson BSc PhD
Scientific Support Manager
Covance Laboratories Ltd

Date

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KEY PERSONNEL

[redacted] 28 Day Oral (Dietary) Administration Study in the Han Wistar Rat

Study Monitor	[redacted]
Study Director	P Harvey
Deputy Study Director	C Green
Head of Pathology	J Glaister
Head of Statistics	C Gardner
Quality Assurance	C Clare
Head of Formulations & Formulations Analysis	C Wood
Animal house supervisor	J Hollingsworth
Animal health and welfare	A Basford
Clinical Pathology	B Tetlow
Necropsy	I Wilkins
Histology	S Brogden

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ABSTRACT

The purpose of this study was to determine the toxicity of the test article, [redacted], following oral (dietary) administration to the rat for 28 days. Pre-study documentation, records, data and animals were transferred from study 535/102, which this current study replaces.

Male and female Crl:WI(Glx/BRL/Han)BR rats were assigned to four groups (five animals/sex/group). Each group received diet preparations containing the control article or 500, 5000, or 20000 ppm of test article.

Group Number	Group description	Group codes	Dose level (ppm)	Animal numbers	
				Male	Female
1	Control	Buff	0	1-5	21-25
2	Low	Green	500	6-10	26-30
3	Intermediate	Blue	5000	11-15	31-35
4	High	Pink	20000	16-20	36-40

Assessment of toxicity was based on mortality, clinical observations, and clinical and anatomic pathology evaluations.

There were no decedents during the study.

Pale teeth was noted in high dose (20,000 ppm) animals.

High dose animals had significantly lower bodyweight gains and had lower food consumption during the treatment period compared with controls.

Changes were noted in clinical pathology parameters, predominantly at the high dose (20,000 ppm) but occasionally at the intermediate dose (5,000 ppm) including higher plateletcrit, aspartate aminotransferase, alkaline phosphatase, inorganic phosphorus, total cholesterol, triglycerides and phospholipids and lower total bilirubin and creatinine.

In organ weights, significantly higher absolute and relative liver weights were recorded for High (20,000 ppm) and intermediate (5,000 ppm) dose males and females and high dose females had higher kidney and lower heart weights.

Macroscopically, large and/or pale liver was recorded in high and intermediate dose animals. Abnormal teeth were noted in some high dose animals. Pale kidney was seen in one high dose male.

Microscopically, there was hepatocyte vacuolation in the liver and myocardial vacuolation in the heart of high and intermediate dose animals. Increased tubular vacuolation was seen in the kidney of a few high dose animals when compared with

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the controls. These changes were considered to be due to effects of the test article. In addition, there was myocardial degeneration/necrosis in the heart of several high and intermediate dose males and females and acinar cell degranulation in the pancreas of a few high dose females. The toxicological significance of these findings was unclear.

The no observable effect level (NOEL) in the heart and liver was the low dose (500 ppm).

In conclusion, the no-observable-effect level was 500 ppm equivalent to 64.3 mg/kg/day in males and 62.2 mg/kg/day in females.

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OBJECTIVES AND PROCEDURES

Introduction

The purpose of this study was to determine the toxicity of the test article, [redacted] following oral (dietary) administration to the rat for 28 days. Pre-study documentation, records, data and animals were transferred from study 535/102, which this current study replaces.

The experimental start date was 23 April 2003; animals were first dosed on 1 May 2003 and the final necropsy occurred on 30 May 2003. The experimental end date was 24 September 2003. The study completion date is the date the final report is signed by the Study Director.

Protocol Adherence

The study was conducted in accordance with the protocol, protocol amendments and minor deviations as presented in Appendix 1. None of the deviations affected the integrity or outcome of the study.

Test and Control Articles

The test article was supplied as follows:

Test article	Covance lot number	Batch number	Quantity supplied (g)	Purity (%)	Expiry Date	Date of receipt at Covance Dispensary
[redacted] TGAI	1	RCT301	5000	99.1	20 February 2004	21 March 2001

A Certificate of Analysis for this material is presented in Appendix 2.

The test article was referred to as [redacted] (TGAI) in the documentation received from the Sponsor.

When not in use the test article was stored in a sealed container, at room temperature.

The control article and the vehicle for the test article was SQC Rat and Mouse Diet No 1, Expanded, Ground Fine, supplied by Special Diet Services Ltd., Witham.

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Test System and Study Design
A sufficient number of rats of the Crl:WI(Glx/BRL/Han)BR strain were obtained from Charles River UK Limited, Margate, UK in order to provide 20 healthy animals of each sex.

Group Number	Group description	Group codes	Dose level (ppm)	Animal numbers	
				Male	Female
1	Control	Buff	0	1-5	21-25
2	Low	Green	500	6-10	26-30
3	Intermediate	Blue	5000	11-15	31-35
4	High	Pink	20000	16-20	36-40

At initiation of treatment, the animals were five weeks old; the males weighed from 99.3 to 135.4 g, and the females weighed from 80.8 to 119.3 g.

Animals were identified using an implanted microchip identification device coded with a number before initiation of treatment.

The dose levels were selected by the Sponsor on the basis of preliminary data which indicated that the test article was of low toxicity. This study was also designed to cover a wide span of dose levels with the aim of selecting a suitable high dose level for the subsequent rat 90 day study (535/101).

Rationale for Route of Administration
The route of administration was chosen because it is a possible route of human exposure.

Study Procedures
All deviations from protocol (annotated #) are documented in Appendix 1.

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Procedure	Frequency/Comment
Dose Preparation	
Vehicle/Control	SQC Rat and Mouse Diet No 1, Expanded, Ground Fine
Dosing Formulations	The test article was first sieved through a 355 µm sieve before weighing. The test article was weighed into a prelabelled beaker and then put into a mortar with rinsings from the beaker. The test article diet mix in the mortar was mixed with a pestle until homogenous; more diet was gradually added to the test article until the capacity of the mortar was reached. This mix was then added to the bulk diet and the mortar was finally rinsed out with more diet. After the rinsings were added to the bulk diet the mixer was set in motion for five minutes.
Administration	Orally by incorporation into the diet. Animals had access *ad libitum* for 28 days excluding the day of necropsy.
Dose Analysis	
Method	High Performance Liquid Chromatography.
Concentration Analysis	Analysed on formulations prepared for use in Week 1.
Homogeneity and stability	Before the start of the study, homogeneity determined on trial formulations prepared at concentrations of 100 and 20000 ppm. Analysed again after 1, 3 and 7 days to determine stability
Inlife Procedures	
Clinical Observations	Twice daily (am/pm) for routine health checks and daily for signs of ill health or overt toxicity.
Physical Examinations	Weekly intervals.
Body Weights	Before treatment on first day of dosing, at weekly intervals and before necropsy.
Food Consumption	Weekly. Calculated as g/animal/week.
Compound consumption	Weekly. Calculated as mg/kg body weight/day
Haematology	Blood samples (2 x 0.5 mL [EDTA, trisodium] nominal) were withdrawn from the abdominal aorta of all animals at necropsy, after an overnight period without food.
Clinical Chemistry	Blood sample (1 x 1 mL [lithium heparin] nominal) was withdrawn from the abdominal aorta of all animals at necropsy, after an overnight period without food.
Anatomic Pathology	
Necropsy	All animals after an overnight period without food in cage order. An intraperitoneal sodium pentobarbitone overdose was given prior to exsanguination and a full macroscopic examination was performed under the general supervision of a pathologist and all lesions were recorded.
Organ weights	All specified organs were dissected free from fat and other contiguous tissue and weighed before fixation. Left and right organs were weighed together.
Tissue Preservation#	Tissues from all animals were preserved in 10% neutral buffered formalin except for the eyes which were fixed in

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Procedure	Frequency/Comment
	Davidson's fluid and the bone marrow smear which was fixed in methanol. Also, PAS and Oil Red O staining was used for the liver, kidney and heart of animals 5, 19, 25 and 39 (this fixative was not stated in the protocol).
Histopathology#	Gross lesions, liver and heart from all animals and those tissues specified in Appendix 3 of the protocol from control and high dose animals were examined microscopically by the study pathologist. The liver and heart from all animals were processed ahead of the other tissues. Although a trea
Additional Procedures	
Record Retention	The raw data, documentation, records, specimens, protocol, and final report generated as a result of this study will be archived in the storage facilities of Covance, Harrogate, UK. At least 10 years after issue of the final report, the Covance Archives staff will contact the Sponsor. At that time, the Sponsor may choose to have the aforementioned articles returned, archived for an additional period of time, or disposed of by Covance. A fee will be charged based on the option selected by the Sponsor. Specimens requiring storage deep frozen are specifically excluded from the above. These will be retained for as long as the quality of the material permits evaluation but for no longer than three months after issue of the final report.

Statistical Evaluation

Data type	Statistical analysis procedure/Comment[a]
Body Weight	Two-way ANOVA, regression and Dunnett's (Procedure II) on body weight gains over specified intervals.
Haematology	Two-way ANOVA, regression and Dunnett's (Procedure II).
Clinical Chemistry	Two-way ANOVA, regression and Dunnett's (Procedure II). Kruskal-Wallis, Terpstra-Jonckheere and Wilcoxon rank sum test (Procedure III) for parameters with values above or below the limit of the assay.
Necropsy Body Weight	Two-way ANOVA, regression and Dunnett's (Procedure II).
Organ Weights	ANCOVA and Dunnett's (Procedure IV) using the necropsy body weight as covariate.One-way ANOVA, regression and Dunnett's (Procedure I) on absolute organ weight and organ to necropsy body weight ratio where there was significant heterogeneity among the gradients.

a See Appendix 1 of the protocol for details of statistical procedures.

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Procedure	Frequency/Comment
Major Computer Systems	Application Function (Version numbers of the systems will be held on file at Covance)
Scheduling	CMS (Covance Management System)
Formulations	Talisman
In-life data collection	Connex
Clinical pathology	Clinaxys
Post-life data collection	Xybion
Report generation and statistical analysis	Deliver/Office 97

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INTERPRETATION AND CONCLUSION

Dose Analysis (Appendix 3)
Formulations were found to be homogenous and stable for 7 days when stored at room temperature (10 to 30°C) at concentrations of 100 and 20000 mg/kg of diet (ppm).

Formulations from Week 1 were analysed to determine the achieved concentration. Results were within the range 85 to 110%.

Mortality
There were no mortalities.

Clinical signs (Appendix 4)
Pale teeth was noted in high dose animals (3/5 males and 5/5 females) in Week 4 and/or 5. There were no other observations related to treatment.

Body weight (Figures 1 & 2, Tables 1.1, 1.2 & 6, Appendix 5)
High dose (20,000 ppm) animals showed reduced bodyweight gains and lower body weight at study termination. Males showed significantly reduced body weight gains during Weeks 1 to 3 of study, and females showed significantly reduced gains during Weeks 1 and 2 of study, compared with controls. Group mean bodyweights were significantly lower at necropsy in high dose males only.

There were no effects at lower dose levels.

Food consumption (Figures 3 & 4, Tables 2.1 & 2.2, Appendix 6)
Food consumption was variable between treatment groups throughout the study. However, food consumption was lower in high dose animals (20,000 ppm) for the majority of the treatment period.

Compound consumption (Table 3)
The overall mean compound consumptions over the test period were:-

Low dose (500 ppm) males 64.3 and females 62.2 mg/kg/day
Intermediate dose (5000 ppm) males 649.7 and females 673.9 mg/kg/day
High dose (20,000 ppm) males 2677.5 and females 2584.7 mg/kg/day

Haematology (Table 4, Appendix 7)
High dose males (20,000 ppm) and high dose and intermediate dose (5,000 ppm) females showed significantly higher plateletcrit values.

Other statistically significant changes are considered not to be related to treatment because of the slight magnitude of effect, sporadic occurrence or lack of dose response.

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Clinical chemistry (Table 5, Appendix 8)
High dose (20,000 ppm) and intermediate dose (5,000 ppm) males showed slightly higher aspartate aminotransferase and alkaline phosphatase values. High dose males also showed significantly higher inorganic phosphorus and total cholesterol (which were also higher in high dose females) triglycerides and phospholipids. There was slightly lower total bilirubin and creatinine in high dose males and females.

At the intermediate dose (5,000 ppm) males showed significantly higher triglycerides and phospholipids and females showed lower creatinine. High and intermediate dose females showed marginally higher sodium without any changes in other electrolytes.

Other statistically significant changes are considered not to be related to treatment because of the slight magnitude of effect, sporadic occurrence or lack of dose response.

Organ weights (Table 6, Appendix 9)
Absolute and relative to bodyweight liver weights were significantly higher in high dose (20,000 ppm) and intermediate dose (5,000 ppm) males and females. High dose females also showed significantly lower heart weights and significantly higher kidney weights.

Macroscopic findings (Table 7, Appendix 10)
Most tissues were macroscopically unremarkable and the findings seen were generally consistent with the usual pattern of findings in rats of this strain and age.

In addition, large and/or pale liver was recorded in high and intermediate dose animals. Pale kidney was seen in one high dose male. Abnormal teeth were noted in some high dose animals. This correlated with the clinical observation pale teeth. The findings in the liver and kidney generally correlated with changes seen microscopically.

There were no other macroscopic findings due to effects of the test article.

Microscopic findings (Table 8, Appendix 10)
Microscopic findings in controls were generally infrequent, of a minor nature and consistent with the usual pattern of findings in rats of this strain and age.

Additionally, in treated animals, there were variations in the incidence of certain findings in the liver, heart, kidney and pancreas.

There was an overall treatment-related increase in vacuolation in the liver, heart and kidney. In the liver there was hepatocyte vacuolation in high and intermediate dose males and females. This finding was characterised by numerous very small well circumscribed cytoplasmic vacuoles resulting in a granular and/or foamy appearance of the hepatocyte cytoplasm. In some animals this resulted in minor hepatocyte enlargement in all zones.

In the heart, myocardial vacuolation characterised by very fine well circumscribed vacuoles within the sarcoplasm was seen in high and intermediate dose animals.

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In the kidney, an increased extent of the vacuolation normally present in proximal tubules was noted in a few high dose animals. This finding was characterised by numerous very small well circumscribed vacuoles within the proximal tubule epithelium.

To establish the nature of the vacuolation, special stainings for lipid (Oil Red O) and glycogen (PAS) were performed on the liver, kidney and heart of selected control and high dose animals (Numbers 5, 19, 25 and 39). The PAS staining was generally negative but the Oil Red O staining was positive in the liver, kidney and heart indicating that the vacuolation was caused by lipid accumulation.

The no observable effect level for the vacuolation in the liver and heart was the low dose (500 ppm).

Group incidence of selected microscopic findings in the liver, heart and kidney

		Males				Females			
		1M	2M	3M	4M	1F	2F	3F	4F
Tissue and finding	Level (mg/kg/day)	0	500	5000	20000	0	500	5000	20000
Liver	No. examined:	5	5	5	5	5	5	5	5
hepatocyte vacuolation	Grade -	5	5	1	0	3	4	0	0
	1	0	0	3	2	2	1	3	1
	2	0	0	1	2	0	0	1	3
	3	0	0	0	1	0	0	1	1
Heart	No. examined:	5	5	5	5	5	5	5	5
myocardial vacuolation	Grade -	5	5	2	0	5	5	1	0
	1	0	0	3	3	0	0	4	3
	2	0	0	0	2	0	0	0	2
myocardial degeneration/necrosis	Grade -	5	5	1	3	5	5	1	4
	1	0	0	4	2	0	0	4	0
	2	0	0	0	0	0	0	0	1
Kidney	No. examined:	5	0	0	5	5	0	0	5
tubular vacuolation	Grade -	5	-	-	4	2	-	-	1
	1	0	-	-	1	3	-	-	3
	2	0	-	-	0	0	-	-	1
Pancreas	No. examined:	5	-	-	5	5	1	-	5
degranulation	Grade -	0	-	-	0	0	1	-	2
	1	0	-	-	0	0	0	-	1
	2	0	-	-	0	0	0	-	2

Key: "-" = finding not present, 1 = minimal, 2 = slight, 3 = moderate

In addition, a very minor myocardial degeneration/necrosis was noted in the heart of a few high dose and most intermediate dose animals. This finding was characterised by small foci of degenerating cardiomyofibres with dark eosinophilic sarcoplasm, loss of cross striation and early necrosis and was associated with inflammatory cell infiltration.

Acinar cell degranulation was noted in the pancreas of high dose females. This finding was characterised by a decrease of zymogen granules normally present in acinar cells resulting in increased acinar cell basophilia.

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The toxicological significance of the cardiomyopathy in the heart and the degranulation in the pancreas was not clear.

There were no other microscopic findings due to effects of the test article.

In conclusion, the no-observable-effect level was 500 ppm equivalent to 64.3 mg/kg/day in males and 62.2 mg/kg/day in females.

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FIGURES

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Figure 1
Group mean body weights - males

Test article	Control	[redacted]		
Group	1	2	3	4
Level (ppm)	0	500	5000	20000

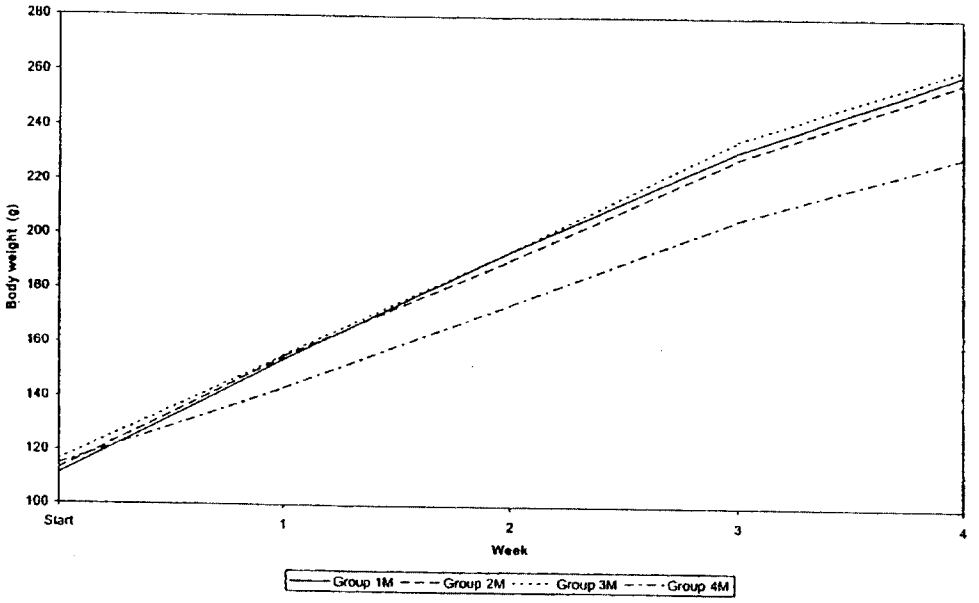

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Figure 2
Group mean body weights - females

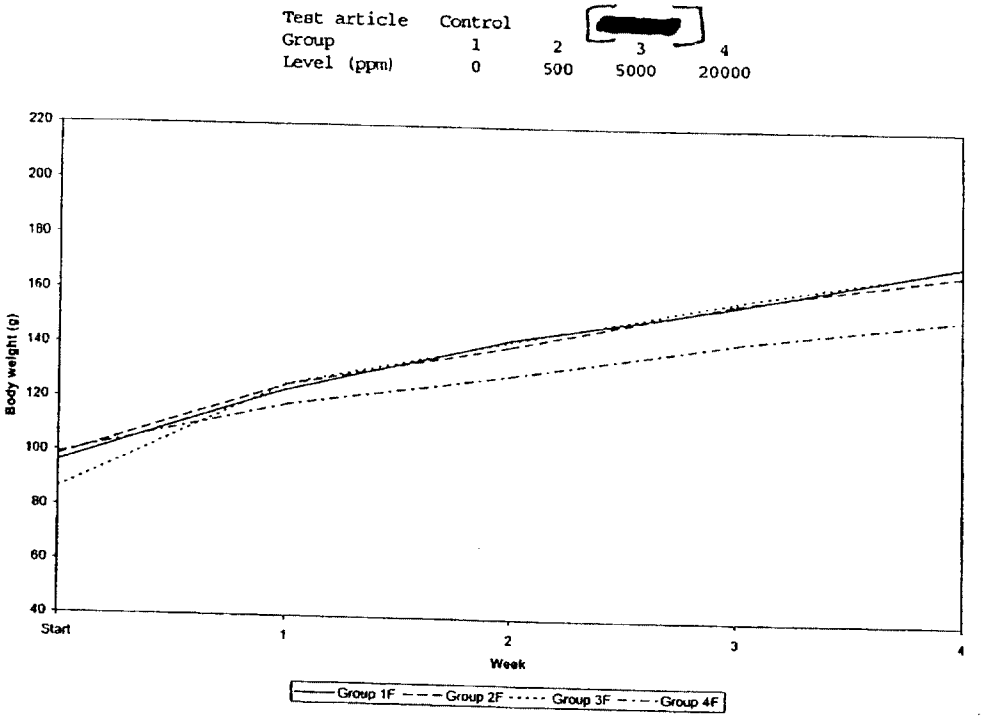

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Figure 3
Group mean food consumption - males

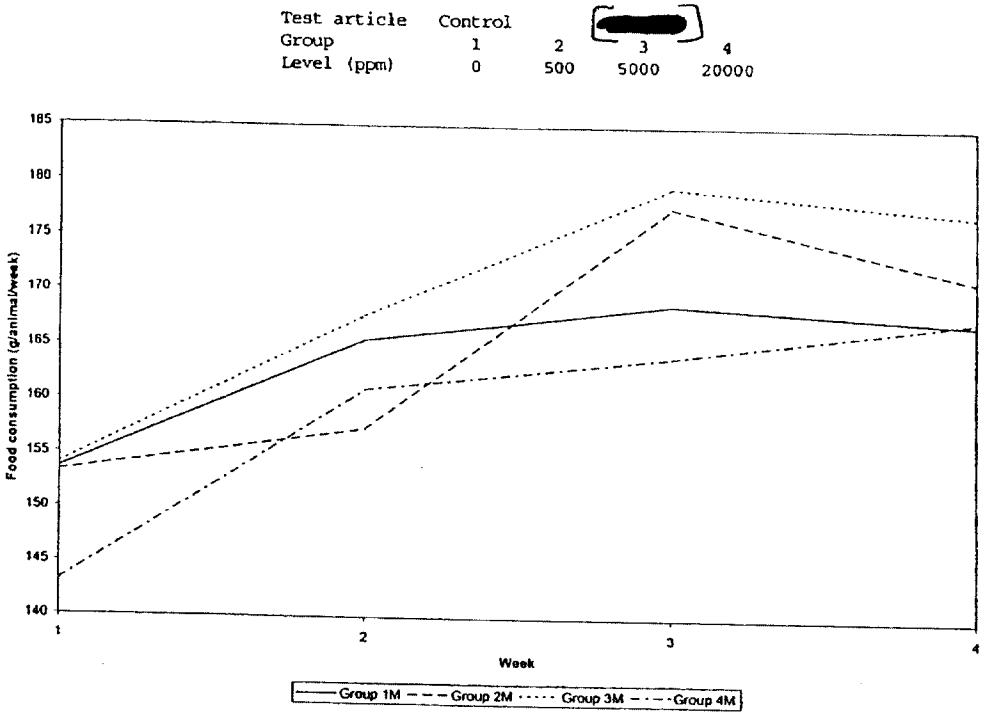

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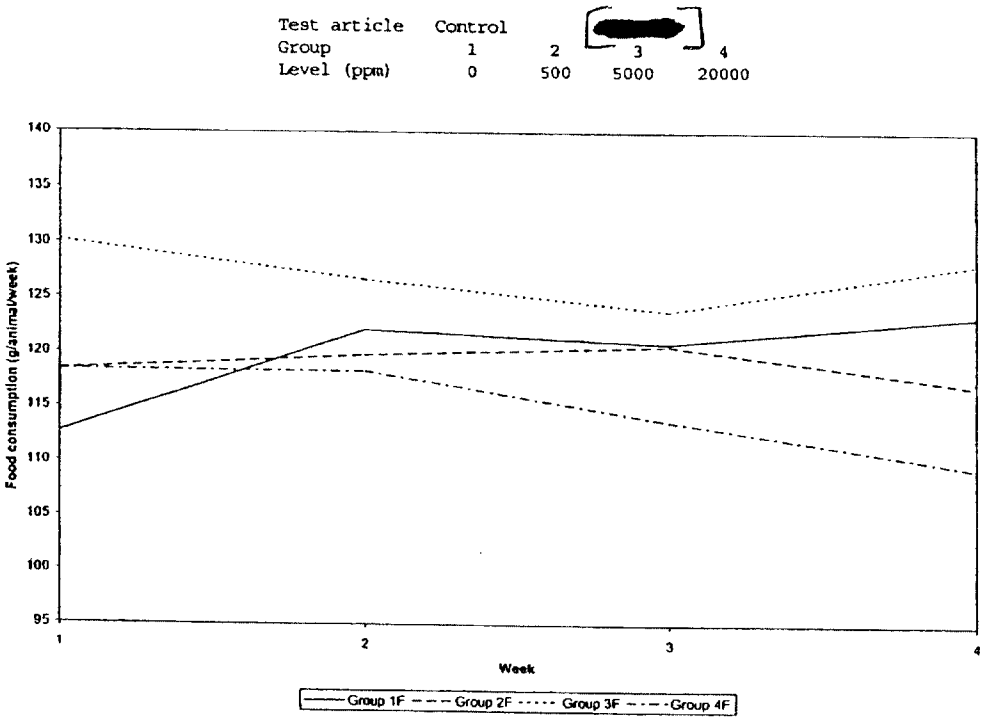
Figure 4
Group mean food consumption - females



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TABLES

Note: some tables/appendices in this report are computer generated. In this system individual and derived figures are rounded. Thereby recalculation of derived values from the individual data presented in the reports will, in some instances, yield minor variations that do not affect the interpretation of the data.

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Table 1.1
Group mean body weight

Test article	Control		[redacted]	
Group	1	2	3	4
Level (ppm)	0	500	5000	20000

Week of study		Mean body weights (g) for Group: 1M	2M	3M	4M
Start	Mean	111.1	112.9	116.3	114.7
	SD	10.08	9.25	12.42	9.24
1	Mean	153.8	155.1	155.5	143.5
	SD	12.17	11.75	15.08	12.66
2	Mean	194.4	191.3	194.6	174.9
	SD	14.53	14.02	15.67	14.08
3	Mean	231.6	229.0	235.7	206.6
	SD	15.77	16.42	18.04	15.04
4	Mean	259.9	257.2	262.2	230.3
	SD	19.06	20.15	23.12	18.61
		1F	2F	3F	4F
Start	Mean	96.2	98.3	86.3	99.2
	SD	7.85	4.89	5.62	11.39
1	Mean	123.4	125.3	125.6	118.0
	SD	9.97	3.34	9.85	12.07
2	Mean	143.1	140.7	142.5	130.0
	SD	13.14	3.76	9.40	10.91
3	Mean	156.6	157.4	158.4	143.0
	SD	17.10	3.35	8.42	8.95
4	Mean	172.1	168.9	171.9	152.7
	SD	18.03	3.64	9.75	11.32

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Table 1.2
Group mean body weight gains

Test article	Control	[redacted]		
Group	1	2	3	4
Level (ppm)	0	500	5000	20000

Week of study		Mean body weight gains (g) for Group: 1M	2M	3M	4M	Statistics
Start to 1	Mean	42.7	42.2	39.2	28.8***	A2
	SD	3.25	2.78	3.68	5.50	
Start to 4	Mean	148.8	144.2	145.9	115.7***	A2
	SD	10.17	11.69	15.34	11.91	
1 to 2	Mean	40.6	36.2*	39.1	31.4***	A2
	SD	2.77	3.15	1.85	2.33	
2 to 3	Mean	37.2	37.8	41.1	31.8*	A2
	SD	2.11	3.89	5.16	1.50	
3 to 4	Mean	28.2	28.1	26.6	23.7	A2
	SD	4.00	4.26	6.65	3.76	
		1F	2F	3F	4F	Statistics
Start to 1	Mean	27.2	27.0	39.3***	18.8*	A2
	SD	3.22	5.58	6.10	3.22	
Start to 4	Mean	75.9	70.6	85.6	53.5**	A2
	SD	13.04	7.22	5.84	2.31	
1 to 2	Mean	19.7	15.4	16.9	12.0***	A2
	SD	4.53	1.95	2.87	1.87	
2 to 3	Mean	13.5	16.6	15.8	13.0	A2
	SD	5.11	2.40	1.16	3.36	
3 to 4	Mean	15.5	11.5	13.5	9.6	A2
	SD	2.74	2.54	4.04	3.84	

* P<0.05
** P<0.01
*** P<0.001

A2 = two-way ANOVA, regression and Dunnett's

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Table 2.1
Group mean food consumption

Test article	Control	[redacted]		
Group	1	2	3	4
Level (ppm)	0	500	5000	20000

Week of study		Mean food consumption (g/animal/week) for Group: 1M	2M	3M	4M
1	Mean	153.6	153.3	154.0	143.2
2	Mean	165.5	157.4	167.8	161.0
3	Mean	168.9	177.8	179.6	164.1
4	Mean	167.3	171.3	177.2	167.7
		1F	2F	3F	4F
1	Mean	112.7	118.4	130.2	118.4
2	Mean	122.1	119.8	126.7	118.3
3	Mean	120.9	120.7	123.9	113.8
4	Mean	123.4	117.0	128.2	109.5

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Table 2.2
Group mean food consumption over selected intervals

Test article	Control	[redacted]		
Group	1	2	3	4
Level (ppm)	0	500	5000	20000

Week of study		Mean food consumption (g/animal/week) for Group: 1M	2M	3M	4M
1 to 2	Mean	159.6	155.4	160.9	152.1
2 to 3	Mean	167.2	167.6	173.7	162.6
3 to 4	Mean	168.1	174.6	178.4	165.9
		1F	2F	3F	4F
1 to 2	Mean	117.4	119.1	128.5	118.4
2 to 3	Mean	121.5	120.3	125.3	116.1
3 to 4	Mean	122.2	118.9	126.1	111.7

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Table 3
Group mean compound consumption

Test article	Control	[redacted]		
Group	1	2	3	4
Level (ppm)	0	500	5000	20000

Week of study	Mean compound consumption (mg/kg/day) for Group: 2M	3M	4M
1	81.7	809.4	3169.2
2	64.9	684.7	2889.4
3	60.4	596.3	2458.0
4	50.3	508.4	2193.4
	2F	3F	4F
1	75.6	877.8	3115.0
2	64.3	675.1	2725.8
3	57.8	588.2	2382.0
4	51.2	554.5	2116.0

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Table 4
Group mean haematology

Key to abbreviations/methods

Code	Parameter	Analyser	Method of determination
Hb	haemoglobin concentration	Bayer ADVIA	Spectrophotometric measurement of cyanmethaemoglobin
RBC	red blood cell count	Bayer ADVIA	Flow cytometry
PCV	packed cell volume	Calculation	PCV = (MCV x RBC) ÷ 10
RETA	reticulocytes	Automated	Supravital staining with oxazine 750, assessed by flow cytometry
RET ABS	absolute reticulocytes	Calculation	RBC x RETA ÷ 100
MCV	mean cell volume	Bayer ADVIA	Flow cytometry
MCH	mean cell haemoglobin	Calculation	MCH = (Hb ÷ RBC) x 10
MCHC	mean cell haemoglobin concentration	Calculation	MCHC = (Hb ÷ PCV) x 100
HDW	haemoglobin distribution width	Bayer ADVIA	Flow cytometry
RDW	red cell distribution width	Bayer ADVIA	Flow cytometry
PLAT	platelets	Bayer ADVIA	Flow cytometry
PCT	plateletcrit	Calculated	PCT = (MPV x PLT) ÷ 10,000
MPV	mean platelet volume	Bayer ADVIA	Flow cytometry
PDW	platelet distribution width	Bayer ADVIA	Flow cytometry
PT	prothrombin time	ACL Futura	Fibrin formation using rabbit brain thromboplastin to activate coagulation cascade
APTT	activated partial thromboplastin time	ACL Futura	Fibrin formation using micronised silica to activate coagulation cascade
WBC	white blood cell count	Bayer ADVIA	Flow cytometry
N L M E B LUC	neutrophils lymphocytes monocytes eosinophils basophils large unstained cells	Manual: Blood smear Automated: Bayer ADVIA	Manual: Visual appraisal of a blood smear using a Romanowski-type stain Automated: Cytochemical staining with a peroxidase stain and detection of light scatter using a photo-optical method. Basophils enumerated using differential lysis and laser light scattering

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Table 4
Group mean haematology
Occasion: Week 5 (at terminal necropsy)

Test article	Control	[redacted]		
Group	1	2	3	4
Level (ppm)	0	500	5000	20000

Group/ Sex	Hb g/dL	RBC mil/cmm	PCV %	RETA %	RET ABS mil/cmm	MCV fL	MCH pg	MCHC g/dL
1M Mean	15.2	8.01	44.1	3.4	0.27	55.0	18.9	34.4
SD	0.4	0.37	2.0	0.5	0.03	1.8	0.5	0.8
2M Mean	15.4	8.24	44.7	3.2	0.27	54.2	18.7	34.5
SD	0.7	0.26	2.0	0.3	0.03	0.9	0.6	0.8
3M Mean	15.2	7.90	43.6	3.5	0.28	55.1	19.2	34.8
SD	0.1	0.03	1.3	0.3	0.02	1.5	0.1	0.9
4M Mean	15.5	8.49	45.0	3.5	0.30	53.0	18.2	34.4
SD	0.6	0.26	2.6	0.4	0.04	1.7	0.2	0.8
Statistics	J	A2	A2	A2	A2	A2	A2	A2
1F Mean	14.6	7.84	41.7	3.4	0.27	53.2	18.7	35.1
SD	0.6	0.57	2.9	0.2	0.04	0.2	0.5	0.9
2F Mean	14.8	7.80	41.8	2.4*	0.19*	53.6	18.9	35.4
SD	0.1	0.23	1.8	0.6	0.05	1.6	0.6	1.3
3F Mean	15.6	8.10	43.3	2.6	0.21	53.5	19.2	35.9
SD	0.2	0.26	1.0	0.2	0.02	1.7	0.8	0.6
4F Mean	15.0	8.43	43.2	3.5	0.29	51.2	17.8	34.7
SD	1.5	0.43 DR*	4.2	0.4	0.01	2.5	0.9	0.0
Statistics	X	A2	A2	A2	A2	A2	A2	A2

* P<0.05
** P<0.01
*** P<0.001
DR = significant dose response test

J = Kruskal-Wallis, Terpstra-Jonckheere, Wilcoxon
A2 = two-way ANOVA, regression and Dunnett's
X = Not analysed

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Table 4
Group mean haematology
Occasion: Week 5 (at terminal necropsy)

Test article	Control	[redacted]		
Group	1	2	3	4
Level (ppm)	0	500	5000	20000

Group/ Sex	HDW g/dL	RDW %	PLAT 1000/cmm	PCT %	MPV fl	PDW %	PT s	APTT s
1M Mean	2.38	12.0	1037	0.64	6.2	60.4	20.3	15.9
SD	0.18	0.4	86	0.04	0.3	3.1	0.9	2.3
2M Mean	2.42	11.8	1125	0.74	6.5	71.2**	19.2	18.9
SD	0.17	0.4	155	0.09	0.1	5.0	0.5	3.9
3M Mean	2.55	12.2	987	0.67	6.9*	65.9	20.2	25.1*
SD	0.19	0.7	175	0.08	0.6	7.9	0.9	8.0
4M Mean	2.46	12.3	1243	0.78*	6.3	61.6	20.3	15.8
SD	0.17	0.6	80	0.03	0.2	3.2	2.3	1.2
Statistics	A2	A2	A2	A2	A2	A2	A2	A2
1F Mean	2.25	10.4	1131	0.71	6.3	67.1	21.2	15.0
SD	0.21	0.1	64	0.01	0.3	1.0	1.7	2.8
2F Mean	2.31	12.3	1124	0.69	6.2	54.5*	21.4	17.1
SD	0.28	2.3	168	0.07	0.6	4.9	0.3	4.3
3F Mean	2.47	12.6	1317	0.90**	6.9	64.9	20.4	14.7
SD	0.14	3.4	136	0.08	0.2	2.4	0.4	3.6
4F Mean	2.53	11.9	1391	0.90*	6.5	59.7	20.2	13.6
SD	0.17	1.1	78	0.05	0.1	3.6	0.1	1.8
			DR*					
Statistics	A2	A2	A2	A2	A2	A2	A2	A2

* P<0.05
** P<0.01
*** P<0.001
DR = significant dose response test

A2 = two-way ANOVA, regression and Dunnett's

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Table 4
Group mean haematology
Occasion: Week 5 (at terminal necropsy)

Test article	Control	[redacted]		
Group	1	2	3	4
Level (ppm)	0	500	5000	20000

Group/ Sex	Total WBC 1000/cmm	N 1000/cmm	L 1000/cmm	M 1000/cmm	E 1000/cmm	B 1000/cmm	LUC 1000/cmm
1M Mean	3.7	0.7	2.8	0.1	0.0	0.0	0.0
SD	2.0	0.4	1.6	0.1	0.1	0.0	0.0
2M Mean	2.9	0.5	2.4	0.1	0.1	0.0	0.0
SD	1.5	0.2	1.3	0.1	0.1	0.0	0.0
3M Mean	2.4	1.0	1.2	0.1	0.1	0.0	0.0
SD	1.0	0.3	0.7	0.0	0.1	0.0	0.0
4M Mean	2.7	0.7	1.8	0.1	0.0	0.0	0.0
SD	0.2	0.4	0.4	0.0	0.1	0.0	0.0
Statistics	A2	A2	A2	X	X	X	X
1F Mean	4.0	0.7	3.1	0.1	0.1	0.0	0.0
SD	1.1	0.3	0.8	0.1	0.1	0.0	0.0
2F Mean	2.2	0.4	1.7	0.1	0.0	0.0	0.0
SD	0.8	0.2	0.7	0.1	0.1	0.0	0.0
3F Mean	1.5	0.3	1.1	0.1	0.0	0.0	0.0
SD	0.7	0.2	0.5	0.1	0.1	0.0	0.0
4F Mean	2.8	0.7	2.0	0.1	0.1	0.0	0.0
SD	0.8	0.4	0.4	0.1	0.1	0.0	0.0
Statistics	A2	A2	A2	X	X	X	X

A2 = two-way ANOVA, regression and Dunnett's
X = not analysed

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Table 4
Group mean haematology
Occasion: Week 5 (at terminal necropsy)

Test article	Control	[redacted]		
Group	1	2	3	4
Level (ppm)	0	500	5000	20000

Group/ Sex	Total WBC 1000/cmm	N % WBC	L % WBC	M % WBC	E % WBC	B % WBC	LUC % WBC
1M Mean	3.7	20	77	2	1	0	0
SD	2.0	6	6	1	0	0	0
2M Mean	2.9	16	81	2	2	0	1
SD	1.5	2	2	1	1	0	1
3M Mean	2.4	45***	47***	4	3	0	1
SD	1.0	13	13	0	1	0	0
4M Mean	2.7	26	67	4	2	0	1
SD	0.2	12	13	0	1	0	1
Statistics	A2	A2	A2	X	X	X	X
1F Mean	4.0	18	79	2	2	0	1
SD	1.1	3	1	1	1	0	1
2F Mean	2.2	20	74	2	2	0	1
SD	0.8	5	6	1	1	0	1
3F Mean	1.5	19	73	4	3	0	1
SD	0.7	7	7	1	1	0	1
4F Mean	2.8	22	72	3	3	0	1
SD	0.8	7	10	1	3	0	0
Statistics	A2	A2	A2	X	X	X	X

* P<0.05
** P<0.01
*** P<0.001

A2 = two-way ANOVA, regression and Dunnett's
X = not analysed

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Table 5
Group mean clinical chemistry

Key to abbreviations/methods

Code	Parameter	Analyser	Method of determination
AST	Aspartate aminotransferase	Hitachi 917	Optimised UV method using L-aspartate and alpha-oxoglutarate as primary substrates
ALT	Alanine aminotransferase	Hitachi 917	Optimised UV method using L-Alanine and alpha-oxoglutarate as primary substrates
Gamma GT	Gamma glutamyltransferase	Hitachi 917	Colorimetric method using l-gamma-glutamyl-3-carboxy-4nitroanilide as substrate
ALK PHOS	Alkaline phosphatase	Hitachi 917	Colorimetric method using p-nitrophenyl phosphate as substrate
Na/K/Cl	Sodium /potassium /chloride	Hitachi 917	Ion-selective electrode
Ca	Calcium	Hitachi 917	Colorimetric method using o-cresophthalein complexone in alkaline solution
IN PHOS	inorganic phosphorous	Hitachi 917	Colorimetric method based upon ammonium molybdate in acid conditions
UREA	urea	Hitachi 917	UV method using a coupled urease procedure
BUN	blood urea nitrogen	Hitachi 917	BUN = urea x 2.801
T BILI	total bilirubin	Hitachi 917	A colorimetric method. Indirect bilirubin is liberated by detergent: Total bilirubin is coupled with a diazonium compound to give corresponding azobilirubin.
CREAT	creatinine	Hitachi 917	Colorimetric method
T PROT	total protein	Hitachi 917	Colorimetric method based on biuret reaction
ALBUMIN	albumin	Hitachi 917	Colorimetric method based on the BCG reaction
GLOBULIN	globulin	Calculation	globulin = total protein - albumin
AG RATIO	albumin/globulin ratio	Calculation	AG ratio = albumin /(total protein - albumin)
TOT CHOL	total cholesterol	Hitachi 917	Enzymatic method using cholesterol oxidase/esterase
TRIGS	triglycerides	Hitachi 917	Enzymatic method using lipase and glycerol kinase as primary enzymes
PLIPIDS	phospholipids	ILAB 900	Enzymatic Colorimetric method using phospholipase-D as primary substrate
GLUC	glucose	Hitachi 917	UV method using a coupled hexokinase procedure

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Table 5
Group mean clinical chemistry
Occasion: Week 5 (at terminal necropsy)

Test article	Control	[redacted]		
Group	1	2	3	4
Level (ppm)	0	500	5000	20000

Group/ Sex	AST IU/L	ALT IU/L	GAMMA GT IU/L	ALK PHOS IU/L	Na mmol/L	K mmol/L	Cl mmol/L
1M Mean	141	76	1	381	143	3.8	100
SD	36	26	0	57	1	0.3	1
2M Mean	143	77	1	354	143	3.8	99
SD	49	38	0	84	1	0.6	2
3M Mean	378*	83	1	399	143	4.3	100
SD	130	31	0	49	1	0.9	0
4M Mean	335	100	1	532*	143	4.8	101
SD	65	20	0	191	2	1.2	2
Statistics	A2	A2	X	A2	A2	A2	A2
1F Mean	166	50	1	200	142	4.4	101
SD	166	49	0	67	1	1.0	2
2F Mean	244	97	1	181	144	4.1	101
SD	200	93	0	48	1	1.4	2
3F Mean	328	57	1	189	144*	4.0	101
SD	166	39	0	45	1	1.0	0
4F Mean	273	49	1	260	145**	3.8	100
SD	182	28	0	72	1	0.9	2
Statistics	A2	A2	X	A2	A2	A2	A2

* P<0.05
** P<0.01
*** P<0.001

A2 = two-way ANOVA, regression and Dunnett's
X = not analysed

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Table 5
Group mean clinical chemistry
Occasion: Week 5 (at terminal necropsy)

Test article	Control	[redacted]		
Group	1	2	3	4
Level (ppm)	0	500	5000	20000

Group/ Sex	Ca mmol/L	IN PHOS mmol/L	UREA mmol/L	BUN mg/dL	T BILI umol/L	CREAT umol/L	T PROT g/L
1M Mean	2.53	2.4	9.3	25.9	1.6	59	60
SD	0.05	0.1	1.6	4.4	0.4	5	2
2M Mean	2.55	2.5	8.6	24.2	1.6	57	61
SD	0.10	0.3	1.2	3.3	0.2	4	2
3M Mean	2.64	2.8	8.5	23.9	0.8	51	61
SD	0.07	0.3	0.7	2.0	0.6	3	1
4M Mean	2.65	3.3**	10.2	28.5	0.7*	49*	60
SD	0.06 DR**	0.2	3.2	9.0	0.4	4	1
Statistics	A2	A2	A2	A2	J	A2	A2
1F Mean	2.58	2.5	11.7	32.6	2.1	72	62
SD	0.09	0.4	2.9	8.2	0.4	12	4
2F Mean	2.53	2.1	9.6	26.8	1.4*	64	61
SD	0.08	0.4	1.7	4.7	0.3	7	2
3F Mean	2.68	2.9	11.1	31.1	1.6	55***	63
SD	0.11	0.2	0.9	2.6	0.4	3	4
4F Mean	2.60	3.1*	11.4	32.0	1.0*	54***	64
SD	0.05	0.5	1.4	3.8	0.6	4	2
Statistics	A2	A2	A2	A2	J	A2	A2

* P<0.05
** P<0.01
*** P<0.001
DR = significant dose response test

A2 = two-way ANOVA, regression and Dunnett's
J = Kruskal-Wallis, Terpstra-Jonckheere, Wilcoxon

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Table 5
Group mean clinical chemistry
Occasion: Week 5 (at terminal necropsy)

Test article	Control	[redacted]		
Group	1	2	3	4
Level (ppm)	0	500	5000	20000

Group/ Sex	ALBUMIN g/L	GLOBULIN g/L	AG RATIO	TOT CHOL mmol/L	TRIGS mmol/L	P LIPIDS mg/dL	GLUC mmol/L
1M Mean	41	19	2.2	1.5	0.58	115	6.6
SD	1	1	0.1	0.3	0.14	18	1.2
2M Mean	41	20	2.1	1.7	0.61	131	7.0
SD	2	1	0.1	0.3	0.15	15	1.4
3M Mean	41	20	2.1	1.9	1.98**	165**	6.7
SD	3	1	0.2	0.2	1.14	15	0.9
4M Mean	41	19	2.2	2.2**	2.07**	188***	4.8
SD	2	1	0.2	0.4	1.00	32	1.9
Statistics	A2	A2	A2	A2	A2	A2	A2
1F Mean	47	17	2.8	1.4	0.41	128	4.6
SD	2	1	0.2	0.2	0.15	15	0.9
2F Mean	44	17	2.7	1.4	0.55	125	5.8
SD	2	1	0.2	0.1	0.37	14	2.4
3F Mean	46	17	2.7	1.5	0.69	127	3.5
SD	2	3	0.3	0.5	0.28	33	0.8
4F Mean	46	17	2.8	2.0*	0.86	156	2.5
SD	1	2	0.4	0.5	0.81	38	0.6
							DR**
Statistics	A2	A2	A2	A2	A2	A2	A2

* P<0.05
** P<0.01
*** P<0.001
DR = significant dose response test

A2 = two-way ANOVA, regression and Dunnett's

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Table 6
Group mean organ weights

Group mean organ weights adjusted to overall mean necropsy body weight

Terminal kill

Test article	Control	[redacted]		
Group	1	2	3	4
Level (ppm)	0	500	5000	20000

Group and Sex	Body weight (g)		Organ weights (g): Adrenals	Kidneys	Liver	Brain
1M		Adjusted	0.068	1.505	7.035	1.812
	239.1	Unadjusted	(0.072)	(1.532)	(7.300)	(1.823)
2M		Adjusted	0.063	1.571	7.413	1.853
	237.1	Unadjusted	(0.066)	(1.593)	(7.625)	(1.861)
3M		Adjusted	0.053	1.627	8.764**	1.816
	236.3	Unadjusted	(0.056)	(1.646)	(8.956)	(1.824)
4M		Adjusted	0.062	1.642	10.024***	1.774
	204.1**	Unadjusted	(0.053)	(1.575)	(9.356)	(1.748)
Statistics	A2		C	C	C	C

* P<0.05
** P<0.01
*** P<0.001

A2 = two-way ANOVA, regression and Dunnett's
C = ANCOVA and Dunnett's

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Table 6
Group mean organ weights
Group mean organ weights adjusted to overall mean necropsy body weight
Terminal kill

Test article	Control	[redacted]		
Group	1	2	3	4
Level (ppm)	0	500	5000	20000

Group and Sex	Body weight (g)		Thymus	Organ weights (g): Testes/ Epididymides
1M		Adjusted	0.501	3.939
	239.1	Unadjusted	(0.529)	(4.009)
2M		Adjusted	0.529	3.984
	237.1	Unadjusted	(0.552)	(4.040)
3M		Adjusted	0.547	3.657
	236.3	Unadjusted	(0.567)	(3.708)
4M		Adjusted	0.569	3.657
	204.1**	Unadjusted	(0.497)	(3.481)
Statistics	A2		C	C

* P<0.05
** P<0.01
*** P<0.001

A2 = two-way ANOVA, regression and Dunnett's
C = ANCOVA and Dunnett's

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Table 6
Group mean organ weights
Group mean organ weights and organ to body weight ratios
Terminal kill

Test article	Control	[redacted]		
Group	1	2	3	4
Level (ppm)	0	500	5000	20000

Group and Sex	Body weight (g)	Spleen		Heart	
		Unadjusted (g)	Ratio (%)	Unadjusted (g)	Ratio (%)
1M	239.1	0.564	0.236	0.834	0.350
2M	237.1	0.602	0.251	0.833	0.352
3M	236.3	0.518	0.222	0.820	0.349
4M	204.1**	0.560	0.276	0.742	0.363
Statistics		A2	A	A	A

* P<0.05
** P<0.01
*** P<0.001

A2 = two-way ANOVA, regression and Dunnett's
A = ANOVA, regression and Dunnett's

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Table 6
Group mean organ wieghts
Group mean organ weights adjusted to overall mean necropsy body weight
Terminal kill

Test article	Control	[redacted]		
Group	1	2	3	4
Level (ppm)	0	500	5000	20000

Group and Sex	Body weight (g)		Organ weights (g): Adrenals	Kidneys	Spleen	Liver
1F		Adjusted	0.060	1.047	0.401	4.912
	157.5	Unadjusted	(0.065)	(1.085)	(0.422)	(5.106)
2F		Adjusted	0.063	1.004	0.320*	4.851
	154.8	Unadjusted	(0.066)	(1.026)	(0.332)	(4.964)
3F		Adjusted	0.057	1.113	0.330	5.592**
	154.9	Unadjusted	(0.060)	(1.135)	(0.343)	(5.706)
4F		Adjusted	0.073	1.232**	0.393	6.284***
	137.1	Unadjusted	(0.062)	(1.150)	(0.347)	(5.863)
Statistics	A2		C	C	C	C

* P<0.05
** P<0.01
*** P<0.001

A2 = two-way ANOVA, regression and Dunnett's
C = ANCOVA and Dunnett's

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Table 6
Group mean orgen weights
Group mean organ weights adjusted to overall mean necropsy body weight
Terminal kill

Test article	Control	[redacted]		
Group	1	2	3	4
Level (ppm)	0	500	5000	20000

Group and Sex	Body weight (g)		Organ weights (g): Brain	Thymus
1F	157.5	Adjusted	1.678	0.488
		Unadjusted	(1.695)	(0.493)
2F	154.8	Adjusted	1.661	0.470
		Unadjusted	(1.671)	(0.473)
3F	154.9	Adjusted	1.684	0.444
		Unadjusted	(1.694)	(0.447)
4F	137.1	Adjusted	1.730	0.398
		Unadjusted	(1.693)	(0.387)
Statistics	A2		C	C

A2 = two-way ANOVA, regression and Dunnett's
C = ANCOVA and Dunnett's

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Table 6
Group mean organ weights
Group mean organ weights and organ to body weight ratios
Terminal kill

Test article	Control		[redacted]	
Group	1	2	3	4
Level (ppm)	0	500	5000	20000

Group and Sex	Body weight (g)	Heart		Ovaries	
		Unadjusted (g)	Ratio (%)	Unadjusted (g)	Ratio (%)
1F	157.5	0.664	0.425	0.087	0.055
2F	154.8	0.588	0.380	0.069	0.045
3F	154.9	0.595	0.385	0.072	0.046
4F	137.1	0.497***	0.363	0.073	0.053
Statistics	A2	A	DR* A	A	A

* P<0.05
** P<0.01
*** P<0.001
DR = significant dose response test

A2 = two-way ANOVA, regression and Dunnett's
A = ANOVA, regression and Dunnett's

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Table 7
Group incidence macroscopic data

	Test article	Control		[redacted]	
	Group	1	2	3	4
	Level (ppm)	0	500	5000	20000

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HARROGATE, ENGLAND

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STUDY NUMBER: 0535104

TABLE INCLUDES:
SEX=ALL;GROUP=ALL;WEEKS=ALL
DEATH=ALL;SUBSET=ALL

ORGAN AND KEYWORD(S) OR PHRASE		--- NUMBER OF ANIMALS AFFECTED ---							
	SEX:	-------MALE-------				------FEMALE------			
	GROUP:	-1-	-2-	-3-	-4-	-1-	-2-	-3-	-4-
	NUMBER:	5	5	5	5	5	5	5	5
** TOP OF LIST **									
ANIMAL	NUMBER EXAMINED:	5	5	5	5	5	5	5	5
NOT REMARKABLE		3	1	0	0	1	1	0	0
EYE	NUMBER EXAMINED:	5	5	5	5	5	5	5	5
OPTIC NERVE	NUMBER EXAMINED:	5	5	5	5	5	5	5	5
HARDERIAN GLAND	NUMBER EXAMINED:	5	5	5	5	5	5	5	5
SKIN + SUBCUTIS	NUMBER EXAMINED:	5	5	5	5	5	5	5	5
MAMMARY GLAND	NUMBER EXAMINED:	5	5	5	5	5	5	5	5
MUSCLE	NUMBER EXAMINED:	5	5	5	5	5	5	5	5
FEMUR + MARROW	NUMBER EXAMINED:	5	5	5	5	5	5	5	5
STERNUM + MARROW	NUMBER EXAMINED:	5	5	5	5	5	5	5	5
SCIATIC NERVE	NUMBER EXAMINED:	5	5	5	5	5	5	5	5
LIVER	NUMBER EXAMINED:	5	5	5	5	5	5	5	5
MOTTLED		1	1	5	2	1	0	5	3
LARGE		0	0	2	3	0	0	2	0
PALE		0	0	0	1	0	0	1	1
DARK		0	0	0	1	0	0	0	0

** CONTINUED ON NEXT PAGE **

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Table 7

Group incidence macroscopic data

Test article	Control		[redacted]	
Group	1	2	3	4
Level (ppm)	0	500	5000	20000

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STUDY NUMBER: 0535104

TABLE INCLUDES:
SEX=ALL;GROUP=ALL;WEEKS=ALL
DEATH=ALL;SUBSET=ALL

ORGAN AND KEYWORD(S) OR PHRASE		--- NUMBER-OF-ANIMALS-AFFECTED ---							
SEX:		-------MALE-------				------FEMALE------			
GROUP:		-1-	-2-	-3-	-4-	-1-	-2-	-3-	-4-
NUMBER:		5	5	5	5	5	5	5	5
** FROM PREVIOUS PAGE **									
LIVER	NUMBER EXAMINED:	5	5	5	5	5	5	5	5
PALE AREA		0	0	0	0	0	0	0	1
SPLEEN	NUMBER EXAMINED:	5	5	5	5	5	5	5	5
PANCREAS	NUMBER EXAMINED:	5	5	5	5	5	5	5	5
DARK		0	0	0	0	0	1	0	0
MESENTERIC LN	NUMBER EXAMINED:	5	5	5	5	5	5	5	5
INJECTION LESION		0	1	0	0	0	0	0	0
STOMACH	NUMBER EXAMINED:	5	5	5	5	5	5	5	5
THICK		0	0	1	0	0	0	1	0
PALE		0	0	2	0	0	0	3	1
RED AREA		1	0	0	0	0	0	0	0
PALE AREA		0	0	0	0	0	0	0	1
DUODENUM	NUMBER EXAMINED:	5	5	5	5	5	5	5	5
RED		0	0	0	0	1	0	0	0
JEJUNUM	NUMBER EXAMINED:	5	5	5	5	5	5	5	5
DARK		0	0	0	1	0	0	0	0
ILEUM	NUMBER EXAMINED:	5	5	5	5	5	5	5	5

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Table 7

Group incidence macroscopic data

Test article	Control	[redacted]		
Group	1	2	3	4
Level (ppm)	0	500	5000	20000

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TABLE INCLUDES:
SEX=ALL;GROUP=ALL;WEEKS=ALL
DEATH=ALL;SUBSET=ALL

ORGAN AND KEYWORD(S) OR PHRASE		--- NUMBER-OF-ANIMALS-AFFECTED ---							
SEX:		-------MALE-------				------FEMALE------			
GROUP:		-1-	-2-	-3-	-4-	-1-	-2-	-3-	-4-
NUMBER:		5	5	5	5	5	5	5	5
CAECUM	NUMBER EXAMINED:	5	5	5	5	5	5	5	5
INJECTION LESION		0	0	1	0	1	1	0	1
COLON	NUMBER EXAMINED:	5	5	5	5	5	5	5	5
RECTUM	NUMBER EXAMINED:	5	5	5	5	5	5	5	5
ADRENAL	NUMBER EXAMINED:	5	5	5	5	5	5	5	5
PALE		0	1	0	0	0	0	0	0
DARK		0	0	2	1	0	0	0	0
LARGE		0	0	1	0	1	0	1	1
RED		2	0	2	0	1	0	0	0
SMALL		0	0	0	1	0	0	0	0
RED FOCUS		0	0	0	1	0	0	0	0
KIDNEY	NUMBER EXAMINED:	5	5	5	5	5	5	5	5
PALE		0	0	0	1	0	0	0	0
PELVIC DILATATION		0	0	0	1	0	0	0	0
TESTIS	NUMBER EXAMINED:	5	5	5	5	0	0	0	0
EPIDIDYMIS	NUMBER EXAMINED:	5	5	5	5	0	0	0	0
OVARY	NUMBER EXAMINED:	0	0	0	0	5	5	5	5
LARGE		0	0	0	0	2	0	1	1
SEMINAL VESICLE	NUMBER EXAMINED:	5	5	5	5	0	0	0	0

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Table 7

Group incidence macroscopic data

Test article	Control		[redacted]	
Group	1	2	3	4
Level (ppm)	0	500	5000	20000

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TABLE INCLUDES:
SEX=ALL;GROUP=ALL;WEEKS=ALL
DEATH=ALL;SUBSET=ALL

--- NUMBER - OF - ANIMALS - AFFECTED ---

ORGAN AND KEYWORD(S) OR PHRASE		SEX:	MALE				FEMALE			
		GROUP:	-1-	-2-	-3-	-4-	-1-	-2-	-3-	-4-
		NUMBER:	5	5	5	5	5	5	5	5
URINARY BLADDER	NUMBER EXAMINED:		5	5	5	5	5	5	5	5
DISTENSION			0	0	0	0	0	0	1	0
PROSTATE	NUMBER EXAMINED:		5	5	5	5	0	0	0	0
INJECTION LESION			0	1	0	0	0	0	0	0
UTERUS	NUMBER EXAMINED:		0	0	0	0	5	5	5	5
DISTENSION			0	0	0	0	1	0	1	1
VAGINA	NUMBER EXAMINED:		0	0	0	0	5	5	5	5
SALIVARY GLAND	NUMBER EXAMINED:		5	5	5	5	5	5	5	5
MANDIBULAR LN	NUMBER EXAMINED:		5	5	5	5	5	5	5	5
RED FOCUS			0	1	0	0	1	0	0	0
THYMUS	NUMBER EXAMINED:		5	5	5	5	5	5	5	5
LARGE			0	0	1	1	0	2	1	0
DARK AREA			0	0	0	0	0	1	0	0
RED FOCUS			0	0	0	0	1	0	0	0
LUNG	NUMBER EXAMINED:		5	5	5	5	5	5	5	5
DARK			0	0	0	1	0	0	0	0
PALE			0	0	0	0	0	0	0	1

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Table 7

Group incidence microscopic data

Test article	Control		[redacted]	
Group	1	2	3	4
Level (ppm)	0	500	5000	20000

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TABLE INCLUDES:
SEX=ALL;GROUP=ALL;WEEKS=ALL
DEATH=ALL;SUBSET=ALL

ORGAN AND KEYWORD(S) OR PHRASE		--- NUMBER OF ANIMALS AFFECTED ---							
	SEX:	-------MALE-------				------FEMALE------			
	GROUP:	-1-	-2-	-3-	-4-	-1-	-2-	-3-	-4-
	NUMBER:	5	5	5	5	5	5	5	5
HEART	NUMBER EXAMINED:	5	5	5	5	5	5	5	5
LARGE		0	0	0	1	0	0	0	0
AORTA	NUMBER EXAMINED:	5	5	5	5	5	5	5	5
TRACHEA	NUMBER EXAMINED:	5	5	5	5	5	5	5	5
OESOPHAGUS	NUMBER EXAMINED:	5	5	5	5	5	5	5	5
TONGUE	NUMBER EXAMINED:	5	5	5	5	5	5	5	5
THYROID	NUMBER EXAMINED:	5	5	5	5	5	5	5	5
PARATHYROID	NUMBER EXAMINED:	5	5	5	5	5	5	5	5
PITUITARY	NUMBER EXAMINED:	5	5	5	5	5	5	5	5
BRAIN	NUMBER EXAMINED:	5	5	5	5	5	5	5	5
SPINAL CORD	NUMBER EXAMINED:	5	5	5	5	5	5	5	5
LACRIMAL GLAND	NUMBER EXAMINED:	5	5	5	5	5	5	5	5
ZYMBAL GLAND	NUMBER EXAMINED:	5	5	5	5	5	5	5	5
HEAD	NUMBER EXAMINED:	5	5	5	5	5	5	5	5

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Table 7

Group incidence microscopic data

Test article	Control		[redacted]	
Group	1	2	3	4
Level (ppm)	0	500	5000	20000

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TABLE INCLUDES:
SEX=ALL;GROUP=ALL;WEEKS=ALL
DEATH=ALL;SUBSET=ALL

ORGAN AND KEYWORD(S) OR PHRASE		--- NUMBER-OF-ANIMALS-AFFECTED ---							
SEX:		-------MALE-------				------FEMALE------			
GROUP:		-1-	-2-	-3-	-4-	-1-	-2-	-3-	-4-
NUMBER:		5	5	5	5	5	5	5	5
NASAL CAVITY	NUMBER EXAMINED:	5	5	5	5	5	5	5	5
PHARYNX	NUMBER EXAMINED:	5	5	5	5	5	5	5	5
ORAL CAVITY	NUMBER EXAMINED:	5	5	5	5	5	5	5	5
ABNORMAL TEETH		0	0	0	3	0	0	0	5

** END OF LIST **

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Table 8
Group incidence microscopic data

	Test article	Control		[redacted]	
	Group	1	2	3	4
	Level (ppm)	0	500	5000	20000

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TABLE INCLUDES:
SEX=ALL;GROUP=ALL;WEEKS=ALL
DEATH=ALL;FIND=ALL;SUBSET=ALL

		--- NUMBER OF ANIMALS AFFECTED ---							
	SEX:	-------MALE-------				------FEMALE------			
	GROUP:	-1-	-2-	-3-	-4-	-1-	-2-	-3-	-4-
ORGAN AND FINDING DESCRIPTION	NUMBER:	5	5	5	5	5	5	5	5
** TOP OF LIST **									
LIVER	NUMBER EXAMINED:	5	5	5	5	5	5	5	5
--HEPATOCYTE PIGMENT		0	0	0	0	0	0	1	0
--HEPATOCYTE VACUOLATION		0	0	4	5	2	1	5	5
--INFLAMMATORY CELL FOCI		5	4	4	4	2	4	4	2
SPLEEN	NUMBER EXAMINED:	5	0	0	5	5	0	0	5
--HAEMOPOIESIS		0	0	0	1	0	0	0	0
PANCREAS	NUMBER EXAMINED:	5	0	0	5	5	1	0	5
--DEGRANULATION		0	0	0	0	0	0	0	3
MESENTERIC LN	NUMBER EXAMINED:	5	1	0	5	5	0	0	5
--BARBITURATE LYSIS		0	1	0	0	0	0	0	0
--ATROPHY		0	0	0	0	0	0	0	1
STOMACH	NUMBER EXAMINED:	5	0	2	5	5	0	3	5
--EROSION/ULCER		1	0	0	0	0	0	0	1
DUODENUM	NUMBER EXAMINED:	5	0	0	5	5	0	0	5
--AGONAL CONGESTION/HAEMORRHAGE		0	0	0	0	1	0	0	0
JEJUNUM	NUMBER EXAMINED:	5	0	0	5	5	0	0	5
--BARBITURATE LYSIS		0	0	0	1	0	0	0	0
CAECUM	NUMBER EXAMINED:	5	0	1	5	5	1	0	5
--BARBITURATE LYSIS		0	0	1	0	1	1	0	1

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Table 8

Group incidence microscopic data

Test article	Control		[redacted]	
Group	1	2	3	4
Level (ppm)	0	500	5000	20000

COVANCE
HARROGATE, ENGLAND

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STUDY NUMBER: 0535104

TABLE INCLUDES:
SEX=ALL;GROUP=ALL;WEEKS=ALL
DEATH=ALL;FIND=ALL;SUBSET=ALL

ORGAN AND FINDING DESCRIPTION		--- NUMBER-OF-ANIMALS-AFFECTED ---							
SEX:		-------MALE-------				------FEMALE------			
GROUP:		-1-	-2-	-3-	-4-	-1-	-2-	-3-	-4-
NUMBER:		5	5	5	5	5	5	5	5
ADRENAL	NUMBER EXAMINED:	5	1	4	5	5	0	1	5
--ADRENAL CONGESTION/HAEMORRHAGE		1	0	4	1	1	0	0	0
KIDNEY	NUMBER EXAMINED:	5	0	0	5	5	0	0	5
--FOCAL NEPHROPATHY		2	0	0	4	2	0	0	1
--HYALINE DROPLETS		3	0	0	0	0	0	0	0
--TUBULAR VACUOLATION		0	0	0	1	3	0	0	4
--HYDRONEPHROSIS		0	0	0	1	0	0	0	0
--CORTICOMEDULLARY MINERALISATION		0	0	0	0	1	0	0	0
--PAPILLARY MINERALISATION		0	0	0	0	1	0	0	0
EPIDIDYMIS	NUMBER EXAMINED:	5	0	0	5	0	0	0	0
--INFLAMMATORY CELL FOCI		1	0	0	2	0	0	0	0
OVARY	NUMBER EXAMINED:	0	0	0	0	5	0	1	5
--OESTROUS CYCLE		0	0	0	0	2	0	1	1
URINARY BLADDER	NUMBER EXAMINED:	5	0	1	5	5	0	1	5
--BARBITURATE LYSIS		0	0	1	0	0	0	1	0
PROSTATE	NUMBER EXAMINED:	5	1	0	5	0	0	0	0
--BARBITURATE LYSIS		0	1	0	0	0	0	0	0
UTERUS	NUMBER EXAMINED:	0	0	0	0	5	0	1	5
--OESTROUS CYCLE		0	0	0	0	1	0	1	1

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Table 8

Group incidence microscopic data

Test article	Control	[redacted]		
Group	1	2	3	4
Level (ppm)	0	500	5000	20000

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DEATH=ALL;FIND=ALL;SUBSET=ALL

ORGAN AND FINDING DESCRIPTION		--- NUMBER-OF-ANIMALS-AFFECTED ---							
	SEX:	-------MALE-------				------FEMALE------			
	GROUP:	-1-	-2-	-3-	-4-	-1-	-2-	-3-	-4-
	NUMBER:	5	5	5	5	5	5	5	5
VAGINA	NUMBER EXAMINED:	0	0	0	0	5	0	1	5
--OESTRUS		0	0	0	0	3	0	0	1
--DIOESTRUS		0	0	0	0	1	0	0	1
--PRO-OESTRUS		0	0	0	0	1	0	1	3
MANDIBULAR LN	NUMBER EXAMINED:	5	1	0	5	5	0	0	5
--ACONAL CONGESTION/HAEMORRHAGE		0	1	0	0	1	0	0	0
THYMUS	NUMBER EXAMINED:	5	0	1	5	5	3	1	5
--CYST		1	0	0	0	1	0	0	1
--ECTOPIC PARATHYROID		0	0	0	1	0	0	0	0
--ACONAL CONGESTION/HAEMORRHAGE		0	0	0	0	1	1	0	0
--LYMPHOID HYPERPLASIA		0	0	0	0	0	1	1	0
LUNG	NUMBER EXAMINED:	5	0	0	5	5	0	0	5
--FOAMY HISTIOCYTES		1	0	0	0	0	0	0	0
--INFLAMMATORY CELL FOCI		0	0	0	1	0	0	0	2
--PNEUMONITIS		0	0	0	1	0	0	0	0
--ACONAL CONGESTION/HAEMORRHAGE		0	0	0	1	0	0	0	0
--OEDEMA		0	0	0	1	0	0	0	0
HEART	NUMBER EXAMINED:	5	5	5	5	5	5	5	5
--MYOCARDIAL VACUOLATION		0	0	3	5	0	0	4	5
--CHAMBER DISTENSION		0	0	0	1	0	0	0	0
--MYOCARDIAL DEGENERATION/NECROSIS		0	0	4	2	0	0	4	1
--INFLAMMATORY CELL FOCI		1	0	0	1	0	1	0	0

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Table 8

Group incidence microscopic data

Test article	Control		[redacted]		
Group	1	2	3	4	
Level (ppm)	0	500	5000	20000	

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STUDY NUMBER: 0535104

TABLE INCLUDES:
SEX=ALL;GROUP=ALL;WEEKS=ALL
DEATH=ALL;FIND=ALL;SUBSET=All.

ORGAN AND FINDING DESCRIPTION		NUMBER OF ANIMALS AFFECTED							
	SEX:	MALE				FEMALE			
	GROUP:	-1-	-2-	-3-	-4-	-1-	-2-	-3-	-4-
	NUMBER:	5	5	5	5	5	5	5	5
THYROID	NUMBER EXAMINED:	5	0	0	5	5	0	0	5
--ECTOPIC THYMUS		0	0	0	0	1	0	0	0

** END OF LIST **

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APPENDICES

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Appendix 1
Protocol, amendments and deviations

Definitive Protocol

Study Title	[redacted]28 Day Oral (Dietary) Administration Study in the Han Wistar Rat
Study Director	Dr Philip W Harvey philip.harvey@covance.com +44 (0) 1423 848421
Sponsor	[redacted]
Study Monitor	[redacted]
Test Facility	Covance Laboratories Ltd Otley Road, Harrogate North Yorkshire HG3 1PY ENGLAND
Covance Study Number	535/104
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INTRODUCTION

Study objective

The objective of the study is to determine the toxicity of the test article, [redacted] following oral (dietary) administration to the rat for 28 days. Pre-study documentation, records, data and animals were transferred from study 535/102, which this current study replaces.

The route of administration has been chosen because it is a possible route of human exposure.

The rat has been selected because it is a rodent species recommended by various regulatory authorities. Background data are available.

Proposed study dates

The Study Director aims to gain Sponsor approval of the definitive protocol and have made all preparations for the study at least ten working days before treatment commences. Other relevant materials and information (eg certificates of test article analysis) should also reach Covance before this date. This enables pre-treatment procedures to be carried out and provides the opportunity for participating Covance staff to respond to briefings on any of the scientific or welfare features of the study.

Animals on site & experimental start date	23 April 2003
First treatment	1 May 2003
Study termination	30 May 2003
Liver and heart draft pathology	To be advised
Pathology completed & experimental completion date	To be advised

Dates relating to the issue of draft and final reports will be supplied to the Sponsor by the Study Director on request.

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TEST AND CONTROL ARTICLES

The test article is identified as [redacted]

The Sponsor has provided information as possible on the physical appearance, known hazardous properties, purity, stability and a date of expiry. A sample for archive will be the responsibility of the Sponsor.

When not in use the test article will be stored in a sealed container, at room temperature in the dark.

The control article and vehicle for the test article will be ground diet.

EXPERIMENTAL DESIGN

Regulatory test guidelines
Although not designed for specific guidelines this protocol is expected to meet the requirements of the relevant agencies.

Test article administration
The test article will be administered orally by incorporation into the diet. Test article inclusion will not routinely be allowed to exceed 5% of the dietary formulation. The animals will have access *ad libitum* to the dietary formulations for at least 28 days excluding the day of necropsy.

Dose levels
The following dose levels were selected by the sponsor:

Group number	Group description	Group codes	Dose level (ppm)	Animal numbers	
				Male	Female
1	Control	Buff	0	1-5	21-25
2	Low	Green	500	6-10	26-30
3	Intermediate	Blue	5000	11-15	31-35
4	High	Pink	20000	16-20	36-40

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The rationale for selection of dose levels will be specified in a protocol amendment.

It is a requirement of UK law (Animals (Scientific Procedures) Act, 1986) that minimum suffering and distress is caused to animals on study. Therefore it is necessary for the Sponsor to provide Covance with detailed justification for their selection of dose levels. If possible, this should include clinical signs and effects on body weight and food consumption. If appropriate data are not available it may be necessary for a preliminary dose range-finding study to be performed either by the Sponsor or Covance.

TEST ARTICLE FORMULATION

Preparation
Formulations will be prepared weekly and reserve samples will be retained from all batches deep frozen. The reserve samples may be discarded following authorisation by the Study Director.

Storage
The formulations will be stored at room temperature in a sealed container.

Formulation analysis
Formulations will be analysed for their test article content by the Formulations Analysis section of the Central Dispensary at Covance.

A method using high performance liquid chromatography with UV detection will be supplied by the Sponsor. Sponsor supplied methods may be altered for use at Covance. Any changes will be communicated to the Study Director before use.

The method used for the analysis will be the current version of Covance 535/102-01F. The method will be validated according to Standard Operating Procedures in this study.

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Stability and homogeneity

Stability and homogeneity analysis will be performed for each batch of test article used on the study.

Trial formulations will be prepared at 100 ppm and 20,000 ppm. These concentrations span the range envisaged in this study and subsequent Covance studies in rat (535/101) and mouse (535/103). As soon as possible after preparation, three samples will be removed from the top and three from the bottom of each formulation. These will be analysed for test article concentration to determine homogeneity. The formulations will be considered homogeneous if the coefficient of variation (CV%) of the results is ≤6.5%. In addition all the results should be within ± 10% of the mean

After the initial sampling each of the trial formulations will be split into two aliquots. One aliquot will be allowed to stand at room temperature in the Formulations Analysis laboratory protected from light. After 1, 3 and 7 days the above procedure will be repeated to determine stability.

The second aliquot will be stored frozen (nominal -20°C) and will only be analysed, as described above, if recovery is a problem or any degradation is present at room temperature.

If the formulations are stable the results should remain constant and show no significant change in achieved concentration. If a significant change is apparent the results will be discussed and further actions agreed with the Study Director/Study Sponsor.

Achieved concentration

Analysis of the formulations for achieved concentration will be performed on samples prepared for use in Week 1. The normal target range for the results will be 85% to 110% of nominal concentration.

Initially only two samples will be taken and analysed. If the achieved concentration results are within the target range the results will be accepted.

If one or both of the achieved concentration results are outside of the target range a third sample will be analysed. Results will be expressed in terms of % nominal concentration

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A single sample will be taken from control formulations and will be analysed. If test article is not found this analysis will be reported.

If test article is found at a level ≥20% of the LLOQ, a determination as to whether the test article is systematic, interference from the diet, or actually present in the sample will be made. If the reagent blank does not contain test article a second control sample will be analysed at the end of the analytical run. If test article is also found in the reagent blank at a level ≥20% of the LLOQ the cause of the contamination will be investigated. Reagent blanks will be prepared and analysed until the level of test article found is <20% of the LLOQ. A second control sample will then be analysed.

TEST SYSTEM

Species, strain and supplier
Sufficient rats of the Crl:WI(Glx/BRL/Han)BR strain will be obtained from a recognised supplier in order to provide 20 healthy animals of each sex.

Specification
The animals will be obtained as weanlings of about 28 days of age on arrival. At randomisation their body weight will be within ±20% of the overall mean for each sex. They will be approximately 5 weeks old at start of dosing.

Environment
The animals will be routinely kept in the following environment except for short periods of time where experimental procedures dictate otherwise. The animals will be housed in a single, exclusive room, air-conditioned to provide a minimum of 15 air changes/hour. The temperature and relative humidity ranges will be 19 to 25°C and 40 to 70% respectively. Fluorescent lighting will be controlled automatically to give a cycle of 12 hours light (0600 to 1800) and 12 hours dark.

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The animals will be housed in groups of five in cages that conform with the 'Code of practice for the housing and care of animals used in scientific procedures' (Home Office, London, 1989).

Environmental enrichment
In order to enrich both the environment and the welfare of the animals, they may be provided with wooden Aspen chew blocks.

Diet and water
Throughout the study the animals will have access *ad libitum* to SQC Rat and Mouse Maintenance Diet No 1, Expanded, Ground Fine (Special Diets Services Ltd. Witham). Each batch of diet is analysed for specific constituents and contaminants. Typical values are presented in Appendix 1.

Mains water will be provided *ad libitum* via an automatic watering system or bottles. The water is periodically analysed for specific contaminants. Typical values are presented in Appendix 2.

No contaminants are expected to be present in diet or water at levels which might interfere with achieving the objective of the study.

ANIMAL HEALTH AND WELFARE

All procedures to be carried out on live animals as part of this study will be subject to the provisions of United Kingdom National Law, in particular the Animals (Scientific Procedures) Act, 1986.

In order to monitor the welfare of an individual or group of animals, additional observations to those already detailed may be instigated at the discretion of the Study Director. In certain instances this may include treatment as advised by a Covance animal welfare veterinary surgeon.

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ETHICAL REVIEW

The Animals (Scientific Procedures) Act 1986 obliges all UK laboratories to maintain a local ethical review process. This is intended to ensure all animal use in the establishment is carefully considered and justified; that proper account is taken of all possibilities for reduction, refinement or replacement and that high standards of accommodation and care are achieved. The Study Director may require assistance from the Sponsor in preparing for ethical review of the study protocol.

PRE-EXPERIMENTAL PROCEDURES

Acclimatisation and health procedures
All animals will be given a clinical inspection for ill health on arrival. They will be acclimatised for about two weeks and a veterinary inspection will be performed before the start of dosing to ensure their suitability for study.

Allocation to treatment group
The animals will be assigned to treatment groups during the acclimatisation period using a randomisation procedure based on stratified body weight.

Group mean body weights will be calculated and inspected to ensure there are no unacceptable differences between groups.

Treatment group positions in the cage battery will be assigned using a set of random letter permutations.

Identification of the test system
The animals will be individually identified by a subcutaneous electronic transponder/tattoo. Cages will be appropriately identified with study information including study number and animal number/s.

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EXPERIMENTAL OBSERVATIONS

Clinical signs
All animals will be observed daily for signs of ill health or overt toxicity. In addition, each animal will be given a detailed physical examination at weekly intervals. An individual record will be maintained of the clinical condition of each animal.

Routine health checks
All animals will be examined at the beginning and the end of the working day to ensure the animals are in good health. Any animal which shows marked signs of ill health may be isolated. Moribund animals will be killed and necropsied.

Body weights
Individual body weights will be recorded before treatment on the first day of dosing, at weekly intervals and before necropsy.

Food consumption
The amount of food consumed by each cage of animals will be determined weekly. Consumption will be calculated as g/animal/week.

Compound consumption
The amount of test article consumed by each cage of animals will be determined weekly. Consumption will be calculated as mg/kg body weight/day.

Clinical pathology (Appendix 4)

Samples and occasions
Blood samples (2 x 0.5 mL [EDTA, trisodium citrate], 1 x 1 mL [lithium heparin] nominal) will be withdrawn from the abdominal aorta of all animals at necropsy (after an overnight period without food). Where possible, samples will also be taken from the abdominal aorta of all decedents at necropsy.

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Haematology

The following parameters will be determined on blood taken into EDTA anticoagulant:

haemoglobin concentration	red blood cell count
packed cell volume	reticulocytes
mean cell volume	mean cell haemoglobin
mean cell haemoglobin concentration	haemoglobin distribution width
red cell distribution width	platelet count
platelet crit	mean platelet volume
platelet distribution width	total and differential white cell count

In addition, the following parameters will be determined on blood taken into trisodium citrate anticoagulant:

prothrombin time	activated partial thromboplastin time

Bone marrow smears

Bone marrow smears will be prepared at necropsy. They will be fixed in methanol but only examined by a haematologist if a blood disorder is suspected.

Clinical chemistry

The following parameters will be determined on plasma derived from whole blood collected into lithium heparin anticoagulant:

aspartate aminotransferase	alanine aminotransferase
alkaline phosphatase	sodium
potassium	calcium
inorganic phosphorus	chloride
total protein	albumin
globulin	albumin/globulin ratio
total cholesterol	glucose
urea (and BUN)	total bilirubin
creatinine	triglycerids
phospholipid	gamma glutamyl transpeptidase

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TERMINAL PROCEDURES

Necropsy and tissue preservation (Appendix 3)
All animals including decedents will be subject to necropsy.

The scheduled necropsies will be performed after an overnight period without food. Where possible, they will be carried out in cage order. An intraperitoneal sodium pentobarbitone overdose will be given prior to exsanguination and a full macroscopic examination will be performed under the general supervision of a pathologist and all lesions will be recorded.

All tissues denoted by (•) from all animals will be preserved in the appropriate fixative/s.

Organ weights (Appendix 3)
Animals will be weighed before necropsy. The organs denoted by (†) will be dissected free from fat and other contiguous tissue and weighed before fixation.

Histology (Appendix 3)
Gross lesions, liver and heart from all animals and tissues denoted by (Š) from:

- control and high dose animals
- decedents (all groups)

will be embedded in paraffin wax BP, sectioned at a nominal 5 µm and stained with haematoxylin and eosin.

The liver and heart for all animals will be processed ahead of the other tissues.

Spleen and kidney from low and intermediate dose animals will be processed to the slide stage.

Additional tissues may also be included to complete standard tissue blocks at no extra cost to the Sponsor. This will be done in accordance with relevant Histology SOP's.

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Duplicate slides from all tissues will be prepared. The additional set will be despatched to the Sponsor for evaluation. The Sponsor will be responsible for the reporting of any data generated and this will not be included in the Covance report.

Pathology (Appendix 3)
Gross lesions, liver and heart from all animals and tissues denoted by (S) from:

- control and high dose animals
- decedents (all groups)

will be examined microscopically by the study pathologist.

If a treatment-related effect is indicated in any tissue at the high dose level, then the pertinent tissue from one or all of the lower dose groups will be examined at additional cost and within an additional time frame.

The liver and heart pathology will be completed ahead of the other tissues. A draft pathology report on the findings for these tissues will be issued approximately 3 weeks from the last day of necropsy.

DATA EVALUATION

Data from treated animals will be compared with control data.

Statistical analysis will be performed where appropriate using the methods specified in the appendices.

MAJOR COMPUTER SYSTEMS

The following computerised systems may be used during the conduct of this study:

Scheduling	CMS (Covance Management System)
Formulations	Talisman
In-life data collection	Connex
Clinical pathology	Clinaxys
Bioanalytical analysis	Atlas/Analyst/Nautilus
Post-life data collection	Xybion

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Report generation and statistical analysis Deliver/Office 97

Version numbers of the systems will be held on file at Covance.

GOOD LABORATORY PRACTICE COMPLIANCE

The study will be performed in compliance with the United Kingdom Statutory Instrument 1999 No. 3106, the Good Laboratory Practice Regulations 1999 and the OECD Principles on Good Laboratory Practice (revised 1997, Issued Jan 1998) ENV/MC/CHEM(98)17.

All procedures will be performed in accordance with detailed Standard Operating Procedures. The records to be kept for this study are indicated in the appendices. Wherever appropriate, any change to this protocol will be made by an amendment issued in agreement with the Sponsor.

For aspects of study performed at Covance, protocol review, in-life and report audits will be performed in accordance with Standard Operating Procedures laid down by the Covance Quality Assurance department.

In the event of inspection by an outside authority, the Sponsor will be consulted before the inspectors are permitted access to any of the study records (unless required by law or regulation).

REPORTS

The Sponsor will be informed promptly of any significant findings and issued progress reports at appropriate intervals.

Following completion of the study a draft report will be issued. Client comments should be supplied for inclusion into a final document within six months of receipt of the draft document. In accordance with requirements of the UK Medicines Control Agency GLP Monitoring Authority, if no client comments are received within six months of issue, the report will be finalised. Any further changes after this time will be addressed as an amended final report and may result in additional costs.

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ARCHIVE

All primary data, or authenticated copies thereof, specimens and the final report will be retained in the Covance Laboratories Limited archives for ten years after issue of the final report. At this time the sponsor will be contacted to determine whether the data should be returned, retained or destroyed on their behalf. Sponsors will be notified of the financial implications of each of these options at that time.

Specimens requiring storage deep frozen are specifically excluded from the above. These will be retained for as long as the quality of the material permits evaluation but for no longer than three months after issue of the final report. The Study Sponsor will be notified of the intent to destroy samples and any financial implications before specimens are destroyed on their behalf.

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Appendix 1
Diet Summary (Year Ending 31 December 2002)

R+M No 1

Nutrients		Mean	SD
Moisture	%	9.9	0.7
Crude Fat	%	2.8	0.4
Crude protein	%	14.6	0.2
Crude Fibre	%	4.7	0.5
Ash	%	4.6	0.1
Calcium	%	0.74	0.03
Phosphorus	%	0.53	0.02
Sodium	%	0.23	0.04
Chloride	%	0.42	0.02
Potassium	%	0.74	0.02
Magnesium	%	0.16	0.01
Iron	mg/kg	163	18
Copper	mg/kg	8	1
Manganese	mg/kg	50	3
Zinc	mg/kg	38	3
Vitamin A	iu/g	5.7	1.5
Vitamin E	mg/kg	61.0	11

Contaminants			
Fluoride		mg/kg	4	2
Nitrate as $NaNO_3$		mg/kg	9	2
Nitrite as $NaNO_2$		mg/kg	0.2	0.6
Lead		mg/kg	0.07	0.14
Arsenic		mg/kg	ND	ND
Cadmium		mg/kg	0.01	0.03
Mercury		mg/kg	0.00	0.01
Selenium		mg/kg	0.06	0.06
Total Aflatoxins		mcg/kg	ND	ND
Total PCB		mcg/kg	ND	ND
Total DDT		mcg/kg	ND	ND
Dieldrin		mcg/kg	ND	ND
Lindane		mcg/kg	ND	ND
Heptachlor		mcg/kg	ND	ND
Malathion		mcg/kg	4	8
Total viable organisms	$x 10^3$	per g	ND	ND
Mesophilic spores	$x 10^2$	per g	0.2	0.42
Salmonellae species		per g	ND	ND
Entero Bacteriaceae		per g	ND	ND
Escherichia coli		per g	ND	ND
Fungal units		per g	21	41
Antibiotic activity			ND	ND

ND = Non detected

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Appendix 2
Summary of Water Analysis (Year Ending 31 December 2002)

Covance water supply sampled at point of use (treated water)

Parameter	Unit	Range	Mean
Nitro total axid	mg/L	3.844 - 6.988	4.22
Conductivity 20c	uS/cm	145 - 183	149
pH		7.2 - 8.1	7.4
Turbidity	FTU	<0.15 - 0.51	<0.18
Nitrate	mg/L NO_3	3.840 - 6.988	4.155
Nitrite	mg/L NO_2	<0.010	<0.010
Nitrogen ammoniacal	mg/L NH_4	<0.03 - 0.06	<0.03
Iron	ug/L Fe	<7 - 55	<19
Aluminium	ug/L Al	<13 - 60	<34
Manganese	ug/L Mn	<1.5 - 39.7	<3.5
Colour True	Hazen	<1.7 - 5.2	<3.4
Aldrin	ug/L	<0.0050 - <0.0053	<0.0052
DDT (pp)	ug/L	<0.0036 - <0.0050	<0.0043
Dieldrin	ug/L	<0.0022 - <0.0040	<0.0031
Endrin	ug/L	<0.0032 - <0.0060	<0.0046
HCH - gamma	ug/L	<0.0008 - <0.0050	<0.0029
Copper	ug/L Cu	9 - 1990	110
Lead	ug/L Pb	<0.3 - 1.7	<0.5
Zinc	ug/L Zn	<6 - 208	<22
Chloride	mg/L Cl	11.5 - 15.0	12.7
Sulphate	mg/L SO_4	30.5 - 36.6	32.3
Calcium	mg/L Ca	14.2 - 17.7	15
Magnesium	mg/L Mg	2.47 - 3.53	2.75
Sodium	mg/L Na	9.14 - 11.40	10.03
Potassium	mg/L K	1.28 - 1.52	1.38
Phosphorus	ug/L P	160 - 998	920
Cadmium	ug/L Cd	<0.09	<0.09
Hardness total	mg/L Ca	19 - 25	20
Alkalinity total	mg/L HCO_3	15.9 - 29.6	19.2
Total coliforms	No/100ml	0	0
Faecal coliforms	No/100ml	0	0
Escherichia coli	No/100ml	0	0
Chlorine free	mg/L Cl	<0.05 - 0.16	<0.07
Chlorine total	mg/L Cl	<0.05 - 0.20	<0.11
Colonies 1 day 37c	No/ml	0 - 1100	45
Colonies 3 day 22c	No/ml	0 - 512	53

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Appendix 3
Terminal Procedures

(• - Tissues preserved) († - Organs weighed) (§ - Tissues examined)

Ref no	Tissue/organ	(•)	(†)	(§)
0	Blood sample	•c		
0	Bone marrow smear (femur)	•ac		
1	Eyes (x2)	•b		
1.1	Optic nerves (x2)	•		
2	Harderian glands	•d		
3	Skin	•		
3	Mammary	•f		
3	Muscle (quadriceps)	•		
4	Femur with bone marrow and articular surface	•		
5	Sternum with bone marrow	•		
6	Sciatic nerves (x2)	•		
7	Liver (x 2)	•	†	§
7	Spleen	•	†	§
7	Pancreas	•		§
7	Mesenteric lymph nodes	•		§
8	Stomach	•		§
8	Duodenum	•		§
8	Jejunum	•		§
9	Ileum	•		§
9	Caecum	•		§
9	Colon	•		§
9	Rectum	•		
11	Adrenals (x2)	•	†	§
12	Kidney (x2)	•	†	§
13	Testes + epididymides	•	†	§
13	Ovaries (x2)	•	†	§
14	Seminal vesicles (x2)	•		§
14	Urinary bladder	•		§
14	Prostate	•		§
14	Uterus (x3)	•		§
14	Vagina	•		§

Ref no	Tissue/organ	(•)	(†)	(§)
15	Salivary glands	•		
15	Mandibular lymph nodes	•		§
15.1	Thymus	•	†	§
16	Lungs (x2)	•		§
18	Heart	•	†	§
18	Aorta	•		
18	Trachea	•		§
18	Oesophagus	•		
18	Tongue	•		
19	Thyroids + parathyroids	•		§
19.1	Larynx			
20	Pituitary	•		
21	Brain (x3)	•	†	
21	Spinal cord cervical	•		
21	Spinal cord thoracic	•		
22	Spinal cord lumbar	•		
23	Lacrimal glands (x2)	•d		
24	Zymbal glands (x2)	•d		
25	Bronchial lymph nodes			
25.1	Trachea bifurcation			
25.2	Head	•		
26	Nasal cavity (x2)	•d		
27	Nasal cavity (x2)	•d		
28	Nasopharynx / nares (x2)	•d		
99.	Additional tissue			
99.1	Dosing sites			
99.2	Animal identification	•		
99.3				
99.4				
99.5				
100	Gross lesions	•		§

Fixative: 10% Neutral Buffered Formalin except where stated as: a – methanol b - Davidson's

c - see clinical pathology section of protocol

d - will be preserved with the head (in situ) unless histopathological processing is required

f - female only

Left and right organs will be weighed together.

Lungs to include mainstem bronchi.

Bone tissue designated for histopathological examination will be decalcified using Kristensons fluid.

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Appendix 4
Blood sampling requirements

Terminal blood sampling schedule – necropsy

Occasion	Sample site	Animals fasted	Sample type	Anticoagulant	Sample volume (mL)	Total number of samples
Terminal	AA	Yes	Haematology	EDTA	0.5	40
	AA	Yes	Haematology	Trisodium citrate	0.5	40
	AA	Yes	Clinical chemistry	Lithium heparin	1.0	40
Unscheduled	AA	NA	Haematology	EDTA	0.5	1
	AA	NA	Haematology	Trisodium citrate	0.5	1
	AA	NA	Clinical chemistry	Lithium heparin	1.0	1

AA = abdominal aorta
NA = not applicable
Blood samples for clinical chemistry are taken into lithium heparin gel tubes.
Total number of samples may alter if deaths occur

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Appendix 5
Statistical Methods

General statistical procedures
Tests will be performed using a two-sided risk.

The vehicle control group (Group 1) will be taken as the baseline group with which the treated groups (Groups 2-4) will be compared.

Significant results will be reported as $P<0.05$, $P<0.01$ or $P<0.001$.

In general, where analysis of variance (ANOVA) is indicated in the following methods, two-way ANOVA will be used where the smallest group size is between 4 and 6, and data for both sexes are available. Otherwise, one-way ANOVA will be used. No analysis will be performed where there are less than 4 animals per group.

Methods for in-life and necropsy parameters
Body weight gains over specified intervals and, where required, absolute body weights at pre-determined study durations will be analysed using analysis of variance (ANOVA) (Procedure I or II; see below).

Clinical pathology parameters will be analysed using ANOVA (Procedure I or II). Non-parametric tests (Procedure III) will be used for parameters containing values outside the limits of detection.

Organ weights will be analysed using analysis of covariance (ANCOVA) (Procedure IV), adjusting for necropsy body weight. For paired organs the total weight will be analysed. Unadjusted organ weights and organ/body weight ratios may be analysed instead if requested by the Sponsor or thought to be appropriate by the Study Director/Study Biostatistician; ANOVA (Procedure I) will then be used.

Necropsy body weights will be analysed using ANOVA (Procedure I or II).

Where data are unsuitable for analysis by these methods, the Statisticians will use appropriate alternative methods. Any such analysis will be described in the report.

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Procedures for quantitative data

Procedure I (ANOVA)
Male and female data will be analysed separately.

One-way ANALYSIS OF VARIANCE (ANOVA) will be performed. Levene's test will be used to test for equality of variances among groups. Where Levene's test is non-significant (P≥0.01), comparisons between each treated group and control will be made using DUNNETT'S test. A LINEAR CONTRAST will be used to test for dose response. A log transformation may be applied to achieve variance stability.

Where the data prove unsuitable for this procedure, non-parametric methods (Procedure III) will be used.

Where data for only two groups are available, a two-sample t-test will be used.

Procedure II (Two-way ANOVA)
Two-way ANALYSIS OF VARIANCE (ANOVA) will be performed on the data from both sexes. LEVENE's test will be used to test for equality of variance between sexes, among groups and for any interaction. Where none of the Levene's tests is significant (P≥0.01 for all 3 tests), comparisons between each treated group and control will be made for each sex separately using DUNNETT'S test. A LINEAR CONTRAST will be used to test for dose response for each sex separately. The Dunnett's tests and regression analyses will use the mean square error from the combined ANOVA for testing the significance of results. A log transformation may be applied to achieve variance stability.

Where either of the Levene's tests for group or interaction differences is significant, the data will be analysed using Procedure III. Where only the test for a sex difference is significant, the data will be analysed using Procedure I.

Where data for only two groups are available, a two-way ANOVA will be used; comparisons between treated and control groups will be made for each sex separately using t-tests.

Procedure III (non-parametric)
Male and female data will be analysed separately.

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The KRUSKAL-WALLIS non-parametric ANOVA will be performed, together with the WILCOXON RANK SUM TEST for each treated group against control. Where the ANOVA is not significant, the Wilcoxon tests will not be reported. The TERPSTRA-JONCKHEERE TEST for dose response will also be performed.

Where data for only two groups are available, the Wilcoxon Rank Sum test will be used.

Procedure IV (ANCOVA)
Male and female data will be analysed separately.

This procedure will be used when adjustment is required for a second variable.

ANALYSIS OF COVARIANCE (ANCOVA) will be performed. Where there is no significant heterogeneity among the gradients ($P \geq 0.01$), Levene's test will be performed to test for equality of variances between groups. If Levene's test is non-significant ($P \geq 0.01$), the adjusted means for treated groups will be compared against control using DUNNETT'S test. Where data for only two groups are available, the GROUP effect from the ANCOVA will be reported.

Where there is significant heterogeneity among the gradients, the data will be inspected and the Biostatistician will decide how to proceed. Where Levene's test is significant, both the organ weight and organ/body weight ratio will be analysed using Procedure I.

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Appendix 6
Study Records

The following study records will be routinely maintained and will include but may not be limited to the following:

Definitive protocol
Protocol amendment(s)
File notes(s)
Study schedule
Study correspondence
Despatch/receipt of samples from Covance

Dispensary information pertaining to:
Test article receipt
Test article description
Test article usage
Test article disposal
Preparation of dosing formulations (if appropriate)

Animal house information pertaining to:
Diet batches used
Diet and water analysis §
Supplier's animal data
Acceptability and randomisation of animals
Details of experimental environment

§ - central records maintained

Animal house experimental procedures, observations and recording as listed in the protocol

The following data will be maintained if the analyses are required by protocol and performed by Covance:

Analysis of formulations
Analysis of toxicokinetic samples
Clinical pathology
Macro/micro pathological observations and recording as specified in the protocol

Statistical analyses (if appropriate)

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Appendix 7
Study Reports

Unaudited draft report
A draft report will be issued for comment by the study Sponsor. The report will contain the following information:

The name and address of the testing facility/s, location of all raw data and final report.

The objectives and procedures stated in the approved protocol including any amendments made to the original protocol and any unforeseen circumstances, which may have affected the quality or integrity of the study.

The identity of the test and control substances, by name or code number, their quality or purity and accuracy of formulation will be presented if appropriate. The experimental design including study start and completion dates, dose levels, route, frequency and duration of dosing.

The supplier, species, strain, sex of the animals and the method of identification.

The reports of the individual scientists involved in the study e.g. pathologist.

Data collected and pertaining to the observations as indicated in the protocol will be presented in the report unless considered not appropriate by the Study Director. In these circumstances a textual comment will describe any effects, relationship or absence thereof to dosing.

Other data not specified in the above sections (e.g. results of statistical analyses, and data supplied by the Sponsor or suppliers) may be reported where appropriate.

Final report
The final report will be produced on paper. In addition to the detail described for the draft report it will contain the signature of the Study Director and other scientists involved in the conduct of the study. It will also contain a signed statement indicating that the study has been subject to evaluation by the Quality Assurance Unit.

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Electronic reports

An electronic copy of the final report above may be made available on request from the Sponsor. The study report/s will be provided in PDF format unless agreed otherwise by Covance before the start of the study. Reports requiring specialised Sponsor formats/alternative computer software packages may be possible on request from the Sponsor but may involve extra time and cost.

It should be noted that an electronic final report will be despatched only at the request of the Sponsor and will contain, to the best of our knowledge, a full copy of the available information presented in the original and verified hard copy of the final report. However, the electronic copy will not be subject to quality assurance approval. Covance will accept no responsibility for subsequent operations carried out on this electronic information, or copies thereof, after despatched to the Sponsor. Furthermore the electronic copy will be scanned by Covance prior to dispatch for the presence of computer viruses; however, we advise the Sponsor to recheck this prior to accessing as no warranty can be given as to its being virus-free.

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Appendix 8
Study personnel

Study Director Dr Philip W Harvey

Any change in Study Director will be documented by protocol amendment.

Distribution
In addition to the above the following personnel should receive copies of the protocol, protocol amendments and file notes.

Animal Health & Welfare/Ophthalmoscopy	A Basford
Animal House Supervisor (2 copies)	J Hollingsworth
Animal House Manager	T Jameson
Clinical Pathology Services	Sample Reception, B Johnson, F Palou
Deputy Study Director	C Green
Ethical Review	J Gardner
Formulations & Formulations Analysis	C Wood
Histology	S Brogden
Necropsy	I Wilkins
Pathology	J Glaister
Quality Assurance	C Clare
Report Co-ordination	P Lancaster
Resource Management	Estimation
Resource Management	Scheduling
Sample Management M.E.S	L Dunn
Statistics	C Gardner

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APPENDIX 9
PROTOCOL APPROVAL

[redacted]

May 2, 2003
Date

P.W. Harvey

29 April 2003
Date

Dr Philip W Harvey
Study Director
Covance Laboratories Ltd

D Everett

29 Apr 03
Date

D Everett BSc CBiol FIBiol
Head of Toxicology Study Directors/Home Office Project Licence Holder/
Project Licence Number:PPL 60/2100 (4)
Covance Laboratories Ltd

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Protocol Amendment

Study Title	[redacted]28 Day Oral (Dietary) Administration Study in the Han Wistar Rat
Study Director	Dr Philip W Harvey philip.harvey@covance.com +44 (0) 1423 848421
Sponsor	[redacted]
Study Monitor	[redacted]
Test Facility	Covance Laboratories Ltd Otley Road, Harrogate North Yorkshire HG3 1PY ENGLAND
Covance Study Number	535/104
Amendment Number	1
Page Number	1 of 5

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This amendment clarifies proposed dates, corrects the acclimatisation period to approximately one week and corrects the study personnel list (sample management).

Proposed study dates

Animals on site	23 April 2003
Experimental start date	29 April 2003
First treatment	1 May 2003
Study termination	30 May 2003
Liver and heart draft pathology	To be advised
Pathology completed & experimental completion date	To be advised

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Acclimatisation and health procedures

All animals were given a clinical inspection for ill health on arrival. They were acclimatised for about one week and a veterinary inspection was performed before the start of dosing to ensure their suitability for study.

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Report Co-ordination	P Lancaster
Resource Management	Estimation
Resource Management	Scheduling
Sample Management M.E.S	L Kelshaw
Statistics	C Gardner

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AMENDMENT APPROVAL

[redacted]

May 13 2003
Date

P.W. Harvey

6 May 2003
Date

Dr Philip W Harvey
Study Director
Covance Laboratories Ltd

D Everett

6 May 03
Date

D Everett BSc CBiol FIBiol
Head of Toxicology Study Directors/Home Office Project Licence Holder/
Project Licence Number:PPL 60/2100 (4)
Covance Laboratories Ltd

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Protocol Amendment

Study Title	[redacted]28 Day Oral (Dietary) Administration Study In the Han Wistar Rat
Study Director	Dr Philip W Harvey philip.harvey@covance.com +44 (0) 1423 848421
Sponsor	[redacted]
Study Monitor	[redacted]
Test Facility	Covance Laboratories Ltd Otley Road, Harrogate North Yorkshire HG3 1PY ENGLAND
Covance Study Number	535/104
Amendment Number	2
Page Number	1 of 4

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This amendment confirms the rationale for selection of dose levels as stated in the protocol in accordance with UK law (Animals (Scientific Procedures) Act 1986).

Dose levels

The following dose levels were selected by the sponsor:

Group number	Group description	Group codes	Dose level (ppm)	Animal numbers	
				Male	Female
1	Control	Buff	0	1-5	21-25
2	Low	Green	500	6-10	26-30
3	Intermediate	Blue	5000	11-15	31-35
4	High	Pink	20000	16-20	36-40

The dose levels were selected by the sponsor on the basis of preliminary data which indicated that the test article was of low toxicity. This study was also designed to cover a wide span of dose levels with the aim of selecting a suitable high dose level for the subsequent rat 90 day study (535/101).

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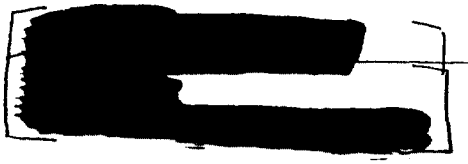
AMENDMENT APPROVAL



June 30, 2003
Date

P. W. Harvey

Dr Philip W Harvey
Study Director
Covance Laboratories Ltd

25/6/03
Date

D Everett

D Everett BSc CBiol FIBiol
Head of Toxicology Study Directors/Home Office Project Licence Holder/
Project Licence Number:PPL 60/2100 (4)
Covance Laboratories Ltd

25 June 03
Date

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Appendix 8
Study personnel

Study Director Dr Philip W Harvey

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Resource Management	Scheduling
Sample Management M.E.S	L Kelshaw
Statistics	C Gardner

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Protocol Deviations

Procedure	Protocol Deviations
Anatomic Pathology	
Histopathology	On the instruction of the Sponsor, histology and pathology was not conducted on the kidney of Group 2 and 3 even although findings were seen in Groups 1 and 4.
Tissue preservation	In addition to the preservatives stated in the protocol (10% neutral buffered formalin except for the eyes which were fixed in Davidson's fluid and the bone marrow smear which was fixed in methanol) PAS and Oil Red O staining was also used for the liver, kidney and heart of animals 5, 19, 25 and 39.

These deviations are expected not to have affected the results of the study

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Appendix 2
Certificate of test article analysis

Certificate of Analysis

Code Name :	[redacted]TGAI)
Chemical Name :	[redacted]
CAS Number :	[redacted]
Lot No. :	RCT301
Purity :	99.1 %
Color :	White powder
Method for Analysis :	HPLC external standard method
Date of Analysis :	February 21, 2003
Date of Synthesis :	January 22, 2003
Storage Condition :	10℃ to 30℃
Expiry Date :	February 20, 2004

This compound was synthesized and analyzed by [redacted]

Date March 17, 2003

Signature [redacted]

[redacted]

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Appendix 3
Analysis of formulations

SUMMARY

Test article was formulated into ground diet for administration to the study animals.

Formulations were found to be homogenous and stable for 7 days when stored at room temperature (10 to 30°C) at concentrations 100 and 20000 mg/kg.

Formulations from Week 1 were analysed to determine the achieved concentration. Results were within the range 85 to 110%.

The analytical procedure was validated under study number 535/102 and is reported in this study (535/104) report.

PROCEDURES

Validation of analytical method

To determine the validity of an analytical method it is necessary to:

- verify linearity of response
- verify linearity of extraction
- determine analytical recovery
- determine the precision of the analytical method
- determine the accuracy of the analytical method
- confirm specificity

The approximate working calibration range was approximately 5 to 200 µg/mL.

Linearity of response

A 'calibration set' of solutions of increasing test article concentration was submitted to HPLC.

A calibration graph was constructed for the standard solutions.

Precision and accuracy

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The precision and accuracy of the analytical procedure was determined as follows:

- Sets of standards at concentrations of 5.020 and 200.8 µg/mL were prepared (each set contained six standards).
- Control diets were fortified with test article to give nominal concentrations of 100 and 20000 µg/g.
- All extracts were submitted to HPLC.
- A six point calibration line was constructed from a separate stock solution from the one above.
- The concentration of the test article in the other extracts was calculated from their HPLC responses using the calibration line.
- The mean and standard deviations of these observations were used to determine the relative precision (coefficient of variation) and accuracy of the assay.

$$precision\,\% = \frac{standard\ deviation}{mean} x\ 100 \quad (1)$$

$$accuracy\,\% = \frac{mean\ calculated\ test\ article\ concentration}{true\ test\ article\ concentration} x\ 100 \quad (2)$$

Selectivity and analytical recoveries

Fortified control diets prepared as part of the precision and accuracy and a set of six blank diets were also prepared. All were submitted to HPLC to determine recovery and selectivity.

Homogeneity and stability

Homogeneity and stability were determined at concentrations 100 and 20000 mg/kg.

Samples from the top and bottom of the dietary formulations were removed from each of the diets (time zero). These were analysed in triplicate for test article concentration to determine homogeneity.

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The formulations were analysed as above after storage at room temperature (10 to 30°C) for 1, 3 and 7 days to determine stability.

Achieved concentration

Samples removed from dietary formulations prepared in Week 1 were analysed in duplicate (apart from the control where a single analysis was performed).

Analytical procedure

The written analytical procedure Covance 535/102-01F was used to determine achieved concentration, homogeneity and stability.

RESULTS AND DISCUSSION

Validation

Linearity of response

A set of fortified diet extracts, were submitted to HPLC. The concentration/response curve was straight with an intercept approaching zero. The correlation coefficient (r) was 1.0000. A minimum value of 0.9900 is considered acceptable (r = 1.00 for a perfect fit to the line).

Linearity of response was therefore considered to be acceptable.

There was no significant detector response from control diet extracts thereby confirming specificity of the method.

Analytical recovery

Analytical recoveries were determined at concentrations 100 and 20000 µg/g. Diet extract responses were calculated against a calibration line.

The mean recoveries were 106% and 102% respectively.

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Precision and accuracy

Precision and accuracy was determined:

	Actual concentration			
	5.020 µg/mL	200.8 µg/mL	100.4 µg/g	20000 µg/g*
Precision %	0.71	0.86	0.28	1.41
Accuracy %	104	105	106	102

Precision is normally expected to be ≤10% for this type of test and accuracy is regarded as acceptable if it is between 90% and 110%. All the results were within these limits. The method was therefore accepted in terms of precision and accuracy.

Homogeneity and stability

Group 2 (100 ppm)

	Results as % nominal							
Day	Top			Bottom			mean %	CV %
1	98	94	98	94	92	91	95	3.12
2	99	117	102	104	103	111	106	6.31
4	98	101	103	100	102	106	102	2.69
8	99	104	110	104	109	106	105	3.78

Group 4 (20000 ppm)

	Results as % nominal							
Day	Top			Bottom			mean %	CV %
1	94	94	95	96	95	100	96	2.35
2	96	101	99	102	101	90	98	4.62
4	97	96	99	97	98	96	97	1.20
8	100	104	103	100	100	100	101	1.81

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Group 4S (20000 ppm)

Day	Results as % nominal						mean %	CV %
	Top			Bottom				
1	100	98	97	99	98	96	98	1.44
2	98	99	96	98	98	101	98	1.66
4	97	100	98	98	99	97	98	1.19
8	105	105	106	103	102	105	104	1.44

At this laboratory, diets are considered homogenous if the coefficient of variation (CV%) of the results is ≤6.5%. In addition all the homogeneity results should be within ± 10% of the mean. Results, with the exception of 1 replicate from the 100 µg/g formulation after 24 hours, were within these criteria and the diets were therefore considered to be homogeneous.

There was no significant change in mean test article concentration during the 7 day storage period.

Achieved concentration analysis

WEEK 1

Group	Results as % nominal	
2	100	104
3	102	102
4	101	101

The target range for preparation of diets in this study was 85 to 110% of nominal. Results were within this range. Test article was not detected in the Group 1 (control) formulation.

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Appendix 4
Individual clinical observations

Test article	Control		[redacted]	
Group	1	2	3	4
Level (ppm)	0	500	5000	20000

Group/ Sex	Animal number	Clinical sign	Observations discovered during week: 1	2	3
2M	7	Thinning fur - dorsal	P		
4M	16	Thinning fur - dorsal	P	P	
1F	21	Thinning fur - dorsal	P	P	P
2F	29	Thinning fur - dorsal	P		

P = clinical sign present
Any other animal - no clinical signs present

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Appendix 4
Individual clinical observations

Test article	Control		[redacted]	
Group	1	2	3	4
Level (ppm)	0	500	5000	20000

Group/ Sex	Animal number	Clinical sign	Observations discovered during week: 4	5#
1M	5	Thinning fur - head		P
2M	7	Thinning fur - dorsal		P
3M	11	Thinning fur - dorsal		P
4M	17	Pale - teeth lower	P	P
	18	Pale - teeth lower		P
	19	Pale - teeth		P
1F	21	Thinning fur - dorsal	P	P
	25	Thinning fur - dorsal	P	P
2F	29	Thinning fur - dorsal	P	P
4F	36	Pale - teeth lower	P	P
	37	Pale - teeth		P
		Pale - teeth lower	P	
	38	Pale - teeth lower	P	P
	39	Pale - teeth		P
		Pale - teeth lower	P	
	40	Pale - teeth lower	P	P

# part-week only; terminal necropsies performed on second day of week (Day 30)
P = clinical sign present
Any other animal - no clinical signs present

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Appendix 5
Individual body weights

Test article	Control	[redacted]		
Group	1	2	3	4
Level (ppm)	0	500	5000	20000

Group/ Sex	Animal number	Individual body weights (g) at Week: Start	1	2	3	4
1M	1	122.7	165.7	209.5	248.2	283.3
1M	2	99.3	137.5	175.3	212.0	237.1
1M	3	105.1	150.9	192.9	231.9	258.6
1M	4	120.4	166.1	208.0	245.9	274.0
1M	5	107.9	148.8	186.4	220.2	246.3
2M	6	126.2	171.2	212.9	254.7	287.6
2M	7	116.1	158.6	193.3	232.6	260.5
2M	8	114.0	158.7	192.6	227.7	258.6
2M	9	105.4	144.3	179.8	212.2	233.9
2M	10	103.0	142.8	177.8	218.0	245.2
3M	11	135.4	177.9	216.6	257.0	285.4
3M	12	111.0	144.7	182.7	222.0	238.4
3M	13	103.8	141.0	178.0	212.6	236.4
3M	14	109.8	150.7	192.4	241.2	272.5
3M	15	121.4	163.1	203.3	245.5	278.4
4M	16	113.8	147.2	177.8	210.4	235.2
4M	17	101.5	124.4	155.7	187.1	207.1
4M	18	111.1	139.7	168.4	199.1	221.2
4M	19	123.6	158.8	193.9	227.8	257.5
4M	20	123.3	147.2	178.5	208.7	230.6
1F	21	101.8	134.4	159.8	181.3	200.4
1F	22	93.2	117.5	139.4	155.1	167.3
1F	23	105.9	132.7	153.3	164.1	177.6
1F	24	94.2	121.3	135.0	145.1	160.6
1F	25	85.8	111.1	128.0	137.4	154.4
2F	26	99.7	125.2	141.4	158.5	169.4
2F	27	94.2	120.6	137.6	152.1	165.4
2F	28	93.6	126.6	142.4	157.9	172.3
2F	29	98.5	129.8	145.8	161.3	172.5
2F	30	105.7	124.5	136.5	157.1	164.9
3F	31	85.4	131.8	145.7	161.2	173.5
3F	32	89.1	122.6	144.2	158.9	167.2
3F	33	94.5	139.5	155.8	170.7	188.0
3F	34	80.8	118.7	134.4	151.2	163.0
3F	35	81.8	115.6	132.6	149.9	167.8
4F	36	93.5	110.1	124.1	138.7	145.9
4F	37	92.0	109.0	120.6	136.3	148.7
4F	38	94.0	118.2	131.9	140.3	144.6
4F	39	97.3	114.1	125.3	141.2	151.9
4F	40	119.3	138.6	148.1	158.7	172.3

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Appendix 6
Individual food consumption, as a cage mean

Test article	Control		[redacted]	
Group	1	2	3	4
Level (ppm)	0	500	5000	20000

Group/ Sex	Animal number	Individual food consumption (g/animal/week) at Week: 1	2	3	4
1M	1	153.6	165.5	168.9	167.3
1M	2	153.6	165.5	168.9	167.3
1M	3	153.6	165.5	168.9	167.3
1M	4	153.6	165.5	168.9	167.3
1M	5	153.6	165.5	168.9	167.3
2M	6	153.3	157.4	177.8	171.3
2M	7	153.3	157.4	177.8	171.3
2M	8	153.3	157.4	177.8	171.3
2M	9	153.3	157.4	177.8	171.3
2M	10	153.3	157.4	177.8	171.3
3M	11	154.0	167.8	179.6	177.2
3M	12	154.0	167.8	179.6	177.2
3M	13	154.0	167.8	179.6	177.2
3M	14	154.0	167.8	179.6	177.2
3M	15	154.0	167.8	179.6	177.2
4M	16	143.2	161.0	164.1	167.7
4M	17	143.2	161.0	164.1	167.7
4M	18	143.2	161.0	164.1	167.7
4M	19	143.2	161.0	164.1	167.7
4M	20	143.2	161.0	164.1	167.7
1F	21	112.7	122.1	120.9	123.4
1F	22	112.7	122.1	120.9	123.4
1F	23	112.7	122.1	120.9	123.4
1F	24	112.7	122.1	120.9	123.4
1F	25	112.7	122.1	120.9	123.4
2F	26	118.4	119.8	120.7	117.0
2F	27	118.4	119.8	120.7	117.0
2F	28	118.4	119.8	120.7	117.0
2F	29	118.4	119.8	120.7	117.0
2F	30	118.4	119.8	120.7	117.0
3F	31	130.2	126.7	123.9	128.2
3F	32	130.2	126.7	123.9	128.2
3F	33	130.2	126.7	123.9	128.2
3F	34	130.2	126.7	123.9	128.2
3F	35	130.2	126.7	123.9	128.2
4F	36	118.4	118.3	113.8	109.5
4F	37	118.4	118.3	113.8	109.5
4F	38	118.4	118.3	113.8	109.5
4F	39	118.4	118.3	113.8	109.5
4F	40	118.4	118.3	113.8	109.5

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Appendix 7
Individual haematology

Key to abbreviations/methods

Code	Parameter	Analyser	Method of determination
Hb	haemoglobin concentration	Bayer ADVIA	Spectrophotometric measurement of cyanmethaemoglobin
RBC	red blood cell count	Bayer ADVIA	Flow cytometry
PCV	packed cell volume	Calculation	PCV = (MCV x RBC) ÷ 10
RETA	reticulocytes	Automated	Supravital staining with oxazine 750, assessed by flow cytometry
RET ABS	absolute reticulocytes	Calculation	RBC x RETA ÷ 100
MCV	mean cell volume	Bayer ADVIA	Flow cytometry
MCH	mean cell haemoglobin	Calculation	MCH = (Hb ÷ RBC) x 10
MCHC	mean cell haemoglobin concentration	Calculation	MCHC = (Hb ÷ PCV) x 100
HDW	haemoglobin distribution width	Bayer ADVIA	Flow cytometry
RDW	red cell distribution width	Bayer ADVIA	Flow cytometry
PLAT	platelets	Bayer ADVIA	Flow cytometry
PCT	plateletcrit	Calculated	PCT = (MPV x PLT) ÷ 10,000
MPV	mean platelet volume	Bayer ADVIA	Flow cytometry
PDW	platelet distribution width	Bayer ADVIA	Flow cytometry
PT	prothrombin time	ACL Futura	Fibrin formation using rabbit brain thromboplastin to activate coagulation cascade
APTT	activated partial thromboplastin time	ACL Futura	Fibrin formation using micronised silica to activate coagulation cascade
WBC	white blood cell count	Bayer ADVIA	Flow cytometry
N L M E B LUC	neutrophils lymphocytes monocytes eosinophils basophils large unstained cells	Manual: Blood smear Automated: Bayer ADVIA	Manual: Visual appraisal of a blood smear using a Romanowski-type stain Automated: Cytochemical staining with a peroxidase stain and detection of light scatter using a photo-optical method. Basophils enumerated using differential lysis and laser light scattering

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Appendix 7
Individual haematology
Occasion: Week 5 (at terminal necropsy)

Test article	Control	[redacted]		
Group	1	2	3	4
Level (ppm)	0	500	5000	20000

Group/ Sex	Animal number	Hb g/dL	RBC mil/cmm	PCV %	RETA %	RET ABS mil/cmm	MCV fL	MCH pg	MCHC g/dL
1M	1	14.6	7.64	42.0	4.0	0.31	55.0	19.1	34.8
1M	2	15.7	8.63	46.3	2.9	0.25	53.6	18.2	33.9
1M	3	15.1	7.94	44.9	3.3	0.26	56.5	19.0	33.6
1M	4	14.9	7.92	41.8	2.9	0.23	52.8	18.8	35.6
1M	5	15.5	7.94	45.3	3.8	0.30	57.1	19.5	34.1
2M	6	14.8	8.00	42.5	3.6	0.29	53.1	18.5	34.8
2M	7	14.9	8.07	43.6	3.0	0.24	54.0	18.4	34.2
2M	8	SC	SC	SC	SC	NC	SC	SC	SC
2M	9	16.3	8.33	46.0	2.9	0.24	55.3	19.5	35.4
2M	10	15.7	8.57	46.7	3.4	0.29	54.5	18.3	33.6
3M	11	SC	SC	SC	SC	NC	SC	SC	SC
3M	12	15.2	7.93	45.0	3.7	0.29	56.7	19.2	33.8
3M	13	SC	SC	SC	SC	NC	SC	SC	SC
3M	14	15.1	7.91	42.6	3.7	0.29	53.8	19.1	35.5
3M	15	15.2	7.87	43.1	3.2	0.25	54.8	19.3	35.2
4M	16	15.3	8.37	44.7	3.2	0.27	53.4	18.3	34.3
4M	17	16.1	8.78	47.7	3.9	0.34	54.4	18.3	33.7
4M	18	SC	SC	SC	SC	NC	SC	SC	SC
4M	19	15.0	8.31	42.5	3.5	0.29	51.1	18.0	35.3
4M	20	SC	SC	SC	SC	NC	SC	SC	SC

SC = sample clotted
NC = not calculated

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Appendix 7
Individual haematology
Occasion: Week 5 (at terminal necropsy)

Test article	Control	[redacted]		
Group	1	2	3	4
Level (ppm)	0	500	5000	20000

Group/ Sex	Animal number	HDW g/dL	RDW %	PLAT 1000/cmm	PCT %	MPV fl	PDW %	PT s	APTT s
1M	1	2.54	12.2	1008	0.60	5.9	57.8	21.8	19.4
1M	2	2.16	11.4	1109	0.65	5.9	59.7	20.2	13.3
1M	3	2.23	11.9	938	0.61	6.5	64.9	19.7	16.1
1M	4	2.57	12.2	1144	0.71	6.2	57.5	20.4	16.2
1M	5	2.39	12.5	988	0.63	6.4	62.3	19.4	14.5
2M	6	2.56	12.3	921	0.61	6.6	73.6	18.8	14.8
2M	7	2.28	11.4	1146	0.75	6.5	71.1	19.1	19.3
2M	8	SC	SC	SC	SC	SC	SC	SC	SC
2M	9	2.57	11.8	1135	0.75	6.6	64.3	19.7	22.5
2M	10	2.27	11.5	1297	0.83	6.4	75.7	SC	SC
3M	11	SC	SC	SC	SC	SC	SC	19.5	30.7
3M	12	2.34	11.5	800	0.60	7.5	73.2	20.8	19.4
3M	13	SC	SC	SC	SC	SC	SC	SC	SC
3M	14	2.69	12.8	1148	0.75	6.5	57.6	SC	SC
3M	15	2.63	12.2	1013	0.67	6.6	67.0	SC	SC
4M	16	2.32	11.8	1332	0.81	6.1	59.4	19.0	15.5
4M	17	2.41	12.9	1175	0.75	6.4	65.3	19.0	17.1
4M	18	SC	SC	SC	SC	SC	SC	SC	SC
4M	19	2.64	12.3	1223	0.77	6.3	60.0	22.9	14.7
4M	20	SC	SC	SC	SC	SC	SC	SC	SC

SC = sample clotted

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Appendix 7
Individual haematology
Occasion: Week 5 (at terminal necropsy)

Test article	Control	[redacted]		
Group	1	2	3	4
Level (ppm)	0	500	5000	20000

Group/ Sex	Animal number	Hb g/dL	RBC mil/cmm	PCV %	RETA %	RET ABS mil/cmm	MCV fL	MCH pg	MCHC g/dL
1F	21	14.1	7.44	39.6	3.2	0.24	53.3	19.0	35.7
1F	22	SC	SC	SC	SC	NC	SC	SC	SC
1F	23	15.0	8.24	43.7	3.5	0.29	53.0	18.3	34.4
1F	24	SC	SC	SC	SC	NC	SC	SC	SC
1F	25	SC	SC	SC	SC	NC	SC	SC	SC
2F	26	14.7	8.02	42.3	3.0	0.24	52.7	18.3	34.8
2F	27	SC	SC	SC	SC	NC	SC	SC	SC
2F	28	SC	SC	SC	SC	NC	SC	SC	SC
2F	29	14.9	7.81	43.3	1.9	0.15	55.4	19.1	34.4
2F	30	14.7	7.57	39.8	2.2	0.17	52.6	19.4	36.9
3F	31	SC	SC	SC	SC	NC	SC	SC	SC
3F	32	15.4	7.95	42.0	2.7	0.21	52.9	19.4	36.6
3F	33	15.8	8.17	44.5	2.8	0.23	54.5	19.3	35.4
3F	34	15.4	8.44	43.4	2.3	0.19	51.4	18.2	35.5
3F	35	15.7	7.85	43.3	2.6	0.20	55.2	20.0	36.1
4F	36	SC	SC	SC	SC	NC	SC	SC	SC
4F	37	SC	SC	SC	SC	NC	SC	SC	SC
4F	38	SC	SC	SC	SC	NC	SC	SC	SC
4F	39	13.9	8.12	40.2	3.7	0.30	49.4	17.1	34.7
4F	40	16.0	8.73	46.2	3.2	0.28	53.0	18.4	34.7

SC = sample clotted
NC = not calculated

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Appendix 7
Individual haematology
Occasion: Week 5 (at terminal necropsy)

Test article	Control	[redacted]		
Group	1	2	3	4
Level (ppm)	0	500	5000	20000

Group/ Sex	Animal number	HDW g/dL	RDW %	PLAT 1000/cmm	PCT %	MPV fl	PDW %	PT s	APTT s
1F	21	2.40	10.5	1085	0.70	6.5	66.4	21.9	13.8
1F	22	SC	SC	SC	SC	SC	SC	SC	SC
1F	23	2.10	10.3	1176	0.71	6.1	67.8	22.4	13.1
1F	24	SC	SC	SC	SC	SC	SC	19.2	18.2
1F	25	SC	SC	SC	SC	SC	SC	SC	SC
2F	26	2.33	11.5	1047	0.62	5.9	54.6	21.2	20.1
2F	27	SC	SC	SC	SC	SC	SC	SC	SC
2F	28	SC	SC	SC	SC	SC	SC	SC	SC
2F	29	2.03	10.6	1009	0.68	6.8	59.3	SC	SC
2F	30	2.58	14.9	1317	0.76	5.8	49.5	21.6	14.0
3F	31	SC	SC	SC	SC	SC	SC	SC	SC
3F	32	2.37	10.5	1298	0.88	6.8	64.5	20.2	20.0
3F	33	2.33	10.6	1224	0.86	7.1	66.0	20.4	11.9
3F	34	2.53	11.5	1232	0.84	6.8	67.4	20.0	14.0
3F	35	2.64	17.6	1515	1.01	6.7	61.8	20.9	13.0
4F	36	SC	SC	SC	SC	SC	SC	SC	SC
4F	37	SC	SC	SC	SC	SC	SC	SC	SC
4F	38	SC	SC	SC	SC	SC	SC	SC	SC
4F	39	2.65	12.7	1446	0.93	6.4	57.1	20.1	12.3
4F	40	2.41	11.1	1335	0.86	6.5	62.2	20.2	14.8

SC = sample clotted

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Appendix 7
Individual haematology
Occasion: Week 5 (at terminal necropsy)

Test article	Control		[redacted]	
Group	1	2	3	4
Level (ppm)	0	500	5000	20000

Group/ Sex	Animal number	Total WBC 1000/cmm	N 1000/cmm	L 1000/cmm	M 1000/cmm	E 1000/cmm	B 1000/cmm	LUC 1000/cmm
1M	1	3.0	0.7	2.2	0.1	0.0	0.0	0.0
1M	2	1.0	0.3	0.7	0.0	0.0	0.0	0.0
1M	3	5.9	1.4	4.2	0.1	0.1	0.0	0.0
1M	4	5.5	0.6	4.7	0.1	0.1	0.0	0.1
1M	5	3.0	0.5	2.4	0.0	0.0	0.0	0.0
2M	6	4.7	0.7	3.9	0.0	0.1	0.0	0.0
2M	7	2.5	0.4	2.0	0.1	0.1	0.0	0.0
2M	8	SC	NC	NC	NC	NC	NC	NC
2M	9	3.4	0.5	2.8	0.1	0.0	0.0	0.0
2M	10	1.1	0.2	0.9	0.0	0.0	0.0	0.0
3M	11	SC	NC	NC	NC	NC	NC	NC
3M	12	1.3	0.8	0.4	0.1	0.0	0.0	0.0
3M	13	SC	NC	NC	NC	NC	NC	NC
3M	14	2.8	1.0	1.6	0.1	0.1	0.0	0.0
3M	15	3.2	1.3	1.6	0.1	0.1	0.0	0.0
4M	16	2.4	0.7	1.5	0.1	0.0	0.0	0.0
4M	17	2.8	1.0	1.6	0.1	0.1	0.0	0.0
4M	18	SC	NC	NC	NC	NC	NC	NC
4M	19	2.8	0.3	2.3	0.1	0.0	0.0	0.0
4M	20	SC	NC	NC	NC	NC	NC	NC

SC = sample clotted
NC = not calculated

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Appendix 7
Individual haematology
Occasion: Week 5 (at terminal necropsy)

Test article	Control	[redacted]		
Group	1	2	3	4
Level (ppm)	0	500	5000	20000

Group/ Sex	Animal number	Total WBC 1000/cmm	N % WBC	L % WBC	M % WBC	E % WBC	B % WBC	LUC % WBC
1M	1	3.0	24	73	2	1	0	0
1M	2	1.0	26	72	2	1	0	0
1M	3	5.9	24	72	2	2	0	0
1M	4	5.5	11	86	1	1	0	1
1M	5	3.0	16	81	1	1	0	0
2M	6	4.7	14	83	1	2	0	1
2M	7	2.5	16	80	2	2	0	1
2M	8	SC	SC	SC	SC	SC	SC	SC
2M	9	3.4	16	81	2	1	0	1
2M	10	1.1	19	79	2	1	0	0
3M	11	SC	SC	SC	SC	SC	SC	SC
3M	12	1.3	59	33	4	3	0	1
3M	13	SC	SC	SC	SC	SC	SC	SC
3M	14	2.8	34	58	4	4	0	1
3M	15	3.2	42	51	4	2	0	1
4M	16	2.4	31	61	4	2	0	1
4M	17	2.8	35	57	4	3	0	0
4M	18	SC	SC	SC	SC	SC	SC	SC
4M	19	2.8	12	82	4	1	0	1
4M	20	SC	SC	SC	SC	SC	SC	SC

SC = sample clotted

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Appendix 7
Individual haematology
Occasion: Week 5 (at terminal necropsy)

Test article	Control		[redacted]	
Group	1	2	3	4
Level (ppm)	0	500	5000	20000

Group/ Sex	Animal number	Total WBC 1000/cmm	N 1000/cmm	L 1000/cmm	M 1000/cmm	E 1000/cmm	B 1000/cmm	LUC 1000/cmm
1F	21	3.2	0.5	2.5	0.1	0.1	0.0	0.0
1F	22	SC	NC	NC	NC	NC	NC	NC
1F	23	4.7	0.9	3.7	0.0	0.0	0.0	0.0
1F	24	SC	NC	NC	NC	NC	NC	NC
1F	25	SC	NC	NC	NC	NC	NC	NC
2F	26	2.8	0.4	2.3	0.1	0.0	0.0	0.0
2F	27	SC	NC	NC	NC	NC	NC	NC
2F	28	SC	NC	NC	NC	NC	NC	NC
2F	29	2.6	0.6	1.8	0.1	0.1	0.0	0.0
2F	30	1.3	0.3	0.9	0.0	0.0	0.0	0.0
3F	31	SC	NC	NC	NC	NC	NC	NC
3F	32	2.4	0.4	1.8	0.1	0.0	0.0	0.0
3F	33	1.5	0.4	0.9	0.1	0.0	0.0	0.0
3F	34	1.5	0.2	1.2	0.1	0.1	0.0	0.0
3F	35	0.7	0.1	0.5	0.0	0.0	0.0	0.0
4F	36	SC	NC	NC	NC	NC	NC	NC
4F	37	SC	NC	NC	NC	NC	NC	NC
4F	38	SC	NC	NC	NC	NC	NC	NC
4F	39	2.2	0.4	1.7	0.0	0.0	0.0	0.0
4F	40	3.4	0.9	2.2	0.1	0.2	0.0	0.0

SC = sample clotted
NC = not calculated

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Appendix 7
Individual haematology
Occasion: Week 5 (at terminal necropsy)

Test article	Control	[redacted]		
Group	1	2	3	4
Level (ppm)	0	500	5000	20000

Group/ Sex	Animal number	Total WBC 1000/cmm	N % WBC	L % WBC	M % WBC	E % WBC	B % WBC	LUC % WBC
1F	21	3.2	16	79	2	2	0	1
1F	22	SC	SC	SC	SC	SC	SC	SC
1F	23	4.7	20	78	1	1	0	0
1F	24	SC	SC	SC	SC	SC	SC	SC
1F	25	SC	SC	SC	SC	SC	SC	SC
2F	26	2.8	15	81	2	1	0	0
2F	27	SC	SC	SC	SC	SC	SC	SC
2F	28	SC	SC	SC	SC	SC	SC	SC
2F	29	2.6	23	70	2	3	0	1
2F	30	1.3	23	71	3	1	0	1
3F	31	SC	SC	SC	SC	SC	SC	SC
3F	32	2.4	17	77	4	2	0	0
3F	33	1.5	28	63	5	3	0	1
3F	34	1.5	12	79	4	4	0	1
3F	35	0.7	20	74	4	2	0	0
4F	36	SC	SC	SC	SC	SC	SC	SC
4F	37	SC	SC	SC	SC	SC	SC	SC
4F	38	SC	SC	SC	SC	SC	SC	SC
4F	39	2.2	17	79	2	1	0	1
4F	40	3.4	27	65	3	5	0	1

SC = sample clotted

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Appendix 8
Individual clinical chemistry

Key to abbreviations/methods

Code	Parameter	Analyser	Method of determination
AST	Aspartate aminotransferase	Hitachi 917	Optimised UV method using L-aspartate and alpha-oxoglutarate as primary substrates
ALT	Alanine aminotransferase	Hitachi 917	Optimised UV method using L-Alanine and alpha-oxoglutarate as primary substrates
Gamma GT	Gamma glutamyltransferase	Hitachi 917	Colorimetric method using l-gamma-glutamyl-3-carboxy-4nitroanilide as substrate
ALK PHOS	Alkaline phosphatase	Hitachi 917	Colorimetric method using p-nitrophenyl phosphate as substrate
Na/K/Cl	Sodium /potassium /chloride	Hitachi 917	Ion-selective electrode
Ca	Calcium	Hitachi 917	Colorimetric method using o-cresophthalein complexone in alkaline solution
IN PHOS	inorganic phosphorous	Hitachi 917	Colorimetric method based upon ammonium molybdate in acid conditions
UREA	urea	Hitachi 917	UV method using a coupled urease procedure
BUN	blood urea nitrogen	Hitachi 917	BUN = urea x 2.801
T BILI	total bilirubin	Hitachi 917	A colorimetric method. Indirect bilirubin is liberated by detergent: Total bilirubin is coupled with a diazonium compound to give corresponding azobilirubin.
CREAT	creatinine	Hitachi 917	Colorimetric method
T PROT	total protein	Hitachi 917	Colorimetric method based on biuret reaction
ALBUMIN	albumin	Hitachi 917	Colorimetric method based on the BCG reaction
GLOBULIN	globulin	Calculation	globulin = total protein - albumin
AG RATIO	albumin/globulin ratio	Calculation	AG ratio = albumin /(total protein - albumin)
TOT CHOL	total cholesterol	Hitachi 917	Enzymatic method using cholesterol oxidase/esterase
TRIGS	triglycerides	Hitachi 917	Enzymatic method using lipase and glycerol kinase as primary enzymes
PLIPIDS	phospholipids	ILAB 900	Enzymatic Colorimetric method using phospholipase-D as primary substrate
GLUC	glucose	Hitachi 917	UV method using a coupled hexokinase procedure

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Appendix 8
Individual clinical chemistry
Occasion: Week 5 (at terminal necropsy)

Test article	Control	[redacted]		
Group	1	2	3	4
Level (ppm)	0	500	5000	20000

Group/ Sex	Animal number	AST IU/L	ALT IU/L	GAMMA GT IU/L	ALK PHOS IU/L	Na mmol/L	K mmol/L	Cl mmol/L
1M	1	161	83	<2	391	144	3.5	100
1M	2	176	109	<2	298	143	3.8	99
1M	3	150	82	<2	385	144	3.9	101
1M	4	136	68	<2	457	142	3.8	98
1M	5	82	37	<2	374	143	4.2	100
2M	6	114	77	<2	254	143	3.3	99
2M	7	225	137	<2	298	144	3.4	101
2M	8	104	31	<2	443	143	4.8	97
2M	9	147	70	<2	335	144	3.6	98
2M	10	123	68	<2	438	143	3.7	101
3M	11	226	54	<2	372	142	3.3	100
3M	12	503	122	<2	327	144	4.1	100
3M	13	523	110	<2	449	143	5.7	99
3M	14	337	70	<2	416	145	3.8	100
3M	15	302	60	<2	431	142	4.6	100
4M	16	314	97	<2	347	145	3.5	98
4M	17	271	82	<2	799	143	4.9	101
4M	18	425	128	<2	504	141	6.4	102
4M	19	328	93	<2	476	143	4.5	101
4M	20	SH	SH	SH	SH	SH	SH	SH

SH = sample haemolysed
< = half value shown used in calculations

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Appendix 8
Individual clinical chemistry
Occasion: Week 5 (at terminal necropsy)

Test article	Control	[redacted]		
Group	1	2	3	4
Level (ppm)	0	500	5000	20000

Group/ Sex	Animal number	Ca mmol/L	IN PHOS mmol/L	UREA mmol/L	BUN mg/dL	T BILI umol/L	CREAT umol/L	T PROT g/L
1M	1	2.62	2.4	10.9	30.5	2.2	58	62
1M	2	2.51	2.4	8.8	24.6	1.1	55	59
1M	3	2.48	2.6	7.3	20.4	1.3	53	57
1M	4	2.53	2.2	10.8	30.3	1.8	65	59
1M	5	2.52	2.4	8.5	23.8	1.4	63	63
2M	6	2.59	2.5	10.0	28.0	1.4	58	60
2M	7	2.51	2.1	7.9	22.1	1.6	51	61
2M	8	2.42	2.7	7.4	20.7	1.5	57	59
2M	9	2.55	2.7	8.1	22.7	2.0	61	65
2M	10	2.68	2.7	9.8	27.4	1.6	60	60
3M	11	2.63	2.6	7.7	21.6	<1.0	51	59
3M	12	2.62	3.0	8.1	22.7	<1.0	46	61
3M	13	2.57	3.1	8.8	24.6	<1.0	53	61
3M	14	2.75	2.5	9.6	26.9	1.9	54	63
3M	15	2.63	2.9	8.4	23.5	<1.0	49	61
4M	16	2.70	3.0	8.4	23.5	<1.0	46	60
4M	17	2.71	3.3	8.2	23.0	<1.0	45	61
4M	18	2.59	3.5	IS	NC	1.2	49	61
4M	19	2.61	3.2	13.9	38.9	<1.0	54	58
4M	20	SH	SH	SH	NC	SH	SH	SH

IS = insufficient sample for analysis
NC = not calculated
SH = sample haemolysed
< = half value shown used in calculations

SANITIZED COPY

Appendix 8
Individual clinical chemistry
Occasion: Week 5 (at terminal necropsy)

Test article	Control		[redacted]	
Group	1	2	3	4
Level (ppm)	0	500	5000	20000

Group/ Sex	Animal number	ALBUMIN g/L	GLOBULIN g/L	AG RATIO	TOT CHOL mmol/L	TRIGS mmol/L	P LIPIDS mg/dL	GLUC mmol/L
1M	1	41	21	2.0	1.7	0.76	128	6.2
1M	2	41	18	2.3	1.3	0.64	103	8.3
1M	3	39	18	2.2	1.5	0.42	120	5.1
1M	4	41	18	2.3	1.1	0.44	92	7.2
1M	5	43	20	2.2	1.8	0.62	134	6.0
2M	6	39	21	1.9	2.0	0.80	138	8.2
2M	7	41	20	2.1	1.8	0.59	134	6.2
2M	8	40	19	2.1	2.0	0.68	151	5.2
2M	9	44	21	2.1	1.5	0.39	119	6.8
2M	10	42	18	2.3	1.3	0.61	113	8.7
3M	11	37	22	1.7	2.1	3.79	184	7.1
3M	12	42	19	2.2	1.8	1.42	167	6.1
3M	13	42	19	2.2	2.1	1.52	176	6.9
3M	14	44	19	2.3	1.8	0.86	150	5.5
3M	15	42	19	2.2	1.6	2.30	150	7.7
4M	16	41	19	2.2	2.3	0.95	181	6.7
4M	17	43	18	2.4	2.7	3.36	223	2.8
4M	18	IS	NC	NC	2.0	1.80	IS	6.1
4M	19	39	19	2.1	1.9	2.15	160	3.4
4M	20	SH	NC	NC	SH	SH	SH	SH

IS = insufficient sample for analysis
NC = not calculated
SH = sample haemolysed

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Appendix 8
Individual clinical chemistry
Occasion: Week 5 (at terminal necropsy)

Test article	Control		[redacted]	
Group	1	2	3	4
Level (ppm)	0	500	5000	20000

Group/ Sex	Animal number	AST IU/L	ALT IU/L	GAMMA GT IU/L	ALK PHOS IU/L	Na mmol/L	K mmol/L	Cl mmol/L
1F	21	70	22	<2	197	142	3.6	102
1F	22	134	36	<2	232	144	5.3	100
1F	23	67	24	<2	103	141	3.4	103
1F	24	102	31	<2	183	141	5.1	100
1F	25	459	136	IS	285	IS	IS	IS
2F	26	69	24	<2	105	143	2.8	100
2F	27	167	50	<2	197	142	4.7	101
2F	28	391	142	<2	183	145	5.7	102
2F	29	515	241	<2	183	143	4.9	98
2F	30	77	30	<2	238	145	2.5	103
3F	31	463	95	<2	217	144	4.1	102
3F	32	148	27	<2	171	145	2.6	101
3F	33	260	29	<2	143	143	4.1	101
3F	34	541	105	<2	160	143	3.7	101
3F	35	229	30	<2	252	145	5.4	101
4F	36	560	93	<2	231	146	4.7	98
4F	37	150	33	2	386	144	4.8	101
4F	38	332	53	<2	215	145	3.6	99
4F	39	102	17	<2	249	143	2.7	103
4F	40	219	47	<2	217	145	3.1	98

IS = insufficient sample for analysis
< = half value shown used in calculations

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Appendix 8
Individual clinical chemistry
Occasion: Week 5 (at terminal necropsy)

Test article	Control	[redacted]		
Group	1	2	3	4
Level (ppm)	0	500	5000	20000

Group/ Sex	Animal number	Ca mmol/L	IN PHOS mmol/L	UREA mmol/L	BUN mg/dL	T BILI umol/L	CREAT umol/L	T PROT g/L
1F	21	2.58	2.3	10.2	28.6	2.0	64	63
1F	22	2.52	2.8	11.2	31.4	1.6	65	65
1F	23	2.71	2.0	9.3	26.0	2.5	61	67
1F	24	2.62	2.7	15.9	44.5	2.1	88	60
1F	25	2.49	IS	IS	NC	IS	80	57
2F	26	2.62	1.7	10.1	28.3	1.6	60	65
2F	27	2.56	2.3	9.0	25.2	1.3	62	59
2F	28	2.41	2.7	10.5	29.4	1.6	71	61
2F	29	2.52	2.3	11.3	31.7	1.5	70	61
2F	30	2.53	1.7	7.0	19.6	1.0	55	60
3F	31	2.58	3.1	12.6	35.3	2.2	54	63
3F	32	2.80	2.8	10.1	28.3	1.7	55	69
3F	33	2.77	2.6	10.6	29.7	1.1	52	58
3F	34	2.70	2.7	11.2	31.4	1.5	59	65
3F	35	2.55	3.1	11.0	30.8	1.5	56	60
4F	36	2.57	3.7	9.7	27.2	<1.0	50	67
4F	37	2.67	3.4	12.8	35.9	<1.0	55	62
4F	38	2.63	2.9	10.5	29.4	1.3	57	64
4F	39	2.55	2.5	12.7	35.6	1.1	49	61
4F	40	2.59	3.0	11.3	31.7	1.8	57	64

IS = insufficient sample for analysis
NC = not calculated
< = half value shown used in calculations

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Appendix 8
Individual clinical chemistry
Occasion: Week 5 (at terminal necropsy)

Test article	Control		[redacted]	
Group	1	2	3	4
Level (ppm)	0	500	5000	20000

Group/ Sex	Animal number	ALBUMIN g/L	GLOBULIN g/L	AG RATIO	TOT CHOL mmol/L	TRIGS mmol/L	P LIPIDS mg/dL	GLUC mmol/L
1F	21	45	18	2.5	1.6	0.27	123	4.0
1F	22	48	17	2.8	1.2	0.35	115	4.4
1F	23	49	18	2.7	1.1	0.62	122	5.0
1F	24	45	15	3.0	1.6	0.39	150	5.9
1F	25	IS	NC	NC	1.4	IS	IS	3.6
2F	26	48	17	2.8	1.5	1.14	141	4.1
2F	27	43	16	2.7	1.5	0.63	138	9.9
2F	28	43	18	2.4	1.4	0.41	113	4.1
2F	29	44	17	2.6	1.3	0.38	111	4.8
2F	30	44	16	2.8	1.5	0.17	120	6.0
3F	31	47	16	2.9	0.9	0.76	91	3.1
3F	32	48	21	2.3	2.3	0.44	178	3.2
3F	33	44	14	3.1	1.3	1.13	119	2.8
3F	34	47	18	2.6	1.7	0.59	137	3.4
3F	35	43	17	2.5	1.2	0.51	112	4.8
4F	36	48	19	2.5	2.9	0.88	215	1.4
4F	37	46	16	2.9	1.9	2.25	173	2.8
4F	38	45	19	2.4	1.7	0.30	126	2.8
4F	39	47	14	3.4	1.9	0.30	134	3.0
4F	40	46	18	2.6	1.7	0.56	134	2.5

IS = insufficient sample for analysis
NC = not calculated

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Appendix 9
Individual organ weights

Terminal kill

Test article	Control		[redacted]	
Group	1	2	3	4
Level (ppm)	0	500	5000	20000

Group and Sex	Animal number	Body weight (g)	Individual organ weights (g): Adrenals	Kidneys	Spleen	Liver
1M	1	261.5	0.091	1.612	0.563	7.999
1M	2	214.6	0.070	1.430	0.473	7.165
1M	3	237.1	0.057	1.506	0.569	6.835
1M	4	255.7	0.064	1.500	0.646	7.342
1M	5	226.4	0.077	1.611	0.571	7.157
2M	6	267.8	0.070	1.735	0.880	8.770
2M	7	241.6	0.068	1.555	0.626	7.956
2M	8	237.2	0.070	1.655	0.600	7.763
2M	9	213.3	0.040	1.427	0.472	6.291
2M	10	225.7	0.083	1.591	0.431	7.347
3M	11	258.7	0.069	1.650	0.504	9.736
3M	12	216.0	0.049	1.607	0.571	7.852
3M	13	213.9	0.042	1.629	0.586	9.162
3M	14	244.2	0.059	1.605	0.481	8.928
3M	15	248.8	0.060	1.741	0.447	9.100
4M	16	208.9	0.063	1.602	0.495	8.500
4M	17	185.3	0.032	1.440	0.590	8.719
4M	18	196.0	0.051	1.515	0.545	8.921
4M	19	226.1	0.052	1.535	0.521	9.866
4M	20	204.4	0.066	1.785	0.648	10.772

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Appendix 9
Individual organ weights
Terminal kill

Test article	Control		[redacted]	
Group	1	2	3	4
Level (ppm)	0	500	5000	20000

Group and Sex	Animal number	Body weight (g)	Individual organ weights (g): Heart	Brain	Thymus	Testes/ Epididymides
1M	1	261.5	0.825	1.883	0.545	4.518
1M	2	214.6	0.713	1.798	0.424	3.681
1M	3	237.1	0.752	1.752	0.544	3.592
1M	4	255.7	0.943	1.845	0.629	4.012
1M	5	226.4	0.938	1.835	0.503	4.241
2M	6	267.8	0.879	1.896	0.514	4.222
2M	7	241.6	0.847	1.885	0.617	4.096
2M	8	237.2	0.828	1.806	0.584	4.510
2M	9	213.3	0.772	1.901	0.534	3.850
2M	10	225.7	0.840	1.818	0.512	3.524
3M	11	258.7	0.829	1.777	0.720	3.561
3M	12	216.0	0.796	1.781	0.431	3.735
3M	13	213.9	0.836	1.784	0.467	3.699
3M	14	244.2	0.840	1.910	0.558	3.704
3M	15	248.8	0.801	1.867	0.660	3.839
4M	16	208.9	0.773	1.836	0.500	3.391
4M	17	185.3	0.670	1.684	0.476	3.100
4M	18	196.0	0.640	1.695	0.457	3.458
4M	19	226.1	0.791	1.700	0.561	3.571
4M	20	204.4	0.837	1.826	0.489	3.884

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Appendix 9
Individual organ weights
Terminal kill

Test article	Control	[redacted]		
Group	1	2	3	4
Level (ppm)	0	500	5000	20000

Group and Sex	Animal number	Body weight (g)	Individual organ weights (g): Adrenals	Kidneys	Spleen	Liver
1F	21	182.7	0.091	1.169	0.507	5.803
1F	22	152.1	0.058	0.959	0.364	4.512
1F	23	163.8	0.071	1.172	0.401	5.270
1F	24	146.5	0.048	1.126	0.401	4.998
1F	25	142.6	0.056	0.997	0.438	4.949
2F	26	155.3	0.053	1.016	0.361	4.952
2F	27	150.7	0.074	1.092	0.267	4.929
2F	28	157.9	0.061	0.987	0.373	4.869
2F	29	157.4	0.056	1.039	0.366	5.336
2F	30	152.8	0.086	0.997	0.293	4.733
3F	31	151.1	0.044	1.072	0.322	5.499
3F	32	153.8	0.052	1.147	0.353	5.717
3F	33	170.2	0.070	1.315	0.352	6.347
3F	34	145.9	0.067	1.111	0.311	5.399
3F	35	153.3	0.066	1.031	0.376	5.566
4F	36	132.9	0.044	1.154	0.303	5.731
4F	37	131.3	0.075	1.088	0.351	5.871
4F	38	133.1	0.053	1.087	0.295	5.171
4F	39	136.3	0.058	1.129	0.311	6.121
4F	40	152.1	0.080	1.293	0.475	6.421

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Appendix 9
Individual organ weights
Terminal kill

Test article	Control		[redacted]	
Group	1	2	3	4
Level (ppm)	0	500	5000	20000

Group and Sex	Animal number	Body weight (g)	Individual organ weights (g): Heart	Brain	Thymus	Ovaries
1F	21	182.7	0.715	1.701	0.489	0.150
1F	22	152.1	0.712	1.611	0.548	0.055
1F	23	163.8	0.563	1.862	0.544	0.075
1F	24	146.5	0.586	1.674	0.476	0.084
1F	25	142.6	0.746	1.625	0.408	0.073
2F	26	155.3	0.576	1.522	0.451	0.065
2F	27	150.7	0.572	1.680	0.518	0.070
2F	28	157.9	0.616	1.663	0.489	0.069
2F	29	157.4	0.605	1.721	0.381	0.073
2F	30	152.8	0.570	1.767	0.525	0.068
3F	31	151.1	0.598	1.684	0.569	0.061
3F	32	153.8	0.543	1.640	0.377	0.069
3F	33	170.2	0.617	1.754	0.440	0.095
3F	34	145.9	0.590	1.674	0.437	0.059
3F	35	153.3	0.625	1.718	0.413	0.078
4F	36	132.9	0.483	1.789	0.443	0.059
4F	37	131.3	0.455	1.570	0.413	0.060
4F	38	133.1	0.512	1.733	0.273	0.072
4F	39	136.3	0.529	1.657	0.372	0.067
4F	40	152.1	0.508	1.718	0.434	0.107

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Appendix 10
Individual animal pathology data

Test article	Control	[redacted]		
Group	1	2	3	4
Level (ppm)	0	500	5000	20000

COVANCE
HARROGATE, ENGLAND

PRINTED: 24-SEP-03
PAGE: 1

STUDY NUMBER: 535104

ANIMAL NUMBER: 000001 SEX: MALE DOSE GROUP: 1 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 05/30/03 STUDY DAY OF DEATH: 30 STUDY WEEK OF DEATH: 5 TERMINAL BODY WEIGHT: 261.5 GRAMS

OBSERVATIONS

NECROPSY	HISTOPATHOLOGY
STOMACH : -RED AREA; FEW, 2-4MM DIAMETER, MUCOSAL SURFACE, FUNDUS REGION	LIVER : -INFLAMMATORY CELL FOCI,-MINIMAL
ADRENAL : -RED, SLIGHT; BILATERAL	STOMACH : >UNREMARKABLE >NOTE:>NO MICROSCOPIC CORRELATION WITH NECROPSY.
	ADRENAL : >UNREMARKABLE >NOTE:>NO MICROSCOPIC CORRELATION WITH NECROPSY.
	KIDNEY : -FOCAL NEPHROPATHY,-MINIMAL
	HEART : -INFLAMMATORY CELL FOCI,-MINIMAL
	PARATHYROID : >UNREMARKABLE >NOTE:>ONE SAMPLE.

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
SPLEEN, PANCREAS, MESENTERIC LN, DUODENUM, JEJUNUM, ILEUM, CAECUM, COLON, TESTIS, EPIDIDYMIS, SEMINAL VESICLE, URINARY BLADDER, PROSTATE, MANDIBULAR LN, THYMUS, LUNG, TRACHEA, THYROID

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Appendix 10

Individual animal pathology data

Test article	Control	[redacted]		
Group	1	2	3	4
Level (ppm)	0	500	5000	20000

COVANCE
HARROGATE, ENGLAND

PRINTED: 24-SEP-03
PAGE: 2

STUDY NUMBER: 0535104

ANIMAL NUMBER: 000002 SEX: MALE DOSE GROUP: 1 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 05/30/03 STUDY DAY OF DEATH: 30 STUDY WEEK OF DEATH: 5 TERMINAL BODY WEIGHT: 214.6 GRAMS

OBSERVATIONS

NECROPSY	HISTOPATHOLOGY
ANIMAL : -NOT REMARKABLE	LIVER : -INFLAMMATORY CELL FOCI,-MINIMAL KIDNEY : -HYALINE DROPLETS,-MINIMAL PARATHYROID : >UNREMARKABLE >NOTE:>ONE SAMPLE.

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
SPLEEN, PANCREAS, MESENTERIC LN, STOMACH, DUODENUM, JEJUNUM, ILEUM, CAECUM, COLON, ADRENAL, TESTIS, EPIDIDYMIS, SEMINAL VESICLE, URINARY BLADDER, PROSTATE, MANDIBULAR LN, THYMUS, LUNG, HEART, TRACHEA, THYROID

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Appendix 10

Individual animal pathology data

Test article	Control	[redacted]		
Group	1	2	3	4
Level (ppm)	0	500	5000	20000

COVANCE
HARROGATE, ENGLAND

PRINTED: 24-SEP-01
PAGE: 3

STUDY NUMBER: 0535104

ANIMAL NUMBER: 00003 SEX: MALE DOSE GROUP: 1 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 05/30/01 STUDY DAY OF DEATH: 30 STUDY WEEK OF DEATH: 5 TERMINAL BODY WEIGHT: 237.1 GRAMS

OBSERVATIONS

NECROPSY	HISTOPATHOLOGY
ANIMAL :	LIVER :
-NOT REMARKABLE	-INFLAMMATORY CELL FOCI,-MINIMAL
	KIDNEY :
	-FOCAL NEPHROPATHY,-MINIMAL
	PARATHYROID :
	>UNREMARKABLE
	>NOTE:>ONE SAMPLE.

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
SPLEEN, PANCREAS, MESENTERIC LN, STOMACH, DUODENUM, JEJUNUM, ILEUM, CAECUM, COLON, ADRENAL, TESTIS, EPIDIDYMIS, SEMINAL VESICLE, URINARY BLADDER, PROSTATE, MANDIBULAR LN, THYMUS, LUNG, HEART, TRACHEA, THYROID

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Appendix 10

Individual animal pathology data

Test article	Control	[redacted]		
Group	1	2	3	4
Level (ppm)	0	500	5000	20000

COVANCE
HARROGATE, ENGLAND

PRINTED: 24-SEP-03
PAGE: 4

STUDY NUMBER: 0535104

ANIMAL NUMBER: 000004 SEX: MALE DOSE GROUP: 1 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 05/30/03 STUDY DAY OF DEATH: 30 STUDY WEEK OF DEATH: 5 TERMINAL BODY WEIGHT: 255.7 GRAMS

OBSERVATIONS

NECROPSY	HISTOPATHOLOGY
LIVER : -MOTTLED, SLIGHT; ALL LOBES	LIVER : -INFLAMMATORY CELL FOCI,-MINIMAL >NOTE:>OTHERWISE UNREMARKABLE.
ADRENAL : -RED, SLIGHT; BILATERAL	ADRENAL : -AGONAL CONGESTION/HAEMORRHAGE,-PRESENT
	KIDNEY : -HYALINE DROPLETS,-MINIMAL
	EPIDIDYMIS : -INFLAMMATORY CELL FOCI,-MINIMAL
	PARATHYROID : >UNREMARKABLE >NOTE:>ONE SAMPLE.

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
SPLEEN, PANCREAS, MESENTERIC LN, STOMACH, DUODENUM, JEJUNUM, ILEUM, CAECUM, COLON, TESTIS, SEMINAL VESICLE, URINARY BLADDER, PROSTATE, MANDIBULAR LN, THYMUS, LUNG, HEART, TRACHEA, THYROID

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Appendix 10

Individual animal pathology data

Test article	Control	[redacted]		
Group	1	2	3	4
Level (ppm)	0	500	5000	20000

COVANCE
HARROGATE, ENGLAND

PRINTED: 24-SEP-03
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STUDY NUMBER: 0535104

ANIMAL NUMBER: 000005 SEX: MALE DOSE GROUP: 1 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 05/30/03 STUDY DAY OF DEATH: 30 STUDY WEEK OF DEATH: 5 TERMINAL BODY WEIGHT: 226.4 GRAMS

OBSERVATIONS

NECROPSY

ANIMAL :
-NOT REMARKABLE

HISTOPATHOLOGY

LIVER :
-INFLAMMATORY CELL FOCI,-MINIMAL
>NOTE:>OIL RED O STAINING FOR LIPID WAS WEAKLY POSITIVE, PAS STAINING FOR GLYCOGEN WAS NEGATIVE.

STOMACH :
-EROSION/ULCER,-MINIMAL

KIDNEY :
-HYALINE DROPLETS,-MINIMAL
>NOTE:>OIL RED O STAINING FOR LIPID WAS NEGATIVE, PAS STAINING WAS WEAKLY POSITIVE.

THYMUS :
-CYST,-PRESENT

LUNG :
-FOAMY HISTIOCYTES,-MINIMAL

HEART :
>UNREMARKABLE
>NOTE:>OIL RED O AND PAS STAININGS BOTH NEGATIVE.

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Appendix 10

Individual animal pathology data

Test article	Control	[redacted]		
Group	1	2	3	4
Level (ppm)	0	500	5000	20000

COVANCE
HARROGATE, ENGLAND

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STUDY NUMBER: 0535104

ANIMAL NUMBER: 000005 SEX: MALE DOSE GROUP: 1 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 05/30/03 STUDY DAY OF DEATH: 30 STUDY WEEK OF DEATH: 5 TERMINAL BODY WEIGHT: 226.4 GRAMS

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
SPLEEN, PANCREAS, MESENTERIC LN, DUODENUM, JEJUNUM, ILEUM, CAECUM, COLON, ADRENAL, TESTIS, EPIDIDYMIS, SEMINAL VESICLE, URINARY BLADDER, PROSTATE, MANDIBULAR LN, TRACHEA, THYROID, PARATHYROID

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Appendix 10

Individual animal pathology data

Test article	Control	[redacted]		
Group	1	2	3	4
Level (ppm)	0	500	5000	20000

COVANCE
HARROGATE, ENGLAND

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STUDY NUMBER: 0535104

ANIMAL NUMBER: 000006 SEX: MALE DOSE GROUP: 2 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 05/30/03 STUDY DAY OF DEATH: 30 STUDY WEEK OF DEATH: 5 TERMINAL BODY WEIGHT: 267.8 GRAMS

OBSERVATIONS

NECROPSY	HISTOPATHOLOGY
LIVER : -MOTTLED, SLIGHT; ALL LOBES	LIVER : -INFLAMMATORY CELL FOCI, -MINIMAL >NOTE:>OTHERWISE UNREMARKABLE.
ADRENAL : -PALE, SLIGHT; BILATERAL	ADRENAL : >UNREMARKABLE >NOTE:>NO MICROSCOPIC CORRELATION WITH NECROPSY.

GENERAL INFORMATION :
>COMMENT:>POST FIX OBS:KIDNEY - PELVIC DILATION

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
HEART

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Appendix 10

Individual animal pathology data

Test article	Control	[redacted]		
Group	1	2	3	4
Level (ppm)	0	500	5000	20000

COVANCE
HARROGATE, ENGLAND

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STUDY NUMBER: 0535104

ANIMAL NUMBER: 000007 SEX: MALE DOSE GROUP: 2 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 05/30/03 STUDY DAY OF DEATH: 30 STUDY WEEK OF DEATH: 5 TERMINAL BODY WEIGHT: 241.6 GRAMS

OBSERVATIONS

NECROPSY	HISTOPATHOLOGY
MANDIBULAR LN :	MANDIBULAR LN :
-RED FOCUS; FEW	-ACONAL CONGESTION/HAEMORRHAGE, -PRESENT

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
LIVER, HEART

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Appendix 10

Individual animal pathology data

Test article	Control	[redacted]		
Group	1	2	3	4
Level (ppm)	0	500	5000	20000

COVANCE
HARROGATE, ENGLAND

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STUDY NUMBER: 0535104

ANIMAL NUMBER: 000008 SEX: MALE DOSE GROUP: 2 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 05/30/03 STUDY DAY OF DEATH: 30 STUDY WEEK OF DEATH: 5 TERMINAL BODY WEIGHT: 237.2 GRAMS

OBSERVATIONS

NECROPSY	HISTOPATHOLOGY
PROSTATE : -INJECTION LESION; LEFT	LIVER : -INFLAMMATORY CELL FOCI,-MINIMAL PROSTATE : -BARBITURATE LYSIS,-PRESENT

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
HEART

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Appendix 10

Individual animal pathology data

Test Article	Control	[redacted]		
Group	1	2	3	4
Level (ppm)	0	500	5000	20000

COVANCE
HARROGATE, ENGLAND

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STUDY NUMBER: 0535104

ANIMAL NUMBER: 000009 SEX: MALE DOSE GROUP: 2 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 05/30/03 STUDY DAY OF DEATH: 30 STUDY WEEK OF DEATH: 5 TERMINAL BODY WEIGHT: 213.3 GRAMS

OBSERVATIONS

NECROPSY	HISTOPATHOLOGY
MESENTERIC LN : -INJECTION LESION	LIVER : -INFLAMMATORY CELL FOCI, -MINIMAL MESENTERIC LN : -BARBITURATE LYSIS, -PRESENT

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
HEART

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Appendix 10

Individual animal pathology data

Test article	Control		[redacted]	
Group	1	2	3	4
Level (ppm)	0	500	5000	20000

COVANCE
HARROGATE, ENGLAND

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STUDY NUMBER: 0535104

ANIMAL NUMBER: 000010 SEX: MALE DOSE GROUP: 2 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 05/30/03 STUDY DAY OF DEATH: 30 STUDY WEEK OF DEATH: 5 TERMINAL BODY WEIGHT: 225.7 GRAMS

OBSERVATIONS

NECROPSY	HISTOPATHOLOGY
ANIMAL :	LIVER :
-NOT REMARKABLE	-INFLAMMATORY CELL FOCI, -MINIMAL

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
HEART

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Appendix 10

Individual animal pathology data

Test article	Control	[redacted]		
Group	1	2	3	4
Level (ppm)	0	500	5000	20000

COVANCE
HARROGATE, ENGLAND

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STUDY NUMBER: 0535104

ANIMAL NUMBER: 000011 SEX: MALE DOSE GROUP: 3 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 05/30/01 STUDY DAY OF DEATH: 30 STUDY WEEK OF DEATH: 5 TERMINAL BODY WEIGHT: 258.7 GRAMS

OBSERVATIONS

NECROPSY	HISTOPATHOLOGY
LIVER : -MOTTLED, MODERATE; ALL LOBES	LIVER : -HEPATOCYTE VACUOLATION,-MINIMAL -INFLAMMATORY CELL FOCI,-MINIMAL >NOTE:>OTHERWISE UNREMARKABLE.
CAECUM : -INJECTION LESION	CAECUM : -BARBITURATE LYSIS,-PRESENT
ADRENAL : -DARK, SLIGHT; BILATERAL	ADRENAL : -AGONAL CONGESTION/HAEMORRHAGE,-PRESENT
THYMUS : -LARGE, SLIGHT; BILATERAL	THYMUS : >UNREMARKABLE >NOTE:>NO MICROSCOPIC CORRELATION WITH NECROPSY.
	HEART : -MYOCARDIAL DEGENERATION/NECROSIS,-MINIMAL >NOTE:>MYOCARDIAL DEGENERATION/NECROSIS WAS CHARACTERISED BY SMALL FOCI OF DEGENERATING CARDIOMYOFIBRES WITH DARK EOSINOPHILIC SARCOPLASM, LOSS OF CROSS STRIATION AND EARLY NECROSIS AND WAS ASSOCIATED WITH INFLAMMATORY CELL INFILTRATION.

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Individual animal pathology data

Test article	Control	[redacted]		
Group	1	2	3	4
Level (ppm)	0	500	5000	20000

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STUDY NUMBER: 0535104

ANIMAL NUMBER: 000012 SEX: MALE DOSE GROUP: 3 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 05/30/03 STUDY DAY OF DEATH: 30 STUDY WEEK OF DEATH: 5 TERMINAL BODY WEIGHT: 216.0 GRAMS

OBSERVATIONS

NECROPSY	HISTOPATHOLOGY
LIVER : -MOTTLED, MODERATE; ALL LOBES	LIVER : -HEPATOCYTE VACUOLATION,-MINIMAL -INFLAMMATORY CELL FOCI,-MINIMAL >NOTE:>OTHERWISE UNREMARKABLE.
STOMACH : -THICK, SLIGHT; FUNDUS REGION, MUCOSAL SURFACE -PALE, MODERATE; ALL REGIONS, MUCOSAL SURFACE	STOMACH : >UNREMARKABLE >NOTE:>NO MICROSCOPIC CORRELATION WITH NECROPSY.
	HEART : -MYOCARDIAL VACUOLATION,-MINIMAL -MYOCARDIAL DEGENERATION/NECROSIS,-MINIMAL

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Individual animal pathology data

Test article	Control	[redacted]		
Group	1	2	3	4
Level (ppm)	0	500	5000	20000

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STUDY NUMBER: 0535104

ANIMAL NUMBER: 000013 SEX: MALE DOSE GROUP: 3 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 05/30/03 STUDY DAY OF DEATH: 30 STUDY WEEK OF DEATH: 5 TERMINAL BODY WEIGHT: 213.9 GRAMS

OBSERVATIONS

NECROPSY	HISTOPATHOLOGY
LIVER : -MOTTLED, MODERATE; ALL LOBES -LARGE, SLIGHT; ALL LOBES	LIVER : >UNREMARKABLE >NOTE:>NO MICROSCOPIC CORRELATION WITH NECROPSY.
ADRENAL : -DARK, SLIGHT; BILATERAL -LARGE, SLIGHT; LEFT	ADRENAL : -ADRENAL CONGESTION/HAEMORRHAGE, -PRESENT >NOTE:>PROCEDURAL ARTEFACT UNILATERAL, OTHERWISE UNREMARKABLE.
	HEART : -MYOCARDIAL VACUOLATION, -MINIMAL -MYOCARDIAL DEGENERATION/NECROSIS, -MINIMAL

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Individual animal pathology data

Test article	Control	[redacted]		
Group	1	2	3	4
Level (ppm)	0	500	5000	20000

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STUDY NUMBER: 0535104

ANIMAL NUMBER: 000014 SEX: MALE DOSE GROUP: 3 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 05/30/03 STUDY DAY OF DEATH: 30 STUDY WEEK OF DEATH: 5 TERMINAL BODY WEIGHT: 244.2 GRAMS

OBSERVATIONS

NECROPSY	HISTOPATHOLOGY
LIVER : -MOTTLED, SLIGHT; ALL LOBES -LARGE, SLIGHT; ALL LOBES	LIVER : -HEPATOCYTE VACUOLATION,-MINIMAL -INFLAMMATORY CELL FOCI,-MINIMAL >NOTE:>OTHERWISE UNREMARKABLE.
STOMACH : -PALE, MODERATE; MUCOSAL SURFACE, FUNDUS REGION	STOMACH : >UNREMARKABLE >NOTE:>NO MICROSCOPIC CORRELATION WITH NECROPSY.
ADRENAL : -RED, MODERATE; BILATERAL	ADRENAL : -ACONAL CONGESTION/HAEMORRHAGE,-PRESENT
	URINARY BLADDER : -BARBITURATE LYSIS,-PRESENT

GENERAL INFORMATION :
>COMMENT:>POST FIX OBS:URINARY BLADDER - DISTENDED

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
HEART

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Individual animal pathology data

Test article	Control	[redacted]		
Group	1	2	3	4
Level (ppm)	0	500	5000	20000

COVANCE
HARROGATE, ENGLAND

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STUDY NUMBER: 0535104

ANIMAL NUMBER: 000015 SEX: MALE DOSE GROUP: 3 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 05/30/03 STUDY DAY OF DEATH: 30 STUDY WEEK OF DEATH: 5 TERMINAL BODY WEIGHT: 248.8 GRAMS

OBSERVATIONS

NECROPSY	HISTOPATHOLOGY
LIVER : -MOTTLED, SLIGHT; ALL LOBES	LIVER : -HEPATOCYTE VACUOLATION,-SLIGHT -INFLAMMATORY CELL FOCI,-MINIMAL >NOTE:>OTHERWISE UNREMARKABLE.
ADRENAL : -RED, SLIGHT; BILATERAL	ADRENAL : -ADRENAL CONGESTION/HAEMORRHAGE,-PRESENT
	HEART : -MYOCARDIAL VACUOLATION,-MINIMAL -MYOCARDIAL DEGENERATION/NECROSIS,-MINIMAL

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Individual animal pathology data

Test article	Control	[redacted]		
Group	1	2	3	4
Level (ppm)	0	500	5000	20000

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STUDY NUMBER: 0535104

ANIMAL NUMBER: 000016 SEX: MALE DOSE GROUP: 4 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 05/30/03 STUDY DAY OF DEATH: 30 STUDY WEEK OF DEATH: 5 TERMINAL BODY WEIGHT: 208.9 GRAMS

OBSERVATIONS

NECROPSY	HISTOPATHOLOGY
LIVER : -MOTTLED, SLIGHT; ALL LOBES -LARGE, SLIGHT; ALL LOBES	LIVER : -HEPATOCYTE VACUOLATION,-MINIMAL -INFLAMMATORY CELL FOCI,-MINIMAL >NOTE:>HEPATOCYTE VACUOLATION WAS CHARACTERISED BY NUMEROUS VERY SMALL WELL CIRCUMSCRIBED CYTOPLASMIC VACUOLES RESULTING IN A SLIGHTLY GRANULAR AND/OR FOAMY APPEARANCE OF THE HEPATOCYTE CYTOPLASM.
ADRENAL : -RED FOCUS; FEW, RIGHT	ADRENAL : -ADRENAL CONGESTION/HAEMORRHAGE,-PRESENT
	KIDNEY : -FOCAL NEPHROPATHY,-MINIMAL
	EPIDIDYMIS : -INFLAMMATORY CELL FOCI,-MINIMAL
	HEART : -MYOCARDIAL VACUOLATION,-MINIMAL
	PARATHYROID : >UNREMARKABLE >NOTE:>ONE SAMPLE.

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Individual animal pathology data

Test article	Control	[redacted]		
Group	1	2	3	4
Level (ppm)	0	500	5000	20000

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STUDY NUMBER: 0535104

ANIMAL NUMBER: 000016 SEX: MALE DOSE GROUP: 4 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 05/30/03 STUDY DAY OF DEATH: 30 STUDY WEEK OF DEATH: 5 TERMINAL BODY WEIGHT: 208.9 GRAMS

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
SPLEEN, PANCREAS, MESENTERIC LN, STOMACH, DUODENUM, JEJUNUM, ILEUM, CAECUM, COLON, TESTIS, SEMINAL VESICLE, URINARY BLADDER, PROSTATE, MANDIBULAR LN, THYMUS, LUNG, TRACHEA, THYROID

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Appendix 10

Individual animal pathology data

Test article	Control	[redacted]		
Group	1	2	3	4
Level (ppm)	0	500	5000	20000

COVANCE
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STUDY NUMBER: 0535104

ANIMAL NUMBER: 000017 SEX: MALE DOSE GROUP: 4 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 05/10/03 STUDY DAY OF DEATH: 30 STUDY WEEK OF DEATH: 5 TERMINAL BODY WEIGHT: 185.3 GRAMS

OBSERVATIONS

NECROPSY

ADRENAL :
-DARK, SLIGHT; RIGHT
-SMALL, SLIGHT; RIGHT

ORAL CAVITY :
-ABNORMAL TEETH

HISTOPATHOLOGY

LIVER :
-HEPATOCYTE VACUOLATION, -SLIGHT
-INFLAMMATORY CELL FOCI, -MINIMAL
>NOTE:>HEPATOCYTE VACUOLATION WAS RESULTING IN MINOR HEPATOCYTE ENLARGEMENT IN ALL ZONES.

SPLEEN :
-HAEMOPOIESIS, -MINIMAL

ADRENAL :
>UNREMARKABLE
>NOTE:>PROCEDURAL DAMAGE, OTHERWISE UNREMARKABLE.

KIDNEY :
-FOCAL NEPHROPATHY, -MINIMAL

HEART :
-MYOCARDIAL VACUOLATION, -MINIMAL
-INFLAMMATORY CELL FOCI, -MINIMAL

PARATHYROID :
>UNREMARKABLE
>NOTE:>ONE SAMPLE.

ORAL CAVITY :
>TISSUE MISSING
>NOTE:>NO EQUIVALENT SAMPLE FOR CORRELATION WITH NECROPSY.

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Appendix 10

Individual animal pathology data

Test article	Control	[redacted]		
Group	1	2	3	4
Level (ppm)	0	500	5000	20000

COVANCE
HARROGATE, ENGLAND

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STUDY NUMBER: 0535104

ANIMAL NUMBER: 000017 SEX: MALE DOSE GROUP: 4 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 05/30/03 STUDY DAY OF DEATH: 30 STUDY WEEK OF DEATH: 5 TERMINAL BODY WEIGHT: 185.3 GRAMS

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
PANCREAS, MESENTERIC LN, STOMACH, DUODENUM, JEJUNUM, ILEUM, CAECUM, COLON, TESTIS, EPIDIDYMIS, SEMINAL VESICLE, URINARY BLADDER, PROSTATE, MANDIBULAR LN, THYMUS, LUNG, TRACHEA, THYROID

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Appendix 10

Individual animal pathology data

Test article	Control	[redacted]		
Group	1	2	3	4
Level (ppm)	0	500	5000	20000

COVANCE
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STUDY NUMBER: 0535104

ANIMAL NUMBER: 000018 SEX: MALE DOSE GROUP: 4 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 05/10/03 STUDY DAY OF DEATH: 30 STUDY WEEK OF DEATH: 5 TERMINAL BODY WEIGHT: 196.0 GRMS

OBSERVATIONS

NECROPSY

LIVER :
-MOTTLED, MODERATE; ALL LOBES
-LARGE, MODERATE; ALL LOBES

JEJUNUM :
-DARK, MODERATE

ORAL CAVITY :
-ABNORMAL TEETH

HISTOPATHOLOGY

LIVER :
-HEPATOCYTE VACUOLATION,-MINIMAL
>NOTE:>OTHERWISE UNREMARKABLE.

JEJUNUM :
-BARBITURATE LYSIS,-PRESENT

ADRENAL :
>UNREMARKABLE
>NOTE:>ONE MEDULLA.

EPIDIDYMIS :
-INFLAMMATORY CELL FOCI,-MINIMAL

LUNG :
-INFLAMMATORY CELL FOCI,-MINIMAL

HEART :
-MYOCARDIAL VACUOLATION,-SLIGHT
>NOTE:>CHARACTERISED BY NUMEROUS VERY SMALL WELL CIRCUMSCRIBED VACUOLES WITHIN THE CARDIOMYOFIBRES.

PARATHYROID :
>UNREMARKABLE
>NOTE:>ONE SAMPLE.

ORAL CAVITY :
>TISSUE MISSING
>NOTE:>NO EQUIVALENT SAMPLE FOR CORRELATION WITH NECROPSY.

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Appendix 10

Individual animal pathology data

Test article	Control	[redacted]		
Group	1	2	3	4
Level (ppm)	0	500	5000	20000

COVANCE
HARROGATE, ENGLAND

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STUDY NUMBER: 0535104

ANIMAL NUMBER: 000018 SEX: MALE DOSE GROUP: 4 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 05/30/03 STUDY DAY OF DEATH: 30 STUDY WEEK OF DEATH: 5 TERMINAL BODY WEIGHT: 196.0 GRAMS

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
SPLEEN, PANCREAS, MESENTERIC LN, STOMACH, DUODENUM, ILEUM, CAECUM, COLON, KIDNEY, TESTIS, SEMINAL VESICLE, URINARY BLADDER, PROSTATE, MANDIBULAR LN, THYMUS, TRACHEA, THYROID

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Appendix 10

Individual animal pathology data

Test article	Control		[redacted]	
Group	1	2	3	4
Level (ppm)	0	500	5000	20000

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STUDY NUMBER: 0535104

ANIMAL NUMBER: 000019 SEX: MALE DOSE GROUP: 4 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 05/30/03 STUDY DAY OF DEATH: 30 STUDY WEEK OF DEATH: 5 TERMINAL BODY WEIGHT: 226.1 GRAMS

OBSERVATIONS

NECROPSY

LIVER :
-LARGE, MODERATE; ALL LOBES
-PALE, MODERATELY SEVERE; ALL LOBES

KIDNEY :
-PALE, SLIGHT; BILATERAL
-PELVIC DILATATION, SLIGHT; BILATERAL

THYMUS :
-LARGE, SLIGHT; BILATERAL

ORAL CAVITY :
-ABNORMAL TEETH

HISTOPATHOLOGY

LIVER :
-HEPATOCYTE VACUOLATION,-MODERATE
-INFLAMMATORY CELL FOCI,-MINIMAL
>NOTE:>OIL RED O STAINING FOR LIPID WAS POSITIVE, PAS STAINING FOR GLYCOGEN WAS NEGATIVE.

KIDNEY :
-FOCAL NEPHROPATHY,-MINIMAL
-TUBULAR VACUOLATION,-MINIMAL
-HYDRONEPHROSIS,-SLIGHT
>NOTE:>TUBULAR VACUOLATION WAS CHARACTERISED BY NUMEROUS VERY SMALL WELL CIRCUMSCRIBED VACUOLES WITHIN THE PROXIMAL TUBULE EPITHELIUM. OIL RED O STAINING FOR LIPID WAS POSITIVE, PAS STAINING WAS NEGATIVE.

THYMUS :
-ECTOPIC PARATHYROID,-PRESENT
>NOTE:>OTHERWISE UNREMARKABLE.

LUNG :
-PNEUMONITIS,-MINIMAL

HEART :
-MYOCARDIAL VACUOLATION,-SLIGHT
-MYOCARDIAL DEGENERATION/NECROSIS,-MINIMAL
>NOTE:>OIL RED O STAINING FOR LIPID WAS POSITIVE, PAS STAINING FOR GLYCOGEN WAS NEGATIVE.

ORAL CAVITY :
>TISSUE MISSING

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Appendix 10

Individual animal pathology data

Test article	Control	[redacted]		
Group	1	2	3	4
Level (ppm)	0	500	5000	20000

COVANCE
HARROGATE, ENGLAND

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STUDY NUMBER: 0535104

ANIMAL NUMBER: 000019 SEX: MALE DOSE GROUP: 4 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 05/30/03 STUDY DAY OF DEATH: 30 STUDY WEEK OF DEATH: 5 TERMINAL BODY WEIGHT: 226.1 GRAMS

O B S E R V A T I O N S (CONTINUED)

NECROPSY	HISTOPATHOLOGY
	ORAL CAVITY :
	>NOTE:>NO EQUIVALENT SAMPLE FOR CORRELATION WITH NECROPSY.

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
SPLEEN, PANCREAS, MESENTERIC LN, STOMACH, DUODENUM, JEJUNUM, ILEUM, CAECUM, COLON, ADRENAL, TESTIS, EPIDIDYMIS, SEMINAL VESICLE, URINARY BLADDER, PROSTATE, MANDIBULAR LN, TRACHEA, THYROID, PARATHYROID

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Appendix 10

Individual animal pathology data

Test article	Control	[redacted]		
Group	1	2	3	4
Level (ppm)	0	500	5000	20000

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HARROGATE, ENGLAND

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STUDY NUMBER: 0535104

ANIMAL NUMBER: 000020 SEX: MALE DOSE GROUP: 4 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 05/30/03 STUDY DAY OF DEATH: 30 STUDY WEEK OF DEATH: 5 TERMINAL BODY WEIGHT: 204.4 GRAMS

OBSERVATIONS

NECROPSY	HISTOPATHOLOGY
LIVER : -DARK, MODERATE; ALL LOBES	LIVER : -HEPATOCYTE VACUOLATION,-SLIGHT -INFLAMMATORY CELL FOCI,-MINIMAL >NOTE:>OTHERWISE UNREMARKABLE.
LUNG : -DARK, SLIGHT; ALL LOBES	KIDNEY : -FOCAL NEPHROPATHY,-MINIMAL
HEART : -LARGE, SLIGHT; ATRIUM, BILATERAL	LUNG : -AGONAL CONGESTION/HAEMORRHAGE,-PRESENT -OEDEMA,-MODERATE
	HEART : -MYOCARDIAL VACUOLATION,-MINIMAL -CHAMBER DISTENSION,-PRESENT -MYOCARDIAL DEGENERATION/NECROSIS,-MINIMAL
	PARATHYROID : >UNREMARKABLE >NOTE:>ONE SAMPLE.

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
SPLEEN, PANCREAS, MESENTERIC LN, STOMACH, DUODENUM, JEJUNUM, ILEUM, CAECUM, COLON, ADRENAL, TESTIS, EPIDIDYMIS, SEMINAL VESICLE, URINARY BLADDER, PROSTATE, MANDIBULAR LN, THYMUS, TRACHEA, THYROID

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Appendix 10

Individual animal pathology data

Test article	Control	[redacted]		
Group	1	2	3	4
Level (ppm)	0	500	5000	20000

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STUDY NUMBER: 0535104

ANIMAL NUMBER: 000021 SEX: FEMALE DOSE GROUP: 1 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 05/30/03 STUDY DAY OF DEATH: 30 STUDY WEEK OF DEATH: 5 TERMINAL BODY WEIGHT: 182.7 GRAMS

OBSERVATIONS

NECROPSY	HISTOPATHOLOGY
OVARY : -LARGE, SLIGHT; BILATERAL	LIVER : -HEPATOCYTE VACUOLATION, -MINIMAL -INFLAMMATORY CELL FOCI, -MINIMAL KIDNEY : -CORTICOMEDULLARY MINERALISATION, -MINIMAL -PAPILLARY MINERALISATION, -MINIMAL OVARY : -OESTROUS CYCLE, -PRESENT VAGINA : -OESTRUS, -PRESENT THYMUS : -CYST, -PRESENT

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
SPLEEN, PANCREAS, MESENTERIC LN, STOMACH, DUODENUM, JEJUNUM, ILEUM, CAECUM, COLON, ADRENAL, URINARY BLADDER, UTERUS, MANDIBULAR LN, LUNG, HEART, TRACHEA, THYROID, PARATHYROID

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Appendix 10

Individual animal pathology data

Test article	Control	[redacted]		
Group	1	2	3	4
Level (ppm)	0	500	5000	20000

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STUDY NUMBER: 0535104

ANIMAL NUMBER: 000022 SEX: FEMALE DOSE GROUP: 1 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 05/30/03 STUDY DAY OF DEATH: 30 STUDY WEEK OF DEATH: 5 TERMINAL BODY WEIGHT: 152.1 GRAMS

OBSERVATIONS

NECROPSY	HISTOPATHOLOGY
LIVER : -MOTTLED, SLIGHT; ALL LOBES	LIVER : >UNREMARKABLE >NOTE:>NO MICROSCOPIC CORRELATION WITH NECROPSY.
ADRENAL : -RED, SLIGHT; BILATERAL.	ADRENAL : -AGONAL CONGESTION/HAEMORRHAGE, -PRESENT
MANDIBULAR LN : -RED FOCUS; FEW	KIDNEY : -TUBULAR VACUOLATION, -MINIMAL
THYMUS : -RED FOCUS; FEW, BILATERAL	VAGINA : -DIOESTRUS, -PRESENT
	MANDIBULAR LN : -AGONAL CONGESTION/HAEMORRHAGE, -PRESENT
	THYMUS : -AGONAL CONGESTION/HAEMORRHAGE, -PRESENT
	PARATHYROID : >UNREMARKABLE >NOTE:>ONE SAMPLE.

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Individual animal pathology data

Test article	Control	[redacted]		
Group	1	2		4
Level (ppm)	0	500	5000	20000

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STUDY NUMBER: 0535104

ANIMAL NUMBER: 000022 SEX: FEMALE DOSE GROUP: 1 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 05/30/03 STUDY DAY OF DEATH: 30 STUDY WEEK OF DEATH: 5 TERMINAL BODY WEIGHT: 152.1 GRAMS

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
SPLEEN, PANCREAS, MESENTERIC LN, STOMACH, DUODENUM, JEJUNUM, ILEUM, CAECUM, COLON, OVARY, URINARY BLADDER, UTERUS, LUNG, HEART, TRACHEA, THYROID

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Individual animal pathology data

Test article	Control	[redacted]		
Group	1	2	3	4
Level (ppm)	0	500	5000	20000

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STUDY NUMBER: 0535104

ANIMAL NUMBER: 000023 SEX: FEMALE DOSE GROUP: 1 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 05/30/03 STUDY DAY OF DEATH: 30 STUDY WEEK OF DEATH: 5 TERMINAL BODY WEIGHT: 163.8 GRAMS

OBSERVATIONS

NECROPSY	HISTOPATHOLOGY
CAECUM : -INJECTION LESION	LIVER : -INFLAMMATORY CELL FOCI,-MINIMAL CAECUM : -BARBITURATE LYSIS,-PRESENT VAGINA : -OESTRUS,-PRESENT PARATHYROID : >UNREMARKABLE >NOTE:>ONE SAMPLE.

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
SPLEEN, PANCREAS, MESENTERIC LN, STOMACH, DUODENUM, JEJUNUM, ILEUM, COLON, ADRENAL, KIDNEY, OVARY, URINARY BLADDER, UTERUS, MANDIBULAR LN, THYMUS, LUNG, HEART, TRACHEA, THYROID

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Individual animal pathology data

Test article	Control	[redacted]		
Group	1	2	3	4
Level (ppm)	0	500	5000	20000

COVANCE
HARROGATE, ENGLAND

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STUDY NUMBER: 0535104

ANIMAL NUMBER: 000024 SEX: FEMALE DOSE GROUP: 1 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 05/30/03 STUDY DAY OF DEATH: 30 STUDY WEEK OF DEATH: 5 TERMINAL BODY WEIGHT: 146.5 GRAMS

OBSERVATIONS

NECROPSY	HISTOPATHOLOGY
DUODENUM : -RED, MODERATE; MUCOSAL SURFACE	DUODENUM : -AGONAL CONGESTION/HAEMORRHAGE, -PRESENT
ADRENAL : -LARGE, MODERATE; RIGHT	ADRENAL : >UNREMARKABLE >NOTE:>NO MICROSCOPIC CORRELATION WITH NECROPSY.
OVARY : -LARGE, SLIGHT; RIGHT	KIDNEY : -FOCAL NEPHROPATHY, -MINIMAL -TUBULAR VACUOLATION, -MINIMAL
UTERUS : -DISTENSION, MODERATE; BILATERAL	OVARY : -OESTROUS CYCLE, -PRESENT
	UTERUS : -OESTROUS CYCLE, -PRESENT
	VAGINA : -PRO-OESTRUS, -PRESENT

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
LIVER, SPLEEN, PANCREAS, MESENTERIC LN, STOMACH, JEJUNUM, ILEUM, CAECUM, COLON, URINARY BLADDER, MANDIBULAR LN, THYMUS, LUNG, HEART, TRACHEA, THYROID, PARATHYROID

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Individual animal pathology data

Test article	Control	[redacted]		
Group	1	2	3	4
Level (ppm)	0	500	5000	20000

COVANCE
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STUDY NUMBER: 0535104

ANIMAL NUMBER: 000025 SEX: FEMALE DOSE GROUP: 1 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 05/30/03 STUDY DAY OF DEATH: 30 STUDY WEEK OF DEATH: 5 TERMINAL BODY WEIGHT: 142.6 GRAMS

OBSERVATIONS

NECROPSY

ANIMAL :
-NOT REMARKABLE

HISTOPATHOLOGY

LIVER :
-HEPATOCYTE VACUOLATION, -MINIMAL
>NOTE:>OIL RED O STAINING FOR LIPID WAS WEAKLY POSITIVE, PAS STAINING FOR GLYCOGEN WAS NEGATIVE.

KIDNEY :
-FOCAL NEPHROPATHY, -MINIMAL
-TUBULAR VACUOLATION, -MINIMAL
>NOTE:>OIL RED O AND PAS STAININGS WERE BOTH WEAKLY POSITIVE.

VAGINA :
-OESTRUS, -PRESENT

HEART :
>UNREMARKABLE
>NOTE:>OIL RED O AND PAS STAININGS WERE BOTH NEGATIVE.

THYROID :
-ECTOPIC THYMUS, -PRESENT

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
SPLEEN, PANCREAS, MESENTERIC LN, STOMACH, DUODENUM, JEJUNUM, ILEUM, CAECUM, COLON, ADRENAL, OVARY, URINARY BLADDER, UTERUS, MANDIBULAR LN, THYMUS, LUNG, TRACHEA, PARATHYROID

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Individual animal pathology data

Test article	Control	[redacted]		
Group	1	2	3	4
Level (ppm)	0	500	5000	20000

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STUDY NUMBER: 0535104

ANIMAL NUMBER: 000026 SEX: FEMALE DOSE GROUP: 2 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 05/30/03 STUDY DAY OF DEATH: 30 STUDY WEEK OF DEATH: 5 TERMINAL BODY WEIGHT: 155.3 GRAMS

OBSERVATIONS

NECROPSY	HISTOPATHOLOGY
CAECUM : -INJECTION LESION	LIVER : -INFLAMMATORY CELL FOCI,-MINIMAL
THYMUS : -LARGE, MINIMAL; BILATERAL	CAECUM : -BARBITURATE LYSIS,-PRESENT
	THYMUS : >UNREMARKABLE >NOTE:>NO MICROSCOPIC CORRELATION WITH NECROPSY.

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
HEART

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Individual animal pathology data

Test article	Control	[redacted]		
Group	1	2	3	4
Level (ppm)	0	500	5000	20000

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STUDY NUMBER: 0535104

ANIMAL NUMBER: 000027 SEX: FEMALE DOSE GROUP: 2 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 05/30/03 STUDY DAY OF DEATH: 30 STUDY WEEK OF DEATH: 5 TERMINAL BODY WEIGHT: 150.7 GRAMS

OBSERVATIONS

NECROPSY	HISTOPATHOLOGY
THYMUS : -LARGE, MODERATE; BILATERAL	LIVER : -INFLAMMATORY CELL FOCI, -MINIMAL THYMUS : -LYMPHOID HYPERPLASIA, -MINIMAL

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
HEART

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Individual animal pathology data

Test article	Control	[redacted]		
Group	1	2	3	4
Level (ppm)	0	500	5000	20000

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HARROGATE, ENGLAND

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STUDY NUMBER: 0535104

ANIMAL NUMBER: 000028 SEX: FEMALE DOSE GROUP: 2 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 05/10/03 STUDY DAY OF DEATH: 30 STUDY WEEK OF DEATH: 5 TERMINAL BODY WEIGHT: 157.9 GRAMS

OBSERVATIONS

NECROPSY	HISTOPATHOLOGY
THYMUS : -DARK AREA; FEW, 1-2MM DIAMETER, BILATERAL	LIVER : -INFLAMMATORY CELL FOCI,-MINIMAL THYMUS : -AGONAL CONGESTION/HAEMORRHAGE,-PRESENT HEART : -INFLAMMATORY CELL FOCI,-MINIMAL

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Individual animal pathology data

Test article	Control	[redacted]		
Group	1	2	3	4
Level (ppm)	0	500	5000	20000

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STUDY NUMBER: 0535104

ANIMAL NUMBER: 000029 SEX: FEMALE DOSE GROUP: 2 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 05/30/03 STUDY DAY OF DEATH: 30 STUDY WEEK OF DEATH: 5 TERMINAL BODY WEIGHT: 157.4 GRAMS

OBSERVATIONS

NECROPSY	HISTOPATHOLOGY
ANIMAL :	
-NOT REMARKABLE	
THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:	
LIVER, HEART	

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Individual animal pathology data

Test article	Control	[redacted]		
Group	1	2	3	4
Level (ppm)	0	500	5000	20000

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STUDY NUMBER: 0535104

ANIMAL NUMBER: 000030 SEX: FEMALE DOSE GROUP: 2 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 05/30/03 STUDY DAY OF DEATH: 30 STUDY WEEK OF DEATH: 5 TERMINAL BODY WEIGHT: 152.8 GRAMS

O B S E R V A T I O N S

NECROPSY	HISTOPATHOLOGY
PANCREAS : -DARK, SLIGHT	LIVER : -HEPATOCYTE VACUOLATION, -MINIMAL -INFLAMMATORY CELL FOCI, -MINIMAL PANCREAS : >UNREMARKABLE >NOTE:>NO MICROSCOPIC CORRELATION WITH NECROPSY.

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
HEART

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Individual animal pathology data

Test article	Control	[redacted]		
Group	1	2	3	4
Level (ppm)	0	500	5000	20000

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STUDY NUMBER: 0535104

ANIMAL NUMBER: 000031 SEX: FEMALE DOSE GROUP: 3 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 05/30/01 STUDY DAY OF DEATH: 30 STUDY WEEK OF DEATH: 5 TERMINAL BODY WEIGHT: 151.1 GRAMS

OBSERVATIONS

NECROPSY

LIVER :
-MOTTLED, MODERATE; ALL LOBES
-PALE, MODERATE; ALL LOBES

STOMACH :
-THICK, SLIGHT; FUNDUS REGION, MUCOSAL SURFACE
-PALE, SLIGHT; FUNDUS REGION, MUCOSAL SURFACE

UTERUS :
-DISTENSION, SLIGHT; BILATERAL

THYMUS :
-LARGE, MODERATE; BILATERAL

HISTOPATHOLOGY

LIVER :
-HEPATOCYTE VACUOLATION, -MODERATE
>NOTE:>OTHERWISE UNREMARKABLE.

STOMACH :
>UNREMARKABLE
>NOTE:>NO MICROSCOPIC CORRELATION WITH NECROPSY.

UTERUS :
-OESTROUS CYCLE, -PRESENT

VAGINA :
-PRO-OESTRUS, -PRESENT

THYMUS :
-LYMPHOID HYPERPLASIA, -MINIMAL

HEART :
-MYOCARDIAL VACUOLATION, -MINIMAL
-MYOCARDIAL DEGENERATION/NECROSIS, -MINIMAL

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Individual animal pathology data

Test article	Control	[redacted]		
Group	1	2	3	4
Level (ppm)	0	500	5000	20000

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STUDY NUMBER: 0535104

ANIMAL NUMBER: 000032 SEX: FEMALE DOSE GROUP: 3 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 05/30/03 STUDY DAY OF DEATH: 30 STUDY WEEK OF DEATH: 5 TERMINAL BODY WEIGHT: 153.8 GRAMS

OBSERVATIONS

NECROPSY	HISTOPATHOLOGY
LIVER : -MOTTLED, SLIGHT; ALL LOBES -LARGE, SLIGHT; ALL LOBES	LIVER : -HEPATOCYTE PIGMENT,-SLIGHT -HEPATOCYTE VACUOLATION,-MINIMAL -INFLAMMATORY CELL FOCI,-MINIMAL HEART : -MYOCARDIAL VACUOLATION,-MINIMAL -MYOCARDIAL DEGENERATION/NECROSIS,-MINIMAL

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Individual animal pathology data

Test article	Control	[redacted]		
Group	1	2	3	4
Level (ppm)	0	500	5000	20000

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STUDY NUMBER: 0535104

ANIMAL NUMBER: 00003 | SEX: FEMALE | DOSE GROUP: 3 | SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 05/30/03 | STUDY DAY OF DEATH: 30 | STUDY WEEK OF DEATH: 5 | TERMINAL BODY WEIGHT: 170.2 GRAMS

OBSERVATIONS

NECROPSY	HISTOPATHOLOGY
LIVER : -MOTTLED, SLIGHT; ALL LOBES	LIVER : -HEPATOCYTE VACUOLATION,-MINIMAL -INFLAMMATORY CELL FOCI,-MINIMAL >NOTE:>OTHERWISE UNREMARKABLE.
STOMACH : -PALE, SLIGHT; FUNDUS REGION, MUCOSAL SURFACE	STOMACH : >UNREMARKABLE >NOTE:>NO MICROSCOPIC CORRELATION WITH NECROPSY.
OVARY : -LARGE, MINIMAL; BILATERAL	OVARY : -OESTROUS CYCLE,-PRESENT
URINARY BLADDER : -DISTENSION, SLIGHT	URINARY BLADDER : -BARBITURATE LYSIS,-PRESENT
	HEART : -MYOCARDIAL DEGENERATION/NECROSIS,-MINIMAL

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Individual animal pathology data

Test article	Control	[redacted]		
Group	1	2	3	4
Level (ppm)	0	500	5000	20000

COVANCE
HARROGATE, ENGLAND

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STUDY NUMBER: 0535104

ANIMAL NUMBER: 000034 SEX: FEMALE DOSE GROUP: 3 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 05/30/03 STUDY DAY OF DEATH: 30 STUDY WEEK OF DEATH: 5 TERMINAL BODY WEIGHT: 145.9 GRAMS

OBSERVATIONS

NECROPSY	HISTOPATHOLOGY
LIVER : -MOTTLED, SLIGHT; ALL LOBES	LIVER : -HEPATOCYTE VACUOLATION,-MINIMAL -INFLAMMATORY CELL FOCI,-MINIMAL >NOTE:>OTHERWISE UNREMARKABLE. HEART : -MYOCARDIAL VACUOLATION,-MINIMAL -MYOCARDIAL DEGENERATION/NECROSIS,-MINIMAL

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Individual animal pathology data

Test article	Control	[redacted]		
Group	1	2	3	4
Level (ppm)	0	500	5000	20000

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STUDY NUMBER: 0535104

ANIMAL NUMBER: 000035 SEX: FEMALE DOSE GROUP: 3 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 05/30/03 STUDY DAY OF DEATH: 30 STUDY WEEK OF DEATH: 5 TERMINAL BODY WEIGHT: 153.3 GRAMS

OBSERVATIONS

NECROPSY	HISTOPATHOLOGY
LIVER : -MOTTLED, SLIGHT; ALL LOBES -LARGE, SLIGHT; ALL LOBES	LIVER : -HEPATOCYTE VACUOLATION,-SLIGHT -INFLAMMATORY CELL FOCI,-MINIMAL >NOTE:>OTHERWISE UNREMARKABLE.
STOMACH : -PALE, MODERATE; MUCOSAL SURFACE, FUNDUS REGION	STOMACH : >UNREMARKABLE >NOTE:>NO MICROSCOPIC CORRELATION WITH NECROPSY.
ADRENAL : -LARGE, SLIGHT; RIGHT	ADRENAL : >UNREMARKABLE >NOTE:>PROCEDURAL ARTEFACT UNILATERAL, OTHERWISE UNREMARKABLE.
	HEART : -MYOCARDIAL VACUOLATION,-MINIMAL

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Individual animal pathology data

Test article	Control	[redacted]		
Group	1	2	3	4
Level (ppm)	0	500	5000	20000

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STUDY NUMBER: 0535104

ANIMAL NUMBER: 000036 SEX: FEMALE DOSE GROUP: 4 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 05/30/03 STUDY DAY OF DEATH: 30 STUDY WEEK OF DEATH: 5 TERMINAL BODY WEIGHT: 132.9 GRAMS

OBSERVATIONS

NECROPSY	HISTOPATHOLOGY
LIVER : -MOTTLED, SLIGHT; ALL LOBES -PALE AREA; FEW, 2MM DIAMETER - 5 X 4MM, ALL LOBES	LIVER : -HEPATOCYTE VACUOLATION,-SLIGHT -INFLAMMATORY CELL FOCI,-MINIMAL >NOTE:>OTHERWISE UNREMARKABLE.
STOMACH : -PALE AREA; FEW, 5 X 4MM - 7 X 6MM, MUCOSAL SURFACE, FUNDUS REGION	PANCREAS : -DEGRANULATION,-MINIMAL
ORAL CAVITY : -ABNORMAL TEETH	STOMACH : >UNREMARKABLE >NOTE:>NO MICROSCOPIC CORRELATION WITH NECROPSY.
	VAGINA : -PRO-OESTRUS,-PRESENT
	THYMUS : -CYST,-PRESENT
	LUNG : -INFLAMMATORY CELL FOCI,-MINIMAL
	HEART : -MYOCARDIAL VACUOLATION,-SLIGHT
	ORAL CAVITY : >TISSUE MISSING >NOTE:>NO EQUIVALENT SAMPLE FOR CORRELATION WITH NECROPSY.

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Appendix 10

Individual animal pathology data

Test article	Control	[redacted]		
Group	1	2	3	4
Level (ppm)	0	500	5000	20000

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STUDY NUMBER: 0535104

ANIMAL NUMBER: 000036 SEX: FEMALE DOSE GROUP: 4 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 05/30/03 STUDY DAY OF DEATH: 30 STUDY WEEK OF DEATH: 5 TERMINAL BODY WEIGHT: 132.9 GRAMS

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
SPLEEN, MESENTERIC LN, DUODENUM, JEJUNUM, ILEUM, CAECUM, COLON, ADRENAL, KIDNEY, OVARY, URINARY BLADDER, UTERUS, MANDIBULAR LN, TRACHEA, THYROID, PARATHYROID

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Individual animal pathology data

Test article	Control	[redacted]		
Group	1	2	3	4
Level (ppm)	0	500	5000	20000

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STUDY NUMBER: 0535104

ANIMAL NUMBER: 000037 SEX: FEMALE DOSE GROUP: 4 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 05/30/03 STUDY DAY OF DEATH: 30 STUDY WEEK OF DEATH: 5 TERMINAL BODY WEIGHT: 131.3 GRAMS

OBSERVATIONS

NECROPSY	HISTOPATHOLOGY
LIVER : -MOTTLED, SLIGHT; ALL LOBES	LIVER : -HEPATOCYTE VACUOLATION,-SLIGHT >NOTE:>OTHERWISE UNREMARKABLE.
ORAL CAVITY : -ABNORMAL TEETH	KIDNEY : -FOCAL NEPHROPATHY,-MINIMAL -TUBULAR VACUOLATION,-MINIMAL
	VAGINA : -DIOESTRUS,-PRESENT
	HEART : -MYOCARDIAL VACUOLATION,-MINIMAL -MYOCARDIAL DEGENERATION/NECROSIS,-SLIGHT
	ORAL CAVITY : >TISSUE MISSING >NOTE:>NO EQUIVALENT SAMPLE FOR CORRELATION WITH NECROPSY.

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
SPLEEN, PANCREAS, MESENTERIC LN, STOMACH, DUODENUM, JEJUNUM, ILEUM, CAECUM, COLON, ADRENAL, OVARY, URINARY BLADDER, UTERUS, MANDIBULAR LN, THYMUS, LUNG, TRACHEA, THYROID, PARATHYROID

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Individual animal pathology data

Test article	Control		[redacted]	
Group	1	2	3	4
Level (ppm)	0	500	5000	20000

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STUDY NUMBER: 0535104

ANIMAL NUMBER: 000038 SEX: FEMALE DOSE GROUP: 4 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 05/30/03 STUDY DAY OF DEATH: 30 STUDY WEEK OF DEATH: 5 TERMINAL BODY WEIGHT: 133.1 GRAMS

OBSERVATIONS

NECROPSY

LIVER :
-MOTTLED, SLIGHT; ALL LOBES

STOMACH :
-PALE, MODERATE; MUCOSAL SURFACE, FUNDUS REGION

LUNG :
-PALE, MINIMAL; ALL LOBES

ORAL CAVITY :
-ABNORMAL TEETH

HISTOPATHOLOGY

LIVER :
-HEPATOCYTE VACUOLATION,-SLIGHT
>NOTE:>OTHERWISE UNREMARKABLE.

PANCREAS :
-DEGRANULATION,-SLIGHT
>NOTE:>DEGRANULATION WAS CHARACTERISED BY A DECREASE OF ZYMOGEN GRANULES NORMALLY PRESENT IN ACINAR CELLS RESULTING IN INCREASED ACINAR CELL BASOPHILIA.

STOMACH :
>UNREMARKABLE
>NOTE:>NO MICROSCOPIC CORRELATION WITH NECROPSY.

KIDNEY :
-TUBULAR VACUOLATION,-MINIMAL

VAGINA :
-OESTRUS,-PRESENT

LUNG :
>UNREMARKABLE
>NOTE:>NO MICROSCOPIC CORRELATION WITH NECROPSY.

HEART :
-MYOCARDIAL VACUOLATION,-MINIMAL

PARATHYROID :
>UNREMARKABLE
>NOTE:>ONE SAMPLE.

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Individual animal pathology data

Test article	Control	[redacted]		
Group	1	2	3	4
Level (ppm)	0	500	5000	20000

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STUDY NUMBER: 0535104

ANIMAL NUMBER: 000038 SEX: FEMALE DOSE GROUP: 4 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 05/30/03 STUDY DAY OF DEATH: 30 STUDY WEEK OF DEATH: 5 TERMINAL BODY WEIGHT: 133.1 GRAMS

OBSERVATIONS (CONTINUED)

NECROPSY	HISTOPATHOLOGY
	ORAL CAVITY : >TISSUE MISSING >NOTE:>NO EQUIVALENT SAMPLE FOR CORRELATION WITH NECROPSY.

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
SPLEEN, MESENTERIC LN, DUODENUM, JEJUNUM, ILEUM, CAECUM, COLON, ADRENAL, OVARY, URINARY BLADDER, UTERUS, MANDIBULAR LN, THYMUS, TRACHEA, THYROID

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Individual animal pathology data

Test article	Control	[redacted]		
Group	1	2	3	4
Level (ppm)	0	500	5000	20000

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STUDY NUMBER: 0535104

ANIMAL NUMBER: 000039 SEX: FEMALE DOSE GROUP: 4 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 05/30/03 STUDY DAY OF DEATH: 30 STUDY WEEK OF DEATH: 5 TERMINAL BODY WEIGHT: 136.3 GRAMS

OBSERVATIONS

NECROPSY

LIVER :
-PALE, MODERATELY SEVERE; ALL LOBES

CAECUM :
-INJECTION LESION

UTERUS :
-DISTENSION, SLIGHT; BILATERAL

ORAL CAVITY :
-ABNORMAL TEETH

HISTOPATHOLOGY

LIVER :
-HEPATOCYTE VACUOLATION, -MODERATE
>NOTE:>OIL RED O STAINING FOR LIPID WAS POSITIVE, PAS STAINING FOR GLYCOGEN WAS NEGATIVE.

PANCREAS :
-DEGRANULATION, -SLIGHT

MESENTERIC LN :
-ATROPHY, -SLIGHT

STOMACH :
-EROSION/ULCER, -MINIMAL

CAECUM :
-BARBITURATE LYSIS, -PRESENT

KIDNEY :
-FOCAL NEPHROPATHY, -MINIMAL
-TUBULAR VACUOLATION, -SLIGHT
>NOTE:>OIL RED O STAINING WAS POSITIVE, PAS STAINING WAS NEGATIVE.

UTERUS :
-OESTROUS CYCLE, -PRESENT

VAGINA :
-PRO-OESTRUS, -PRESENT

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Appendix 10

Individual animal pathology data

Test article	Control	[redacted]		
Group	1	2	3	4
Level (ppm)	0	500	5000	20000

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HARROGATE, ENGLAND

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STUDY NUMBER: 0535104

ANIMAL NUMBER: 000039 SEX: FEMALE DOSE GROUP: 4 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 05/30/03 STUDY DAY OF DEATH: 30 STUDY WEEK OF DEATH: 5 TERMINAL BODY WEIGHT: 136.3 GRAMS

OBSERVATIONS (CONTINUED)

NECROPSY	HISTOPATHOLOGY
	HEART : -MYOCARDIAL VACUOLATION,-SLIGHT >NOTE:>OIL RED O STAINING FOR LIPID WAS POSITIVE, PAS STAINING FOR GLYCOGEN WAS NEGATIVE. ORAL CAVITY : >TISSUE MISSING >NOTE:>NO EQUIVALENT SAMPLE FOR CORRELATION WITH NECROPSY.

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
SPLEEN, DUODENUM, JEJUNUM, ILEUN, COLON, ADRENAL, OVARY, URINARY BLADDER, MANDIBULAR LN, THYMUS, LUNG, TRACHEA, THYROID, PARATHYROID

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Appendix 10

Individual animal pathology data

Test article	Control	[redacted]		
Group	1	2	3	4
Level (ppm)	0	500	5000	20000

COVANCE
HARROGATE, ENGLAND

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STUDY NUMBER: 053S104

ANIMAL NUMBER: 000040 SEX: FEMALE DOSE GROUP: 4 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 05/30/03 STUDY DAY OF DEATH: 30 STUDY WEEK OF DEATH: 5 TERMINAL BODY WEIGHT: 152.1 GRAMS

OBSERVATIONS

NECROPSY

ADRENAL :
-LARGE, SLIGHT; BILATERAL

OVARY :
-LARGE, SLIGHT; BILATERAL

ORAL CAVITY :
-ABNORMAL TEETH

HISTOPATHOLOGY

LIVER :
-HEPATOCYTE VACUOLATION,-MINIMAL
-INFLAMMATORY CELL FOCI,-MINIMAL

ADRENAL :
>UNREMARKABLE
>NOTE:>NO MICROSCOPIC CORRELATION WITH NECROPSY.

KIDNEY :
-FOCAL NEPHROPATHY,-MINIMAL
-TUBULAR VACUOLATION,-MINIMAL

OVARY :
-OESTROUS CYCLE,-PRESENT

VAGINA :
-PRO-OESTRUS,-PRESENT

LUNG :
-INFLAMMATORY CELL FOCI,-MINIMAL

HEART :
-MYOCARDIAL VACUOLATION,-MINIMAL

PARATHYROID :
>UNREMARKABLE
>NOTE:>ONE SAMPLE.

ORAL CAVITY :
>TISSUE MISSING

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Appendix 10

Individual animal pathology data

Test article	Control	[redacted]		
Group	1	2	3	4
Level (ppm)	0	500	5000	20000

COVANCE
HARROGATE, ENGLAND

PRINTED: 24-SEP-03
PAGE: 50

STUDY NUMBER: 0535104

ANIMAL NUMBER: 000040 SEX: FEMALE DOSE GROUP: 4 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 05/30/03 STUDY DAY OF DEATH: 30 STUDY WEEK OF DEATH: 5 TERMINAL BODY WEIGHT: 152.1 GRAMS

OBSERVATIONS (CONTINUED)

NECROPSY	HISTOPATHOLOGY
	ORAL CAVITY ;
	>NOTE:>NO EQUIVALENT SAMPLE FOR CORRELATION WITH NECROPSY. .

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
SPLEEN, PANCREAS, MESENTERIC LN, STOMACH, DUODENUM, JEJUNUM, ILEUM, CAECUM, COLON, URINARY BLADDER, UTERUS, MANDIBULAR LN, THYMUS, TRACHEA, THYROID

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Appendix 11
Certificates of diet analysis

SDS
Special Diets Services

Special Quality Control Certificate of Analysis

PRODUCT: RM1 (E) SQC FG — BATCH NO: 2870

PREMIX BATCH NO: 12009,12072 — DATE OF MANUFACTURE: 06-FEB-03

Nutrient	Found Analysis		Contaminant	Found Analysis		Limit of Detection
Moisture	10.5	%	Fluoride	6	mg/kg	1.0 mg/kg
Crude Fat	3.4	%	Nitrate as NaNO3	14	mg/kg	1.0 mg/kg
Crude Protein	15.0	%	Nitrite as NaNO2	Non Detected	mg/kg	1.0 mg/kg
Crude Fibre	4.3	%	Lead	Non Detected	mg/kg	0.25 mg/kg
Ash	4.7	%	Arsenic	Non Detected	mg/kg	0.2 mg/kg
Calcium	0.78	%	Cadmium	0.05	mg/kg	0.05 mg/kg
Phosphorus	0.56	%	Mercury	Non Detected	mg/kg	0.01 mg/kg
Sodium	0.24	%	Selenium	0.14	mg/kg	0.05 mg/kg
Chloride	0.44	%				
Potassium	0.75	%				
Magnesium	0.18	%	Total Aflatoxins	Non Detected	mcg/kg	1 mcg/kg each of B1,B2,G1,G2
Iron	147	mg/kg				
Copper	8	mg/kg	Total P.C.B	Non Detected	mcg/kg	10.0 mcg/kg
Manganese	54	mg/kg	Total D.D.T	Non Detected	mcg/kg	10.0 mcg/kg
Zinc	45	mg/kg	Dieldrin	Non Detected	mcg/kg	10.0 mcg/kg
			Lindane	Non Detected	mcg/kg	10.0 mcg/kg
			Heptachlor	Non Detected	mcg/kg	10.0 mcg/kg
			Malathion	Non Detected	mcg/kg	20.0 mcg/kg
Vitamin A	4.1	iu/g	Total Viable Organisms x 1000	Non Detected	per grm	1000/g
Vitamin E	38	mg/kg				
Vitamin C		mg/kg	Mesophilic Spores x 100	Non Detected	per grm	100/g
			Salmonellae Species	Non Detected	per grm	Absent in 20 grm
			Entero Bacteriaceae	Non Detected	per grm	Absent in 20 grm
			Escherichia Coli	Non Detected	per grm	Absent in 20 grm
			Fungal Units	Non Detected	per grm	Absent in 20 grm
			Antibiotic Activity	Non Detected		

Signed .....
Dated 13/3/2003

SANITIZED COPY

Draft Report

Study Title	[ ] 13 Week Oral (Dietary) Administration Toxicity Study in the Rat with a 4 Week Treatment-free Period
Data Requirement	OPPTS 870.3100
Author	
Sponsor	[ ]
Test facility	Covance Laboratories Ltd Otley Road, Harrogate North Yorkshire HG3 1PY ENGLAND
Covance Study Number	0535/101
Report Issued	January 2004
Volume Number	I of 3
Page Number	1 of 1316

STATEMENT OF NO DATA CONFIDENTIALITY CLAIMS

[ ]: 13 Week Oral (Dietary) Administration Toxicity Study in the Rat with a 4 Week Treatment-free Period

No claim of confidentiality is made for any information contained in this study on the basis of its falling within the scope of the United States Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act §10 (d) (1) (A), (B), or (C).

Company

Company Agent

Date

Title

Signature

COMPLIANCE STATEMENT

[ ]: 13 Week Oral (Dietary) Administration Toxicity Study in the Rat with a 4 Week Treatment-free Period

The study was conducted in compliance with:

United Kingdom Statutory Instrument 1999 No. 3106, The Good Laboratory Practice Regulations 1999.

OECD Principles on Good Laboratory Practice (revised 1997, Issued Jan 1998) ENV/MC/CHEM(98)17.

P Harvey BSc (Hons), PhD, CBiol, MIBiol
Study Director
Covance Laboratories Ltd

Date

QUALITY ASSURANCE STATEMENT

[ ]: 13 Week Oral (Dietary) Administration Toxicity Study in the Rat with a 4 Week Treatment-free Period

SIGNATURE PAGE

[ ]: 13 Week Oral (Dietary) Administration Toxicity Study in the Rat with a 4 Week Treatment-free Period

I, the undersigned, hereby declare that the work was performed by me or under my supervision and that the findings provide a true and accurate record of the results obtained. The study was performed in accordance with the agreed protocol and with Covance Laboratories Limited Standard Operating Procedures, unless otherwise stated, and the study objectives were achieved.

P Harvey BSc (Hons), PhD, CBiol, MIBiol
Study Director
Covance Laboratories Ltd

Date

Signatures of contributing scientists:

Study pathologist:

U Rehkemper Dr. med. vet. MRCVS
Study Pathologist
Covance Laboratories Ltd

Date

Scientific reviewer:

D Everett BSc CBiol FIBiol
Head of Toxicology Study Directors
Covance Laboratories Ltd

Date

KEY PERSONNEL

[ ]: 13 Week Oral (Dietary) Administration Toxicity Study in the Rat with a 4 Week Treatment-free Period

Study Monitor	[ ]
Study Director	P Harvey
Deputy Study Director	C Green
Head of Pathology	C Barton
Head of Statistics	C Gardner
Quality Assurance	C Clare
Head of Formulations & Formulations Analysis	C Wood
Animal house supervisor	D Gill
Animal health and welfare	A Basford
Ophthalmoscopy	A Basford
Clinical Pathology	B Tetlow
Necropsy	I Wilkins
Histology	L Patterson

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ABSTRACT

The purpose of this study was to determine the toxicity of the test article, [ ], following oral (dietary) administration to the rat for 13 weeks and to assess the reversibility of any changes noted at the high dose level over a 4 week treatment-free period.

Male and female rats of the Crl:WI(Glx/BRL/Han)BR strain were dosed as follows:

Group number	Group description	Dose level (ppm)	Animals/group			
			Main study		Treatment-free	
			Male	Female	Male	Female
1	Control	0	10	10	5	5
2	Low	100	10	10	-	-
3	Intermediate I	500	10	10	-	-
4	Intermediate II	2500	10	10	-	-
5	High	5000	10	10	5	5

Assessment of toxicity was based on mortality, clinical observations, and clinical and anatomic pathology evaluations.

There was a higher incidence of pale teeth in Group 5 animals. Group 5 males had a lower bodyweight gain. There were no effects on food consumption, opthalmoscopy, functional observation battery or locomotor activity.

Group 5 males showed higher platelets and plateletcrit values and lower lymphocytes at the end of the treatment period. Group 5 females showed higher reticulocyte, absolute reticulocyte, platelets and plateletcrit values at the end of the treatment period. These changes were not apparent in treatment free animals.

Group 5 males and Group 5 and 4 females had higher aspartate aminotransferase. Group 5 and 4 males had lower creatinine and total bilirubin and all treated females had lower total bilirubin but the difference was only significant from Group 3 and above. These findings were not apparent in treatment free animals. Group 5 animals also showed higher urinary volumes and the males also showed lower specific gravity.

In males, there was a dose related increase in liver weights adjusted to bodyweights in all treatment groups and kidney weights were higher in Groups 5 and 4. In the females, liver weights adjusted to bodyweights were higher in Groups 5 and 4. There were no changes apparent in liver or kidney weights in treatment free males but treatment free females showed higher liver, kidney and thymus weights adjusted to bodyweights.

There were no decedents during the study related to effects of the test article.

At the terminal kill, large liver was recorded macroscopically in a few Group 5 animals.

Microscopically, there were treatment-related findings in the liver, heart, muscle and pancreas due to effects of the test article.

In the liver, there was a minor dose-dependent centrilobular hypertrophy/eosinophilia in males from all treated groups and in some Group 5 females. A minor hepatocyte vacuolation was noted in all Group 4 and a few Group 5 females.

In the heart, a dose-dependent myocardial necrosis/degeneration was seen in males from all treated Groups and in Group 4 and Group 5 females.

In the skeletal muscle, an increase in minor myopathy was noted in muscle provided in sections of sternum and thyroid and in the quadriceps muscle from Group 5 and 4 males when compared with Group 1. In females, the increase in minor myopathy was seen at all dose levels in muscle provided in sections of sternum and thyroid. In the quadriceps muscle of females, the extent of myopathy was similar in control and treated animals.

In the pancreas, there was an increased incidence of degranulation in Group 5 females when compared with Group 1.

A no observable effect level (NOEL) could not be established.

At the treatment-free kill, there were no treatment-related macroscopic findings.

Microscopic findings in the liver, heart, muscle and pancreas of Group 5 animals were comparable with those in Group 1 rats indicating a complete reversal of the treatment-related findings noted at the terminal kill.

CONCLUSION

On the basis of histopathological findings comprising liver centrilobular hepatocyte hypertrophy and eosinophilia in males, a dose related increased incidence of myocardial degeneration or necrosis in the heart of males and skeletal muscle myopathy in females, a NOEL could not be established in this study.

OBJECTIVES AND PROCEDURES

Introduction

The purpose of this study was to determine the toxicity of the test article, [ ], following oral (dietary) administration to the rat for 13 weeks and to assess the reversibility of any changes noted at the high dose level over a 4 week treatment-free period.

The experimental start date was 10 June 2003; animals were first dosed on 26 June 2003 and the final necropsy occurred on 24 October 2003. The experimental end date was ***to be inserted***. The study completion date is the date the final report is signed by the Study Director.

Protocol Adherence

The study was conducted in accordance with the protocol and protocol amendments. These and any minor deviations from protocol are presented in Appendix 1. None of the deviations affected the integrity or outcome of the study.

Regulatory test guidelines

This study was designed to meet the known requirements of the Japanese MAFF Agrochemical Test Guidelines 2001 (90 day oral toxicity (2-1-9)). The study was also expected to meet the requirements of the US EPA (OPPTS 870.3100) the Organisation for Economic Co-operation and Development (OECD 408, 1998).

Test and Control Articles

The test article, a white powder, was supplied as follows:

Test article	Covance lot number	Batch number	Quantity supplied (g)	Purity (%)	Expiry Date	Date of receipt at Covance
[ ]	1	RCT301	5000	99.1	20 February 2004	21 March 2003

A Certificate of Analysis for this material is presented in Appendix 11.

When not in use the test article was stored in a sealed container, at room temperature.

The control article and the vehicle for the test article was SQC Rat and Mouse Diet No 1, Expanded, Ground Fine, supplied by Special Diet Services Ltd., Witham.

Test System and Study Design
Male and female rats of the Crl:WI(Glx/BRL/Han)BR strain were obtained from Charles River UK Ltd., Margate, on 10 June 2003. Animals were assigned to study groups as follows:

Group Number	Colour Code	Animal numbers			
		Main study		Treatment-free	
		Male	Female	Male	Female
1	Buff	1-10	61-70	11-15	71-75
2	Green	16-25	76-85	-	-
3	Blue	26-35	86-95	-	-
4	Yellow	36-45	96-105	-	-
5	Pink	46-55	106-115	56-60	116-120

At initiation of treatment, the animals were about five weeks old; the males weighed from 119.2 to 168.3 g, and the females weighed from 97.6 to 142.7 g.

Animals were identified using an implanted microchip identification device coded with a number before initiation of treatment.

Dose levels were confirmed from the results of a 28-day rat study (535/104) that showed liver and heart changes at 5000 ppm and 20000 ppm. The high dose of 5000 ppm is expected to be tolerated for the course of 13 weeks of treatment.

Rationale for Route of Administration
The oral (dietary) route is a possible route of human exposure.

Study Procedures
All deviations from protocol (annotated #) are documented in Appendix 1.

Procedure	Frequency/Comment
Dose Preparation	
Vehicle/Control	SQC Rat and Mouse Diet No 1, Expanded, Ground Fine
Dosing Formulations	The test article was first sieved through a 355 µm sieve before weighing. The test article was weighed into a prelabelled beaker and then put into a mortar with rinsings from the beaker. The test article diet mix in the mortar was mixed with a pestle until homogenous; more diet was gradually added to the test article until the capacity of the mortar was reached. This mix was then added to the bulk diet and the mortar was finally rinsed out with more diet. After the rinsings were added to the bulk diet the mixer was set in motion for five minutes.
Administration	Orally by incorporation into the diet. Animals had access *ad libitum* for at least 13 weeks excluding the day of necropsy. Treatment-free animals were not dosed beyond the end of Week 13 and were allowed a treatment-free period of 4 weeks prior to necropsy.
Dose Analysis	
Method	High Performance Liquid Chromatography.

Procedure	Frequency/Comment
Concentration Analysis	Weeks 1and 13.
Homogeneity and stability	Homogeneity and stability was determined on formulations prepared for study number 0535/104 at concentrations of 100 to 20,000 ppm.
Inlife Procedures	
Clinical Observations	Twice daily (am/pm) for routine health checks and daily for signs of ill health or overt toxicity.
Physical Examinations	Weekly intervals.
Functional observational battery (FOB)	Pre-treatment and at weekly intervals. Before initiation of treatment and in Week 13 an assessment was made of sensory reactivity to stimuli, grip strength and motor activity.
Ophthalmic Examinations	Pre-treatment (all animals) and Week 12 (control and high dose groups).
Body Weights	Pre-treatment, before treatment on Day 1, at weekly intervals and before necropsy.
Food Consumption	Weekly. Calculated as g/animal/week.
Compound Consumption	Consumption was calculated as mg/kg body weight/day.
Haematology#	Week 14 (before terminal kill) from all main study animals and at necropsy from all treatment-free animals.
Clinical Chemistry#	Week 14 (before terminal kill) from all main study animals and at necropsy from all treatment-free animals.
Urinalysis	Week 13 all animals.
Anatomic Pathology	
Necropsy	All animals including decedents were subject to necropsy.
Organ weights	All protocol specified organs were dissected free from fat and weighed before fixation.
Tissue Preservation	All protocol specified tissues from all animals preserved in the appropriate fixatives.
Histopathology	All protocol specified tissues from all animals processed and examined. Tissues from lower dose groups and treatment free animals were subsequently examined to establish a no-effect-level.
Record Retention	

Procedure	Frequency/Comment
	The raw data, documentation, records, specimens, protocol, and final report generated as a result of this study will be archived in the storage facilities of Covance, Harrogate, UK. At least ten years after submission of the final report, the Covance Archives staff will contact the Sponsor. At that time, the Sponsor may choose to have the aforementioned articles returned, archived for an additional period of time, or disposed of by Covance. A fee will be charged based on the option selected by the Sponsor. Specimens requiring storage deep frozen are specifically excluded from the above. These will be retained for as long as the quality of the material permits evaluation but for no longer than three months after issue of the final report.
Statistical Evaluation	
Data type	**Statistical analysis procedure/Comment[a]**
Main Study	**Groups 1 to 5**
Body Weight	One-way ANOVA, dose response and Dunnett's (Procedure I) on body weight gains over specified intervals.
Food Consumption	One-way ANOVA, dose response and Dunnett's (Procedure I) on food consumption over specified intervals.
Haematology	One-way ANOVA, dose response and Dunnett's (Procedure I).
Clinical Chemistry	One-way ANOVA, dose response and Dunnett's (Procedure I). Kruskal-Wallis, Terpstra-Jonckheere and Wilcoxon rank sum test (Procedure III) for parameters with values above or below the limit of the assay.
Urine Analysis	One-way ANOVA, dose response and Dunnett's (Procedure I).
Necropsy Body Weight	One-way ANOVA, dose response and Dunnett's (Procedure I).
Organ Weights	ANCOVA and Dunnett's (Procedure IV) using the necropsy body weight as covariate.
Locomotor Activity	One-way ANOVA, dose response and Dunnett's (Procedure I).
Functional Observational Battery	One-way ANOVA, dose response and Dunnett's (Procedure I).
Treatment-free	**Groups 1 and 5 only**
Body Weight	Two-way ANOVA and t-tests (Procedure II for two groups) on body weight gains over specified intervals.
Food Consumption	Two-way ANOVA and t-tests (Procedure II for two groups) on food consumption over specified intervals.
Haematology	Two-way ANOVA and t-tests (Procedure II for two groups).
Clinical Chemistry	Two-way ANOVA and t-tests (Procedure II for two groups).
Necropsy Body Weight	Two-way ANOVA and t-tests (Procedure II for two groups).
Organ Weights	ANCOVA (Procedure IV for two groups) using the necropsy body weight as covariate.

a See Appendix 1 for details of statistical procedures.

Major Computer Systems	
Function	**Application** - (Version numbers of the systems will be held on file at Covance)
Scheduling	CMS (Covance Management System)
Formulations	Talisman
Formulations Analysis	Atlas/Talisman
In-life data collection	Connex
Clinical pathology	Clinaxys
Post-life data collection	Xybion
Report generation and statistical analysis	Deliver/Office 97

Chronology terms used in body weight/food reports (Covance Reporting System - Deliver 3.11r26).

	Week	Day of	Body weight	Food consumption
Pre-dose	-1	-8	⇐ -1:0	
		-7		⇐ -1:0 to ⇐ -0:4
		-6		
		-5		
		-4		
		-3	⇐ -0:3	⇐ -0:3 to ⇐ -0:1
		-2		
		-1	⇐ -0:1	
Start of study ⇒	1	1	⇐ Start	⇐ 0:1 to ⇐ 0:3
		2		
		3		
		4	⇐ 0:3	⇐ 0:4 to ⇐ 1:0
		5		
		6		
		7	⇐ 1:0	
	2	8		⇐ 1:1 to ⇐ 1:3
		9		
		10		
		11	⇐ 1:3	⇐ 1:4 to ⇐ 2:0
		12		
		13		
		14		

INTERPRETATION AND CONCLUSION

Dose Analysis
Appendix 2

Test article, [ ] was formulated into ground diet for administration to the study animals.

Formulations from Weeks 1 and 13 were analysed to determine the achieved concentration. Results, with the exception of the slightly high values for Group 2 in Week 13, were within the range 85 to 110%.

The analytical procedure was validated under study number 535/102.

Mortality
There was one Group 2 female decedent during the study. The cause of demise was accidental bone fracture unrelated to effects of the test article.

In addition to findings associated with terminal events, the range of macroscopic and microscopic findings in the decedent was generally similar to those in animals surviving to terminal kill.

Clinical signs
Appendix 3

A higher incidence of pale teeth was noted in Group 5 animals.

Body weight
Figure 1, Figure 2, Table 1, Table 2,Appendix 4

Group 5 males showed reduced bodyweight gain during the course of the study and the bodyweight deficit was approximately 10% at the end of the treatment phase.

Food consumption
Figure 3, Figure 4, Table 3, Table 4, Table 5, Appendix 5

Food consumption was variable between treatment Groups but there were no consistent effects of treatment. Group mean compound consumption are given in Table 5.

Ophthalmoscopy
There were no treatment related findings.

Functional observation battery
Table 6, Appendix 13

There were lower values of hindlimb footsplay in Group 2, 3 and 5 males at Week 13. However, with the absence of dose relationship or any effect in the females this is not considered to be of toxicological significance.

There were no differences in the incidences of tremors, convulsions, excessive vocalisations, ease of removal or handling, arousal, palpebral closure, exopthalmos, lacrimation/ type of lacrimation, salivation or respiration changes in the functional examinations.

In the open field, there were no effects of treatment on latency of first step, posture, circling, gait type, stereotypy, tremor, convulsion, number of rears, number of faecal boli, number of urine pools, diarrhoea or polyuria.

There were no effects of treatment on the approach response, touch response, tail pinch, air righting, pupillary response, corneal tactile response, auditory response, forelimb grip strength or hindlimb grip stength.

Overall, there were no findings from any assessment indicative of any neurotoxicological effect of the test formulations.

Locomotor activity data
Figure 5, Figure 6, Table 7, Appendix 14

Locomotor activity data was variable between treatment groups throughout the study, but there was no evidence of an effect of treatment.

Haematology
Table 8, Appendix 6

Group 5 males showed higher platelets and plateletcrit values and lower lymphocytes at the end of the treatment period. Group 5 females showed higher reticulocyte, absolute reticulocyte, platelets and plateletcrit values at the end of the treatment period. These changes were not apparent in treatment free animals.

Clinical chemistry
Table 9, Appendix 7

Group 5 and 4 males and females had higher aspartate aminotransferase. Group 5 and 4 males had lower creatinine and total bilirubin and all treated females had lower total bilirubin, the difference being significant from Group 3 and above. These findings were not apparent in treatment free animals but Group 5 males showed lower triglycerides and Group 5 females showed higher total cholesterol.

Urinalysis
Table 10, Appendix 8

Group 5 animals showed higher urinary volumes and the males also showed lower specific gravity.

Organ weights
Table 11, Appendix 9

In males, there was a dose related increase in liver weights adjusted to bodyweights in all treatment groups and kidney weights were higher in Groups 5 and 4. In the females, liver weights adjusted to bodyweights were higher in Groups 5 and 4.

There were no changes apparent in liver or kidney weights in treatment free males but treatment free females showed higher liver, kidney and thymus weights adjusted to bodyweights.

Macroscopic findings
Table 12, Table 13, Table 14, Appendix 10

Terminal kill
Macroscopic findings
Most tissues were macroscopically unremarkable and the findings seen were generally consistent with the usual pattern of findings in rats of this strain and age.

In addition, large liver was recorded in a few Group 5 animals which generally correlated with findings seen microscopically.

There were no other macroscopic findings due to effects of the test article.

Microscopic findings

Microscopic findings in Group 1 animals were generally infrequent, of a minor nature and consistent with the usual pattern of findings in rats of this strain and age.

Additionally, in treated animals, there were effects in the liver, muscle, heart and pancreas due to effects of the test article.

In the liver, there was a minor dose-dependent centrilobular hypertrophy/eosinophilia in males from all treated groups and in some Group 5 females. This finding was characterised by enlarged hepatocytes with granular pale eosinophilic cytoplasm. In addition, a minor hepatocyte vacuolation was noted in all Group 5 and two Group 4 females. This finding was characterised by very fine well circumscribed cytoplasmic vacuoles especially in periportal hepatocytes.

Group incidence of selected microscopic findings in the liver

		Males					Females				
		1M	2M	3M	4M	5M	1F	2F	3F	4F	5F
Tissue and finding	Level (ppm)	0	100	500	2500	5000	0	100	500	2500	5000
Liver	No. examined:	10	10	10	10	10	10	9	10	10	10
centrilobular hypertrophy/eosinophilia	Grade -	10	5	5	5	1	10	9	10	10	5
	1	0	5	5	5	7	0	0	0	0	5
	2	0	0	0	0	2	0	0	0	0	0
hepatocyte vacuolation	Grade -	10	9	10	10	9	10	9	10	8	0
	1	0	1	0	0	1	0	0	0	1	6
	2	0	0	0	0	0	0	0	0	1	4

Key: "-" = finding not present, 1 = minimal, 2 = slight

In the heart, there was a dose-dependent increase in minor myocardial degeneration/necrosis in males from all treated groups and in Group 4 and Group 5 females when compared with the controls. This finding was characterised by variably sized foci of degenerating cardiomyofibres with eosinophilic and/or vacuolated sarcoplasm, loss of cross striation and necrosis and was associated with an increase in satellite cells, inflammatory cell infiltration and very minor early fibrosis.

In the skeletal muscle, there was an increase in the incidence of minor myopathy in most Group 5 and several Group 4 males when compared with Group 1. This finding was noted predominantly in tissue provided in section of sternum and thyroid and, to a lesser extent, in the quadriceps muscle. In females, the increase in myopathy was seen at all dose levels but only in tissue provided in the section 0of sternum and thyroid. The extent of myopathy seen in the quadriceps muscle of treated females was similar to that in controls. This finding was characterised by myofibre degeneration with loss of cross striation, sarcoplasmic vacuolation and eosinophilia, myofibre regeneration characterised by sarcoplasmic basophilia and an increase in satellite cells and occasional minor inflammatory cell infiltration.

Group incidence of selected microscopic findings in the skeletal muscle and heart

		Males					Females				
		1M	2M	3M	4M	5M	1F	2F	3F	4F	5F
Tissue and finding	Level (ppm)	0	100	500	2500	5000	0	100	500	2500	5000
Heart	No. examined:	10	10	10	10	10	10	9	10	10	10
myocardial degeneration/necrosis	Incidence:	1	2	4	8	10	0	1	0	9	10
Skeletal muscle	No. examined:	10	10	10	10	10	10	9	10	10	10
myopathy, other muscle	Incidence:	1	1	1	5	9	1	3	3	4	8
myopathy, quadriceps muscle	Incidence:	3	2	3	6	6	4	2	3	4	4

In the pancreas, there was an increased incidence of degranulation in Group 5 females when compared with Group 1. The marginal increase in the incidence of degranulation in Group 4 females was considered to be a chance event rather than the result of a treatment-related effect. This finding was characterised by a decrease in the eosinophilic zymogen granules normally present in the acinar cells resulting in increased acinar cell basophilia.

Group incidence of selected microscopic findings in the pancreas

		Males					Females				
		1M	2M	3M	4M	5M	1F	2F	3F	4F	5F
Tissue and finding	Level (ppm)	0	100	500	2500	5000	0	100	500	2500	5000
Pancreas	No. examined:	10	10	9	10	10	10	9	10	10	10
degranulation	Grade -	10	10	9	10	10	9	9	10	8	2
	1	0	0	0	0	0	1	0	0	2	6
	2	0	0	0	0	0	0	0	0	0	2

Key: "-" = finding not present, 1 = minimal, 2 = slight

A no observable effect level (NOEL) could not be established.

There were no other microscopic findings due to effects of the test article.

There were some intergroup variations, increases as well as decreases, in the incidences of some background findings such as hyaline droplets and hydronephrosis in the kidney of males, cortico-medullary mineralisation in the kidney of females and inflammatory cell foci in the lung of males and females. These findings were seen in Group 1 as well as in Group 5 animals and the incidences were not dose dependent. These variations were therefore considered as a chance event and not related to treatment.

Treatment-free kill

Macroscopic findings

Most tissues were macroscopically unremarkable and the findings seen were generally consistent with the usual pattern of findings in rats of this strain and age. Macroscopic findings in the liver of the Group 5 males were considered to be rather a chance event and not related to treatment.

Microscopic findings
Microscopic findings in the liver, heart, muscle and pancreas in Group 5 animals were comparable with those in Group 1 rats indicating a complete reversal of the treatment-related findings seen in terminal kill animals.

Conclusion
On the basis of histopathological findings comprising liver centrilobular hepatocyte hypertrophy and eosinophilia in males, a dose related increased incidence of myocardial degeneration or necrosis in the heart of males and skeletal muscle myopathy in females, a NOEL could not be established in this study.

FIGURES

Figure 1
Group mean body weights – males

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

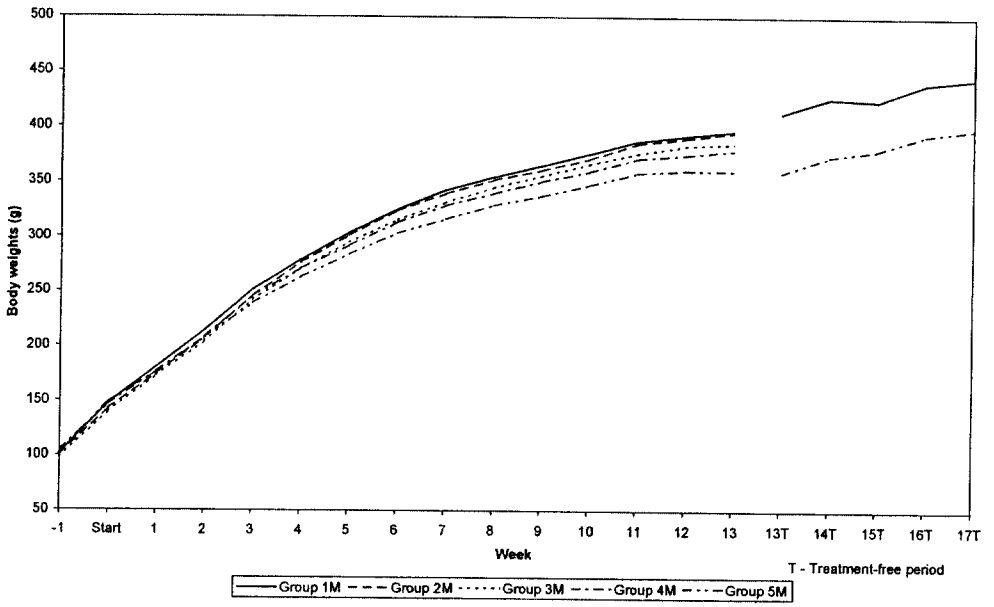


Figure 2
Group mean body weights – females

Test Article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

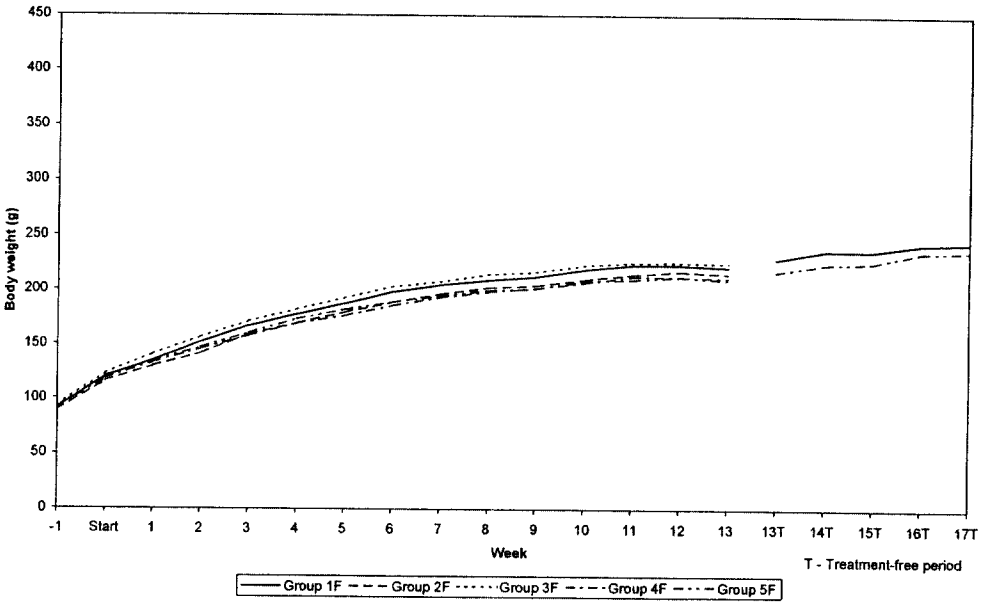


Figure 3
Group mean food consumption – males

Test Article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

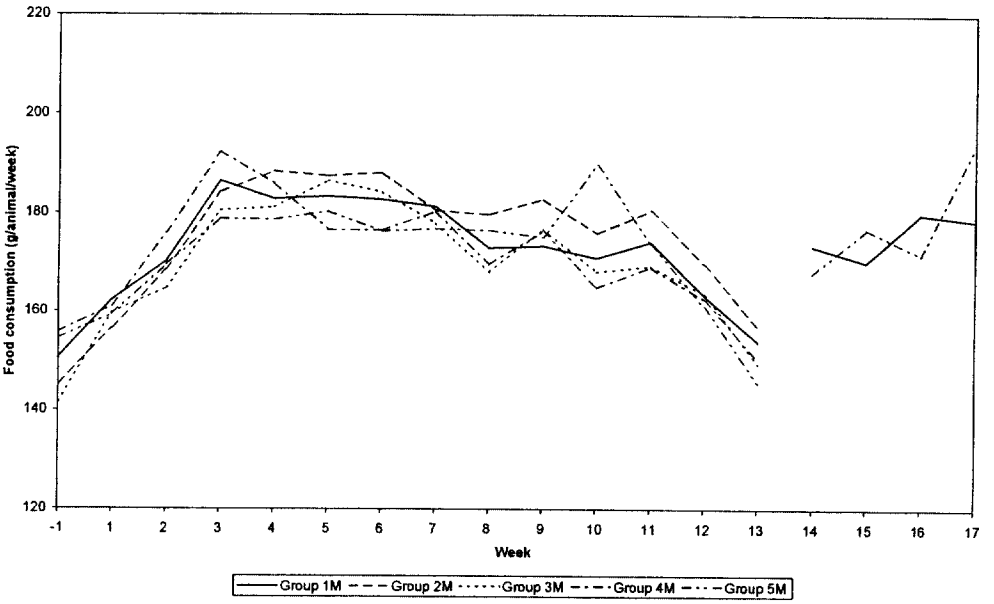


Figure 4
Group mean food consumption – females

Test Article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

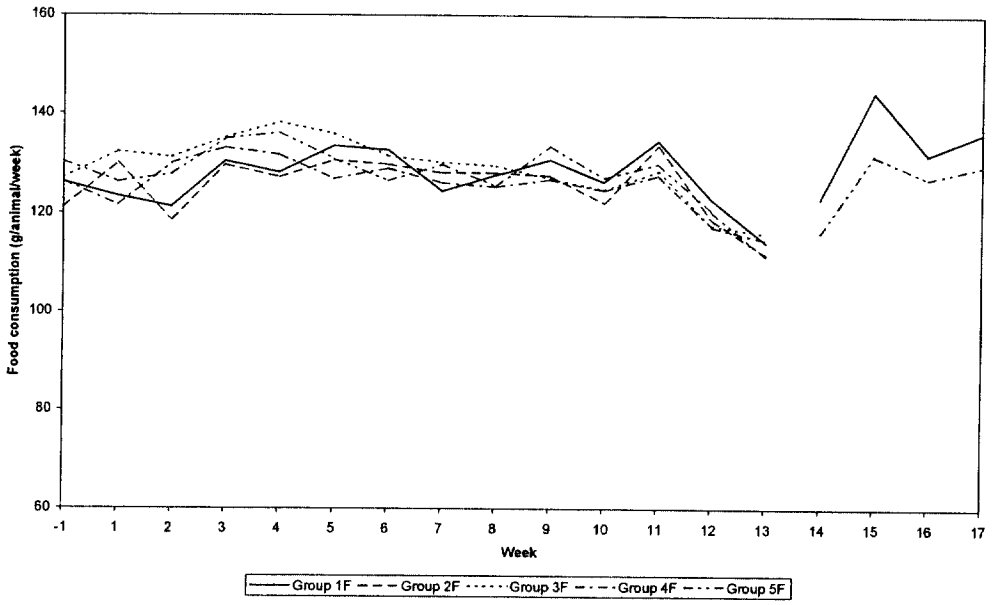
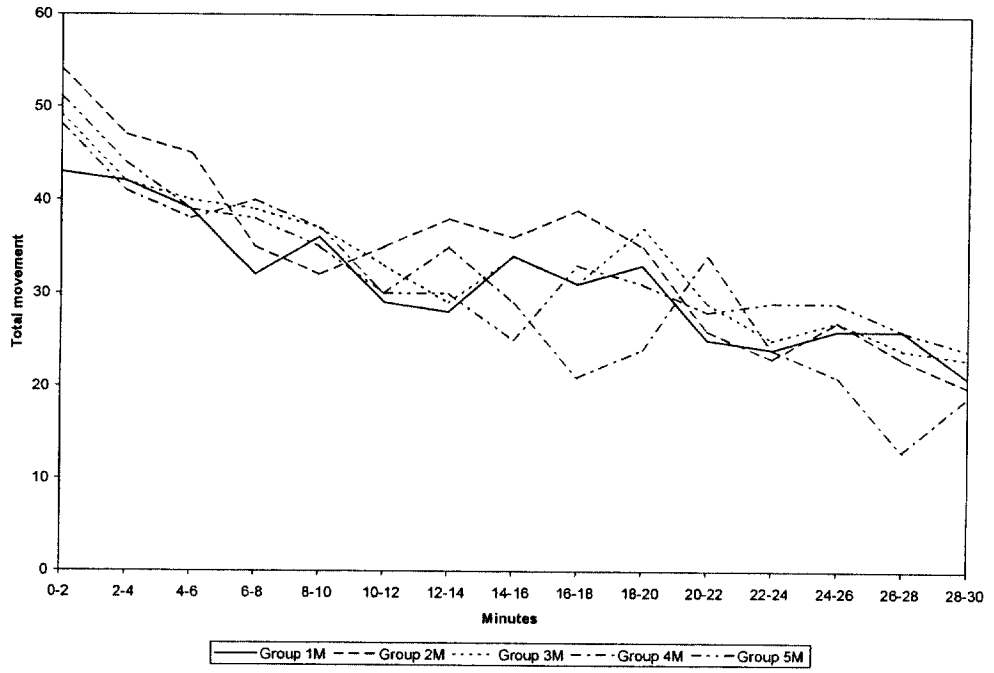
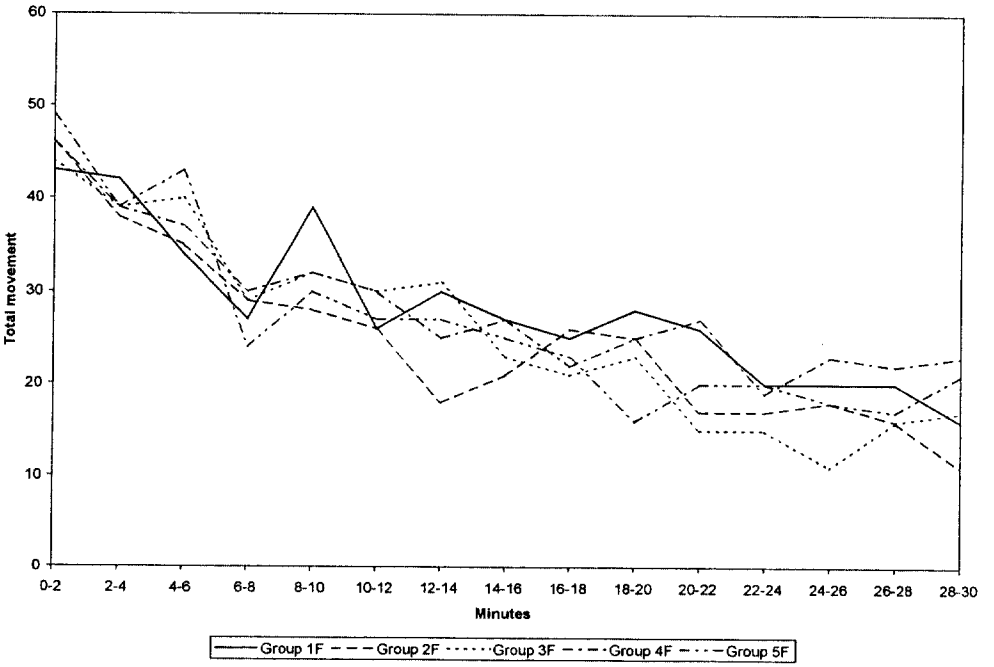


Figure 5
Group mean locomotor activity data – Week -1

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

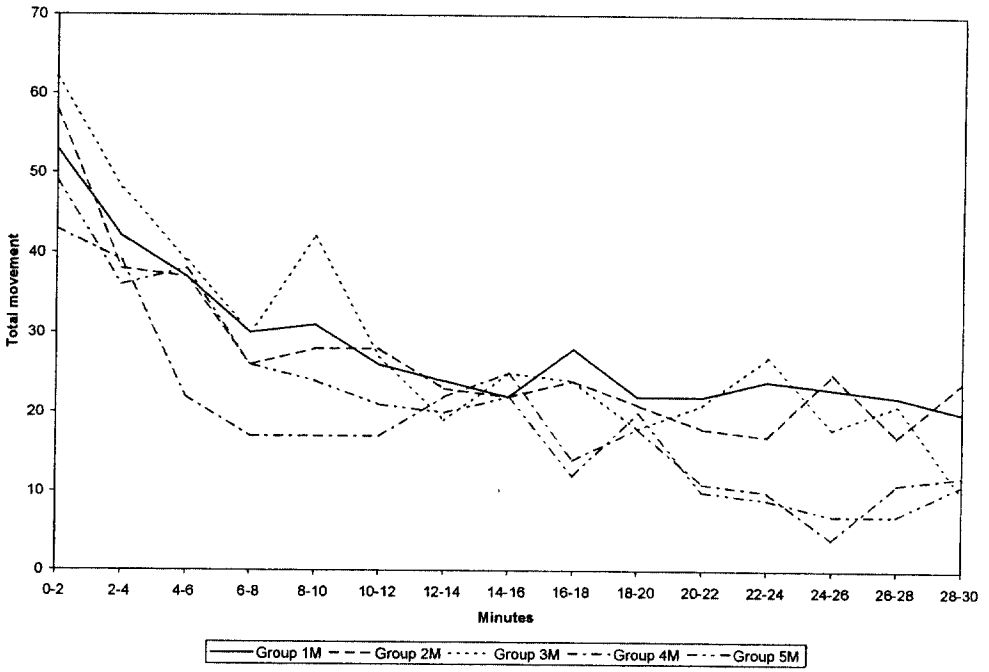


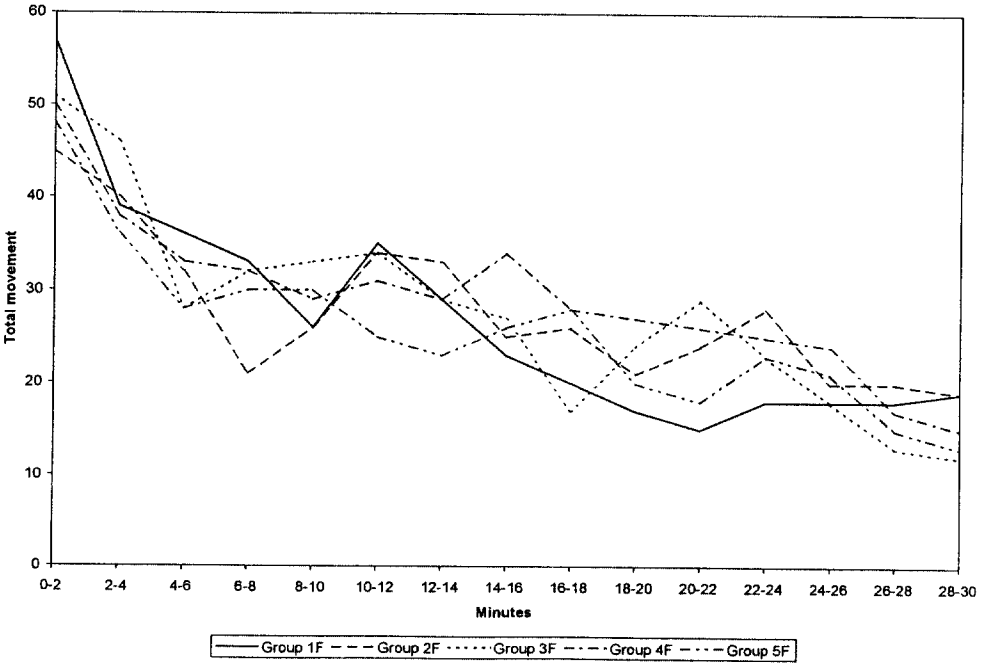


Total movement - Total number of occasions a light beam was broken in the interval

Figure 6
Group mean locomotor activity data – Week 13

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000





Total movement - Total number of occasions a light beam was broken in the interval

TABLES

Some tables/appendices in this report are computer generated. In this system individual and derived figures are rounded. Thereby recalculation of derived values from the individual data presented in the reports will, in some instances, yield minor variations.

Table 1
Group mean body weight

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Week		Mean body weights (g) for Group: 1M	2M	3M	4M	5M
-1:0	Mean	100.9	99.9	97.5	104.1	102.4
	SD	10.62	9.68	7.94	17.22	10.92
Start	Mean	146.8	142.1	139.2	145.9	148.1
	SD	14.40	11.89	8.99	11.85	13.97
1:0	Mean	179.6	173.6	172.1	175.9	176.0
	SD	18.23	15.15	10.96	12.44	16.23
2:0	Mean	212.9	206.5	203.0	207.5	206.5
	SD	21.13	18.17	13.94	11.92	18.97
3:0	Mean	250.7	245.2	241.5	245.2	238.5
	SD	22.49	15.60	14.46	13.29	19.65
4:0	Mean	278.2	275.7	270.3	270.3	262.4
	SD	22.02	14.36	14.33	14.33	20.45
5:0	Mean	302.9	300.5	294.3	291.2	283.1
	SD	23.06	12.56	14.49	16.93	21.02
6:0	Mean	324.5	323.2	315.3	312.9	302.8
	SD	23.94	11.42	17.20	18.81	24.18
7:0	Mean	342.4	339.0	331.1	328.1	315.9
	SD	24.20	10.60	18.18	21.49	23.06
8:0	Mean	354.2	351.6	344.7	339.4	328.7
	SD	23.49	12.50	18.84	22.60	24.08
9:0	Mean	364.3	360.5	355.4	350.3	337.0
	SD	25.06	11.89	21.54	25.47	26.14
10:0	Mean	375.5	370.8	366.2	359.5	347.4
	SD	26.31	14.45	23.04	25.72	26.58
11:0	Mean	386.8	384.9	375.9	371.2	358.2
	SD	25.81	15.91	23.19	27.22	27.07
12:0	Mean	391.6	389.5	382.9	374.6	360.7
	SD	26.84	15.16	24.11	28.56	26.52
13:0	Mean	396.2	394.9	384.7	378.5	360.0
	SD	25.16	16.97	23.29	31.05	28.28
13:0T	Mean	412.6	-	-	-	358.7
		38.02	-	-	-	9.53
14:0T	Mean	426.3	-	-	-	373.3
	SD	39.71	-	-	-	12.09
15:0T	Mean	423.7	-	-	-	379.2
	SD	40.94	-	-	-	9.66
16:0T	Mean	439.1	-	-	-	393.0
	SD	40.76	-	-	-	13.80
17:0T	Mean	444.2	-	-	-	398.5
	SD	41.76	-	-	-	14.69

T Treatment-free period

Table 1
Group mean body weights

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Week		1F	2F	3F	4F	5F
-1:0	Mean	90.6	88.7	93.5	91.0	91.5
	SD	7.45	5.41	6.12	8.50	7.66
Start	Mean	119.5	115.4	122.6	117.5	120.2
	SD	9.47	6.92	5.75	12.18	11.02
1:0	Mean	134.7	129.3	140.4	132.6	133.8
	SD	10.91	5.53	8.50	12.03	12.92
2:0	Mean	151.3	141.1	156.2	145.2	146.7
	SD	11.87	7.18	10.24	14.55	12.12
3:0	Mean	166.1	158.5	170.9	157.3	160.3
	SD	12.72	6.61	10.20	14.86	13.95
4:0	Mean	177.1	169.2	181.9	168.9	172.9
	SD	13.69	5.48	11.53	15.72	13.97
5:0	Mean	186.9	179.1	192.5	175.9	181.8
	SD	14.11	8.34	13.41	19.92	13.65
6:0	Mean	197.7	188.6	202.9	185.5	188.9
	SD	15.17	6.74	13.47	19.08	14.83
7:0	Mean	204.5	196.4	207.6	193.0	194.4
	SD	15.14	8.21	11.56	19.18	15.96
8:0	Mean	208.7	202.1	214.3	198.3	199.7
	SD	15.96	8.23	11.04	20.17	16.41
9:0	Mean	212.1	204.2	216.7	201.7	201.4
	SD	16.22	8.44	13.39	18.33	16.50
10:0	Mean	219.0	209.8	222.7	206.8	208.3
	SD	17.42	9.01	15.16	19.38	17.70
11:0	Mean	223.1	214.4	225.4	212.7	209.8
	SD	16.44	8.61	13.39	20.02	18.17
12:0	Mean	223.1	217.5	225.6	212.3	212.6
	SD	17.84	6.84	13.27	21.10	17.14
13:0	Mean	220.9	215.0	224.9	211.6	209.6
	SD	17.87	8.76	14.69	19.64	16.63
13:0T	Mean	228.3	-	-	-	217.1
	SD	23.51	-	-	-	18.27
14:0T	Mean	236.7	-	-	-	224.2
	SD	17.18	-	-	-	20.80
15:0T	Mean	236.0	-	-	-	225.8
	SD	20.36	-	-	-	22.51
16:0T	Mean	242.9	-	-	-	235.5
	SD	20.51	-	-	-	23.71
17:0T	Mean	243.9	-	-	-	236.4
	SD	19.35	-	-	-	24.56

T Treatment-free period

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Table 2
Group mean body weight gains

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Week		Mean body weight gain (g) for Group: 1M	2M	3M	4M	5M	Statistics
Start-13:0	Mean	249.4	252.8	245.5	232.6	211.9***	A
	SD	21.24	17.58	23.60	33.80	25.09	
13:0-17:0	Mean	31.6	-	-	-	39.7	S2
	SD	7.81	-	-	-	7.06	
Week		**1F**	**2F**	**3F**	**4F**	**5F**	**Statistics**
Start-13:0	Mean	101.3	98.8	102.3	94.1	89.4*	A
	SD	11.43	8.31	12.18	10.26	10.34	
13:0-17:0	Mean	15.6	-	-	-	19.3	S2
	SD	5.07	-	-	-	7.91	

* P<0.05
** P<0.01
*** P<0.001

S2 = two-way ANOVA and t-tests
A = ANOVA, dose response and Dunnett's

Table 3
Group mean food consumption

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Week		Mean food consumption (g/animal/week) for Group: 1M	2M	3M	4M	5M
-1	Mean	150.5	145.2	141.5	155.7	154.4
	SD	15.28	9.31	5.35	10.50	15.84
1	Mean	162.2	156.4	159.6	161.0	159.3
	SD	16.38	10.84	11.64	14.13	14.02
2	Mean	170.1	168.4	164.7	175.9	169.4
	SD	16.28	13.25	15.53	17.09	13.81
3	Mean	186.4	184.2	180.5	192.3	178.8
	SD	17.16	16.86	11.13	13.62	12.00
4	Mean	182.8	188.4	181.1	185.9	178.6
	SD	13.34	11.09	10.91	12.31	16.04
5	Mean	183.3	187.5	186.5	176.6	180.3
	SD	13.50	10.12	17.39	9.75	15.48
6	Mean	182.7	188.1	184.2	176.5	176.3
	SD	12.59	5.95	16.94	11.74	24.90
7	Mean	181.2	180.5	177.9	180.3	176.8
	SD	15.32	12.31	14.27	9.84	14.54
8	Mean	172.9	179.7	168.0	169.6	176.5
	SD	11.12	10.46	14.74	12.13	17.30
9	Mean	173.3	182.8	176.8	176.4	175.1
	SD	18.15	11.75	13.84	13.27	15.39
10	Mean	170.9	175.9	168.1	164.9	189.8
	SD	14.24	10.82	15.51	10.46	79.48
11	Mean	174.1	180.6	169.3	169.1	173.8
	SD	14.95	9.77	19.19	12.64	15.92
12	Mean	163.3	169.7	163.6	162.5	161.1
	SD	11.23	5.69	17.03	9.69	10.46
13	Mean	153.9	156.9	149.5	150.3	145.6
	SD	9.61	7.82	14.32	6.25	10.22
14	Mean	173.3	-	-	-	167.8
	SD	15.03	-	-	-	8.13
15	Mean	170.1	-	-	-	176.9
	SD	4.80	-	-	-	13.98
16	Mean	179.9	-	-	-	171.6
	SD	10.41	-	-	-	10.27
17	Mean	178.5	-	-	-	193.6
	SD	13.18	-	-	-	23.76

Table 3
Group mean food consumption

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Week		Mean food consumption (g/animal/week) for Group: 1F	2F	3F	4F	5F
-1	Mean	126.2	121.1	127.0	126.3	130.3
	SD	8.59	8.98	14.52	13.21	11.75
1	Mean	123.4	130.0	132.3	121.5	126.2
	SD	10.24	10.58	13.54	12.82	11.43
2	Mean	121.3	118.6	131.2	130.0	127.8
	SD	10.08	10.53	18.35	17.09	10.51
3	Mean	130.4	129.6	135.2	133.1	134.9
	SD	16.40	10.65	21.00	21.76	12.90
4	Mean	128.2	127.2	138.2	131.7	136.1
	SD	9.59	11.96	18.88	13.97	13.00
5	Mean	133.5	130.6	135.9	126.9	130.9
	SD	12.27	12.21	22.03	18.67	13.59
6	Mean	132.6	129.8	131.5	129.0	126.5
	SD	12.62	13.62	16.87	19.74	14.30
7	Mean	124.4	128.1	130.2	126.1	129.8
	SD	8.09	11.98	13.51	11.00	12.75
8	Mean	127.7	128.1	129.5	125.3	125.5
	SD	14.05	9.39	15.19	11.49	12.06
9	Mean	130.7	127.6	127.0	126.8	133.5
	SD	13.53	12.36	15.50	18.15	11.36
10	Mean	126.3	122.1	124.8	124.6	127.1
	SD	10.81	8.37	11.40	14.39	11.89
11	Mean	134.5	133.5	128.5	127.7	130.0
	SD	14.16	8.95	14.02	12.37	13.79
12	Mean	122.8	118.8	117.6	117.3	120.4
	SD	11.26	9.65	12.94	12.42	13.16
13	Mean	114.2	111.7	115.9	114.6	111.3
	SD	9.28	9.95	11.17	8.15	8.99
14	Mean	122.9	-	-	-	116.2
	SD	23.13	-	-	-	12.10
15	Mean	144.4	-	-	-	131.7
	SD	26.72	-	-	-	13.73
16	Mean	131.8	-	-	-	127.0
	SD	25.40	-	-	-	12.13
17	Mean	136.1	-	-	-	129.6
	SD	26.81	-	-	-	17.61

Table 4
Group mean food consumption over selected intervals

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Week		Mean food consumption (g/animal/week) for Group: 1M	2M	3M	4M	5M	Statistics
0:1-13:0	Mean	173.6	176.9	171.5	172.4	172.4	A
	SD	11.54	4.10	10.64	7.66	12.47	
13:1-17:0	Mean	175.5	-	-	-	177.5	S2
	SD	10.02	-	-	-	9.03	
Week		**1F**	**2F**	**3F**	**4F**	**5F**	**Statistics**
0:1-13:0	Mean	126.9	126.2	129.1	125.7	127.7	A
	SD	9.53	8.32	14.48	12.59	10.09	
13:1-17:0	Mean	133.8	-	-	-	126.1	S2
	SD	22.53	-	-	-	12.79	

S2 = two-way ANOVA and t-tests
A = ANOVA, dose response and Dunnett's

Table 5
Group mean compound consumption

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Week(s)		Mean compound consumption (mg/kg/day) for Group: 1M	2M	3M	4M	5M
1	Mean	0.0	14.2	73.3	357.5	703.7
2	Mean	0.0	12.7	62.8	327.8	635.1
3	Mean	0.0	11.7	58.1	303.7	576.2
4	Mean	0.0	10.4	50.6	257.9	510.1
5	Mean	0.0	9.3	47.2	224.8	473.2
6	Mean	0.0	8.6	43.1	208.9	431.9
7	Mean	0.0	7.8	39.3	201.2	408.9
8	Mean	0.0	7.4	35.6	181.8	391.5
9	Mean	0.0	7.3	36.1	182.9	377.2
10	Mean	0.0	6.9	33.3	166.2	393.4
11	Mean	0.0	6.8	32.6	165.9	352.9
12	Mean	0.0	6.3	30.8	156.3	321.3
13	Mean	0.0	5.7	27.8	143.0	289.7
14	Mean	0.0	.	.	.	0.0
15	Mean	0.0	.	.	.	0.0
16	Mean	0.0	.	.	.	0.0
17	Mean	0.0	.	.	.	0.0
Week(s)		**1F**	**2F**	**3F**	**4F**	**5F**
1	Mean	0.0	15.2	71.8	347.1	712.3
2	Mean	0.0	12.5	63.2	334.8	653.0
3	Mean	0.0	12.4	59.0	313.8	628.4
4	Mean	0.0	11.1	55.9	288.8	584.5
5	Mean	0.0	10.7	51.8	262.5	528.1
6	Mean	0.0	10.1	47.4	254.6	487.8
7	Mean	0.0	9.5	45.3	238.6	484.3
8	Mean	0.0	9.2	43.9	229.6	455.7
9	Mean	0.0	9.0	42.1	227.2	476.8
10	Mean	0.0	8.4	40.6	218.3	443.5
11	Mean	0.0	9.0	41.0	218.1	444.9
12	Mean	0.0	7.8	37.2	198.3	407.2
13	Mean	0.0	7.4	36.7	194.4	377.9
14	Mean	0.0	.	.	.	0.0
15	Mean	0.0	.	.	.	0.0
16	Mean	0.0	.	.	.	0.0
17	Mean	0.0	.	.	.	0.0

Table 6
Group mean functional observation battery data

Summary of observations before removal from cage
Posture

	Test Article	Control		[		]
	Group	1	2	3	4	5
	Level (ppm)	0	100	500	2500	5000

	Week -1 M	Week -1 F	Week 1 M	Week 1 F	Week 2 M	Week 2 F	Week 3 M	Week 3 F	Week 4 M	Week 4 F
GROUP 1										
Number observed	15	15	15	15	15	15	15	15	15	15
NORMAL	15	15	15	15	15	15	15	15	15	15
LOW CARRIAGE	0	0	0	0	0	0	0	0	0	0
HUNCHED	0	0	0	0	0	0	0	0	0	0
PROSTRATE	0	0	0	0	0	0	0	0	0	0
GROUP 2										
Number observed	10	10	10	10	10	10	10	10	10	10
NORMAL	10	10	10	10	10	10	10	10	10	10
LOW CARRIAGE	0	0	0	0	0	0	0	0	0	0
HUNCHED	0	0	0	0	0	0	0	0	0	0
PROSTRATE	0	0	0	0	0	0	0	0	0	0
GROUP 3										
Number observed	10	10	10	10	10	10	10	10	10	10
NORMAL	10	10	10	10	10	10	10	10	10	10
LOW CARRIAGE	0	0	0	0	0	0	0	0	0	0
HUNCHED	0	0	0	0	0	0	0	0	0	0
PROSTRATE	0	0	0	0	0	0	0	0	0	0
GROUP 4										
Number observed	10	10	10	10	10	10	10	10	10	10
NORMAL	10	10	10	10	10	10	10	10	10	10
LOW CARRIAGE	0	0	0	0	0	0	0	0	0	0
HUNCHED	0	0	0	0	0	0	0	0	0	0
PROSTRATE	0	0	0	0	0	0	0	0	0	0
GROUP 5										
Number observed	15	13	15	15	15	14	15	15	15	15
NORMAL	15	13	15	15	15	14	15	15	15	15
LOW CARRIAGE	0	0	0	0	0	0	0	0	0	0
HUNCHED	0	0	0	0	0	0	0	0	0	0
PROSTRATE	0	0	0	0	0	0	0	0	0	0

Table 6
Group functional observation battery data
Summary of observations before removal from cage
Posture

	Test Article	Control		[		]
	Group	1	2	3	4	5
	Level (ppm)	0	100	500	2500	5000

	Week 5 M	Week 5 F	Week 6 M	Week 6 F	Week 7 M	Week 7 F	Week 8 M	Week 8 F	Week 9 M	Week 9 F
GROUP 1										
Number observed	15	15	15	15	15	15	15	15	15	15
NORMAL	15	15	15	15	15	15	15	15	15	15
LOW CARRIAGE	0	0	0	0	0	0	0	0	0	0
HUNCHED	0	0	0	0	0	0	0	0	0	0
PROSTRATE	0	0	0	0	0	0	0	0	0	0
GROUP 2										
Number observed	10	10	10	10	10	10	10	10	10	10
NORMAL	10	10	10	10	10	10	10	10	10	10
LOW CARRIAGE	0	0	0	0	0	0	0	0	0	0
HUNCHED	0	0	0	0	0	0	0	0	0	0
PROSTRATE	0	0	0	0	0	0	0	0	0	0
GROUP 3										
Number observed	10	10	10	10	10	10	10	10	10	10
NORMAL	10	10	10	10	10	10	10	10	10	10
LOW CARRIAGE	0	0	0	0	0	0	0	0	0	0
HUNCHED	0	0	0	0	0	0	0	0	0	0
PROSTRATE	0	0	0	0	0	0	0	0	0	0
GROUP 4										
Number observed	10	10	10	10	10	10	10	10	10	10
NORMAL	10	10	10	10	10	10	10	10	10	10
LOW CARRIAGE	0	0	0	0	0	0	0	0	0	0
HUNCHED	0	0	0	0	0	0	0	0	0	0
PROSTRATE	0	0	0	0	0	0	0	0	0	0
GROUP 5										
Number observed	15	15	15	15	15	15	15	15	15	15
NORMAL	15	15	15	15	15	15	15	15	15	15
LOW CARRIAGE	0	0	0	0	0	0	0	0	0	0
HUNCHED	0	0	0	0	0	0	0	0	0	0
PROSTRATE	0	0	0	0	0	0	0	0	0	0

Table 6
Group functional observation battery data
Summary of observations before removal from cage
Posture

	Test Article	Control	[			]		
	Group	1	2	3	4	5		
	Level (ppm)	0	100	500	2500	5000		
	Week 10 M	Week 10 F	Week 11 M	Week 11 F	Week 12 M	Week 12 F	Week 13 M	Week 13 F
GROUP 1								
Number observed	15	14	14	15	15	15	15	15
NORMAL	15	14	14	15	15	15	15	15
LOW CARRIAGE	0	0	0	0	0	0	0	0
HUNCHED	0	0	0	0	0	0	0	0
PROSTRATE	0	0	0	0	0	0	0	0
GROUP 2								
Number observed	10	10	10	10	10	9	10	9
NORMAL	10	10	10	10	10	9	10	9
LOW CARRIAGE	0	0	0	0	0	0	0	0
HUNCHED	0	0	0	0	0	0	0	0
PROSTRATE	0	0	0	0	0	0	0	0
GROUP 3								
Number observed	10	10	10	10	10	10	10	10
NORMAL	10	10	10	10	10	10	10	10
LOW CARRIAGE	0	0	0	0	0	0	0	0
HUNCHED	0	0	0	0	0	0	0	0
PROSTRATE	0	0	0	0	0	0	0	0
GROUP 4								
Number observed	10	10	10	10	10	10	10	10
NORMAL	10	10	10	10	10	10	10	10
LOW CARRIAGE	0	0	0	0	0	0	0	0
HUNCHED	0	0	0	0	0	0	0	0
PROSTRATE	0	0	0	0	0	0	0	0
GROUP 5								
Number observed	15	15	15	15	15	15	15	15
NORMAL	15	15	15	15	15	15	15	15
LOW CARRIAGE	0	0	0	0	0	0	0	0
HUNCHED	0	0	0	0	0	0	0	0
PROSTRATE	0	0	0	0	0	0	0	0

Table 6
Group functional observation battery data
Summary of observations before removal from cage
Activity

	Test Article	Control		[		]
	Group	1	2	3	4	5
	Level (ppm)	0	100	500	2500	5000

	Week -1 M	Week -1 F	Week 1 M	Week 1 F	Week 2 M	Week 2 F	Week 3 M	Week 3 F	Week 4 M	Week 4 F
GROUP 1										
Number observed	15	15	15	15	15	15	15	15	15	15
NORMAL	15	15	15	15	15	15	15	15	15	15
HYPOACTIVE	0	0	0	0	0	0	0	0	0	0
HYPERACTIVE	0	0	0	0	0	0	0	0	0	0
GROUP 2										
Number observed	10	10	10	10	10	10	10	10	10	10
NORMAL	10	10	10	10	10	10	10	10	10	10
HYPOACTIVE	0	0	0	0	0	0	0	0	0	0
HYPERACTIVE	0	0	0	0	0	0	0	0	0	0
GROUP 3										
Number observed	10	10	10	10	10	10	10	10	10	10
NORMAL	10	10	10	10	10	10	10	10	10	10
HYPOACTIVE	0	0	0	0	0	0	0	0	0	0
HYPERACTIVE	0	0	0	0	0	0	0	0	0	0
GROUP 4										
Number observed	10	10	10	10	10	10	10	10	10	10
NORMAL	10	10	10	10	10	10	10	10	10	10
HYPOACTIVE	0	0	0	0	0	0	0	0	0	0
HYPERACTIVE	0	0	0	0	0	0	0	0	0	0
GROUP 5										
Number observed	15	13	15	15	15	14	15	15	15	15
NORMAL	15	13	15	15	15	14	15	15	15	15
HYPOACTIVE	0	0	0	0	0	0	0	0	0	0
HYPERACTIVE	0	0	0	0	0	0	0	0	0	0

Table 6
Group functional observation battery data
Summary of observations before removal from cage
Activity

	Test Article	Control		[		]
	Group	1	2	3	4	5
	Level (ppm)	0	100	500	2500	5000

	Week 5 M	Week 5 F	Week 6 M	Week 6 F	Week 7 M	Week 7 F	Week 8 M	Week 8 F	Week 9 M	Week 9 F
GROUP 1										
Number observed	15	15	15	15	15	15	15	15	15	15
NORMAL	15	15	15	15	15	15	15	15	15	15
HYPOACTIVE	0	0	0	0	0	0	0	0	0	0
HYPERACTIVE	0	0	0	0	0	0	0	0	0	0
GROUP 2										
Number observed	10	10	10	10	10	10	10	10	10	10
NORMAL	10	10	10	10	10	10	10	10	10	10
HYPOACTIVE	0	0	0	0	0	0	0	0	0	0
HYPERACTIVE	0	0	0	0	0	0	0	0	0	0
GROUP 3										
Number observed	10	10	10	10	10	10	10	10	10	10
NORMAL	10	10	10	10	10	10	10	10	10	10
HYPOACTIVE	0	0	0	0	0	0	0	0	0	0
HYPERACTIVE	0	0	0	0	0	0	0	0	0	0
GROUP 4										
Number observed	10	10	10	10	10	10	10	10	10	10
NORMAL	10	10	10	10	10	10	10	10	10	10
HYPOACTIVE	0	0	0	0	0	0	0	0	0	0
HYPERACTIVE	0	0	0	0	0	0	0	0	0	0
GROUP 5										
Number observed	15	15	15	15	15	15	15	15	15	15
NORMAL	15	15	15	15	15	15	15	15	15	15
HYPOACTIVE	0	0	0	0	0	0	0	0	0	0
HYPERACTIVE	0	0	0	0	0	0	0	0	0	0

Table 6
Group functional observation battery data
Summary of observations before removal from cage
Activity

	Test Article	Control	[			]	
	Group	1	2	3	4	5	
	Level (ppm)	0	100	500	2500	5000	
	Week 10 M	Week 10 F	Week 11 M	Week 11 F	Week 12 M	Week 12 F	Week 13 M	Week 13 F
GROUP 1								
Number observed	15	14	14	15	15	15	15	15
NORMAL	15	14	14	15	15	15	15	15
HYPOACTIVE	0	0	0	0	0	0	0	0
HYPERACTIVE	0	0	0	0	0	0	0	0
GROUP 2								
Number observed	10	10	10	10	10	9	10	9
NORMAL	10	10	10	10	10	9	10	9
HYPOACTIVE	0	0	0	0	0	0	0	0
HYPERACTIVE	0	0	0	0	0	0	0	0
GROUP 3								
Number observed	10	10	10	10	10	10	10	10
NORMAL	10	10	10	10	10	10	10	10
HYPOACTIVE	0	0	0	0	0	0	0	0
HYPERACTIVE	0	0	0	0	0	0	0	0
GROUP 4								
Number observed	10	10	10	10	10	10	10	10
NORMAL	10	10	10	10	10	10	10	10
HYPOACTIVE	0	0	0	0	0	0	0	0
HYPERACTIVE	0	0	0	0	0	0	0	0
GROUP 5								
Number observed	15	15	15	15	15	15	15	15
NORMAL	15	15	15	15	15	15	15	15
HYPOACTIVE	0	0	0	0	0	0	0	0
HYPERACTIVE	0	0	0	0	0	0	0	0

Table 6
Group functional observation battery data
Summary of observations before removal from cage
Gait

	Test Article Group	Control 1	2	[3	4	] 5
	Level (ppm)	0	100	500	2500	5000

	Week -1 M	Week -1 F	Week 1 M	Week 1 F	Week 2 M	Week 2 F	Week 3 M	Week 3 F	Week 4 M	Week 4 F
GROUP 1										
Number observed	15	15	15	15	15	15	15	15	15	15
NORMAL	15	15	15	15	15	15	15	15	15	15
SLIGHTLY IMPAIRED	0	0	0	0	0	0	0	0	0	0
MODERATELY IMPAIRED	0	0	0	0	0	0	0	0	0	0
SEVERELY IMPAIRED	0	0	0	0	0	0	0	0	0	0
N/A	0	0	0	0	0	0	0	0	0	0
GROUP 2										
Number observed	10	10	10	10	10	10	10	10	10	10
NORMAL	10	10	10	10	10	10	10	10	10	10
SLIGHTLY IMPAIRED	0	0	0	0	0	0	0	0	0	0
MODERATELY IMPAIRED	0	0	0	0	0	0	0	0	0	0
SEVERELY IMPAIRED	0	0	0	0	0	0	0	0	0	0
N/A	0	0	0	0	0	0	0	0	0	0
GROUP 3										
Number observed	10	10	10	10	10	10	10	10	10	10
NORMAL	10	10	10	10	10	10	10	10	10	10
SLIGHTLY IMPAIRED	0	0	0	0	0	0	0	0	0	0
MODERATELY IMPAIRED	0	0	0	0	0	0	0	0	0	0
SEVERELY IMPAIRED	0	0	0	0	0	0	0	0	0	0
N/A	0	0	0	0	0	0	0	0	0	0
GROUP 4										
Number observed	10	10	10	10	10	10	10	10	10	10
NORMAL	10	10	10	10	10	10	10	10	10	10
SLIGHTLY IMPAIRED	0	0	0	0	0	0	0	0	0	0
MODERATELY IMPAIRED	0	0	0	0	0	0	0	0	0	0
SEVERELY IMPAIRED	0	0	0	0	0	0	0	0	0	0
N/A	0	0	0	0	0	0	0	0	0	0
GROUP 5										
Number observed	15	13	15	15	15	14	15	15	15	15
NORMAL	15	13	15	15	15	14	15	15	15	15
SLIGHTLY IMPAIRED	0	0	0	0	0	0	0	0	0	0
MODERATELY IMPAIRED	0	0	0	0	0	0	0	0	0	0
SEVERELY IMPAIRED	0	0	0	0	0	0	0	0	0	0
N/A	0	0	0	0	0	0	0	0	0	0

Table 6
Group functional observation battery data
Summary of observations before removal from cage
Gait

Test Article Control [ ]
Group 1 2 3 4 5
Level (ppm) 0 100 500 2500 5000

	Week 5 M	Week 5 F	Week 6 M	Week 6 F	Week 7 M	Week 7 F	Week 8 M	Week 8 F	Week 9 M	Week 9 F
GROUP 1										
Number observed	15	15	15	15	15	15	15	15	15	15
NORMAL	15	15	15	15	15	15	15	15	15	15
SLIGHTLY IMPAIRED	0	0	0	0	0	0	0	0	0	0
MODERATELY IMPAIRED	0	0	0	0	0	0	0	0	0	0
SEVERELY IMPAIRED	0	0	0	0	0	0	0	0	0	0
N/A	0	0	0	0	0	0	0	0	0	0
GROUP 2										
Number observed	10	10	10	10	10	10	10	10	10	10
NORMAL	10	10	10	10	10	10	10	10	10	10
SLIGHTLY IMPAIRED	0	0	0	0	0	0	0	0	0	0
MODERATELY IMPAIRED	0	0	0	0	0	0	0	0	0	0
SEVERELY IMPAIRED	0	0	0	0	0	0	0	0	0	0
N/A	0	0	0	0	0	0	0	0	0	0
GROUP 3										
Number observed	10	10	10	10	10	10	10	10	10	10
NORMAL	10	10	10	10	10	10	10	10	10	10
SLIGHTLY IMPAIRED	0	0	0	0	0	0	0	0	0	0
MODERATELY IMPAIRED	0	0	0	0	0	0	0	0	0	0
SEVERELY IMPAIRED	0	0	0	0	0	0	0	0	0	0
N/A	0	0	0	0	0	0	0	0	0	0
GROUP 4										
Number observed	10	10	10	10	10	10	10	10	10	10
NORMAL	10	10	10	10	10	10	10	10	10	10
SLIGHTLY IMPAIRED	0	0	0	0	0	0	0	0	0	0
MODERATELY IMPAIRED	0	0	0	0	0	0	0	0	0	0
SEVERELY IMPAIRED	0	0	0	0	0	0	0	0	0	0
N/A	0	0	0	0	0	0	0	0	0	0
GROUP 5										
Number observed	15	15	15	15	15	15	15	15	15	15
NORMAL	15	15	15	15	15	15	15	15	15	15
SLIGHTLY IMPAIRED	0	0	0	0	0	0	0	0	0	0
MODERATELY IMPAIRED	0	0	0	0	0	0	0	0	0	0
SEVERELY IMPAIRED	0	0	0	0	0	0	0	0	0	0
N/A	0	0	0	0	0	0	0	0	0	0

Table 6
Group functional observation battery data
Summary of observations before removal from cage
Gait

	Test Article	Control		[		]		
	Group	1	2	3	4	5		
	Level (ppm)	0	100	500	2500	5000		
	Week 10 M	Week 10 F	Week 11 M	Week 11 F	Week 12 M	Week 12 F	Week 13 M	Week 13 F
GROUP 1								
Number observed	15	14	14	15	15	15	15	15
NORMAL	15	14	14	15	15	15	15	15
SLIGHTLY IMPAIRED	0	0	0	0	0	0	0	0
MODERATELY IMPAIRED	0	0	0	0	0	0	0	0
SEVERELY IMPAIRED	0	0	0	0	0	0	0	0
N/A	0	0	0	0	0	0	0	0
GROUP 2								
Number observed	10	10	10	10	10	9	10	9
NORMAL	10	10	10	10	10	9	10	9
SLIGHTLY IMPAIRED	0	0	0	0	0	0	0	0
MODERATELY IMPAIRED	0	0	0	0	0	0	0	0
SEVERELY IMPAIRED	0	0	0	0	0	0	0	0
N/A	0	0	0	0	0	0	0	0
GROUP 3								
Number observed	10	10	10	10	10	10	10	10
NORMAL	10	10	10	10	10	10	10	10
SLIGHTLY IMPAIRED	0	0	0	0	0	0	0	0
MODERATELY IMPAIRED	0	0	0	0	0	0	0	0
SEVERELY IMPAIRED	0	0	0	0	0	0	0	0
N/A	0	0	0	0	0	0	0	0
GROUP 4								
Number observed	10	10	10	10	10	10	10	10
NORMAL	10	10	10	10	10	10	10	10
SLIGHTLY IMPAIRED	0	0	0	0	0	0	0	0
MODERATELY IMPAIRED	0	0	0	0	0	0	0	0
SEVERELY IMPAIRED	0	0	0	0	0	0	0	0
N/A	0	0	0	0	0	0	0	0
GROUP 5								
Number observed	15	15	15	15	15	15	15	15
NORMAL	15	15	15	15	15	15	15	15
SLIGHTLY IMPAIRED	0	0	0	0	0	0	0	0
MODERATELY IMPAIRED	0	0	0	0	0	0	0	0
SEVERELY IMPAIRED	0	0	0	0	0	0	0	0
N/A	0	0	0	0	0	0	0	0

Table 6
Group functional observation battery data
Summary of observations before removal from cage
Tremor

Test Article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

	Week -1 M	Week -1 F	Week 1 M	Week 1 F	Week 2 M	Week 2 F	Week 3 M	Week 3 F	Week 4 M	Week 4 F
GROUP 1										
Number observed	15	15	15	15	15	15	15	15	15	15
ABSENT	15	15	15	15	15	15	15	15	15	15
PRESENT	0	0	0	0	0	0	0	0	0	0
GROUP 2										
Number observed	10	10	10	10	10	10	10	10	10	10
ABSENT	10	10	10	10	10	10	10	10	10	10
PRESENT	0	0	0	0	0	0	0	0	0	0
GROUP 3										
Number observed	10	10	10	10	10	10	10	10	10	10
ABSENT	10	10	10	10	10	10	10	10	10	10
PRESENT	0	0	0	0	0	0	0	0	0	0
GROUP 4										
Number observed	10	10	10	10	10	10	10	10	10	10
ABSENT	10	10	10	10	10	10	10	10	10	10
PRESENT	0	0	0	0	0	0	0	0	0	0
GROUP 5										
Number observed	15	13	15	15	15	14	15	15	15	15
ABSENT	15	13	15	15	15	14	15	15	15	15
PRESENT	0	0	0	0	0	0	0	0	0	0

Table 6
Group functional observation battery data
Summary of observations before removal from cage
Tremor

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

	Week 5 M	Week 5 F	Week 6 M	Week 6 F	Week 7 M	Week 7 F	Week 8 M	Week 8 F	Week 9 M	Week 9 F
GROUP 1										
Number observed	15	15	15	15	15	15	15	15	15	15
ABSENT	15	15	15	15	15	15	15	15	15	15
PRESENT	0	0	0	0	0	0	0	0	0	0
GROUP 2										
Number observed	10	10	10	10	10	10	10	10	10	10
ABSENT	10	10	10	10	10	10	10	10	10	10
PRESENT	0	0	0	0	0	0	0	0	0	0
GROUP 3										
Number observed	10	10	10	10	10	10	10	10	10	10
ABSENT	10	10	10	10	10	10	10	10	10	10
PRESENT	0	0	0	0	0	0	0	0	0	0
GROUP 4										
Number observed	10	10	10	10	10	10	10	10	10	10
ABSENT	10	10	10	10	10	10	10	10	10	10
PRESENT	0	0	0	0	0	0	0	0	0	0
GROUP 5										
Number observed	15	15	15	15	15	15	15	15	15	15
ABSENT	15	15	15	15	15	15	15	15	15	15
PRESENT	0	0	0	0	0	0	0	0	0	0

Table 6
Group functional observation battery data
Summary of observations before removal from cage
Tremor

	Test Article Group	Control 1	2	[3	4	] 5		
	Level (ppm)	0	100	500	2500	5000		
	Week 10 M	Week 10 F	Week 11 M	Week 11 F	Week 12 M	Week 12 F	Week 13 M	Week 13 F
GROUP 1								
Number observed	15	14	14	15	15	15	15	15
ABSENT	15	14	14	15	15	15	15	15
PRESENT	0	0	0	0	0	0	0	0
GROUP 2								
Number observed	10	10	10	10	10	9	10	9
ABSENT	10	10	10	10	10	9	10	9
PRESENT	0	0	0	0	0	0	0	0
GROUP 3								
Number observed	10	10	10	10	10	10	10	10
ABSENT	10	10	10	10	10	10	10	10
PRESENT	0	0	0	0	0	0	0	0
GROUP 4								
Number observed	10	10	10	10	10	10	10	10
ABSENT	10	10	10	10	10	10	10	10
PRESENT	0	0	0	0	0	0	0	0
GROUP 5								
Number observed	15	15	15	15	15	15	15	15
ABSENT	15	15	15	15	15	15	15	15
PRESENT	0	0	0	0	0	0	0	0

Table 6
Group functional observation battery data
Summary of observations before removal from cage
Convulsion

Test Article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

	Week -1 M	Week -1 F	Week 1 M	Week 1 F	Week 2 M	Week 2 F	Week 3 M	Week 3 F	Week 4 M	Week 4 F
GROUP 1										
Number observed	15	15	15	15	15	15	15	15	15	15
ABSENT	15	15	15	15	15	15	15	15	15	15
PRESENT	0	0	0	0	0	0	0	0	0	0
GROUP 2										
Number observed	10	10	10	10	10	10	10	10	10	10
ABSENT	10	10	10	10	10	10	10	10	10	10
PRESENT	0	0	0	0	0	0	0	0	0	0
GROUP 3										
Number observed	10	10	10	10	10	10	10	10	10	10
ABSENT	10	10	10	10	10	10	10	10	10	10
PRESENT	0	0	0	0	0	0	0	0	0	0
GROUP 4										
Number observed	10	10	10	10	10	10	10	10	10	10
ABSENT	10	10	10	10	10	10	10	10	10	10
PRESENT	0	0	0	0	0	0	0	0	0	0
GROUP 5										
Number observed	15	13	15	15	15	14	15	15	15	15
ABSENT	15	13	15	15	15	14	15	15	15	15
PRESENT	0	0	0	0	0	0	0	0	0	0

Table 6
Group functional observation battery data
Summary of observations before removal from cage
Convulsion

	Test Article	Control	[		]				
	Group	1	2	3	4	5			
	Level (ppm)	0	100	500	2500	5000			
	Week 5 M	Week 5 F	Week 6 M	Week 6 F	Week 7 M	Week 7 F	Week 8 M	Week 8 F	Week 9 M	Week 9 F
GROUP 1										
Number observed	15	15	15	15	15	15	15	15	15	15
ABSENT	15	15	15	15	15	15	15	15	15	15
PRESENT	0	0	0	0	0	0	0	0	0	0
GROUP 2										
Number observed	10	10	10	10	10	10	10	10	10	10
ABSENT	10	10	10	10	10	10	10	10	10	10
PRESENT	0	0	0	0	0	0	0	0	0	0
GROUP 3										
Number observed	10	10	10	10	10	10	10	10	10	10
ABSENT	10	10	10	10	10	10	10	10	10	10
PRESENT	0	0	0	0	0	0	0	0	0	0
GROUP 4										
Number observed	10	10	10	10	10	10	10	10	10	10
ABSENT	10	10	10	10	10	10	10	10	10	10
PRESENT	0	0	0	0	0	0	0	0	0	0
GROUP 5										
Number observed	15	15	15	15	15	15	15	15	15	15
ABSENT	15	15	15	15	15	15	15	15	15	15
PRESENT	0	0	0	0	0	0	0	0	0	0

Table 6
Group functional observation battery data
Summary of observations before removal from cage
Convulsion

	Test Article	Control		[		]
	Group	1	2	3	4	5
	Level (ppm)	0	100	500	2500	5000

	Week 10 M	Week 10 F	Week 11 M	Week 11 F	Week 12 M	Week 12 F	Week 13 M	Week 13 F
GROUP 1								
Number observed	15	14	14	15	15	15	15	15
ABSENT	15	14	14	15	15	15	15	15
PRESENT	0	0	0	0	0	0	0	0
GROUP 2								
Number observed	10	10	10	10	10	9	10	9
ABSENT	10	10	10	10	10	9	10	9
PRESENT	0	0	0	0	0	0	0	0
GROUP 3								
Number observed	10	10	10	10	10	10	10	10
ABSENT	10	10	10	10	10	10	10	10
PRESENT	0	0	0	0	0	0	0	0
GROUP 4								
Number observed	10	10	10	10	10	10	10	10
ABSENT	10	10	10	10	10	10	10	10
PRESENT	0	0	0	0	0	0	0	0
GROUP 5								
Number observed	15	15	15	15	15	15	15	15
ABSENT	15	15	15	15	15	15	15	15
PRESENT	0	0	0	0	0	0	0	0

Table 6
Group functional observation battery data
Summary of observations before removal from cage
Excessive vocalisation

	Test Article	Control	[		]
Group		1	2	3	4	5
Level (ppm)		0	100	500	2500	5000

	Week -1 M	Week -1 F	Week 1 M	Week 1 F	Week 2 M	Week 2 F	Week 3 M	Week 3 F	Week 4 M	Week 4 F
GROUP 1										
Number observed	15	15	15	15	15	15	15	15	15	15
ABSENT	15	15	15	15	15	15	15	15	15	15
PRESENT	0	0	0	0	0	0	0	0	0	0
GROUP 2										
Number observed	10	10	10	10	10	10	10	10	10	10
ABSENT	10	10	10	10	10	10	10	10	10	10
PRESENT	0	0	0	0	0	0	0	0	0	0
GROUP 3										
Number observed	10	10	10	10	10	10	10	10	10	10
ABSENT	10	10	10	10	10	10	10	10	10	10
PRESENT	0	0	0	0	0	0	0	0	0	0
GROUP 4										
Number observed	10	10	10	10	10	10	10	10	10	10
ABSENT	10	10	10	10	10	10	10	10	10	10
PRESENT	0	0	0	0	0	0	0	0	0	0
GROUP 5										
Number observed	15	13	15	15	15	14	15	15	15	15
ABSENT	15	13	15	15	15	14	15	15	14	15
PRESENT	0	0	0	0	0	0	0	0	1	0

Table 6
Group functional observation battery data
Summary of observations before removal from cage
Excessive vocalisation

	Test Article	Control	[		]
Group		1	2	3	4	5
Level (ppm)		0	100	500	2500	5000

	Week 5 M	Week 5 F	Week 6 M	Week 6 F	Week 7 M	Week 7 F	Week 8 M	Week 8 F	Week 9 M	Week 9 F
GROUP 1										
Number observed	15	15	15	15	15	15	15	15	15	15
ABSENT	15	15	15	15	15	15	15	15	15	15
PRESENT	0	0	0	0	0	0	0	0	0	0
GROUP 2										
Number observed	10	10	10	10	10	10	10	10	10	10
ABSENT	10	10	10	10	10	10	10	10	10	10
PRESENT	0	0	0	0	0	0	0	0	0	0
GROUP 3										
Number observed	10	10	10	10	10	10	10	10	10	10
ABSENT	10	10	10	10	10	10	10	10	10	10
PRESENT	0	0	0	0	0	0	0	0	0	0
GROUP 4										
Number observed	10	10	10	10	10	10	10	10	10	10
ABSENT	10	10	10	10	10	10	10	10	10	10
PRESENT	0	0	0	0	0	0	0	0	0	0
GROUP 5										
Number observed	15	15	15	15	15	15	15	15	15	15
ABSENT	15	15	15	15	15	15	15	15	15	15
PRESENT	0	0	0	0	0	0	0	0	0	0

Table 6
Group functional observation battery data
Summary of observations before removal from cage
Excessive vocalisation

	Test Article Group	Control 1	2	[3	4	] 5
	Level (ppm)	0	100	500	2500	5000
	Week 10 M	Week 10 F	Week 11 M	Week 11 F	Week 12 M	Week 12 F	Week 13 M	Week 13 F
GROUP 1								
Number observed	15	14	14	15	15	15	15	15
ABSENT	15	14	14	15	15	15	15	15
PRESENT	0	0	0	0	0	0	0	0
GROUP 2								
Number observed	10	10	10	10	10	9	10	9
ABSENT	10	10	10	10	10	9	10	9
PRESENT	0	0	0	0	0	0	0	0
GROUP 3								
Number observed	10	10	10	10	10	10	10	10
ABSENT	10	10	10	10	10	10	10	10
PRESENT	0	0	0	0	0	0	0	0
GROUP 4								
Number observed	10	10	10	10	10	10	10	10
ABSENT	10	10	10	10	10	10	10	10
PRESENT	0	0	0	0	0	0	0	0
GROUP 5								
Number observed	15	15	15	15	15	15	15	15
ABSENT	15	15	15	15	15	15	15	15
PRESENT	0	0	0	0	0	0	0	0

Table 6
Group functional observation battery data
Summary of observations before removal from cage
Arousal upon opening cage

	Test Article	Control	[		]
Group		1	2	3	4	5
Level (ppm)		0	100	500	2500	5000

	Week -1 M	Week -1 F	Week 1 M	Week 1 F	Week 2 M	Week 2 F	Week 3 M	Week 3 F	Week 4 M	Week 4 F
GROUP 1										
Number observed	15	15	15	15	15	15	15	15	15	15
NORMAL	15	15	15	15	15	15	15	15	15	15
HYPOACTIVE	0	0	0	0	0	0	0	0	0	0
HYPERACTIVE	0	0	0	0	0	0	0	0	0	0
GROUP 2										
Number observed	10	10	10	10	10	10	10	10	10	10
NORMAL	10	10	10	10	10	10	10	10	10	10
HYPOACTIVE	0	0	0	0	0	0	0	0	0	0
HYPERACTIVE	0	0	0	0	0	0	0	0	0	0
GROUP 3										
Number observed	10	10	10	10	10	10	10	10	10	10
NORMAL	10	10	10	10	10	10	10	10	10	10
HYPOACTIVE	0	0	0	0	0	0	0	0	0	0
HYPERACTIVE	0	0	0	0	0	0	0	0	0	0
GROUP 4										
Number observed	10	10	10	10	10	10	10	10	10	10
NORMAL	10	10	10	10	10	10	10	10	10	10
HYPOACTIVE	0	0	0	0	0	0	0	0	0	0
HYPERACTIVE	0	0	0	0	0	0	0	0	0	0
GROUP 5										
Number observed	15	13	15	15	15	14	15	15	15	15
NORMAL	15	13	15	14	15	14	15	15	15	15
HYPOACTIVE	0	0	0	0	0	0	0	0	0	0
HYPERACTIVE	0	0	0	0	0	0	0	0	0	0
NOT RECORDED	0	0	0	1	0	0	0	0	0	0

Table 6
Group functional observation battery data
Summary of observations before removal from cage
Arousal upon opening cage

	Test Article	Control	[			]			
Group	1	2	3	4	5				
Level (ppm)	0	100	500	2500	5000				
	Week 5 M	Week 5 F	Week 6 M	Week 6 F	Week 7 M	Week 7 F	Week 8 M	Week 8 F	Week 9 M	Week 9 F
GROUP 1										
Number observed	15	15	15	15	15	15	15	15	15	15
NORMAL	15	15	15	15	15	15	15	15	15	15
HYPOACTIVE	0	0	0	0	0	0	0	0	0	0
HYPERACTIVE	0	0	0	0	0	0	0	0	0	0
GROUP 2										
Number observed	10	10	10	10	10	10	10	10	10	10
NORMAL	10	10	10	10	10	10	10	10	10	10
HYPOACTIVE	0	0	0	0	0	0	0	0	0	0
HYPERACTIVE	0	0	0	0	0	0	0	0	0	0
GROUP 3										
Number observed	10	10	10	10	10	10	10	10	10	10
NORMAL	10	10	10	10	10	10	10	10	10	10
HYPOACTIVE	0	0	0	0	0	0	0	0	0	0
HYPERACTIVE	0	0	0	0	0	0	0	0	0	0
GROUP 4										
Number observed	10	10	10	10	10	10	10	10	10	10
NORMAL	10	10	10	10	10	10	10	10	10	10
HYPOACTIVE	0	0	0	0	0	0	0	0	0	0
HYPERACTIVE	0	0	0	0	0	0	0	0	0	0
GROUP 5										
Number observed	15	15	15	15	15	15	15	15	15	15
NORMAL	15	15	15	15	15	15	15	15	15	15
HYPOACTIVE	0	0	0	0	0	0	0	0	0	0
HYPERACTIVE	0	0	0	0	0	0	0	0	0	0
NOT RECORDED	0	0	0	0	0	0	0	0	0	0

Table 6
Group functional observation battery data
Summary of observations before removal from cage
Arousal upon opening cage

	Test Article	Control	[			]	
Group	1	2	3	4	5		
Level (ppm)	0	100	500	2500	5000		
	Week 10 M	Week 10 F	Week 11 M	Week 11 F	Week 12 M	Week 12 F	Week 13 M	Week 13 F
GROUP 1								
Number observed	15	14	14	15	15	15	15	15
NORMAL	15	14	14	15	15	15	15	15
HYPOACTIVE	0	0	0	0	0	0	0	0
HYPERACTIVE	0	0	0	0	0	0	0	0
GROUP 2								
Number observed	10	10	10	10	10	9	10	9
NORMAL	10	10	10	10	10	9	10	9
HYPOACTIVE	0	0	0	0	0	0	0	0
HYPERACTIVE	0	0	0	0	0	0	0	0
GROUP 3								
Number observed	10	10	10	10	10	10	10	10
NORMAL	10	10	10	10	10	10	10	10
HYPOACTIVE	0	0	0	0	0	0	0	0
HYPERACTIVE	0	0	0	0	0	0	0	0
GROUP 4								
Number observed	10	10	10	10	10	10	10	10
NORMAL	10	10	10	10	10	10	10	10
HYPOACTIVE	0	0	0	0	0	0	0	0
HYPERACTIVE	0	0	0	0	0	0	0	0
GROUP 5								
Number observed	15	15	15	15	15	15	15	15
NORMAL	15	15	15	15	15	15	15	15
HYPOACTIVE	0	0	0	0	0	0	0	0
HYPERACTIVE	0	0	0	0	0	0	0	0
NOT RECORDED	0	0	0	0	0	0	0	0

Table 6
Group functional observation battery data
Summary of observations on removal from cage
Ease of removal

	Test Article	Control	[			]			
Group	1	2	3	4	5				
Level (ppm)	0	100	500	2500	5000				
	Week -1 M	Week -1 F	Week 1 M	Week 1 F	Week 2 M	Week 2 F	Week 3 M	Week 3 F	Week 4 M	Week 4 F
GROUP 1										
Number observed	15	15	15	15	15	15	15	15	15	15
EASY	15	15	15	15	15	15	15	15	15	14
EVASION	0	0	0	0	0	0	0	0	0	1
FREEZES	0	0	0	0	0	0	0	0	0	0
AGGRESSIVE	0	0	0	0	0	0	0	0	0	0
GROUP 2										
Number observed	10	10	10	10	10	10	10	10	10	10
EASY	10	10	10	10	9	10	9	10	9	10
EVASION	0	0	0	0	1	0	0	0	1	0
FREEZES	0	0	0	0	0	0	0	0	0	0
AGGRESSIVE	0	0	0	0	0	0	1	0	0	0
GROUP 3										
Number observed	10	10	10	10	10	10	10	10	10	10
EASY	10	10	10	10	10	10	10	10	10	10
EVASION	0	0	0	0	0	0	0	0	0	0
FREEZES	0	0	0	0	0	0	0	0	0	0
AGGRESSIVE	0	0	0	0	0	0	0	0	0	0
GROUP 4										
Number observed	10	10	10	10	10	10	10	10	10	10
EASY	10	10	10	10	10	10	9	10	10	10
EVASION	0	0	0	0	0	0	1	0	0	0
FREEZES	0	0	0	0	0	0	0	0	0	0
AGGRESSIVE	0	0	0	0	0	0	0	0	0	0
GROUP 5										
Number observed	15	13	15	15	15	14	15	15	15	15
EASY	15	13	15	15	14	13	14	15	14	13
EVASION	0	0	0	0	1	1	0	0	1	2
FREEZES	0	0	0	0	0	0	1	0	0	0
AGGRESSIVE	0	0	0	0	0	0	0	0	0	0

Table 6
Group functional observation battery data
Summary of observations on removal from cage
Ease of removal

	Test Article	Control		[		]			
Group		1	2	3	4	5			
Level (ppm)		0	100	500	2500	5000			
	Week 5 M	Week 5 F	Week 6 M	Week 6 F	Week 7 M	Week 7 F	Week 8 M	Week 8 F	Week 9 M	Week 9 F
GROUP 1										
Number observed	15	15	15	15	15	15	15	15	15	15
EASY	14	15	13	15	12	15	13	15	10	15
EVASION	0	0	2	0	3	0	0	0	3	0
FREEZES	1	0	0	0	0	0	0	0	0	0
AGGRESSIVE	0	0	0	0	0	0	2	0	2	0
GROUP 2										
Number observed	10	10	10	10	10	10	10	10	10	10
EASY	8	10	9	10	10	10	8	10	6	10
EVASION	2	0	1	0	0	0	1	0	2	0
FREEZES	0	0	0	0	0	0	0	0	0	0
AGGRESSIVE	0	0	0	0	0	0	1	0	2	0
GROUP 3										
Number observed	10	10	10	10	10	10	10	10	10	10
EASY	9	10	9	10	9	10	8	10	8	10
EVASION	1	0	1	0	1	0	2	0	1	0
FREEZES	0	0	0	0	0	0	0	0	0	0
AGGRESSIVE	0	0	0	0	0	0	0	0	1	0
GROUP 4										
Number observed	10	10	10	10	10	10	10	10	10	10
EASY	10	10	10	10	9	9	10	10	9	10
EVASION	0	0	0	0	0	1	0	0	0	0
FREEZES	0	0	0	0	0	0	0	0	0	0
AGGRESSIVE	0	0	0	0	1	0	0	0	1	0
GROUP 5										
Number observed	15	15	15	15	15	15	15	15	15	15
EASY	14	15	12	15	15	15	11	15	7	15
EVASION	0	0	2	0	0	0	2	0	7	0
FREEZES	0	0	0	0	0	0	0	0	0	0
AGGRESSIVE	1	0	1	0	0	0	2	0	1	0

Table 6
Group functional observation battery data
Summary of observations on removal from cage
Ease of removal

	Test Article Group	Control 1	2	[3	4	] 5
	Level (ppm)	0	100	500	2500	5000
	Week 10 M	Week 10 F	Week 11 M	Week 11 F	Week 12 M	Week 12 F	Week 13 M	Week 13 F
GROUP 1								
Number observed	15	14	14	15	15	15	15	15
EASY	12	14	13	15	14	15	14	15
EVASION	3	0	1	0	1	0	1	0
FREEZES	0	0	0	0	0	0	0	0
AGGRESSIVE	0	0	0	0	0	0	0	0
GROUP 2								
Number observed	10	10	10	10	10	9	10	9
EASY	8	10	9	10	7	9	9	9
EVASION	2	0	1	0	2	0	1	0
FREEZES	0	0	0	0	0	0	0	0
AGGRESSIVE	0	0	0	0	1	0	0	0
GROUP 3								
Number observed	10	10	10	10	10	10	10	10
EASY	9	10	10	10	10	9	10	10
EVASION	0	0	0	0	0	0	0	0
FREEZES	0	0	0	0	0	0	0	0
AGGRESSIVE	1	0	0	0	0	1	0	0
GROUP 4								
Number observed	10	10	10	10	10	10	10	10
EASY	9	10	10	10	10	10	9	10
EVASION	0	0	0	0	0	0	1	0
FREEZES	0	0	0	0	0	0	0	0
AGGRESSIVE	1	0	0	0	0	0	0	0
GROUP 5								
Number observed	15	15	15	15	15	15	15	15
EASY	14	15	12	15	14	15	15	15
EVASION	1	0	3	0	0	0	0	0
FREEZES	0	0	0	0	0	0	0	0
AGGRESSIVE	0	0	0	0	1	0	0	0

Table 6
Group functional observation battery data
Summary of observations on removal from cage
Ease of handling

	Test Article	Control	[		]				
Group	1	2	3	4	5				
Level (ppm)	0	100	500	2500	5000				
	Week -1 M	Week -1 F	Week 1 M	Week 1 F	Week 2 M	Week 2 F	Week 3 M	Week 3 F	Week 4 M	Week 4 F
GROUP 1										
Number observed	15	15	15	15	15	15	15	15	15	15
EASY	15	15	15	15	15	15	15	15	15	15
MODERATE DIFFICULTY	0	0	0	0	0	0	0	0	0	0
RIGID IN HAND	0	0	0	0	0	0	0	0	0	0
DIFFICULT	0	0	0	0	0	0	0	0	0	0
LIMP	0	0	0	0	0	0	0	0	0	0
GROUP 2										
Number observed	10	10	10	10	10	10	10	10	10	10
EASY	10	10	10	10	9	10	9	10	9	10
MODERATE DIFFICULTY	0	0	0	0	0	0	0	0	0	0
RIGID IN HAND	0	0	0	0	1	0	1	0	1	0
DIFFICULT	0	0	0	0	0	0	0	0	0	0
LIMP	0	0	0	0	0	0	0	0	0	0
GROUP 3										
Number observed	10	10	10	10	10	10	10	10	10	10
EASY	10	10	10	10	10	10	10	10	10	10
MODERATE DIFFICULTY	0	0	0	0	0	0	0	0	0	0
RIGID IN HAND	0	0	0	0	0	0	0	0	0	0
DIFFICULT	0	0	0	0	0	0	0	0	0	0
LIMP	0	0	0	0	0	0	0	0	0	0
GROUP 4										
Number observed	10	10	10	10	10	10	10	10	10	10
EASY	10	10	10	10	10	10	9	10	10	10
MODERATE DIFFICULTY	0	0	0	0	0	0	1	0	0	0
RIGID IN HAND	0	0	0	0	0	0	0	0	0	0
DIFFICULT	0	0	0	0	0	0	0	0	0	0
LIMP	0	0	0	0	0	0	0	0	0	0
GROUP 5										
Number observed	15	13	15	15	15	14	15	15	15	15
EASY	15	13	15	15	15	13	14	15	13	14
MODERATE DIFFICULTY	0	0	0	0	0	0	0	0	2	1
RIGID IN HAND	0	0	0	0	0	1	1	0	0	0
DIFFICULT	0	0	0	0	0	0	0	0	0	0
LIMP	0	0	0	0	0	0	0	0	0	0

Table 6
Group functional observation battery data
Summary of observations on removal from cage
Ease of handling

	Test Article	Control	[		]				
Group	1	2	3	4	5				
Level (ppm)	0	100	500	2500	5000				
	Week 5 M	Week 5 F	Week 6 M	Week 6 F	Week 7 M	Week 7 F	Week 8 M	Week 8 F	Week 9 M	Week 9 F
GROUP 1										
Number observed	15	15	15	15	15	15	15	15	15	15
EASY	14	15	14	15	14	15	13	15	12	15
MODERATE DIFFICULTY	0	0	1	0	1	0	0	0	0	0
RIGID IN HAND	1	0	0	0	0	0	0	0	2	0
DIFFICULT	0	0	0	0	0	0	2	0	1	0
LIMP	0	0	0	0	0	0	0	0	0	0
GROUP 2										
Number observed	10	10	10	10	10	10	10	10	10	10
EASY	8	10	8	10	10	10	10	10	5	10
MODERATE DIFFICULTY	1	0	2	0	0	0	0	0	0	0
RIGID IN HAND	0	0	0	0	0	0	0	0	4	0
DIFFICULT	1	0	0	0	0	0	0	0	1	0
LIMP	0	0	0	0	0	0	0	0	0	0
GROUP 3										
Number observed	10	10	10	10	10	10	10	10	10	10
EASY	10	10	9	10	10	10	8	10	10	10
MODERATE DIFFICULTY	0	0	0	0	0	0	1	0	0	0
RIGID IN HAND	0	0	0	0	0	0	1	0	0	0
DIFFICULT	0	0	1	0	0	0	0	0	0	0
LIMP	0	0	0	0	0	0	0	0	0	0
GROUP 4										
Number observed	10	10	10	10	10	10	10	10	10	10
EASY	10	10	10	10	9	10	10	10	7	10
MODERATE DIFFICULTY	0	0	0	0	0	0	0	0	0	0
RIGID IN HAND	0	0	0	0	0	0	0	0	2	0
DIFFICULT	0	0	0	0	1	0	0	0	1	0
LIMP	0	0	0	0	0	0	0	0	0	0
GROUP 5										
Number observed	15	15	15	15	15	15	15	15	15	15
EASY	13	15	12	15	15	15	12	15	14	15
MODERATE DIFFICULTY	1	0	2	0	0	0	2	0	1	0
RIGID IN HAND	1	0	0	0	0	0	0	0	0	0
DIFFICULT	0	0	1	0	0	0	1	0	0	0
LIMP	0	0	0	0	0	0	0	0	0	0

Table 6
Group functional observation battery data
Summary of observations on removal from cage
Ease of handling

Test Article	Control	[			]		
Group	1	2	3	4	5		
Level (ppm)	0	100	500	2500	5000		
Week 10 M	Week 10 F	Week 11 M	Week 11 F	Week 12 M	Week 12 F	Week 13 M	Week 13 F
GROUP 1							
Number observed	15	14	14	15	15	15	15	15
EASY	14	14	14	15	15	15	13	15
MODERATE DIFFICULTY	0	0	0	0	0	0	0	0
RIGID IN HAND	1	0	0	0	0	0	2	0
DIFFICULT	0	0	0	0	0	0	0	0
LIMP	0	0	0	0	0	0	0	0
GROUP 2								
Number observed	10	10	10	10	10	9	10	9
EASY	9	10	10	10	10	9	7	9
MODERATE DIFFICULTY	0	0	0	0	0	0	1	0
RIGID IN HAND	0	0	0	0	0	0	2	0
DIFFICULT	1	0	0	0	0	0	0	0
LIMP	0	0	0	0	0	0	0	0
GROUP 3								
Number observed	10	10	10	10	10	10	10	10
EASY	9	10	10	10	10	9	10	10
MODERATE DIFFICULTY	0	0	0	0	0	0	0	0
RIGID IN HAND	0	0	0	0	0	0	0	0
DIFFICULT	1	0	0	0	0	1	0	0
LIMP	0	0	0	0	0	0	0	0
GROUP 4								
Number observed	10	10	10	10	10	10	10	10
EASY	9	10	10	10	10	10	9	10
MODERATE DIFFICULTY	1	0	0	0	0	0	1	0
RIGID IN HAND	0	0	0	0	0	0	0	0
DIFFICULT	0	0	0	0	0	0	0	0
LIMP	0	0	0	0	0	0	0	0
GROUP 5								
Number observed	15	15	15	15	15	15	15	15
EASY	13	15	14	15	15	15	15	15
MODERATE DIFFICULTY	2	0	1	0	0	0	0	0
RIGID IN HAND	0	0	0	0	0	0	0	0
DIFFICULT	0	0	0	0	0	0	0	0
LIMP	0	0	0	0	0	0	0	0

Table 6
Group functional observation battery data
Summary of observations on removal from cage
Excessive vocalisation

	Test Article	Control	[			]
Group		1	2	3	4	5
Level (ppm)		0	100	500	2500	5000

	Week -1 M	Week -1 F	Week 1 M	Week 1 F	Week 2 M	Week 2 F	Week 3 M	Week 3 F	Week 4 M	Week 4 F
GROUP 1										
Number observed	15	15	15	15	15	15	15	15	15	15
ABSENT	15	15	15	15	15	15	15	15	15	15
PRESENT	0	0	0	0	0	0	0	0	0	0
GROUP 2										
Number observed	10	10	10	10	10	10	10	10	10	10
ABSENT	10	10	10	10	10	10	9	10	9	10
PRESENT	0	0	0	0	0	0	1	0	1	0
GROUP 3										
Number observed	10	10	10	10	10	10	10	10	10	10
ABSENT	10	10	10	10	10	10	10	10	10	10
PRESENT	0	0	0	0	0	0	0	0	0	0
GROUP 4										
Number observed	10	10	10	10	10	10	10	10	10	10
ABSENT	10	10	10	10	10	10	10	10	10	10
PRESENT	0	0	0	0	0	0	0	0	0	0
GROUP 5										
Number observed	15	13	15	15	15	14	15	15	15	15
ABSENT	15	13	15	15	14	13	14	15	14	15
PRESENT	0	0	0	0	1	1	1	0	1	0

Table 6
Group functional observation battery data
Summary of observations on removal from cage
Excessive vocalisation

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

	Week 5 M	Week 5 F	Week 6 M	Week 6 F	Week 7 M	Week 7 F	Week 8 M	Week 8 F	Week 9 M	Week 9 F
GROUP 1										
Number observed	15	15	15	15	15	15	15	15	15	15
ABSENT	14	15	13	15	13	15	13	15	14	15
PRESENT	1	0	2	0	2	0	2	0	1	0
GROUP 2										
Number observed	10	10	10	10	10	10	10	10	10	10
ABSENT	10	10	8	10	10	10	9	10	10	10
PRESENT	0	0	2	0	0	0	1	0	0	0
GROUP 3										
Number observed	10	10	10	10	10	10	10	10	10	10
ABSENT	10	10	9	10	10	10	10	10	10	10
PRESENT	0	0	1	0	0	0	0	0	0	0
GROUP 4										
Number observed	10	10	10	10	10	10	10	10	10	10
ABSENT	10	10	10	10	9	10	10	10	9	10
PRESENT	0	0	0	0	1	0	0	0	1	0
GROUP 5										
Number observed	15	15	15	15	15	15	15	15	15	15
ABSENT	14	15	13	15	15	15	12	15	15	15
PRESENT	1	0	2	0	0	0	3	0	0	0

Table 6
Group functional observation battery data
Summary of observations on removal from cage
Excessive vocalisation

	Test Article	Control	[			]		
	Group	1	2	3	4	5		
	Level (ppm)	0	100	500	2500	5000		
	Week 10 M	Week 10 F	Week 11 M	Week 11 F	Week 12 M	Week 12 F	Week 13 M	Week 13 F
GROUP 1								
Number observed	15	14	14	15	15	15	15	15
ABSENT	15	14	13	15	15	15	14	15
PRESENT	0	0	1	0	0	0	1	0
GROUP 2								
Number observed	10	10	10	10	10	9	10	9
ABSENT	9	10	10	10	10	9	9	9
PRESENT	1	0	0	0	0	0	1	0
GROUP 3								
Number observed	10	10	10	10	10	10	10	10
ABSENT	9	10	10	10	10	9	10	10
PRESENT	1	0	0	0	0	1	0	0
GROUP 4								
Number observed	10	10	10	10	10	10	10	10
ABSENT	8	10	10	10	10	10	10	10
PRESENT	2	0	0	0	0	0	0	0
GROUP 5								
Number observed	15	15	15	15	15	15	15	15
ABSENT	13	15	13	15	15	15	15	15
PRESENT	2	0	2	0	0	0	0	0

Table 6
Group functional observation battery data
Summary of observations on removal from cage
Tremor

	Test Article	Control	[			]			
	Group	1	2	3	4	5			
	Level (ppm)	0	100	500	2500	5000			
	Week -1 M	Week -1 F	Week 1 M	Week 1 F	Week 2 M	Week 2 F	Week 3 M	Week 3 F	Week 4 M	Week 4 F
GROUP 1										
Number observed	15	15	15	15	15	15	15	15	15	15
ABSENT	15	15	15	15	15	15	15	15	15	15
PRESENT	0	0	0	0	0	0	0	0	0	0
GROUP 2										
Number observed	10	10	10	10	10	10	10	10	10	10
ABSENT	10	10	10	10	10	10	10	10	10	10
PRESENT	0	0	0	0	0	0	0	0	0	0
GROUP 3										
Number observed	10	10	10	10	10	10	10	10	10	10
ABSENT	10	10	10	10	10	10	10	10	10	10
PRESENT	0	0	0	0	0	0	0	0	0	0
GROUP 4										
Number observed	10	10	10	10	10	10	10	10	10	10
ABSENT	10	10	10	10	10	10	10	10	10	10
PRESENT	0	0	0	0	0	0	0	0	0	0
GROUP 5										
Number observed	15	13	15	15	15	14	15	15	15	15
ABSENT	15	13	15	15	15	14	15	15	15	15
PRESENT	0	0	0	0	0	0	0	0	0	0

Table 6
Group functional observation battery data
Summary of observations on removal from cage
Tremor

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

	Week 5 M	Week 5 F	Week 6 M	Week 6 F	Week 7 M	Week 7 F	Week 8 M	Week 8 F	Week 9 M	Week 9 F
GROUP 1										
Number observed	15	15	15	15	15	15	15	15	15	15
ABSENT	15	15	15	15	15	15	15	15	15	15
PRESENT	0	0	0	0	0	0	0	0	0	0
GROUP 2										
Number observed	10	10	10	10	10	10	10	10	10	10
ABSENT	10	10	10	10	10	10	10	10	10	10
PRESENT	0	0	0	0	0	0	0	0	0	0
GROUP 3										
Number observed	10	10	10	10	10	10	10	10	10	10
ABSENT	10	10	10	10	10	10	10	10	10	10
PRESENT	0	0	0	0	0	0	0	0	0	0
GROUP 4										
Number observed	10	10	10	10	10	10	10	10	10	10
ABSENT	10	10	10	10	10	10	10	10	10	10
PRESENT	0	0	0	0	0	0	0	0	0	0
GROUP 5										
Number observed	15	15	15	15	15	15	15	15	15	15
ABSENT	15	15	15	15	15	15	15	15	15	15
PRESENT	0	0	0	0	0	0	0	0	0	0

Table 6
Group functional observation battery data
Summary of observations on removal from cage
Tremor

	Test Article Group	Control 1	2	[3	4	] 5		
	Level (ppm)	0	100	500	2500	5000		
	Week 10 M	Week 10 F	Week 11 M	Week 11 F	Week 12 M	Week 12 F	Week 13 M	Week 13 F
GROUP 1								
Number observed	15	14	14	15	15	15	15	15
ABSENT	15	14	14	15	15	15	15	15
PRESENT	0	0	0	0	0	0	0	0
GROUP 2								
Number observed	10	10	10	10	10	9	10	9
ABSENT	10	10	10	10	10	9	10	9
PRESENT	0	0	0	0	0	0	0	0
GROUP 3								
Number observed	10	10	10	10	10	10	10	10
ABSENT	10	10	10	10	10	10	10	10
PRESENT	0	0	0	0	0	0	0	0
GROUP 4								
Number observed	10	10	10	10	10	10	10	10
ABSENT	10	10	10	10	10	10	10	10
PRESENT	0	0	0	0	0	0	0	0
GROUP 5								
Number observed	15	15	15	15	15	15	15	15
ABSENT	15	15	15	15	15	15	15	15
PRESENT	0	0	0	0	0	0	0	0

Table 6
Group functional observation battery data
Summary of observations on removal from cage
Convulsion

	Test Article	Control	[			]			
	Group	1	2	3	4	5			
	Level (ppm)	0	100	500	2500	5000			
	Week -1 M	Week -1 F	Week 1 M	Week 1 F	Week 2 M	Week 2 F	Week 3 M	Week 3 F	Week 4 M	Week 4 F
GROUP 1										
Number observed	15	15	15	15	15	15	15	15	15	15
NONE	15	15	15	15	15	15	15	15	15	15
TONIC	0	0	0	0	0	0	0	0	0	0
CLONIC	0	0	0	0	0	0	0	0	0	0
TONIC/CLONIC	0	0	0	0	0	0	0	0	0	0
OTHER	0	0	0	0	0	0	0	0	0	0
GROUP 2										
Number observed	10	10	10	10	10	10	10	10	10	10
NONE	10	10	10	10	10	10	10	10	10	10
TONIC	0	0	0	0	0	0	0	0	0	0
CLONIC	0	0	0	0	0	0	0	0	0	0
TONIC/CLONIC	0	0	0	0	0	0	0	0	0	0
OTHER	0	0	0	0	0	0	0	0	0	0
GROUP 3										
Number observed	10	10	10	10	10	10	10	10	10	10
NONE	10	10	10	10	10	10	10	10	10	10
TONIC	0	0	0	0	0	0	0	0	0	0
CLONIC	0	0	0	0	0	0	0	0	0	0
TONIC/CLONIC	0	0	0	0	0	0	0	0	0	0
OTHER	0	0	0	0	0	0	0	0	0	0
GROUP 4										
Number observed	10	10	10	10	10	10	10	10	10	10
NONE	10	10	10	10	10	10	10	10	10	10
TONIC	0	0	0	0	0	0	0	0	0	0
CLONIC	0	0	0	0	0	0	0	0	0	0
TONIC/CLONIC	0	0	0	0	0	0	0	0	0	0
OTHER	0	0	0	0	0	0	0	0	0	0
GROUP 5										
Number observed	15	13	15	15	15	14	15	15	15	15
NONE	15	13	15	15	15	14	15	15	15	15
TONIC	0	0	0	0	0	0	0	0	0	0
CLONIC	0	0	0	0	0	0	0	0	0	0
TONIC/CLONIC	0	0	0	0	0	0	0	0	0	0
OTHER	0	0	0	0	0	0	0	0	0	0

Table 6
Group functional observation battery data
Summary of observations on removal from cage
Convulsion

	Test Article	Control	[			]			
	Group	1	2	3	4	5			
	Level (ppm)	0	100	500	2500	5000			
	Week 5 M	Week 5 F	Week 6 M	Week 6 F	Week 7 M	Week 7 F	Week 8 M	Week 8 F	Week 9 M	Week 9 F
GROUP 1										
Number observed	15	15	15	15	15	15	15	15	15	15
NONE	15	15	15	15	15	15	15	15	15	15
TONIC	0	0	0	0	0	0	0	0	0	0
CLONIC	0	0	0	0	0	0	0	0	0	0
TONIC/CLONIC	0	0	0	0	0	0	0	0	0	0
OTHER	0	0	0	0	0	0	0	0	0	0
GROUP 2										
Number observed	10	10	10	10	10	10	10	10	10	10
NONE	10	10	10	10	10	10	10	10	10	10
TONIC	0	0	0	0	0	0	0	0	0	0
CLONIC	0	0	0	0	0	0	0	0	0	0
TONIC/CLONIC	0	0	0	0	0	0	0	0	0	0
OTHER	0	0	0	0	0	0	0	0	0	0
GROUP 3										
Number observed	10	10	10	10	10	10	10	10	10	10
NONE	10	10	10	10	10	10	10	10	10	10
TONIC	0	0	0	0	0	0	0	0	0	0
CLONIC	0	0	0	0	0	0	0	0	0	0
TONIC/CLONIC	0	0	0	0	0	0	0	0	0	0
OTHER	0	0	0	0	0	0	0	0	0	0
GROUP 4										
Number observed	10	10	10	10	10	10	10	10	10	10
NONE	10	10	10	10	10	10	10	10	10	10
TONIC	0	0	0	0	0	0	0	0	0	0
CLONIC	0	0	0	0	0	0	0	0	0	0
TONIC/CLONIC	0	0	0	0	0	0	0	0	0	0
OTHER	0	0	0	0	0	0	0	0	0	0
GROUP 5										
Number observed	15	15	15	15	15	15	15	15	15	15
NONE	15	15	15	15	15	15	15	15	15	15
TONIC	0	0	0	0	0	0	0	0	0	0
CLONIC	0	0	0	0	0	0	0	0	0	0
TONIC/CLONIC	0	0	0	0	0	0	0	0	0	0
OTHER	0	0	0	0	0	0	0	0	0	0

Table 6
Group functional observation battery data
Summary of observations on removal from cage
Convulsion

Test Article	Control	[			]		
Group	1	2	3	4	5		
Level (ppm)	0	100	500	2500	5000		
Week 10 M	Week 10 F	Week 11 M	Week 11 F	Week 12 M	Week 12 F	Week 13 M	Week 13 F
GROUP 1							
Number observed	15	14	14	15	15	15	15	15
NONE	15	14	14	15	15	15	15	15
TONIC	0	0	0	0	0	0	0	0
CLONIC	0	0	0	0	0	0	0	0
TONIC/CLONIC	0	0	0	0	0	0	0	0
OTHER	0	0	0	0	0	0	0	0
GROUP 2								
Number observed	10	10	10	10	10	9	10	9
NONE	10	10	10	10	10	9	10	9
TONIC	0	0	0	0	0	0	0	0
CLONIC	0	0	0	0	0	0	0	0
TONIC/CLONIC	0	0	0	0	0	0	0	0
OTHER	0	0	0	0	0	0	0	0
GROUP 3								
Number observed	10	10	10	10	10	10	10	10
NONE	10	10	10	10	10	10	10	10
TONIC	0	0	0	0	0	0	0	0
CLONIC	0	0	0	0	0	0	0	0
TONIC/CLONIC	0	0	0	0	0	0	0	0
OTHER	0	0	0	0	0	0	0	0
GROUP 4								
Number observed	10	10	10	10	10	10	10	10
NONE	10	10	10	10	10	10	10	10
TONIC	0	0	0	0	0	0	0	0
CLONIC	0	0	0	0	0	0	0	0
TONIC/CLONIC	0	0	0	0	0	0	0	0
OTHER	0	0	0	0	0	0	0	0
GROUP 5								
Number observed	15	15	15	15	15	15	15	15
NONE	15	15	15	15	15	15	15	15
TONIC	0	0	0	0	0	0	0	0
CLONIC	0	0	0	0	0	0	0	0
TONIC/CLONIC	0	0	0	0	0	0	0	0
OTHER	0	0	0	0	0	0	0	0

Table 6
Group functional observation battery data
Summary of observations on removal from cage
Palpebral closure

	Test Article	Control		[		]			
	Group	1	2	3	4	5			
	Level (ppm)	0	100	500	2500	5000			
	Week -1 M	Week -1 F	Week 1 M	Week 1 F	Week 2 M	Week 2 F	Week 3 M	Week 3 F	Week 4 M	Week 4 F
GROUP 1										
Number observed	15	15	15	15	15	15	15	15	15	15
NORMAL	15	15	15	15	15	15	15	15	15	15
LESS THAN 50%	0	0	0	0	0	0	0	0	0	0
MORE THAN 50%	0	0	0	0	0	0	0	0	0	0
GROUP 2										
Number observed	10	10	10	10	10	10	10	10	10	10
NORMAL	10	10	10	10	10	10	10	10	10	10
LESS THAN 50%	0	0	0	0	0	0	0	0	0	0
MORE THAN 50%	0	0	0	0	0	0	0	0	0	0
GROUP 3										
Number observed	10	10	10	10	10	10	10	10	10	10
NORMAL	10	10	10	10	10	10	10	10	10	10
LESS THAN 50%	0	0	0	0	0	0	0	0	0	0
MORE THAN 50%	0	0	0	0	0	0	0	0	0	0
GROUP 4										
Number observed	10	10	10	10	10	10	10	10	10	10
NORMAL	10	10	10	10	10	10	10	10	10	10
LESS THAN 50%	0	0	0	0	0	0	0	0	0	0
MORE THAN 50%	0	0	0	0	0	0	0	0	0	0
GROUP 5										
Number observed	15	13	15	15	15	14	15	15	15	15
NORMAL	15	13	15	15	15	14	15	15	15	15
LESS THAN 50%	0	0	0	0	0	0	0	0	0	0
MORE THAN 50%	0	0	0	0	0	0	0	0	0	0

Table 6
Group functional observation battery data
Summary of observations on removal from cage
Palpebral closure

	Test Article	Control	[			]			
Group	1	2	3	4	5				
Level (ppm)	0	100	500	2500	5000				
	Week 5 M	Week 5 F	Week 6 M	Week 6 F	Week 7 M	Week 7 F	Week 8 M	Week 8 F	Week 9 M	Week 9 F
GROUP 1										
Number observed	15	15	15	15	15	15	15	15	15	15
NORMAL	15	15	15	15	15	15	15	15	15	15
LESS THAN 50%	0	0	0	0	0	0	0	0	0	0
MORE THAN 50%	0	0	0	0	0	0	0	0	0	0
GROUP 2										
Number observed	10	10	10	10	10	10	10	10	10	10
NORMAL	10	10	10	10	10	10	10	10	10	10
LESS THAN 50%	0	0	0	0	0	0	0	0	0	0
MORE THAN 50%	0	0	0	0	0	0	0	0	0	0
GROUP 3										
Number observed	10	10	10	10	10	10	10	10	10	10
NORMAL	10	10	10	10	10	10	10	10	10	10
LESS THAN 50%	0	0	0	0	0	0	0	0	0	0
MORE THAN 50%	0	0	0	0	0	0	0	0	0	0
GROUP 4										
Number observed	10	10	10	10	10	10	10	10	10	10
NORMAL	10	10	10	10	10	10	10	10	10	10
LESS THAN 50%	0	0	0	0	0	0	0	0	0	0
MORE THAN 50%	0	0	0	0	0	0	0	0	0	0
GROUP 5										
Number observed	15	15	15	15	15	15	15	15	15	15
NORMAL	15	15	15	15	15	15	15	15	15	15
LESS THAN 50%	0	0	0	0	0	0	0	0	0	0
MORE THAN 50%	0	0	0	0	0	0	0	0	0	0

Table 6
Group functional observation battery data
Summary of observations on removal from cage
Palpebral closure

	Test Article	Control	[			]		
	Group	1	2	3	4	5		
	Level (ppm)	0	100	500	2500	5000		
	Week 10 M	Week 10 F	Week 11 M	Week 11 F	Week 12 M	Week 12 F	Week 13 M	Week 13 F
GROUP 1								
Number observed	15	14	14	15	15	15	15	15
NORMAL	15	14	14	15	15	15	15	15
LESS THAN 50%	0	0	0	0	0	0	0	0
MORE THAN 50%	0	0	0	0	0	0	0	0
GROUP 2								
Number observed	10	10	10	10	10	9	10	9
NORMAL	10	10	10	10	10	9	10	9
LESS THAN 50%	0	0	0	0	0	0	0	0
MORE THAN 50%	0	0	0	0	0	0	0	0
GROUP 3								
Number observed	10	10	10	10	10	10	10	10
NORMAL	10	10	10	10	10	10	10	10
LESS THAN 50%	0	0	0	0	0	0	0	0
MORE THAN 50%	0	0	0	0	0	0	0	0
GROUP 4								
Number observed	10	10	10	10	10	10	10	10
NORMAL	10	10	10	10	10	10	10	10
LESS THAN 50%	0	0	0	0	0	0	0	0
MORE THAN 50%	0	0	0	0	0	0	0	0
GROUP 5								
Number observed	15	15	15	15	15	15	15	15
NORMAL	15	15	15	15	15	15	15	15
LESS THAN 50%	0	0	0	0	0	0	0	0
MORE THAN 50%	0	0	0	0	0	0	0	0

Table 6
Group functional observation battery data
Summary of observations on removal from cage
Exophthalmus

	Test Article	Control	[		]
Group		1	2	3	4	5
Level (ppm)		0	100	500	2500	5000

	Week -1 M	Week -1 F	Week 1 M	Week 1 F	Week 2 M	Week 2 F	Week 3 M	Week 3 F	Week 4 M	Week 4 F
GROUP 1										
Number observed	15	15	15	15	15	15	15	15	15	15
ABSENT	15	15	15	15	15	15	15	15	15	15
PRESENT	0	0	0	0	0	0	0	0	0	0
GROUP 2										
Number observed	10	10	10	10	10	10	10	10	10	10
ABSENT	10	10	10	10	10	10	10	10	10	10
PRESENT	0	0	0	0	0	0	0	0	0	0
GROUP 3										
Number observed	10	10	10	10	10	10	10	10	10	10
ABSENT	10	10	10	10	10	10	10	10	10	10
PRESENT	0	0	0	0	0	0	0	0	0	0
GROUP 4										
Number observed	10	10	10	10	10	10	10	10	10	10
ABSENT	10	10	10	10	10	10	10	10	10	10
PRESENT	0	0	0	0	0	0	0	0	0	0
GROUP 5										
Number observed	15	13	15	15	15	14	15	15	15	15
ABSENT	15	13	15	15	15	14	15	15	15	15
PRESENT	0	0	0	0	0	0	0	0	0	0

Table 6
Group functional observation battery data
Summary of observations on removal from cage
Exophthalmus

	Test Article	Control		[		]			
Group		1	2	3	4	5			
Level (ppm)		0	100	500	2500	5000			
	Week 5 M	Week 5 F	Week 6 M	Week 6 F	Week 7 M	Week 7 F	Week 8 M	Week 8 F	Week 9 M	Week 9 F
GROUP 1										
Number observed	15	15	15	15	15	15	15	15	15	15
ABSENT	15	15	15	15	15	15	15	15	15	15
PRESENT	0	0	0	0	0	0	0	0	0	0
GROUP 2										
Number observed	10	10	10	10	10	10	10	10	10	10
ABSENT	10	10	10	10	10	10	10	10	10	10
PRESENT	0	0	0	0	0	0	0	0	0	0
GROUP 3										
Number observed	10	10	10	10	10	10	10	10	10	10
ABSENT	10	10	10	10	10	10	10	10	10	10
PRESENT	0	0	0	0	0	0	0	0	0	0
GROUP 4										
Number observed	10	10	10	10	10	10	10	10	10	10
ABSENT	10	10	10	10	10	10	10	10	10	10
PRESENT	0	0	0	0	0	0	0	0	0	0
GROUP 5										
Number observed	15	15	15	15	15	15	15	15	15	15
ABSENT	15	15	15	15	15	15	15	15	15	15
PRESENT	0	0	0	0	0	0	0	0	0	0

Table 6
Group functional observation battery data
Summary of observations on removal from cage
Exophthalmus

	Test Article	Control	[			]	
	Group	1	2	3	4	5	
	Level (ppm)	0	100	500	2500	5000	
	Week 10 M	Week 10 F	Week 11 M	Week 11 F	Week 12 M	Week 12 F	Week 13 M	Week 13 F
GROUP 1								
Number observed	15	14	14	15	15	15	15	15
ABSENT	15	14	14	15	15	15	15	15
PRESENT	0	0	0	0	0	0	0	0
GROUP 2								
Number observed	10	10	10	10	10	9	10	9
ABSENT	10	10	10	10	10	9	10	9
PRESENT	0	0	0	0	0	0	0	0
GROUP 3								
Number observed	10	10	10	10	10	10	10	10
ABSENT	10	10	10	10	10	10	10	10
PRESENT	0	0	0	0	0	0	0	0
GROUP 4								
Number observed	10	10	10	10	10	10	10	10
ABSENT	10	10	10	10	10	10	10	10
PRESENT	0	0	0	0	0	0	0	0
GROUP 5								
Number observed	15	15	15	15	15	15	15	15
ABSENT	15	15	15	15	15	15	15	15
PRESENT	0	0	0	0	0	0	0	0

Table 6
Group functional observation battery data
Summary of observations on removal from cage
Lacrimation

	Test Article	Control	[		]
Group		1	2	3	4	5
Level (ppm)		0	100	500	2500	5000

	Week -1 M	Week -1 F	Week 1 M	Week 1 F	Week 2 M	Week 2 F	Week 3 M	Week 3 F	Week 4 M	Week 4 F
GROUP 1										
Number observed	15	15	15	15	15	15	15	15	15	15
NONE	15	15	15	15	15	15	15	15	15	15
MODERATE	0	0	0	0	0	0	0	0	0	0
SEVERE	0	0	0	0	0	0	0	0	0	0
GROUP 2										
Number observed	10	10	10	10	10	10	10	10	10	10
NONE	10	10	10	10	10	10	10	10	10	10
MODERATE	0	0	0	0	0	0	0	0	0	0
SEVERE	0	0	0	0	0	0	0	0	0	0
GROUP 3										
Number observed	10	10	10	10	10	10	10	10	10	10
NONE	10	10	10	10	10	10	10	10	10	10
MODERATE	0	0	0	0	0	0	0	0	0	0
SEVERE	0	0	0	0	0	0	0	0	0	0
GROUP 4										
Number observed	10	10	10	10	10	10	10	10	10	10
NONE	10	10	10	10	10	10	10	10	10	10
MODERATE	0	0	0	0	0	0	0	0	0	0
SEVERE	0	0	0	0	0	0	0	0	0	0
GROUP 5										
Number observed	15	13	15	15	15	14	15	15	15	15
NONE	15	13	15	15	15	14	15	15	15	15
MODERATE	0	0	0	0	0	0	0	0	0	0
SEVERE	0	0	0	0	0	0	0	0	0	0

Table 6
Group functional observation battery data
Summary of observations on removal from cage
Lacrimation

	Test Article	Control	[			]			
	Group	1	2	3	4	5			
	Level (ppm)	0	100	500	2500	5000			
	Week 5 M	Week 5 F	Week 6 M	Week 6 F	Week 7 M	Week 7 F	Week 8 M	Week 8 F	Week 9 M	Week 9 F
GROUP 1										
Number observed	15	15	15	15	15	15	15	15	15	15
NONE	15	15	15	15	15	15	15	15	15	15
MODERATE	0	0	0	0	0	0	0	0	0	0
SEVERE	0	0	0	0	0	0	0	0	0	0
GROUP 2										
Number observed	10	10	10	10	10	10	10	10	10	10
NONE	10	10	10	10	10	10	10	10	10	10
MODERATE	0	0	0	0	0	0	0	0	0	0
SEVERE	0	0	0	0	0	0	0	0	0	0
GROUP 3										
Number observed	10	10	10	10	10	10	10	10	10	10
NONE	10	10	10	10	10	10	10	10	10	10
MODERATE	0	0	0	0	0	0	0	0	0	0
SEVERE	0	0	0	0	0	0	0	0	0	0
GROUP 4										
Number observed	10	10	10	10	10	10	10	10	10	10
NONE	10	10	10	10	10	10	10	10	10	10
MODERATE	0	0	0	0	0	0	0	0	0	0
SEVERE	0	0	0	0	0	0	0	0	0	0
GROUP 5										
Number observed	15	15	15	15	15	15	15	15	15	15
NONE	15	15	15	15	15	15	15	15	15	15
MODERATE	0	0	0	0	0	0	0	0	0	0
SEVERE	0	0	0	0	0	0	0	0	0	0

Table 6
Group functional observation battery data
Summary of observations on removal from cage
Lacrimation

	Test Article	Control	[			]		
	Group	1	2	3	4	5		
	Level (ppm)	0	100	500	2500	5000		
	Week 10 M	Week 10 F	Week 11 M	Week 11 F	Week 12 M	Week 12 F	Week 13 M	Week 13 F
GROUP 1								
Number observed	15	14	14	15	15	15	15	15
NONE	15	14	14	15	15	15	15	15
MODERATE	0	0	0	0	0	0	0	0
SEVERE	0	0	0	0	0	0	0	0
GROUP 2								
Number observed	10	10	10	10	10	9	10	9
NONE	10	10	10	10	10	9	10	9
MODERATE	0	0	0	0	0	0	0	0
SEVERE	0	0	0	0	0	0	0	0
GROUP 3								
Number observed	10	10	10	10	10	10	10	10
NONE	10	10	10	10	10	10	10	10
MODERATE	0	0	0	0	0	0	0	0
SEVERE	0	0	0	0	0	0	0	0
GROUP 4								
Number observed	10	10	10	10	10	10	10	10
NONE	10	10	10	10	10	10	10	10
MODERATE	0	0	0	0	0	0	0	0
SEVERE	0	0	0	0	0	0	0	0
GROUP 5								
Number observed	15	15	15	15	15	15	15	15
NONE	15	15	15	15	15	15	15	15
MODERATE	0	0	0	0	0	0	0	0
SEVERE	0	0	0	0	0	0	0	0

Table 6
Group functional observation battery data
Summary of observations on removal from cage
Lacrimation type

	Test Article	Control	[		]
Group		1	2	3	4	5
Level (ppm)		0	100	500	2500	5000

	Week -1 M	Week -1 F	Week 1 M	Week 1 F	Week 2 M	Week 2 F	Week 3 M	Week 3 F	Week 4 M	Week 4 F
GROUP 1										
Number observed	15	15	15	15	15	15	15	15	15	15
NONE	15	15	15	15	15	15	15	15	15	15
CLEAR	0	0	0	0	0	0	0	0	0	0
RED	0	0	0	0	0	0	0	0	0	0
YELLOW/WHITE	0	0	0	0	0	0	0	0	0	0
GROUP 2										
Number observed	10	10	10	10	10	10	10	10	10	10
NONE	10	10	10	10	10	10	10	10	10	10
CLEAR	0	0	0	0	0	0	0	0	0	0
RED	0	0	0	0	0	0	0	0	0	0
YELLOW/WHITE	0	0	0	0	0	0	0	0	0	0
GROUP 3										
Number observed	10	10	10	10	10	10	10	10	10	10
NONE	10	10	10	10	10	10	10	10	10	10
CLEAR	0	0	0	0	0	0	0	0	0	0
RED	0	0	0	0	0	0	0	0	0	0
YELLOW/WHITE	0	0	0	0	0	0	0	0	0	0
GROUP 4										
Number observed	10	10	10	10	10	10	10	10	10	10
NONE	10	10	10	10	10	10	10	10	10	10
CLEAR	0	0	0	0	0	0	0	0	0	0
RED	0	0	0	0	0	0	0	0	0	0
YELLOW/WHITE	0	0	0	0	0	0	0	0	0	0
GROUP 5										
Number observed	15	13	15	15	15	14	15	15	15	15
NONE	15	13	15	15	15	14	15	15	15	15
CLEAR	0	0	0	0	0	0	0	0	0	0
RED	0	0	0	0	0	0	0	0	0	0
YELLOW/WHITE	0	0	0	0	0	0	0	0	0	0

Table 6
Group functional observation battery data
Summary of observations on removal from cage
Lacrimation type

	Test Article	Control		[		]
Group		1	2	3	4	5
Level (ppm)		0	100	500	2500	5000

	Week 5 M	Week 5 F	Week 6 M	Week 6 F	Week 7 M	Week 7 F	Week 8 M	Week 8 F	Week 9 M	Week 9 F
GROUP 1										
Number observed	15	15	15	15	15	15	15	15	15	15
NONE	15	15	15	15	15	15	15	15	15	15
CLEAR	0	0	0	0	0	0	0	0	0	0
RED	0	0	0	0	0	0	0	0	0	0
YELLOW/WHITE	0	0	0	0	0	0	0	0	0	0
GROUP 2										
Number observed	10	10	10	10	10	10	10	10	10	10
NONE	10	10	10	10	10	10	10	10	10	10
CLEAR	0	0	0	0	0	0	0	0	0	0
RED	0	0	0	0	0	0	0	0	0	0
YELLOW/WHITE	0	0	0	0	0	0	0	0	0	0
GROUP 3										
Number observed	10	10	10	10	10	10	10	10	10	10
NONE	10	10	10	10	10	10	10	10	10	10
CLEAR	0	0	0	0	0	0	0	0	0	0
RED	0	0	0	0	0	0	0	0	0	0
YELLOW/WHITE	0	0	0	0	0	0	0	0	0	0
GROUP 4										
Number observed	10	10	10	10	10	10	10	10	10	10
NONE	10	10	10	10	10	10	10	10	10	10
CLEAR	0	0	0	0	0	0	0	0	0	0
RED	0	0	0	0	0	0	0	0	0	0
YELLOW/WHITE	0	0	0	0	0	0	0	0	0	0
GROUP 5										
Number observed	15	15	15	15	15	15	15	15	15	15
NONE	15	15	15	15	15	15	15	15	15	15
CLEAR	0	0	0	0	0	0	0	0	0	0
RED	0	0	0	0	0	0	0	0	0	0
YELLOW/WHITE	0	0	0	0	0	0	0	0	0	0

Table 6
Group functional observation battery data
Summary of observations on removal from cage
Lacrimation type

	Test Article	Control	[			]		
	Group	1	2	3	4	5		
	Level (ppm)	0	100	500	2500	5000		
	Week 10 M	Week 10 F	Week 11 M	Week 11 F	Week 12 M	Week 12 F	Week 13 M	Week 13 F
GROUP 1								
Number observed	15	14	14	15	15	15	15	15
NONE	15	14	14	15	15	15	15	15
CLEAR	0	0	0	0	0	0	0	0
RED	0	0	0	0	0	0	0	0
YELLOW/WHITE	0	0	0	0	0	0	0	0
GROUP 2								
Number observed	10	10	10	10	10	9	10	9
NONE	10	10	10	10	10	9	10	9
CLEAR	0	0	0	0	0	0	0	0
RED	0	0	0	0	0	0	0	0
YELLOW/WHITE	0	0	0	0	0	0	0	0
GROUP 3								
Number observed	10	10	10	10	10	10	10	10
NONE	10	10	10	10	10	10	10	10
CLEAR	0	0	0	0	0	0	0	0
RED	0	0	0	0	0	0	0	0
YELLOW/WHITE	0	0	0	0	0	0	0	0
GROUP 4								
Number observed	10	10	10	10	10	10	10	10
NONE	10	10	10	10	10	10	10	10
CLEAR	0	0	0	0	0	0	0	0
RED	0	0	0	0	0	0	0	0
YELLOW/WHITE	0	0	0	0	0	0	0	0
GROUP 5								
Number observed	15	15	15	15	15	15	15	15
NONE	15	15	15	15	15	15	15	15
CLEAR	0	0	0	0	0	0	0	0
RED	0	0	0	0	0	0	0	0
YELLOW/WHITE	0	0	0	0	0	0	0	0

Table 6
Group functional observation battery data
Summary of observations on removal from cage
Salivation

	Test Article	Control	[		]
	Group	1	2	3	4	5
	Level (ppm)	0	100	500	2500	5000

	Week -1 M	Week -1 F	Week 1 M	Week 1 F	Week 2 M	Week 2 F	Week 3 M	Week 3 F	Week 4 M	Week 4 F
GROUP 1										
Number observed	15	15	15	15	15	15	15	15	15	15
NONE	15	15	15	15	15	15	15	15	15	15
MODERATE	0	0	0	0	0	0	0	0	0	0
SEVERE	0	0	0	0	0	0	0	0	0	0
GROUP 2										
Number observed	10	10	10	10	10	10	10	10	10	10
NONE	10	10	10	10	10	10	10	10	10	10
MODERATE	0	0	0	0	0	0	0	0	0	0
SEVERE	0	0	0	0	0	0	0	0	0	0
GROUP 3										
Number observed	10	10	10	10	10	10	10	10	10	10
NONE	10	10	10	10	10	10	10	10	10	10
MODERATE	0	0	0	0	0	0	0	0	0	0
SEVERE	0	0	0	0	0	0	0	0	0	0
GROUP 4										
Number observed	10	10	10	10	10	10	10	10	10	10
NONE	10	10	10	10	10	10	10	10	10	10
MODERATE	0	0	0	0	0	0	0	0	0	0
SEVERE	0	0	0	0	0	0	0	0	0	0
GROUP 5										
Number observed	15	13	15	15	15	14	15	15	15	15
NONE	15	13	15	15	15	14	15	15	15	15
MODERATE	0	0	0	0	0	0	0	0	0	0
SEVERE	0	0	0	0	0	0	0	0	0	0

Table 6
Group functional observation battery data
Summary of observations on removal from cage
Salivation

	Test Article	Control		[		]			
Group	1	2	3	4	5				
Level (ppm)	0	100	500	2500	5000				
	Week 5 M	Week 5 F	Week 6 M	Week 6 F	Week 7 M	Week 7 F	Week 8 M	Week 8 F	Week 9 M	Week 9 F
GROUP 1										
Number observed	15	15	15	15	15	15	15	15	15	15
NONE	15	15	15	15	15	15	15	15	15	15
MODERATE	0	0	0	0	0	0	0	0	0	0
SEVERE	0	0	0	0	0	0	0	0	0	0
GROUP 2										
Number observed	10	10	10	10	10	10	10	10	10	10
NONE	10	10	10	10	10	10	10	10	10	10
MODERATE	0	0	0	0	0	0	0	0	0	0
SEVERE	0	0	0	0	0	0	0	0	0	0
GROUP 3										
Number observed	10	10	10	10	10	10	10	10	10	10
NONE	10	10	10	10	10	10	10	10	10	10
MODERATE	0	0	0	0	0	0	0	0	0	0
SEVERE	0	0	0	0	0	0	0	0	0	0
GROUP 4										
Number observed	10	10	10	10	10	10	10	10	10	10
NONE	10	10	10	10	10	10	10	10	10	10
MODERATE	0	0	0	0	0	0	0	0	0	0
SEVERE	0	0	0	0	0	0	0	0	0	0
GROUP 5										
Number observed	15	15	15	15	15	15	15	15	15	15
NONE	15	15	15	15	15	15	15	15	15	15
MODERATE	0	0	0	0	0	0	0	0	0	0
SEVERE	0	0	0	0	0	0	0	0	0	0

Table 6
Group functional observation battery data
Summary of observations on removal from cage
Salivation

	Test Article	Control	[			]		
	Group	1	2	3	4	5		
	Level (ppm)	0	100	500	2500	5000		
	Week 10 M	Week 10 F	Week 11 M	Week 11 F	Week 12 M	Week 12 F	Week 13 M	Week 13 F
GROUP 1								
Number observed	15	14	14	15	15	15	15	15
NONE	15	14	14	15	15	15	15	15
MODERATE	0	0	0	0	0	0	0	0
SEVERE	0	0	0	0	0	0	0	0
GROUP 2								
Number observed	10	10	10	10	10	9	10	9
NONE	10	10	10	10	10	9	10	9
MODERATE	0	0	0	0	0	0	0	0
SEVERE	0	0	0	0	0	0	0	0
GROUP 3								
Number observed	10	10	10	10	10	10	10	10
NONE	10	10	10	10	10	10	10	10
MODERATE	0	0	0	0	0	0	0	0
SEVERE	0	0	0	0	0	0	0	0
GROUP 4								
Number observed	10	10	10	10	10	10	10	10
NONE	10	10	10	10	10	10	10	10
MODERATE	0	0	0	0	0	0	0	0
SEVERE	0	0	0	0	0	0	0	0
GROUP 5								
Number observed	15	15	15	15	15	15	15	15
NONE	15	15	15	15	15	15	15	15
MODERATE	0	0	0	0	0	0	0	0
SEVERE	0	0	0	0	0	0	0	0

Table 6
Group functional observation battery data
Summary of observations on removal from cage
Respiration

	Test Article	Control	[			]
	Group	1	2	3	4	5
	Level (ppm)	0	100	500	2500	5000

	Week -1 M	Week -1 F	Week 1 M	Week 1 F	Week 2 M	Week 2 F	Week 3 M	Week 3 F	Week 4 M	Week 4 F
GROUP 1										
Number observed	15	15	15	15	15	15	15	15	15	15
NORMAL	15	15	15	15	15	15	15	15	15	15
LABOURED	0	0	0	0	0	0	0	0	0	0
RAPID	0	0	0	0	0	0	0	0	0	0
GASPING	0	0	0	0	0	0	0	0	0	0
OTHER	0	0	0	0	0	0	0	0	0	0
GROUP 2										
Number observed	10	10	10	10	10	10	10	10	10	10
NORMAL	10	10	10	10	10	10	10	10	10	10
LABOURED	0	0	0	0	0	0	0	0	0	0
RAPID	0	0	0	0	0	0	0	0	0	0
GASPING	0	0	0	0	0	0	0	0	0	0
OTHER	0	0	0	0	0	0	0	0	0	0
GROUP 3										
Number observed	10	10	10	10	10	10	10	10	10	10
NORMAL	10	10	10	10	10	10	10	10	10	10
LABOURED	0	0	0	0	0	0	0	0	0	0
RAPID	0	0	0	0	0	0	0	0	0	0
GASPING	0	0	0	0	0	0	0	0	0	0
OTHER	0	0	0	0	0	0	0	0	0	0
GROUP 4										
Number observed	10	10	10	10	10	10	10	10	10	10
NORMAL	10	10	10	10	10	10	10	10	10	10
LABOURED	0	0	0	0	0	0	0	0	0	0
RAPID	0	0	0	0	0	0	0	0	0	0
GASPING	0	0	0	0	0	0	0	0	0	0
OTHER	0	0	0	0	0	0	0	0	0	0
GROUP 5										
Number observed	15	13	15	15	15	14	15	15	15	15
NORMAL	15	13	15	15	15	14	15	15	15	15
LABOURED	0	0	0	0	0	0	0	0	0	0
RAPID	0	0	0	0	0	0	0	0	0	0
GASPING	0	0	0	0	0	0	0	0	0	0
OTHER	0	0	0	0	0	0	0	0	0	0

Table 6
Group functional observation battery data
Summary of observations on removal from cage
Respiration

	Test Article	Control		[		]
	Group	1	2	3	4	5
	Level (ppm)	0	100	500	2500	5000

	Week 5 M	Week 5 F	Week 6 M	Week 6 F	Week 7 M	Week 7 F	Week 8 M	Week 8 F	Week 9 M	Week 9 F
GROUP 1										
Number observed	15	15	15	15	15	15	15	15	15	15
NORMAL	15	15	15	15	15	15	15	15	15	15
LABOURED	0	0	0	0	0	0	0	0	0	0
RAPID	0	0	0	0	0	0	0	0	0	0
GASPING	0	0	0	0	0	0	0	0	0	0
OTHER	0	0	0	0	0	0	0	0	0	0
GROUP 2										
Number observed	10	10	10	10	10	10	10	10	10	10
NORMAL	10	10	10	10	10	10	10	10	10	10
LABOURED	0	0	0	0	0	0	0	0	0	0
RAPID	0	0	0	0	0	0	0	0	0	0
GASPING	0	0	0	0	0	0	0	0	0	0
OTHER	0	0	0	0	0	0	0	0	0	0
GROUP 3										
Number observed	10	10	10	10	10	10	10	10	10	10
NORMAL	10	10	10	10	10	10	10	10	10	10
LABOURED	0	0	0	0	0	0	0	0	0	0
RAPID	0	0	0	0	0	0	0	0	0	0
GASPING	0	0	0	0	0	0	0	0	0	0
OTHER	0	0	0	0	0	0	0	0	0	0
GROUP 4										
Number observed	10	10	10	10	10	10	10	10	10	10
NORMAL	10	10	10	10	10	10	10	10	10	10
LABOURED	0	0	0	0	0	0	0	0	0	0
RAPID	0	0	0	0	0	0	0	0	0	0
GASPING	0	0	0	0	0	0	0	0	0	0
OTHER	0	0	0	0	0	0	0	0	0	0
GROUP 5										
Number observed	15	15	15	15	15	15	15	15	15	15
NORMAL	15	15	15	15	15	15	15	15	14	15
LABOURED	0	0	0	0	0	0	0	0	1	0
RAPID	0	0	0	0	0	0	0	0	0	0
GASPING	0	0	0	0	0	0	0	0	0	0
OTHER	0	0	0	0	0	0	0	0	0	0

Table 6
Group functional observation battery data
Summary of observations on removal from cage
Respiration

	Test Article	Control	[			]	
Group		1	2	3	4	5	
Level (ppm)		0	100	500	2500	5000	
	Week 10 M	Week 10 F	Week 11 M	Week 11 F	Week 12 M	Week 12 F	Week 13 M	Week 13 F
GROUP 1								
Number observed	15	14	14	15	15	15	15	15
NORMAL	15	14	14	15	15	15	15	15
LABOURED	0	0	0	0	0	0	0	0
RAPID	0	0	0	0	0	0	0	0
GASPING	0	0	0	0	0	0	0	0
OTHER	0	0	0	0	0	0	0	0
GROUP 2								
Number observed	10	10	10	10	10	9	10	9
NORMAL	10	10	10	10	10	9	10	9
LABOURED	0	0	0	0	0	0	0	0
RAPID	0	0	0	0	0	0	0	0
GASPING	0	0	0	0	0	0	0	0
OTHER	0	0	0	0	0	0	0	0
GROUP 3								
Number observed	10	10	10	10	10	10	10	10
NORMAL	10	10	10	10	10	10	10	10
LABOURED	0	0	0	0	0	0	0	0
RAPID	0	0	0	0	0	0	0	0
GASPING	0	0	0	0	0	0	0	0
OTHER	0	0	0	0	0	0	0	0
GROUP 4								
Number observed	10	10	10	10	10	10	10	10
NORMAL	10	10	10	10	10	10	10	10
LABOURED	0	0	0	0	0	0	0	0
RAPID	0	0	0	0	0	0	0	0
GASPING	0	0	0	0	0	0	0	0
OTHER	0	0	0	0	0	0	0	0
GROUP 5								
Number observed	15	15	15	15	15	15	15	15
NORMAL	15	15	15	15	15	15	15	15
LABOURED	0	0	0	0	0	0	0	0
RAPID	0	0	0	0	0	0	0	0
GASPING	0	0	0	0	0	0	0	0
OTHER	0	0	0	0	0	0	0	0

Table 6
Group functional observation battery data
Summary of observations on removal from cage
Piloerection

Test Article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

	Week -1 M	Week -1 F	Week 1 M	Week 1 F	Week 2 M	Week 2 F	Week 3 M	Week 3 F	Week 4 M	Week 4 F
GROUP 1										
Number observed	15	15	15	15	15	15	15	15	15	15
ABSENT	15	15	15	15	15	15	15	14	15	14
PRESENT	0	0	0	0	0	0	0	1	0	1
GROUP 2										
Number observed	10	10	10	10	10	10	10	10	10	10
ABSENT	10	10	10	10	10	10	10	10	10	10
PRESENT	0	0	0	0	0	0	0	0	0	0
GROUP 3										
Number observed	10	10	10	10	10	10	10	10	10	10
ABSENT	10	10	10	10	10	10	10	10	10	10
PRESENT	0	0	0	0	0	0	0	0	0	0
GROUP 4										
Number observed	10	10	10	10	10	10	10	10	10	10
ABSENT	10	10	10	10	10	10	10	9	10	9
PRESENT	0	0	0	0	0	0	0	1	0	1
GROUP 5										
Number observed	15	13	15	15	15	14	15	15	15	15
ABSENT	15	13	15	15	15	14	15	15	15	15
PRESENT	0	0	0	0	0	0	0	0	0	0

Table 6
Group functional observation battery data
Summary of observations on removal from cage
Piloerection

	Test Article	Control	[			]			
	Group	1	2	3	4	5			
	Level (ppm)	0	100	500	2500	5000			
	Week 5 M	Week 5 F	Week 6 M	Week 6 F	Week 7 M	Week 7 F	Week 8 M	Week 8 F	Week 9 M	Week 9 F
GROUP 1										
Number observed	15	15	15	15	15	15	15	15	15	15
ABSENT	15	15	15	15	15	15	15	15	15	15
PRESENT	0	0	0	0	0	0	0	0	0	0
GROUP 2										
Number observed	10	10	10	10	10	10	10	10	10	10
ABSENT	10	10	10	10	10	10	10	10	10	10
PRESENT	0	0	0	0	0	0	0	0	0	0
GROUP 3										
Number observed	10	10	10	10	10	10	10	10	10	10
ABSENT	10	10	10	10	10	10	10	10	10	10
PRESENT	0	0	0	0	0	0	0	0	0	0
GROUP 4										
Number observed	10	10	10	10	10	10	10	10	10	10
ABSENT	10	10	10	10	10	10	10	10	10	10
PRESENT	0	0	0	0	0	0	0	0	0	0
GROUP 5										
Number observed	15	15	15	15	15	15	15	15	15	15
ABSENT	15	15	15	15	15	15	15	15	15	15
PRESENT	0	0	0	0	0	0	0	0	0	0

Table 6
Group functional observation battery data
Summary of observations on removal from cage
Piloerection

	Test Article Group / Level (ppm)	Control 1 0	2 100	[3 500	4 2500	] 5 5000			
	Week 10 M	Week 10 F	Week 11 M	Week 11 F	Week 12 M	Week 12 F	Week 13 M	Week 13 F
GROUP 1								
Number observed	15	14	14	15	15	15	15	15
ABSENT	15	14	14	15	15	15	15	15
PRESENT	0	0	0	0	0	0	0	0
GROUP 2								
Number observed	10	10	10	10	10	9	10	9
ABSENT	10	10	10	10	10	9	10	9
PRESENT	0	0	0	0	0	0	0	0
GROUP 3								
Number observed	10	10	10	10	10	10	10	10
ABSENT	10	10	10	10	10	10	10	10
PRESENT	0	0	0	0	0	0	0	0
GROUP 4								
Number observed	10	10	10	10	10	10	10	10
ABSENT	10	10	10	10	10	10	10	10
PRESENT	0	0	0	0	0	0	0	0
GROUP 5								
Number observed	15	15	15	15	15	15	15	15
ABSENT	15	15	15	15	15	15	15	15
PRESENT	0	0	0	0	0	0	0	0

Table 6
Group functional observation battery data
Summary of observations on removal from cage
Appearance of fur

	Test Article	Control	[			]			
	Group	1	2	3	4	5			
	Level (ppm)	0	100	500	2500	5000			
	Week -1 M	Week -1 F	Week 1 M	Week 1 F	Week 2 M	Week 2 F	Week 3 M	Week 3 F	Week 4 M	Week 4 F
GROUP 1										
Number observed	15	15	15	15	15	15	15	15	15	15
NORMAL	15	15	15	15	15	15	15	15	15	15
STAINED	0	0	0	0	0	0	0	0	0	0
ROUGH	0	0	0	0	0	0	0	0	0	0
STAINED/ROUGH	0	0	0	0	0	0	0	0	0	0
GROUP 2										
Number observed	10	10	10	10	10	10	10	10	10	10
NORMAL	10	10	10	10	10	10	10	10	10	10
STAINED	0	0	0	0	0	0	0	0	0	0
ROUGH	0	0	0	0	0	0	0	0	0	0
STAINED/ROUGH	0	0	0	0	0	0	0	0	0	0
GROUP 3										
Number observed	10	10	10	10	10	10	10	10	10	10
NORMAL	10	10	10	10	10	10	10	10	10	10
STAINED	0	0	0	0	0	0	0	0	0	0
ROUGH	0	0	0	0	0	0	0	0	0	0
STAINED/ROUGH	0	0	0	0	0	0	0	0	0	0
GROUP 4										
Number observed	10	10	10	10	10	10	10	10	10	10
NORMAL	10	10	10	10	10	10	10	10	10	10
STAINED	0	0	0	0	0	0	0	0	0	0
ROUGH	0	0	0	0	0	0	0	0	0	0
STAINED/ROUGH	0	0	0	0	0	0	0	0	0	0
GROUP 5										
Number observed	15	13	15	15	15	14	15	15	15	15
NORMAL	15	13	15	15	15	14	15	15	15	15
STAINED	0	0	0	0	0	0	0	0	0	0
ROUGH	0	0	0	0	0	0	0	0	0	0
STAINED/ROUGH	0	0	0	0	0	0	0	0	0	0

Table 6
Group functional observation battery data
Summary of observations on removal from cage
Appearance of fur

	Test Article	Control	[			]				
	Group	1	2	3	4	5				
	Level (ppm)	0	100	500	2500	5000				
	Week 5 M	Week 5 F	Week 6 M	Week 6 F	Week 7 M	Week 7 F	Week 8 M	Week 8 F	Week 9 M	Week 9 F
GROUP 1										
Number observed	15	15	15	15	15	15	15	15	15	15
NORMAL	15	15	15	15	15	15	15	15	15	15
STAINED	0	0	0	0	0	0	0	0	0	0
ROUGH	0	0	0	0	0	0	0	0	0	0
STAINED/ROUGH	0	0	0	0	0	0	0	0	0	0
GROUP 2										
Number observed	10	10	10	10	10	10	10	10	10	10
NORMAL	10	10	10	10	10	10	10	10	10	10
STAINED	0	0	0	0	0	0	0	0	0	0
ROUGH	0	0	0	0	0	0	0	0	0	0
STAINED/ROUGH	0	0	0	0	0	0	0	0	0	0
GROUP 3										
Number observed	10	10	10	10	10	10	10	10	10	10
NORMAL	10	10	10	10	10	10	10	10	9	10
STAINED	0	0	0	0	0	0	0	0	0	0
ROUGH	0	0	0	0	0	0	0	0	1	0
STAINED/ROUGH	0	0	0	0	0	0	0	0	0	0
GROUP 4										
Number observed	10	10	10	10	10	10	10	10	10	10
NORMAL	10	10	10	10	10	10	10	10	10	10
STAINED	0	0	0	0	0	0	0	0	0	0
ROUGH	0	0	0	0	0	0	0	0	0	0
STAINED/ROUGH	0	0	0	0	0	0	0	0	0	0
GROUP 5										
Number observed	15	15	15	15	15	15	15	15	15	15
NORMAL	15	15	15	15	15	15	15	15	15	15
STAINED	0	0	0	0	0	0	0	0	0	0
ROUGH	0	0	0	0	0	0	0	0	0	0
STAINED/ROUGH	0	0	0	0	0	0	0	0	0	0

Table 6
Group functional observation battery data
Summary of observations on removal from cage
Appearance of fur

	Test Article Group Level (ppm)	Control 1 0	2 100	[3 500	4 2500	] 5 5000		
	Week 10 M	Week 10 F	Week 11 M	Week 11 F	Week 12 M	Week 12 F	Week 13 M	Week 13 F
GROUP 1								
Number observed	15	14	14	15	15	15	15	15
NORMAL	15	14	14	15	15	15	15	15
STAINED	0	0	0	0	0	0	0	0
ROUGH	0	0	0	0	0	0	0	0
STAINED/ROUGH	0	0	0	0	0	0	0	0
GROUP 2								
Number observed	10	10	10	10	10	9	10	9
NORMAL	10	10	10	10	10	9	10	9
STAINED	0	0	0	0	0	0	0	0
ROUGH	0	0	0	0	0	0	0	0
STAINED/ROUGH	0	0	0	0	0	0	0	0
GROUP 3								
Number observed	10	10	10	10	10	10	10	10
NORMAL	10	10	10	10	10	10	10	10
STAINED	0	0	0	0	0	0	0	0
ROUGH	0	0	0	0	0	0	0	0
STAINED/ROUGH	0	0	0	0	0	0	0	0
GROUP 4								
Number observed	10	10	10	10	10	10	10	10
NORMAL	10	10	10	10	10	10	10	10
STAINED	0	0	0	0	0	0	0	0
ROUGH	0	0	0	0	0	0	0	0
STAINED/ROUGH	0	0	0	0	0	0	0	0
GROUP 5								
Number observed	15	15	15	15	15	15	15	15
NORMAL	15	15	15	15	15	15	15	15
STAINED	0	0	0	0	0	0	0	0
ROUGH	0	0	0	0	0	0	0	0
STAINED/ROUGH	0	0	0	0	0	0	0	0

Table 6
Group functional observation battery data
Summary of open field observations
Latency to first step (secs)

	Test Article	Control	[		]
Group		1	2	3	4	5
Level (ppm)		0	100	500	2500	5000

	Week -1 M	Week -1 F	Week 1 M	Week 1 F	Week 2 M	Week 2 F	Week 3 M	Week 3 F	Week 4 M	Week 4 F
GROUP 1										
N	15	15	15	15	15	15	15	15	15	15
Mean	0	1	0	0	0	0	0	0	0	0
SD	0	1	0	0	1	0	1	0	0	0
GROUP 2										
N	10	10	10	10	10	10	10	10	10	9
Mean	0	0	0	0	0	0	0	0	0	0
SD	0	0	0	1	1	0	0	0	0	0
GROUP 3										
N	10	10	10	10	10	10	10	10	10	10
Mean	0	0	0	1	0	0	0	0	0	0
SD	1	0	1	1	0	0	0	0	0	0
GROUP 4										
N	10	10	10	10	10	10	10	10	10	10
Mean	1	0	0	1	0	0	0	0	0	0
SD	2	0	0	1	0	0	0	0	0	0
GROUP 5										
N	15	13	15	15	15	14	15	15	15	15
Mean	0	0	0	0	0	0	0	0	0	0
SD	1	0	1	1	0	0	1	0	0	0
Statistics	X	X	X	X	X	X	X	X	X	X

N = number of non-missing values
X = not analysed

Table 6
Group functional observation battery data
Summary of open field observations
Latency to first step (secs)

	Test Article	Control		[		]			
	Group	1	2	3	4	5			
	Level (ppm)	0	100	500	2500	5000			
	Week 5 M	Week 5 F	Week 6 M	Week 6 F	Week 7 M	Week 7 F	Week 8 M	Week 8 F	Week 9 M	Week 9 F
GROUP 1										
N	15	15	15	15	15	15	15	15	15	15
Mean	0	0	0	0	0	0	0	0	0	0
SD	0	0	1	0	0	0	0	0	0	0
GROUP 2										
N	10	10	10	10	10	10	10	10	10	10
Mean	0	0	0	0	0	0	1	0	0	0
SD	0	0	1	0	0	0	3	0	0	0
GROUP 3										
N	10	9	10	10	10	10	10	10	10	10
Mean	0	0	0	0	0	0	0	0	0	0
SD	0	0	0	0	0	0	0	0	0	0
GROUP 4										
N	10	10	10	10	10	10	10	10	10	10
Mean	0	0	0	0	0	0	0	0	0	0
SD	0	0	0	0	0	0	0	0	0	0
GROUP 5										
N	15	15	15	15	15	15	15	15	15	15
Mean	0	0	0	0	0	0	0	0	0	0
SD	0	0	0	0	0	0	0	0	0	0
Statistics	X	X	X	X	X	X	X	X	X	X

N = number of non-missing values
X = not analysed

Table 6
Group functional observation battery data
Summary of open field observations
Latency to first step (secs)

	Test Article	Control		[		]		
	Group	1	2	3	4	5		
	Level (ppm)	0	100	500	2500	5000		
	Week 10 M	Week 10 F	Week 11 M	Week 11 F	Week 12 M	Week 12 F	Week 13 M	Week 13 F
GROUP 1								
N	15	14	14	15	15	15	15	15
Mean	0	0	0	0	0	0	0	0
SD	0	0	0	0	0	0	0	0
GROUP 2								
N	10	10	10	10	10	9	10	9
Mean	0	0	0	0	0	0	0	0
SD	0	0	1	0	0	0	0	0
GROUP 3								
N	10	10	10	10	10	10	10	10
Mean	0	0	0	0	0	0	0	0
SD	0	0	0	0	0	0	0	0
GROUP 4								
N	10	10	10	10	10	10	10	10
Mean	0	0	0	0	0	0	0	0
SD	0	0	0	0	0	0	0	0
GROUP 5								
N	15	15	15	15	15	15	15	15
Mean	0	0	0	0	0	0	0	0
SD	0	0	0	0	0	0	0	0
Statistics	X	X	X	X	X	X	X	X

N = number of non-missing values
X = not analysed

Table 6
Group functional observation battery data
Summary of open field observations
Posture

	Test Article	Control	[			]			
	Group	1	2	3	4	5			
	Level (ppm)	0	100	500	2500	5000			
	Week -1 M	Week -1 F	Week 1 M	Week 1 F	Week 2 M	Week 2 F	Week 3 M	Week 3 F	Week 4 M	Week 4 F
GROUP 1										
Number observed	15	15	15	15	15	15	15	15	15	15
NORMAL	15	15	15	15	15	15	15	15	15	15
LOW CARRIAGE	0	0	0	0	0	0	0	0	0	0
HUNCHED	0	0	0	0	0	0	0	0	0	0
PROSTRATE	0	0	0	0	0	0	0	0	0	0
GROUP 2										
Number observed	10	10	10	10	10	10	10	10	10	10
NORMAL	10	10	10	10	10	10	10	10	10	10
LOW CARRIAGE	0	0	0	0	0	0	0	0	0	0
HUNCHED	0	0	0	0	0	0	0	0	0	0
PROSTRATE	0	0	0	0	0	0	0	0	0	0
GROUP 3										
Number observed	10	10	10	10	10	10	10	10	10	10
NORMAL	10	10	10	10	10	10	10	10	10	8
LOW CARRIAGE	0	0	0	0	0	0	0	0	0	2
HUNCHED	0	0	0	0	0	0	0	0	0	0
PROSTRATE	0	0	0	0	0	0	0	0	0	0
GROUP 4										
Number observed	10	10	10	10	10	10	10	10	10	10
NORMAL	10	10	10	10	10	10	10	10	10	10
LOW CARRIAGE	0	0	0	0	0	0	0	0	0	0
HUNCHED	0	0	0	0	0	0	0	0	0	0
PROSTRATE	0	0	0	0	0	0	0	0	0	0
GROUP 5										
Number observed	15	13	15	15	15	14	15	15	15	15
NORMAL	15	13	15	15	15	14	14	15	15	15
LOW CARRIAGE	0	0	0	0	0	0	1	0	0	0
HUNCHED	0	0	0	0	0	0	0	0	0	0
PROSTRATE	0	0	0	0	0	0	0	0	0	0

Table 6
Group functional observation battery data
Summary of open field observations
Posture

	Test Article	Control		[		]			
	Group	1	2	3	4	5			
	Level (ppm)	0	100	500	2500	5000			
	Week 5 M	Week 5 F	Week 6 M	Week 6 F	Week 7 M	Week 7 F	Week 8 M	Week 8 F	Week 9 M	Week 9 F
GROUP 1										
Number observed	15	15	15	15	15	15	15	15	15	15
NORMAL	15	15	15	15	15	15	15	15	15	15
LOW CARRIAGE	0	0	0	0	0	0	0	0	0	0
HUNCHED	0	0	0	0	0	0	0	0	0	0
PROSTRATE	0	0	0	0	0	0	0	0	0	0
GROUP 2										
Number observed	10	10	10	10	10	10	10	10	10	10
NORMAL	10	10	10	10	10	10	10	10	10	10
LOW CARRIAGE	0	0	0	0	0	0	0	0	0	0
HUNCHED	0	0	0	0	0	0	0	0	0	0
PROSTRATE	0	0	0	0	0	0	0	0	0	0
GROUP 3										
Number observed	10	10	10	10	10	10	10	10	10	10
NORMAL	10	10	10	10	10	10	10	10	10	10
LOW CARRIAGE	0	0	0	0	0	0	0	0	0	0
HUNCHED	0	0	0	0	0	0	0	0	0	0
PROSTRATE	0	0	0	0	0	0	0	0	0	0
GROUP 4										
Number observed	10	10	10	10	10	10	10	10	10	10
NORMAL	10	10	10	10	10	10	10	10	10	10
LOW CARRIAGE	0	0	0	0	0	0	0	0	0	0
HUNCHED	0	0	0	0	0	0	0	0	0	0
PROSTRATE	0	0	0	0	0	0	0	0	0	0
GROUP 5										
Number observed	15	15	15	15	15	15	15	15	15	15
NORMAL	15	15	15	15	14	15	15	15	15	15
LOW CARRIAGE	0	0	0	0	1	0	0	0	0	0
HUNCHED	0	0	0	0	0	0	0	0	0	0
PROSTRATE	0	0	0	0	0	0	0	0	0	0

Table 6
Group functional observation battery data
Summary of open field observations
Posture

	Test Article	Control	[			]	
	Group	1	2	3	4	5	
	Level (ppm)	0	100	500	2500	5000	
	Week 10 M	Week 10 F	Week 11 M	Week 11 F	Week 12 M	Week 12 F	Week 13 M	Week 13 F
GROUP 1								
Number observed	15	14	14	15	15	15	15	15
NORMAL	15	14	14	15	15	15	15	15
LOW CARRIAGE	0	0	0	0	0	0	0	0
HUNCHED	0	0	0	0	0	0	0	0
PROSTRATE	0	0	0	0	0	0	0	0
GROUP 2								
Number observed	10	10	10	10	10	9	10	9
NORMAL	10	10	10	10	10	9	10	9
LOW CARRIAGE	0	0	0	0	0	0	0	0
HUNCHED	0	0	0	0	0	0	0	0
PROSTRATE	0	0	0	0	0	0	0	0
GROUP 3								
Number observed	10	10	10	10	10	10	10	10
NORMAL	10	10	10	10	10	10	10	10
LOW CARRIAGE	0	0	0	0	0	0	0	0
HUNCHED	0	0	0	0	0	0	0	0
PROSTRATE	0	0	0	0	0	0	0	0
GROUP 4								
Number observed	10	10	10	10	10	10	10	10
NORMAL	10	10	10	10	10	10	10	10
LOW CARRIAGE	0	0	0	0	0	0	0	0
HUNCHED	0	0	0	0	0	0	0	0
PROSTRATE	0	0	0	0	0	0	0	0
GROUP 5								
Number observed	15	15	15	15	15	15	15	15
NORMAL	15	15	15	15	15	15	15	15
LOW CARRIAGE	0	0	0	0	0	0	0	0
HUNCHED	0	0	0	0	0	0	0	0
PROSTRATE	0	0	0	0	0	0	0	0

Table 6
Group functional observation battery data
Summary of open field observations
Arousal

	Test Article	Control	[			]			
	Group	1	2	3	4	5			
	Level (ppm)	0	100	500	2500	5000			
	Week -1 M	Week -1 F	Week 1 M	Week 1 F	Week 2 M	Week 2 F	Week 3 M	Week 3 F	Week 4 M	Week 4 F
GROUP 1										
Number observed	15	15	15	15	15	15	15	15	15	15
NORMAL	15	12	14	15	13	15	12	14	15	10
HYPOACTIVE	0	0	1	0	1	0	3	0	0	0
HYPERACTIVE	0	3	0	0	1	0	0	1	0	5
GROUP 2										
Number observed	10	10	10	10	10	10	10	10	10	10
NORMAL	10	10	10	10	8	10	9	9	10	7
HYPOACTIVE	0	0	0	0	0	0	1	0	0	0
HYPERACTIVE	0	0	0	0	2	0	0	1	0	3
GROUP 3										
Number observed	10	10	10	10	10	10	10	10	10	10
NORMAL	10	9	9	10	9	10	8	10	10	6
HYPOACTIVE	0	0	1	0	1	0	2	0	0	0
HYPERACTIVE	0	1	0	0	0	0	0	0	0	4
GROUP 4										
Number observed	10	10	10	10	10	10	10	10	10	10
NORMAL	10	10	9	10	9	10	8	8	10	8
HYPOACTIVE	0	0	1	0	0	0	2	0	0	0
HYPERACTIVE	0	0	0	0	0	0	0	2	0	2
NOT RECORDED	0	0	0	0	1	0	0	0	0	0
GROUP 5										
Number observed	15	13	15	15	15	14	15	15	15	15
NORMAL	15	12	14	15	15	12	12	14	13	11
HYPOACTIVE	0	0	0	0	0	1	0	0	0	0
HYPERACTIVE	0	1	1	0	0	1	3	1	2	4

Table 6
Group functional observation battery data
Summary of open field observations
Arousal

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

	Week 5 M	Week 5 F	Week 6 M	Week 6 F	Week 7 M	Week 7 F	Week 8 M	Week 8 F	Week 9 M	Week 9 F
GROUP 1										
Number observed	15	15	15	15	15	15	15	15	15	15
NORMAL	14	14	14	15	11	15	12	15	15	15
HYPOACTIVE	0	0	0	0	3	0	3	0	0	0
HYPERACTIVE	1	1	1	0	1	0	0	0	0	0
GROUP 2										
Number observed	10	10	10	10	10	10	10	10	10	10
NORMAL	6	10	7	10	6	10	8	10	10	10
HYPOACTIVE	2	0	1	0	3	0	0	0	0	0
HYPERACTIVE	2	0	2	0	1	0	2	0	0	0
GROUP 3										
Number observed	10	10	10	10	10	10	10	10	10	10
NORMAL	10	9	10	9	9	10	10	10	10	10
HYPOACTIVE	0	0	0	0	1	0	0	0	0	0
HYPERACTIVE	0	1	0	1	0	0	0	0	0	0
GROUP 4										
Number observed	10	10	10	10	10	10	10	10	10	10
NORMAL	10	7	10	9	10	10	10	10	10	9
HYPOACTIVE	0	0	0	0	0	0	0	0	0	0
HYPERACTIVE	0	3	0	1	0	0	0	0	0	1
NOT RECORDED	0	0	0	0	0	0	0	0	0	0
GROUP 5										
Number observed	15	15	15	15	15	15	15	15	15	15
NORMAL	15	15	13	14	14	15	15	15	15	14
HYPOACTIVE	0	0	0	0	1	0	0	0	0	0
HYPERACTIVE	0	0	2	1	0	0	0	0	0	1

Table 6
Group functional observation battery data
Summary of open field observations
Arousal

	Test Article	Control	[			]		
	Group	1	2	3	4	5		
	Level (ppm)	0	100	500	2500	5000		
	Week 10 M	Week 10 F	Week 11 M	Week 11 F	Week 12 M	Week 12 F	Week 13 M	Week 13 F
GROUP 1								
Number observed	15	14	14	15	15	15	15	15
NORMAL	14	14	14	14	14	14	15	15
HYPOACTIVE	0	0	0	0	1	0	0	0
HYPERACTIVE	1	0	0	1	0	1	0	0
GROUP 2								
Number observed	10	10	10	10	10	9	10	9
NORMAL	9	10	10	10	9	9	10	9
HYPOACTIVE	0	0	0	0	0	0	0	0
HYPERACTIVE	1	0	0	0	1	0	0	0
GROUP 3								
Number observed	10	10	10	10	10	10	10	10
NORMAL	10	10	10	10	10	10	10	10
HYPOACTIVE	0	0	0	0	0	0	0	0
HYPERACTIVE	0	0	0	0	0	0	0	0
GROUP 4								
Number observed	10	10	10	10	10	10	10	10
NORMAL	10	8	10	10	10	8	10	10
HYPOACTIVE	0	0	0	0	0	0	0	0
HYPERACTIVE	0	2	0	0	0	2	0	0
NOT RECORDED	0	0	0	0	0	0	0	0
GROUP 5								
Number observed	15	15	15	15	15	15	15	15
NORMAL	14	15	15	15	14	15	15	15
HYPOACTIVE	0	0	0	0	1	0	0	0
HYPERACTIVE	1	0	0	0	0	0	0	0

Table 6
Group functional observation battery data
Summary of open field observations
Circling

	Test Article	Control	[			]
	Group	1	2	3	4	5
	Level (ppm)	0	100	500	2500	5000

	Week -1 M	Week -1 F	Week 1 M	Week 1 F	Week 2 M	Week 2 F	Week 3 M	Week 3 F	Week 4 M	Week 4 F
GROUP 1										
Number observed	15	15	15	15	15	15	15	15	15	15
ABSENT	15	15	15	15	15	15	15	15	15	15
PRESENT	0	0	0	0	0	0	0	0	0	0
GROUP 2										
Number observed	10	10	10	10	10	10	10	10	10	10
ABSENT	10	10	10	10	10	10	10	10	10	10
PRESENT	0	0	0	0	0	0	0	0	0	0
GROUP 3										
Number observed	10	10	10	10	10	10	10	10	10	10
ABSENT	10	10	10	10	10	10	10	10	10	10
PRESENT	0	0	0	0	0	0	0	0	0	0
GROUP 4										
Number observed	10	10	10	10	10	10	10	10	10	10
ABSENT	10	10	10	10	10	10	10	10	10	10
PRESENT	0	0	0	0	0	0	0	0	0	0
GROUP 5										
Number observed	15	13	15	15	15	14	15	15	15	15
ABSENT	15	13	15	15	15	14	15	15	15	15
PRESENT	0	0	0	0	0	0	0	0	0	0

Table 6
Group functional observation battery data
Summary of open field observations
Circling

	Test Article	Control	[		]
	Group	1	2	3	4	5
	Level (ppm)	0	100	500	2500	5000

	Week 5 M	Week 5 F	Week 6 M	Week 6 F	Week 7 M	Week 7 F	Week 8 M	Week 8 F	Week 9 M	Week 9 F
GROUP 1										
Number observed	15	15	15	15	15	15	15	15	15	15
ABSENT	15	15	15	15	15	15	15	15	15	15
PRESENT	0	0	0	0	0	0	0	0	0	0
GROUP 2										
Number observed	10	10	10	10	10	10	10	10	10	10
ABSENT	10	10	10	10	10	10	10	10	10	10
PRESENT	0	0	0	0	0	0	0	0	0	0
GROUP 3										
Number observed	10	10	10	10	10	10	10	10	10	10
ABSENT	10	10	10	10	10	10	10	10	10	10
PRESENT	0	0	0	0	0	0	0	0	0	0
GROUP 4										
Number observed	10	10	10	10	10	10	10	10	10	10
ABSENT	10	10	10	10	10	10	10	10	10	10
PRESENT	0	0	0	0	0	0	0	0	0	0
GROUP 5										
Number observed	15	15	15	15	15	15	15	15	15	15
ABSENT	15	15	15	15	15	15	15	15	15	15
PRESENT	0	0	0	0	0	0	0	0	0	0

Table 6
Group functional observation battery data
Summary of open field observations
Circling

	Test Article Group	Control 1	2	[3	4	] 5		
	Level (ppm)	0	100	500	2500	5000		
	Week 10 M	Week 10 F	Week 11 M	Week 11 F	Week 12 M	Week 12 F	Week 13 M	Week 13 F
GROUP 1								
Number observed	15	14	14	15	15	15	15	15
ABSENT	15	14	14	15	15	15	15	15
PRESENT	0	0	0	0	0	0	0	0
GROUP 2								
Number observed	10	10	10	10	10	9	10	9
ABSENT	10	10	10	10	10	9	10	9
PRESENT	0	0	0	0	0	0	0	0
GROUP 3								
Number observed	10	10	10	10	10	10	10	10
ABSENT	10	10	10	10	10	10	10	10
PRESENT	0	0	0	0	0	0	0	0
GROUP 4								
Number observed	10	10	10	10	10	10	10	10
ABSENT	10	10	10	10	10	10	10	10
PRESENT	0	0	0	0	0	0	0	0
GROUP 5								
Number observed	15	15	15	15	15	15	15	15
ABSENT	15	15	15	15	15	15	15	15
PRESENT	0	0	0	0	0	0	0	0

Table 6
Group functional observation battery data
Summary of open field observations
Gait type

Test Article Control [ ]
Group 1 2 3 4 5
Level (ppm) 0 100 500 2500 5000

	Week -1 M	Week -1 F	Week 1 M	Week 1 F	Week 2 M	Week 2 F	Week 3 M	Week 3 F	Week 4 M	Week 4 F
GROUP 1										
Number observed	15	15	15	15	15	15	15	15	15	15
NORMAL	15	15	15	11	15	15	15	10	15	15
ATAXIC	0	0	0	0	0	0	0	0	0	0
PARALYTIC	0	0	0	0	0	0	0	0	0	0
SPASTIC	0	0	0	0	0	0	0	0	0	0
OTHER	0	0	0	4	0	0	0	5	0	0
GROUP 2										
Number observed	10	10	10	10	10	10	10	10	10	10
NORMAL	9	10	10	10	10	10	10	6	10	10
ATAXIC	0	0	0	0	0	0	0	0	0	0
PARALYTIC	0	0	0	0	0	0	0	0	0	0
SPASTIC	0	0	0	0	0	0	0	0	0	0
OTHER	1	0	0	0	0	0	0	4	0	0
GROUP 3										
Number observed	10	10	10	10	10	10	10	10	10	10
NORMAL	10	10	10	8	10	9	10	6	10	10
ATAXIC	0	0	0	0	0	0	0	0	0	0
PARALYTIC	0	0	0	0	0	0	0	0	0	0
SPASTIC	0	0	0	0	0	0	0	1	0	0
OTHER	0	0	0	2	0	1	0	3	0	0
GROUP 4										
Number observed	10	10	10	10	10	10	10	10	10	10
NORMAL	10	10	10	9	10	10	10	7	10	10
ATAXIC	0	0	0	0	0	0	0	0	0	0
PARALYTIC	0	0	0	0	0	0	0	0	0	0
SPASTIC	0	0	0	0	0	0	0	0	0	0
OTHER	0	0	0	1	0	0	0	3	0	0
GROUP 5										
Number observed	15	13	15	15	15	14	15	15	15	15
NORMAL	14	13	15	12	15	13	15	10	15	15
ATAXIC	0	0	0	0	0	0	0	0	0	0
PARALYTIC	0	0	0	0	0	0	0	0	0	0
SPASTIC	0	0	0	0	0	0	0	0	0	0
OTHER	1	0	0	3	0	1	0	5	0	0

Table 6
Group functional observation battery data
Summary of open field observations
Gait type

	Test Article	Control	[		]				
	Group	1	2	3	4	5			
	Level (ppm)	0	100	500	2500	5000			
	Week 5 M	Week 5 F	Week 6 M	Week 6 F	Week 7 M	Week 7 F	Week 8 M	Week 8 F	Week 9 M	Week 9 F
GROUP 1										
Number observed	15	15	15	15	15	15	15	15	15	15
NORMAL	15	10	15	10	15	12	14	11	15	12
ATAXIC	0	0	0	0	0	0	0	0	0	0
PARALYTIC	0	0	0	0	0	0	0	0	0	0
SPASTIC	0	0	0	0	0	0	0	0	0	0
OTHER	0	5	0	5	0	3	1	4	0	3
GROUP 2										
Number observed	10	10	10	10	10	10	10	10	10	10
NORMAL	10	7	10	6	10	9	9	8	10	8
ATAXIC	0	0	0	0	0	0	0	0	0	0
PARALYTIC	0	0	0	0	0	0	0	0	0	0
SPASTIC	0	0	0	0	0	0	0	0	0	0
OTHER	0	3	0	4	0	1	1	2	0	2
GROUP 3										
Number observed	10	10	10	10	10	10	10	10	10	10
NORMAL	10	8	10	8	9	10	10	10	10	10
ATAXIC	0	0	0	0	0	0	0	0	0	0
PARALYTIC	0	0	0	0	0	0	0	0	0	0
SPASTIC	0	0	0	0	0	0	0	0	0	0
OTHER	0	2	0	2	1	0	0	0	0	0
GROUP 4										
Number observed	10	10	10	10	10	10	10	10	10	10
NORMAL	10	7	10	6	10	8	10	9	10	9
ATAXIC	0	0	0	0	0	0	0	0	0	0
PARALYTIC	0	0	0	0	0	0	0	0	0	0
SPASTIC	0	0	0	0	0	0	0	0	0	0
OTHER	0	3	0	4	0	2	0	1	0	1
GROUP 5										
Number observed	15	15	15	15	15	15	15	15	15	15
NORMAL	15	5	15	7	15	12	15	12	15	14
ATAXIC	0	1	0	0	0	0	0	0	0	0
PARALYTIC	0	0	0	0	0	0	0	0	0	0
SPASTIC	0	0	0	0	0	0	0	0	0	0
OTHER	0	9	0	8	0	3	0	3	0	1

Table 6
Group functional observation battery data
Summary of open field observations
Gait type

	Test Article	Control	[			]		
	Group	1	2	3	4	5		
	Level (ppm)	0	100	500	2500	5000		
	Week 10 M	Week 10 F	Week 11 M	Week 11 F	Week 12 M	Week 12 F	Week 13 M	Week 13 F
GROUP 1								
Number observed	15	14	14	15	15	15	15	15
NORMAL	15	11	14	12	15	15	15	13
ATAXIC	0	0	0	0	0	0	0	0
PARALYTIC	0	0	0	0	0	0	0	0
SPASTIC	0	0	0	0	0	0	0	0
OTHER	0	3	0	3	0	0	0	2
GROUP 2								
Number observed	10	10	10	10	10	9	10	9
NORMAL	10	8	10	9	10	9	10	9
ATAXIC	0	0	0	0	0	0	0	0
PARALYTIC	0	0	0	0	0	0	0	0
SPASTIC	0	0	0	0	0	0	0	0
OTHER	0	2	0	1	0	0	0	0
GROUP 3								
Number observed	10	10	10	10	10	10	10	10
NORMAL	10	9	10	10	10	10	10	10
ATAXIC	0	0	0	0	0	0	0	0
PARALYTIC	0	0	0	0	0	0	0	0
SPASTIC	0	0	0	0	0	0	0	0
OTHER	0	1	0	0	0	0	0	0
GROUP 4								
Number observed	10	10	10	10	10	10	10	10
NORMAL	10	8	10	9	10	10	10	10
ATAXIC	0	0	0	0	0	0	0	0
PARALYTIC	0	0	0	0	0	0	0	0
SPASTIC	0	0	0	0	0	0	0	0
OTHER	0	2	0	1	0	0	0	0
GROUP 5								
Number observed	15	15	15	15	15	15	15	15
NORMAL	15	14	15	13	15	15	15	11
ATAXIC	0	0	0	0	0	0	0	0
PARALYTIC	0	0	0	0	0	0	0	0
SPASTIC	0	0	0	0	0	0	0	0
OTHER	0	1	0	2	0	0	0	4

Table 6
Group functional observation battery data
Summary of open field observations
Gait type severity

	Test Article	Control	[		]				
Group	1	2	3	4	5				
Level (ppm)	0	100	500	2500	5000				
	Week -1 M	Week -1 F	Week 1 M	Week 1 F	Week 2 M	Week 2 F	Week 3 M	Week 3 F	Week 4 M	Week 4 F
GROUP 1										
Number observed	15	15	15	15	15	15	15	15	15	15
NORMAL	15	15	15	11	15	15	15	10	15	15
SLIGHT	0	0	0	3	0	0	0	4	0	0
MODERATE	0	0	0	1	0	0	0	1	0	0
SEVERE	0	0	0	0	0	0	0	0	0	0
GROUP 2										
Number observed	10	10	10	10	10	10	10	10	10	10
NORMAL	9	10	10	10	10	10	10	6	10	10
SLIGHT	1	0	0	0	0	0	0	2	0	0
MODERATE	0	0	0	0	0	0	0	2	0	0
SEVERE	0	0	0	0	0	0	0	0	0	0
GROUP 3										
Number observed	10	10	10	10	10	10	10	10	10	10
NORMAL	10	10	10	8	10	10	10	6	10	10
SLIGHT	0	0	0	2	0	0	0	3	0	0
MODERATE	0	0	0	0	0	0	0	1	0	0
SEVERE	0	0	0	0	0	0	0	0	0	0
GROUP 4										
Number observed	10	10	10	10	10	10	10	10	10	10
NORMAL	10	10	10	9	10	10	10	7	10	10
SLIGHT	0	0	0	1	0	0	0	1	0	0
MODERATE	0	0	0	0	0	0	0	2	0	0
SEVERE	0	0	0	0	0	0	0	0	0	0
GROUP 5										
Number observed	15	13	15	15	15	14	15	15	15	15
NORMAL	14	13	15	12	15	14	15	10	15	15
SLIGHT	1	0	0	2	0	0	0	5	0	0
MODERATE	0	0	0	1	0	0	0	0	0	0
SEVERE	0	0	0	0	0	0	0	0	0	0

Table 6
Group functional observation battery data
Summary of open field observations
Gait type severity

	Test Article	Control	[			]
	Group	1	2	3	4	5
	Level (ppm)	0	100	500	2500	5000

	Week 5 M	Week 5 F	Week 6 M	Week 6 F	Week 7 M	Week 7 F	Week 8 M	Week 8 F	Week 9 M	Week 9 F
GROUP 1										
Number observed	15	15	15	15	15	15	15	15	15	15
NORMAL	15	10	15	10	15	12	14	11	15	12
SLIGHT	0	2	0	3	0	2	1	3	0	2
MODERATE	0	3	0	2	0	1	0	1	0	1
SEVERE	0	0	0	0	0	0	0	0	0	0
GROUP 2										
Number observed	10	10	10	10	10	10	10	10	10	10
NORMAL	10	7	10	6	10	9	10	8	10	8
SLIGHT	0	2	0	1	0	1	0	1	0	2
MODERATE	0	1	0	3	0	0	0	1	0	0
SEVERE	0	0	0	0	0	0	0	0	0	0
GROUP 3										
Number observed	10	10	10	10	10	10	10	10	10	10
NORMAL	10	8	10	8	9	10	10	10	10	10
SLIGHT	0	2	0	1	1	0	0	0	0	0
MODERATE	0	0	0	1	0	0	0	0	0	0
SEVERE	0	0	0	0	0	0	0	0	0	0
GROUP 4										
Number observed	10	10	10	10	10	10	10	10	10	10
NORMAL	10	7	10	6	10	8	10	9	10	9
SLIGHT	0	1	0	4	0	2	0	1	0	1
MODERATE	0	2	0	0	0	0	0	0	0	0
SEVERE	0	0	0	0	0	0	0	0	0	0
GROUP 5										
Number observed	15	15	15	15	15	15	15	15	15	15
NORMAL	15	5	15	7	15	12	15	12	15	14
SLIGHT	0	9	0	8	0	3	0	3	0	1
MODERATE	0	1	0	0	0	0	0	0	0	0
SEVERE	0	0	0	0	0	0	0	0	0	0

Table 6
Group functional observation battery data
Summary of open field observations
Gait type severity

	Test Article	Control	[			]		
	Group	1	2	3	4	5		
	Level (ppm)	0	100	500	2500	5000		
	Week 10 M	Week 10 F	Week 11 M	Week 11 F	Week 12 M	Week 12 F	Week 13 M	Week 13 F
GROUP 1								
Number observed	15	14	14	15	15	15	15	15
NORMAL	15	11	14	12	15	15	15	13
SLIGHT	0	3	0	3	0	0	0	2
MODERATE	0	0	0	0	0	0	0	0
SEVERE	0	0	0	0	0	0	0	0
GROUP 2								
Number observed	10	10	10	10	10	9	10	9
NORMAL	10	8	10	9	10	9	10	9
SLIGHT	0	2	0	0	0	0	0	0
MODERATE	0	0	0	1	0	0	0	0
SEVERE	0	0	0	0	0	0	0	0
GROUP 3								
Number observed	10	10	10	10	10	10	10	10
NORMAL	10	9	10	10	10	10	10	10
SLIGHT	0	0	0	0	0	0	0	0
MODERATE	0	1	0	0	0	0	0	0
SEVERE	0	0	0	0	0	0	0	0
GROUP 4								
Number observed	10	10	10	10	10	10	10	10
NORMAL	10	8	10	9	10	10	10	10
SLIGHT	0	2	0	1	0	0	0	0
MODERATE	0	0	0	0	0	0	0	0
SEVERE	0	0	0	0	0	0	0	0
GROUP 5								
Number observed	15	15	15	15	15	15	15	15
NORMAL	15	14	15	13	15	15	15	11
SLIGHT	0	1	0	2	0	0	0	3
MODERATE	0	0	0	0	0	0	0	1
SEVERE	0	0	0	0	0	0	0	0

Table 6
Group functional observation battery data
Summary of open field observations
Stereotypy

	Test Article	Control	[			]			
Group	1	2	3	4	5				
Level (ppm)	0	100	500	2500	5000				
	Week -1 M	Week -1 F	Week 1 M	Week 1 F	Week 2 M	Week 2 F	Week 3 M	Week 3 F	Week 4 M	Week 4 F
GROUP 1										
Number observed	15	15	15	15	15	15	15	15	15	15
ABSENT	15	15	15	15	15	15	15	15	15	15
PRESENT	0	0	0	0	0	0	0	0	0	0
GROUP 2										
Number observed	10	10	10	10	10	10	10	10	10	10
ABSENT	10	10	10	10	10	10	10	10	10	10
PRESENT	0	0	0	0	0	0	0	0	0	0
GROUP 3										
Number observed	10	10	10	10	10	10	10	10	10	10
ABSENT	10	10	10	10	10	10	10	10	10	10
PRESENT	0	0	0	0	0	0	0	0	0	0
GROUP 4										
Number observed	10	10	10	10	10	10	10	10	10	10
ABSENT	10	10	10	10	10	10	10	10	10	10
PRESENT	0	0	0	0	0	0	0	0	0	0
GROUP 5										
Number observed	15	13	15	15	15	14	15	15	15	15
ABSENT	15	13	15	15	15	14	15	15	14	15
PRESENT	0	0	0	0	0	0	0	0	1	0

Table 6
Group functional observation battery data
Summary of open field observations
Stereotypy

	Test Article	Control	[			]
	Group	1	2	3	4	5
	Level (ppm)	0	100	500	2500	5000

	Week 5 M	Week 5 F	Week 6 M	Week 6 F	Week 7 M	Week 7 F	Week 8 M	Week 8 F	Week 9 M	Week 9 F
GROUP 1										
Number observed	15	15	15	15	15	15	15	15	15	15
ABSENT	15	15	15	15	15	15	15	15	15	15
PRESENT	0	0	0	0	0	0	0	0	0	0
GROUP 2										
Number observed	10	10	10	10	10	10	10	10	10	10
ABSENT	10	10	10	10	10	10	10	10	10	10
PRESENT	0	0	0	0	0	0	0	0	0	0
GROUP 3										
Number observed	10	10	10	10	10	10	10	10	10	10
ABSENT	10	10	10	10	10	10	10	10	10	10
PRESENT	0	0	0	0	0	0	0	0	0	0
GROUP 4										
Number observed	10	10	10	10	10	10	10	10	10	10
ABSENT	10	10	10	10	10	10	10	10	10	10
PRESENT	0	0	0	0	0	0	0	0	0	0
GROUP 5										
Number observed	15	15	15	15	15	15	15	15	15	15
ABSENT	15	15	15	15	15	15	15	15	15	15
PRESENT	0	0	0	0	0	0	0	0	0	0

Table 6
Group functional observation battery data
Summary of open field observations
Stereotypy

	Test Article	Control	[			]		
	Group	1	2	3	4	5		
	Level (ppm)	0	100	500	2500	5000		
	Week 10 M	Week 10 F	Week 11 M	Week 11 F	Week 12 M	Week 12 F	Week 13 M	Week 13 F
GROUP 1								
Number observed	15	14	14	15	15	15	15	15
ABSENT	15	14	14	15	15	15	15	15
PRESENT	0	0	0	0	0	0	0	0
GROUP 2								
Number observed	10	10	10	10	10	9	10	9
ABSENT	10	10	10	10	10	9	10	9
PRESENT	0	0	0	0	0	0	0	0
GROUP 3								
Number observed	10	10	10	10	10	10	10	10
ABSENT	10	10	10	10	10	10	10	10
PRESENT	0	0	0	0	0	0	0	0
GROUP 4								
Number observed	10	10	10	10	10	10	10	10
ABSENT	10	10	10	10	10	10	10	10
PRESENT	0	0	0	0	0	0	0	0
GROUP 5								
Number observed	15	15	15	15	15	15	15	15
ABSENT	15	15	15	15	15	15	15	15
PRESENT	0	0	0	0	0	0	0	0

Table 6
Group functional observation battery data
Summary of open field observations
Tremor

	Test Article	Control	[			]			
	Group	1	2	3	4	5			
	Level (ppm)	0	100	500	2500	5000			
	Week -1 M	Week -1 F	Week 1 M	Week 1 F	Week 2 M	Week 2 F	Week 3 M	Week 3 F	Week 4 M	Week 4 F
GROUP 1										
Number observed	15	15	15	15	15	15	15	15	15	15
ABSENT	15	15	15	15	15	15	15	15	15	15
PRESENT	0	0	0	0	0	0	0	0	0	0
GROUP 2										
Number observed	10	10	10	10	10	10	10	10	10	10
ABSENT	10	10	10	10	10	10	10	10	10	10
PRESENT	0	0	0	0	0	0	0	0	0	0
GROUP 3										
Number observed	10	10	10	10	10	10	10	10	10	10
ABSENT	10	10	10	10	10	10	10	10	10	10
PRESENT	0	0	0	0	0	0	0	0	0	0
GROUP 4										
Number observed	10	10	10	10	10	10	10	10	10	10
ABSENT	10	10	10	10	10	10	10	10	10	10
PRESENT	0	0	0	0	0	0	0	0	0	0
GROUP 5										
Number observed	15	13	15	15	15	14	15	15	15	15
ABSENT	15	13	15	15	15	14	15	15	15	15
PRESENT	0	0	0	0	0	0	0	0	0	0

Table 6
Group functional observation battery data
Summary of open field observations
Tremor

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

	Week 5 M	Week 5 F	Week 6 M	Week 6 F	Week 7 M	Week 7 F	Week 8 M	Week 8 F	Week 9 M	Week 9 F
GROUP 1										
Number observed	15	15	15	15	15	15	15	15	15	15
ABSENT	15	15	15	15	15	15	15	15	15	15
PRESENT	0	0	0	0	0	0	0	0	0	0
GROUP 2										
Number observed	10	10	10	10	10	10	10	10	10	10
ABSENT	10	10	10	10	10	10	10	10	10	10
PRESENT	0	0	0	0	0	0	0	0	0	0
GROUP 3										
Number observed	10	10	10	10	10	10	10	10	10	10
ABSENT	10	10	10	10	10	10	10	10	10	10
PRESENT	0	0	0	0	0	0	0	0	0	0
GROUP 4										
Number observed	10	10	10	10	10	10	10	10	10	10
ABSENT	10	10	10	10	10	10	10	10	10	10
PRESENT	0	0	0	0	0	0	0	0	0	0
GROUP 5										
Number observed	15	15	15	15	15	15	15	15	15	15
ABSENT	15	15	15	15	15	15	15	15	15	15
PRESENT	0	0	0	0	0	0	0	0	0	0

Table 6
Group functional observation battery data
Summary of open field observations
Tremor

	Test Article	Control	[			]		
	Group	1	2	3	4	5		
	Level (ppm)	0	100	500	2500	5000		
	Week 10 M	Week 10 F	Week 11 M	Week 11 F	Week 12 M	Week 12 F	Week 13 M	Week 13 F
GROUP 1								
Number observed	15	14	14	15	15	15	15	15
ABSENT	15	14	14	15	15	15	15	15
PRESENT	0	0	0	0	0	0	0	0
GROUP 2								
Number observed	10	10	10	10	10	9	10	9
ABSENT	10	10	10	10	10	9	10	9
PRESENT	0	0	0	0	0	0	0	0
GROUP 3								
Number observed	10	10	10	10	10	10	10	10
ABSENT	10	10	10	10	10	10	10	10
PRESENT	0	0	0	0	0	0	0	0
GROUP 4								
Number observed	10	10	10	10	10	10	10	10
ABSENT	10	10	10	10	10	10	10	10
PRESENT	0	0	0	0	0	0	0	0
GROUP 5								
Number observed	15	15	15	15	15	15	15	15
ABSENT	15	15	15	15	15	15	15	15
PRESENT	0	0	0	0	0	0	0	0

Table 6
Group functional observation battery data
Summary of open field observations
Convulsion

	Test Article	Control	[			]			
	Group	1	2	3	4	5			
	Level (ppm)	0	100	500	2500	5000			
	Week -1 M	Week -1 F	Week 1 M	Week 1 F	Week 2 M	Week 2 F	Week 3 M	Week 3 F	Week 4 M	Week 4 F
GROUP 1										
Number observed	15	15	15	15	15	15	15	15	15	15
NONE	15	15	15	15	15	15	15	14	15	15
TONIC	0	0	0	0	0	0	0	0	0	0
CLONIC	0	0	0	0	0	0	0	0	0	0
TONIC/CLONIC	0	0	0	0	0	0	0	0	0	0
OTHER	0	0	0	0	0	0	0	0	0	0
NOT RECORDED	0	0	0	0	0	0	0	1	0	0
GROUP 2										
Number observed	10	10	10	10	10	10	10	10	10	10
NONE	10	10	10	10	10	10	10	10	10	10
TONIC	0	0	0	0	0	0	0	0	0	0
CLONIC	0	0	0	0	0	0	0	0	0	0
TONIC/CLONIC	0	0	0	0	0	0	0	0	0	0
OTHER	0	0	0	0	0	0	0	0	0	0
GROUP 3										
Number observed	10	10	10	10	10	10	10	10	10	10
NONE	10	10	10	10	10	10	10	10	10	10
TONIC	0	0	0	0	0	0	0	0	0	0
CLONIC	0	0	0	0	0	0	0	0	0	0
TONIC/CLONIC	0	0	0	0	0	0	0	0	0	0
OTHER	0	0	0	0	0	0	0	0	0	0
GROUP 4										
Number observed	10	10	10	10	10	10	10	10	10	10
NONE	10	10	10	10	10	10	10	10	10	10
TONIC	0	0	0	0	0	0	0	0	0	0
CLONIC	0	0	0	0	0	0	0	0	0	0
TONIC/CLONIC	0	0	0	0	0	0	0	0	0	0
OTHER	0	0	0	0	0	0	0	0	0	0
GROUP 5										
Number observed	15	13	15	15	15	14	15	15	15	15
NONE	15	13	15	15	15	14	15	15	15	15
TONIC	0	0	0	0	0	0	0	0	0	0
CLONIC	0	0	0	0	0	0	0	0	0	0
TONIC/CLONIC	0	0	0	0	0	0	0	0	0	0
OTHER	0	0	0	0	0	0	0	0	0	0

Table 6
Group functional observation battery data
Summary of open field observations
Convulsion

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

	Week 5 M	Week 5 F	Week 6 M	Week 6 F	Week 7 M	Week 7 F	Week 8 M	Week 8 F	Week 9 M	Week 9 F
GROUP 1										
Number observed	15	15	15	15	15	15	15	15	15	15
NONE	15	15	15	15	15	15	15	15	15	15
TONIC	0	0	0	0	0	0	0	0	0	0
CLONIC	0	0	0	0	0	0	0	0	0	0
TONIC/CLONIC	0	0	0	0	0	0	0	0	0	0
OTHER	0	0	0	0	0	0	0	0	0	0
NOT RECORDED	0	0	0	0	0	0	0	0	0	0
GROUP 2										
Number observed	10	10	10	10	10	10	10	10	10	10
NONE	10	10	10	10	10	10	10	10	10	10
TONIC	0	0	0	0	0	0	0	0	0	0
CLONIC	0	0	0	0	0	0	0	0	0	0
TONIC/CLONIC	0	0	0	0	0	0	0	0	0	0
OTHER	0	0	0	0	0	0	0	0	0	0
GROUP 3										
Number observed	10	10	10	10	10	10	10	10	10	10
NONE	10	10	10	10	10	10	10	10	10	10
TONIC	0	0	0	0	0	0	0	0	0	0
CLONIC	0	0	0	0	0	0	0	0	0	0
TONIC/CLONIC	0	0	0	0	0	0	0	0	0	0
OTHER	0	0	0	0	0	0	0	0	0	0
GROUP 4										
Number observed	10	10	10	10	10	10	10	10	10	10
NONE	10	10	10	10	10	10	10	10	10	10
TONIC	0	0	0	0	0	0	0	0	0	0
CLONIC	0	0	0	0	0	0	0	0	0	0
TONIC/CLONIC	0	0	0	0	0	0	0	0	0	0
OTHER	0	0	0	0	0	0	0	0	0	0
GROUP 5										
Number observed	15	15	15	15	15	15	15	15	15	15
NONE	15	15	15	15	15	15	15	15	15	15
TONIC	0	0	0	0	0	0	0	0	0	0
CLONIC	0	0	0	0	0	0	0	0	0	0
TONIC/CLONIC	0	0	0	0	0	0	0	0	0	0
OTHER	0	0	0	0	0	0	0	0	0	0

Table 6
Group functional observation battery data
Summary of open field observations
Convulsion

	Test Article	Control	[			]		
	Group	1	2	3	4	5		
	Level (ppm)	0	100	500	2500	5000		
	Week 10 M	Week 10 F	Week 11 M	Week 11 F	Week 12 M	Week 12 F	Week 13 M	Week 13 F
GROUP 1								
Number observed	15	14	14	15	15	15	15	15
NONE	15	14	14	15	15	15	15	15
TONIC	0	0	0	0	0	0	0	0
CLONIC	0	0	0	0	0	0	0	0
TONIC/CLONIC	0	0	0	0	0	0	0	0
OTHER	0	0	0	0	0	0	0	0
NOT RECORDED	0	0	0	0	0	0	0	0
GROUP 2								
Number observed	10	10	10	10	10	9	10	9
NONE	10	10	10	10	10	9	10	9
TONIC	0	0	0	0	0	0	0	0
CLONIC	0	0	0	0	0	0	0	0
TONIC/CLONIC	0	0	0	0	0	0	0	0
OTHER	0	0	0	0	0	0	0	0
GROUP 3								
Number observed	10	10	10	10	10	10	10	10
NONE	10	10	10	10	10	10	10	10
TONIC	0	0	0	0	0	0	0	0
CLONIC	0	0	0	0	0	0	0	0
TONIC/CLONIC	0	0	0	0	0	0	0	0
OTHER	0	0	0	0	0	0	0	0
GROUP 4								
Number observed	10	10	10	10	10	10	10	10
NONE	10	10	10	10	10	10	10	10
TONIC	0	0	0	0	0	0	0	0
CLONIC	0	0	0	0	0	0	0	0
TONIC/CLONIC	0	0	0	0	0	0	0	0
OTHER	0	0	0	0	0	0	0	0
GROUP 5								
Number observed	15	15	15	15	15	15	15	15
NONE	15	15	15	15	15	15	15	15
TONIC	0	0	0	0	0	0	0	0
CLONIC	0	0	0	0	0	0	0	0
TONIC/CLONIC	0	0	0	0	0	0	0	0
OTHER	0	0	0	0	0	0	0	0

Table 6
Group functional observation battery data
Summary of open field observations
Number of rears

Test Article Control [ ]
Group 1 2 3 4 5
Level (ppm) 0 100 500 2500 5000

	Week -1 M	Week -1 F	Week 1 M	Week 1 F	Week 2 M	Week 2 F	Week 3 M	Week 3 F	Week 4 M	Week 4 F
GROUP 1										
N	15	15	15	15	15	15	15	15	15	15
Mean	10	22	8	20	12	24	11	24	11	27
SD	4	8	5	7	8	6	6	6	7	9
GROUP 2										
N	10	10	10	10	10	10	10	10	10	10
Mean	12	21	11	18	17	27	12	25	15	25
SD	6	8	3	4	8	6	6	7	8	7
GROUP 3										
N	10	10	10	10	10	10	10	10	10	10
Mean	10	23	11	18	13	24	11	23	13	25
SD	5	10	7	4	7	6	5	5	5	10
GROUP 4										
N	10	10	10	10	10	10	10	10	10	10
Mean	10	18	10	17	15	26	10	24	9	26
SD	4	5	5	5	6	6	5	6	7	6
GROUP 5										
N	15	13	15	15	15	13	15	15	15	15
Mean	8	21	11	18	13	22	13	24	11	25
SD	5	6	6	4	6	10	6	7	8	8
Statistics	A	A	A	A	A	A	A	A	A	A

N = number of non-missing values
A = ANOVA, regression and Dunnett's

Table 6
Group functional observation battery data
Summary of open field observations
Number of rears

Test Article Control [ ]
Group 1 2 3 4 5
Level (ppm) 0 100 500 2500 5000

	Week 5 M	Week 5 F	Week 6 M	Week 6 F	Week 7 M	Week 7 F	Week 8 M	Week 8 F	Week 9 M	Week 9 F
GROUP 1										
N	15	15	15	15	15	15	15	15	15	15
Mean	12	26	13	26	10	31	11	25	12	28
SD	5	7	6	4	7	7	6	5	6	7
GROUP 2										
N	10	10	10	10	10	10	10	10	10	10
Mean	14	28	12	25	13	25	16	23	16	29
SD	10	7	8	6	9	5	9	5	8	8
GROUP 3										
N	10	10	10	10	10	10	10	10	10	10
Mean	13	22	15	26	11	26	17	20	14	22
SD	4	7	6	5	6	6	5	4	4	6
GROUP 4										
N	10	10	10	10	10	10	10	10	10	10
Mean	12	24	14	26	12	29	14	24	13	26
SD	3	8	7	4	6	5	5	5	4	5
GROUP 5										
N	15	15	15	15	15	15	15	15	15	15
Mean	12	26	13	23	13	26	13	22	11	27
SD	6	5	7	7	6	6	4	4	5	9
Statistics	J	A	A	A	A	A	A	A	A	A

N = number of non-missing values
A = ANOVA, regression and Dunnett's
J = Kruskal-Wallis, Terpstra-Jonckheere, Wilcoxon

Table 6
Group functional observation battery data
Summary of open field observations
Number of rears

	Test Article	Control	[			]	
Group	1	2	3	4	5		
Level (ppm)	0	100	500	2500	5000		
	Week 10 M	Week 10 F	Week 11 M	Week 11 F	Week 12 M	Week 12 F	Week 13 M	Week 13 F
GROUP 1								
N	15	14	14	15	15	15	15	15
Mean	15	23	13	24	14	28	13	18
SD	8	7	7	7	8	7	8	6
GROUP 2								
N	10	10	10	10	10	9	10	9
Mean	18	24	14	25	15	24	16	20
SD	9	8	6	6	7	3	7	4
GROUP 3								
N	10	10	10	10	10	10	10	10
Mean	14	23	14	21	16	25	16	21
SD	6	5	5	7	6	6	6	4
GROUP 4								
N	10	10	10	10	10	10	10	10
Mean	16	26	15	24	13	26	15	17
SD	4	5	6	6	5	5	8	3
GROUP 5								
N	15	15	15	15	15	15	15	15
Mean	15	21	12	22	13	25	15	15
SD	5	8	2	8	4	5	4	6
								DR*
Statistics	A	A	J	A	A	A	A	A

N = number of non-missing values
* P<0.05
** P<0.01
*** P<0.001
DR = significant dose response test

A = ANOVA, regression and Dunnett's
J = Kruskal-Wallis, Terpstra-Jonckheere, Wilcoxon

Table 6
Group functional observation battery data
Summary of open field observations
Number of faecal boli

	Test Article	Control	[		]					
Group		1	2	3	4	5				
Level (ppm)		0	100	500	2500	5000				
	Week -1 M	Week -1 F	Week 1 M	Week 1 F	Week 2 M	Week 2 F	Week 3 M	Week 3 F	Week 4 M	Week 4 F
GROUP 1										
N	15	15	15	15	15	15	15	15	15	15
Mean	0	1	0	0	0	0	0	0	0	0
SD	1	2	0	0	0	0	0	0	0	0
GROUP 2										
N	10	10	10	10	10	10	10	10	10	10
Mean	0	0	0	0	0	0	0	0	0	0
SD	0	0	0	0	0	0	0	0	0	0
GROUP 3										
N	10	10	10	10	10	10	10	10	10	10
Mean	1	0	0	0	0	0	0	0	0	0
SD	2	1	1	0	1	0	0	0	0	0
GROUP 4										
N	10	10	10	10	10	9	10	10	10	10
Mean	1	0	0	0	0	0	0	0	0	0
SD	1	1	0	0	0	0	0	0	0	0
GROUP 5										
N	15	13	15	15	15	14	15	15	14	15
Mean	0	0	0	0	0	0	0	0	0	0
SD	1	1	0	0	0	0	0	0	0	0

N = number of non-missing values

Table 6
Group functional observation battery data
Summary of open field observations
Number of faecal boli

Test Article Control [ ]
Group 1 2 3 4 5
Level (ppm) 0 100 500 2500 5000

	Week 5 M	Week 5 F	Week 6 M	Week 6 F	Week 7 M	Week 7 F	Week 8 M	Week 8 F	Week 9 M	Week 9 F
GROUP 1										
N	15	15	15	15	15	15	15	15	15	15
Mean	0	0	0	0	0	0	0	0	0	0
SD	0	0	0	0	0	0	0	0	0	0
GROUP 2										
N	9	10	9	10	9	10	9	10	10	10
Mean	0	0	0	0	0	0	0	0	0	0
SD	0	0	0	0	0	0	0	0	0	0
GROUP 3										
N	10	10	10	10	10	10	10	10	10	10
Mean	0	0	0	0	0	0	0	0	0	0
SD	0	0	0	0	0	0	0	0	0	0
GROUP 4										
N	9	10	10	10	10	10	10	10	10	10
Mean	0	0	0	0	0	0	0	0	0	0
SD	0	0	0	0	0	0	0	0	0	0
GROUP 5										
N	15	15	15	15	15	15	15	15	15	15
Mean	0	0	0	0	0	0	0	0	0	0
SD	0	0	0	0	0	0	0	0	0	0

N = number of non-missing values

Table 6
Group functional observation battery data
Summary of open field observations
Number of faecal boli

Test Article	Control		[					]
Group	1	2	3	4	5			
Level (ppm)	0	100	500	2500	5000			
	Week 10 M	Week 10 F	Week 11 M	Week 11 F	Week 12 M	Week 12 F	Week 13 M	Week 13 F
GROUP 1								
N	15	14	13	15	15	15	15	15
Mean	0	0	0	0	0	0	0	0
SD	0	0	0	0	0	0	0	0
GROUP 2								
N	10	10	10	10	10	9	10	9
Mean	0	0	0	0	0	0	0	0
SD	0	0	0	0	0	0	0	0
GROUP 3								
N	10	10	10	10	10	10	10	10
Mean	0	0	0	0	0	0	0	0
SD	0	0	0	0	0	0	0	0
GROUP 4								
N	10	10	10	10	10	10	10	10
Mean	0	0	0	0	0	0	0	0
SD	0	0	0	0	0	0	0	0
GROUP 5								
N	15	15	15	15	15	15	15	15
Mean	0	0	0	0	0	0	0	0
SD	0	0	0	0	0	0	0	0

N = number of non-missing values

Table 6
Group functional observation battery data
Summary of open field observations
Number of urine pools

	Test Article	Control	[			]			
Group	1	2	3	4	5				
Level (ppm)	0	100	500	2500	5000				

	Week -1 M	Week -1 F	Week 1 M	Week 1 F	Week 2 M	Week 2 F	Week 3 M	Week 3 F	Week 4 M	Week 4 F
GROUP 1										
N	15	15	15	15	15	15	15	15	15	15
Mean	1	3	1	0	0	4	0	2	1	1
SD	2	5	2	1	1	7	1	4	2	2
GROUP 2										
N	10	10	10	10	10	10	10	10	10	10
Mean	1	2	1	0	0	1	1	0	3	0
SD	1	3	2	1	1	1	3	0	5	1
GROUP 3										
N	10	10	10	10	10	10	10	10	10	10
Mean	1	4	1	1	1	3	1	3	2	4
SD	2	6	1	2	1	5	2	7	4	7
GROUP 4										
N	10	10	10	10	10	9	10	10	10	10
Mean	1	2	1	1	1	4	0	2	0	3
SD	2	3	1	2	1	7	1	4	1	6
GROUP 5										
N	15	13	15	15	15	14	15	15	14	15
Mean	1	2	0	1	1	1	1	1	2	1
SD	3	3	1	3	1	2	1	1	2	2

N = number of non-missing values

Table 6
Group functional observation battery data
Summary of open field observations
Number of urine pools

	Test Article	Control	[			]				
	Group	1	2	3	4	5				
	Level (ppm)	0	100	500	2500	5000				
	Week 5 M	Week 5 F	Week 6 M	Week 6 F	Week 7 M	Week 7 F	Week 8 M	Week 8 F	Week 9 M	Week 9 F
GROUP 1										
N	15	15	15	15	15	15	15	15	15	15
Mean	0	1	1	1	2	2	3	2	2	3
SD	1	3	1	2	8	3	6	3	3	4
GROUP 2										
N	9	10	9	10	10	10	10	10	10	10
Mean	1	0	2	1	3	1	4	1	2	1
SD	2	0	3	1	4	2	7	1	3	2
GROUP 3										
N	10	10	10	10	10	10	10	10	10	10
Mean	1	1	2	4	3	4	3	5	3	5
SD	2	1	3	6	3	7	5	8	4	7
GROUP 4										
N	9	10	10	10	10	10	10	10	10	10
Mean	0	2	1	3	1	5	1	4	0	5
SD	0	3	1	5	2	6	1	7	0	7
GROUP 5										
N	15	15	14	15	15	15	15	15	15	15
Mean	2	1	2	1	4	1	4	1	5	2
SD	4	2	4	1	5	2	5	2	9	2

N = number of non-missing values

Table 6
Group functional observation battery data
Summary of open field observations
Number of urine pools

	Test Article Control Group Level (ppm)		[1 0	2 100	3 500	4 2500	5 5000]	
	Week 10 M	Week 10 F	Week 11 M	Week 11 F	Week 12 M	Week 12 F	Week 13 M	Week 13 F
GROUP 1								
N	14	14	13	15	15	15	15	15
Mean	1	2	2	3	2	1	3	2
SD	3	4	4	3	5	2	7	4
GROUP 2								
N	10	10	10	10	10	9	10	9
Mean	1	1	1	1	1	2	2	1
SD	2	1	3	3	2	4	2	1
GROUP 3								
N	10	10	10	10	10	10	10	10
Mean	1	4	1	4	3	2	2	7
SD	3	7	1	7	4	4	3	10
GROUP 4								
N	10	10	10	10	10	10	10	10
Mean	0	4	0	4	1	4	1	7
SD	0	4	1	5	1	6	2	8
GROUP 5								
N	15	15	15	15	15	15	15	15
Mean	3	1	3	1	2	1	4	3
SD	5	2	5	2	4	2	5	4

N = number of non-missing values

Table 6
Group functional observation battery data
Summary of open field observations
Diarrhoea

	Test Article	Control	[			]			
	Group	1	2	3	4	5			
	Level (ppm)	0	100	500	2500	5000			
	Week -1 M	Week -1 F	Week 1 M	Week 1 F	Week 2 M	Week 2 F	Week 3 M	Week 3 F	Week 4 M	Week 4 F
GROUP 1										
Number observed	15	15	15	15	15	15	15	15	15	15
ABSENT	15	15	15	15	15	15	15	15	15	15
PRESENT	0	0	0	0	0	0	0	0	0	0
NOT RECORDED	0	0	0	0	0	0	0	0	0	0
GROUP 2										
Number observed	10	10	10	10	10	10	10	10	10	10
ABSENT	10	10	10	10	10	10	10	10	10	10
PRESENT	0	0	0	0	0	0	0	0	0	0
GROUP 3										
Number observed	10	10	10	10	10	10	10	10	10	10
ABSENT	10	10	10	10	10	10	10	10	10	10
PRESENT	0	0	0	0	0	0	0	0	0	0
GROUP 4										
Number observed	10	10	10	10	10	10	10	10	10	10
ABSENT	10	10	10	10	10	10	10	10	10	10
PRESENT	0	0	0	0	0	0	0	0	0	0
NOT RECORDED	0	0	0	0	0	0	0	0	0	0
GROUP 5										
Number observed	15	13	15	15	15	14	15	15	15	15
ABSENT	15	13	15	15	15	14	15	15	15	15
PRESENT	0	0	0	0	0	0	0	0	0	0
NOT RECORDED	0	0	0	0	0	0	0	0	0	0

Table 6
Group functional observation battery data
Summary of open field observations
Diarrhoea

	Test Article	Control	[			]
	Group	1	2	3	4	5
	Level (ppm)	0	100	500	2500	5000

	Week 5 M	Week 5 F	Week 6 M	Week 6 F	Week 7 M	Week 7 F	Week 8 M	Week 8 F	Week 9 M	Week 9 F
GROUP 1										
Number observed	15	15	15	15	15	15	15	15	15	15
ABSENT	15	15	15	15	15	15	15	15	15	15
PRESENT	0	0	0	0	0	0	0	0	0	0
NOT RECORDED	0	0	0	0	0	0	0	0	0	0
GROUP 2										
Number observed	10	10	10	10	10	10	10	10	10	10
ABSENT	10	10	10	10	10	10	10	10	10	10
PRESENT	0	0	0	0	0	0	0	0	0	0
GROUP 3										
Number observed	10	10	10	10	10	10	10	10	10	10
ABSENT	10	10	10	10	10	10	10	10	10	10
PRESENT	0	0	0	0	0	0	0	0	0	0
GROUP 4										
Number observed	10	10	10	10	10	10	10	10	10	10
ABSENT	10	10	10	10	10	10	10	10	10	10
PRESENT	0	0	0	0	0	0	0	0	0	0
NOT RECORDED	0	0	0	0	0	0	0	0	0	0
GROUP 5										
Number observed	15	15	15	15	15	15	15	15	15	15
ABSENT	15	15	15	15	15	15	15	15	15	15
PRESENT	0	0	0	0	0	0	0	0	0	0
NOT RECORDED	0	0	0	0	0	0	0	0	0	0

Table 6
Group functional observation battery data
Summary of open field observations
Diarrhoea

	Test Article Group Level (ppm)	Control 1 0	2 100	3 500	4 2500	5 5000			
	Week 10 M	Week 10 F	Week 11 M	Week 11 F	Week 12 M	Week 12 F	Week 13 M	Week 13 F
GROUP 1								
Number observed	15	14	14	15	15	15	15	15
ABSENT	15	14	13	15	15	15	15	15
PRESENT	0	0	0	0	0	0	0	0
NOT RECORDED	0	0	1	0	0	0	0	0
GROUP 2								
Number observed	10	10	10	10	10	9	10	9
ABSENT	10	10	10	10	10	9	10	9
PRESENT	0	0	0	0	0	0	0	0
GROUP 3								
Number observed	10	10	10	10	10	10	10	10
ABSENT	10	10	10	10	10	10	10	10
PRESENT	0	0	0	0	0	0	0	0
GROUP 4								
Number observed	10	10	10	10	10	10	10	10
ABSENT	10	10	9	10	10	10	10	10
PRESENT	0	0	0	0	0	0	0	0
NOT RECORDED	0	0	1	0	0	0	0	0
GROUP 5								
Number observed	15	15	15	15	15	15	15	15
ABSENT	15	15	14	15	15	15	15	15
PRESENT	0	0	0	0	0	0	0	0
NOT RECORDED	0	0	1	0	0	0	0	0

Table 6
Group functional observation battery data
Summary of open field observations
Polyuria

	Test Article	Control	[			]
Group		1	2	3	4	5
Level (ppm)		0	100	500	2500	5000

	Week -1 M	Week -1 F	Week 1 M	Week 1 F	Week 2 M	Week 2 F	Week 3 M	Week 3 F	Week 4 M	Week 4 F
GROUP 1										
Number observed	15	15	15	15	15	15	15	15	15	15
ABSENT	15	15	15	15	15	15	15	15	15	15
PRESENT	0	0	0	0	0	0	0	0	0	0
NOT RECORDED	0	0	0	0	0	0	0	0	0	0
GROUP 2										
Number observed	10	10	10	10	10	10	10	10	10	10
ABSENT	10	10	10	10	10	10	10	10	10	10
PRESENT	0	0	0	0	0	0	0	0	0	0
GROUP 3										
Number observed	10	10	10	10	10	10	10	10	10	10
ABSENT	10	10	10	10	10	10	10	10	10	10
PRESENT	0	0	0	0	0	0	0	0	0	0
GROUP 4										
Number observed	10	10	10	10	10	10	10	10	10	10
ABSENT	10	10	10	10	10	10	10	10	10	10
PRESENT	0	0	0	0	0	0	0	0	0	0
NOT RECORDED	0	0	0	0	0	0	0	0	0	0
GROUP 5										
Number observed	15	13	15	15	15	14	15	15	15	15
ABSENT	15	13	15	15	15	14	15	15	15	15
PRESENT	0	0	0	0	0	0	0	0	0	0
NOT RECORDED	0	0	0	0	0	0	0	0	0	0

Table 6
Group functional observation battery data
Summary of open field observations
Polyuria

	Test Article	Control	[			]
	Group	1	2	3	4	5
	Level (ppm)	0	100	500	2500	5000

	Week 5 M	Week 5 F	Week 6 M	Week 6 F	Week 7 M	Week 7 F	Week 8 M	Week 8 F	Week 9 M	Week 9 F
GROUP 1										
Number observed	15	15	15	15	15	15	15	15	15	15
ABSENT	15	15	15	15	15	15	15	15	15	15
PRESENT	0	0	0	0	0	0	0	0	0	0
NOT RECORDED	0	0	0	0	0	0	0	0	0	0
GROUP 2										
Number observed	10	10	10	10	10	10	10	10	10	10
ABSENT	10	10	10	10	10	10	10	10	10	10
PRESENT	0	0	0	0	0	0	0	0	0	0
GROUP 3										
Number observed	10	10	10	10	10	10	10	10	10	10
ABSENT	10	10	10	10	10	10	10	10	10	10
PRESENT	0	0	0	0	0	0	0	0	0	0
GROUP 4										
Number observed	10	10	10	10	10	10	10	10	10	10
ABSENT	10	10	10	10	10	10	10	10	10	10
PRESENT	0	0	0	0	0	0	0	0	0	0
NOT RECORDED	0	0	0	0	0	0	0	0	0	0
GROUP 5										
Number observed	15	15	15	15	15	15	15	15	15	15
ABSENT	15	15	15	15	15	15	15	15	15	15
PRESENT	0	0	0	0	0	0	0	0	0	0
NOT RECORDED	0	0	0	0	0	0	0	0	0	0

Table 6
Group functional observation battery data
Summary of open field observations
Polyuria

	Test Article Group	Control 1	2	[3	4	5]		
	Level (ppm)	0	100	500	2500	5000		
	Week 10 M	Week 10 F	Week 11 M	Week 11 F	Week 12 M	Week 12 F	Week 13 M	Week 13 F
GROUP 1								
Number observed	15	14	14	15	15	15	15	15
ABSENT	15	14	13	15	15	15	15	15
PRESENT	0	0	0	0	0	0	0	0
NOT RECORDED	0	0	1	0	0	0	0	0
GROUP 2								
Number observed	10	10	10	10	10	9	10	9
ABSENT	10	10	10	10	10	9	10	9
PRESENT	0	0	0	0	0	0	0	0
GROUP 3								
Number observed	10	10	10	10	10	10	10	10
ABSENT	10	10	10	10	10	10	10	10
PRESENT	0	0	0	0	0	0	0	0
GROUP 4								
Number observed	10	10	10	10	10	10	10	10
ABSENT	10	10	9	10	10	10	10	10
PRESENT	0	0	0	0	0	0	0	0
NOT RECORDED	0	0	1	0	0	0	0	0
GROUP 5								
Number observed	15	15	15	15	15	15	15	15
ABSENT	15	15	14	15	15	15	15	15
PRESENT	0	0	0	0	0	0	0	0
NOT RECORDED	0	0	1	0	0	0	0	0

Table 6
Group functional observation battery data
Summary of open field tests
Approach response

Test Article Control [ ]
Group 1 2 3 4 5
Level (ppm) 0 100 500 2500 5000

	Week -1 M	Week -1 F	Week 1 M	Week 1 F	Week 2 M	Week 2 F	Week 3 M	Week 3 F	Week 4 M	Week 4 F
GROUP 1										
Number observed	15	15	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
NORMAL	15	15								
NO RESPONSE	0	0								
FREEZES	0	0								
RAPID	0	0								
AGGRESSIVE	0	0								
GROUP 2										
Number observed	10	10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
NORMAL	10	10								
NO RESPONSE	0	0								
FREEZES	0	0								
RAPID	0	0								
AGGRESSIVE	0	0								
GROUP 3										
Number observed	10	10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
NORMAL	10	9								
NO RESPONSE	0	0								
FREEZES	0	0								
RAPID	0	0								
AGGRESSIVE	0	0								
NOT RECORDED	0	1								
GROUP 4										
Number observed	10	10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
NORMAL	10	10								
NO RESPONSE	0	0								
FREEZES	0	0								
RAPID	0	0								
AGGRESSIVE	0	0								
GROUP 5										
Number observed	15	13	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
NORMAL	15	13								
NO RESPONSE	0	0								
FREEZES	0	0								
RAPID	0	0								
AGGRESSIVE	0	0								

Table 6
Group functional observation battery data
Summary of open field tests
Approach response

	Test Article	Control	[			]			
	Group	1	2	3	4	5			
	Level (ppm)	0	100	500	2500	5000			
	Week 5 M	Week 5 F	Week 6 M	Week 6 F	Week 7 M	Week 7 F	Week 8 M	Week 8 F	Week 9 M	Week 9 F
GROUP 1										
Number observed	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
NORMAL										
NO RESPONSE										
FREEZES										
RAPID										
AGGRESSIVE										
GROUP 2										
Number observed	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
NORMAL										
NO RESPONSE										
FREEZES										
RAPID										
AGGRESSIVE										
GROUP 3										
Number observed	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
NORMAL										
NO RESPONSE										
FREEZES										
RAPID										
AGGRESSIVE										
NOT RECORDED										
GROUP 4										
Number observed	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
NORMAL										
NO RESPONSE										
FREEZES										
RAPID										
AGGRESSIVE										
GROUP 5										
Number observed	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
NORMAL										
NO RESPONSE										
FREEZES										
RAPID										
AGGRESSIVE										

Table 6
Group functional observation battery data
Summary of open field tests
Approach response

	Test Article	Control	[			]		
	Group	1	2	3	4	5		
	Level (ppm)	0	100	500	2500	5000		
	Week 10 M	Week 10 F	Week 11 M	Week 11 F	Week 12 M	Week 12 F	Week 13 M	Week 13 F
GROUP 1								
Number observed	N/A	N/A	N/A	N/A	N/A	N/A	15	15
NORMAL							15	15
NO RESPONSE							0	0
FREEZES							0	0
RAPID							0	0
AGGRESSIVE							0	0
GROUP 2								
Number observed	N/A	N/A	N/A	N/A	N/A	N/A	10	9
NORMAL							10	9
NO RESPONSE							0	0
FREEZES							0	0
RAPID							0	0
AGGRESSIVE							0	0
GROUP 3								
Number observed	N/A	N/A	N/A	N/A	N/A	N/A	10	10
NORMAL							10	10
NO RESPONSE							0	0
FREEZES							0	0
RAPID							0	0
AGGRESSIVE							0	0
NOT RECORDED							0	0
GROUP 4								
Number observed	N/A	N/A	N/A	N/A	N/A	N/A	10	10
NORMAL							10	9
NO RESPONSE							0	0
FREEZES							0	0
RAPID							0	1
AGGRESSIVE							0	0
GROUP 5								
Number observed	N/A	N/A	N/A	N/A	N/A	N/A	15	15
NORMAL							15	15
NO RESPONSE							0	0
FREEZES							0	0
RAPID							0	0
AGGRESSIVE							0	0

Table 6
Group functional observation battery data
Summary of open field tests
Touch response

Test Article Control [ ]
Group 1 2 3 4 5
Level (ppm) 0 100 500 2500 5000

	Week -1 M	Week -1 F	Week 1 M	Week 1 F	Week 2 M	Week 2 F	Week 3 M	Week 3 F	Week 4 M	Week 4 F
GROUP 1										
Number observed	15	15	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
NORMAL	15	15								
NO RESPONSE	0	0								
FREEZES	0	0								
AGGRESSIVE	0	0								
GROUP 2										
Number observed	10	10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
NORMAL	10	10								
NO RESPONSE	0	0								
FREEZES	0	0								
AGGRESSIVE	0	0								
GROUP 3										
Number observed	10	10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
NORMAL	10	9								
NO RESPONSE	0	0								
FREEZES	0	0								
AGGRESSIVE	0	0								
NOT RECORDED	0	1								
GROUP 4										
Number observed	10	10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
NORMAL	10	10								
NO RESPONSE	0	0								
FREEZES	0	0								
AGGRESSIVE	0	0								
GROUP 5										
Number observed	15	13	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
NORMAL	15	13								
NO RESPONSE	0	0								
FREEZES	0	0								
AGGRESSIVE	0	0								

Table 6
Group functional observation battery data
Summary of open field tests
Touch response

Test Article Control [ ]
Group 1 2 3 4 5
Level (ppm) 0 100 500 2500 5000

	Week 5 M	Week 5 F	Week 6 M	Week 6 F	Week 7 M	Week 7 F	Week 8 M	Week 8 F	Week 9 M	Week 9 F
GROUP 1										
Number observed	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
NORMAL										
NO RESPONSE										
FREEZES										
AGGRESSIVE										
GROUP 2										
Number observed	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
NORMAL										
NO RESPONSE										
FREEZES										
AGGRESSIVE										
GROUP 3										
Number observed	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
NORMAL										
NO RESPONSE										
FREEZES										
AGGRESSIVE										
NOT RECORDED										
GROUP 4										
Number observed	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
NORMAL										
NO RESPONSE										
FREEZES										
AGGRESSIVE										
GROUP 5										
Number observed	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
NORMAL										
NO RESPONSE										
FREEZES										
AGGRESSIVE										

Table 6
Group functional observation battery data
Summary of open field tests
Touch response

	Test Article	Control	[			]		
	Group	1	2	3	4	5		
	Level (ppm)	0	100	500	2500	5000		
	Week 10 M	Week 10 F	Week 11 M	Week 11 F	Week 12 M	Week 12 F	Week 13 M	Week 13 F
GROUP 1								
Number observed	N/A	N/A	N/A	N/A	N/A	N/A	15	15
NORMAL							15	15
NO RESPONSE							0	0
FREEZES							0	0
AGGRESSIVE							0	0
GROUP 2								
Number observed	N/A	N/A	N/A	N/A	N/A	N/A	10	9
NORMAL							10	9
NO RESPONSE							0	0
FREEZES							0	0
AGGRESSIVE							0	0
GROUP 3								
Number observed	N/A	N/A	N/A	N/A	N/A	N/A	10	10
NORMAL							10	10
NO RESPONSE							0	0
FREEZES							0	0
AGGRESSIVE							0	0
NOT RECORDED							0	0
GROUP 4								
Number observed	N/A	N/A	N/A	N/A	N/A	N/A	10	10
NORMAL							10	10
NO RESPONSE							0	0
FREEZES							0	0
AGGRESSIVE							0	0
GROUP 5								
Number observed	N/A	N/A	N/A	N/A	N/A	N/A	15	15
NORMAL							15	15
NO RESPONSE							0	0
FREEZES							0	0
AGGRESSIVE							0	0

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Table 6
Group functional observation battery data
Summary of open field tests
Tail pinch

	Test Article	Control	[			]			
	Group	1	2	3	4	5			
	Level (ppm)	0	100	500	2500	5000			
	Week -1 M	Week -1 F	Week 1 M	Week 1 F	Week 2 M	Week 2 F	Week 3 M	Week 3 F	Week 4 M	Week 4 F
GROUP 1										
Number observed	15	15	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
NORMAL	15	15								
NO REACTION	0	0								
FREEZES	0	0								
AGGRESSIVE	0	0								
GROUP 2										
Number observed	10	10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
NORMAL	10	10								
NO REACTION	0	0								
FREEZES	0	0								
AGGRESSIVE	0	0								
GROUP 3										
Number observed	10	10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
NORMAL	10	9								
NO REACTION	0	0								
FREEZES	0	0								
AGGRESSIVE	0	0								
NOT RECORDED	0	1								
GROUP 4										
Number observed	10	10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
NORMAL	10	10								
NO REACTION	0	0								
FREEZES	0	0								
AGGRESSIVE	0	0								
GROUP 5										
Number observed	15	13	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
NORMAL	15	13								
NO REACTION	0	0								
FREEZES	0	0								
AGGRESSIVE	0	0								

Table 6
Group functional observation battery data
Summary of open field tests
Tail pinch

	Test Article	Control	[			]			
	Group	1	2	3	4	5			
	Level (ppm)	0	100	500	2500	5000			
	Week 5 M	Week 5 F	Week 6 M	Week 6 F	Week 7 M	Week 7 F	Week 8 M	Week 8 F	Week 9 M	Week 9 F
GROUP 1										
Number observed	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
NORMAL										
NO REACTION										
FREEZES										
AGGRESSIVE										
GROUP 2										
Number observed	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
NORMAL										
NO REACTION										
FREEZES										
AGGRESSIVE										
GROUP 3										
Number observed	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
NORMAL										
NO REACTION										
FREEZES										
AGGRESSIVE										
NOT RECORDED										
GROUP 4										
Number observed	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
NORMAL										
NO REACTION										
FREEZES										
AGGRESSIVE										
GROUP 5										
Number observed	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
NORMAL										
NO REACTION										
FREEZES										
AGGRESSIVE										

Table 6
Group functional observation battery data
Summary of open field tests
Tail pinch

Test Article	Control	[				]	
Group	1	2	3	4	5		
Level (ppm)	0	100	500	2500	5000		
	Week 10 M	Week 10 F	Week 11 M	Week 11 F	Week 12 M	Week 12 F	Week 13 M	Week 13 F
GROUP 1								
Number observed	N/A	N/A	N/A	N/A	N/A	N/A	15	15
NORMAL							14	15
NO REACTION							1	0
FREEZES							0	0
AGGRESSIVE							0	0
GROUP 2								
Number observed	N/A	N/A	N/A	N/A	N/A	N/A	10	9
NORMAL							10	9
NO REACTION							0	0
FREEZES							0	0
AGGRESSIVE							0	0
GROUP 3								
Number observed	N/A	N/A	N/A	N/A	N/A	N/A	10	10
NORMAL							10	10
NO REACTION							0	0
FREEZES							0	0
AGGRESSIVE							0	0
NOT RECORDED							0	0
GROUP 4								
Number observed	N/A	N/A	N/A	N/A	N/A	N/A	10	10
NORMAL							10	10
NO REACTION							0	0
FREEZES							0	0
AGGRESSIVE							0	0
GROUP 5								
Number observed	N/A	N/A	N/A	N/A	N/A	N/A	15	15
NORMAL							15	15
NO REACTION							0	0
FREEZES							0	0
AGGRESSIVE							0	0

Table 6
Group functional observation battery data
Summary of open field tests
Air righting ability

	Test Article	Control	[			]				
	Group	1	2	3	4	5				
	Level (ppm)	0	100	500	2500	5000				
	Week -1 M	Week -1 F	Week 1 M	Week 1 F	Week 2 M	Week 2 F	Week 3 M	Week 3 F	Week 4 M	Week 4 F
GROUP 1										
Number observed	15	15	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
NORMAL	15	15								
SLIGHTLY UNCOORDINATED	0	0								
LANDS ON SIDE	0	0								
LANDS ON BACK	0	0								
GROUP 2										
Number observed	10	10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
NORMAL	10	10								
SLIGHTLY UNCOORDINATED	0	0								
LANDS ON SIDE	0	0								
LANDS ON BACK	0	0								
GROUP 3										
Number observed	10	10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
NORMAL	10	9								
SLIGHTLY UNCOORDINATED	0	0								
LANDS ON SIDE	0	0								
LANDS ON BACK	0	0								
NOT RECORDED	0	1								
GROUP 4										
Number observed	10	10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
NORMAL	10	10								
SLIGHTLY UNCOORDINATED	0	0								
LANDS ON SIDE	0	0								
LANDS ON BACK	0	0								
GROUP 5										
Number observed	15	13	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
NORMAL	15	13								
SLIGHTLY UNCOORDINATED	0	0								
LANDS ON SIDE	0	0								
LANDS ON BACK	0	0								

Table 6
Group functional observation battery data
Summary of open field tests
Air righting ability

Test Article	Control	[				]			
Group	1	2	3	4	5				
Level (ppm)	0	100	500	2500	5000				
	Week 5 M	Week 5 F	Week 6 M	Week 6 F	Week 7 M	Week 7 F	Week 8 M	Week 8 F	Week 9 M	Week 9 F
GROUP 1										
Number observed	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
NORMAL										
SLIGHTLY UNCOORDINATED										
LANDS ON SIDE										
LANDS ON BACK										
GROUP 2										
Number observed	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
NORMAL										
SLIGHTLY UNCOORDINATED										
LANDS ON SIDE										
LANDS ON BACK										
GROUP 3										
Number observed	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
NORMAL										
SLIGHTLY UNCOORDINATED										
LANDS ON SIDE										
LANDS ON BACK										
NOT RECORDED										
GROUP 4										
Number observed	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
NORMAL										
SLIGHTLY UNCOORDINATED										
LANDS ON SIDE										
LANDS ON BACK										
GROUP 5										
Number observed	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
NORMAL										
SLIGHTLY UNCOORDINATED										
LANDS ON SIDE										
LANDS ON BACK										

Table 6
Group functional observation battery data
Summary of open field tests
Air righting ability

Test Article	Control		[		]			
Group	1	2	3	4	5			
Level (ppm)	0	100	500	2500	5000			
	Week 10 M	Week 10 F	Week 11 M	Week 11 F	Week 12 M	Week 12 F	Week 13 M	Week 13 F
GROUP 1								
Number observed	N/A	N/A	N/A	N/A	N/A	N/A	15	15
NORMAL							15	15
SLIGHTLY UNCOORDINATED							0	0
LANDS ON SIDE							0	0
LANDS ON BACK							0	0
GROUP 2								
Number observed	N/A	N/A	N/A	N/A	N/A	N/A	10	9
NORMAL							10	9
SLIGHTLY UNCOORDINATED							0	0
LANDS ON SIDE							0	0
LANDS ON BACK							0	0
GROUP 3								
Number observed	N/A	N/A	N/A	N/A	N/A	N/A	10	10
NORMAL							10	10
SLIGHTLY UNCOORDINATED							0	0
LANDS ON SIDE							0	0
LANDS ON BACK							0	0
NOT RECORDED							0	0
GROUP 4								
Number observed	N/A	N/A	N/A	N/A	N/A	N/A	10	10
NORMAL							10	10
SLIGHTLY UNCOORDINATED							0	0
LANDS ON SIDE							0	0
LANDS ON BACK							0	0
GROUP 5								
Number observed	N/A	N/A	N/A	N/A	N/A	N/A	15	15
NORMAL							15	15
SLIGHTLY UNCOORDINATED							0	0
LANDS ON SIDE							0	0
LANDS ON BACK							0	0

Table 6
Group functional observation battery data
Summary of open field tests
Pupillary response

	Test Article	Control	[			]			
	Group	1	2	3	4	5			
	Level (ppm)	0	100	500	2500	5000			
	Week -1 M	Week -1 F	Week 1 M	Week 1 F	Week 2 M	Week 2 F	Week 3 M	Week 3 F	Week 4 M	Week 4 F
GROUP 1										
Number observed	15	15	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
NORMAL	15	15								
ABNORMAL	0	0								
GROUP 2										
Number observed	10	10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
NORMAL	10	10								
ABNORMAL	0	0								
GROUP 3										
Number observed	10	10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
NORMAL	10	9								
ABNORMAL	0	0								
NOT RECORDED	0	1								
GROUP 4										
Number observed	10	10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
NORMAL	10	10								
ABNORMAL	0	0								
GROUP 5										
Number observed	15	13	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
NORMAL	15	13								
ABNORMAL	0	0								

Table 6
Group functional observation battery data
Summary of open field tests
Pupillary response

Test Article Control [ ]
Group 1 2 3 4 5
Level (ppm) 0 100 500 2500 5000

	Week 5 M	Week 5 F	Week 6 M	Week 6 F	Week 7 M	Week 7 F	Week 8 M	Week 8 F	Week 9 M	Week 9 F
GROUP 1										
Number observed	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
NORMAL										
ABNORMAL										
GROUP 2										
Number observed	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
NORMAL										
ABNORMAL										
GROUP 3										
Number observed	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
NORMAL										
ABNORMAL										
NOT RECORDED										
GROUP 4										
Number observed	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
NORMAL										
ABNORMAL										
GROUP 5										
Number observed	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
NORMAL										
ABNORMAL										

Table 6
Group functional observation battery data
Summary of open field tests
Pupillary response

	Test Article	Control	[			]		
	Group	1	2	3	4	5		
	Level (ppm)	0	100	500	2500	5000		
	Week 10 M	Week 10 F	Week 11 M	Week 11 F	Week 12 M	Week 12 F	Week 13 M	Week 13 F
GROUP 1								
Number observed	N/A	N/A	N/A	N/A	N/A	N/A	15	15
NORMAL							15	15
ABNORMAL							0	0
GROUP 2								
Number observed	N/A	N/A	N/A	N/A	N/A	N/A	10	9
NORMAL							10	9
ABNORMAL							0	0
GROUP 3								
Number observed	N/A	N/A	N/A	N/A	N/A	N/A	10	10
NORMAL							10	10
ABNORMAL							0	0
NOT RECORDED							0	0
GROUP 4								
Number observed	N/A	N/A	N/A	N/A	N/A	N/A	10	10
NORMAL							10	10
ABNORMAL							0	0
GROUP 5								
Number observed	N/A	N/A	N/A	N/A	N/A	N/A	15	15
NORMAL							15	15
ABNORMAL							0	0

Table 6
Group functional observation battery data
Summary of open field tests
Corneal tactile response

	Test Article	Control	[			]			
Group		1	2	3	4	5			
Level (ppm)		0	100	500	2500	5000			
	Week -1 M	Week -1 F	Week 1 M	Week 1 F	Week 2 M	Week 2 F	Week 3 M	Week 3 F	Week 4 M	Week 4 F
GROUP 1										
Number observed	15	15	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
NORMAL	15	15								
NO RESPONSE	0	0								
GROUP 2										
Number observed	10	10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
NORMAL	10	10								
NO RESPONSE	0	0								
GROUP 3										
Number observed	10	10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
NORMAL	10	9								
NO RESPONSE	0	0								
NOT RECORDED	0	1								
GROUP 4										
Number observed	10	10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
NORMAL	10	10								
NO RESPONSE	0	0								
GROUP 5										
Number observed	15	13	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
NORMAL	15	13								
NO RESPONSE	0	0								

Table 6
Group functional observation battery data
Summary of open field tests
Corneal tactile response

	Test Article Group	Control 1	2	[3	4	5]
	Level (ppm)	0	100	500	2500	5000

	Week 5 M	Week 5 F	Week 6 M	Week 6 F	Week 7 M	Week 7 F	Week 8 M	Week 8 F	Week 9 M	Week 9 F
GROUP 1										
Number observed	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
NORMAL										
NO RESPONSE										
GROUP 2										
Number observed	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
NORMAL										
NO RESPONSE										
GROUP 3										
Number observed	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
NORMAL										
NO RESPONSE										
NOT RECORDED										
GROUP 4										
Number observed	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
NORMAL										
NO RESPONSE										
GROUP 5										
Number observed	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
NORMAL										
NO RESPONSE										

Table 6
Group functional observation battery data
Summary of open field tests
Corneal tactile response

	Test Article	Control	[			]		
	Group	1	2	3	4	5		
	Level (ppm)	0	100	500	2500	5000		
	Week 10 M	Week 10 F	Week 11 M	Week 11 F	Week 12 M	Week 12 F	Week 13 M	Week 13 F
GROUP 1								
Number observed	N/A	N/A	N/A	N/A	N/A	N/A	15	15
NORMAL							15	15
NO RESPONSE							0	0
GROUP 2								
Number observed	N/A	N/A	N/A	N/A	N/A	N/A	10	9
NORMAL							10	9
NO RESPONSE							0	0
GROUP 3								
Number observed	N/A	N/A	N/A	N/A	N/A	N/A	10	10
NORMAL							10	10
NO RESPONSE							0	0
NOT RECORDED							0	0
GROUP 4								
Number observed	N/A	N/A	N/A	N/A	N/A	N/A	10	10
NORMAL							10	10
NO RESPONSE							0	0
GROUP 5								
Number observed	N/A	N/A	N/A	N/A	N/A	N/A	15	15
NORMAL							15	15
NO RESPONSE							0	0

Table 6
Group functional observation battery data
Summary of open field tests
Auditory starle response

	Test Article	Control	[			]			
	Group	1	2	3	4	5			
	Level (ppm)	0	100	500	2500	5000			
	Week -1 M	Week -1 F	Week 1 M	Week 1 F	Week 2 M	Week 2 F	Week 3 M	Week 3 F	Week 4 M	Week 4 F
GROUP 1										
Number observed	15	15	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
PRESENT	15	15								
ABSENT	0	0								
GROUP 2										
Number observed	10	10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
PRESENT	10	10								
ABSENT	0	0								
GROUP 3										
Number observed	10	10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
PRESENT	10	9								
ABSENT	0	0								
NOT RECORDED	0	1								
GROUP 4										
Number observed	10	10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
PRESENT	10	10								
ABSENT	0	0								
GROUP 5										
Number observed	15	13	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
PRESENT	15	13								
ABSENT	0	0								

Table 6
Group functional observation battery data
Summary of open field tests
Auditory startle response

	Test Article	Control	[			]				
	Group	1	2	3	4	5				
	Level (ppm)	0	100	500	2500	5000				
	Week 5 M	Week 5 F	Week 6 M	Week 6 F	Week 7 M	Week 7 F	Week 8 M	Week 8 F	Week 9 M	Week 9 F
GROUP 1										
Number observed	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
PRESENT										
ABSENT										
GROUP 2										
Number observed	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
PRESENT										
ABSENT										
GROUP 3										
Number observed	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
PRESENT										
ABSENT										
NOT RECORDED										
GROUP 4										
Number observed	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
PRESENT										
ABSENT										
GROUP 5										
Number observed	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
PRESENT										
ABSENT										

Table 6
Group functional observation battery data
Summary of open field tests
Auditory response

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

	Week 10 M	Week 10 F	Week 11 M	Week 11 F	Week 12 M	Week 12 F	Week 13 M	Week 13 F
GROUP 1								
Number observed	N/A	N/A	N/A	N/A	N/A	N/A	15	15
PRESENT							15	15
ABSENT							0	0
GROUP 2								
Number observed	N/A	N/A	N/A	N/A	N/A	N/A	10	9
PRESENT							10	9
ABSENT							0	0
GROUP 3								
Number observed	N/A	N/A	N/A	N/A	N/A	N/A	10	10
PRESENT							10	10
ABSENT							0	0
NOT RECORDED							0	0
GROUP 4								
Number observed	N/A	N/A	N/A	N/A	N/A	N/A	10	10
PRESENT							10	10
ABSENT							0	0
GROUP 5								
Number observed	N/A	N/A	N/A	N/A	N/A	N/A	15	15
PRESENT							15	15
ABSENT							0	0

Table 6
Group functional observation battery data
Summary of open field tests
Hindlimb footsplay (mm)

Test Article Control [ ]
Group 1 2 3 4 5
Level (ppm) 0 100 500 2500 5000

	Week -1 M	Week -1 F	Week 1 M	Week 1 F	Week 2 M	Week 2 F	Week 3 M	Week 3 F	Week 4 M	Week 4 F
GROUP 1										
N	15	15	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mean	65	62								
SD	11	10								
GROUP 2										
N	10	10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mean	63	63								
SD	11	13								
GROUP 3										
N	10	10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mean	65	63								
SD	3	8								
GROUP 4										
N	10	10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mean	64	59								
SD	11	7								
GROUP 5										
N	15	13	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mean	57	61								
SD	7	5								

Statistics	AT	A

N = number of non-missing values
A = ANOVA, regression and Dunnett's
T = log-transformed data

Table 6
Group functional observation battery data
Summary of open field tests
Hindlimb footsplay (mm)

	Test Article	Control	[			]
Group		1	2	3	4	5
Level (ppm)		0	100	500	2500	5000

	Week 5 M	Week 5 F	Week 6 M	Week 6 F	Week 7 M	Week 7 F	Week 8 M	Week 8 F	Week 9 M	Week 9 F
GROUP 1										
N	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mean										
SD										
GROUP 2										
N	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mean										
SD										
GROUP 3										
N	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mean										
SD										
GROUP 4										
N	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mean										
SD										
GROUP 5										
N	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mean										
SD										

Table 6
Group functional observation battery data
Summary of open field tests
Hindlimb footsplay (mm)

	Test Article / Group / Level (ppm)	Control 1 0	2 100	[3 500	4 2500	5 5000]			
	Week 10 M	Week 10 F	Week 11 M	Week 11 F	Week 12 M	Week 12 F	Week 13 M	Week 13 F
GROUP 1								
N	N/A	N/A	N/A	N/A	N/A	N/A	15	15
Mean							108	62
SD							16	12
GROUP 2								
N	N/A	N/A	N/A	N/A	N/A	N/A	10	9
Mean							89*	60
SD							16	11
GROUP 3								
N	N/A	N/A	N/A	N/A	N/A	N/A	10	10
Mean							86**	64
SD							10	10
GROUP 4								
N	N/A	N/A	N/A	N/A	N/A	N/A	10	10
Mean							102	60
SD							20	14
GROUP 5								
N	N/A	N/A	N/A	N/A	N/A	N/A	15	15
Mean							88**	63
SD							15	11
Statistics							A	A

N = number of non-missing values
* P<0.05
** P<0.01
*** P<0.001

A = ANOVA, regression and Dunnett's

Table 6
Group functional observation battery data
Summary of open field tests
Forelimb grip strength (kg)

	Test Article	Control	[			]			
Group	1	2	3	4	5				
Level (ppm)	0	100	500	2500	5000				

	Week -1 M	Week -1 F	Week 1 M	Week 1 F	Week 2 M	Week 2 F	Week 3 M	Week 3 F	Week 4 M	Week 4 F
GROUP 1										
N	15	15	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mean	0.434	0.525								
SD	0.068	0.071								
GROUP 2										
N	10	10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mean	0.432	0.527								
SD	0.059	0.066								
GROUP 3										
N	10	10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mean	0.416	0.513								
SD	0.046	0.075								
GROUP 4										
N	10	10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mean	0.435	0.548								
SD	0.030	0.056								
GROUP 5										
N	15	13	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mean	0.423	0.521								
SD	0.055	0.040								
Statistics	A	A								

N = number of non-missing values
A = ANOVA, regression and Dunnett's

Table 6
Group functional observation battery data
Summary of open field tests
Forelimb grip strength (kg)

Test Article Control [ ]
Group 1 2 3 4 5
Level (ppm) 0 100 500 2500 5000

	Week 5 M	Week 5 F	Week 6 M	Week 6 F	Week 7 M	Week 7 F	Week 8 M	Week 8 F	Week 9 M	Week 9 F
GROUP 1										
N	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mean										
SD										
GROUP 2										
N	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mean										
SD										
GROUP 3										
N	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mean										
SD										
GROUP 4										
N	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mean										
SD										
GROUP 5										
N	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mean										
SD										

Table 6
Group functional observation battery data
Summary of open field tests
Forelimb grip strength (kg)

	Test Article Group Level (ppm)	Control 1 0	2 100	[3 500	4 2500	5 5000]			
	Week 10 M	Week 10 F	Week 11 M	Week 11 F	Week 12 M	Week 12 F	Week 13 M	Week 13 F
GROUP 1								
N	N/A	N/A	N/A	N/A	N/A	N/A	15	15
Mean							1.143	0.774
SD							0.173	0.168
GROUP 2								
N	N/A	N/A	N/A	N/A	N/A	N/A	10	9
Mean							1.093	0.826
SD							0.158	0.199
GROUP 3								
N	N/A	N/A	N/A	N/A	N/A	N/A	10	10
Mean							1.034	0.845
SD							0.126	0.178
GROUP 4								
N	N/A	N/A	N/A	N/A	N/A	N/A	10	10
Mean							1.135	0.818
SD							0.218	0.100
GROUP 5								
N	N/A	N/A	N/A	N/A	N/A	N/A	15	15
Mean							1.020	0.832
SD							0.159	0.204
Statistics							A	A

N = number of non-missing values
A = ANOVA, regression and Dunnett's

Table 6
Group functional observation battery data
Summary of open field tests
Hindlimb grip strength (kg)

	Test Article	Control	[					]	
Group	1	2	3	4	5				
Level (ppm)	0	100	500	2500	5000				

	Week -1 M	Week -1 F	Week 1 M	Week 1 F	Week 2 M	Week 2 F	Week 3 M	Week 3 F	Week 4 M	Week 4 F
GROUP 1										
N	15	15	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mean	0.159	0.288								
SD	0.049	0.050								
GROUP 2										
N	10	10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mean	0.131	0.280								
SD	0.009	0.046								
GROUP 3										
N	10	10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mean	0.185	0.266								
SD	0.111	0.057								
GROUP 4										
N	10	10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mean	0.147	0.269								
SD	0.031	0.050								
GROUP 5										
N	15	13	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mean	0.141	0.291								
SD	0.029	0.061								
Statistics	A	A								

N = number of non-missing values
A = ANOVA, regression and Dunnett's

Table 6
Group functional observation battery data
Summary of open field tests
Hindlimb grip strength (kg)

Test Article Control [ ]
Group 1 2 3 4 5
Level (ppm) 0 100 500 2500 5000

	Week 5 M	Week 5 F	Week 6 M	Week 6 F	Week 7 M	Week 7 F	Week 8 M	Week 8 F	Week 9 M	Week 9 F
GROUP 1										
N	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mean										
SD										
GROUP 2										
N	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mean										
SD										
GROUP 3										
N	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mean										
SD										
GROUP 4										
N	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mean										
SD										
GROUP 5										
N	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mean										
SD										

Table 6
Group functional observation battery data
Summary of open field tests
Hindlimb grip strength (kg)

	Test Article	Control	[			]	
Group	1	2	3	4	5		
Level (ppm)	0	100	500	2500	5000		
	Week 10 M	Week 10 F	Week 11 M	Week 11 F	Week 12 M	Week 12 F	Week 13 M	Week 13 F
GROUP 1								
N	N/A	N/A	N/A	N/A	N/A	N/A	15	15
Mean							0.761	0.326
SD							0.112	0.075
GROUP 2								
N	N/A	N/A	N/A	N/A	N/A	N/A	10	9
Mean							0.704	0.290
SD							0.144	0.076
GROUP 3								
N	N/A	N/A	N/A	N/A	N/A	N/A	10	10
Mean							0.815	0.331
SD							0.146	0.083
GROUP 4								
N	N/A	N/A	N/A	N/A	N/A	N/A	10	10
Mean							0.739	0.318
SD							0.196	0.080
GROUP 5								
N	N/A	N/A	N/A	N/A	N/A	N/A	15	15
Mean							0.681	0.329
SD							0.152	0.063
Statistics							A	A

N = number of non-missing values
A = ANOVA, regression and Dunnett's

Table 7
Group mean locomotor activity data

Key to abbreviations

AMB =	Ambulation - number of occasions 2 light beams or more broken within one second
TOT =	Total movement - Total number of occasions a light beam was broken in the interval
m =	Minutes

Table 7
Group mean locomotor activity data
Occasion: Week -1

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group/ Sex		AMB01 0-2m	AMB02 2-4m	AMB03 4-6m	AMB04 6-8m	AMB05 8-10m	AMB06 10-12m	AMB07 12-14m	AMB08 14-16m
1M	Mean	15	13	11	8	9	7	5	10
	SD	7.8	4.9	6.1	6.8	6.4	4.9	3.4	7.4
2M	Mean	19	14	14	11	8	8	9	11
	SD	7.9	4.6	6.6	8.3	7.5	5.0	5.1	5.3
3M	Mean	16	11	12	11	11	8	8	7
	SD	7.8	7.5	4.0	3.9	6.5	4.7	4.8	4.7
4M	Mean	15	10	9	9	8	6	6	6
	SD	6.1	6.3	4.6	2.9	3.2	3.7	4.3	3.1
5M	Mean	18	13	10	10	9	7	8	6
	SD	6.2	5.4	4.5	4.2	4.9	3.9	5.2	4.3
									DR*
Statistics		A	A	A	A	A	A	A	A
1F	Mean	14	10	9	6	11	6	6	5
	SD	5.7	4.5	3.6	5.2	5.0	4.6	3.4	2.5
2F	Mean	12	9	7	7	6*	6	3	4
	SD	3.6	3.2	3.5	3.1	3.7	4.5	3.5	3.8
3F	Mean	13	12	10	6	6*	5	8	4
	SD	4.5	8.7	3.2	3.7	2.8	3.5	5.8	3.6
4F	Mean	13	9	7	6	7	7	5	5
	SD	4.0	4.3	3.6	4.7	5.0	2.7	3.6	3.1
5F	Mean	13	11	11	6	7	5	6	6
	SD	5.4	5.9	4.0	3.4	4.6	4.1	4.7	6.3
Statistics		A	A	A	A	A	A	A	A

* P<0.05
** P<0.01
*** P<0.001
DR = significant dose response test

A = ANOVA, dose response and Dunnett's

Table 7
Group mean locomotor activity data
Occasion: Week -1

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group/ Sex		AMB09 16-18m	AMB10 18-20m	AMB11 20-22m	AMB12 22-24m	AMB13 24-26m	AMB14 26-28m	AMB15 28-30m	AMB TOTAL
1M	Mean	8	7	7	5	6	6	5	122
	SD	5.9	6.0	6.9	4.4	4.5	5.4	5.5	52.0
2M	Mean	10	9	7	5	7	6	4	140
	SD	4.2	4.6	6.2	6.1	7.7	6.6	2.6	51.7
3M	Mean	8	9	7	4	6	5	5	127
	SD	5.2	4.1	5.1	3.5	6.4	5.1	6.2	58.0
4M	Mean	3	6	6	4	4	3	5	99
	SD	2.8	5.1	6.4	4.7	3.5	3.8	5.7	29.9
5M	Mean	8	8	5	6	6	4	5	122
	SD	6.3	4.0	3.6	4.0	4.6	4.4	4.7	24.7
Statistics		A	A	A	A	A	A	A	A
1F	Mean	5	5	5	4	4	2	2	93
	SD	5.1	4.7	5.0	2.8	3.4	2.8	2.7	32.5
2F	Mean	6	5	3	4	3	2	2	76
	SD	3.2	3.5	3.0	3.6	2.9	2.7	1.8	24.8
3F	Mean	4	5	2	3	2	3	3	88
	SD	3.6	5.3	2.8	3.5	3.3	4.8	5.2	46.0
4F	Mean	4	4	7	4	4	5	5	90
	SD	2.3	3.3	5.4	2.5	3.2	4.6	3.9	34.4
5F	Mean	6	3	4	5	4	4	4	97
	SD	6.3	4.3	5.5	6.3	5.0	4.0	4.0 DR*	44.9
Statistics		A	A	A	A	A	A	A	A

* P<0.05
** P<0.01
*** P<0.001
DR = significant dose response test

A = ANOVA, dose response and Dunnett's

Table 7
Group mean locomotor activity data
Occasion: Week -1

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group/ Sex		TOT01 0-2m	TOT02 2-4m	TOT03 4-6m	TOT04 6-8m	TOT05 8-10m	TOT06 10-12m	TOT07 12-14m	TOT08 14-16m
1M	Mean	43	42	39	32	36	29	28	34
	SD	22.1	11.1	18.1	16.9	15.9	15.9	18.6	18.2
2M	Mean	54	47	45	35	32	35	38	36
	SD	15.2	9.1	8.6	16.1	13.8	13.1	8.2	13.7
3M	Mean	49	42	40	39	37	33	29	34
	SD	16.1	11.6	9.4	11.6	14.8	14.2	10.5	9.2
4M	Mean	48	41	38	40	37	30	35	29
	SD	11.4	18.0	8.8	5.8	11.0	15.4	16.1	12.7
5M	Mean	51	44	39	38	35	30	30	25
	SD	9.9	11.8	12.0	13.1	10.1	13.1	18.2	15.0 DR*
Statistics		A	A	A	A	A	A	A	A
1F	Mean	43	42	34	27	39	26	30	27
	SD	15.2	10.5	10.9	13.2	12.5	12.4	9.1	8.7
2F	Mean	46	38	35	29	28	26	18	21
	SD	10.3	6.9	10.3	13.5	11.4	14.3	15.7	10.0
3F	Mean	44	39	40	29	32	30	31	23
	SD	12.8	17.6	9.9	10.9	9.2	12.9	15.8	13.0
4F	Mean	46	39	37	30	32	30	25	27
	SD	12.9	9.0	9.4	14.0	12.8	6.8	13.5	15.0
5F	Mean	49	39	43	24	30	27	27	25
	SD	12.8	14.0	10.6 DR*	11.4	16.6	13.0	13.5	17.4
Statistics		A	A	A	A	A	A	A	A

* P<0.05
** P<0.01
*** P<0.001
DR = significant dose response test

A = ANOVA, dose response and Dunnett's

Table 7
Group mean locomotor activity data
Occasion: Week -1

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group/ Sex		TOT09 16-18m	TOT10 18-20m	TOT11 20-22m	TOT12 22-24m	TOT13 24-26m	TOT14 26-28m	TOT15 28-30m	TOT TOTAL
1M	Mean	31	33	25	24	26	26	21	470
	SD	19.1	17.4	18.2	16.8	17.2	13.0	14.9	152.2
2M	Mean	39	35	26	23	27	23	20	514
	SD	12.8	11.6	15.3	18.3	17.6	16.6	11.3	100.9
3M	Mean	31	37	29	25	27	24	23	498
	SD	11.3	14.9	9.4	8.4	14.1	14.2	21.4	128.0
4M	Mean	21	24	34	24	21	13	19	455
	SD	12.4	16.7	22.2	12.4	17.8	14.2	16.9	99.2
5M	Mean	33	31	28	29	29	26	24	492
	SD	18.0	14.6	10.4	15.1	14.7	13.2	18.3	91.7
Statistics		A	A	A	A	A	A	A	A
1F	Mean	25	28	26	20	20	20	16	424
	SD	14.0	15.7	15.7	11.6	13.7	12.5	10.4	100.2
2F	Mean	26	25	17	17	18	16	11	369
	SD	10.1	13.3	12.1	13.1	14.8	12.6	10.0	107.4
3F	Mean	21	23	15	15	11	16	17	385
	SD	13.9	20.4	13.0	15.9	13.4	17.1	16.8	162.4
4F	Mean	22	25	27	19	23	22	23	427
	SD	10.5	13.9	15.0	11.6	14.8	16.8	16.9	130.4
5F	Mean	23	16	20	20	18	17	21	398
	SD	17.6	15.6	17.4	15.5	14.6	15.1	16.0	124.6
Statistics		A	A	A	A	A	A	A	A

A = ANOVA, dose response and Dunnett's

Table 7
Group mean locomotor activity data
Occasion: Week 13

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group/ Sex		AMB01 0-2m	AMB02 2-4m	AMB03 4-6m	AMB04 6-8m	AMB05 8-10m	AMB06 10-12m	AMB07 12-14m	AMB08 14-16m
1M	Mean	21	13	11	9	9	8	8	6
	SD	10.3	5.2	6.4	6.4	5.4	6.1	6.0	5.3
2M	Mean	27	14	14	9	10	11	7	10
	SD	7.9	8.4	8.2	5.3	7.0	9.9	4.6	9.4
3M	Mean	28	16	13	9	12	10	5	8
	SD	7.6	5.7	5.7	4.4	6.1	4.8	4.4	6.8
4M	Mean	16	12	6	5	4	7	6	6
	SD	6.8	5.4	6.3	4.5	3.5	4.6	6.5	4.8
5M	Mean	19	12	11	7	9	7	7	6
	SD	9.3	10.0	6.6	5.9	8.4	8.3	5.8	5.1
Statistics		A	A	A	A	A	A	A	A
1F	Mean	21	12	10	9	7	8	7	4
	SD	10.8	7.0	5.8	6.7	5.0	5.9	7.3	4.0
2F	Mean	15	12	10	5	8	10	10	7
	SD	5.4	6.7	7.3	3.5	6.1	7.7	8.1	3.8
3F	Mean	20	14	8	9	11	10	10	7
	SD	10.1	11.9	8.7	9.8	14.3	8.9	12.0	7.7
4F	Mean	18	10	10	8	8	8	7	9
	SD	8.5	5.2	8.0	6.8	6.5	3.7	4.7	4.9
5F	Mean	18	10	8	9	9	7	6	7
	SD	8.2	7.9	5.7	6.0	8.6	7.5	5.5	7.6
Statistics		A	A	A	A	A	A	A	A

A = ANOVA, dose response and Dunnett's

Table 7
Group mean locomotor activity data
Occasion: Week 13

Test Article Control [ ]
Group 1 2 3 4 5
Level (ppm) 0 100 500 2500 5000

Group/ Sex		AMB09 16-18m	AMB10 18-20m	AMB11 20-22m	AMB12 22-24m	AMB13 24-26m	AMB14 26-28m	AMB15 28-30m	AMB TOTAL
1M	Mean	10	6	5	6	7	6	6	131
	SD	7.4	5.9	5.8	5.5	7.0	5.7	6.9	52.7
2M	Mean	9	8	6	6	7	6	7	148
	SD	8.8	5.1	5.2	5.4	7.1	6.6	3.7	66.1
3M	Mean	5	6	7	10	5	7	4	142
	SD	4.1	5.8	6.8	9.3	5.1	6.7	5.0	40.2
4M	Mean	3*	5	2	3	0*	3	3	81
	SD	3.4	3.6	3.3	3.6	0.8	7.0	5.6	32.8
5M	Mean	3*	5	3	3	2	2	3	99
	SD	4.6	7.8	4.4	5.0	5.0	3.0	5.2	46.1
								DR*	DR**
Statistics		A	A	A	A	A	A	A	A
1F	Mean	5	4	3	4	4	4	5	107
	SD	5.3	5.3	4.7	4.6	7.1	4.1	6.2	53.8
2F	Mean	6	6	6	8	5	6	5	117
	SD	3.2	2.5	5.9	4.7	7.9	4.4	6.9	41.7
3F	Mean	5	5	7	5	4	3	3	123
	SD	4.7	5.1	5.6	7.0	4.5	3.7	4.0	96.5
4F	Mean	6	7	6	7	5	5	3	116
	SD	3.0	6.7	6.5	6.8	4.2	7.8	3.6	45.0
5F	Mean	7	5	4	5	6	3	3	107
	SD	5.1	4.5	4.0	5.0	6.8	3.9	3.5	49.2
Statistics		A	A	A	A	A	A	A	A

* P<0.05
** P<0.01
*** P<0.001
DR = significant dose response test

A = ANOVA, dose response and Dunnett's

Table 7
Group mean locomotor activity data
Occasion: Week 13

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group/ Sex		TOT01 0-2m	TOT02 2-4m	TOT03 4-6m	TOT04 6-8m	TOT05 8-10m	TOT06 10-12m	TOT07 12-14m	TOT08 14-16m
1M	Mean	53	42	37	30	31	26	24	22
	SD	19.4	13.4	14.1	17.2	15.2	15.9	10.6	13.5
2M	Mean	58	38	37	26	28	28	23	22
	SD	15.3	17.1	18.1	9.7	17.6	21.5	15.2	16.6
3M	Mean	62	48	39	30	42	27	19	25
	SD	11.7	10.4	10.5	11.1	15.6	12.9	9.8	13.8
4M	Mean	43	39	22*	17	17	17	22	25
	SD	12.9	13.7	11.1	11.4	13.0	8.0	15.8	12.1
5M	Mean	49	36	38	26	24	21	20	22
	SD	17.7	19.2	14.0	15.0	15.1	19.1	14.5	11.4
Statistics		A	A	A	A	A	A	A	A
1F	Mean	57	39	36	33	26	35	29	23
	SD	21.0	16.2	15.1	13.4	11.8	16.3	15.5	12.4
2F	Mean	45	40	32	21	26	34	33	25
	SD	13.2	17.1	20.5	11.9	16.1	18.4	17.7	13.6
3F	Mean	51	46	28	32	33	34	29	27
	SD	25.7	23.1	21.3	23.1	27.3	22.1	24.7	19.5
4F	Mean	50	38	33	32	29	31	29	34
	SD	21.2	12.6	14.3	20.0	18.0	9.9	12.8	14.5
5F	Mean	48	36	28	30	30	25	23	26
	SD	14.9	20.4	15.7	17.4	20.0	18.6	16.0	16.5
Statistics		A	A	A	A	A	A	A	A

* P<0.05
** P<0.01
*** P<0.001

A = ANOVA, dose response and Dunnett's

Table 7
Group mean locomotor activity data
Occasion: Week 13

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group/ Sex		TOT09 16-18m	TOT10 18-20m	TOT11 20-22m	TOT12 22-24m	TOT13 24-26m	TOT14 26-28m	TOT15 28-30m	TOT TOTAL
1M	Mean	28	22	22	24	23	22	20	424
	SD	18.5	13.7	13.5	13.0	16.2	15.0	13.4	116.9
2M	Mean	24	21	18	17	25	17	24	406
	SD	20.2	11.0	11.9	12.8	23.3	15.8	13.4	148.9
3M	Mean	24	18	21	27	18	21	10	431
	SD	19.0	11.3	15.6	20.8	13.5	12.6	8.5	83.0
4M	Mean	14	18	11	10	4*	11	12	282*
	SD	12.9	10.6	10.6	12.2	6.6	14.9	14.8	79.7
5M	Mean	12	20	10	9*	7*	7*	11	313*
	SD	13.7	20.9	13.9	14.3	12.2	8.0	12.1	116.8
		DR**		DR**				DR*	
Statistics		A	A	A	A	A	A	A	A
1F	Mean	20	17	15	18	18	18	19	404
	SD	15.5	11.4	16.3	13.9	15.4	12.2	14.8	127.6
2F	Mean	26	21	24	28	20	20	19	414
	SD	12.2	8.5	17.7	15.3	22.5	9.1	19.9	137.7
3F	Mean	17	24	29	23	18	13	12	416
	SD	12.3	10.5	7.1	17.8	9.6	8.1	10.5	199.0
4F	Mean	28	27	26	25	24	17	15	438
	SD	5.8	16.5	12.7	14.3	12.8	18.0	11.4	119.5
5F	Mean	28	20	18	23	21	15	13	384
	SD	11.3	11.4	13.7	16.0	16.3	11.2	10.9	134.4
Statistics		A	A	A	A	A	A	A	A

* P<0.05
** P<0.01
*** P<0.001
DR = significant dose response test

A = ANOVA, dose response and Dunnett's

Table 8
Group mean haematology

Key to abbreviations/methods

Code	Parameter	Analyser	Method of determination
Hb	haemoglobin concentration	Bayer ADVIA	Spectrophotometric measurement of cyanmethaemoglobin
RBC	red blood cell count	Bayer ADVIA	Flow cytometry
PCV	packed cell volume	Calculation	PCV = (MCV x RBC) + 10
RETA	reticulocytes	Automated	Supravital staining with oxazine 750, assessed by flow cytometry
RET ABS	absolute reticulocytes	Calculation	RBC x RETA ÷ 100
MCV	mean cell volume	Bayer ADVIA	Flow cytometry
MCH	mean cell haemoglobin	Calculation	MCH = (Hb + RBC) x 10
MCHC	mean cell haemoglobin concentration	Calculation	MCHC = (Hb + PCV) x 100
HDW	haemoglobin distribution width	Bayer ADVIA	Flow cytometry
RDW	red cell distribution width	Bayer ADVIA	Flow cytometry
PLAT	platelets	Bayer ADVIA	Flow cytometry
PCT	plateletcrit	Calculated	PCT = (MPV x PLT) ÷ 10,000
MPV	mean platelet volume	Bayer ADVIA	Flow cytometry
PDW	platelet distribution width	Bayer ADVIA	Flow cytometry
PT	prothrombin time	ACL Futura	Fibrin formation using rabbit brain thromboplastin to activate coagulation cascade
APTT	activated partial thromboplastin time	ACL Futura	Fibrin formation using micronised silica to activate coagulation cascade
WBC	white blood cell count	Bayer ADVIA	Flow cytometry
N L M E B LUC	neutrophils lymphocytes monocytes eosinophils basophils large unstained cells	Manual: Blood smear Automated: Bayer ADVIA	Manual: Visual appraisal of a blood smear using a Romanowski-type stain Automated: Cytochemical staining with a peroxidase stain and detection of light scatter using a photo-optical method. Basophils enumerated using differential lysis and laser light scattering

Table 8
Group mean haematology
Occasion: Week 14 - main study

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group/ Sex		Hb g/dL	RBC mil/cmm	PCV %	RETA %	RET ABS mil/cmm	MCV fL
1M	Mean	15.9	8.84	45.9	2.3	0.20	51.9
	SD	0.42	0.237	1.26	0.25	0.023	1.38
2M	Mean	16.3	9.02	47.1	2.2	0.20	52.3
	SD	0.59	0.302	1.65	0.26	0.022	1.65
3M	Mean	16.2	8.92	46.4	2.1	0.19	52.2
	SD	0.45	0.415	1.12	0.45	0.035	2.02
4M	Mean	16.2	9.17	46.5	2.1	0.19	50.7
	SD	0.71	0.444	2.48	0.34	0.028	1.35
5M	Mean	16.4	9.00	46.9	2.3	0.21	52.2
	SD	1.10	0.667	3.43	0.62	0.051	2.62
Statistics		A	A	J	A	A	A
1F	Mean	15.4	8.27	44.5	2.4	0.20	53.9
	SD	0.53	0.497	1.94	0.44	0.033	2.79
2F	Mean	15.5	8.30	44.7	2.3	0.20	53.9
	SD	0.53	0.493	2.06	0.40	0.035	1.47
3F	Mean	15.3	8.29	43.0	1.7	0.14	51.9
	SD	0.38	0.368	1.11	0.30	0.025	1.87
4F	Mean	15.2	8.23	43.4	2.7	0.22	52.7
	SD	0.55	0.400	1.79	0.78	0.067	1.63
5F	Mean	15.4	8.08	44.3	3.7***	0.30***	54.8
	SD	0.64	0.425	2.16	0.83	0.068	1.60
Statistics		A	A	A	A	A	A

* P<0.05
** P<0.01
*** P<0.001

A = ANOVA, dose response and Dunnett's
J = Kruskal-Wallis, Terpstra-Jonckheere, Wilcoxon

Table 8
Group mean haematology
Occasion: Week 14 - main study

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group/ Sex		MCH pg	MCHC g/dL	HDW g/dL	RDW %	PLAT 1000/cmm	PCT %
1M	Mean	17.9	34.6	2.79	14.0	874	0.62
	SD	0.49	0.52	0.253	2.04	109.9	0.070
2M	Mean	18.1	34.6	2.72	13.7	959	0.68
	SD	0.50	0.56	0.269	2.26	93.8	0.057
3M	Mean	18.2	34.8	2.60	13.8	885	0.63
	SD	0.91	0.71	0.166	2.28	109.3	0.069
4M	Mean	17.7	34.8	2.67	14.5	952	0.68
	SD	0.68	0.94	0.252	4.98	87.5	0.062
5M	Mean	18.3	35.1	2.85	14.8	1035*	0.73**
	SD	0.98	0.86	0.211	3.94	113.1	0.050
Statistics		A	A	A	A	A	A
1F	Mean	18.6	34.6	2.22	12.6	892	0.66
	SD	0.89	0.52	0.165	2.96	94.3	0.073
2F	Mean	18.7	34.6	2.21	12.5	900	0.66
	SD	0.71	0.61	0.178	2.57	62.0	0.035
3F	Mean	18.4	35.5*	2.34	13.0	935	0.67
	SD	0.65	0.37	0.105	3.39	130.1	0.085
4F	Mean	18.5	35.0	2.40	12.4	937	0.69
	SD	0.54	0.84	0.218	1.32	117.7	0.080
5F	Mean	19.0	34.7	2.31	11.8	1150***	0.88***
	SD	0.66	0.54	0.133 DR*	1.22	98.7	0.091
Statistics		A	A	A	A	A	A

* P<0.05
** P<0.01
*** P<0.001
DR = significant dose response test

A = ANOVA, dose response and Dunnett's

Table 8
Group mean haematology
Occasion: Week 14 - main study

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group/ Sex		MPV fl	PDW %	PT s	APTT s
1M	Mean	7.1	60.1	21.8	20.3
	SD	0.15	4.13	0.95	2.60
2M	Mean	7.1	57.0	22.1	19.9
	SD	0.16	2.37	0.95	1.29
3M	Mean	7.1	60.5	21.8	20.6
	SD	0.35	4.46	0.92	2.27
4M	Mean	7.2	58.2	21.2	20.5
	SD	0.27	5.58	1.26	1.55
5M	Mean	7.1	56.6	21.0	22.1
	SD	0.34	4.31	1.34	2.16
				DR*	DR*
Statistics		A	A	A	A
1F	Mean	7.4	60.8	19.5	20.5
	SD	0.50	4.21	1.84	2.52
2F	Mean	7.4	63.3	19.8	20.0
	SD	0.20	3.96	0.88	2.75
3F	Mean	7.2	60.2	20.2	18.6
	SD	0.25	2.93	1.04	1.19
4F	Mean	7.3	60.2	19.9	18.7
	SD	0.44	6.30	1.59	1.57
5F	Mean	7.7	57.1	19.6	19.2
	SD	0.59	4.33	1.75	1.87
			DR*		
Statistics		A	A	A	A

* P<0.05
** P<0.01
*** P<0.001
DR = significant dose response test

A = ANOVA, dose response and Dunnett's

Table 8
Group mean haematology
Occasion: Week 14 - main study

Test Article Control [ ]
Group 1 2 3 4 5
Level (ppm) 0 100 500 2500 5000

Group/ Sex		WBC 1000/cmm	N 1000/cmm	L 1000/cmm	M 1000/cmm	E 1000/cmm	B 1000/cmm	LUC 1000/cmm
1M	Mean	7.3	1.1	6.0	0.1	0.1	0.0	0.0
	SD	2.72	0.48	2.20	0.08	0.04	0.00	0.05
2M	Mean	7.2	1.0	5.8	0.1	0.1	0.0	0.1
	SD	2.74	0.43	2.34	0.08	0.07	0.00	0.05
3M	Mean	6.3	0.9	5.0	0.1	0.2	0.0	0.1
	SD	1.12	0.22	1.04	0.04	0.07	0.00	0.05
4M	Mean	6.6	1.4	4.8	0.2	0.1	0.0	0.0
	SD	1.19	0.77	0.55	0.11	0.05	0.03	0.05
5M	Mean	6.9	1.5	5.0	0.2	0.2	0.0	0.1
	SD	1.18	0.53 DR*	0.97	0.09	0.07	0.00	0.05
Statistics		A	A	J	X	X	X	X
1F	Mean	4.3	0.7	3.4	0.1	0.1	0.0	0.0
	SD	1.13	0.36	0.76	0.05	0.00	0.00	0.00
2F	Mean	3.9	0.6	3.1	0.0	0.1	0.0	0.0
	SD	0.85	0.23	0.66	0.05	0.04	0.00	0.00
3F	Mean	4.0	0.7	3.1	0.1	0.1	0.0	0.0
	SD	1.12	0.31	1.03	0.05	0.04	0.00	0.00
4F	Mean	4.2	0.8	3.1	0.1	0.2	0.0	0.0
	SD	0.85	0.29	0.79	0.03	0.10	0.00	0.04
5F	Mean	4.5	0.9	3.3	0.1	0.1	0.0	0.0
	SD	1.58	0.34	1.32	0.06	0.13	0.00	0.05
Statistics		A	A	A	X	X	X	X

* P<0.05
** P<0.01
*** P<0.001
DR = significant dose response test

A = ANOVA, dose response and Dunnett's
J = Kruskal-Wallis, Terpstra-Jonckheere, Wilcoxon
X = not analysed

Table 8
Group mean haematology
Occasion: Week 14 - main study

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group/ Sex		WBC 1000/cmm	N % WBC	L % WBC	M % WBC	E % WBC	B % WBC	LUC % WBC
1M	Mean	7.3	15	81	2	1	0	0
	SD	2.72	3.0	3.9	0.8	0.5	0.0	0.5
2M	Mean	7.2	15	81	2	2	0	1
	SD	2.74	4.4	4.2	0.7	0.9	0.0	0.5
3M	Mean	6.3	15	80	2	2	0	1
	SD	1.12	3.3	4.2	0.5	1.2	0.0	0.5
4M	Mean	6.6	21	74	2	2	0	0
	SD	1.19	7.3	7.6	1.2	0.7	0.3	0.5
5M	Mean	6.9	21	73*	3	2	0	1
	SD	1.18	6.6 DR**	8.0	1.2	1.0	0.0	0.5
Statistics		A	A	A	X	X	X	X
1F	Mean	4.3	16	80	2	2	0	0
	SD	1.13	4.5	4.7	0.7	0.4	0.0	0.5
2F	Mean	3.9	16	80	1	3	0	1
	SD	0.85	3.0	3.2	0.5	1.3	0.0	0.5
3F	Mean	4.0	19	77	2	2	0	1
	SD	1.12	6.9	7.4	0.5	0.7	0.0	0.5
4F	Mean	4.2	20	74	2	4	0	1
	SD	0.85	8.7	9.6	0.4	1.7	0.0	0.4
5F	Mean	4.5	20	74	2	3	0	1
	SD	1.58	6.6	6.3 DR*	0.7	1.5	0.0	0.4
Statistics		A	A	A	X	X	X	X

* P<0.05
** P<0.01
*** P<0.001
DR = significant dose response test

A = ANOVA, dose response and Dunnett's
X = not analysed

Table 8
Group mean haematology
Occasion: Week 18 - treatment-free

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group/ Sex		Hb g/dL	RBC mil/cmm	PCV %	RETA %	RET ABS mil/cmm	MCV fL	MCH pg
1M	Mean	15.8	8.80	45.4	2.1	0.18	51.6	18.1
	SD	0.31	0.289	1.57	0.15	0.010	0.46	0.35
5M	Mean	15.7	8.53	45.1	2.3	0.20	52.8*	18.3
	SD	0.60	0.278	1.60	0.18	0.015	0.74	0.48
Statistics		S2	S2	S2	S2	S2	S2	S2
1F	Mean	16.3	8.28	45.1	2.0	0.16	54.5	19.7
	SD	0.13	0.207	0.50	0.24	0.022	0.78	0.41
5F	Mean	16.3	8.37	45.6	2.0	0.17	54.5	19.5
	SD	0.84	0.275	1.85	0.39	0.031	0.73	0.57
Statistics		S2	S2	S2	S2	S2	S2	S2

Group/ Sex		MCHC g/dL	HDW g/dL	RDW %	PLAT 1000/cmm	PCT %	MPV fl	PDW %
1M	Mean	35.0	2.71	13.1	860	0.59	6.8	71.8
	SD	0.86	0.221	0.26	87.1	0.055	0.15	4.65
5M	Mean	34.7	2.80	14.5	914	0.62	6.9	71.8
	SD	0.57	0.279	2.62	80.7	0.048	0.18	8.46
Statistics		S2	S2	S2	S2	S2	S2	S2
1F	Mean	36.1	2.34	12.0	879	0.58	6.6	61.1
	SD	0.23	0.106	0.48	110.5	0.039	0.35	6.14
5F	Mean	35.8	2.34	11.8	992	0.64	6.5	59.2
	SD	0.91	0.081	0.13	83.1	0.046	0.24	2.56
Statistics		S2	S2	S2	S2	S2	S2	S2

* P<0.05
** P<0.01
*** P<0.001

S2 = two-way ANOVA and t-tests

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Table 8
Group mean haematology
Occasion: Week 18 - treatment-free

Test Article Control [ ]
Group 1 2 3 4 5
Level (ppm) 0 100 500 2500 5000

Group/ Sex		WBC 1000/cmm	N 1000/cmm	L 1000/cmm	M 1000/cmm	E 1000/cmm	B 1000/cmm	LUC 1000/cmm
1M	Mean	3.0	1.0	1.8	0.1	0.1	0.0	0.0
	SD	0.51	0.45	0.10	0.00	0.00	0.00	0.00
5M	Mean	2.9	0.6	2.1	0.1	0.1	0.0	0.0
	SD	0.67	0.11	0.58	0.05	0.00	0.00	0.00
Statistics		S2	S2	S2	X	X	X	X
1F	Mean	2.0	0.3	1.6	0.1	0.1	0.0	0.0
	SD	0.61	0.08	0.56	0.06	0.06	0.00	0.00
5F	Mean	1.3	0.2	1.0	0.0	0.0	0.0	0.0
	SD	0.43	0.10	0.36	0.05	0.05	0.00	0.00
Statistics		S2	S2	S2	X	X	X	X

Group/ Sex		WBC 1000/cmm	N % WBC	L % WBC	M % WBC	E % WBC	B % WBC	LUC % WBC
1M	Mean	3.0	31	63	3	3	0	1
	SD	0.51	10.0	9.0	0.6	0.6	0.0	0.0
5M	Mean	2.9	22*	72*	2	3	0	1
	SD	0.67	3.8	4.2	0.5	0.5	0.4	0.4
Statistics		S2	S2	S2	X	X	X	X
1F	Mean	2.0	15	80	2	3	0	1
	SD	0.61	5.0	4.0	0.8	0.5	0.0	0.5
5F	Mean	1.3	17	77	2	3	0	0
	SD	0.43	3.6	3.6	0.5	0.5	0.5	0.5
Statistics		S2	S2	S2	X	X	X	X

* P<0.05
** P<0.01
*** P<0.001

S2 = two-way ANOVA and t-tests
X = not analysed

Table 9
Group mean clinical chemistry

Key to abbreviations/methods

Code	Parameter	Analyser	Method of determination
AST	Aspartate aminotransferase	Hitachi 917	Optimised UV method using L-aspartate and alpha-oxoglutarate as primary substrates
ALT	Alanine aminotransferase	Hitachi 917	Optimised UV method using L-Alanine and alpha-oxoglutarate as primary substrates
Gamma GT	Gamma glutamyl transpeptidase	Hitachi 917	Colorimetric method using l-gamma-glutamyl-3-carboxy-4nitroanilide as substrate
ALK PHOS	Alkaline phosphatase	Hitachi 917	Colorimetric method using p-nitrophenyl phosphate as substrate
Na/K/Cl	Sodium /potassium /chloride	Hitachi 917	Ion-selective electrode
Ca	Calcium	Hitachi 917	Colorimetric method using o-cresophthalein complexone in alkaline solution
IN PHOS	inorganic phosphorous	Hitachi 917	Colorimetric method based upon ammonium molybdate in acid conditions
UREA	Urea	Hitachi 917	UV method using a coupled urease procedure
T BILI	total bilirubin	Hitachi 917	A colorimetric method. Indirect bilirubin is liberated by detergent: Total bilirubin is coupled with a diazonium compound to give corresponding azobilirubin.
CREAT	Creatinine	Hitachi 917	Colorimetric method
T PROT	total protein	Hitachi 917	Colorimetric method based on biuret reaction
ALBUMIN	Albumin	Hitachi 917	Colorimetric method based on the BCG reaction
GLOBULIN	Globulin	Calculation	globulin = total protein - albumin
AG RATIO	albumin/globulin ratio	Calculation	AG ratio = albumin /(total protein - albumin)
TOT CHOL	total cholesterol	Hitachi 917/ILAB 900	Enzymatic method using cholesterol oxidase/esterase
TRIGS	Triglycerides	Hitachi 917/ILAB 900	Enzymatic method using lipase and glycerol kinase as primary enzymes
GLUC	Glucose	Hitachi 917	UV method using a coupled hexokinase procedure

Table 9
Group mean clinical chemistry
Occasion: Week 14 - main study

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group/ Sex		AST IU/L	ALT IU/L	GAMMA GT IU/L	ALK PHOS IU/L	Na mmol/L	K mmol/L	Cl mmol/L
1M	Mean	60	33	1	152	141	4.4	104
	SD	4.3	8.0	0.0	21.6	1.5	0.26	1.6
2M	Mean	62	30	1	159	141	4.5	104
	SD	4.9	4.2	0.0	37.4	1.5	0.23	0.8
3M	Mean	65	33	1	169	141	4.4	104
	SD	15.2	13.6	0.0	28.7	2.0	0.39	1.3
4M	Mean	111	30	1	170	141	4.6	105
	SD	66.2	10.1	0.0	18.7	1.8	0.30	1.1
5M	Mean	215**	36	1	179	141	4.6	103
	SD	174.9	17.8	0.0	43.3 DR*	1.1	0.28	2.0
Statistics		J	A	X	A	A	A	A
1F	Mean	67	31	1	79	140	4.8	105
	SD	9.9	11.5	0.0	19.7	1.3	0.46	0.8
2F	Mean	64	30	1	88	141	4.8	107*
	SD	14.7	8.6	0.0	25.6	1.4	0.51	1.1
3F	Mean	62	27	1	81	140	4.7	105
	SD	9.2	6.9	0.0	21.6	1.1	0.40	1.5
4F	Mean	149*	26	1	85	140	4.5	105
	SD	108.7	8.7	0.0	16.1	1.1	0.57	1.7
5F	Mean	149**	22	1	74	140	4.6	103*
	SD	54.8	5.4 DR*	0.0	20.7	1.4	0.52	1.8
Statistics		J	A	X	A	A	A	A

* P<0.05
** P<0.01
*** P<0.001
DR = significant dose response test

A = ANOVA, dose response and Dunnett's
J = Kruskal-Wallis, Terpstra-Jonckheere, Wilcoxon
X = not analysed

Table 9
Group mean clinical chemistry
Occasion: Week 14 - main study

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group/ Sex		Ca mmol/L	IN PHOS mmol/L	UREA mmol/L	T BILI umol/L	CREAT umol/L	T PROT g/L	ALBUMIN g/L
1M	Mean	2.58	1.9	6.4	2.0	66	66	42
	SD	0.075	0.23	1.52	0.32	4.8	2.7	1.5
2M	Mean	2.65	2.0	6.4	1.8	60*	68	42
	SD	0.063	0.18	1.14	0.30	3.8	3.1	1.4
3M	Mean	2.59	1.9	6.5	1.7	63	66	41
	SD	0.079	0.21	1.02	0.37	5.1	2.3	2.4
4M	Mean	2.64	1.9	6.6	1.4**	58**	67	42
	SD	0.060	0.25	1.24	0.47	2.4	1.6	1.0
5M	Mean	2.60	2.0	6.5	1.3***	59*	65	41
	SD	0.042	0.13	0.91	0.27	5.8	1.8	2.3
Statistics		A	A	A	J	A	A	A
1F	Mean	2.73	1.8	8.7	2.6	64	69	47
	SD	0.109	0.28	0.81	0.46	5.5	4.5	4.9
2F	Mean	2.73	1.4**	8.8	2.1	71	69	53
	SD	0.128	0.23	1.56	0.32	9.8	5.7	16.1
3F	Mean	2.75	1.6	8.2	2.1*	63	70	49
	SD	0.086	0.17	1.53	0.48	5.6	2.8	1.9
4F	Mean	2.76	1.4***	9.1	1.7***	66	72	52
	SD	0.153	0.25	1.44	0.34	6.9	5.6	7.1
5F	Mean	2.81	1.8	9.0	1.7***	62	71	52
	SD	0.110	0.32	1.10	0.38	5.6	3.8	2.9
Statistics		A	A	A	A	A	A	A

* P<0.05
** P<0.01
*** P<0.001

A = ANOVA, dose response and Dunnett's
J = Kruskal-Wallis, Terpstra-Jonckheere, Wilcoxon

Table 9
Group mean clinical chemistry
Occasion: Week 14 - main study

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group/ Sex		GLOBULIN g/L	AG RATIO	TOT CHOL mmol/L	TRIGS mmol/L	GLUC mmol/L
1M	Mean	24	1.7	1.7	0.84	6.5
	SD	2.3	0.18	0.26	0.463	1.03
2M	Mean	26	1.7	1.8	0.97	6.3
	SD	2.8	0.19	0.25	0.542	0.37
3M	Mean	25	1.6	1.6	0.71	6.7
	SD	1.5	0.16	0.25	0.196	1.21
4M	Mean	25	1.7	1.9	0.92	6.0
	SD	1.6	0.10	0.35	0.425	0.64
5M	Mean	25	1.7	1.9	1.03	6.3
	SD	2.0	0.22	0.21 DR*	0.595	1.52
Statistics		A	A	A	A	A
1F	Mean	21	2.2	1.4	0.62	5.2
	SD	1.8	0.35	0.50	0.263	1.18
2F	Mean	16	1.2	1.4	0.56	5.0
	SD	12.2	3.17	0.29	0.203	0.81
3F	Mean	21	2.3	1.5	0.55	4.9
	SD	1.8	0.21	0.28	0.191	0.83
4F	Mean	20	2.8	1.7	0.53	4.7
	SD	3.0	1.07	0.57	0.156	0.90
5F	Mean	20	2.7	1.7	0.52	4.6
	SD	2.1	0.30	0.47	0.130	1.05
Statistics		A	A	A	A	A

* P<0.05
** P<0.01
*** P<0.001
DR = significant dose response test

A = ANOVA, dose response and Dunnett's

Table 9
Group mean clinical chemistry
Occasion: Week 18 - main study

Test Article Control [ ]
Group 1 2 3 4 5
Level (ppm) 0 100 500 2500 5000

Group/ Sex		AST IU/L	ALT IU/L	GAMMA GT IU/L	ALK PHOS IU/L	Na mmol/L	K mmol/L	Cl mmol/L
1M	Mean	82	41	1	157	143	4.7	103
	SD	16.8	16.3	0.0	38.4	6.8	0.47	2.9
5M	Mean	79	43	1	200	144	4.9	106
	SD	16.1	12.9	0.0	153.9	2.5	0.31	1.8
Statistics		S2	S2	X	S2	S2	S2	S2
1F	Mean	74	30	1	80	143	5.0	105
	SD	17.0	11.3	0.0	14.5	3.6	0.33	1.5
5F	Mean	112	36	1	56	140	5.0	101
	SD	71.8	13.4	0.0	10.8	4.3	0.59	3.4
Statistics		S2	S2	X	S2	S2	S2	S2

Group/ Sex		Ca mmol/L	IN PHOS mmol/L	UREA mmol/L	T BILI umol/L	CREAT umol/L	T PROT g/L	ALBUMIN g/L
1M	Mean	2.44	1.6	7.6	1.4	66	62	40
	SD	0.134	0.19	1.17	0.13	9.9	3.2	1.5
5M	Mean	2.51	1.4	7.9	1.5	65	61	40
	SD	0.070	0.24	1.99	0.27	12.2	2.4	2.3
Statistics		S2	S2	S2	S2	S2	S2	S2
1F	Mean	2.47	2.1	8.5	1.8	63	62	45
	SD	0.192	0.12	2.47	0.58	10.6	1.7	1.1
5F	Mean	2.63	2.0	6.5	1.6	59	65	46
	SD	0.034	0.05	1.07	0.13	3.1	2.5	3.3
Statistics		S2	S2	S2	S2	S2	S2	S2

S2 = two-way ANOVA and t-tests
X = not analysed

Table 9
Group mean clinical chemistry
Occasion: Week 18 - main study

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group/ Sex		GLOBULIN g/L	AG RATIO	TOT CHOL mmol/L	TRIGS mmol/L	GLUC mmol/L
1M	Mean	22	1.8	1.6	0.97	8.9
	SD	2.0	0.12	0.28	0.270	1.05
5M	Mean	21	2.0	1.9	0.71*	8.0
	SD	1.1	0.17	0.22	0.201	1.99
Statistics		S2	S2	S2	S2	S2
1F	Mean	18	2.5	1.2	0.27	5.0
	SD	0.8	0.10	0.25	0.031	0.40
5F	Mean	19	2.4	1.6*	0.36	5.8
	SD	1.6	0.32	0.36	0.157	0.78
Statistics		S2	S2	S2	S2	S2

* P<0.05
** P<0.01
*** P<0.001

S2 = two-way ANOVA and t-tests

Table 10
Group mean urine analysis

Key to abbreviations/methods

Code	parameter	Method of determination	Units
VOL	Volume	Direct visual measurement	mL
SP GR	Specific gravity	Visual measurement	Numerical
pH	pH	Visual assessment following reaction with Methyl Red and Bromothymol Blue	Numerical approximation

Table 10
Group mean urine analysis
Occasion: Week 13

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group/ Sex		VOL mL	SP GR	pH
1M	Mean	4.5	1.042	6
	SD	1.37	0.0184	0.6
2M	Mean	3.6	1.041	6
	SD	1.01	0.0105	0.9
3M	Mean	5.5	1.035	6
	SD	1.32	0.0031	0.9
4M	Mean	5.9	1.035	6
	SD	2.32	0.0054	0.5
5M	Mean	9.4***	1.026***	6
	SD	2.36	0.0047	0.5

Statistics		AT	A	X
1F	Mean	2.6	1.035	5
	SD	1.08	0.0133	1.1
2F	Mean	2.6	1.035	5
	SD	0.98	0.0095	0.7
3F	Mean	4.3*	1.031	6
	SD	1.70	0.0062	1.3
4F	Mean	3.2	1.037	6
	SD	1.40	0.0098	0.8
5F	Mean	4.9***	1.028	5
	SD	1.71	0.0064	0.5

Statistics	A	A	X

* P<0.05
** P<0.01
*** P<0.001

A = ANOVA, dose response and Dunnett's
T = log-transformed data
X = not analysed

Table 11
Group mean organ weights adjusted to overall mean necropsy body weight

Terminal kill

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group and Sex	Body weight (g)		Organ weights (g): Adrenals	Kidneys	Spleen	Liver
1M		Adjusted	0.067	1.731	0.704	8.086
	368.5	Unadjusted	(0.068)	(1.761)	(0.716)	(8.267)
2M		Adjusted	0.060	1.798	0.672	8.712*
	372.0	Unadjusted	(0.061)	(1.842)	(0.689)	(8.973)
3M		Adjusted	0.067	1.851	0.680	8.752**
	365.4	Unadjusted	(0.068)	(1.870)	(0.688)	(8.863)
4M		Adjusted	0.060	1.953**	0.722	9.389***
	359.2	Unadjusted	(0.060)	(1.947)	(0.720)	(9.358)
5M		Adjusted	0.063	1.971**	0.719	10.116***
	337.7*	Unadjusted	(0.062)	(1.883)	(0.685)	(9.594)
Statistics	A		C	C	C	C

Group and Sex	Body weight (g)		Organ weights (g): Heart	Brain	Thymus	Testes/ Epididymides
1M		Adjusted	1.042	1.967	0.411	5.224
	368.5	Unadjusted	(1.056)	(1.975)	(0.419)	(5.269)
2M		Adjusted	1.041	1.999	0.398	5.201
	372.0	Unadjusted	(1.062)	(2.012)	(0.409)	(5.266)
3M		Adjusted	1.017	2.023	0.375	5.108
	365.4	Unadjusted	(1.026)	(2.028)	(0.379)	(5.136)
4M		Adjusted	1.020	1.999	0.368	5.182
	359.2	Unadjusted	(1.018)	(1.997)	(0.367)	(5.174)
5M		Adjusted	1.084	1.979	0.364	4.789
	337.7*	Unadjusted	(1.043)	(1.954)	(0.342)	(4.657)
Statistics	A		C	C	C	C

* P<0.05
** P<0.01
*** P<0.001

A = ANOVA, dose response and Dunnett's
C = ANCOVA and Dunnett's

Table 11
Group mean organ weights adjusted to overall mean necropsy body weight
Terminal kill

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group and Sex	Body weight (g)		Organ weights (g): Adrenals	Kidneys	Spleen	Liver
1F		Adjusted	0.072	1.176	0.485	5.148
	205.8	Unadjusted	(0.073)	(1.189)	(0.491)	(5.232)
2F		Adjusted	0.071	1.148	0.463	4.946
	202.0	Unadjusted	(0.071)	(1.148)	(0.463)	(4.945)
3F		Adjusted	0.071	1.226	0.458	5.164
	213.9	Unadjusted	(0.073)	(1.265)	(0.479)	(5.429)
4F		Adjusted	0.069	1.192	0.455	5.663*
	198.4	Unadjusted	(0.068)	(1.179)	(0.449)	(5.579)
5F		Adjusted	0.075	1.269	0.435	6.307***
	190.4	Unadjusted	(0.073)	(1.230)	(0.415)	(6.044)
Statistics	DR* A		C	C	C	C

Group and Sex	Body weight (g)		Organ weights (g): Heart	Brain	Thymus	Ovaries
1F		Adjusted	0.692	1.804	0.310	0.091
	205.8	Unadjusted	(0.700)	(1.812)	(0.314)	(0.092)
2F		Adjusted	0.722	1.803	0.295	0.089
	202.0	Unadjusted	(0.722)	(1.803)	(0.295)	(0.089)
3F		Adjusted	0.698	1.836	0.277	0.075
	213.9	Unadjusted	(0.723)	(1.860)	(0.288)	(0.078)
4F		Adjusted	0.706	1.812	0.286	0.088
	198.4	Unadjusted	(0.698)	(1.804)	(0.283)	(0.087)
5F		Adjusted	0.695	1.830	0.305	0.092
	190.4	Unadjusted	(0.670)	(1.806)	(0.294)	(0.089)
Statistics	DR* A		C	C	C	C

* P<0.05
** P<0.01
*** P<0.001
DR = significant dose response test

A = ANOVA, dose response and Dunnett's
C = ANCOVA and Dunnett's

Table 11
Group mean organ weights adjusted to overall mean necropsy body weight
Treatment-free kill

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group and Sex	Body weight (g)		Organ weights (g): Adrenals	Kidneys	Spleen	Liver
1M		Adjusted	0.066	2.019	0.671	9.259
	421.4	Unadjusted	(0.069)	(2.102)	(0.682)	(9.888)
5M		Adjusted	0.062	2.065	0.675	9.512
	376.7*	Unadjusted	(0.060)	(1.982)	(0.664)	(8.883)
Statistics	S2		C1	C1	C1	C1

Group and Sex	Body weight (g)		Organ weights (g): Heart	Brain	Thymus	Testes/ Epididymides
1M		Adjusted	1.084	2.101	0.372	5.561
	421.4	Unadjusted	(1.126)	(2.112)	(0.392)	(5.640)
5M		Adjusted	1.116	2.024	0.382	5.718
	376.7*	Unadjusted	(1.074)	(2.013)	(0.362)	(5.639)
Statistics	S2		C1	C1	C1	C1

* P<0.05
** P<0.01
*** P<0.001

S2 = two-way ANOVA and t-tests
C1 = ANCOVA

Table 11
Group mean organ weights adjusted to overall mean necropsy body weight
Treatment-free kill

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group and Sex	Body weight (g)		Organ weights (g): Adrenals	Kidneys	Spleen	Liver
1F		Adjusted	0.068	1.179	0.497	5.208
	230.8	Unadjusted	(0.069)	(1.200)	(0.511)	(5.302)
5F		Adjusted	0.071	1.316*	0.508	5.738**
	222.7	Unadjusted	(0.070)	(1.296)	(0.495)	(5.644)
Statistics	S2		C1	C1	C1	C1

Group and Sex	Body weight (g)		Organ weights (g): Heart	Brain	Thymus	Ovaries
1F		Adjusted	0.742	1.837	0.272	0.103
	230.8	Unadjusted	(0.756)	(1.842)	(0.283)	(0.103)
5F		Adjusted	0.752	1.861	0.332*	0.103
	222.7	Unadjusted	(0.738)	(1.855)	(0.321)	(0.103)
Statistics	S2		C1	C1	C1	C1

* P<0.05
** P<0.01
*** P<0.001

S2 = two-way ANOVA and t-tests
C1 = ANCOVA

Table 12
Group incidence macroscopic data – decedents

	Test article	Control		[		] .					
	Group	1	2	3	4	5 .					
	Level (ppm)	0	100	500	2500	5000 .					
COVANCE										PRINTED: 13-JAN-04	
HARROGATE, ENGLAND										PAGE: 1	
				DRAFT						STUDY NUMBER: 0535101	
							--- N U M B E R - O F - A N I M A L S - A F F E C T E D ---				
TABLE INCLUDES:											
SEX=ALL;GROUP=ALL;WEEKS=ALL						SEX:	----------MALE---------			--------FEMALE--------	
DEATH=D,M;SUBSET=ALL						GROUP:	-1-	-2-	-3-	-4-	-5-
ORGAN AND KEYWORD(S) OR PHRASE						NUMBER:	0	0	0	0	0
** TOP OF LIST **											
ANIMAL	NUMBER EXAMINED:						0	0	0	0	0
EYE	NUMBER EXAMINED:						0	0	0	0	0
OPTIC NERVE	NUMBER EXAMINED:						0	0	0	0	0
SKIN + SUBCUTIS	NUMBER EXAMINED:						0	0	0	0	0
FUR LOSS							0	0	0	0	0
MAMMARY GLAND	NUMBER EXAMINED:						0	0	0	0	0
MUSCLE	NUMBER EXAMINED:						0	0	0	0	0
FEMUR + MARROW	NUMBER EXAMINED:						0	0	0	0	0
STERNUM + MARROW	NUMBER EXAMINED:						0	0	0	0	0
SCIATIC NERVE	NUMBER EXAMINED:						0	0	0	0	0
LIVER	NUMBER EXAMINED:						0	0	0	0	0
SPLEEN	NUMBER EXAMINED:						0	0	0	0	0
PANCREAS	NUMBER EXAMINED:						0	0	0	0	0
MESENTERIC LN	NUMBER EXAMINED:						0	0	0	0	0

Table 12

Group incidence macroscopic data - decedents

Test article	Control		[		] .
Group	1	2	3	4	5 .
Level (ppm)	0	100	500	2500	5000 .

COVANCE
HARROGATE, ENGLAND

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DRAFT

STUDY NUMBER: 0535101

TABLE INCLUDES:
SEX=ALL;GROUP=ALL;WEEKS=ALL
DEATH=D,M;SUBSET=ALL

ORGAN AND KEYWORD(S) OR PHRASE		--- NUMBER-OF-ANIMALS-AFFECTED ---									
	SEX:	----------MALE---------					---------FEMALE--------				
	GROUP:	-1-	-2-	-3-	-4-	-5-	-1-	-2-	-3-	-4-	-5-
	NUMBER:	0	0	0	0	0	0	1	0	0	0
STOMACH	NUMBER EXAMINED:	0	0	0	0	0	0	1	0	0	0
DUODENUM	NUMBER EXAMINED:	0	0	0	0	0	0	1	0	0	0
JEJUNUM	NUMBER EXAMINED:	0	0	0	0	0	0	1	0	0	0
ILEUM	NUMBER EXAMINED:	0	0	0	0	0	0	1	0	0	0
CAECUM	NUMBER EXAMINED:	0	0	0	0	0	0	1	0	0	0
COLON	NUMBER EXAMINED:	0	0	0	0	0	0	1	0	0	0
RECTUM	NUMBER EXAMINED:	0	0	0	0	0	0	1	0	0	0
ADRENAL	NUMBER EXAMINED:	0	0	0	0	0	0	1	0	0	0
KIDNEY	NUMBER EXAMINED:	0	0	0	0	0	0	1	0	0	0
TESTIS	NUMBER EXAMINED:	0	0	0	0	0	0	0	0	0	0
EPIDIDYMIS	NUMBER EXAMINED:	0	0	0	0	0	0	0	0	0	0
OVARY	NUMBER EXAMINED:	0	0	0	0	0	0	1	0	0	0
RED		0	0	0	0	0	0	1	0	0	0
SEMINAL VESICLE	NUMBER EXAMINED:	0	0	0	0	0	0	0	0	0	0

Table 12

Group incidence macroscopic [ ] ents

Test article	Control					
Group	1	2	-	-	5	.
Level (ppm)	0	100	500	2500	5000	.

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TABLE INCLUDES:
SEX=ALL;GROUP=ALL;WEEKS=ALL
DEATH=D,M;SUBSET=ALL

ORGAN AND KEYWORD(S) OR PHRASE		--- NUMBER-OF-ANIMALS-AFFECTED ---									
	SEX:	---------MALE---------					---------FEMALE--------				
	GROUP:	-1-	-2-	-3-	-4-	-5-	-1-	-2-	-3-	-4-	-5-
	NUMBER:	0	0	0	0	0	0	1	0	0	0
URINARY BLADDER	NUMBER EXAMINED:	0	0	0	0	0	0	1	0	0	0
PROSTATE	NUMBER EXAMINED:	0	0	0	0	0	0	0	0	0	0
UTERUS	NUMBER EXAMINED:	0	0	0	0	0	0	1	0	0	0
VAGINA	NUMBER EXAMINED:	0	0	0	0	0	0	1	0	0	0
SALIVARY GLAND	NUMBER EXAMINED:	0	0	0	0	0	0	1	0	0	0
MANDIBULAR LN	NUMBER EXAMINED:	0	0	0	0	0	0	1	0	0	0
THYMUS	NUMBER EXAMINED:	0	0	0	0	0	0	1	0	0	0
LARGE		0	0	0	0	0	0	1	0	0	0
LUNG	NUMBER EXAMINED:	0	0	0	0	0	0	1	0	0	0
HEART	NUMBER EXAMINED:	0	0	0	0	0	0	1	0	0	0
AORTA	NUMBER EXAMINED:	0	0	0	0	0	0	1	0	0	0
TRACHEA	NUMBER EXAMINED:	0	0	0	0	0	0	1	0	0	0
OESOPHAGUS	NUMBER EXAMINED:	0	0	0	0	0	0	1	0	0	0
TONGUE	NUMBER EXAMINED:	0	0	0	0	0	0	1	0	0	0

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Table 12

Group incidence macroscopic data - decedents

	Test article	Control		[		] .
	Group	1	2	3	4	5 .
	Level (ppm)	0	100	500	2500	5000 .

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STUDY NUMBER: 0535101

TABLE INCLUDES:
SEX=ALL;GROUP=ALL;WEEKS=ALL
DEATH=D,M;SUBSET=ALL

ORGAN AND KEYWORD(S) OR PHRASE		--- NUMBER-OF-ANIMALS-AFFECTED ---									
	SEX:	----------MALE----------					---------FEMALE---------				
	GROUP:	-1-	-2-	-3-	-4-	-5-	-1-	-2-	-3-	-4-	-5-
	NUMBER:	0	0	0	0	0	0	1	0	0	0
THYROID	NUMBER EXAMINED:	0	0	0	0	0	0	1	0	0	0
PARATHYROID	NUMBER EXAMINED:	0	0	0	0	0	0	1	0	0	0
PITUITARY	NUMBER EXAMINED:	0	0	0	0	0	0	1	0	0	0
BRAIN	NUMBER EXAMINED:	0	0	0	0	0	0	1	0	0	0
SPINAL CORD	NUMBER EXAMINED:	0	0	0	0	0	0	1	0	0	0
HEAD	NUMBER EXAMINED:	0	0	0	0	0	0	1	0	0	0
BONE	NUMBER EXAMINED:	0	0	0	0	0	0	1	0	0	0
FRACTURE		0	0	0	0	0	0	1	0	0	0
TAIL	NUMBER EXAMINED:	0	0	0	0	0	0	1	0	0	0
FOOT/LEG	NUMBER EXAMINED:	0	0	0	0	0	0	1	0	0	0
ABDOMINAL CAVITY	NUMBER EXAMINED:	0	0	0	0	0	0	1	0	0	0

** END OF LIST **

Table 13
Group incidence macroscopic data - terminal kill

Test article	Control		[		] .
Group	1	2	3	4	5 .
Level (ppm)	0	100	500	2500	5000 .

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STUDY NUMBER: 0535101

TABLE INCLUDES:
SEX=ALL;GROUP=ALL;WEEKS=ALL
DEATH=T;SUBSET=ALL

ORGAN AND KEYWORD(S) OR PHRASE		--- NUMBER-OF-ANIMALS-AFFECTED ---									
	SEX:	----------MALE----------					---------FEMALE--------				
	GROUP:	-1-	-2-	-3-	-4-	-5-	-1-	-2-	-3-	-4-	-5-
	NUMBER:	10	10	10	10	10	10	9	10	10	10
** TOP OF LIST **											
ANIMAL	NUMBER EXAMINED:	10	10	10	10	10	10	9	10	10	10
NOT REMARKABLE		5	4	3	3	1	5	3	5	3	2
EYE	NUMBER EXAMINED:	10	10	10	10	10	10	9	10	10	10
OPTIC NERVE	NUMBER EXAMINED:	10	10	10	10	10	10	9	10	10	10
SKIN + SUBCUTIS	NUMBER EXAMINED:	10	10	10	10	10	10	9	10	10	10
MAMMARY GLAND	NUMBER EXAMINED:	10	10	10	10	10	10	9	10	10	10
MUSCLE	NUMBER EXAMINED:	10	10	10	10	10	10	9	10	10	10
FEMUR + MARROW	NUMBER EXAMINED:	10	10	10	10	10	10	9	10	10	10
STERNUM + MARROW	NUMBER EXAMINED:	10	10	10	10	10	10	9	10	10	10
SCIATIC NERVE	NUMBER EXAMINED:	10	10	10	10	10	10	9	10	10	10
LIVER	NUMBER EXAMINED:	10	10	10	10	10	10	9	10	10	10
LARGE		0	1	0	0	3	0	0	0	0	0
DARK		0	1	0	0	0	0	0	0	0	0
MOTTLED		1	1	1	2	4	0	0	0	0	3
PALE		1	0	1	1	0	0	0	0	0	3

Table 13

Group incidence macroscopic data - terminal kill

Test article	Control		[			] .
Group	1	2	3	4	5	.
Level (ppm)	0	100	500	2500	5000	.

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STUDY NUMBER: 0535101

TABLE INCLUDES:
SEX=ALL;GROUP=ALL;WEEKS=ALL
DEATH=T;SUBSET=ALL

ORGAN AND KEYWORD(S) OR PHRASE		--- NUMBER-OF-ANIMALS-AFFECTED ---									
	SEX:	----------MALE----------					---------FEMALE--------				
	GROUP:	-1-	-2-	-3-	-4-	-5-	-1-	-2-	-3-	-4-	-5-
	NUMBER:	10	10	10	10	10	10	9	10	10	10
SPLEEN	NUMBER EXAMINED:	10	10	10	10	10	10	9	10	10	10
ABNORMAL SHAPE		0	0	0	1	0	0	1	0	0	0
PANCREAS	NUMBER EXAMINED:	10	10	10	10	10	10	9	10	10	10
DARK		0	0	0	0	0	0	2	0	2	4
MESENTERIC LN	NUMBER EXAMINED:	10	10	10	10	10	10	9	10	10	10
INJECTION LESION		0	0	0	0	0	0	0	0	1	0
STOMACH	NUMBER EXAMINED:	10	10	10	10	10	10	9	10	10	10
ABNORMAL APPEARANCE		0	0	1	0	0	0	0	0	0	0
RED		0	0	1	0	0	0	0	0	0	0
RAISED AREA		0	0	0	0	1	0	0	0	0	0
YELLOW		0	0	0	0	1	1	2	1	0	0
PALE		0	0	0	0	0	1	1	0	2	1
DUODENUM	NUMBER EXAMINED:	10	10	10	10	10	10	9	10	10	10
PALE		0	1	0	0	0	0	0	0	0	0
THICK		0	1	0	0	0	0	1	0	0	0
YELLOW		0	0	0	0	0	0	0	1	0	0
JEJUNUM	NUMBER EXAMINED:	10	10	10	10	10	10	9	10	10	10
ILEUM	NUMBER EXAMINED:	10	10	10	10	10	10	9	10	10	10

Table 13

Group incidence macroscopic data - terminal kill

Test article	Control		[		] .
Group	1	2	3	4	5 .
Level (ppm)	0	100	500	2500	5000 .

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TABLE INCLUDES:
SEX=ALL;GROUP=ALL;WEEKS=ALL
DEATH=T;SUBSET=ALL

ORGAN AND KEYWORD(S) OR PHRASE		--- NUMBER-OF-ANIMALS-AFFECTED ---									
	SEX:	----------MALE---------					---------FEMALE--------				
	GROUP:	-1-	-2-	-3-	-4-	-5-	-1-	-2-	-3-	-4-	-5-
	NUMBER:	10	10	10	10	10	10	9	10	10	10
CAECUM	NUMBER EXAMINED:	10	10	10	10	10	10	9	10	10	10
INJECTION LESION		1	2	2	0	1	1	0	3	0	1
DARK		0	0	0	0	0	0	0	1	0	0
RED		0	0	0	0	0	0	0	0	1	0
COLON	NUMBER EXAMINED:	10	10	10	10	10	10	9	10	10	10
IMPACTION		0	0	0	0	0	0	0	0	1	0
RECTUM	NUMBER EXAMINED:	10	10	10	10	10	10	9	10	10	10
ADRENAL	NUMBER EXAMINED:	10	10	10	10	10	10	9	10	10	10
DARK		1	1	0	1	0	0	1	0	0	0
DARK FOCUS		0	0	0	0	0	0	0	0	1	0
LARGE		0	0	0	0	0	0	0	2	1	2
KIDNEY	NUMBER EXAMINED:	10	10	10	10	10	10	9	10	10	10
DARK FOCUS		0	0	1	0	0	0	0	0	0	0
PALE		0	0	2	1	0	0	0	0	0	0
PELVIC DILATATION		1	0	0	0	0	0	0	0	0	0
ONE NOT PRESENT		0	0	0	0	0	0	0	0	1	0
LARGE		0	0	0	0	0	0	0	0	1	0
TESTIS	NUMBER EXAMINED:	10	10	10	10	10	0	0	0	0	0
SMALL		0	0	1	0	1	0	0	0	0	0
SOFT		0	0	0	0	1	0	0	0	0	0
DARK		0	0	1	1	0	0	0	0	0	0

** CONTINUED ON NEXT PAGE **

Table 13

Group incidence macroscopic data - terminal kill

Test article	Control		[		] .
Group	1	2	3	4	5 .
Level (ppm)	0	100	500	2500	5000 .

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STUDY NUMBER: 0535101

TABLE INCLUDES:
SEX=ALL;GROUP=ALL;WEEKS=ALL
DEATH=T;SUBSET=ALL

		--- NUMBER-OF-ANIMALS-AFFECTED ---									
	SEX:	----------MALE---------					---------FEMALE--------				
	GROUP:	-1-	-2-	-3-	-4-	-5-	-1-	-2-	-3-	-4-	-5-
ORGAN AND KEYWORD(S) OR PHRASE	NUMBER:	10	10	10	10	10	10	9	10	10	10
** FROM PREVIOUS PAGE **											
TESTIS ..... NUMBER EXAMINED:		10	10	10	10	10	0	0	0	0	0
RED		0	1	0	1	0	0	0	0	0	0
EPIDIDYMIS ..... NUMBER EXAMINED:		10	10	10	10	10	0	0	0	0	0
RED		0	0	0	1	0	0	0	0	0	0
OVARY ..... NUMBER EXAMINED:		0	0	0	0	0	10	9	10	10	10
LARGE		0	0	0	0	0	0	1	0	1	1
SEMINAL VESICLE ..... NUMBER EXAMINED:		10	10	10	10	10	0	0	0	0	0
URINARY BLADDER ..... NUMBER EXAMINED:		10	10	10	10	10	10	9	10	10	10
DISTENSION		2	0	1	2	0	1	1	0	0	1
DARK		0	0	1	0	0	0	0	0	0	0
PROSTATE ..... NUMBER EXAMINED:		10	10	10	10	10	0	0	0	0	0
UTERUS ..... NUMBER EXAMINED:		0	0	0	0	0	10	9	10	10	10
DISTENSION		0	0	0	0	0	1	2	0	1	1
RED		0	0	0	0	0	0	0	0	0	1
VAGINA ..... NUMBER EXAMINED:		0	0	0	0	0	10	9	10	10	10
SALIVARY GLAND ..... NUMBER EXAMINED:		10	10	10	10	10	10	9	10	10	10

Table 13

Group incidence macroscopic data - terminal kill

Test article	Control		[			] .
Group	1	2	3	4	5	.
Level (ppm)	0	100	500	2500	5000	.

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HARROGATE, ENGLAND

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STUDY NUMBER: 0535101

TABLE INCLUDES:
SEX=ALL;GROUP=ALL;WEEKS=ALL
DEATH=T;SUBSET=ALL

ORGAN AND KEYWORD(S) OR PHRASE		--- NUMBER-OF-ANIMALS-AFFECTED ---									
	SEX:	----------MALE----------					---------FEMALE--------				
	GROUP:	-1-	-2-	-3-	-4-	-5-	-1-	-2-	-3-	-4-	-5-
	NUMBER:	10	10	10	10	10	10	9	10	10	10
MANDIBULAR LN	NUMBER EXAMINED:	10	10	10	10	10	10	9	10	10	10
LARGE		0	1	0	0	0	0	0	0	0	0
RED FOCUS		0	1	0	0	0	0	0	0	0	0
RED		0	0	0	0	0	0	0	1	0	0
THYMUS	NUMBER EXAMINED:	10	10	10	10	10	10	9	10	10	10
LARGE		1	0	0	0	0	0	0	0	0	1
THICK		1	0	0	0	1	0	0	0	0	0
RED AREA		0	0	0	0	0	1	0	0	0	0
RED FOCUS		0	0	0	0	0	0	1	0	0	0
LUNG	NUMBER EXAMINED:	10	10	10	10	10	10	9	10	10	10
RED FOCUS		0	1	1	0	0	0	0	0	0	0
DARK FOCUS		0	0	0	0	1	0	0	0	0	0
PALE AREA		0	0	0	0	0	1	0	0	0	0
PALE		0	0	0	0	0	0	0	0	0	1
HEART	NUMBER EXAMINED:	10	10	10	10	10	10	9	10	10	10
AORTA	NUMBER EXAMINED:	10	10	10	10	10	10	9	10	10	10
TRACHEA	NUMBER EXAMINED:	10	10	10	10	10	10	9	10	10	10
OESOPHAGUS	NUMBER EXAMINED:	10	10	10	10	10	10	9	10	10	10
TONGUE	NUMBER EXAMINED:	10	10	10	10	10	10	9	10	10	10

Table 13

Group incidence macroscopic data - terminal kill

Test article	Control		[			] .
Group	1	2	3	4	5	.
Level (ppm)	0	100	500	2500	5000	.

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STUDY NUMBER: 0535101

TABLE INCLUDES:
SEX=ALL;GROUP=ALL;WEEKS=ALL
DEATH=T;SUBSET=ALL

ORGAN AND KEYWORD(S) OR PHRASE		--- NUMBER-OF-ANIMALS-AFFECTED ---									
	SEX:	----------MALE---------					---------FEMALE--------				
	GROUP:	-1-	-2-	-3-	-4-	-5-	-1-	-2-	-3-	-4-	-5-
	NUMBER:	10	10	10	10	10	10	9	10	10	10
THYROID	NUMBER EXAMINED:	10	10	10	10	10	10	9	10	10	10
PARATHYROID	NUMBER EXAMINED:	10	10	10	10	10	10	9	10	10	10
PITUITARY	NUMBER EXAMINED:	10	10	10	10	10	10	9	10	10	10
BRAIN	NUMBER EXAMINED:	10	10	10	10	10	10	9	10	10	10
SPINAL CORD	NUMBER EXAMINED:	10	10	10	10	10	10	9	10	10	10
HEAD	NUMBER EXAMINED:	10	10	10	10	10	10	9	10	10	10
BONE	NUMBER EXAMINED:	10	10	10	10	10	10	9	10	10	10
TAIL	NUMBER EXAMINED:	10	10	10	10	10	10	9	10	10	10
KINKED		0	0	0	0	1	0	0	0	0	2
TIP MISSING		0	0	0	0	0	0	0	0	1	0
FOOT/LEG	NUMBER EXAMINED:	10	10	10	10	10	10	9	10	10	10
FUR LOSS		0	0	0	1	0	0	0	0	0	0
ABDOMINAL CAVITY	NUMBER EXAMINED:	10	10	10	10	10	10	9	10	10	10
ABNORMAL CONTENTS		0	0	0	0	0	0	0	0	1	0

** END OF LIST **

Table 14
Group incidence macroscopic data - treatment-free

	Test article	Control		[		]
	Group	1	2	3	4	5
	Level (ppm)	0	100	500	2500	5000

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STUDY NUMBER: 0535101

TABLE INCLUDES:
SEX=ALL;GROUP=ALL;WEEKS=ALL
DEATH=U;SUBSET=ALL

ORGAN AND KEYWORD(S) OR PHRASE		--- NUMBER-OF-ANIMALS-AFFECTED ---									
SEX:		----------MALE---------					---------FEMALE--------				
GROUP:		-1-	-2-	-3-	-4-	-5-	-1-	-2-	-3-	-4-	-5-
NUMBER:		5	0	0	0	5	5	0	0	0	5
** TOP OF LIST **											
ANIMAL	NUMBER EXAMINED:	5	0	0	0	5	5	0	0	0	5
NOT REMARKABLE		2	0	0	0	1	2	0	0	0	3
EYE	NUMBER EXAMINED:	5	0	0	0	5	5	0	0	0	5
OPTIC NERVE	NUMBER EXAMINED:	5	0	0	0	5	5	0	0	0	5
SKIN + SUBCUTIS	NUMBER EXAMINED:	5	0	0	0	5	5	0	0	0	5
MAMMARY GLAND	NUMBER EXAMINED:	5	0	0	0	5	5	0	0	0	5
MUSCLE	NUMBER EXAMINED:	5	0	0	0	5	5	0	0	0	5
FEMUR + MARROW	NUMBER EXAMINED:	5	0	0	0	5	5	0	0	0	5
STERNUM + MARROW	NUMBER EXAMINED:	5	0	0	0	5	5	0	0	0	5
SCIATIC NERVE	NUMBER EXAMINED:	5	0	0	0	5	5	0	0	0	5
LIVER	NUMBER EXAMINED:	5	0	0	0	5	5	0	0	0	5
MOTTLED		0	0	0	0	3	0	0	0	0	0
SPLEEN	NUMBER EXAMINED:	5	0	0	0	5	5	0	0	0	5
PANCREAS	NUMBER EXAMINED:	5	0	0	0	5	5	0	0	0	5
DARK		0	0	0	0	0	1	0	0	0	0

Table 14

Group incidence macroscopic data - treatment-free kill

Test article	Control		[		] .
Group	1	2	3	4	5 .
Level (ppm)	0	100	500	2500	5000 .

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STUDY NUMBER: 0535101

TABLE INCLUDES:
SEX=ALL;GROUP=ALL;WEEKS=ALL
DEATH=U;SUBSET=ALL

ORGAN AND KEYWORD(S) OR PHRASE		--- NUMBER-OF-ANIMALS-AFFECTED ---									
	SEX:	----------MALE---------					---------FEMALE--------				
	GROUP:	-1-	-2-	-3-	-4-	-5-	-1-	-2-	-3-	-4-	-5-
	NUMBER:	5	0	0	0	5	5	0	0	0	5
MESENTERIC LN	NUMBER EXAMINED:	5	0	0	0	5	5	0	0	0	5
STOMACH	NUMBER EXAMINED:	5	0	0	0	5	5	0	0	0	5
YELLOW		0	0	0	0	0	1	0	0	0	0
DUODENUM	NUMBER EXAMINED:	5	0	0	0	5	5	0	0	0	5
JEJUNUM	NUMBER EXAMINED:	5	0	0	0	5	5	0	0	0	5
ILEUM	NUMBER EXAMINED:	5	0	0	0	5	5	0	0	0	5
CAECUM	NUMBER EXAMINED:	5	0	0	0	5	5	0	0	0	5
INJECTION LESION		1	0	0	0	0	0	0	0	0	1
COLON	NUMBER EXAMINED:	5	0	0	0	5	5	0	0	0	5
RECTUM	NUMBER EXAMINED:	5	0	0	0	5	5	0	0	0	5
ADRENAL	NUMBER EXAMINED:	5	0	0	0	5	5	0	0	0	5
KIDNEY	NUMBER EXAMINED:	5	0	0	0	5	5	0	0	0	5
PELVIC DILATATION		2	0	0	0	0	0	0	0	0	0
MOTTLED		1	0	0	0	0	0	0	0	0	0
TESTIS	NUMBER EXAMINED:	5	0	0	0	5	0	0	0	0	0
EPIDIDYMIS	NUMBER EXAMINED:	5	0	0	0	5	0	0	0	0	0

Table 14

Group incidence macroscopic data - treatment-free kill

Test article	Control		[		] .
Group	1	2	3	4	5 .
Level (ppm)	0	100	500	2500	5000 .

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STUDY NUMBER: 0535101

TABLE INCLUDES:
SEX=ALL;GROUP=ALL;WEEKS=ALL
DEATH=U;SUBSET=ALL

ORGAN AND KEYWORD(S) OR PHRASE		--- NUMBER-OF-ANIMALS-AFFECTED ---									
	SEX:	----------MALE----------					---------FEMALE--------				
	GROUP:	-1-	-2-	-3-	-4-	-5-	-1-	-2-	-3-	-4-	-5-
	NUMBER:	5	0	0	0	5	5	0	0	0	5
OVARY	NUMBER EXAMINED:	0	0	0	0	0	5	0	0	0	5
LARGE		0	0	0	0	0	2	0	0	0	1
SEMINAL VESICLE	NUMBER EXAMINED:	5	0	0	0	5	0	0	0	0	0
URINARY BLADDER	NUMBER EXAMINED:	5	0	0	0	5	5	0	0	0	5
DISTENSION		0	0	0	0	2	0	0	0	0	0
PROSTATE	NUMBER EXAMINED:	5	0	0	0	5	0	0	0	0	0
UTERUS	NUMBER EXAMINED:	0	0	0	0	0	5	0	0	0	5
DISTENSION		0	0	0	0	0	1	0	0	0	1
VAGINA	NUMBER EXAMINED:	0	0	0	0	0	5	0	0	0	5
SALIVARY GLAND	NUMBER EXAMINED:	5	0	0	0	5	5	0	0	0	5
MANDIBULAR LN	NUMBER EXAMINED:	5	0	0	0	5	5	0	0	0	5
THYMUS	NUMBER EXAMINED:	5	0	0	0	5	5	0	0	0	5
LUNG	NUMBER EXAMINED:	5	0	0	0	5	5	0	0	0	5
PALE AREA		1	0	0	0	0	0	0	0	0	0
HEART	NUMBER EXAMINED:	5	0	0	0	5	5	0	0	0	5
AORTA	NUMBER EXAMINED:	5	0	0	0	5	5	0	0	0	5

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Table 14

Group incidence macroscopic data - treatment-free kill

Test article	Control		[		] .
Group	1	2	3	4	5 .
Level (ppm)	0	100	500	2500	5000 .

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TABLE INCLUDES:
SEX=ALL;GROUP=ALL;WEEKS=ALL
DEATH=U;SUBSET=ALL

		--- NUMBER-OF-ANIMALS-AFFECTED ---									
	SEX:	----------MALE----------					---------FEMALE---------				
	GROUP:	-1-	-2-	-3-	-4-	-5-	-1-	-2-	-3-	-4-	-5-
ORGAN AND KEYWORD(S) OR PHRASE	NUMBER:	5	0	0	0	5	5	0	0	0	5
TRACHEA	NUMBER EXAMINED:	5	0	0	0	5	5	0	0	0	5
OESOPHAGUS	NUMBER EXAMINED:	5	0	0	0	5	5	0	0	0	5
TONGUE	NUMBER EXAMINED:	5	0	0	0	5	5	0	0	0	5
THYROID	NUMBER EXAMINED:	5	0	0	0	5	5	0	0	0	5
PARATHYROID	NUMBER EXAMINED:	5	0	0	0	5	5	0	0	0	5
PITUITARY	NUMBER EXAMINED:	5	0	0	0	5	5	0	0	0	5
BRAIN	NUMBER EXAMINED:	5	0	0	0	5	5	0	0	0	5
SPINAL CORD	NUMBER EXAMINED:	5	0	0	0	5	5	0	0	0	5
HEAD	NUMBER EXAMINED:	5	0	0	0	5	5	0	0	0	5
BONE	NUMBER EXAMINED:	5	0	0	0	5	5	0	0	0	5
TAIL	NUMBER EXAMINED:	5	0	0	0	5	5	0	0	0	5
FOOT/LEG	NUMBER EXAMINED:	5	0	0	0	5	5	0	0	0	5
ABDOMINAL CAVITY	NUMBER EXAMINED:	5	0	0	0	5	5	0	0	0	5

** END OF LIST **

Table 15
Group incidence microscopic data - decedents

	Test article	Control		[		] .
	Group	1	2	3	4	5 .
	Level (ppm)	0	100	500	2500	5000 .

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TABLE INCLUDES:
SEX=ALL;GROUP=ALL;WEEKS=ALL
DEATH=D,M;FIND=ALL;SUBSET=ALL

		--- N U M B E R - O F - A N I M A L S - A F F E C T E D ---									
	SEX:	----------MALE---------					---------FEMALE--------				
	GROUP:	-1-	-2-	-3-	-4-	-5-	-1-	-2-	-3-	-4-	-5-
ORGAN AND FINDING DESCRIPTION	NUMBER:	0	0	0	0	0	0	1	0	0	0
** TOP OF LIST **											
SKIN + SUBCUTIS	NUMBER EXAMINED:	0	0	0	0	0	0	1	0	0	0
--ADNEXAL ATROPHY		0	0	0	0	0	0	1	0	0	0
MUSCLE	NUMBER EXAMINED:	0	0	0	0	0	0	1	0	0	0
--MYOPATHY, QUADRICEPS MUSCLE		0	0	0	0	0	0	1	0	0	0
STERNUM + MARROW	NUMBER EXAMINED:	0	0	0	0	0	0	1	0	0	0
--STEATITIS		0	0	0	0	0	0	1	0	0	0
LIVER	NUMBER EXAMINED:	0	0	0	0	0	0	1	0	0	0
--INFLAMMATORY CELL FOCI		0	0	0	0	0	0	1	0	0	0
SPLEEN	NUMBER EXAMINED:	0	0	0	0	0	0	1	0	0	0
--PIGMENT		0	0	0	0	0	0	1	0	0	0
KIDNEY	NUMBER EXAMINED:	0	0	0	0	0	0	1	0	0	0
--INFLAMMATORY CELL FOCI		0	0	0	0	0	0	1	0	0	0
OVARY	NUMBER EXAMINED:	0	0	0	0	0	0	1	0	0	0
--AGONAL CONGESTION/HAEMORRHAGE		0	0	0	0	0	0	1	0	0	0
UTERUS	NUMBER EXAMINED:	0	0	0	0	0	0	1	0	0	0
--PRO-OESTRUS		0	0	0	0	0	0	1	0	0	0
BONE	NUMBER EXAMINED:	0	0	0	0	0	0	1	0	0	0
--FRACTURE		0	0	0	0	0	0	1	0	0	0
--HAEMORRHAGE		0	0	0	0	0	0	1	0	0	0

Table 15

Group incidence microscopic data - decedents

Test article	Control		[			] .
Group	1	2	3	4	5	.
Level (ppm)	0	100	500	2500	5000	.

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TABLE INCLUDES:
SEX=ALL;GROUP=ALL;WEEKS=ALL
DEATH=D,M;FIND=ALL;SUBSET=ALL

ORGAN AND FINDING DESCRIPTION		--- NUMBER-OF-ANIMALS-AFFECTED ---									
	SEX:	----------MALE----------					---------FEMALE--------				
	GROUP:	-1-	-2-	-3-	-4-	-5-	-1-	-2-	-3-	-4-	-5-
	NUMBER:	0	0	0	0	0	0	1	0	0	0
CAUSE OF DEMISE	NUMBER EXAMINED:	0	0	0	0	0	0	1	0	0	0
--ACCIDENTAL		0	0	0	0	0	0	1	0	0	0

** END OF LIST **

Table 16
Group incidence microscopic data – terminal

	Test article	Control		[		] .
	Group	1	2	3	4	5 .
	Level (ppm)	0	100	500	2500	5000 .

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TABLE INCLUDES:
SEX=ALL;GROUP=ALL;WEEKS=ALL
DEATH=T;FIND=ALL;SUBSET=ALL

ORGAN AND FINDING DESCRIPTION		--- NUMBER-OF-ANIMALS-AFFECTED ---									
	SEX:	----------MALE---------					---------FEMALE--------				
	GROUP:	-1-	-2-	-3-	-4-	-5-	-1-	-2-	-3-	-4-	-5-
	NUMBER:	10	10	10	10	10	10	9	10	10	10
** TOP OF LIST **											
OPTIC NERVE	NUMBER EXAMINED:	10	0	0	0	10	10	0	0	0	10
--NEUROPATHY		0	0	0	0	0	0	0	0	0	1
MUSCLE	NUMBER EXAMINED:	10	10	10	10	10	10	9	10	10	10
--MYOPATHY, OTHER MUSCLE		1	1	1	5	9	1	3	3	4	8
--MYOPATHY, QUADRICEPS MUSCLE		3	2	3	6	6	4	2	3	4	4
--INFLAMMATORY CELL FOCI		0	1	0	0	0	0	1	1	0	0
FEMUR + MARROW	NUMBER EXAMINED:	10	0	0	0	10	10	0	0	0	10
--MARROW ATROPHY		0	0	0	0	2	1	0	0	0	0
STERNUM + MARROW	NUMBER EXAMINED:	10	0	1	0	10	10	0	1	0	10
--STEATITIS		0	0	1	0	0	0	0	1	0	0
LIVER	NUMBER EXAMINED:	10	10	10	10	10	10	9	10	10	10
--AGONAL CONGESTION/HAEMORRHAGE		0	2	1	2	4	0	0	0	0	3
--PIGMENT		0	0	1	0	1	0	2	1	0	0
--HEPATOCYTE VACUOLATION		0	1	0	0	1	0	0	0	2	10
--INFLAMMATORY CELL FOCI		10	10	10	10	10	10	9	10	10	10
--SINGLE CELL NECROSIS		4	8	7	8	4	4	5	3	7	2
--FOCAL NECROSIS		1	0	1	0	0	0	0	2	0	0
--CENTRILOBULAR HYPERTROPHY/EOSINOPHILIA		0	5	5	5	9	0	0	0	0	5
--PIGMENTED HISTIOCYTES		0	0	1	0	0	0	1	0	0	0
SPLEEN	NUMBER EXAMINED:	10	0	0	1	10	10	1	0	0	10
--PIGMENT		8	0	0	1	10	10	1	0	0	10
--ACCESSORY SPLEEN		0	0	0	1	0	0	0	0	0	0

** CONTINUED ON NEXT PAGE **

Table 16

Group incidence microscopic data - terminal kill

Test article	Control		[		] .
Group	1	2	3	4	5 .
Level (ppm)	0	100	500	2500	5000 .

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TABLE INCLUDES:
SEX=ALL;GROUP=ALL;WEEKS=ALL
DEATH=T;FIND=ALL;SUBSET=ALL

ORGAN AND FINDING DESCRIPTION		--- NUMBER-OF-ANIMALS-AFFECTED ---									
SEX:		----------MALE----------					---------FEMALE--------				
GROUP:		-1-	-2-	-3-	-4-	-5-	-1-	-2-	-3-	-4-	-5-
NUMBER:		10	10	10	10	10	10	9	10	10	10
** FROM PREVIOUS PAGE **											
SPLEEN	NUMBER EXAMINED:	10	0	0	1	10	10	1	0	0	10
--DEFORMITY		0	0	0	0	0	0	1	0	0	0
--HAEMOPOIESIS		0	0	0	0	1	0	0	0	0	0
PANCREAS	NUMBER EXAMINED:	10	10	9	10	10	10	9	10	10	10
--LOBULAR ATROPHY		2	3	0	0	0	0	1	0	1	0
--DEGRANULATION		0	0	0	0	0	1	0	0	2	8
--AGONAL CONGESTION/HAEMORRHAGE		0	0	0	0	0	0	2	0	2	2
--ACINAR CELL HYPERTROPHY		0	0	0	1	0	1	0	0	0	0
MESENTERIC LN	NUMBER EXAMINED:	10	0	0	0	10	10	0	0	1	10
--BARBITURATE LYSIS		0	0	0	0	0	0	0	0	1	0
STOMACH	NUMBER EXAMINED:	10	0	2	0	10	10	2	1	2	10
--SQUAMOUS CYST		0	0	0	0	1	0	0	0	0	0
--CYST		0	0	0	0	0	1	0	0	0	0
--AGONAL CONGESTION/HAEMORRHAGE		0	0	2	0	0	0	0	0	0	0
--OEDEMA		0	0	0	0	1	0	0	0	1	0
--LIMITING RIDGE GASTRITIS		0	0	1	0	0	1	0	0	1	0
--EROSION/ULCER		0	0	0	0	0	0	0	0	0	1
DUODENUM	NUMBER EXAMINED:	10	1	0	0	10	10	1	1	0	10
--EROSION/ULCER		0	0	0	0	0	0	0	0	0	1
ILEUM	NUMBER EXAMINED:	10	0	0	0	10	10	0	0	0	10
--BARBITURATE LYSIS		0	0	0	0	0	1	0	0	0	0

Table 16

Group incidence microscopic data - terminal kill

	Test article	Control		[			] .
	Group	1	2	3	4	5	.
	Level (ppm)	0	100	500	2500	5000	.

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TABLE INCLUDES:
SEX=ALL;GROUP=ALL;WEEKS=ALL
DEATH=T;FIND=ALL;SUBSET=ALL

ORGAN AND FINDING DESCRIPTION		--- NUMBER-OF-ANIMALS-AFFECTED ---									
	SEX:	----------MALE---------					---------FEMALE--------				
	GROUP:	-1-	-2-	-3-	-4-	-5-	-1-	-2-	-3-	-4-	-5-
	NUMBER:	10	10	10	10	10	10	9	10	10	10
CAECUM	NUMBER EXAMINED:	10	2	2	0	10	10	0	4	1	10
--BARBITURATE LYSIS		1	2	2	0	1	1	0	4	1	1
COLON	NUMBER EXAMINED:	10	0	0	0	10	10	0	0	0	10
--NEMATODE		0	0	0	0	1	0	0	0	0	0
RECTUM	NUMBER EXAMINED:	10	0	0	0	10	10	0	0	0	10
--NEMATODE		0	0	0	0	1	1	0	0	0	0
ADRENAL	NUMBER EXAMINED:	10	1	0	1	10	10	1	2	2	10
--AGONAL CONGESTION/HAEMORRHAGE		1	1	0	1	0	0	1	1	1	1
KIDNEY	NUMBER EXAMINED:	10	0	3	1	10	10	0	0	1	10
--DEVELOPMENTAL ANOMALY		0	0	0	0	0	0	0	0	1	0
--AGONAL CONGESTION/HAEMORRHAGE		0	0	1	0	0	0	0	0	0	0
--HYALINE DROPLETS		7	0	3	1	3	0	0	0	0	0
--HYDRONEPHROSIS		2	0	0	0	6	3	0	0	1	1
--CASTS		0	0	0	0	0	1	0	0	0	0
--FOCAL NEPHROPATHY		2	0	1	0	3	2	0	0	0	1
--PAPILLARY MINERALISATION		1	0	0	0	1	3	0	0	0	0
--PELVIC MINERALISATION		0	0	0	0	2	2	0	0	0	2
--CORTICOMEDULLARY MINERALISATION		0	0	0	0	0	5	0	0	0	0
--CORTICAL MINERALISATION		2	0	1	0	1	0	0	0	0	0
--INFLAMMATORY CELL FOCI		2	0	0	0	2	1	0	0	0	0
TESTIS	NUMBER EXAMINED:	10	1	2	2	10	0	0	0	0	0
--TUBULAR ATROPHY		0	0	1	0	2	0	0	0	0	0

** CONTINUED ON NEXT PAGE **

Table 16

Group incidence microscopic data - terminal kill

Test article	Control		[		] .
Group	1	2	3	4	5 .
Level (ppm)	0	100	500	2500	5000 .

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TABLE INCLUDES:
SEX=ALL;GROUP=ALL;WEEKS=ALL
DEATH=T;FIND=ALL;SUBSET=ALL

ORGAN AND FINDING DESCRIPTION		--- NUMBER-OF-ANIMALS-AFFECTED ---									
SEX:		----------MALE----------					---------FEMALE--------				
GROUP:		-1-	-2-	-3-	-4-	-5-	-1-	-2-	-3-	-4-	-5-
NUMBER:		10	10	10	10	10	10	9	10	10	10
** FROM PREVIOUS PAGE **											
TESTIS	NUMBER EXAMINED:	10	1	2	2	10	0	0	0	0	0
--AGONAL CONGESTION/HAEMORRHAGE		0	1	1	2	0	0	0	0	0	0
EPIDIDYMIS	NUMBER EXAMINED:	10	0	0	1	10	0	0	0	0	0
--OLIGOSPERMIA		0	0	0	0	1	0	0	0	0	0
--AGONAL CONGESTION/HAEMORRHAGE		0	0	0	1	0	0	0	0	0	0
--INFLAMMATORY CELL FOCI		4	0	0	1	1	0	0	0	0	0
OVARY	NUMBER EXAMINED:	0	0	0	0	0	10	1	0	1	10
--OESTROUS CYCLE		0	0	0	0	0	0	0	0	1	1
--CYST		0	0	0	0	0	0	1	0	0	0
URINARY BLADDER	NUMBER EXAMINED:	10	0	2	2	10	10	1	0	0	10
--BARBITURATE LYSIS		3	0	2	1	0	2	1	0	0	1
--COLLOID PLUG		0	0	0	1	0	0	0	0	0	0
--INFLAMMATORY CELL FOCI		0	0	0	0	0	1	0	0	0	0
PROSTATE	NUMBER EXAMINED:	10	0	0	0	10	0	0	0	0	0
--INFLAMMATORY CELL FOCI		2	0	0	0	1	0	0	0	0	0
UTERUS	NUMBER EXAMINED:	0	0	0	0	0	10	2	0	1	10
--PRO-OESTRUS		0	0	0	0	0	4	2	0	1	2
--OESTRUS		0	0	0	0	0	1	0	0	0	2
--METOESTRUS		0	0	0	0	0	1	0	0	0	1
--DIOESTRUS		0	0	0	0	0	4	0	0	0	5
--AGONAL CONGESTION/HAEMORRHAGE		0	0	0	0	0	0	0	0	0	1

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Table 16

Group incidence microscopic data - terminal kill

Test article	Control		[			]
Group	1	2	3	4	5	
Level (ppm)	0	100	500	2500	5000	

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STUDY NUMBER: 0535101

TABLE INCLUDES:
SEX=ALL;GROUP=ALL;WEEKS=ALL
DEATH=T;FIND=ALL;SUBSET=ALL

		--- NUMBER-OF-ANIMALS-AFFECTED ---									
	SEX:	----------MALE---------					---------FEMALE--------				
	GROUP:	-1-	-2-	-3-	-4-	-5-	-1-	-2-	-3-	-4-	-5-
ORGAN AND FINDING DESCRIPTION	NUMBER:	10	10	10	10	10	10	9	10	10	10
MANDIBULAR LN	NUMBER EXAMINED:	10	1	0	0	10	10	0	1	0	10
--AGONAL CONGESTION/HAEMORRHAGE		0	1	0	0	0	0	0	1	0	0
--HISTIOCYTE FOCI		0	1	0	0	0	0	0	0	0	0
--LYMPHOID HYPERPLASIA		2	1	0	0	0	2	0	0	0	1
THYMUS	NUMBER EXAMINED:	10	0	0	0	10	10	1	0	0	10
--CYST		3	0	0	0	3	6	1	0	0	2
--ECTOPIC PARATHYROID		0	0	0	0	0	1	0	0	0	0
--AGONAL CONGESTION/HAEMORRHAGE		0	0	0	0	0	1	1	0	0	0
--EPITHELIAL HYPERPLASIA		0	0	0	0	1	0	0	0	0	3
LUNG	NUMBER EXAMINED:	10	1	1	0	10	10	0	0	0	10
--AGONAL CONGESTION/HAEMORRHAGE		0	1	1	0	1	0	0	0	0	0
--FOAMY HISTIOCYTES		4	0	0	0	4	2	0	0	0	5
--PIGMENTED HISTIOCYTES		0	0	0	0	0	0	0	0	0	1
--OSSEOUS METAPLASIA		0	0	0	0	1	0	0	0	0	0
--INFLAMMATORY CELL FOCI		3	1	1	0	5	4	0	0	0	1
--PNEUMONITIS		0	0	0	0	1	0	0	0	0	0
HEART	NUMBER EXAMINED:	10	10	10	10	10	10	9	10	10	10
--INFLAMMATORY CELL FOCI		0	2	1	0	0	0	1	0	0	0
--MYOCARDIAL DEGENERATION/NECROSIS		1	2	4	8	10	0	1	0	9	10
THYROID	NUMBER EXAMINED:	10	0	0	0	10	10	0	0	0	10
--ECTOPIC THYMUS		0	0	0	0	0	0	0	0	0	1
--CYST		4	0	0	0	1	1	0	0	0	2
--C-CELL HYPERPLASIA		0	0	0	0	0	0	0	0	0	1

Table 16

Group incidence microscopic data - terminal kill

Test article	Control		[			] .
Group	1	2	3	4	5	.
Level (ppm)	0	100	500	2500	5000	.

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TABLE INCLUDES:
SEX=ALL;GROUP=ALL;WEEKS=ALL
DEATH=T;FIND=ALL;SUBSET=ALL

ORGAN AND FINDING DESCRIPTION		--- NUMBER-OF-ANIMALS-AFFECTED ---									
	SEX:	----------MALE----------					----------FEMALE----------				
	GROUP:	-1-	-2-	-3-	-4-	-5-	-1-	-2-	-3-	-4-	-5-
	NUMBER:	10	10	10	10	10	10	9	10	10	10
PITUITARY	NUMBER EXAMINED:	10	0	0	0	10	10	0	0	0	10
--CYST		1	0	0	0	0	0	0	0	0	0
--VACUOLATION		0	0	0	0	1	0	0	0	0	0
TAIL	NUMBER EXAMINED:	0	0	0	0	1	0	0	0	0	2
--DEFORMITY		0	0	0	0	1	0	0	0	0	0
--FRACTURE/DISLOCATION		0	0	0	0	0	0	0	0	0	2
FOOT/LEG	NUMBER EXAMINED:	0	0	0	1	0	0	0	0	0	0
--ADNEXAL ATROPHY		0	0	0	1	0	0	0	0	0	0

** END OF LIST **

Table 17
Group incidence microscopic data - treatment-free

	Test article	Control		[		] .
	Group	1	2	3	4	5 .
	Level (ppm)	0	100	500	2500	5000 .

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DRAFT

STUDY NUMBER: 0535101

TABLE INCLUDES:
SEX=ALL;GROUP=ALL;WEEKS=ALL
DEATH=U;FIND=ALL;SUBSET=ALL

ORGAN AND FINDING DESCRIPTION		--- NUMBER-OF-ANIMALS-AFFECTED ---									
	SEX:	----------MALE---------					---------FEMALE--------				
	GROUP:	-1-	-2-	-3-	-4-	-5-	-1-	-2-	-3-	-4-	-5-
	NUMBER:	5	0	0	0	5	5	0	0	0	5
** TOP OF LIST **											
MUSCLE	NUMBER EXAMINED:	5	0	0	0	5	5	0	0	0	5
--MYOPATHY, OTHER MUSCLE		1	0	0	0	0	0	0	0	0	0
--MYOPATHY, QUADRICEPS MUSCLE		4	0	0	0	2	1	0	0	0	0
LIVER	NUMBER EXAMINED:	5	0	0	0	5	5	0	0	0	5
--AGONAL CONGESTION/HAEMORRHAGE		0	0	0	0	3	0	0	0	0	0
--PIGMENT		0	0	0	0	0	1	0	0	0	1
--HEPATOCYTE VACUOLATION		0	0	0	0	0	1	0	0	0	1
--INFLAMMATORY CELL FOCI		5	0	0	0	5	5	0	0	0	5
--SINGLE CELL NECROSIS		4	0	0	0	4	1	0	0	0	2
--PIGMENTED HISTIOCYTES		0	0	0	0	0	1	0	0	0	1
--BASOPHILIC FOCUS		0	0	0	0	0	1	0	0	0	0
PANCREAS	NUMBER EXAMINED:	5	0	0	0	5	5	0	0	0	5
--AGONAL CONGESTION/HAEMORRHAGE		0	0	0	0	0	1	0	0	0	0
--INFLAMMATORY CELL FOCI		1	0	0	0	0	0	0	0	0	0
CAECUM	NUMBER EXAMINED:	1	0	0	0	0	0	0	0	0	1
--BARBITURATE LYSIS		1	0	0	0	0	0	0	0	0	1
KIDNEY	NUMBER EXAMINED:	3	0	0	0	0	0	0	0	0	0
--AGONAL CONGESTION/HAEMORRHAGE		1	0	0	0	0	0	0	0	0	0
--HYALINE DROPLETS		2	0	0	0	0	0	0	0	0	0
--HYDRONEPHROSIS		2	0	0	0	0	0	0	0	0	0
--INFLAMMATORY CELL FOCI		2	0	0	0	0	0	0	0	0	0

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Table 17

Group incidence microscopic data - treatment-free kill

Test article	Control		[		] .
Group	1	2	3	4	5 .
Level (ppm)	0	100	500	2500	5000 .

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PRINTED: 13-JAN-04
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DRAFT

STUDY NUMBER: 0535101

TABLE INCLUDES:
SEX=ALL;GROUP=ALL;WEEKS=ALL
DEATH=U;FIND=ALL;SUBSET=ALL

		--- N U M B E R - O F - A N I M A L S - A F F E C T E D ---									
	SEX:	----------MALE---------					---------FEMALE--------				
	GROUP:	-1-	-2-	-3-	-4-	-5-	-1-	-2-	-3-	-4-	-5-
ORGAN AND FINDING DESCRIPTION	NUMBER:	5	0	0	0	5	5	0	0	0	5
OVARY	NUMBER EXAMINED:	0	0	0	0	0	2	0	0	0	1
--OESTROUS CYCLE		0	0	0	0	0	2	0	0	0	1
URINARY BLADDER	NUMBER EXAMINED:	0	0	0	0	2	0	0	0	0	0
--BARBITURATE LYSIS		0	0	0	0	2	0	0	0	0	0
UTERUS	NUMBER EXAMINED:	0	0	0	0	0	1	0	0	0	1
--OESTRUS		0	0	0	0	0	1	0	0	0	1
LUNG	NUMBER EXAMINED:	1	0	0	0	0	0	0	0	0	0
--FOAMY HISTIOCYTES		1	0	0	0	0	0	0	0	0	0
HEART	NUMBER EXAMINED:	5	0	0	0	5	5	0	0	0	5
--MYOCARDIAL DEGENERATION/NECROSIS		1	0	0	0	1	1	0	0	0	2

** END OF LIST **

APPENDICES

Appendix 1
Study protocol, amendments and minor deviations

Definitive Protocol

Study Title	[ ] 13 Week Oral (Dietary) Administration Toxicity Study in the Rat with a 4 Week Treatment-free Period
Data Requirement	OPPTS 870.3100
Study Director	Dr Philip W Harvey philip.harvey@covance.com +44 (0) 1423 848421
Sponsor	[ ]
Study Monitor	[ ]
Test Facility	Covance Laboratories Ltd Otley Road, Harrogate North Yorkshire HG3 1PY ENGLAND
Covance Study Number	535/101
Sponsor Number	To be advised
Page Number	1 of 28

The content of this protocol represents our interpretation of the study objectives and the requirements of the regulatory guidelines. The definitive protocol will be presented in a similar format. All procedures described in this protocol are the subject of detailed departmental standard operating procedures.

Sponsors should note that bold italic text indicate information which is important for good study design or is a legal, regulatory requirement.

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INTRODUCTION

Study objective

The objective of the study is to determine the toxicity of the test article, [ ] following oral (dietary) administration to the rat for 13 weeks and to assess the reversibility of any changes noted at the high dose level over a 4 week treatment-free period.

The route of administration has been chosen because it is a possible route of human exposure.

The rat has been selected because it is a rodent species recommended by various regulatory authorities. Background data are available.

Proposed study dates

The Study Director aims to gain Sponsor approval of the definitive protocol and have made all preparations for the study at least ten working days before treatment commences. Other relevant materials and information (eg certificates of test article analysis) should also reach Covance before this date. This enables pre-treatment procedures to be carried out and provides the opportunity for participating Covance staff to respond to briefings on any of the scientific or welfare features of the study.

Animals on site & experimental start date	May 2003
First treatment	w/b 23 June 2003
Study termination (Main study)	w/b 22 September 2003
Study termination (Treatment-free)	w/b 20 October 2003
Pathology completed & experimental completion date	November 2003

Dates relating to the issue of draft and final reports will be supplied to the Sponsor by the Study Director on request.

TEST AND CONTROL ARTICLES

The test article is identified as [ ]

The Sponsor has provided information as possible on the physical appearance, known hazardous properties, purity, stability and a date of expiry. A sample for archive will be the responsibility of the Sponsor.

When not in use the test article will be stored in a sealed container, at room temperature in the dark.

The control article and vehicle for the test article will be ground diet.

EXPERIMENTAL DESIGN

Regulatory test guidelines

This protocol is designed to meet the known requirements of the Japanese MAFF Agrochemical Test Guidelines 2001 (90 day oral toxicity (2-1-9)). These requirements and guidelines are current at the time the protocol was issued. The protocol is also expected to meet the requirements of the US EPA (OPPTS 870.3100) the Organisation for Economic Co-operation and Development (OECD 408, 1998).

Test article administration

The test article will be administered orally by incorporation into the diet. The animals will have access *ad libitum* to the dietary formulations for at least 13 weeks excluding the day of necropsy. The treatment-free animals will not be dosed beyond the end of Week 13 and will be allowed a treatment-free period of 4 weeks prior to necropsy.

Dose levels

The following dose levels were selected:

Group number	Group description	Dose level (ppm)	Number of animals			
			Main study		Treatment-free	
			Male	Female	Male	Female
1	Control	0	10	10	5	5
2	Low	100	10	10	-	-
3	Intermediate I	500	10	10	-	-
4	Intermediate II	2500	10	10	-	-
5	High	5000	10	10	5	5

The rationale for selection of dose levels will be specified in a protocol amendment. However, the high dose should produce toxic effects without causing deaths. The intermediate doses should establish a dose response effect. There should be no toxicity at the low dose

TEST ARTICLE FORMULATION

Preparation

Formulations will be prepared weekly and reserve samples will be retained from all batches deep frozen. The reserve samples may be discarded following authorisation by the Study Director.

Storage

The formulations will be stored at room temperature in a sealed container.

Formulation analysis

Formulations will be analysed for their test article content by the Formulations Analysis section of the Central Dispensary at Covance.

The method used for the analysis will be the current version of Covance 535/102-01F. The method was validated according to Standard Operating Procedures in study 535/102.

Stability and homogeneity
Stability and homogeneity analysis will be performed for each batch of test article used on the study.

Homogeneity and stability were determined at concentrations # and # mg/kg in study 535/102 (Proposal 52715B-1).

Achieved concentration
Analysis of the formulations for achieved concentration will be performed on samples prepared for use in Weeks 1 and 13. The normal target range for the results will be 85% to 110% of nominal concentration.

Initially only two samples will be taken and analysed. If the achieved concentration results are within the target range the results will be accepted.

If one or both of the achieved concentration results are outside of the target range a third sample will be analysed. Results will be expressed in terms of % nominal concentration

A single sample will be taken from control formulations and will be analysed. If test article is not found this analysis will be reported.

If test article is found at a level ≥20% of the LLOQ, a determination as to whether the test article is systematic, interference from the diet, or actually present in the sample will be made. If the reagent blank does not contain test article a second control sample will be analysed at the end of the analytical run. If test article is also found in the reagent blank at a level ≥20% of the LLOQ the cause of the contamination will be investigated. Reagent blanks will be prepared and analysed until the level of test article found is <20% of the LLOQ. A second control sample will then be analysed.

TEST SYSTEM

Species, strain and supplier
Sufficient rats of the Crl:WI(Glx/BRL/Han)BR strain will be obtained from a recognised supplier in order to provide 60 healthy animals of each sex.

Specification
The animals will be obtained as weanlings of about 28 days of age on arrival. At randomisation their body weight will be within ±20% of the overall mean for each sex. They will be approximately 5 weeks old at start of dosing.

Environment
The animals will be routinely kept in the following environment except for short periods of time where experimental procedures dictate otherwise. The animals will be housed in a single, exclusive room, air-conditioned to provide a minimum of 15 air changes/hour. The temperature and relative humidity ranges will be 19 to 25°C and 40 to 70% respectively. Fluorescent lighting will be controlled automatically to give a cycle of 12 hours light (0600 to 1800) and 12 hours dark.

The animals will be housed singly in cages that conform with the 'Code of practice for the housing and care of animals used in scientific procedures' (Home Office, London, 1989).

Environmental enrichment
In order to enrich both the environment and the welfare of the animals, they may be provided with wooden Aspen chew blocks.

Diet and water
Throughout the study the animals will have access *ad libitum* to SQC Rat and Mouse Maintenance Diet No 1, Expanded Ground Fine (Special Diets Services Ltd. Witham). Each batch of diet is analysed for specific constituents and contaminants. Typical values are presented in Appendix 1.

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Mains water will be provided *ad libitum* via an automatic watering system or bottles. The water is periodically analysed for specific contaminants. Typical values are presented in Appendix 2.

No contaminants are expected to be present in diet or water at levels which might interfere with achieving the objective of the study.

ANIMAL HEALTH AND WELFARE

All procedures to be carried out on live animals as part of this study will be subject to the provisions of United Kingdom National Law, in particular the Animals (Scientific Procedures) Act, 1986.

In order to monitor the welfare of an individual or group of animals, additional observations to those already detailed may be instigated at the discretion of the Study Director. In certain instances this may include treatment as advised by a Covance animal welfare veterinary surgeon.

ETHICAL REVIEW

The Animals (Scientific Procedures) Act 1986 obliges all UK laboratories to maintain a local ethical review process. This is intended to ensure all animal use in the establishment is carefully considered and justified; that proper account is taken of all possibilities for reduction, refinement or replacement and that high standards of accommodation and care are achieved. The Study Director may require assistance from the Sponsor in preparing for ethical review of the study protocol.

PRE-EXPERIMENTAL PROCEDURES

Acclimatisation and health procedures

All animals will be given a clinical inspection for ill health on arrival. They will be acclimatised for about two weeks and a veterinary inspection will be performed before the start of dosing to ensure their suitability for study.

Allocation to treatment group

The animals will be assigned to treatment groups during the acclimatisation period using a randomisation procedure based on stratified body weight.

Group mean body weights will be calculated and inspected to ensure there are no unacceptable differences between groups.

Treatment group positions in the cage battery will be assigned using a set of random letter permutations.

Identification of the test system

The animals will be individually identified by a subcutaneous electronic transponder/tattoo. Cages will be appropriately identified with study information including study number and animal number/s.

Group number	Group codes	Animal numbers			
		Main study		Treatment-free	
		Male	Female		
1	Buff	1-10	61-70	11-15	71-75
2	Green	16-25	76-85	-	-
3	Blue	26-35	86-95	-	-
4	Yellow	36-45	96-105	-	-
5	Pink	46-55	106-115	56-60	116-120

EXPERIMENTAL OBSERVATIONS

Clinical signs

All animals will be observed daily for signs of ill health or overt toxicity. In addition, each animal will be given a detailed physical examination at weekly intervals. An individual record will be maintained of the clinical condition of each animal. ***Additional observations may be performed at the discretion of the Study Director.***

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Routine health checks
All animals will be examined at the beginning and the end of the working day to ensure the animals are in good health. Any animal which shows marked signs of ill health may be isolated. Moribund animals will be killed and necropsied.

Functional observational battery (FOB)
All animals will be subjected to a battery of behavioural tests and observations (as listed below) before initiation of treatment, and once weekly thereafter.

Before the initiation of treatment and in Week 13 an assessment will be made of sensory reactivity to stimuli, grip strength and motor activity.

At the time of testing, the observer will be unaware of each animals dose level. Where possible the observations will be performed at the same time on each occasion.

Observational measurements will be evaluated before and upon removal from the home cage. The animal will also placed into a circular arena for 2 minutes. During this time, behaviour will be evaluated as indicated in the Open Field section. A battery of manipulative tests will also be initiated.

If any treatment-related effects are indicated during the dosing period of the study, then the battery of tests will also be conducted on treatment-free animals in the treatment-free period, at extra cost.

Observations (Weekly)
Before removal from the home cage, the animal will be observed and evaluated for the following:

Posture	Convulsion
Activity	Excessive vocalisation
Gait	Arousal upon opening cage
Tremor	

Each animal will be removed from its cage, and observed for the following:

Ease of removal	Lacrimation
Ease of handling	Lacrimation type
Excessive vocalisation	Salivation

Tremor	Respiration
Convulsion	Piloerection
Palpebral closure	Appearance of fur
Exophthalmus	Other

Open field (Weekly)

Each animal will be placed into an open field arena for 2 minutes. Animals will be observed for the following:

Latency to first step	Gait type severity
Posture	Stereotypy
Arousal	Tremor
Circling	Convulsion
Gait type	Other

The number of rears, faecal boli and urine pools, the faecal consistency and the presence of polyuria during this 2-minute period will also be recorded.

Open field tests (Pre-treatment and Week 13)

Approach response	Corneal tactile reflex test
Touch response	Auditory startle response
Tail pinch	Hindlimb foot splay
Air righting ability	Forelimb and hindlimb grip strength
Pupillary response	

Motor activity (Pre-treatment and Week 13)

Motor activity of each animal will be assessed in an automated photocell activity recorder for 30 minutes. Activity counts will be recorded at 2 minute intervals

Body weights

Individual body weights will be recorded in Week –1, before treatment on the first day of treatment, at weekly intervals and before necropsy.

Food consumption

The amount of food consumed by each cage of animals will be determined weekly from Week -1. Consumption will be calculated as g/animal/week.

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Compound consumption

The amount of test article consumed by each cage of animals will be determined weekly. Consumption will be calculated as mg/kg body weight/day.

Ophthalmoscopy

Investigations will be performed on all animals pre-treatment and on control and high dose (main study and treatment-free) animals in Week 12. If treatment-related changes are seen in the high dose group then the eyes of the low and intermediate groups will also be examined (at additional cost). A mydriatic agent will be instilled into the eyes before examinations.

If treatment-related changes are seen in the high dose group then the eyes of the low and intermediate groups, will also be examined (at additional cost). In addition, the eyes of the control and high dose groups will also be examined (at additional cost) towards the end of the treatment-free period.

Clinical pathology

Samples and occasions

Blood samples (2 x 0.5 mL [EDTA, trisodium citrate], 1 x 0.6 mL [lithium heparin] nominal) will withdrawn from the abdominal aorta of all main study animals at necropsy (after an overnight period without food). Where possible, samples will also be taken from the abdominal aorta of all decedents at necropsy.

Urine samples will be collected overnight from all animals in Week 13. Food and water will be removed during collection.

If changes are seen at the end of the treatment period, blood and urine samples may be taken towards the end of the treatment-free period/at necropsy (after performing the FOB, if required) for determination of specific parameters, at extra cost.

Haematology

The following parameters will be determined on blood taken into EDTA anticoagulant:

haemoglobin concentration	red blood cell count
packed cell volume	reticulocytes

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mean cell volume	mean cell haemoglobin
mean cell haemoglobin concentration	haemoglobin distribution width
red cell distribution width	platelet count
platelet crit	mean platelet volume
platelet distribution width	total and differential white cell count

In addition, the following parameters will be determined on blood taken into trisodium citrate anticoagulant:

prothrombin time	activated partial thromboplastin time

Bone marrow smears

Bone marrow smears will be prepared at necropsy. They will be fixed in methanol but only examined by a haematologist if a blood disorder is suspected.

Clinical chemistry

The following parameters will be determined on plasma derived from whole blood collected into lithium heparin anticoagulant:

aspartate aminotransferase	alanine aminotransferase
alkaline phosphatase	sodium
potassium	calcium
inorganic phosphorus	chloride
total protein	albumin
globulin	albumin/globulin ratio
total cholesterol	glucose
urea	total bilirubin
creatinine	triglycerides
gamma glutamyl transpeptidase	

Urine analysis

microscopy of sediment	turbidity
colour	volume
specific gravity	pH¤
protein¤	glucose¤
ketones¤	bilirubin¤
blood¤	urobilinogen¤
reducing substances¤	

¤ - urine parameters will be determined semi-quantitatively

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TERMINAL PROCEDURES

Necropsy and tissue preservation (Appendix 3)
All animals including decedents will be subject to necropsy.

The scheduled necropsies will be performed after an overnight period without food. Where possible, they will be carried out in cage order. An intraperitoneal sodium pentobarbitone overdose will be given prior to exsanguination and a full macroscopic examination will be performed under the general supervision of a pathologist and all lesions will be recorded.

All tissues denoted by (•) from all animals will be preserved in the appropriate fixative/s.

Organ weights (Appendix 3)
Animals will be weighed before necropsy. The organs denoted by (†) will be dissected free from fat and other contiguous tissue and weighed before fixation.

Histology (Appendix 3)
Gross lesions from all animals and tissues denoted by (Š) from:

- control and high dose animals (main study)
- decedents (all groups)

will be embedded in paraffin wax BP, sectioned at a nominal 5 µm and stained with haematoxylin and eosin.

Liver, spleen and kidney from treatment-free, low and intermediate dose animals will be processed to the slide stage.

Additional tissues may also be included to complete standard tissue blocks at no extra cost to the Sponsor. This will be done in accordance with relevant Histology SOP's.

Pathology (Appendix 3)
Gross lesions from all animals and tissues denoted by (Š) from:

- control and high dose animals
- decedents (all groups)

will be examined microscopically by the study pathologist.

If a treatment-related effect is indicated in any tissue at the high dose level, then the pertinent tissue from one or all of the lower dose groups and treatment-free study animals will be examined at additional cost and within an additional time frame.

DATA EVALUATION

Data from treated animals will be compared with control data.

Statistical analysis will be performed where appropriate using the methods specified in the appendices.

MAJOR COMPUTER SYSTEMS

The following computerised systems may be used during the conduct of this study:

Scheduling	CMS (Covance Management System)
Formulations	Talisman
In-life data collection	Connex
Clinical pathology	Clinaxys
Bioanalytical analysis	Atlas/Analyst/Nautilus
Post-life data collection	Xybion
Report generation and statistical analysis	Deliver/Office 97

Version numbers of the systems will be held on file at Covance.

GOOD LABORATORY PRACTICE COMPLIANCE

The study will be performed in compliance with the United Kingdom Statutory Instrument 1999 No. 3106, the Good Laboratory Practice Regulations 1999 and the

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OECD Principles on Good Laboratory Practice (revised 1997, Issued Jan 1998) ENV/MC/CHEM(98)17.

All procedures will be performed in accordance with detailed Standard Operating Procedures. The records to be kept for this study are indicated in the appendices. Wherever appropriate, any change to this protocol will be made by an amendment issued in agreement with the Sponsor.

For aspects of study performed at Covance, protocol review, in-life and report audits will be performed in accordance with Standard Operating Procedures laid down by the Covance Quality Assurance department.

In the event of inspection by an outside authority, the Sponsor will be consulted before the inspectors are permitted access to any of the study records (unless required by law or regulation).

REPORTS

The Sponsor will be informed promptly of any significant findings and issued progress reports at appropriate intervals.

Following completion of the study a draft report will be issued. Client comments should be supplied for inclusion into a final document within six months of receipt of the draft document. In accordance with requirements of the UK Medicines Control Agency GLP Monitoring Authority, if no client comments are received within six months of issue, the report will be finalised. Any further changes after this time will be addressed as an amended final report and may result in additional costs.

ARCHIVE

All primary data, or authenticated copies thereof, specimens and the final report will be retained in the Covance Laboratories Limited archives for ten years after issue of the final report. At this time the sponsor will be contacted to determine whether the data should be returned, retained or destroyed on their behalf. Sponsors will be notified of the financial implications of each of these options at that time.

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Specimens requiring storage deep frozen are specifically excluded from the above. These will be retained for as long as the quality of the material permits evaluation but for no longer than three months after issue of the final report. The Study Sponsor will be notified of the intent to destroy samples and any financial implications before specimens are destroyed on their behalf.

Appendix 1
Diet Summary (Year Ending 31 December 2002)

Nutrients		Mean	SD
Moisture	%	9.9	0.7
Crude Fat	%	2.8	0.4
Crude protein	%	14.6	0.2
Crude Fibre	%	4.7	0.5
Ash	%	4.6	0.1
Calcium	%	0.74	0.03
Phosphorus	%	0.53	0.02
Sodium	%	0.23	0.04
Chloride	%	0.42	0.02
Potassium	%	0.74	0.02
Magnesium	%	0.16	0.01
Iron	mg/kg	163	18
Copper	mg/kg	8	1
Manganese	mg/kg	50	3
Zinc	mg/kg	38	3
Vitamin A	iu/g	5.7	1.5
Vitamin B	mg/kg	61.0	11

Contaminants			
Fluoride	mg/kg	4	2
Nitrate as $NaNO_3$	mg/kg	9	2
Nitrite as $NaNO_2$	mg/kg	0.2	0.6
Lead	mg/kg	0.07	0.14
Arsenic	mg/kg	ND	ND
Cadmium	mg/kg	0.01	0.03
Mercury	mg/kg	0.00	0.01
Selenium	mg/kg	0.06	0.06
Total Aflatoxins	mcg/kg	ND	ND
Total PCB	mcg/kg	ND	ND
Total DDT	mcg/kg	ND	ND
Dieldrin	mcg/kg	ND	ND
Lindane	mcg/kg	ND	ND
Heptachlor	mcg/kg	ND	ND
Malathion	mcg/kg	4	8
Total viable organisms x 10^3	per g	ND	ND
Mesophilic spores x 10^2	per g	0.2	0.42
Salmonellae species	per g	ND	ND
Entero Bacteriaceae	per g	ND	ND
Escherichia coli	per g	ND	ND
Fungal units	per g	21	41
Antibiotic activity		ND	ND

ND = Non detected

Appendix 2
Summary of Water Analysis (Year Ending 31 December 2002)

Covance water supply sampled at point of use (treated water)

Parameter	Unit	Range	Mean
Nitro total axid	mg/L	3.844 - 6.988	4.22
Conductivity 20c	uS/cm	145 - 183	149
pH		7.2 - 8.1	7.4
Turbidity	FTU	<0.15 - 0.51	<0.18
Nitrate	mg/L NO_3	3.840 - 6.988	4.155
Nitrite	mg/L NO_2	<0.010	<0.010
Nitrogen ammoniacal	mg/L NH_4	<0.03 - 0.06	<0.03
Iron	ug/L Fe	<7 - 55	<19
Aluminium	ug/L Al	<13 - 60	<34
Manganese	ug/L Mn	<1.5 - 39.7	<3.5
Colour True	Hazen	<1.7 - 5.2	<3.4
Aldrin	ug/L	<0.0050 - <0.0053	<0.0052
DDT (pp)	ug/L	<0.0036 - <0.0050	<0.0043
Dieldrin	ug/L	<0.0022 - <0.0040	<0.0031
Endrin	ug/L	<0.0032 - <0.0060	<0.0046
HCH - gamma	ug/L	<0.0008 - <0.0050	<0.0029
Copper	ug/L Cu	9 - 1990	110
Lead	ug/L Pb	<0.3 - 1.7	<0.5
Zinc	ug/L Zn	<6 - 208	<22
Chloride	mg/L Cl	11.5 - 15.0	12.7
Sulphate	mg/L SO^4	30.5 - 36.6	32.3
Calcium	mg/L Ca	14.2 - 17.7	15
Magnesium	mg/L Mg	2.47 - 3.53	2.75
Sodium	mg/L Na	9.14 - 11.40	10.03
Potassium	mg/L K	1.28 - 1.52	1.38
Phosphorus	ug/L P	160 - 998	920
Cadmium	ug/L Cd	<0.09	<0.09
Hardness total	mg/L Ca	19 - 25	20
Alkalinity total	mg/L HCO_3	15.9 - 29.6	19.2
Total coliforms	No/100ml	0	0
Faecal coliforms	No/100ml	0	0
Escherichia coli	No/100ml	0	0
Chlorine free	mg/L Cl	<0.05 - 0.16	<0.07
Chlorine total	mg/L Cl	<0.05 - 0.20	<0.11
Colonies 1 day 37c	No/ml	0 - 1100	45
Colonies 3 day 22c	No/ml	0 - 512	53

Appendix 3
Terminal Procedures

(• - Tissues preserved) († - Organs weighed) (§ - Tissues examined)

Ref no	Tissue/organ	(•)	(†)	(§)
1	Blood sample	•c		
0	Bone marrow smear (femur)	•ac		
1	Eyes (x 2)	•b		§
1.1	Optic nerves (x 2)	•		§
2	Harderian glands			
3	Skin	•		§
3	Mammary	•f		§
3	Muscle (quadriceps)	•		§
4	Femur with bone marrow and articular surface	•		§
5	Sternum with bone marrow	•		§
6	Sciatic nerves (x2)	•		§
7	Liver (x 2)	•	†	§
7	Spleen	•	†	§
7	Pancreas	•		§
7	Mesenteric lymph nodes	•		§
8	Stomach	•		§
8	Duodenum	•		§
8	Jejunum	•		§
9	Ileum	•		§
9	Caecum	•		§
9	Colon	•		§
9	Rectum	•		§
11	Adrenals (x2)	•	†	§
12	Kidney (x2)	•	†	§
13	Testes + epididymides	•e	†	§
13	Ovaries (x2)	•	†	§
14	Seminal vesicles (x2)	•		§
14	Urinary bladder	•		§
14	Prostate	•		§
14	Uterus (x3)	•		§
14	Vagina	•		§

Ref no	Tissue/organ	(•)	(†)	(§)
15	Salivary glands	•		§
15	Mandibular lymph nodes	•		§
15.1	Thymus	•	†	§
16	Lungs (x2)	•		§
18	Heart	•	†	§
18	Aorta	•		§
18	Trachea	•		§
18	Oesophagus	•		§
18	Tongue			
19	Thyroids + parathyroids	•		§
19.1	Larynx			
20	Pituitary	•		§
21	Brain (x3)	•	†	§
21	Spinal cord cervical	•		§
21	Spinal cord thoracic	•		§
22	Spinal cord lumbar	•		§
23	Lacrimal glands (x2)			
24	Zymbal glands (x2)			
25	Bronchial lymph nodes			
25.1	Trachea bifurcation			
25.2	Head	•		
26	Nasal turbinates (x2)			
27	Nasal turbinates (x2)			
28	Nasopharynx (x2)			
99.	Additional tissue			
99.1	Injection sites			
99.2	Dosing sites			
99.3	Animal identification	•		
99.4				
99.5				
100	Gross lesions	•		§

Fixative: 10% neutral buffered formalin except where stated as:
a – methanol b - Davidson's

c - see clinical pathology section of protocol
e - testes and epididymides into bouin's fixative and processed to block stage

f - female only
Left and right organs will be weighed together
Lungs to include mainstem bronchi
Bone tissue designated for histopathological examination will be decalcified using Kristensons fluid

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Appendix 4
Blood sampling requirements

Terminal blood sampling schedule – necropsy

Occasion	Sample site	Animals fasted	Sample type	Anticoagulant	Sample volume (mL)	Total number of samples
Terminal	AA	Yes	Haematology	EDTA	0.5	100
			Haematology	Trisodium citrate	0.5	100
			Clinical chemistry	Lithium heparin	0.6	100
Treatment-free	Not required in the first instance					
Unscheduled	AA	NA	Haematology	EDTA	0.5	1
			Haematology	Trisodium citrate	0.5	1
			Clinical chemistry	Lithium heparin	0.6	1

AA = abdominal aorta
NA = not applicable
Blood samples for clinical chemistry are taken into lithium heparin gel tubes.

Appendix 5
Statistical Methods

General statistical procedures
Tests will be performed using a two-sided risk.

The vehicle control group (Group 1) will be taken as the baseline group with which the treated groups (Groups 2-5) will be compared.

Significant results will be reported as $P<0.05$, $P<0.01$ or $P<0.001$.

In general, where analysis of variance (ANOVA) is indicated in the following methods, two-way ANOVA will be used where the smallest group size is between 4 and 6, and data for both sexes are available. Otherwise, one-way ANOVA will be used. No analysis will be performed where there are less than 4 animals per group.

Methods for in-life and necropsy parameters
Continuous behavioural (FOB) data (latency to first step, number of rears, hindlimb footsplay, forelimb grip strength, hindlimb grip strength and rectal temperature) will be analysed using ANOVA (Procedure I or II) or non-parametric methods (Procedure III) as appropriate.

Body weight gains over specified intervals and, where required, absolute body weights at pre-determined study durations will be analysed using analysis of variance (ANOVA) (Procedure I or II; see below).

For food and water consumption, the mean consumption per animal will be estimated over specified periods for each animal (individually housed) or for each cage (group housed) and ANOVA will be performed (Procedure I or II). Where there are less than 4 cages per group, no analysis will be performed.

Clinical pathology parameters will be analysed using ANOVA (Procedure I or II). Non-parametric tests (Procedure III) will be used for parameters containing values outside the limits of detection.

Organ weights will be analysed using analysis of covariance (ANCOVA) (Procedure IV), adjusting for necropsy body weight. For paired organs the total weight will be analysed. Unadjusted organ weights and organ/body weight ratios may be analysed instead if requested by the Sponsor or thought to be appropriate by the Study Director/Study Biostatistician; ANOVA (Procedure I) will then be used.

Necropsy body weights will be analysed using ANOVA (Procedure I or II).

Where data are unsuitable for analysis by these methods, the Statisticians will use appropriate alternative methods. Any such analysis will be described in the report.

Procedures for quantitative data

Procedure I (ANOVA)
Male and female data will be analysed separately.

One-way ANALYSIS OF VARIANCE (ANOVA) will be performed. Levene's test will be used to test for equality of variances among groups. Where Levene's test is non-significant (P≥0.01), comparisons between each treated group and control will be made using DUNNETT'S test. A LINEAR CONTRAST will be used to test for dose response. A log transformation may be applied to achieve variance stability.

Where the data prove unsuitable for this procedure, non-parametric methods (Procedure III) will be used.

Where data for only two groups are available, a two-sample t-test will be used.

Procedure II (Two-way ANOVA)
Two-way ANALYSIS OF VARIANCE (ANOVA) will be performed on the data from both sexes. LEVENE's test will be used to test for equality of variance between sexes, among groups and for any interaction. Where none of the Levene's tests is significant (P≥0.01 for all 3 tests), comparisons between each treated group and control will be made for each sex separately using DUNNETT'S test. A LINEAR CONTRAST will be used to test for dose response for each sex separately. The Dunnett's tests and regression analyses will use the mean square error from the combined ANOVA for testing the significance of results. A log transformation may be applied to achieve variance stability.

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Where either of the Levene's tests for group or interaction differences is significant, the data will be analysed using Procedure III. Where only the test for a sex difference is significant, the data will be analysed using Procedure I.

Where data for only two groups are available, a two-way ANOVA will be used; comparisons between treated and control groups will be made for each sex separately using t-tests.

Procedure III (non-parametric)
Male and female data will be analysed separately.

The KRUSKAL-WALLIS non-parametric ANOVA will be performed, together with the WILCOXON RANK SUM TEST for each treated group against control. Where the ANOVA is not significant, the Wilcoxon tests will not be reported. The TERPSTRA-JONCKHEERE TEST for dose response will also be performed.

Where data for only two groups are available, the Wilcoxon Rank Sum test will be used.

Procedure IV (ANCOVA)
Male and female data will be analysed separately.

This procedure will be used when adjustment is required for a second variable.

ANALYSIS OF COVARIANCE (ANCOVA) will be performed. Where there is no significant heterogeneity among the gradients ($P \geq 0.01$), Levene's test will be performed to test for equality of variances between groups. If Levene's test is non-significant ($P \geq 0.01$), the adjusted means for treated groups will be compared against control using DUNNETT'S test. Where data for only two groups are available, the GROUP effect from the ANCOVA will be reported.

Where there is significant heterogeneity among the gradients, the data will be inspected and the Biostatistician will decide how to proceed. Where Levene's test is significant, both the organ weight and organ/body weight ratio will be analysed using Procedure I.

SANITIZED COPY

Appendix 6
Study Records

The following study records will be routinely maintained and will include but may not be limited to the following:

Definitive protocol
Protocol amendment(s)
File notes(s)
Study schedule
Study correspondence
Despatch/receipt of samples from Covance

Dispensary information pertaining to:
Test article receipt
Test article description
Test article usage
Test article disposal
Preparation of dosing formulations (if appropriate)

Animal house information pertaining to:
Diet batches used
Diet and water analysis §
Supplier's animal data
Acceptability and randomisation of animals
Details of experimental environment

§ - central records maintained

Animal house experimental procedures, observations and recording as listed in the protocol

The following data will be maintained if the analyses are required by protocol and performed by Covance:

Analysis of formulations
Analysis of toxicokinetic samples
Clinical pathology
Macro/micro pathological observations and recording as specified in the protocol

Statistical analyses (if appropriate)

SANITIZED COPY

Appendix 7
Study Reports

Unaudited draft report
A draft report will be issued for comment by the study Sponsor. The report will contain the following information:

The name and address of the testing facility/s, location of all raw data and final report.

The objectives and procedures stated in the approved protocol including any amendments made to the original protocol and any unforeseen circumstances, which may have affected the quality or integrity of the study.

The identity of the test and control substances, by name or code number, their quality or purity and accuracy of formulation will be presented if appropriate. The experimental design including study start and completion dates, dose levels, route, frequency and duration of dosing.

The supplier, species, strain, sex of the animals and the method of identification.

The reports of the individual scientists involved in the study e.g. pathologist.

Data collected and pertaining to the observations as indicated in the protocol will be presented in the report unless considered not appropriate by the Study Director. In these circumstances a textual comment will describe any effects, relationship or absence thereof to dosing.

Other data not specified in the above sections (e.g. results of statistical analyses, and data supplied by the Sponsor or suppliers) may be reported where appropriate.

Final report
The final report will be produced on paper. In addition to the detail described for the draft report it will contain the signature of the Study Director and other scientists involved in the conduct of the study. It will also contain a signed statement indicating that the study has been subject to evaluation by the Quality Assurance Unit.

Electronic reports

An electronic copy of the final report above may be made available on request from the Sponsor. The study report/s will be provided in PDF format unless agreed otherwise by Covance before the start of the study. Reports requiring specialised Sponsor formats/alternative computer software packages may be possible on request from the Sponsor but may involve extra time and cost.

It should be noted that an electronic final report will be despatched only at the request of the Sponsor and will contain, to the best of our knowledge, a full copy of the available information presented in the original and verified hard copy of the final report. However, the electronic copy will not be subject to quality assurance approval. Covance will accept no responsibility for subsequent operations carried out on this electronic information, or copies thereof, after despatched to the Sponsor. Furthermore the electronic copy will be scanned by Covance prior to dispatch for the presence of computer viruses; however, we advise the Sponsor to recheck this prior to accessing as no warranty can be given as to its being virus-free.

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Appendix 8
Study personnel

Study Director	Dr Philip W Harvey

(Any change in Study Director will be documented by protocol amendment).

Distribution

In addition to the above the following personnel should receive copies of the protocol, protocol amendments and file notes.

Animal Health & Welfare/Ophthalmoscopy	A Basford
Animal House Supervisor (2 copies)	**To be advised**
Animal House Manager	T Jameson
Clinical Pathology Services	Sample Reception, B Johnson, F Palou
Deputy Study Director	**To be advised**
Ethical Review	J Gardner
Formulations & Formulations Analysis	C Wood
Histology	S Brogden
Necropsy	I Wilkins
Pathology	J Glaister
Quality Assurance	C Clare
Report Co-ordination	P Lancaster
Resource Management	Estimation
Resource Management	Scheduling
Sample Management M.E.S	L Dunn
Statistics	C Gardner

APPENDIX 9
PROTOCOL APPROVAL

[ ]

14 April 2003
Date

[ ]

P.W. Harvey

8 April 2003
Date

Dr Philip W Harvey
Study Director
Covance Laboratories Ltd

D Everett

8 Apr 03
Date

D Everett BSc CBiol FIBiol
Head of Toxicology Study Directors/Home Office Project Licence Holder/
Project Licence Number:PPL 60/2100 (5)
Covance Laboratories Ltd

Protocol Amendment

Study Title	[ ] 13 Week Oral (Dietary) Administration Toxicity Study in the Rat with a 4 Week Treatment-free Period
Data Requirement	OPPTS 870.3100
Study Director	Dr Philip W Harvey philip.harvey@covance.com +44 (0) 1423 848421
Sponsor	[ ]
Study Monitor	[ ]
Test Facility	Covance Laboratories Ltd Otley Road, Harrogate North Yorkshire HG3 1PY ENGLAND
Covance Study Number	535/101
Sponsor Number	To be advised
Amendment Number	1
Page Number	1 of 5

This amendment confirms the address of the sponsor as indicated on the front page of the protocol amendment. It also confirms study dates, concentrations of trial formulations and study personnel as below.

Proposed study dates

Animals on site & experimental start date	10 June 2003
First treatment	26 June 2003
Study termination (Main study)	30 September 2003
Study termination (Treatment-free)	24 October 2003
Pathology completed & experimental completion date	November 2003

Stability and homogeneity

Stability and homogeneity analysis will be performed for each batch of test article used on the study.

Homogeneity and stability will be determined at concentrations of 100 ppm and 20,000 ppm in Covance study 535/102.

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The Animal House Supervisor will be Jane Hollingsworth and the Deputy Study Director will be Colin Green (revised Appendix 8 is given below).

Appendix 8
Study personnel

Study Director	Dr Philip W Harvey

(Any change in Study Director will be documented by protocol amendment).

Distribution

In addition to the above the following personnel should receive copies of the protocol, protocol amendments and file notes.

Animal Health & Welfare/Ophthalmoscopy	A Basford
Animal House Supervisor (2 copies)	J Hollingsworth
Animal House Manager	T Jameson
Clinical Pathology Services	Sample Reception, B Johnson, F Palou
Deputy Study Director	C Green
Ethical Review	J Gardner
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Necropsy	I Wilkins
Pathology	J Glaister
Quality Assurance	C Clare
Report Co-ordination	P Lancaster
Resource Management	Estimation
Resource Management	Scheduling
Sample Management M.E.S	L Dunn
Statistics	C Gardner

AMENDMENT APPROVAL

for [ ] 28 April 2003
Date

[ ]

P.W. Harvey 23 April 2003
Dr Philip W Harvey Date
Study Director
Covance Laboratories Ltd

D Everett 23 Apr 03
D Everett BSc CBiol FIBiol Date
Head of Toxicology Study Directors/Home Office Project Licence Holder/
Project Licence Number:PPL 60/2100 (5)
Covance Laboratories Ltd

Protocol Amendment

Study Title	[ ] 13 Week Oral (Dietary) Administration Toxicity Study in the Rat with a 4 Week Treatment-free Period
Data Requirement	OPPTS 870.3100
Study Director	Dr Philip W Harvey philip.harvey@covance.com +44 (0) 1423 848421
Sponsor	[ ]
Study Monitor	[ ]
Test Facility	Covance Laboratories Ltd Otley Road, Harrogate North Yorkshire HG3 1PY ENGLAND
Covance Study Number	535/101
Sponsor Number	To be advised
Amendment Number	2
Page Number	1 of 3

This protocol amendment details the change in sponsors monitor.

Sponsors monitor

[ ] has been replaced by [ ]

AMENDMENT APPROVAL

[ ] May 2, 2003
Date

[ ]

P.W. Harvey 29 April 2003
Dr Philip W Harvey Date
Study Director
Covance Laboratories Ltd

D Everett 29 Apr 03
D Everett BSc CBiol FIBiol Date
Head of Toxicology Study Directors/Home Office Project Licence Holder/
Project Licence Number:PPL 60/2100 (5)
Covance Laboratories Ltd

Protocol Amendment

Study Title	[ ] 13 Week Oral (Dietary) Administration Toxicity Study in the Rat with a 4 Week Treatment-free Period
Data Requirement	OPPTS 870.3100
Study Director	Dr Philip W Harvey philip.harvey@covance.com +44 (0) 1423 848421
Sponsor	[ ]
Study Monitor	[ ]
Test Facility	Covance Laboratories Ltd Otley Road, Harrogate North Yorkshire HG3 1PY ENGLAND
Covance Study Number	535/101
Sponsor Number	To be advised
Amendment Number	3
Page Number	1 of 4

This protocol amendment details the rationale for selection of dose levels, a change to clinical pathology bleed and the study personnel.

Dose levels

The following dose levels were selected:

Group number	Group description	Dose level (ppm)	Number of animals			
			Main study		Treatment-free	
			Male	Female	Male	Female
1	Control	0	10	10	5	5
2	Low	100	10	10	-	-
3	Intermediate I	500	10	10	-	-
4	Intermediate II	2500	10	10	-	-
5	High	5000	10	10	5	5

Dose levels were confirmed from the results of a 28-day rat study (535/104) that showed liver and heart changes at 5000 ppm and 20,000 ppm. The high dose of 5000 ppm is expected to be tolerated for the course of 13 weeks of treatment.

Clinical pathology

Samples and occasions

Blood samples (2 x 0.5 mL [EDTA, trisodium citrate], 1 x 0.6 mL [lithium heparin] nominal) will be withdrawn from the tail vein of all main study animals, whilst in the animal room and immediately before animals are sent to necropsy (after an overnight period without food).

Where possible, samples will also be taken from the abdominal aorta of all decedents at necropsy.

Urine samples will be collected overnight from all animals in Week 13. Food and water will be removed during collection.

If changes are seen at the end of the treatment period, blood and urine samples may be taken towards the end of the treatment-free period/at necropsy (after performing the FOB, if required) for determination of specific parameters, at extra cost.

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The Animal House Supervisor will be David Gill and the Deputy Study Director will be Colin Green (revised Appendix 8 is given below).

Appendix 8
Study personnel

Study Director	Dr Philip W Harvey

(Any change in Study Director will be documented by protocol amendment).

Distribution

In addition to the above the following personnel should receive copies of the protocol, protocol amendments and file notes.

Animal Health & Welfare/Ophthalmoscopy	A Basford
Animal House Supervisor (2 copies)	D Gill
Animal House Manager	T Jameson
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Deputy Study Director	C Green
Ethical Review	J Gardner
Formulations & Formulations Analysis	C Wood
Histology	S Brogden
Necropsy	I Wilkins
Pathology	J Glaister
Quality Assurance	C Clare
Report Co-ordination	P Lancaster
Resource Management	Estimation
Resource Management	Scheduling
Sample Management M.E.S	L Dunn
Statistics	C Gardner

AMENDMENT APPROVAL

[ ] June 30, 2003
Date

[ ]

P.W. Harvey
Dr Philip W Harvey
Study Director
Covance Laboratories Ltd

23 June 2003
Date

pp D Everett BSc CBiol FIBiol
Head of Toxicology Study Directors/Home Office Project Licence Holder/
Project Licence Number:PPL 60/2100 (5)
Covance Laboratories Ltd

23 June 2003
Date

Protocol Amendment

Study Title	[ ] 13 Week Oral (Dietary) Administration Toxicity Study in the Rat with a 4 Week Treatment-free Period
Data Requirement	OPPTS 870.3100
Study Director	Dr Philip W Harvey philip.harvey@covance.com +44 (0) 1423 848421
Sponsor	[ ]
Study Monitor	[ ]
Test Facility	Covance Laboratories Ltd Otley Road, Harrogate North Yorkshire HG3 1PY ENGLAND
Covance Study Number	535/101
Sponsor Number	To be advised
Amendment Number	4
Page Number	1 of 4

This protocol amendment details identification of test material and retention of dietary samples.

The test material was identified in the protocol as [ ] Documentation received from the sponsor indicated the test material as [ ]. This is equivalent material.

TEST ARTICLE FORMULATION

Preparation

Formulations will be prepared weekly and reserve samples will be retained from all batches and frozen at nominal –20C. The reserve samples may be discarded following authorisation by the Study Director.

AMENDMENT APPROVAL

[ ] July 11, 2003
Date

[ ]

P.W. Harvey 7 July 2003
Dr Philip W Harvey Date
Study Director
Covance Laboratories Ltd

D Everett 7 July 03
D Everett BSc CBiol FIBiol Date
Head of Toxicology Study Directors/Home Office Project Licence Holder/
Project Licence Number:PPL 60/2100 (5)
Covance Laboratories Ltd

Protocol Amendment

Study Title	[ ]: 13 Week Oral (Dietary) Administration Toxicity Study in the Rat with a 4 Week Treatment-free Period
Data Requirement	OPPTS 870.3100
Study Director	Dr Philip W Harvey philip.harvey@covance.com +44 (0) 1423 848421
Sponsor	[ ]
Study Monitor	[ ]
Test Facility	Covance Laboratories Ltd Otley Road, Harrogate North Yorkshire HG3 1PY ENGLAND
Covance Study Number	535/101
Sponsor Number	To be advised
Amendment Number	5
Page Number	1 of 4

This protocol amendment documents the addition of creatinine phosphokinase to the list of clinical pathology parameters to be measured in the terminal blood samples. The appropriate protocol wording is given below.

Clinical chemistry

The following parameters will be determined on plasma derived from whole blood collected into lithium heparin anticoagulant:

aspartate aminotransferase	alanine aminotransferase
alkaline phosphatase	sodium
potassium	calcium
inorganic phosphorus	chloride
total protein	albumin
globulin	albumin/globulin ratio
total cholesterol	glucose
urea	total bilirubin
creatinine	triglycerides
gamma glutamyl transpeptidase	creatinine phosphokinase

AMENDMENT APPROVAL

[ ] August 12, 2003
Date

[ ]

8 Aug 2003
Date

Dr Philip W Harvey
Study Director
Covance Laboratories Ltd

8 Aug 03
Date

D Everett BSc CBiol FIBiol
Head of Toxicology Study Directors/Home Office Project Licence Holder/
Project Licence Number:PPL 60/2100 (5)
Covance Laboratories Ltd

Study Director Dr Philip W Harvey

(Any change in Study Director will be documented by protocol amendment).

Distribution

In addition to the above the following personnel should receive copies of the protocol, protocol amendments and file notes.

Animal Health & Welfare/Ophthalmoscopy	A Basford
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Pathology	J Glaister
Quality Assurance	C Clare
Report Co-ordination	P Lancaster
Resource Management	Estimation
Resource Management	Scheduling
Sample Management M.E.S	
Statistics	C Gardner

Protocol Amendment

Study Title	[ ] 13 Week Oral (Dietary) Administration Toxicity Study in the Rat with a 4 Week Treatment-free Period
Data Requirement	OPPTS 870.3100
Study Director	Dr Philip W Harvey philip.harvey@covance.com +44 (0) 1423 848421
Sponsor	[ ]
Study Monitor	[ ]
Test Facility	Covance Laboratories Ltd Otley Road, Harrogate North Yorkshire HG3 1PY ENGLAND
Covance Study Number	535/101
Sponsor Number	To be advised
Amendment Number	6
Page Number	1 of 4

This protocol amendment details additional samples to be taken at necropsy of liver and heart from all control animals and all high dose animals and processed to resin block in histology for possible electron microscopy. The appropriate wording is below. This amendment also changes the pathology personnel.

Necropsy and tissue preservation (Appendix 3)
All animals including decedents will be subject to necropsy.

The scheduled necropsies will be performed after an overnight period without food. Where possible, they will be carried out in cage order. An intraperitoneal sodium pentobarbitone overdose will be given prior to exsanguination and a full macroscopic examination will be performed under the general supervision of a pathologist and all lesions will be recorded.

All tissues denoted by (•) from all animals will be preserved in the appropriate fixative/s.

Electron microscopy
In addition, samples will be taken from the liver and heart of all control and high dose animals at scheduled necropsy (including treatment free animals) for possible electron microscopy. Samples (approximately 1 mm^3) of liver (left lateral lobe) and heart (left ventricular apex) will be taken from all control (Group 1) and high dose (Group 5) animals at scheduled necropsies into EM storage fixative, and processed to epoxy resin blocks for possible transmission electron microscopy (TEM). Following histopathology, blocks from appropriate animals (1 animal per sex per group) will be chosen for TEM. Semi-thin sections will be prepared and examined by the study pathologist and selected areas within the tissue evaluated by TEM. Evaluation will be performed by a sub-contractor. If additional tissues are required for TEM evaluation, this will be subject to a separate costing and time frame agreement.

Study personnel

Study Director	Dr Philip W Harvey

(Any change in Study Director will be documented by protocol amendment).

Distribution

In addition to the above the following personnel should receive copies of the protocol, protocol amendments and file notes.

Animal Health & Welfare/Ophthalmoscopy	A Basford
Animal House Supervisor (2 copies)	D Gill
Animal House Manager	T Jameson
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Deputy Study Director	C Green
Ethical Review	J Gardner
Formulations & Formulations Analysis	C Wood
Histology	S Brogden
Necropsy	I Wilkins
Pathology	**C Barton**
Quality Assurance	C Clare
Report Co-ordination	P Lancaster
Resource Management	Estimation
Resource Management	Scheduling
Sample Management M.E.S	
Statistics	C Gardner

AMENDMENT APPROVAL

[ ] August 19, 2003
Date

[ ]

P.W. Harvey 13/8/03
Dr Philip W Harvey Date
Study Director
Covance Laboratories Ltd

D Everett 13 Aug 03
D Everett BSc CBiol FIBiol Date
Head of Toxicology Study Directors/Home Office Project Licence Holder/
Project Licence Number:PPL 60/2100 (5)
Covance Laboratories Ltd

Protocol Amendment

Study Title	[ ] 13 Week Oral (Dietary) Administration Toxicity Study in the Rat with a 4 Week Treatment-free Period
Data Requirement	OPPTS 870.3100
Study Director	Dr Philip W Harvey philip.harvey@covance.com +44 (0) 1423 848421
Sponsor	[ ]
Study Monitor	[ ]
Test Facility	Covance Laboratories Ltd Otley Road, Harrogate North Yorkshire HG3 1PY ENGLAND
Covance Study Number	535/101
Sponsor Number	To be advised
Amendment Number	7
Page Number	1 of 3

This protocol amendment supersedes Amendment 6.

Necropsy and tissue preservation (Appendix 3)

Additional samples from liver and heart will **NOT** be taken at necropsy for processing for possible electron microscopy.

AMENDMENT APPROVAL

[ ] _____ SEPT. 16, 2003
Date

[ ]

P.W. Harvey _____ 11 Sept 2003
Date

Dr Philip W Harvey
Study Director
Covance Laboratories Ltd

D Everett _____ 11 Sept 03
Date

D Everett BSc CBiol FIBiol
Head of Toxicology Study Directors/Home Office Project Licence Holder/
Project Licence Number:PPL 60/2100 (5)
Covance Laboratories Ltd

Protocol Amendment

Study Title	[ ]13 Week Oral (Dietary) Administration Toxicity Study in the Rat with a 4 Week Treatment-free Period
Data Requirement	OPPTS 870.3100
Study Director	Dr Philip W Harvey philip.harvey@covance.com +44 (0) 1423 848421
Sponsor	[ ]
Study Monitor	[ ]
Test Facility	Covance Laboratories Ltd Otley Road, Harrogate North Yorkshire HG3 1PY ENGLAND
Covance Study Number	535/101
Sponsor Number	To be advised
Amendment Number	8
Page Number	1 of 3

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Blood samples were taken from treatment free animals at necropsy for both haematology and clinical chemistry, however plasma samples were frozen subject to confirmation of clinical chemistry parameters with the sponsor.

The sponsor has now confirmed that full clinical chemistry is to be conducted on these plasma samples as per the original protocol (creatinine phosphokinase will not be analysed as per amendment 5 at the instruction of the sponsor because this parameter was omitted in error from the main study animals). The list of parameters to analyse in plasma is given below.

Clinical chemistry

The following parameters will be determined on plasma derived from whole blood collected into lithium heparin anticoagulant from treatment free animals:

aspartate aminotransferase
alkaline phosphatase
potassium
inorganic phosphorus
total protein
globulin
total cholesterol
urea
creatinine
gamma glutamyl transpeptidase
alanine aminotransferase
sodium
calcium
chloride
albumin
albumin/globulin ratio
glucose
total bilirubin
triglycerides

AMENDMENT APPROVAL

[ ] November 4, 2003
Date

[ ]

P.W. Harvey 28 Oct 2003
Dr Philip W Harvey Date
Study Director
Covance Laboratories Ltd

D Everett 28 Oct 03
D Everett BSc CBiol FIBiol Date
Head of Toxicology Study Directors/Home Office Project Licence Holder/
Project Licence Number:PPL 60/2100 (5)
Covance Laboratories Ltd

Protocol Deviations

Procedure	Protocol Deviations
Test System	
Specification	The animals were approximately 23 days old on arrival, not 28 days as stated in the protocol.
Environment	The humidity rose above the specified range on one occasion to 71%.
Clinical Pathology	
Haematology and Clinical Chemistry	The protocol (amendment 3) stated that blood samples would be taken during Week 13; they were actually taken in Week 14 immediately before the terminal necropsy.
Clinical Chemistry	In a deviation to the protocol the creatinine phosphokinase was not measured for the terminal kill animals.

These deviations are expected not to have affected the results of the study

Appendix 2
Analysis of formulations

SUMMARY

Test article, [ ] was formulated into ground diet for administration to the study animals.

Formulations from Weeks 1 and 13 were analysed to determine the achieved concentration. Results, with the exception of Group 2 in Week 13, were within the range 85 to 110%.

The analytical procedure was validated under study number 535/102.

PROCEDURES

Achieved concentration

Samples removed from dietary formulations prepared for Weeks 1 and 13 were analysed in duplicate (apart from the control where a single analysis was performed).

Analytical procedure

The written analytical procedure Covance 535/102-01F was used to determine achieved concentration.

RESULTS AND DISCUSSION

Achieved concentration analysis

	Results as % nominal									
Week	Group 2		Group 3		Group 4		Group 5A		Group 5B	
1	101	104	101	103	101	103	102	100	101	102
13	113	119 113	100	106	101	98	94	96	91	97

The target range for preparation of diets in this study was 85 to 110% of nominal. Results, with the exception of Group 2 in Week 13, were within this range. Test article was not detected in the Group 1 (control) formulation.

Appendix 3
Individual clinical observations

Test Article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group/ Sex	Animal number	Clinical sign	Observations present during week: -1	1	2	3
1M	6	Thinning fur - dorsal		P		
	9	Thinning fur - dorsal		P		
		Sores/lesions - neck		P		
	15	Thinning fur - dorsal		P		
		Sores/lesions - neck		P		
2M	19	Thinning fur - dorsal		P	P	P
		Sores/lesions - neck		P	P	
	21	Thinning fur - dorsal		P		
		Sores/lesions - neck		P		
	24	Thinning fur - dorsal - paw fore left		P	P	
3M	26	Thinning fur - ventral				P
	31	Thinning fur - dorsal		P		
5M	53	Pale - teeth lower				P
	54	Thinning fur - dorsal		P	P	P
		Sores/lesions - neck		P	P	P
	55	Thinning fur - dorsal			P	P
		Sores/lesions - shoulder right			P	P
	58	Thinning fur - dorsal		P	P	P
		Sores/lesions - neck		P	P	P
	60	Sores/lesions - neck		P		

P = clinical sign present
Any other animal - no clinical signs present

Appendix 3
Individual clinical observations

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group/ Sex	Animal number	Clinical sign	Observations present during week: -1	1	2	3
1F	62	Thinning fur - dorsal - neck		P		
	65	Thinning fur - dorsal		P	P	
	69	Thinning fur - dorsal		P		
	71	Thinning fur - dorsal		P	P	P
		Sores/lesions - neck		P	P	
	72	Thinning fur - dorsal		P		
	74	Thinning fur - dorsal		P		
2F	79	Pale - teeth lower			P	P
	80	Hair loss - dorsal - paws fore both			P	P
		Thinning fur - dorsal			P	P
4F	98	Pale - teeth lower				P
	100	Pale - teeth lower				P
5F	107	Animal replaced (same animal number)	P			
		Replaced with animal of similar bodyweight				
		Pale - teeth lower				P
	109	Hair loss - dorsal - paws fore both				P
	115	Thinning fur - dorsal - neck			P	P
	118	Thinning fur - dorsal		P		
	119	Pale - teeth lower		P		

P = clinical sign present
Any other animal - no clinical signs present

Appendix 3
Individual clinical observations

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group/ Sex	Animal number	Clinical sign	Observations present during week: 4	5	6	7
1M	1	Tears - eye right			P	
	4	Staining - dorsal				P
	8	Staining - dorsal	P			
2M	17	Shedding/Peeling skin - tail		P	P	P
	18	Staining - dorsal		P	P	
	19	Thinning fur - dorsal	P			
	20	Thinning fur - dorsal - paws fore both				P
	23	Thinning fur - dorsal - paws fore both				P
3M	26	Staining - dorsal			P	
		Thinning fur - ventral			P	P
	27	Staining - dorsal		P	P	P
	32	Staining - dorsal			P	P
4M	43	Staining - dorsal			P	P
5M	46	Pale - teeth lower		P	P	P
	49	Pale - teeth lower				P
	50	Pale - teeth lower			P	P
	52	Staining - dorsal			P	P
	53	Pale - teeth lower	P	P	P	P
	54	Thinning fur - dorsal	P	P	P	P
		Sores/lesions - neck	P	P		
	55	Thinning fur - dorsal	P	P	P	P
		Sores/lesions - shoulder right	P			
		Damaged/missing - tail		P	P	P
	58	Thinning fur - dorsal	P	P	P	P
		Sores/lesions - neck	P	P		
		Pale - teeth lower		P	P	
	59	Pale - teeth lower				P
	60	Hair loss - dorsal - paw fore right				P
		Thinning fur - dorsal - paw fore left				P

P = clinical sign present
Any other animal - no clinical signs present

Appendix 3
Individual clinical observations

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group/ Sex	Animal number	Clinical sign	Observations present during week: 4	5	6	7
1F	62	Thinning fur - dorsal			P	P
	63	Thinning fur - dorsal - paws fore both				P
	71	Thinning fur - dorsal	P	P	P	P
	74	Staining - dorsal			P	P
		Pale - teeth lower		P	P	P
2F	77	Staining - dorsal			P	P
	79	Pale - teeth lower	P			
	80	Hair loss - dorsal - paws fore both	P	P	P	P
		Thinning fur - dorsal	P	P	P	P
	81	Staining - head		P		
3F	90	Sores/lesions - mouth - Top lip			P	
4F	98	Pale - teeth lower	P	P	P	P
	100	Pale - teeth lower	P	P		
	105	Staining - head			P	
		Sores/lesions - tip of tail			P	
		Damaged/missing - tail			P	P

P = clinical sign present

Appendix 3
Individual clinical observations

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group/ Sex	Animal number	Clinical sign	Observations present during week: 4	5	6	7
5F	106	Sores/lesions - tail		P	P	P
		Shedding/Peeling skin - tail				P
		Tail lesions			P	P
	107	Sores/lesions - tail		P		
		Pale - teeth lower	P	P	P	P
	108	Staining - dorsal			P	P
		Damaged/missing - tail	P	P	P	P
	109	Hair loss - dorsal - paws fore both	P	P	P	
		Thinning fur - dorsal - paws fore both				P
	110	Sores/lesions - tail			P	P
		Damaged/missing - tail			P	P
	111	Sores/lesions - tail			P	P
	114	Staining - dorsal			P	P
	115	Thinning fur - dorsal - neck	P	P	P	P
	116	Pale - teeth lower			P	P
	119	Staining - dorsal	P	P	P	P
		Pale - teeth lower		P	P	
	120	Staining - dorsal	P		P	P

P = clinical sign present
Any other animal - no clinical signs present

Appendix 3
Individual clinical observations

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group/ Sex	Animal number	Clinical sign	Observations present during week: 8	9	10	11
1M	4	Staining - dorsal	P	P	P	P
2M	16	Pale - teeth lower	P			
	17	Shedding/Peeling skin - tail	P	P		
	18	Staining - dorsal	P			
	20	Thinning fur - dorsal - paws fore both	P	P	P	P
	23	Thinning fur - dorsal - paws fore both	P	P	P	P
3M	26	Thinning fur - ventral	P	P	P	P
	27	Staining - dorsal	P	P	P	P
	32	Staining - dorsal	P			
		Pale - teeth lower		P	P	P
4M	37	Staining - dorsal	P			
	41	Thinning fur - ventral - paws fore both				P
	43	Staining - dorsal	P	P	P	P
5M	46	Pale - teeth lower	P	P	P	P
	49	Pale - teeth lower	P	P		
	50	Pale - teeth lower	P	P	P	P
	52	Staining - dorsal	P	P	P	P
		Staining - nose				P
	53	Pale - teeth lower	P	P	P	P
	54	Thinning fur - dorsal	P	P	P	P
	55	Damaged/missing - tail	P	P	P	P
	59	Pale - teeth lower	P	P	P	P
	60	Hair loss - dorsal - paw fore right	P			
		Thinning fur - dorsal - paw fore left	P	P	P	P
		Sores/lesions - paw fore right	P			
		Pale - teeth lower				P

P = clinical sign present
Any other animal - no clinical signs present

Appendix 3
Individual clinical observations

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group/ Sex	Animal number	Clinical sign	Observations present during week: 8	9	10	11
1F	62	Thinning fur - dorsal	P	P	P	P
	63	Thinning fur - dorsal - paws fore both	P	P	P	P
	71	Thinning fur - dorsal	P	P	P	P
	74	Staining - dorsal	P			
2F	77	Staining - dorsal	P			
	78	Coloured tears - eye right			P	P
	79	Staining - dorsal	P			
	80	Hair loss - dorsal - paws fore both	P	P	P	P
		Thinning fur - dorsal	P	P	P	P
4F	96	Other abnormalities - ear right Purple tip				P
	98	Pale - teeth lower	P	P	P	P
	103	Thinning fur - dorsal	P	P	P	P
	104	Tail lesions	P			
	105	Shedding/Peeling skin - tail		P		
		Damaged/missing - tail	P	P	P	P

P = clinical sign present

Appendix 3
Individual clinical observations

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group/ Sex	Animal number	Clinical sign	Observations present during week: 8	9	10	11
5F	106	Sores/lesions - tail	P			
		Shedding/Peeling skin - tail	P	P		
		Tail lesions	P			
	107	Pale - teeth lower			P	P
	108	Staining - dorsal	P			
		Damaged/missing - tail	P	P	P	P
	109	Thinning fur - dorsal - paws fore both	P	P	P	P
	110	Sores/lesions - tail	P			
		Damaged/missing - tail	P	P	P	P
	112	Thinning fur - ventral - paws fore both				P
	114	Staining - dorsal	P			
	115	Thinning fur - dorsal - neck	P	P	P	P
	116	Pale - teeth lower	P			
	118	Staining - dorsal		P	P	P
	119	Staining - dorsal	P	P	P	P
	120	Staining - dorsal	P		P	P

P = clinical sign present
Any other animal - no clinical signs present

Appendix 3
Individual clinical observations

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group/ Sex	Animal number	Clinical sign	Observations present during week: 12	13	14#	15#
1M	1	Staining - mouth			P	
	3	Staining - dorsal		P	P	
	4	Staining - dorsal	P	P	P	
	7	Staining - dorsal		P	P	
	8	Staining - dorsal		P	P	
	9	Staining - dorsal			P	
	10	Staining - dorsal			P	
	11	Staining - dorsal			P	P
	12	Staining - dorsal		P	P	P
	14	Staining - dorsal		P	P	P
	15	Staining - dorsal			P	P
2M	18	Staining - dorsal		P	P	
	19	Staining - dorsal			P	
	20	Thinning fur - dorsal - paws fore both	P	P		
	21	Staining - dorsal	P	P	P	
	23	Staining - dorsal			P	
		Thinning fur - dorsal - paws fore both	P	P	P	
	24	Staining - dorsal			P	
3M	26	Staining - dorsal	P	P	P	
		Thinning fur - ventral	P			
	27	Staining - dorsal	P	P	P	
	32	Staining - dorsal		P	P	
		Pale - teeth lower	P	P		
	33	Staining - dorsal			P	

P = clinical sign present
# = Treatment-free period

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Appendix 3
Individual clinical observations

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group/ Sex	Animal number	Clinical sign	Observations present during week: 12	13	14#	15#
4M	38	Staining - dorsal			P	
	39	Staining - dorsal		P	P	
	40	Staining - dorsal	P	P	P	
	41	Hair loss - dorsal - paws fore both	P	P	P	
	43	Staining - dorsal	P	P	P	
5M	46	Staining - dorsal		P	P	
		Pale - teeth lower	P	P		
	50	Pale - teeth lower	P	P		
	52	Staining - dorsal	P	P	P	
		Staining - nose	P			
	53	Pale - teeth lower	P	P		
	54	Thinning fur - dorsal	P			
	55	Staining - dorsal			P	
		Damaged/missing - tail	P	P	P	
	56	Staining - dorsal				P
	57	Staining - dorsal				P
	59	Pale - teeth lower	P	P		
	60	Staining - dorsal		P	P	P
		Thinning fur - dorsal - paw fore left	P	P	P	
		Sores/lesions - tail			P	P
		Pale - teeth lower	P	P	P	P

P = clinical sign present
# = Treatment-free period
Any other animal - no clinical signs present

Appendix 3
Individual clinical observations

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group/ Sex	Animal number	Clinical sign	Observations present during week: 12	13	14#	15#
1F	62	Thinning fur - dorsal	P	P	P	
	63	Staining - ventral			P	
		Thinning fur - dorsal - paws fore both	P	P	P	
	64	Thinning fur - dorsal		P	P	
	65	Thinning fur - dorsal	P	P	P	
	71	Thinning fur - dorsal	P	P		
	75	Staining - dorsal			P	P
2F	77	Staining - dorsal		P	P	
	78	Coloured tears - eye right	P	P		
	80	Impaired mobility - leg hind left	P			
		Hair loss - dorsal - paws fore both	P			
		Thinning fur - dorsal	P			
		Other abnormalities - leg hind left	P			
		Limp foot hind left + red discharge from foot				
		Moribund/Sporadic kill	K			
	81	Staining - dorsal		P	P	
	83	Staining - head			P	
4F	96	Other abnormalities - ear right	P	P	P	
		Purple tip				
	98	Staining - dorsal		P	P	
		Thinning fur - dorsal	P	P	P	
		Pale - teeth lower	P	P		
	101	Sluggish			P	
	103	Thinning fur - dorsal	P	P	P	
	105	Damaged/missing - tail	P	P	P	

P = clinical sign present
K = unscheduled death/removal
# = Treatment-free period

Appendix 3
Individual clinical observations

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group/ Sex	Animal number	Clinical sign	Observations present during week: 12	13	14#	15#
5F	107	Pale - teeth lower	P	P	P	
	108	Teeth cut - teeth lower			P	
		Damaged/missing - tail	P	P	P	
	109	Thinning fur - dorsal - paws fore both	P	P	P	
	110	Thinning fur - dorsal		P	P	
		Damaged/missing - tail	P	P	P	
	112	Thinning fur - ventral - paws fore both	P	P	P	
	115	Staining - ventral			P	
		Thinning fur - dorsal - neck	P	P		
	116	Staining - dorsal		P	P	
	117	Staining - dorsal				P
	118	Staining - dorsal	P	P		
	119	Staining - dorsal	P	P	P	
	120	Staining - dorsal	P	P	P	P
		Coloured tears - eye left	P	P		

P = clinical sign present
# = Treatment-free period

Any other animal - no clinical signs present

Appendix 3
Individual clinical observations

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group/ Sex	Animal number	Clinical sign	Observations present during week: 16#	17#	18#
1M	11	Staining - dorsal	P	P	P
	12	Staining - dorsal	P	P	P
	13	Staining - dorsal		P	P
	14	Staining - dorsal	P	P	P
		Hair loss - head		P	
	15	Staining - dorsal	P	P	P
5M	56	Staining - dorsal	P	P	P
	57	Staining - dorsal	P		P
	60	Staining - dorsal	P	P	P
		Sores/lesions - tail	P	P	
		Pale - teeth lower	P		
1F	71	Staining - dorsal	P	P	P
	72	Staining - dorsal		P	
		Staining - head		P	
	74	Staining - dorsal	P	P	P
	75	Staining - dorsal	P	P	P
5F	116	Staining - dorsal	P	P	
		Staining - head		P	
	117	Staining - dorsal			P
	118	Staining - dorsal		P	P
	119	Staining - dorsal	P	P	P
	120	Staining - dorsal	P	P	P
		Staining - ventral		P	P

P = clinical sign present
# = Treatment-free period
Any other animal - no clinical signs present

Appendix 4
Individual body weight

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group/ Sex	Animal Number	Individual body weights (g) for Week: -1:0	Start	1:0	2:0	3:0	4:0
1M	1	90.0	131.2	160.9	197.1	233.8	265.6
1M	2	114.8	163.3	198.3	234.5	261.7	283.1
1M	3	88.8	131.5	163.5	187.1	221.3	248.2
1M	4	102.2	151.8	184.3	223.8	260.0	286.6
1M	5	101.7	148.9	186.0	218.8	258.8	284.9
1M	6	93.0	140.4	168.5	197.7	229.6	254.5
1M	7	88.2	131.2	162.3	192.0	235.6	268.6
1M	8	83.9	119.2	143.4	174.2	216.0	248.5
1M	9	100.9	148.9	178.9	214.2	256.5	283.7
1M	10	95.0	138.7	172.7	203.8	242.0	274.6
1M	11	113.7	164.9	204.1	241.9	288.5	318.1
1M	12	110.3	157.4	195.1	233.8	272.2	296.9
1M	13	105.0	147.9	173.5	202.7	231.9	251.4
1M	14	109.6	162.8	199.3	232.4	269.1	299.5
1M	15	115.9	164.4	203.8	239.4	283.7	308.2
2M	16	107.1	153.3	182.5	227.3	261.8	286.5
2M	17	86.1	124.1	149.4	179.8	222.9	257.7
2M	18	112.7	156.0	192.4	227.1	267.1	295.3
2M	19	108.3	150.9	185.9	223.7	257.2	291.6
2M	20	102.4	146.5	181.4	212.5	241.2	272.7
2M	21	94.9	134.8	162.7	188.0	228.5	257.0
2M	22	89.9	128.4	155.9	190.2	236.2	275.0
2M	23	97.5	137.6	170.0	194.6	235.0	261.1
2M	24	110.9	156.1	191.0	222.6	262.1	289.3
2M	25	89.5	133.4	164.3	198.7	239.9	271.0
3M	26	104.9	147.5	185.4	221.3	262.1	290.1
3M	27	88.5	133.0	170.1	205.1	241.9	269.5
3M	28	95.5	137.3	171.4	204.9	245.7	274.7
3M	29	85.1	124.9	156.1	182.9	224.7	267.7
3M	30	106.6	148.4	182.2	218.1	255.8	282.6
3M	31	98.9	139.3	166.6	195.6	227.6	251.9
3M	32	97.2	137.1	166.4	196.8	232.6	257.4
3M	33	96.2	133.3	162.1	190.3	230.2	260.8
3M	34	110.1	155.8	191.3	222.9	262.8	292.2
3M	35	92.2	135.6	168.9	191.9	231.5	256.0

Appendix 4
Individual body weights

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group/ Sex	Animal Number	Individual body weights (g) for Week: -1:0	Start	1:0	2:0	3:0	4:0
4M	36	91.3	132.0	160.9	192.7	233.4	263.8
4M	37	102.3	151.1	182.3	212.1	253.4	283.8
4M	38	88.9	131.4	161.0	199.2	242.7	268.7
4M	39	94.3	133.3	162.3	193.2	231.0	260.9
4M	40	100.6	155.6	192.6	231.7	276.2	300.0
4M	41	113.7	159.5	184.7	216.1	253.2	279.0
4M	42	89.6	133.7	165.0	199.1	239.8	262.6
4M	43	109.5	158.2	190.6	212.9	239.6	260.4
4M	44	104.2	155.3	180.5	208.8	235.8	250.1
4M	45	146.9	148.7	178.8	209.6	246.5	273.2
5M	46	96.9	137.8	160.4	186.7	220.6	245.5
5M	47	116.4	158.7	190.2	219.1	251.8	272.2
5M	48	92.4	142.9	171.7	218.0	249.8	276.2
5M	49	103.8	147.1	168.9	182.2	199.9	218.2
5M	50	88.1	136.6	162.8	197.1	232.5	250.7
5M	51	89.0	128.5	157.8	179.4	216.9	245.6
5M	52	116.4	168.3	204.6	230.8	266.9	297.1
5M	53	113.4	164.1	193.5	223.0	251.2	271.0
5M	54	107.8	159.0	185.8	218.8	257.5	285.1
5M	55	99.2	140.9	167.6	203.5	235.2	259.0
5M	56	106.2	148.7	177.9	217.3	239.7	264.9
5M	57	110.0	164.6	197.5	230.6	261.3	282.9
5M	58	85.1	127.7	157.1	187.8	225.3	247.9
5M	59	115.7	163.0	188.4	221.8	253.1	274.7
5M	60	95.2	133.2	156.0	181.3	215.3	244.6

Appendix 4
Individual body weights

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group/ Sex	Animal Number	Individual body weights (g) for Week: -1:0	Start	1:0	2:0	3:0	4:0
1F	61	88.5	114.4	130.2	144.8	155.7	163.0
1F	62	80.1	108.1	123.2	140.2	153.1	157.9
1F	63	92.5	125.6	141.7	160.6	177.4	186.7
1F	64	89.9	121.5	124.3	138.2	157.4	170.1
1F	65	92.7	116.7	134.2	147.1	159.2	172.5
1F	66	87.3	123.3	143.8	164.5	183.5	194.5
1F	67	103.2	132.7	141.3	159.7	172.9	187.1
1F	68	87.3	109.4	119.4	135.4	148.3	160.7
1F	69	92.0	121.1	136.2	151.0	169.8	180.5
1F	70	90.3	118.2	138.9	153.1	164.4	173.8
1F	71	83.6	109.2	121.9	140.6	149.6	162.3
1F	72	102.0	134.9	150.8	169.8	184.3	199.5
1F	73	103.6	133.3	152.7	169.5	183.5	196.7
1F	74	80.5	104.6	121.0	137.0	157.8	168.7
1F	75	85.9	120.1	141.2	157.5	175.0	181.9
2F	76	92.8	118.2	131.4	137.8	163.4	173.4
2F	77	85.6	114.5	129.3	141.7	159.6	170.0
2F	78	81.6	105.3	121.6	138.4	156.6	164.5
2F	79	96.9	113.6	134.1	148.1	163.5	175.5
2F	80	82.4	108.1	124.4	134.4	148.8	158.5
2F	81	83.1	113.9	131.8	141.7	163.6	172.0
2F	82	90.9	124.8	135.7	147.0	160.9	172.2
2F	83	94.8	126.8	135.3	154.7	164.3	170.3
2F	84	91.0	118.9	129.2	136.1	159.3	172.9
2F	85	87.6	109.8	120.3	130.8	145.1	162.6
3F	86	93.2	121.3	144.9	160.9	174.2	192.1
3F	87	89.4	113.9	130.5	146.9	161.6	172.1
3F	88	98.6	126.3	143.7	160.3	170.8	189.3
3F	89	87.1	119.8	130.8	143.5	162.3	172.4
3F	90	91.1	114.9	132.0	148.4	165.7	174.0
3F	91	103.4	130.2	149.2	163.4	178.2	188.9
3F	92	94.3	125.4	141.4	159.9	168.7	175.3
3F	93	90.0	129.6	154.7	177.0	195.8	203.8
3F	94	85.8	118.7	132.7	146.3	163.9	167.3
3F	95	102.3	125.7	144.5	155.3	167.7	183.6

Appendix 4
Individual body weights

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group/ Sex	Animal Number	Individual body weights (g) for Week: -1:0	Start	1:0	2:0	3:0	4:0
4F	96	99.1	129.5	142.6	159.1	171.7	179.7
4F	97	83.4	106.1	119.1	123.3	137.9	147.0
4F	98	85.8	108.1	127.3	141.7	155.5	165.2
4F	99	97.0	130.0	148.7	165.7	175.6	185.7
4F	100	87.8	118.3	132.6	148.5	165.3	181.2
4F	101	85.4	109.9	124.5	135.6	150.4	159.2
4F	102	104.0	136.2	151.8	162.0	178.3	193.8
4F	103	78.1	97.6	115.5	125.2	138.6	149.3
4F	104	89.4	120.5	133.5	148.0	144.8	168.4
4F	105	100.2	119.2	130.1	142.8	154.8	159.9
5F	106	84.8	120.0	140.2	160.1	174.9	187.3
5F	107	NT	106.8	109.3	131.8	143.7	156.5
5F	108	99.0	117.2	135.4	142.2	158.6	170.3
5F	109	87.3	123.6	137.7	151.7	165.4	178.5
5F	110	96.6	126.7	141.5	152.8	164.1	174.1
5F	111	94.2	129.4	140.2	155.5	168.0	171.1
5F	112	82.9	106.3	119.8	134.2	142.4	159.9
5F	113	104.1	134.4	145.7	153.8	171.8	188.3
5F	114	89.1	118.4	131.2	147.2	161.0	173.0
5F	115	81.0	102.0	117.2	127.0	139.5	152.3
5F	116	89.6	123.9	133.4	145.0	161.8	173.9
5F	117	102.8	142.7	163.9	174.2	192.9	207.1
5F	118	83.1	115.7	131.3	139.1	154.4	167.5
5F	119	88.3	111.0	127.2	137.8	148.6	159.4
5F	120	98.6	124.5	132.5	148.7	157.1	174.4

NT = Not Taken

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Appendix 4
Individual body weights

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group/ Sex	Animal Number	Individual body weights (g) for Week: 5:0	6:0	7:0	8:0	9:0	10:0
1M	1	293.5	316.9	334.1	356.2	364.0	373.3
1M	2	304.8	325.5	342.2	349.1	354.7	359.2
1M	3	272.0	297.6	318.1	327.4	337.6	356.5
1M	4	308.3	323.0	336.6	350.8	360.4	368.4
1M	5	307.9	325.1	345.8	358.0	369.1	382.0
1M	6	277.4	298.1	316.6	331.5	334.1	351.1
1M	7	294.9	318.3	334.8	347.5	355.7	363.2
1M	8	275.2	296.8	314.7	331.7	342.4	358.8
1M	9	313.8	332.5	350.3	359.7	374.5	386.2
1M	10	295.2	319.0	335.4	343.2	358.3	370.2
1M	11	353.0	379.4	396.2	406.5	421.3	435.5
1M	12	318.8	340.6	360.5	370.6	377.9	386.3
1M	13	275.6	294.0	309.6	318.5	329.3	329.1
1M	14	321.9	342.7	365.1	377.9	387.8	401.8
1M	15	331.5	357.8	375.3	384.1	397.9	410.7
2M	16	308.5	329.0	343.3	348.7	356.5	363.1
2M	17	283.2	310.6	327.0	340.2	349.5	363.3
2M	18	317.4	340.0	352.4	369.2	373.8	394.8
2M	19	312.5	334.0	349.9	360.4	369.6	379.1
2M	20	297.5	319.2	337.2	355.4	361.8	374.8
2M	21	283.0	307.2	323.6	331.7	344.3	356.5
2M	22	306.6	334.4	350.3	365.9	378.8	390.6
2M	23	287.6	311.4	325.7	336.9	344.3	348.5
2M	24	310.7	327.8	340.6	349.5	361.9	369.1
2M	25	298.4	318.2	340.4	358.4	364.1	368.2
3M	26	314.7	339.3	354.6	372.5	379.5	389.0
3M	27	291.0	309.1	328.1	338.7	347.6	361.4
3M	28	303.5	328.2	346.7	355.5	368.6	374.0
3M	29	295.6	323.6	342.5	361.3	380.1	399.2
3M	30	301.2	320.8	336.1	348.0	363.7	373.5
3M	31	277.0	292.4	309.6	319.3	328.2	333.4
3M	32	279.6	299.6	314.5	323.7	332.6	343.9
3M	33	279.5	298.5	305.7	324.9	328.5	338.8
3M	34	316.4	338.9	353.6	365.8	379.8	391.4
3M	35	284.0	302.2	319.9	337.1	345.2	357.7

Appendix 4
Individual body weights

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group/ Sex	Animal Number	Individual body weights (g) for Week: 5:0	6:0	7:0	8:0	9:0	10:0
4M	36	284.5	305.0	320.9	333.7	339.4	346.7
4M	37	307.2	333.0	355.4	369.7	382.5	380.0
4M	38	289.6	311.5	327.8	342.4	358.7	370.3
4M	39	282.8	307.7	315.4	331.0	344.7	350.4
4M	40	326.4	351.1	369.1	382.3	395.6	407.7
4M	41	297.9	319.1	334.0	338.9	354.0	370.8
4M	42	287.2	308.8	328.1	337.6	351.3	364.5
4M	43	276.0	295.8	309.3	313.9	319.2	332.1
4M	44	265.5	283.2	294.6	306.7	311.2	315.5
4M	45	294.9	313.3	325.9	337.7	346.1	357.1
5M	46	270.8	293.7	306.8	319.2	327.7	336.7
5M	47	292.5	311.1	318.3	333.0	339.7	347.4
5M	48	302.9	330.2	344.6	363.5	374.9	389.0
5M	49	242.3	262.5	270.2	282.1	288.4	300.9
5M	50	265.6	264.7	292.4	310.7	308.3	314.9
5M	51	266.0	281.7	300.6	314.4	326.1	340.6
5M	52	325.4	347.4	366.5	376.8	392.5	405.8
5M	53	285.8	306.5	321.3	329.2	334.6	344.5
5M	54	305.2	328.1	341.7	358.4	364.2	372.4
5M	55	273.6	295.2	307.4	315.8	327.3	331.1
5M	56	284.3	309.0	316.1	323.6	334.9	345.0
5M	57	302.0	322.3	317.1	343.8	355.8	362.4
5M	58	272.0	288.1	308.2	316.6	323.8	336.3
5M	59	292.9	315.6	324.7	333.2	337.3	348.0
5M	60	264.8	286.5	302.0	310.9	320.2	336.6

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Appendix 4
Individual body weights

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group/ Sex	Animal Number	Individual body weights (g) for Week: 5:0	6:0	7:0	8:0	9:0	10:0
1F	61	176.2	186.4	190.0	196.1	199.7	204.6
1F	62	168.3	179.7	185.1	184.9	187.0	197.5
1F	63	193.5	207.9	217.6	218.2	213.7	222.4
1F	64	181.7	195.7	202.6	208.8	211.0	217.4
1F	65	182.6	191.1	195.5	206.5	209.2	218.9
1F	66	205.6	217.2	225.8	228.6	229.4	238.7
1F	67	190.7	206.8	210.8	216.6	216.0	225.9
1F	68	166.2	176.5	186.7	187.8	187.9	192.8
1F	69	189.8	193.5	201.2	208.2	211.4	213.8
1F	70	191.0	199.6	206.3	207.9	217.6	226.0
1F	71	169.9	178.1	186.8	189.2	197.9	198.6
1F	72	212.4	222.7	227.8	238.4	242.3	251.7
1F	73	205.5	219.1	224.7	228.8	236.8	244.9
1F	74	176.9	185.2	191.5	196.4	200.3	205.9
1F	75	192.7	205.6	215.0	214.5	221.7	225.3
2F	76	183.6	191.9	202.6	206.9	209.4	210.5
2F	77	182.2	181.9	193.2	201.5	205.4	210.1
2F	78	177.7	186.2	189.8	196.4	202.8	207.7
2F	79	184.0	192.3	201.1	209.6	207.9	217.3
2F	80	168.9	179.4	184.4	186.9	189.2	194.8
2F	81	185.9	190.8	197.4	202.9	204.1	205.2
2F	82	176.7	186.7	192.3	198.6	197.7	204.9
2F	83	190.9	202.6	213.3	217.7	221.6	229.0
2F	84	179.0	191.2	199.5	201.5	204.9	212.9
2F	85	162.5	182.5	190.4	198.9	199.0	205.3
3F	86	199.2	209.2	212.6	220.9	225.1	226.1
3F	87	181.0	188.7	197.0	199.7	200.7	201.6
3F	88	200.7	205.9	208.0	221.8	225.0	230.2
3F	89	174.4	192.0	199.6	204.2	201.3	208.5
3F	90	187.7	199.2	208.9	212.5	216.5	225.3
3F	91	194.2	206.7	207.6	215.9	211.6	221.7
3F	92	187.8	197.8	201.4	207.0	209.2	214.8
3F	93	220.8	232.8	235.9	236.9	244.5	257.1
3F	94	180.1	186.6	195.2	204.8	208.6	214.0
3F	95	199.1	210.0	210.0	218.9	224.4	227.6

Appendix 4
Individual body weights

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group/ Sex	Animal Number	Individual body weights (g) for Week: 5:0	6:0	7:0	8:0	9:0	10:0
4F	96	192.8	201.2	209.0	214.2	214.2	209.5
4F	97	148.2	158.8	167.1	168.3	176.6	180.2
4F	98	155.2	176.5	183.3	187.0	188.0	199.8
4F	99	190.8	202.2	210.8	214.7	215.4	222.6
4F	100	191.3	198.7	203.9	208.6	214.1	218.3
4F	101	163.7	169.3	179.0	182.1	186.4	192.9
4F	102	209.6	217.6	224.6	233.9	235.1	245.4
4F	103	158.2	164.3	169.8	180.6	184.5	184.7
4F	104	178.2	186.8	199.0	205.8	206.8	213.1
4F	105	170.5	179.2	183.7	188.0	195.5	201.9
5F	106	197.0	206.7	212.9	213.4	219.5	227.8
5F	107	168.0	172.2	176.8	179.6	178.5	186.2
5F	108	178.2	181.0	184.9	192.8	192.0	196.1
5F	109	189.0	199.1	204.5	213.0	210.8	222.5
5F	110	183.3	188.3	192.4	196.4	202.0	200.8
5F	111	180.2	188.6	193.5	193.3	199.5	202.7
5F	112	167.2	173.4	177.6	183.0	179.6	186.9
5F	113	196.3	205.2	214.5	219.5	219.9	229.4
5F	114	185.3	190.2	189.9	199.8	198.0	207.7
5F	115	161.8	167.7	171.3	176.9	181.2	186.8
5F	116	180.8	192.1	202.6	205.0	210.5	219.9
5F	117	212.5	219.1	225.2	232.0	231.7	241.4
5F	118	177.5	186.9	192.4	204.1	206.2	211.2
5F	119	164.2	168.8	174.8	177.1	180.6	188.3
5F	120	185.0	194.4	202.9	210.2	210.6	217.0

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Appendix 4
Individual body weights

Test Article Control [ ]
Group 1 2 3 4 5
Level (ppm) 0 100 500 2500 5000

Group/ Sex	Animal Number	Individual body weights (g) for Week: 11:0	12:0	13:0	14:0	15:0	16:0	17:0
1M	1	383.5	389.2	395.6	-	-	-	-
1M	2	370.6	377.2	381.3	-	-	-	-
1M	3	371.4	380.3	386.9	-	-	-	-
1M	4	375.8	379.8	385.2	-	-	-	-
1M	5	391.2	396.8	402.6	-	-	-	-
1M	6	362.8	353.3	368.8	-	-	-	-
1M	7	371.8	378.7	376.2	-	-	-	-
1M	8	374.0	380.1	386.7	-	-	-	-
1M	9	395.2	401.4	400.7	-	-	-	-
1M	10	380.6	390.1	396.7	-	-	-	-
1M	11	445.4	455.1	451.4	466.3	464.1	482.2	492.8
1M	12	398.7	407.7	404.1	417.0	418.5	432.4	434.1
1M	13	343.4	347.5	351.6	362.7	356.4	373.5	380.0
1M	14	414.3	415.3	425.5	438.1	438.5	456.4	462.5
1M	15	424.0	421.9	430.4	447.2	440.9	451.0	451.7
2M	16	379.6	379.7	385.0	-	-	-	-
2M	17	375.3	375.0	379.9	-	-	-	-
2M	18	407.9	409.6	426.6	-	-	-	-
2M	19	394.5	394.0	403.5	-	-	-	-
2M	20	390.0	397.2	394.2	-	-	-	-
2M	21	368.6	375.5	395.3	-	-	-	-
2M	22	408.7	413.0	412.5	-	-	-	-
2M	23	359.1	367.0	365.3	-	-	-	-
2M	24	383.3	394.3	392.9	-	-	-	-
2M	25	381.7	389.2	394.0	-	-	-	-
3M	26	389.5	399.1	398.4	-	-	-	-
3M	27	372.4	371.9	376.3	-	-	-	-
3M	28	387.8	394.5	391.2	-	-	-	-
3M	29	413.2	422.3	422.2	-	-	-	-
3M	30	383.2	398.2	397.8	-	-	-	-
3M	31	344.5	354.8	348.5	-	-	-	-
3M	32	354.7	360.8	368.2	-	-	-	-
3M	33	346.9	348.5	353.4	-	-	-	-
3M	34	401.8	403.1	405.7	-	-	-	-
3M	35	365.4	375.3	385.5	-	-	-	-

Appendix 4
Individual body weights

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group/ Sex	Animal Number	Individual body weights (g) for Week: 11:0	12:0	13:0	14:0	15:0	16:0	17:0
4M	36	361.8	364.0	361.3	-	-	-	-
4M	37	402.1	406.3	414.1	-	-	-	-
4M	38	382.1	386.8	392.3	-	-	-	-
4M	39	366.8	374.0	376.4	-	-	-	-
4M	40	416.8	419.9	428.6	-	-	-	-
4M	41	375.4	378.7	383.8	-	-	-	-
4M	42	373.6	379.6	381.6	-	-	-	-
4M	43	343.4	343.3	345.4	-	-	-	-
4M	44	320.1	319.8	321.3	-	-	-	-
4M	45	369.6	374.0	379.9	-	-	-	-
5M	46	343.0	344.9	346.9	-	-	-	-
5M	47	356.7	351.2	357.7	-	-	-	-
5M	48	396.9	399.6	400.8	-	-	-	-
5M	49	307.8	310.5	309.4	-	-	-	-
5M	50	328.8	333.5	327.0	-	-	-	-
5M	51	356.4	362.7	356.5	-	-	-	-
5M	52	417.6	418.1	422.8	-	-	-	-
5M	53	352.0	356.1	354.8	-	-	-	-
5M	54	386.1	391.0	390.6	-	-	-	-
5M	55	342.7	350.6	339.6	-	-	-	-
5M	56	361.4	359.7	363.3	374.2	375.6	390.4	397.9
5M	57	374.3	373.7	372.9	392.6	396.0	417.0	423.9
5M	58	346.9	349.3	351.3	360.9	374.2	385.3	392.7
5M	59	355.3	357.3	356.5	365.7	372.0	382.6	389.8
5M	60	346.8	351.8	349.7	373.0	378.1	389.6	388.1

Appendix 4
Individual body weights

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group/ Sex	Animal Number	Individual body weights (g) for Week: 11:0	12:0	13:0	14:0	15:0	16:0	17:0
1F	61	206.4	212.0	209.5	-	-	-	-
1F	62	200.2	191.8	192.0	-	-	-	-
1F	63	226.5	226.0	221.6	-	-	-	-
1F	64	225.1	225.3	223.9	-	-	-	-
1F	65	219.8	218.9	221.1	-	-	-	-
1F	66	243.3	241.8	241.1	-	-	-	-
1F	67	230.3	225.1	223.6	-	-	-	-
1F	68	198.9	197.8	197.6	-	-	-	-
1F	69	219.0	225.3	215.6	-	-	-	-
1F	70	228.3	226.1	225.8	-	-	-	-
1F	71	208.8	204.5	196.9	217.8	212.6	214.9	218.8
1F	72	255.1	256.2	253.7	255.9	261.5	266.4	264.8
1F	73	244.2	250.3	248.7	252.8	252.1	256.2	259.3
1F	74	211.1	214.5	215.6	222.9	222.6	230.4	230.2
1F	75	230.0	230.9	226.5	234.3	231.4	246.5	246.2
2F	76	219.1	218.9	211.5	-	-	-	-
2F	77	214.3	217.1	216.9	-	-	-	-
2F	78	211.4	212.6	211.5	-	-	-	-
2F	79	221.3	222.8	216.3	-	-	-	-
2F	80	198.1	-	-	-	-	-	-
2F	81	210.6	212.8	206.8	-	-	-	-
2F	82	207.6	210.0	207.5	-	-	-	-
2F	83	230.1	232.5	236.4	-	-	-	-
2F	84	218.1	217.6	214.9	-	-	-	-
2F	85	213.0	213.4	213.2	-	-	-	-
3F	86	228.2	225.5	224.6	-	-	-	-
3F	87	208.7	205.7	206.3	-	-	-	-
3F	88	230.9	234.1	234.7	-	-	-	-
3F	89	211.3	213.0	210.6	-	-	-	-
3F	90	230.2	226.4	228.5	-	-	-	-
3F	91	225.2	227.3	227.3	-	-	-	-
3F	92	215.7	215.4	211.3	-	-	-	-
3F	93	256.4	254.3	257.2	-	-	-	-
3F	94	220.9	223.9	219.3	-	-	-	-
3F	95	226.1	230.5	229.0	-	-	-	-

Appendix 4
Individual body weights

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group/ Sex	Animal Number	Individual body weights (g) for Week: 11:0	12:0	13:0	14:0	15:0	16:0	17:0
4F	96	225.7	225.1	218.6	-	-	-	-
4F	97	185.4	184.6	182.2	-	-	-	-
4F	98	198.4	198.0	198.2	-	-	-	-
4F	99	227.5	233.1	227.5	-	-	-	-
4F	100	224.7	222.7	223.5	-	-	-	-
4F	101	198.8	195.7	196.8	-	-	-	-
4F	102	251.4	251.3	249.3	-	-	-	-
4F	103	192.7	191.7	194.2	-	-	-	-
4F	104	215.2	217.3	217.4	-	-	-	-
4F	105	207.4	203.2	208.7	-	-	-	-
5F	106	226.2	230.1	227.2	-	-	-	-
5F	107	184.7	192.0	188.7	-	-	-	-
5F	108	201.0	201.8	193.8	-	-	-	-
5F	109	217.9	222.2	220.3	-	-	-	-
5F	110	209.5	212.3	198.0	-	-	-	-
5F	111	205.8	209.4	208.4	-	-	-	-
5F	112	187.6	194.1	193.9	-	-	-	-
5F	113	235.1	235.4	230.5	-	-	-	-
5F	114	206.5	210.6	205.9	-	-	-	-
5F	115	189.6	190.3	192.0	-	-	-	-
5F	116	226.9	223.8	223.6	232.2	231.9	241.5	240.4
5F	117	243.9	245.1	238.4	249.3	255.8	268.0	270.3
5F	118	210.2	211.3	214.3	218.4	217.8	229.2	225.3
5F	119	187.0	189.2	188.5	192.8	194.0	202.1	203.2
5F	120	215.8	220.8	220.8	228.4	229.5	236.5	242.3

Appendix 5
Individual food consumption

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group/ Sex	Animal Number	Individual food consumption (g/animal/week) at Week: -1	1	2	3	4	5
1M	1	134.3	147.2	155.9	177.0	189.4	188.3
1M	2	174.4	185.6	178.8	184.2	184.1	191.9
1M	3	131.8	149.6	157.0	180.6	169.7	173.1
1M	4	159.9	161.9	165.8	185.8	176.0	172.8
1M	5	153.0	157.9	165.5	192.8	178.3	186.6
1M	6	137.7	141.8	151.9	158.2	156.5	151.2
1M	7	140.8	154.6	175.9	177.2	180.6	186.1
1M	8	121.4	134.2	141.8	161.5	173.5	175.2
1M	9	153.2	159.8	160.8	184.6	181.4	181.2
1M	10	143.7	157.5	163.6	184.0	191.6	178.1
1M	11	167.4	180.2	190.2	226.7	202.5	206.5
1M	12	158.2	177.5	178.5	198.4	200.1	195.8
1M	13	150.0	158.6	171.7	181.2	167.4	176.9
1M	14	168.5	189.1	200.5	193.0	189.3	183.5
1M	15	163.3	177.3	193.0	211.0	202.3	202.2
2M	16	154.2	174.0	186.8	223.8	185.4	184.7
2M	17	132.7	148.9	159.6	175.2	206.5	191.3
2M	18	150.5	155.6	179.8	193.0	191.7	189.8
2M	19	160.1	163.2	185.8	180.0	190.7	187.1
2M	20	148.1	166.8	179.1	184.2	182.2	193.3
2M	21	143.2	141.8	150.9	158.4	163.6	163.4
2M	22	135.2	140.3	158.9	175.4	192.1	198.9
2M	23	141.7	154.9	161.2	188.9	184.0	195.0
2M	24	151.9	164.1	166.0	185.5	195.6	179.0
2M	25	134.1	154.7	155.6	177.4	192.3	192.1
3M	26	143.1	184.8	189.1	197.3	180.1	207.5
3M	27	140.4	163.8	153.0	187.1	177.2	167.6
3M	28	141.7	152.0	159.0	179.2	193.9	190.9
3M	29	138.6	148.5	158.4	169.2	201.9	212.6
3M	30	145.4	156.8	196.8	183.1	181.8	197.9
3M	31	137.5	143.3	152.7	159.2	169.9	157.8
3M	32	140.9	158.2	158.6	184.7	163.3	171.9
3M	33	133.0	157.8	158.1	171.4	181.7	183.0
3M	34	153.4	169.8	167.1	189.5	183.0	192.4
3M	35	141.3	161.1	154.5	184.7	177.7	183.6

Appendix 5
Individual food consumption

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group/ Sex	Animal Number	Individual food consumption (g/animal/week) at Week: -1	1	2	3	4	5
4M	36	141.7	141.2	157.0	188.5	181.1	170.7
4M	37	160.4	158.2	192.5	197.4	185.9	182.1
4M	38	154.5	149.9	199.2	206.9	189.4	171.4
4M	39	144.6	158.7	151.4	184.4	201.8	190.3
4M	40	166.3	177.7	200.4	213.5	201.8	194.7
4M	41	156.1	161.9	180.5	205.0	192.3	177.4
4M	42	142.8	147.8	162.6	187.0	186.1	172.9
4M	43	173.5	188.6	170.8	166.7	167.5	167.8
4M	44	162.9	167.7	171.6	186.9	165.0	164.3
4M	45	154.3	158.1	172.8	186.9	188.5	174.2
5M	46	130.9	138.6	153.1	159.9	161.7	166.5
5M	47	155.1	149.4	153.7	161.5	166.1	167.5
5M	48	151.0	153.8	178.1	180.3	179.4	191.7
5M	49	174.3	168.6	155.9	155.4	147.9	164.4
5M	50	146.1	154.1	160.0	175.6	180.6	178.1
5M	51	129.9	147.4	143.2	176.9	169.0	174.7
5M	52	166.3	174.8	183.2	180.5	195.3	189.5
5M	53	175.0	179.7	188.9	187.6	192.7	182.0
5M	54	158.9	156.5	161.5	183.5	212.4	218.8
5M	55	151.5	169.8	183.9	186.1	160.8	152.7
5M	56	155.4	160.8	176.3	192.1	188.7	190.5
5M	57	170.2	179.9	178.2	193.5	187.7	179.8
5M	58	131.1	141.5	171.9	176.4	179.0	173.8
5M	59	174.8	171.5	181.3	194.3	179.4	185.7
5M	60	145.5	142.8	172.1	178.4	178.8	188.9

Appendix 5
Individual food consumption

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group/ Sex	Animal Number	Individual food consumption (g/animal/week) at Week: -1	1	2	3	4	5
1F	61	122.7	110.0	112.3	113.7	115.3	126.5
1F	62	119.9	104.3	118.7	118.6	119.2	112.6
1F	63	142.4	132.0	143.8	179.7	151.2	146.2
1F	64	124.5	118.3	118.0	125.2	133.4	132.1
1F	65	117.8	117.0	113.9	123.6	126.8	139.5
1F	66	128.5	124.7	124.9	135.0	129.8	136.9
1F	67	135.4	134.2	127.0	143.8	140.1	139.7
1F	68	120.3	118.6	109.6	121.5	126.8	131.4
1F	69	122.1	123.6	119.0	137.2	127.9	132.0
1F	70	122.3	122.7	115.3	123.0	122.9	132.8
1F	71	112.6	111.7	103.9	110.0	111.5	116.2
1F	72	131.2	127.9	123.5	126.5	129.5	124.9
1F	73	138.5	139.6	128.4	135.7	131.4	129.2
1F	74	119.2	128.3	131.1	130.3	125.5	138.0
1F	75	135.0	137.4	130.5	132.6	131.4	164.4
2F	76	127.2	152.3	114.8	133.8	128.1	130.3
2F	77	115.2	128.8	110.3	126.4	119.9	118.2
2F	78	114.8	120.8	122.5	122.8	122.2	122.3
2F	79	126.5	131.8	131.7	128.3	121.6	136.6
2F	80	115.0	120.4	122.1	127.8	122.5	126.8
2F	81	121.5	124.8	116.6	125.1	121.5	121.9
2F	82	129.4	136.4	117.3	150.4	137.8	149.1
2F	83	136.9	139.2	133.7	131.0	134.0	138.5
2F	84	118.4	128.4	120.0	140.3	153.5	148.3
2F	85	106.2	116.8	96.7	110.3	110.7	114.0
3F	86	121.8	120.3	121.3	127.5	128.3	117.4
3F	87	107.3	106.7	107.5	121.0	114.7	113.0
3F	88	118.2	121.9	126.9	127.4	138.8	132.4
3F	89	135.2	140.7	144.0	148.1	129.2	132.0
3F	90	117.1	130.0	133.7	131.4	144.7	138.4
3F	91	129.4	140.2	114.3	131.4	133.0	126.6
3F	92	122.5	136.8	146.3	117.1	132.2	123.5
3F	93	146.5	152.8	161.8	184.0	172.6	175.5
3F	94	117.6	129.2	109.1	113.1	120.5	124.8
3F	95	154.3	144.7	146.8	151.2	167.8	175.1

Appendix 5
Individual food consumption

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group/ Sex	Animal Number	Individual food consumption (g/animal/week) at Week: -1	1	2	3	4	5
4F	96	144.0	132.4	125.8	149.1	137.6	143.1
4F	97	116.0	109.7	115.6	111.6	120.7	112.0
4F	98	130.8	120.9	129.4	145.6	128.9	122.9
4F	99	135.9	130.3	127.4	130.5	128.9	122.6
4F	100	127.4	137.3	141.6	143.8	141.0	138.1
4F	101	113.0	111.6	114.0	135.7	130.4	110.5
4F	102	147.7	140.3	170.7	177.3	165.1	170.1
4F	103	108.4	103.3	125.7	112.9	125.6	111.2
4F	104	121.7	117.0	136.4	108.4	114.9	119.0
4F	105	118.5	112.0	113.0	116.2	123.9	119.9
5F	106	127.8	123.7	135.6	146.6	151.5	136.1
5F	107	121.0	126.1	132.2	115.2	120.9	120.5
5F	108	149.0	139.4	133.2	139.2	146.6	141.3
5F	109	136.6	138.6	134.4	146.3	149.0	144.6
5F	110	137.9	138.5	138.4	160.6	135.3	131.9
5F	111	126.9	117.6	142.5	133.0	121.0	112.7
5F	112	117.4	108.5	119.5	123.8	126.4	121.9
5F	113	145.4	124.0	130.4	144.6	154.9	155.8
5F	114	131.3	120.2	124.7	133.4	139.2	137.2
5F	115	109.3	107.2	108.2	115.7	120.4	126.1
5F	116	135.6	120.3	115.1	128.6	125.7	112.4
5F	117	148.0	145.3	134.1	145.4	139.6	133.7
5F	118	118.7	133.2	119.9	141.1	152.6	141.4
5F	119	123.4	118.0	112.0	121.4	119.1	108.1
5F	120	125.8	132.5	136.9	129.1	138.9	139.7

Appendix 5
Individual food consumption

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group/ Sex	Animal Number	Individual food consumption (g/animal/week) at Week: 6	7	8	9	10	11
1M	1	192.1	186.4	189.2	187.9	177.4	172.6
1M	2	192.7	217.3	178.2	175.7	161.6	180.6
1M	3	175.4	169.1	156.2	136.4	152.4	169.8
1M	4	170.1	164.6	173.9	172.3	167.3	172.7
1M	5	181.0	175.4	170.5	168.9	165.5	164.7
1M	6	157.5	165.9	155.0	141.6	156.4	153.3
1M	7	184.8	183.8	169.3	168.7	157.8	158.4
1M	8	183.3	175.0	173.7	183.3	171.4	171.7
1M	9	180.2	174.8	175.8	190.5	181.1	163.2
1M	10	177.9	174.6	165.3	169.0	170.1	165.2
1M	11	205.0	195.7	191.9	200.4	197.2	197.4
1M	12	178.7	205.0	182.1	168.0	175.6	187.1
1M	13	177.6	168.1	159.5	160.2	150.4	161.9
1M	14	177.0	171.6	169.6	178.6	185.7	206.8
1M	15	206.7	191.0	183.6	198.0	192.9	186.8
2M	16	181.7	184.4	168.2	211.4	196.2	175.5
2M	17	195.8	190.1	174.7	183.6	181.9	170.3
2M	18	189.1	155.0	173.9	175.2	185.2	181.3
2M	19	188.1	183.1	178.3	170.3	175.8	174.4
2M	20	183.6	175.5	177.1	181.3	170.5	173.6
2M	21	189.7	168.3	177.4	175.6	162.9	188.2
2M	22	199.1	192.6	201.5	188.0	178.1	189.4
2M	23	184.1	193.9	193.3	173.9	159.0	175.6
2M	24	180.6	174.1	169.4	189.2	178.4	202.0
2M	25	189.0	188.2	183.3	179.9	171.0	176.1
3M	26	208.8	195.0	179.0	195.3	165.5	143.5
3M	27	169.9	163.2	167.2	164.2	160.4	161.2
3M	28	191.8	181.8	174.2	179.3	163.2	173.4
3M	29	206.6	198.4	183.6	194.0	181.8	196.2
3M	30	187.6	185.6	141.8	188.1	201.9	198.0
3M	31	158.5	153.9	142.0	152.4	145.3	152.0
3M	32	169.6	173.6	180.5	168.3	160.4	161.8
3M	33	181.2	172.2	168.4	166.5	158.5	157.4
3M	34	196.4	187.6	170.0	180.7	176.7	189.9
3M	35	171.1	167.5	173.5	178.8	167.7	159.4

Appendix 5
Individual food consumption

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group/ Sex	Animal Number	Individual food consumption (g/animal/week) at Week: 6	7	8	9	10	11
4M	36	169.1	168.7	160.6	157.4	150.0	157.2
4M	37	176.9	192.9	181.4	183.2	159.8	169.8
4M	38	195.0	175.5	194.2	188.2	174.8	166.9
4M	39	188.3	176.5	172.0	180.3	166.5	172.5
4M	40	192.0	191.5	175.6	190.8	184.5	167.0
4M	41	176.8	182.6	163.1	171.9	172.6	161.6
4M	42	174.1	186.4	173.5	179.8	165.8	199.4
4M	43	166.3	165.6	156.6	157.9	162.7	174.4
4M	44	162.2	172.8	155.6	162.5	152.2	152.6
4M	45	164.3	190.3	163.8	192.2	159.8	169.4
5M	46	165.2	157.8	154.6	156.9	151.0	143.4
5M	47	159.6	154.4	153.4	145.7	146.5	148.1
5M	48	108.7	189.0	183.0	182.9	471.6	178.8
5M	49	165.6	152.5	151.1	171.2	159.5	158.3
5M	50	178.5	172.0	173.2	171.0	170.6	168.4
5M	51	174.6	169.7	172.0	166.5	160.8	178.1
5M	52	189.1	191.2	184.0	180.0	176.2	183.4
5M	53	180.0	179.6	172.1	169.4	165.3	168.0
5M	54	225.4	199.2	214.5	186.0	175.0	168.9
5M	55	176.5	181.6	176.8	182.0	176.7	182.4
5M	56	189.4	192.5	186.2	187.3	190.2	201.2
5M	57	178.5	167.4	191.4	186.0	179.3	187.1
5M	58	165.2	172.2	161.8	159.4	163.2	167.1
5M	59	187.0	184.4	196.7	171.8	154.7	179.1
5M	60	200.5	188.2	177.0	209.8	206.9	194.4

Appendix 5
Individual food consumption

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group/ Sex	Animal Number	Individual food consumption (g/animal/week) at Week: 6	7	8	9	10	11
1F	61	116.8	117.1	121.6	116.9	110.5	114.0
1F	62	118.5	115.6	116.1	114.8	118.0	113.1
1F	63	148.3	133.9	135.5	134.8	139.2	157.0
1F	64	130.8	130.8	131.1	136.9	136.2	134.0
1F	65	133.5	122.8	129.6	128.1	128.5	128.3
1F	66	143.1	130.8	126.6	125.5	134.0	145.9
1F	67	152.4	135.6	166.0	172.3	145.4	159.5
1F	68	136.0	123.3	121.2	125.2	112.7	128.6
1F	69	129.7	128.3	143.8	139.4	128.6	130.7
1F	70	126.1	112.8	117.6	130.7	128.0	136.5
1F	71	117.1	107.5	103.6	119.0	108.1	134.5
1F	72	123.8	123.7	126.4	125.1	120.2	127.5
1F	73	155.5	128.9	129.1	129.5	134.0	124.2
1F	74	121.9	124.8	119.9	134.9	126.4	154.5
1F	75	135.7	129.6	127.8	128.1	124.6	129.8
2F	76	135.4	137.9	134.6	133.3	123.9	137.0
2F	77	115.9	131.8	137.6	123.9	125.8	135.4
2F	78	115.5	113.7	113.0	119.3	113.0	135.3
2F	79	128.5	125.2	129.1	125.2	134.2	129.4
2F	80	128.4	115.1	119.7	115.8	122.7	133.9
2F	81	126.9	119.2	116.7	117.2	108.5	114.5
2F	82	148.0	129.1	138.2	139.5	124.4	143.0
2F	83	125.1	135.8	133.1	137.2	125.3	126.1
2F	84	156.6	152.6	136.5	151.3	131.0	133.2
2F	85	117.3	120.5	122.3	113.1	111.9	146.9
3F	86	117.4	116.9	118.6	113.0	114.0	123.4
3F	87	117.7	124.5	113.7	118.8	114.6	111.7
3F	88	122.1	131.0	129.1	119.0	122.1	129.5
3F	89	133.0	131.3	139.7	127.2	122.8	129.7
3F	90	130.5	135.4	136.8	129.8	133.9	128.4
3F	91	131.1	117.2	120.0	124.0	122.2	120.2
3F	92	120.4	126.6	125.7	120.2	119.8	129.2
3F	93	165.5	141.4	141.8	158.5	147.7	147.1
3F	94	119.6	116.8	110.1	110.2	113.3	110.6
3F	95	157.2	160.5	159.8	149.3	137.7	155.4

Appendix 5
Individual food consumption

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group/ Sex	Animal Number	Individual food consumption (g/animal/week) at Week: 6	7	8	9	10	11
4F	96	144.7	146.6	146.2	114.0	113.5	138.0
4F	97	116.7	120.6	120.2	127.6	123.3	125.2
4F	98	131.8	126.9	134.3	149.0	132.8	119.3
4F	99	132.0	126.8	120.7	120.1	119.9	117.9
4F	100	135.7	128.1	128.1	131.5	133.2	128.6
4F	101	118.0	110.7	107.4	109.4	109.3	126.8
4F	102	173.8	141.3	138.3	166.6	159.4	156.4
4F	103	105.3	116.6	116.5	114.5	116.1	124.6
4F	104	113.7	125.4	121.4	121.8	119.3	111.5
4F	105	117.9	117.5	119.6	113.5	119.2	128.3
5F	106	134.8	131.4	129.8	145.0	136.7	128.3
5F	107	106.1	119.6	107.7	116.2	114.1	111.3
5F	108	145.1	133.7	125.9	137.2	133.6	145.2
5F	109	142.6	140.5	130.9	136.7	144.4	133.4
5F	110	135.9	141.4	127.4	152.4	129.2	134.6
5F	111	107.9	136.2	123.6	130.5	119.9	123.1
5F	112	112.3	110.1	115.3	107.2	106.3	110.0
5F	113	146.4	142.2	135.3	138.7	144.1	146.2
5F	114	128.0	127.0	130.7	129.6	125.7	129.8
5F	115	118.6	118.6	115.8	126.9	122.4	129.0
5F	116	117.7	124.8	119.8	125.7	127.0	121.9
5F	117	125.9	125.1	121.8	137.2	131.9	137.1
5F	118	135.5	141.7	144.2	140.5	132.4	155.6
5F	119	105.4	104.8	105.6	142.3	105.2	107.2
5F	120	134.9	149.2	149.0	135.8	133.7	136.7

Appendix 5
Individual food consumption

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group/ Sex	Animal Number	Individual food consumption (g/animal/week) at Week: 12	13	14	15	16	17
1M	1	170.4	155.8	-	-	-	-
1M	2	168.1	155.2	-	-	-	-
1M	3	160.3	150.5	-	-	-	-
1M	4	156.8	159.7	-	-	-	-
1M	5	162.3	150.1	-	-	-	-
1M	6	137.0	140.2	-	-	-	-
1M	7	156.1	139.9	-	-	-	-
1M	8	165.4	166.0	-	-	-	-
1M	9	164.8	145.7	-	-	-	-
1M	10	166.2	147.2	-	-	-	-
1M	11	182.8	159.2	186.3	174.1	192.3	194.7
1M	12	170.1	158.7	168.2	169.6	179.8	177.5
1M	13	151.7	144.5	152.9	162.8	165.2	158.2
1M	14	157.6	161.7	169.2	169.3	186.7	182.8
1M	15	180.3	173.5	189.9	174.8	175.7	179.5
2M	16	160.3	158.4	-	-	-	-
2M	17	171.0	151.8	-	-	-	-
2M	18	170.9	166.9	-	-	-	-
2M	19	167.8	152.0	-	-	-	-
2M	20	166.4	153.7	-	-	-	-
2M	21	169.0	170.4	-	-	-	-
2M	22	178.9	147.0	-	-	-	-
2M	23	163.6	148.0	-	-	-	-
2M	24	177.2	159.0	-	-	-	-
2M	25	172.3	161.8	-	-	-	-
3M	26	142.6	148.1	-	-	-	-
3M	27	151.5	138.7	-	-	-	-
3M	28	165.6	149.8	-	-	-	-
3M	29	183.3	170.7	-	-	-	-
3M	30	188.7	165.3	-	-	-	-
3M	31	147.9	126.1	-	-	-	-
3M	32	149.1	139.0	-	-	-	-
3M	33	151.6	139.1	-	-	-	-
3M	34	176.0	152.7	-	-	-	-
3M	35	179.3	165.4	-	-	-	-

Appendix 5
Individual food consumption

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group/ Sex	Animal Number	Individual food consumption (g/animal/week) at Week: 12	13	14	15	16	17
4M	36	144.7	141.3	-	-	-	-
4M	37	166.4	153.1	-	-	-	-
4M	38	164.8	157.2	-	-	-	-
4M	39	169.5	145.9	-	-	-	-
4M	40	159.4	161.0	-	-	-	-
4M	41	163.3	152.8	-	-	-	-
4M	42	170.8	151.9	-	-	-	-
4M	43	175.5	146.2	-	-	-	-
4M	44	148.0	142.9	-	-	-	-
4M	45	162.5	150.9	-	-	-	-
5M	46	147.6	122.2	-	-	-	-
5M	47	143.2	129.9	-	-	-	-
5M	48	176.4	156.3	-	-	-	-
5M	49	155.4	143.0	-	-	-	-
5M	50	172.4	153.5	-	-	-	-
5M	51	149.6	147.2	-	-	-	-
5M	52	168.8	150.9	-	-	-	-
5M	53	157.2	152.6	-	-	-	-
5M	54	164.7	150.0	-	-	-	-
5M	55	172.5	145.2	-	-	-	-
5M	56	173.1	159.8	171.3	186.8	182.4	205.8
5M	57	155.3	140.4	167.7	165.3	179.9	180.2
5M	58	160.1	138.1	157.2	166.7	167.4	165.2
5M	59	152.6	140.5	163.7	169.1	156.8	226.9
5M	60	166.9	154.3	178.9	196.5	171.5	189.7

Appendix 5
Individual food consumption

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group/ Sex	Animal Number	Individual food consumption (g/animal/week) at Week: 12	13	14	15	16	17
1F	61	111.7	99.7	-	-	-	-
1F	62	112.6	102.5	-	-	-	-
1F	63	139.6	126.0	-	-	-	-
1F	64	125.7	118.5	-	-	-	-
1F	65	120.5	117.7	-	-	-	-
1F	66	117.7	118.8	-	-	-	-
1F	67	134.6	121.4	-	-	-	-
1F	68	115.0	114.8	-	-	-	-
1F	69	141.0	115.7	-	-	-	-
1F	70	121.5	114.9	-	-	-	-
1F	71	106.6	96.6	105.5	124.2	109.6	107.6
1F	72	116.1	105.1	112.2	128.9	122.7	119.8
1F	73	121.2	123.7	114.1	124.2	122.6	167.8
1F	74	141.4	125.4	163.3	183.3	175.5	161.4
1F	75	116.8	112.5	119.4	161.3	128.5	123.8
2F	76	120.3	114.4	-	-	-	-
2F	77	123.5	111.4	-	-	-	-
2F	78	117.1	114.0	-	-	-	-
2F	79	121.9	119.5	-	-	-	-
2F	80	-	-	-	-	-	-
2F	81	104.7	98.0	-	-	-	-
2F	82	135.1	101.8	-	-	-	-
2F	83	116.2	113.8	-	-	-	-
2F	84	125.4	130.2	-	-	-	-
2F	85	104.9	102.4	-	-	-	-
3F	86	103.5	100.1	-	-	-	-
3F	87	103.3	103.5	-	-	-	-
3F	88	122.2	116.0	-	-	-	-
3F	89	116.4	119.5	-	-	-	-
3F	90	125.0	127.4	-	-	-	-
3F	91	110.6	115.9	-	-	-	-
3F	92	115.9	108.4	-	-	-	-
3F	93	137.6	132.5	-	-	-	-
3F	94	104.1	106.9	-	-	-	-
3F	95	137.4	128.6	-	-	-	-

Appendix 5
Individual food consumption

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group/ Sex	Animal Number	Individual food consumption (g/animal/week) at Week: 12	13	14	15	16	17
4F	96	123.1	111.9	-	-	-	-
4F	97	120.2	121.5	-	-	-	-
4F	98	115.1	125.8	-	-	-	-
4F	99	109.9	117.5	-	-	-	-
4F	100	117.0	116.1	-	-	-	-
4F	101	92.3	104.6	-	-	-	-
4F	102	137.6	126.3	-	-	-	-
4F	103	124.2	104.1	-	-	-	-
4F	104	106.9	108.3	-	-	-	-
4F	105	127.0	110.1	-	-	-	-
5F	106	136.6	117.6	-	-	-	-
5F	107	105.3	100.4	-	-	-	-
5F	108	134.9	101.8	-	-	-	-
5F	109	131.4	116.9	-	-	-	-
5F	110	127.3	108.6	-	-	-	-
5F	111	107.3	106.6	-	-	-	-
5F	112	99.8	97.9	-	-	-	-
5F	113	134.2	121.5	-	-	-	-
5F	114	122.9	124.8	-	-	-	-
5F	115	113.3	108.9	-	-	-	-
5F	116	115.2	105.5	113.7	127.4	122.1	115.8
5F	117	128.3	102.5	112.7	146.7	140.5	138.7
5F	118	130.7	122.7	130.6	131.0	133.5	147.3
5F	119	97.7	111.8	99.2	111.5	108.8	106.2
5F	120	120.5	121.8	124.6	141.8	129.9	139.9

Appendix 6
Individual haematology

Key to abbreviations/methods

Code	Parameter	Analyser	Method of determination
Hb	haemoglobin concentration	Bayer ADVIA	Spectrophotometric measurement of cyanmethaemoglobin
RBC	red blood cell count	Bayer ADVIA	Flow cytometry
PCV	packed cell volume	Calculation	PCV = (MCV x RBC) + 10
RETA	reticulocytes	Automated	Supravital staining with oxazine 750, assessed by flow cytometry
RET ABS	absolute reticulocytes	Calculation	RBC x RETA ÷ 100
MCV	mean cell volume	Bayer ADVIA	Flow cytometry
MCH	mean cell haemoglobin	Calculation	MCH = (Hb ÷ RBC) x 10
MCHC	mean cell haemoglobin concentration	Calculation	MCHC = (Hb ÷ PCV) x 100
HDW	haemoglobin distribution width	Bayer ADVIA	Flow cytometry
RDW	red cell distribution width	Bayer ADVIA	Flow cytometry
PLAT	platelets	Bayer ADVIA	Flow cytometry
PCT	plateletcrit	Calculated	PCT = (MPV x PLT) + 10,000
MPV	mean platelet volume	Bayer ADVIA	Flow cytometry
PDW	platelet distribution width	Bayer ADVIA	Flow cytometry
PT	prothrombin time	ACL Futura	Fibrin formation using rabbit brain thromboplastin to activate coagulation cascade
APTT	activated partial thromboplastin time	ACL Futura	Fibrin formation using micronised silica to activate coagulation cascade
WBC	white blood cell count	Bayer ADVIA	Flow cytometry
N L M E B LUC	neutrophils lymphocytes monocytes eosinophils basophils large unstained cells	Manual: Blood smear Automated: Bayer ADVIA	Manual: Visual appraisal of a blood smear using a Romanowski-type stain Automated: Cytochemical staining with a peroxidase stain and detection of light scatter using a photo-optical method. Basophils enumerated using differential lysis and laser light scattering

Appendix 6
Individual haematology
Occasion: Week 14 - main study

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group/ Sex	Animal Number	Hb g/dL	RBC mil/cmm	PCV %	RETA %	RET ABS mil/cmm	MCV fL
1M	1	16.0	8.88	46.4	2.6	0.23	52.2
1M	2	16.0	8.78	45.4	2.4	0.21	51.7
1M	3	15.2	8.61	43.5	2.4	0.21	50.5
1M	4	16.5	9.23	47.0	2.4	0.22	50.9
1M	5	16.1	8.81	47.3	2.2	0.19	53.7
1M	6	SC	SC	SC	SC	NC	SC
1M	7	15.9	8.54	46.0	2.2	0.19	53.8
1M	8	SC	SC	SC	SC	NC	SC
1M	9	SC	SC	SC	SC	NC	SC
1M	10	15.5	9.03	45.7	1.8	0.16	50.7
2M	16	16.8	9.06	47.5	2.3	0.21	52.4
2M	17	16.2	8.82	47.1	2.4	0.21	53.4
2M	18	16.8	9.54	49.2	2.1	0.20	51.5
2M	19	15.7	8.99	44.9	2.4	0.22	50.0
2M	20	16.0	8.71	47.6	2.6	0.23	54.6
2M	21	15.5	8.64	44.7	2.5	0.22	51.7
2M	22	16.6	8.80	48.0	1.9	0.17	54.6
2M	23	15.9	9.10	45.4	1.9	0.17	49.8
2M	24	16.1	9.03	47.4	2.1	0.19	52.5
2M	25	17.4	9.48	49.4	1.9	0.18	52.1
3M	26	16.3	9.23	47.6	1.9	0.18	51.6
3M	27	16.4	9.66	47.5	1.8	0.17	49.1
3M	28	16.9	8.65	47.4	2.8	0.24	54.8
3M	29	15.6	8.63	44.2	2.4	0.21	51.2
3M	30	SC	SC	SC	SC	NC	SC
3M	31	15.9	9.01	46.0	1.7	0.15	51.1
3M	32	16.3	8.32	45.6	2.4	0.20	54.8
3M	33	16.6	9.27	46.9	1.4	0.13	50.6
3M	34	15.5	8.84	45.9	2.5	0.22	52.0
3M	35	16.1	8.64	46.9	2.2	0.19	54.3
4M	36	16.2	8.61	43.8	2.2	0.19	50.8
4M	37	14.8	8.93	42.9	2.0	0.18	48.1
4M	38	15.8	8.64	44.4	2.0	0.17	51.4
4M	39	17.0	9.77	49.2	2.1	0.21	50.4
4M	40	15.7	9.29	46.5	1.8	0.17	50.0
4M	41	16.4	9.12	46.6	1.7	0.16	51.1
4M	42	16.7	9.50	48.8	2.0	0.19	51.4
4M	43	16.4	9.63	47.4	2.3	0.22	49.2
4M	44	17.1	9.56	50.4	1.6	0.15	52.7
4M	45	15.6	8.65	45.0	2.8	0.24	52.0
5M	46	16.1	9.17	44.3	1.2	0.11	48.4
5M	47	SC	SC	SC	SC	NC	SC
5M	48	14.8	8.36	41.6	2.4	0.20	49.8
5M	49	16.1	8.05	44.4	3.0	0.24	55.2
5M	50	18.0	10.16	51.3	2.2	0.22	50.5
5M	51	16.5	9.00	48.3	3.2	0.29	53.7
5M	52	16.2	9.56	47.5	1.7	0.16	49.7
5M	53	17.4	9.30	50.2	2.6	0.24	54.0
5M	54	17.7	9.09	50.4	2.2	0.20	55.5
5M	55	15.1	8.32	44.0	2.6	0.22	52.8

NC = not calculated
SC = sample clotted

Appendix 6
Individual haematology
Occasion: Week 14 - main study

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group/ Sex	Animal Number	Hb g/dL	RBC mil/cmm	PCV %	RETA %	RET ABS mil/cmm	MCV fL
1F	61	15.8	8.57	46.0	2.2	0.19	53.7
1F	62	SC	SC	SC	SC	NC	SC
1F	63	16.2	8.39	47.6	2.8	0.23	56.7
1F	64	15.0	7.67	44.3	2.8	0.21	57.8
1F	65	15.7	9.00	45.7	2.4	0.22	50.7
1F	66	15.4	8.56	43.8	1.8	0.15	51.1
1F	67	SC	SC	SC	SC	NC	SC
1F	68	15.1	7.56	42.8	2.7	0.20	56.6
1F	69	15.2	8.48	44.3	2.6	0.22	52.2
1F	70	14.5	7.95	41.4	1.7	0.14	52.1
2F	76	15.6	8.89	46.0	1.8	0.16	51.8
2F	77	16.0	8.37	46.8	3.0	0.25	55.9
2F	78	14.8	7.78	42.6	2.0	0.16	54.8
2F	79	SC	SC	SC	SC	NC	SC
2F	81	15.1	8.27	43.7	2.5	0.21	52.8
2F	82	16.2	8.77	46.8	2.6	0.23	53.3
2F	83	15.6	8.49	45.4	2.3	0.20	53.5
2F	84	SC	SC	SC	SC	NC	SC
2F	85	15.0	7.54	41.7	2.2	0.17	55.3
3F	86	15.7	8.60	43.7	1.4	0.12	50.8
3F	87	IS	IS	IS	IS	NC	IS
3F	88	14.9	8.11	41.9	1.8	0.15	51.6
3F	89	14.9	7.59	42.1	1.4	0.11	55.4
3F	90	15.7	8.34	43.9	1.5	0.13	52.7
3F	91	14.7	8.09	41.2	2.2	0.18	50.9
3F	92	15.4	8.61	43.8	1.9	0.16	50.9
3F	93	15.3	8.72	43.2	1.5	0.13	49.5
3F	94	15.4	8.27	44.2	2.0	0.17	53.5
3F	95	SC	SC	SC	SC	NC	SC
4F	96	14.8	8.25	43.1	2.1	0.17	52.2
4F	97	15.6	8.85	44.1	1.6	0.14	49.8
4F	98	15.6	8.56	47.0	4.3	0.37	54.9
4F	99	14.9	8.04	42.0	3.4	0.27	52.3
4F	100	14.6	7.58	41.5	2.6	0.20	54.8
4F	101	15.9	8.47	45.4	3.2	0.27	53.6
4F	102	14.3	7.82	41.6	2.5	0.20	53.1
4F	103	15.7	8.14	43.3	2.7	0.22	53.3
4F	104	14.9	7.95	41.9	2.1	0.17	52.8
4F	105	15.6	8.65	43.7	2.2	0.19	50.6
5F	106	14.9	7.79	43.2	3.6	0.28	55.4
5F	107	15.4	7.66	44.2	3.7	0.28	57.7
5F	108	14.6	8.00	42.9	3.2	0.26	53.7
5F	109	15.4	7.87	44.0	5.3	0.42	55.8
5F	110	15.1	8.37	43.7	3.1	0.26	52.2
5F	111	15.6	8.39	44.6	3.3	0.28	53.2
5F	112	15.3	7.92	43.5	2.4	0.19	54.9
5F	113	SC	SC	SC	SC	NC	SC
5F	114	16.9	8.99	49.8	4.1	0.37	55.3
5F	115	15.2	7.76	42.7	4.3	0.33	55.0

IS = insufficient sample for analysis
NC = not calculated
SC = sample clotted

Appendix 6
Individual haematology
Occasion: Week 14 - main study

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group/ Sex	Animal Number	MCH pg	MCHC g/dL	HDW g/dL	RDW %	PLAT 1000/cmm	PCT %
1M	1	18.1	34.6	2.93	14.0	912	0.65
1M	2	18.2	35.2	2.93	13.1	889	0.63
1M	3	17.6	34.9	2.42	12.7	828	0.60
1M	4	17.8	35.0	2.82	13.7	796	0.59
1M	5	18.2	34.0	2.67	13.1	948	0.67
1M	6	SC	SC	SC	SC	SC	SC
1M	7	18.6	34.5	3.17	18.5	1040	0.72
1M	8	SC	SC	SC	SC	SC	SC
1M	9	SC	SC	SC	SC	SC	SC
1M	10	17.1	33.8	2.57	12.8	702	0.50
2M	16	18.6	35.4	2.86	13.2	786	0.57
2M	17	18.3	34.3	2.63	13.2	911	0.66
2M	18	17.6	34.2	2.29	11.9	919	0.67
2M	19	17.5	35.0	2.82	13.3	949	0.66
2M	20	18.4	33.6	2.61	12.6	926	0.66
2M	21	18.0	34.8	3.09	19.9	1056	0.76
2M	22	18.9	34.7	2.51	12.8	1000	0.70
2M	23	17.4	34.9	2.80	13.8	889	0.63
2M	24	17.8	34.0	2.47	12.4	1089	0.75
2M	25	18.3	35.1	3.13	13.9	1065	0.72
3M	26	17.7	34.3	2.52	12.8	657	0.51
3M	27	17.0	34.6	2.46	12.8	879	0.62
3M	28	19.6	35.7	2.88	19.8	954	0.71
3M	29	18.0	35.2	2.68	13.5	1030	0.73
3M	30	SC	SC	SC	SC	SC	SC
3M	31	17.6	34.4	2.40	12.5	850	0.60
3M	32	19.6	35.7	2.74	13.3	881	0.61
3M	33	18.0	35.5	2.76	13.6	987	0.69
3M	34	17.6	33.8	2.47	13.2	912	0.61
3M	35	18.6	34.2	2.51	12.8	811	0.59
4M	36	18.8	37.0	3.07	23.7	976	0.70
4M	37	16.6	34.5	2.60	12.7	942	0.68
4M	38	18.3	35.7	3.16	24.0	1016	0.75
4M	39	17.4	34.5	2.64	12.5	1030	0.78
4M	40	16.9	33.9	2.50	12.3	822	0.59
4M	41	18.0	35.2	2.38	11.0	1074	0.71
4M	42	17.6	34.3	2.54	11.5	987	0.72
4M	43	17.0	34.6	2.65	12.8	986	0.68
4M	44	17.9	33.9	2.48	11.5	868	0.63
4M	45	18.0	34.7	2.69	12.8	822	0.60
5M	46	17.6	36.4	2.93	15.8	1043	0.73
5M	47	SC	SC	SC	SC	SC	SC
5M	48	17.7	35.6	2.98	13.1	1222	0.83
5M	49	20.1	36.3	3.14	22.3	979	0.69
5M	50	17.7	35.0	2.95	13.0	1203	0.78
5M	51	18.4	34.2	2.40	11.7	891	0.68
5M	52	17.0	34.1	2.71	12.6	1045	0.72
5M	53	18.7	34.7	2.87	12.2	923	0.68
5M	54	19.5	35.2	2.73	12.1	1020	0.74
5M	55	18.2	34.4	2.90	20.5	986	0.70

SC = sample clotted

Appendix 6
Individual haematology
Occasion: Week 14 - main study

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group/ Sex	Animal Number	MCH pg	MCHC g/dL	HDW g/dL	RDW %	PLAT 1000/cmm	PCT %
1F	61	18.4	34.3	2.27	11.7	838	0.57
1F	62	SC	SC	SC	SC	SC	SC
1F	63	19.3	34.1	2.04	11.0	918	0.67
1F	64	19.6	33.9	2.02	11.7	757	0.64
1F	65	17.5	34.5	2.32	12.4	855	0.60
1F	66	18.0	35.2	2.28	11.7	1056	0.80
1F	67	SC	SC	SC	SC	SC	SC
1F	68	20.0	35.3	2.52	19.8	817	0.60
1F	69	18.0	34.4	2.14	10.9	956	0.70
1F	70	18.2	35.0	2.15	11.3	941	0.66
2F	76	17.6	34.0	2.06	11.5	888	0.63
2F	77	19.2	34.3	2.30	11.7	792	0.61
2F	78	19.0	34.7	2.05	10.8	906	0.66
2F	79	SC	SC	SC	SC	SC	SC
2F	81	18.3	34.6	2.09	11.3	909	0.67
2F	82	18.5	34.7	2.41	12.6	888	0.67
2F	83	18.4	34.3	2.08	11.4	1004	0.72
2F	84	SC	SC	SC	SC	SC	SC
2F	85	19.8	35.9	2.46	18.2	912	0.68
3F	86	18.3	36.0	2.31	11.5	1081	0.74
3F	87	IS	IS	IS	IS	IS	IS
3F	88	18.4	35.6	2.30	12.0	745	0.54
3F	89	19.7	35.5	2.59	21.4	961	0.69
3F	90	18.8	35.7	2.26	11.6	821	0.58
3F	91	18.1	35.6	2.32	12.1	1014	0.73
3F	92	17.8	35.1	2.36	12.2	999	0.68
3F	93	17.6	35.5	2.30	11.5	1066	0.78
3F	94	18.6	34.8	2.28	11.9	794	0.60
3F	95	SC	SC	SC	SC	SC	SC
4F	96	18.0	34.4	2.06	11.3	944	0.66
4F	97	17.7	35.4	2.61	14.1	892	0.60
4F	98	18.2	33.2	2.26	11.7	841	0.70
4F	99	18.5	35.4	2.41	12.0	1015	0.74
4F	100	19.3	35.2	2.69	15.3	1010	0.74
4F	101	18.8	35.0	2.41	12.0	824	0.59
4F	102	18.3	34.4	2.07	11.2	1124	0.81
4F	103	19.3	36.2	2.61	12.6	727	0.56
4F	104	18.7	35.4	2.49	12.4	1037	0.72
4F	105	18.1	35.7	2.36	11.4	952	0.73
5F	106	19.2	34.6	2.28	11.3	1272	0.93
5F	107	20.0	34.7	2.51	12.1	1213	0.95
5F	108	18.3	34.0	2.20	10.9	1134	0.86
5F	109	19.6	35.1	2.33	12.2	1211	0.92
5F	110	18.0	34.5	2.13	11.5	1253	0.87
5F	111	18.6	35.0	2.34	11.7	1047	0.79
5F	112	19.3	35.2	2.25	11.1	974	0.76
5F	113	SC	SC	SC	SC	SC	SC
5F	114	18.8	34.0	2.23	10.8	1154	1.05
5F	115	19.6	35.6	2.52	14.8	1096	0.81

IS = insufficient sample for analysis
SC = sample clotted

Appendix 6
Individual haematology
Occasion: Week 14 - main study

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group/ Sex	Animal Number	MPV fl	PDW %	PT s	APTT s
1M	1	7.1	54.8	22.4	18.4
1M	2	7.1	58.5	20.3	18.5
1M	3	7.2	60.6	21.6	19.4
1M	4	7.4	57.4	22.9	20.7
1M	5	7.1	61.9	21.6	24.1
1M	6	SC	SC	SC	SC
1M	7	6.9	59.7	22.6	18.3
1M	8	SC	SC	20.7	24.5
1M	9	SC	SC	SC	SC
1M	10	7.1	67.9	22.6	18.5
2M	16	7.2	61.6	21.4	21.6
2M	17	7.2	56.2	21.6	18.3
2M	18	7.3	59.4	24.0	19.5
2M	19	6.9	56.4	22.8	19.9
2M	20	7.1	55.4	22.7	19.4
2M	21	7.2	54.7	22.5	18.8
2M	22	7.0	54.0	22.1	20.4
2M	23	7.1	59.2	22.1	18.9
2M	24	6.9	56.4	21.7	20.0
2M	25	6.8	56.2	20.5	22.5
3M	26	7.8	66.4	23.1	20.5
3M	27	7.0	60.4	21.0	19.7
3M	28	7.5	58.3	22.4	20.4
3M	29	7.1	57.5	SC	SC
3M	30	SC	SC	SC	SC
3M	31	7.1	57.0	22.6	24.0
3M	32	6.9	61.8	21.2	16.8
3M	33	7.0	62.0	21.5	18.8
3M	34	6.6	67.6	20.4	22.8
3M	35	7.2	53.9	22.2	21.7
4M	36	7.2	58.6	22.0	18.5
4M	37	7.2	56.3	23.1	18.9
4M	38	7.4	54.4	20.1	22.8
4M	39	7.6	58.1	23.4	19.6
4M	40	7.2	71.1	19.8	20.8
4M	41	6.6	52.2	20.7	19.6
4M	42	7.3	54.6	20.1	21.9
4M	43	6.9	62.0	20.9	22.7
4M	44	7.3	53.4	20.7	19.5
4M	45	7.3	61.3	21.6	21.1
5M	46	7.0	56.2	23.6	22.1
5M	47	SC	SC	19.7	18.5
5M	48	6.8	55.7	21.7	24.3
5M	49	7.1	56.5	22.5	22.5
5M	50	6.5	48.8	21.6	24.0
5M	51	7.7	62.9	20.5	24.5
5M	52	6.9	63.0	20.2	21.1
5M	53	7.3	54.2	20.8	22.7
5M	54	7.3	56.4	19.1	22.5
5M	55	7.1	55.8	20.7	18.5

SC = sample clotted

Appendix 6
Individual haematology
Occasion: Week 14 - main study

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group/ Sex	Animal Number	MPV fl	PDW %	PT s	APTT s
1F	61	6.9	56.0	22.3	21.6
1F	62	SC	SC	SC	SC
1F	63	7.3	58.9	18.0	21.3
1F	64	8.5	69.1	17.2	25.2
1F	65	7.1	58.9	19.8	20.8
1F	66	7.6	63.7	20.7	18.2
1F	67	SC	SC	SC	SC
1F	68	7.4	63.1	18.5	18.5
1F	69	7.3	59.1	17.9	21.1
1F	70	7.0	57.9	21.3	17.2
2F	76	7.1	68.7	20.3	20.3
2F	77	7.7	61.0	21.0	19.2
2F	78	7.3	59.4	18.8	25.4
2F	79	SC	SC	SC	SC
2F	81	7.4	67.1	20.5	17.9
2F	82	7.5	66.4	18.8	20.8
2F	83	7.2	60.0	19.1	16.8
2F	84	SC	SC	SC	SC
2F	85	7.4	60.2	19.9	19.6
3F	86	6.9	58.9	21.9	20.5
3F	87	IS	IS	20.4	17.8
3F	88	7.3	60.4	20.6	17.9
3F	89	7.2	54.5	18.9	18.4
3F	90	7.1	62.4	20.0	20.5
3F	91	7.2	59.2	19.5	18.0
3F	92	6.8	59.7	SC	SC
3F	93	7.3	63.8	21.2	17.5
3F	94	7.6	62.8	19.1	18.5
3F	95	SC	SC	SC	SC
4F	96	7.0	68.6	20.7	19.3
4F	97	6.8	52.5	23.3	18.9
4F	98	8.3	67.2	SC	SC
4F	99	7.3	57.0	19.1	20.6
4F	100	7.4	59.0	18.6	18.6
4F	101	7.1	57.7	18.4	19.3
4F	102	7.2	63.1	20.4	16.6
4F	103	7.7	65.0	18.5	17.2
4F	104	7.0	49.2	20.7	21.1
4F	105	7.6	63.0	19.2	17.0
5F	106	7.3	60.0	20.7	20.3
5F	107	7.8	50.1	19.1	19.8
5F	108	7.6	55.2	19.1	21.4
5F	109	7.6	55.9	20.5	16.7
5F	110	7.0	54.6	21.0	18.9
5F	111	7.5	64.8	18.5	21.1
5F	112	7.7	54.2	16.2	18.3
5F	113	SC	SC	SC	SC
5F	114	9.1	60.4	19.4	16.2
5F	115	7.3	58.8	22.3	20.5

IS = insufficient sample for analysis
SC = sample clotted

Appendix 6
Individual haematology
Occasion: Week 14 - main study

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group/ Sex	Animal Number	WBC 1000/cmm	N 1000/cmm	L 1000/cmm	M 1000/cmm	E 1000/cmm	B 1000/cmm	LUC 1000/cmm
1M	1	8.1	0.7	7.1	0.1	0.1	0.0	0.1
1M	2	5.2	0.7	4.4	0.1	0.1	0.0	0.0
1M	3	6.1	0.9	5.1	0.1	0.1	0.0	0.1
1M	4	4.0	0.7	3.1	0.1	0.1	0.0	0.0
1M	5	10.3	1.8	8.1	0.3	0.1	0.0	0.0
1M	6	SC	NC	NC	NC	NC	NC	NC
1M	7	11.4	1.7	9.2	0.2	0.2	0.0	0.0
1M	8	SC	NC	NC	NC	NC	NC	NC
1M	9	SC	NC	NC	NC	NC	NC	NC
1M	10	6.2	1.1	4.8	0.1	0.1	0.0	0.0
2M	16	3.3	0.8	2.4	0.0	0.0	0.0	0.0
2M	17	8.4	0.7	7.5	0.1	0.1	0.0	0.1
2M	18	4.6	0.7	3.7	0.0	0.1	0.0	0.0
2M	19	6.2	0.7	5.0	0.2	0.2	0.0	0.1
2M	20	12.4	1.9	10.0	0.2	0.1	0.0	0.1
2M	21	7.6	0.8	6.4	0.2	0.2	0.0	0.1
2M	22	10.2	1.3	8.5	0.2	0.1	0.0	0.0
2M	23	5.4	0.6	4.5	0.1	0.2	0.0	0.0
2M	24	5.4	0.9	4.2	0.1	0.1	0.0	0.1
2M	25	8.0	1.5	6.2	0.1	0.2	0.0	0.1
3M	26	5.1	1.0	3.7	0.1	0.2	0.0	0.1
3M	27	5.3	0.8	4.1	0.1	0.3	0.0	0.0
3M	28	8.1	0.9	6.9	0.2	0.2	0.0	0.0
3M	29	5.4	0.5	4.6	0.1	0.1	0.0	0.1
3M	30	SC	NC	NC	NC	NC	NC	NC
3M	31	5.9	0.8	4.8	0.1	0.1	0.0	0.1
3M	32	6.1	1.1	4.8	0.1	0.1	0.0	0.1
3M	33	5.6	1.0	4.4	0.1	0.1	0.0	0.0
3M	34	7.6	1.3	5.9	0.2	0.2	0.0	0.1
3M	35	7.4	1.0	6.1	0.1	0.1	0.0	0.1
4M	36	7.1	1.8	4.9	0.1	0.1	0.0	0.0
4M	37	5.9	0.8	4.8	0.1	0.2	0.0	0.1
4M	38	5.0	0.8	4.0	0.1	0.2	0.0	0.1
4M	39	5.6	0.6	4.8	0.1	0.1	0.0	0.0
4M	40	6.3	0.9	5.1	0.1	0.1	0.0	0.0
4M	41	6.0	1.4	4.3	0.2	0.2	0.0	0.0
4M	42	6.9	1.9	4.6	0.3	0.1	0.0	0.0
4M	43	6.4	1.5	4.5	0.2	0.1	0.0	0.1
4M	44	7.4	1.3	5.7	0.1	0.2	0.1	0.0
4M	45	9.3	3.2	5.7	0.4	0.1	0.0	0.0
5M	46	6.6	0.5	5.9	0.1	0.1	0.0	0.1
5M	47	SC	NC	NC	NC	NC	NC	NC
5M	48	7.0	1.6	5.0	0.1	0.1	0.0	0.0
5M	49	5.6	1.2	4.2	0.1	0.1	0.0	0.1
5M	50	6.8	2.0	4.2	0.3	0.3	0.0	0.1
5M	51	9.1	1.6	6.9	0.3	0.2	0.0	0.1
5M	52	6.3	1.3	4.7	0.2	0.1	0.0	0.0
5M	53	8.7	2.4	5.8	0.3	0.2	0.0	0.1
5M	54	6.1	1.6	4.0	0.2	0.2	0.0	0.0
5M	55	6.3	1.3	4.6	0.3	0.1	0.0	0.0

NC = not calculated
SC = sample clotted

Appendix 6
Individual haematology
Occasion: Week 14 - main study

Test Article Control [ ]
Group 1 2 3 4 5
Level (ppm) 0 100 500 2500 5000

Group/ Sex	Animal Number	WBC 1000/cmm	N 1000/cmm	L 1000/cmm	M 1000/cmm	E 1000/cmm	B 1000/cmm	LUC 1000/cmm
1F	61	3.5	0.4	3.0	0.0	0.1	0.0	0.0
1F	62	SC	NC	NC	NC	NC	NC	NC
1F	63	6.3	1.4	4.6	0.1	0.1	0.0	0.0
1F	64	5.1	1.0	3.9	0.1	0.1	0.0	0.0
1F	65	5.2	0.9	4.1	0.1	0.1	0.0	0.0
1F	66	3.3	0.5	2.6	0.1	0.1	0.0	0.0
1F	67	SC	NC	NC	NC	NC	NC	NC
1F	68	4.2	0.4	3.6	0.0	0.1	0.0	0.0
1F	69	3.5	0.5	2.8	0.1	0.1	0.0	0.0
1F	70	3.2	0.5	2.6	0.1	0.1	0.0	0.0
2F	76	4.0	0.7	3.0	0.0	0.2	0.0	0.0
2F	77	2.6	0.3	2.1	0.0	0.1	0.0	0.0
2F	78	3.2	0.5	2.5	0.0	0.1	0.0	0.0
2F	79	SC	NC	NC	NC	NC	NC	NC
2F	81	4.2	0.8	3.3	0.0	0.1	0.0	0.0
2F	82	3.8	0.5	3.2	0.1	0.1	0.0	0.0
2F	83	5.2	1.0	4.0	0.1	0.1	0.0	0.0
2F	84	SC	NC	NC	NC	NC	NC	NC
2F	85	4.5	0.6	3.7	0.0	0.1	0.0	0.0
3F	86	4.2	0.6	3.4	0.1	0.1	0.0	0.0
3F	87	IS	NC	NC	NC	NC	NC	NC
3F	88	2.3	0.5	1.7	0.0	0.0	0.0	0.0
3F	89	3.7	0.6	2.9	0.1	0.1	0.0	0.0
3F	90	3.5	0.5	2.9	0.0	0.1	0.0	0.0
3F	91	3.7	1.0	2.4	0.1	0.1	0.0	0.0
3F	92	4.7	1.4	3.1	0.1	0.1	0.0	0.0
3F	93	3.6	0.6	2.9	0.1	0.1	0.0	0.0
3F	94	6.2	0.7	5.3	0.1	0.1	0.0	0.0
3F	95	SC	NC	NC	NC	NC	NC	NC
4F	96	3.6	0.6	2.8	0.1	0.1	0.0	0.0
4F	97	5.0	1.3	3.3	0.1	0.4	0.0	0.1
4F	98	2.8	1.2	1.4	0.1	0.1	0.0	0.0
4F	99	5.0	0.9	3.9	0.1	0.1	0.0	0.0
4F	100	4.0	0.7	3.1	0.1	0.1	0.0	0.0
4F	101	5.2	0.9	4.0	0.1	0.2	0.0	0.1
4F	102	4.2	0.5	3.5	0.1	0.1	0.0	0.0
4F	103	4.0	0.5	3.2	0.1	0.1	0.0	0.0
4F	104	4.8	0.9	3.7	0.1	0.1	0.0	0.0
4F	105	3.0	0.5	2.3	0.0	0.2	0.0	0.0
5F	106	4.3	0.9	3.3	0.1	0.0	0.0	0.0
5F	107	7.4	0.8	5.9	0.2	0.4	0.0	0.1
5F	108	4.3	0.6	3.5	0.0	0.1	0.0	0.0
5F	109	5.5	0.8	4.5	0.1	0.1	0.0	0.1
5F	110	4.3	1.2	2.9	0.1	0.0	0.0	0.0
5F	111	2.8	0.6	2.0	0.1	0.1	0.0	0.0
5F	112	5.6	1.6	3.6	0.1	0.2	0.0	0.1
5F	113	SC	NC	NC	NC	NC	NC	NC
5F	114	4.1	0.9	2.9	0.1	0.1	0.0	0.0
5F	115	2.0	0.5	1.4	0.0	0.0	0.0	0.0

IS = insufficient sample for analysis
NC = not calculated
SC = sample clotted

Appendix 6
Individual haematology
Occasion: Week 14 - main study

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group/ Sex	Animal Number	WBC 1000/cmm	N % WBC	L % WBC	M % WBC	E % WBC	B % WBC	LUC % WBC
1M	1	8.1	9	88	1	1	0	1
1M	2	5.2	14	84	1	1	0	0
1M	3	6.1	15	83	1	1	0	1
1M	4	4.0	17	78	2	2	0	1
1M	5	10.3	17	79	3	1	0	0
1M	6	SC	SC	SC	SC	SC	SC	SC
1M	7	11.4	15	81	2	2	0	0
1M	8	SC	SC	SC	SC	SC	SC	SC
1M	9	SC	SC	SC	SC	SC	SC	SC
1M	10	6.2	18	77	2	2	0	0
2M	16	3.3	23	74	1	1	0	0
2M	17	8.4	8	89	1	1	0	1
2M	18	4.6	16	80	1	2	0	1
2M	19	6.2	12	81	3	3	0	1
2M	20	12.4	15	81	2	1	0	1
2M	21	7.6	11	84	2	2	0	1
2M	22	10.2	13	83	2	1	0	0
2M	23	5.4	12	83	2	3	0	0
2M	24	5.4	17	78	2	2	0	1
2M	25	8.0	19	77	1	3	0	1
3M	26	5.1	20	73	2	4	0	1
3M	27	5.3	15	78	2	5	0	0
3M	28	8.1	11	85	2	2	0	0
3M	29	5.4	10	86	1	2	0	1
3M	30	SC	SC	SC	SC	SC	SC	SC
3M	31	5.9	14	82	2	2	0	1
3M	32	6.1	18	78	2	1	0	1
3M	33	5.6	17	78	2	2	0	0
3M	34	7.6	17	77	3	2	0	1
3M	35	7.4	14	82	2	2	0	1
4M	36	7.1	26	69	2	2	0	0
4M	37	5.9	14	81	1	3	0	1
4M	38	5.0	16	79	1	3	0	1
4M	39	5.6	11	85	2	2	0	0
4M	40	6.3	14	81	2	2	0	0
4M	41	6.0	23	71	3	3	0	0
4M	42	6.9	27	67	4	2	0	0
4M	43	6.4	24	70	3	2	0	1
4M	44	7.4	18	77	1	3	1	0
4M	45	9.3	34	61	4	1	0	0
5M	46	6.6	7	90	1	1	0	1
5M	47	SC	SC	SC	SC	SC	SC	SC
5M	48	7.0	23	72	2	2	0	0
5M	49	5.6	21	75	2	2	0	1
5M	50	6.8	29	62	5	4	0	1
5M	51	9.1	18	76	3	2	0	1
5M	52	6.3	20	75	3	2	0	0
5M	53	8.7	28	67	3	2	0	1
5M	54	6.1	26	66	4	4	0	0
5M	55	6.3	21	73	4	2	0	0

SC = sample clotted

Appendix 6
Individual haematology
Occasion: Week 14 - main study

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group/ Sex	Animal Number	WBC 1000/cmm	N % WBC	L % WBC	M % WBC	E % WBC	B % WBC	LUC % WBC
1F	61	3.5	10	87	1	2	0	0
1F	62	SC	SC	SC	SC	SC	SC	SC
1F	63	6.3	23	73	1	2	0	0
1F	64	5.1	20	76	2	2	0	0
1F	65	5.2	17	79	2	1	0	0
1F	66	3.3	15	80	2	2	0	1
1F	67	SC	SC	SC	SC	SC	SC	SC
1F	68	4.2	10	86	1	2	0	0
1F	69	3.5	14	80	3	2	0	1
1F	70	3.2	15	81	2	2	0	0
2F	76	4.0	18	76	1	4	0	1
2F	77	2.6	13	81	1	5	0	0
2F	78	3.2	17	79	1	2	0	1
2F	79	SC	SC	SC	SC	SC	SC	SC
2F	81	4.2	18	78	1	2	0	0
2F	82	3.8	12	84	2	2	0	1
2F	83	5.2	20	76	2	2	0	0
2F	84	SC	SC	SC	SC	SC	SC	SC
2F	85	4.5	14	83	1	2	0	1
3F	86	4.2	15	80	2	2	0	1
3F	87	IS	IS	IS	IS	IS	IS	IS
3F	88	2.3	20	76	2	2	0	0
3F	89	3.7	16	79	2	3	0	1
3F	90	3.5	13	84	1	2	0	1
3F	91	3.7	28	66	2	4	0	0
3F	92	4.7	30	66	2	2	0	1
3F	93	3.6	16	81	2	2	0	1
3F	94	6.2	11	85	1	2	0	0
3F	95	SC	SC	SC	SC	SC	SC	SC
4F	96	3.6	17	78	2	3	0	1
4F	97	5.0	26	65	1	7	0	1
4F	98	2.8	42	51	2	5	0	1
4F	99	5.0	18	78	2	2	0	0
4F	100	4.0	17	78	2	2	0	1
4F	101	5.2	17	76	2	4	0	1
4F	102	4.2	11	84	2	2	0	1
4F	103	4.0	13	81	2	3	0	1
4F	104	4.8	18	78	2	2	0	0
4F	105	3.0	18	75	1	5	0	1
5F	106	4.3	20	76	2	1	0	1
5F	107	7.4	11	80	3	5	0	1
5F	108	4.3	13	82	1	3	0	1
5F	109	5.5	14	82	2	1	0	1
5F	110	4.3	29	67	2	1	0	0
5F	111	2.8	20	72	3	4	0	0
5F	112	5.6	29	65	2	4	0	1
5F	113	SC	SC	SC	SC	SC	SC	SC
5F	114	4.1	22	71	3	3	0	1
5F	115	2.0	24	72	2	2	0	1

IS = insufficient sample for analysis
SC = sample clotted

Appendix 6
Individual haematology
Occasion: Week 18 - treatment-free

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group/ Sex	Animal Number	Hb g/dL	RBC mil/cmm	PCV %	RETA %	RET ABS mil/cmm	MCV fL	MCH pg
1M	11	15.9	8.68	44.3	2.1	0.18	51.1	18.4
1M	12	SC	SC	SC	SC	NC	SC	SC
1M	13	15.5	8.59	44.7	2.2	0.19	52.0	18.1
1M	14	16.1	9.13	47.2	1.9	0.17	51.7	17.7
1M	15	SC	SC	SC	SC	NC	SC	SC
5M	56	15.1	8.25	43.4	2.4	0.20	52.5	18.3
5M	57	15.0	8.41	43.7	2.4	0.20	51.9	17.8
5M	58	16.0	8.34	44.9	2.4	0.20	53.9	19.1
5M	59	16.4	8.90	47.0	2.4	0.21	52.8	18.4
5M	60	15.8	8.74	46.4	2.0	0.17	53.1	18.1
1F	71	16.4	8.56	45.8	2.1	0.18	53.6	19.2
1F	72	16.1	8.20	44.7	2.0	0.16	54.5	19.6
1F	73	16.3	8.07	44.8	2.1	0.17	55.5	20.2
1F	74	16.3	8.29	45.1	1.6	0.13	54.4	19.7
1F	75	SC	SC	SC	SC	NC	SC	SC
5F	116	15.2	8.17	44.0	1.8	0.15	53.8	18.6
5F	117	16.1	8.11	44.0	2.1	0.17	54.3	19.8
5F	118	SC	SC	SC	SC	NC	SC	SC
5F	119	17.0	8.68	47.1	1.6	0.14	54.2	19.6
5F	120	16.9	8.52	47.3	2.5	0.21	55.5	19.8

Group/ Sex	Animal Number	MCHC g/dL	HDW g/dL	RDW %	PLAT 1000/cmm	PCT %	MPV fl	PDW %
1M	11	35.9	2.88	13.4	957	0.65	6.8	67.1
1M	12	SC	SC	SC	SC	SC	SC	SC
1M	13	34.8	2.79	13.0	788	0.55	7.0	71.9
1M	14	34.2	2.46	12.9	836	0.56	6.7	76.4
1M	15	SC	SC	SC	SC	SC	SC	SC
5M	56	34.8	2.86	13.6	919	0.61	6.7	70.3
5M	57	34.3	2.72	13.4	864	0.58	6.8	78.4
5M	58	35.5	3.24	19.2	1046	0.70	6.7	57.9
5M	59	34.8	2.72	13.6	907	0.64	7.1	74.3
5M	60	34.0	2.48	12.9	836	0.59	7.0	78.2
1F	71	35.9	2.27	11.5	1022	0.63	6.2	54.9
1F	72	35.9	2.29	12.0	825	0.56	6.8	67.3
1F	73	36.3	2.31	11.7	766	0.54	7.0	65.3
1F	74	36.3	2.50	12.6	901	0.59	6.5	56.8
1F	75	SC	SC	SC	SC	SC	SC	SC
5F	116	34.5	2.23	11.8	905	0.59	6.5	60.2
5F	117	36.6	2.39	12.0	979	0.66	6.8	62.3
5F	118	SC	SC	SC	SC	SC	SC	SC
5F	119	36.2	2.41	11.7	1105	0.69	6.3	56.5
5F	120	35.7	2.34	11.8	978	0.61	6.3	57.9

NC = not calculated
SC = sample clotted

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Appendix 6
Individual haematology
Occasion: Week 18 - treatment-free

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group/ Sex	Animal Number	WBC 1000/cmm	N 1000/cmm	L 1000/cmm	M 1000/cmm	E 1000/cmm	B 1000/cmm	LUC 1000/cmm
1M	11	2.4	0.5	1.7	0.1	0.1	0.0	0.0
1M	12	SC	NC	NC	NC	NC	NC	NC
1M	13	3.4	1.4	1.8	0.1	0.1	0.0	0.0
1M	14	3.1	1.0	1.9	0.1	0.1	0.0	0.0
1M	15	SC	NC	NC	NC	NC	NC	NC
5M	56	3.1	0.5	2.4	0.1	0.1	0.0	0.0
5M	57	3.6	0.8	2.6	0.1	0.1	0.0	0.0
5M	58	2.1	0.6	1.4	0.0	0.1	0.0	0.0
5M	59	3.4	0.7	2.6	0.1	0.1	0.0	0.0
5M	60	2.3	0.6	1.6	0.0	0.1	0.0	0.0
1F	71	1.4	0.3	1.0	0.0	0.0	0.0	0.0
1F	72	2.5	0.3	2.1	0.1	0.1	0.0	0.0
1F	73	2.5	0.4	2.0	0.1	0.1	0.0	0.0
1F	74	1.5	0.2	1.2	0.0	0.0	0.0	0.0
1F	75	SC	NC	NC	NC	NC	NC	NC
5F	116	1.5	0.2	1.2	0.0	0.0	0.0	0.0
5F	117	1.2	0.3	0.9	0.0	0.0	0.0	0.0
5F	118	SC	NC	NC	NC	NC	NC	NC
5F	119	0.7	0.1	0.5	0.0	0.0	0.0	0.0
5F	120	1.7	0.3	1.3	0.1	0.1	0.0	0.0

Group/ Sex	Animal Number	WBC 1000/cmm	N % WBC	L % WBC	M % WBC	E % WBC	B % WBC	LUC % WBC
1M	11	2.4	21	72	3	3	0	1
1M	12	SC	SC	SC	SC	SC	SC	SC
1M	13	3.4	41	54	2	3	0	1
1M	14	3.1	31	62	3	2	0	1
1M	15	SC	SC	SC	SC	SC	SC	SC
5M	56	3.1	17	76	3	3	0	1
5M	57	3.6	22	73	2	2	0	0
5M	58	2.1	27	66	2	3	1	1
5M	59	3.4	20	75	3	2	0	1
5M	60	2.3	24	69	2	3	0	1
1F	71	1.4	22	74	1	3	0	1
1F	72	2.5	11	83	2	3	0	1
1F	73	2.5	16	79	3	2	0	1
1F	74	1.5	12	82	2	3	0	0
1F	75	SC	SC	SC	SC	SC	SC	SC
5F	116	1.5	14	80	2	3	0	1
5F	117	1.2	22	72	2	4	1	0
5F	118	SC	SC	SC	SC	SC	SC	SC
5F	119	0.7	18	76	2	3	0	0
5F	120	1.7	15	79	3	3	0	0

NC = not calculated
SC = sample clotted

Appendix 6
Individual haematology
Occasion: Decedent

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group/ Sex	Animal Number	Hb g/dL	RBC mil/cmm	PCV %	RETA %	RET ABS mil/cmm	MCV fL
2F	80	14.5	7.89	49.8	2.3	0.18	63.2

Group/ Sex	Animal Number	MCH pg	MCHC g/dL	HDW g/dL	RDW %	PLAT 1000/cmm	PCT %
2F	80	18.4	29.1	2.14	11.8	786	0.72

Group/ Sex	Animal Number	MPV fl	PDW %	PT s	APTT s
2F	80	9.1	72.9	20.9	18.0

Group/ Sex	Animal Number	WBC 1000/cmm	N 1000/cmm	L 1000/cmm	M 1000/cmm	E 1000/cmm	B 1000/cmm	LUC 1000/cmm
2F	80	1.6	0.4	1.1	0.0	0.0	0.0	0.0

Group/ Sex	Animal Number	WBC 1000/cmm	N % WBC	L % WBC	M % WBC	E % WBC	B % WBC	LUC % WBC
2F	80	1.6	28	71	0	1	0	0

Appendix 7
Individual clinical chemistry

Key to abbreviations/methods

Code	Parameter	Analyser	Method of determination
AST	Aspartate aminotransferase	Hitachi 917	Optimised UV method using L-aspartate and alpha-oxoglutarate as primary substrates
ALT	Alanine aminotransferase	Hitachi 917	Optimised UV method using L-Alanine and alpha-oxoglutarate as primary substrates
Gamma GT	Gamma glutamyl transpeptidase	Hitachi 917	Colorimetric method using l-gamma-glutamyl-3-carboxy-4nitroanilide as substrate
ALK PHOS	Alkaline phosphatase	Hitachi 917	Colorimetric method using p-nitrophenyl phosphate as substrate
CPK	Creatine phosphokinase	Hitachi 917	Optimised UV method using creatine phosphate and ADP as primary substrates
Na/K/Cl	Sodium /potassium /chloride	Hitachi 917	Ion-selective electrode
Ca	Calcium	Hitachi 917	Colorimetric method using o-cresophthalein complexone in alkaline solution
IN PHOS	inorganic phosphorous	Hitachi 917	Colorimetric method based upon ammonium molybdate in acid conditions
UREA	urea	Hitachi 917	UV method using a coupled urease procedure
T BILI	total bilirubin	Hitachi 917	A colorimetric method. Indirect bilirubin is liberated by detergent: Total bilirubin is coupled with a diazonium compound to give corresponding azobilirubin.
CREAT	creatinine	Hitachi 917	Colorimetric method
T PROT	total protein	Hitachi 917	Colorimetric method based on biuret reaction
ALBUMIN	albumin	Hitachi 917	Colorimetric method based on the BCG reaction
GLOBULIN	globulin	Calculation	globulin = total protein - albumin
AG RATIO	albumin/globulin ratio	Calculation	AG ratio = albumin /(total protein - albumin)
TOT CHOL	total cholesterol	Hitachi 917/ILAB 900	Enzymatic method using cholesterol oxidase/esterase
TRIGS	triglycerides	Hitachi 917/ILAB 900	Enzymatic method using lipase and glycerol kinase as primary enzymes
GLUC	glucose	Hitachi 917	UV method using a coupled hexokinase procedure

Appendix 7
Individual clinical chemistry
Occasion: Week 14 - main study

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group/ Sex	Animal Number	AST IU/L	ALT IU/L	GAMMA GT IU/L	ALK PHOS IU/L	Na mmol/L	K mmol/L	Cl mmol/L
1M	1	59	30	<2	140	142	3.8	104
1M	2	55	25	<2	185	142	4.2	105
1M	3	54	30	<2	172	142	4.4	104
1M	4	56	25	<2	157	143	4.5	104
1M	5	63	49	<2	170	142	4.7	103
1M	6	64	35	<2	161	139	4.5	103
1M	7	66	35	<2	151	143	4.3	105
1M	8	63	32	<2	138	141	4.5	103
1M	9	59	26	<2	139	139	4.5	101
1M	10	64	44	<2	110	140	4.7	107
2M	16	64	28	<2	170	143	4.7	104
2M	17	68	30	<2	106	142	4.6	105
2M	18	67	30	<2	162	141	4.1	105
2M	19	61	26	<2	150	142	4.5	104
2M	20	56	40	<2	138	143	4.8	104
2M	21	55	25	<2	248	140	4.3	103
2M	22	64	33	<2	140	140	4.7	105
2M	23	57	31	<2	174	138	4.5	103
2M	24	68	28	<2	136	141	4.3	104
2M	25	60	29	<2	169	141	4.7	105
3M	26	65	30	<2	168	142	4.8	106
3M	27	55	23	<2	135	143	4.7	104
3M	28	78	36	<2	153	145	4.7	104
3M	29	51	19	<2	162	140	3.7	102
3M	30	73	50	<2	212	140	4.4	105
3M	31	55	23	<2	140	140	4.4	106
3M	32	101	62	<2	216	138	4.1	103
3M	33	61	36	<2	184	140	4.7	105
3M	34	58	25	<2	141	141	3.9	104
3M	35	56	27	<2	176	140	4.7	105
4M	36	99	26	<2	155	140	4.3	104
4M	37	57	25	<2	175	141	4.6	106
4M	38	61	24	<2	175	145	5.0	107
4M	39	59	29	<2	164	142	4.8	105
4M	40	83	21	<2	173	140	4.6	104
4M	41	104	25	<2	174	139	4.4	104
4M	42	168	35	<2	199	141	5.0	106
4M	43	160	32	<2	161	140	4.7	106
4M	44	58	24	<2	191	143	4.3	106
4M	45	259	56	<2	132	140	4.1	104
5M	46	62	17	<2	163	142	5.0	107
5M	47	59	21	<2	203	141	4.4	101
5M	48	107	29	<2	117	140	4.7	103
5M	49	113	27	<2	246	143	4.9	106
5M	50	660	80	<2	233	140	4.5	101
5M	51	253	42	<2	145	140	4.8	102
5M	52	255	25	<2	134	141	4.5	103
5M	53	263	40	<2	189	142	4.5	104
5M	54	203	39	<2	207	140	4.1	104
5M	55	171	39	<2	152	140	4.9	103

< = half value used in calculations

Appendix 7
Individual clinical chemistry
Occasion: Week 14 - main study

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group/ Sex	Animal Number	AST IU/L	ALT IU/L	GAMMA GT IU/L	ALK PHOS IU/L	Na mmol/L	K mmol/L	Cl mmol/L
1F	61	61	24	<2	70	139	4.3	105
1F	62	66	36	<2	112	141	4.1	105
1F	63	75	22	<2	75	140	4.7	106
1F	64	59	19	<2	73	140	5.1	103
1F	65	71	25	<2	81	142	5.2	105
1F	66	86	56	<2	62	142	4.7	104
1F	67	62	26	<2	79	139	5.7	105
1F	68	74	40	<2	63	139	4.6	104
1F	69	51	22	<2	57	142	5.0	104
1F	70	65	37	<2	114	140	4.6	104
2F	76	96	43	<2	74	142	4.5	107
2F	77	59	27	<2	73	144	4.3	108
2F	78	71	43	<2	66	140	5.7	106
2F	79	NS	NS	NS	NS	NS	NS	NS
2F	81	55	26	<2	123	140	4.8	106
2F	82	53	32	<2	66	141	4.7	106
2F	83	52	21	<2	83	141	5.1	105
2F	84	67	25	<2	90	140	4.2	107
2F	85	56	23	<2	132	141	5.3	108
3F	86	66	33	<2	111	139	4.4	106
3F	87	68	31	<2	117	140	4.3	106
3F	88	54	20	<2	88	139	4.6	105
3F	89	84	39	<2	72	140	4.8	105
3F	90	54	22	<2	68	140	4.6	106
3F	91	62	21	<2	53	138	4.8	103
3F	92	62	31	<2	93	139	4.7	107
3F	93	60	26	<2	78	140	5.4	104
3F	94	54	17	<2	75	142	5.1	107
3F	95	56	28	<2	54	139	4.0	103
4F	96	58	31	<2	108	140	4.1	106
4F	97	293	33	<2	69	139	3.7	107
4F	98	366	39	<2	107	138	4.5	101
4F	99	54	15	<2	93	139	5.3	106
4F	100	76	15	<2	72	142	5.2	105
4F	101	140	25	<2	85	140	3.9	104
4F	102	111	21	<2	95	140	5.0	105
4F	103	222	25	<2	86	140	4.2	105
4F	104	100	36	<2	62	140	5.0	105
4F	105	68	18	<2	71	139	4.4	103
5F	106	245	30	<2	54	140	3.7	104
5F	107	155	25	<2	69	140	4.2	104
5F	108	63	15	<2	46	141	4.3	103
5F	109	152	20	<2	70	141	5.1	104
5F	110	IS	20	IS	104	139	4.5	99
5F	111	103	23	<2	79	138	5.1	103
5F	112	149	27	<2	81	141	5.2	104
5F	113	216	29	<2	72	142	4.6	104
5F	114	133	15	<2	108	139	5.2	101
5F	115	126	19	<2	52	138	4.2	101

< = half value used in calculations
IS = insufficient sample for analysis
NS = no sample available

Appendix 7
Individual clinical chemistry
Occasion: Week 14 - main study

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group/ Sex	Animal Number	Ca mmol/L	IN PHOS mmol/L	UREA mmol/L	T BILI umol/L	CREAT umol/L	T PROT g/L	ALBUMIN g/L
1M	1	2.55	2.0	5.9	2.1	71	64	39
1M	2	2.58	2.0	5.5	1.8	62	67	43
1M	3	2.54	2.0	4.5	2.0	58	63	41
1M	4	2.64	2.1	4.9	1.8	65	71	42
1M	5	2.68	2.3	8.7	2.5	65	67	43
1M	6	2.55	2.0	6.9	2.4	68	65	43
1M	7	2.57	1.6	7.3	2.0	72	68	44
1M	8	2.43	1.7	6.0	1.5	70	62	40
1M	9	2.68	1.9	5.7	1.8	66	67	42
1M	10	2.61	1.6	9.0	1.6	59	68	41
2M	16	2.65	2.2	5.7	2.2	57	68	44
2M	17	2.63	2.0	5.8	1.5	62	67	42
2M	18	2.65	2.0	5.7	1.7	66	70	42
2M	19	2.65	2.2	4.9	1.9	56	68	40
2M	20	2.71	2.1	7.9	2.2	57	73	42
2M	21	2.77	2.1	6.0	1.6	63	69	43
2M	22	2.54	1.6	6.6	1.6	64	65	41
2M	23	2.58	1.9	8.2	1.3	58	62	40
2M	24	2.62	2.0	5.5	1.6	56	65	43
2M	25	2.66	1.9	7.7	2.0	63	69	44
3M	26	2.60	1.9	5.3	1.8	56	67	41
3M	27	2.68	2.1	5.6	1.5	62	67	42
3M	28	2.74	2.1	5.8	2.5	63	71	45
3M	29	2.55	1.6	5.4	1.8	69	65	40
3M	30	2.54	1.7	7.7	2.1	61	68	44
3M	31	2.60	1.5	6.7	1.2	66	66	43
3M	32	2.54	1.7	8.3	1.5	69	65	37
3M	33	2.51	2.0	6.5	1.6	62	63	39
3M	34	2.50	1.9	6.7	1.4	65	64	40
3M	35	2.66	2.0	7.3	1.7	53	67	40
4M	36	2.58	1.6	5.8	1.4	60	68	43
4M	37	2.66	2.0	8.4	2.2	58	65	41
4M	38	2.66	1.8	5.5	1.5	59	68	44
4M	39	2.75	2.1	5.1	1.4	57	69	41
4M	40	2.69	1.8	7.2	1.0	55	69	42
4M	41	2.62	1.4	6.1	1.3	57	68	43
4M	42	2.68	1.6	7.6	1.5	61	69	43
4M	43	2.59	2.0	5.9	<1.0	58	65	42
4M	44	2.55	2.2	8.6	1.3	61	66	42
4M	45	2.62	2.0	6.0	2.0	54	67	43
5M	46	2.58	2.0	5.4	1.0	53	65	38
5M	47	2.56	2.1	6.1	1.0	64	64	39
5M	48	2.65	2.1	6.2	1.2	54	65	37
5M	49	2.60	2.2	5.9	1.8	56	65	41
5M	50	2.56	2.2	7.6	1.7	68	64	40
5M	51	2.58	2.0	8.3	1.4	69	65	44
5M	52	2.57	1.9	6.1	1.2	57	66	42
5M	53	2.56	1.8	5.9	1.3	60	66	42
5M	54	2.66	1.9	6.5	1.1	56	70	44
5M	55	2.66	2.0	7.3	1.3	55	64	41

< = half value used in calculations

Appendix 7
Individual clinical chemistry
Occasion: Week 14 - main study

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group/ Sex	Animal Number	Ca mmol/L	IN PHOS mmol/L	UREA mmol/L	T BILI umol/L	CREAT umol/L	T PROT g/L	ALBUMIN g/L
1F	61	2.57	1.6	9.5	2.4	74	63	40
1F	62	2.68	1.7	7.7	2.1	58	68	46
1F	63	2.56	1.7	7.8	2.6	67	65	46
1F	64	2.69	1.8	8.2	2.1	56	65	45
1F	65	2.73	2.1	9.4	2.4	65	66	43
1F	66	2.79	1.9	9.7	3.3	65	75	56
1F	67	2.83	2.4	IS	2.5	63	IS	IS
1F	68	2.86	1.7	8.0	3.5	64	73	52
1F	69	2.86	1.4	9.4	2.4	71	75	51
1F	70	2.71	2.0	9.0	2.7	61	69	47
2F	76	2.80	1.4	6.9	2.4	63	75	52
2F	77	2.67	1.3	7.2	2.0	83	72	51
2F	78	2.74	1.8	9.3	1.7	78	65	47
2F	79	NS	NS	NS	NS	NS	NS	NS
2F	81	2.76	1.4	8.3	1.7	65	68	47
2F	82	2.99	1.1	11.5	2.6	85	78	92
2F	83	2.71	1.7	9.1	2.1	60	68	48
2F	84	2.57	1.5	7.9	2.1	67	61	41
2F	85	2.62	1.3	10.3	2.3	64	65	46
3F	86	2.63	1.6	10.4	1.5	64	67	47
3F	87	2.69	1.4	8.7	1.9	76	71	49
3F	88	2.83	1.7	7.2	2.0	57	69	47
3F	89	2.77	1.7	5.5	2.3	67	67	49
3F	90	2.75	1.6	9.2	2.0	60	71	49
3F	91	2.88	1.3	7.1	2.0	58	74	53
3F	92	2.64	1.5	7.6	1.6	59	65	46
3F	93	2.83	1.8	10.3	2.7	66	72	48
3F	94	2.69	1.5	8.1	2.2	62	68	48
3F	95	2.80	1.8	7.4	3.1	65	71	49
4F	96	2.78	1.3	9.1	1.2	66	71	51
4F	97	2.44	1.4	8.6	1.5	62	62	43
4F	98	2.88	1.4	10.1	2.0	69	77	54
4F	99	2.79	1.3	8.0	1.5	57	75	53
4F	100	2.98	1.6	7.2	2.2	65	82	70
4F	101	2.75	1.5	9.6	1.9	82	72	50
4F	102	2.74	1.8	8.6	2.1	61	67	48
4F	103	2.64	1.4	8.0	1.6	67	68	48
4F	104	2.90	0.9	12.4	1.8	70	70	50
4F	105	2.66	1.1	8.9	1.3	61	71	51
5F	106	2.75	1.7	8.8	1.4	70	74	52
5F	107	2.75	2.2	8.1	2.0	66	68	51
5F	108	2.69	1.5	7.9	1.3	58	64	47
5F	109	2.73	1.9	9.2	2.3	55	68	49
5F	110	2.65	IS	IS	IS	IS	IS	IS
5F	111	2.85	1.7	9.5	1.5	55	74	51
5F	112	2.92	1.6	7.6	1.6	63	73	54
5F	113	2.92	1.7	9.1	1.2	68	72	51
5F	114	2.98	2.5	10.9	2.0	66	75	55
5F	115	2.85	1.7	10.3	2.0	60	74	56

IS = insufficient sample for analysis
NS = no sample available

Appendix 7
Individual clinical chemistry
Occasion: Week 14 - main study

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group/ Sex	Animal Number	GLOBULIN g/L	AG RATIO	TOT CHOL mmol/L	TRIGS mmol/L	GLUC mmol/L
1M	1	25	1.6	1.8	0.84	7.4
1M	2	24	1.8	1.5	0.42	6.4
1M	3	22	1.9	1.9	0.46	6.3
1M	4	29	1.4	1.2	0.47	5.4
1M	5	24	1.8	1.9	1.34	5.4
1M	6	22	2.0	1.7	0.57	8.1
1M	7	24	1.8	1.9	1.38	7.0
1M	8	22	1.8	1.5	0.68	7.7
1M	9	25	1.7	1.5	1.69	6.6
1M	10	27	1.5	2.0	0.51	5.1
2M	16	24	1.8	1.9	0.37	6.5
2M	17	25	1.7	1.6	0.48	6.8
2M	18	28	1.5	1.6	0.38	6.5
2M	19	28	1.4	1.5	1.25	6.3
2M	20	31	1.4	2.0	2.02	6.5
2M	21	26	1.7	2.0	1.49	6.0
2M	22	24	1.7	1.7	0.85	6.1
2M	23	22	1.8	1.6	0.72	6.5
2M	24	22	2.0	1.5	0.82	6.0
2M	25	25	1.8	2.2	1.35	5.5
3M	26	26	1.6	1.5	0.66	6.0
3M	27	25	1.7	1.7	0.79	6.0
3M	28	26	1.7	1.8	0.64	6.9
3M	29	25	1.6	1.5	0.59	8.8
3M	30	24	1.8	1.8	0.71	6.7
3M	31	23	1.9	2.0	0.67	6.9
3M	32	28	1.3	1.3	0.54	7.6
3M	33	24	1.6	1.3	0.63	4.4
3M	34	24	1.7	1.5	0.67	7.8
3M	35	27	1.5	1.9	1.24	6.0
4M	36	25	1.7	2.0	0.63	5.8
4M	37	24	1.7	2.3	0.41	5.5
4M	38	24	1.8	2.2	0.60	6.1
4M	39	28	1.5	1.6	0.51	6.2
4M	40	27	1.6	2.2	1.46	5.6
4M	41	25	1.7	2.3	0.89	6.2
4M	42	26	1.7	2.1	1.13	6.4
4M	43	23	1.8	1.3	1.31	5.7
4M	44	24	1.8	1.6	0.67	5.2
4M	45	24	1.8	1.7	1.60	7.5
5M	46	27	1.4	1.6	0.40	5.3
5M	47	25	1.6	1.6	0.59	8.9
5M	48	28	1.3	1.9	0.42	5.2
5M	49	24	1.7	2.0	0.60	5.8
5M	50	24	1.7	2.0	1.08	8.4
5M	51	21	2.1	2.1	1.86	7.5
5M	52	24	1.8	1.8	1.19	6.5
5M	53	24	1.8	1.9	1.92	6.3
5M	54	26	1.7	2.3	1.62	4.6
5M	55	23	1.8	1.9	0.61	4.6

Appendix 7
Individual clinical chemistry
Occasion: Week 14 - main study

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group/ Sex	Animal Number	GLOBULIN g/L	AG RATIO	TOT CHOL mmol/L	TRIGS mmol/L	GLUC mmol/L
1F	61	23	1.7	0.8	0.49	7.1
1F	62	22	2.1	1.0	1.19	5.2
1F	63	19	2.4	1.2	0.41	6.1
1F	64	20	2.3	1.0	0.50	4.7
1F	65	23	1.9	1.6	0.66	3.7
1F	66	19	2.9	1.9	0.49	6.9
1F	67	NC	NC	IS	0.83	5.2
1F	68	21	2.5	1.7	0.39	4.5
1F	69	24	2.1	2.3	0.84	5.3
1F	70	22	2.1	1.1	0.38	3.7
2F	76	23	2.3	1.6	0.70	5.5
2F	77	21	2.4	1.2	0.43	5.1
2F	78	18	2.6	1.1	0.43	5.8
2F	79	NC	NC	NS	NS	NS
2F	81	21	2.2	1.5	0.92	4.2
2F	82	-14	-6.6	1.9	0.49	5.2
2F	83	20	2.4	1.6	0.47	4.7
2F	84	20	2.1	1.2	0.73	5.8
2F	85	19	2.4	1.1	0.31	3.5
3F	86	20	2.4	1.2	0.52	5.0
3F	87	22	2.2	1.4	0.43	5.4
3F	88	22	2.1	2.1	0.59	5.5
3F	89	18	2.7	1.8	0.46	5.3
3F	90	22	2.2	1.7	0.38	4.2
3F	91	21	2.5	1.7	0.80	4.3
3F	92	19	2.4	1.4	0.35	4.5
3F	93	24	2.0	1.4	0.37	3.9
3F	94	20	2.4	1.3	0.71	4.2
3F	95	22	2.2	1.4	0.89	6.6
4F	96	20	2.6	1.4	0.58	4.9
4F	97	19	2.3	0.5	0.36	4.9
4F	98	23	2.3	2.0	0.60	5.6
4F	99	22	2.4	1.8	0.89	4.7
4F	100	12	5.8	2.5	0.50	3.2
4F	101	22	2.3	2.4	0.65	6.2
4F	102	19	2.5	2.0	0.44	4.0
4F	103	20	2.4	1.6	0.47	5.3
4F	104	20	2.5	1.5	0.38	4.0
4F	105	20	2.6	1.6	0.47	4.0
5F	106	22	2.4	1.5	0.43	5.3
5F	107	17	3.0	2.0	0.48	5.6
5F	108	17	2.8	1.0	0.33	5.0
5F	109	19	2.6	1.6	0.42	5.0
5F	110	NC	NC	IS	IS	2.7
5F	111	23	2.2	1.7	0.70	4.0
5F	112	19	2.8	2.7	0.65	4.6
5F	113	21	2.4	1.7	0.58	6.0
5F	114	20	2.8	1.8	0.64	4.6
5F	115	18	3.1	1.3	0.41	3.1

IS = insufficient sample for analysis
NC = not calculated
NS = no sample available

Appendix 7
Individual clinical chemistry
Occasion: Week 18 - treatment-free

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group/ Sex	Animal Number	AST IU/L	ALT IU/L	GAMMA GT IU/L	ALK PHOS IU/L	Na mmol/L	K mmol/L	Cl mmol/L
1M	11	96	61	<2	163	IS	IS	IS
1M	12	IS	29	IS	153	138	5.3	100
1M	13	60	33	<2	157	153	4.2	107
1M	14	94	57	<2	211	143	4.8	102
1M	15	77	27	<2	103	139	4.5	103
5M	56	69	50	<2	152	140	5.0	105
5M	57	65	25	<2	127	145	4.9	107
5M	58	70	37	<2	127	144	5.4	105
5M	59	85	44	<2	118	144	4.7	105
5M	60	104	59	<2	474	147	4.6	109
1F	71	60	26	<2	70	138	5.3	103
1F	72	59	15	<2	102	145	4.7	106
1F	73	76	46	<2	89	147	5.1	106
1F	74	101	33	<2	71	145	4.7	105
1F	75	73	29	<2	70	141	5.4	103
5F	116	235	54	<2	61	140	5.3	103
5F	117	56	20	<2	56	146	5.4	106
5F	118	67	29	<2	67	140	5.4	100
5F	119	95	33	<2	57	142	4.6	101
5F	120	105	45	<2	38	134	4.1	97

Group/ Sex	Animal Number	Ca mmol/L	IN PHOS mmol/L	UREA mmol/L	T BILI umol/L	CREAT umol/L	T PROT g/L	ALBUMIN g/L
1M	11	2.54	1.3	7.2	1.4	62	63	41
1M	12	2.46	IS	IS	IS	IS	IS	IS
1M	13	2.53	1.6	9.3	1.2	74	IS	IS
1M	14	2.21	1.7	7.4	1.4	73	64	40
1M	15	2.46	1.7	6.6	1.5	53	58	38
5M	56	2.55	1.3	6.9	1.1	58	62	41
5M	57	2.44	1.1	6.5	1.3	63	60	38
5M	58	2.58	1.5	8.2	1.7	65	65	44
5M	59	2.55	1.7	6.5	1.7	53	59	40
5M	60	2.43	1.6	11.2	1.6	85	60	39
1F	71	2.45	2.1	7.8	1.7	57	60	43
1F	72	2.51	1.9	12.8	1.6	81	62	44
1F	73	2.16	2.2	6.5	2.7	58	64	46
1F	74	2.65	2.1	7.4	1.1	55	64	45
1F	75	2.60	2.2	8.0	1.8	65	62	45
5F	116	2.64	2.0	6.2	1.4	58	67	47
5F	117	2.58	2.0	6.0	1.6	61	67	47
5F	118	2.67	2.1	8.3	1.7	64	67	50
5F	119	2.63	2.1	5.5	1.7	56	63	45
5F	120	2.61	2.0	6.5	1.7	58	62	41

< = half value used in calculations
IS = insufficient sample for analysis

Appendix 7
Individual clinical chemistry
Occasion: Week 18 - treatment-free

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group/ Sex	Animal Number	GLOBULIN g/L	AG RATIO	TOT CHOL mmol/L	TRIGS mmol/L	GLUC mmol/L
1M	11	22	1.9	1.8	1.33	9.9
1M	12	NC	NC	IS	IS	IS
1M	13	NC	NC	1.5	0.99	7.9
1M	14	24	1.7	1.3	0.69	9.6
1M	15	20	1.9	1.9	0.87	8.0
5M	56	21	2.0	1.9	0.63	9.8
5M	57	22	1.7	1.6	0.73	9.4
5M	58	21	2.1	1.8	0.69	8.7
5M	59	19	2.1	2.2	1.02	7.3
5M	60	21	1.9	1.8	0.47	4.9
1F	71	17	2.5	0.8	0.22	5.0
1F	72	18	2.4	1.4	0.28	4.9
1F	73	18	2.6	1.1	0.25	5.6
1F	74	19	2.4	1.4	0.28	4.5
1F	75	17	2.6	1.2	0.30	5.1
5F	116	20	2.4	1.3	0.21	5.9
5F	117	20	2.4	1.5	0.62	6.0
5F	118	17	2.9	2.1	0.27	6.6
5F	119	18	2.5	1.2	0.34	4.5
5F	120	21	2.0	1.7	0.36	6.0

IS = insufficient sample for analysis
NC = not calculated

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Appendix 7
Individual clinical chemistry
Occasion: Decedent

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group/ Sex	Animal Number	AST IU/L	ALT IU/L	GAMMA GT IU/L	ALK PHOS IU/L	CPK IU/L	Na mmol/L	K mmol/L
2F	80	174	90	<2	110	460	140	5.5

Group/ Sex	Animal Number	Cl mmol/L	Ca mmol/L	IN PHOS mmol/L	UREA mmol/L	T BILI umol/L	CREAT umol/L	T PROT g/L
2F	80	103	2.59	0.9	8.3	1.3	55	59

Group/ Sex	Animal Number	ALBUMIN g/L	GLOBULIN g/L	AG RATIO	TOT CHOL mmol/L	TRIGS mmol/L	GLUC mmol/L
2F	80	42	17	2.5	1.5	0.81	7.9

< = half value used in calculations

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Appendix 8
Individual urine analysis

Key to abbreviations/methods

Code	parameter	Method of determination	Units
VOL	Volume	Direct visual measurement	mL
COLOUR	Colour	Visual assessment	C = colourless VPS = Very pale straw PS = Pale straw S = Straw DS = Dark straw VDS = Very dark straw B = Brown BL = Blood stained
TURB	Turbidity	Visual assessment	0 = none observed + = Slight ++ = Marked
SP GR	Specific gravity	Visual measurement	Numerical
pH	pH	Visual assessment following reaction with Methyl Red and Bromothymol Blue	Numerical approximation
PROT	Protein	Visual assessment following reaction with tetrachlorophenol-tetrabromosulphothalein	0 = none detected + = approx 0.3 g/L ++ = approx 1.0 g/L +++ = approx 5.0 g/L
GLUC	Glucose	Visual assessment following reaction with glucose oxidase/peroxidase reaction.	0 = none detected + = approx 2.8 mmol/L ++ = approx 5.6 mmol/L +++ = approx 16.7 mmol/L ++++ = approx 55.5 mmol/L
RED SUB	Reducing substances	Visual assessment following reaction with copper sulphate/sodium hydroxide	Percentage (%)
KET	Ketones	Visual assessment following reaction with aceto-acetic acid and sodium nitroprusside	0 = none detected + = approx 0.5 - 4 mmol/L ++ = approx 4 - 10 mmol/L +++ = >10 mmol/L
UROBIL	Urobilinogen	Visual assessment following reaction with 4-methoxybenzene-diazonium-tetrafluoroborate	0 = <17 umol/L + = approx 17 umol/L ++ = approx 70 umol/L +++ = approx 140 umol/L ++++ = approx 200 umol/L
BILI	Bilirubin	Visual assessment following reaction with 2,6-Dichlorobenzene-tetraflurcborate	0 = none detected + = small amount ++ = moderate +++ = large
BL	Blood	Visual assessment following reaction with organic peroxide	0 = <5 x 10^6 RBC/L + = approx 5 x 10^6 RBC/L ++ = approx 50 x 10^6 RBC/L +++ = approx 250 x 10^6 RBC/L
RBC WBC EPITH	Red blood cells White blood cells Epithelial cells	Visual assessment: parameters measured on deposits after at least 10 minutes standing in microwells	0 = none observed + = 1-10 /field ++ = 11-30 /field +++ = >30 /field
SPERM	Sperm cells	Visual assessment: parameters measured on deposits after at least 10 minutes standing in microwells	0 = none observed + = scanty presence ++ = some present/field +++ = heavy presence/field
CASTS	Casts	Visual assessment: parameters measured on deposits after at least 10 minutes standing in microwells	Quantitative assessment: number per field
PHOS URATE UR AC Ca OX AM DEB BACT	Phosphates Urates Uric acid Calcium oxalate Amorphous debris Bacteria	Visual assessment: parameters measured on deposits after at least 10 minutes standing in microwells	0 = none observed + = scanty presence ++ = some present/field +++ = heavy presence/field

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Appendix 8
Individual urine analysis
Occasion: Week 13

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group/ Sex	Animal Number	VOL mL	COLOUR	TURB	SP GR	pH	PROT
1M	2	6.8	S	+	1.033	6	+
1M	3	6.2	S	+	1.034	7	+
1M	4	3.4	S	+	1.032	6	+
1M	5	5.4	S	+	1.030	6	+
1M	6	3.0	S	0	1.039	5	++
1M	7	2.3	S	0	1.090	6	+
1M	8	2.3	S	0	1.078	6	+
1M	9	4.9	S	0	1.039	6	+
1M	10	4.2	S	0	1.043	6	+
1M	11	4.3	S	+	1.036	7	++
1M	12	4.0	PS	+	1.025	7	+
1M	13	5.3	S	+	1.034	7	+
1M	14	5.4	S	0	1.037	6	+
1M	15	4.9	S	0	1.041	6	0
2M	16	3.3	S	0	1.037	6	+
2M	17	3.2	S	0	1.066	6	+
2M	18	4.2	S	+	1.049	5	+
2M	19	4.2	S	+	1.034	6	+
2M	20	3.2	S	0	1.042	5	+
2M	21	1.4	S	+	1.044	6	0
2M	22	4.2	S	0	1.039	6	+
2M	23	3.5	S	++	1.034	7	+
2M	24	3.7	S	0	1.035	5	+
2M	25	5.3	S	+	1.029	8	++
3M	26	6.0	S	+	1.037	7	0
3M	27	4.9	S	0	1.036	6	+
3M	28	6.3	S	+	1.034	8	+
3M	29	6.3	S	+	1.033	6	+
3M	30	8.0	S	+	1.033	5	+
3M	31	3.8	S	+	1.034	6	+
3M	32	4.0	PS	0	1.033	5	+
3M	33	5.9	S	+	1.043	5	+
3M	34	4.1	S	+	1.034	6	+
3M	35	6.0	S	0	1.036	6	+

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Appendix 8
Individual urine analysis
Occasion: Week 13

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group/ Sex	Animal Number	VOL mL	COLOUR	TURB	SP GR	pH	PROT
4M	36	3.4	S	+	1.034	7	+
4M	37	4.7	S	+	1.041	6	++
4M	38	4.8	S	0	1.040	6	+
4M	39	8.0	PS	+	1.027	6	+
4M	40	5.4	S	0	1.034	6	+
4M	41	8.3	S	+	1.030	6	+
4M	42	10.0	PS	+	1.030	7	+
4M	43	3.7	S	+	1.044	6	+
4M	44	3.4	S	+	1.034	6	+
4M	45	7.0	S	+	1.033	7	+
5M	46	12.0	PS	+	1.018	6	+
5M	47	7.0	S	0	1.025	6	+
5M	48	12.0	PS	+	1.019	7	+
5M	49	9.0	S	0	1.026	6	+
5M	50	12.0	PS	+	1.024	7	+
5M	51	12.0	PS	+	1.022	7	0
5M	52	12.0	PS	+	1.022	6	+
5M	53	7.2	S	0	1.029	6	+
5M	54	7.0	S	+	1.030	6	+
5M	55	11.0	S	+	1.026	6	+
5M	56	6.0	S	++	1.034	6	+
5M	57	7.9	S	+	1.029	6	+
5M	58	6.5	S	+	1.033	6	+
5M	59	9.0	S	+	1.029	6	0
5M	60	11.0	PS	0	1.025	5	0

Appendix 8
Individual urine analysis
Occasion: Week 13

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group/ Sex	Animal Number	VOL mL	COLOUR	TURB	SP GR	pH	PROT
1F	61	3.8	S	0	1.029	6	+
1F	62	4.0	S	0	1.027	5	0
1F	63	2.4	S	0	1.043	5	0
1F	64	0.5	S	0	1.039	5	+
1F	65	3.2	S	0	1.028	5	+
1F	66	3.4	S	0	1.028	5	0
1F	67	2.2	S	0	1.036	5	0
1F	68	2.8	S	0	1.035	5	+
1F	69	2.5	PS	0	1.022	5	0
1F	70	3.0	S	+	1.028	6	+
1F	71	0.5	S	0	1.078	5	+
1F	72	4.0	S	++	1.025	9	++
1F	73	1.8	S	0	1.031	5	0
1F	74	2.5	S	0	1.038	5	0
1F	75	2.4	S	0	1.036	5	0
2F	76	1.9	S	0	1.036	7	+
2F	77	1.7	S	0	1.049	5	+
2F	78	2.0	S	0	1.047	5	+
2F	79	2.8	S	0	1.042	5	0
2F	81	2.9	S	0	1.032	6	0
2F	82	3.1	S	0	1.030	5	+
2F	83	1.8	S	0	1.026	5	0
2F	84	4.8	S	0	1.024	5	+
2F	85	2.2	DS	0	1.025	5	+
3F	86	2.5	S	0	1.032	6	+
3F	87	2.9	S	0	1.029	6	+
3F	88	5.0	S	0	1.030	5	0
3F	89	2.2	S	0	1.044	5	0
3F	90	3.0	S	0	1.038	5	+
3F	91	5.5	S	+	1.026	6	+
3F	92	6.9	S	+	1.023	5	+
3F	93	6.5	S	0	1.027	5	+
3F	94	3.4	S	0	1.034	9	0
3F	95	5.0	PS	0	1.028	5	+

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Appendix 8
Individual urine analysis
Occasion: Week 13

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group/ Sex	Animal Number	VOL mL	COLOUR	TURB	SP GR	pH	PROT
4F	96	3.2	S	0	1.035	5	+
4F	97	4.8	S	+	1.029	6	+
4F	98	2.0	S	0	1.034	5	+
4F	99	5.0	S	0	1.026	7	+
4F	100	3.0	S	0	1.041	6	+
4F	101	4.2	S	0	1.029	7	0
4F	102	4.0	S	0	1.040	5	0
4F	103	0.5	S	0	1.058	5	+
4F	104	3.2	S	+	1.028	5	0
4F	105	2.0	S	0	1.045	5	0
5F	106	3.5	S	+	1.044	5	+
5F	107	4.1	S	+	1.026	6	0
5F	108	9.5	S	0	1.017	6	0
5F	109	4.5	S	0	1.037	5	+
5F	110	5.2	S	0	1.027	6	+
5F	111	3.7	PS	0	1.026	5	0
5F	112	3.2	S	0	1.032	5	0
5F	113	5.0	S	0	1.026	6	0
5F	114	7.4	S	0	1.024	5	0
5F	115	5.9	S	+	1.023	5	0
5F	116	4.0	S	+	1.031	5	+
5F	117	4.2	S	0	1.028	5	+
5F	118	3.8	S	0	1.033	5	0
5F	119	3.5	S	0	1.028	5	0
5F	120	5.8	S	+	1.024	6	+

Appendix 8
Individual urine analysis
Occasion: Week 13

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group/ Sex	Animal Number	GLUC	RED SUB %	KET	UROBIL	BILI	BL
1M	2	0	0.25	0	0	0	+
1M	3	0	0.25	0	0	0	0
1M	4	0	0.50	0	0	0	0
1M	5	0	0.00	0	0	0	0
1M	6	0	0.50	0	0	0	0
1M	7	0	0.50	0	0	0	+
1M	8	0	0.25	0	0	0	0
1M	9	0	0.25	0	0	0	+
1M	10	0	0.25	0	0	0	0
1M	11	0	0.25	0	0	0	0
1M	12	0	0.00	0	0	0	+
1M	13	0	0.00	0	0	0	+
1M	14	0	0.25	+	0	0	0
1M	15	0	0.50	0	0	0	0
2M	16	0	0.50	0	0	0	0
2M	17	0	0.25	0	0	0	0
2M	18	0	0.25	0	0	0	0
2M	19	0	0.25	0	0	0	+
2M	20	0	0.50	0	0	0	0
2M	21	0	0.25	+	0	0	0
2M	22	0	0.25	0	0	0	0
2M	23	0	0.50	0	0	0	0
2M	24	0	0.25	0	0	0	0
2M	25	0	0.00	0	0	0	0
3M	26	0	0.25	0	0	0	0
3M	27	0	0.25	0	0	0	+
3M	28	0	0.25	0	0	0	0
3M	29	0	0.50	+	0	0	+++
3M	30	0	0.00	0	0	0	0
3M	31	0	0.50	0	0	0	0
3M	32	0	0.25	+	0	0	+
3M	33	0	0.50	0	0	0	0
3M	34	0	0.25	0	0	0	0
3M	35	0	0.50	0	0	0	+

Appendix 8
Individual urine analysis
Occasion: Week 13

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group/ Sex	Animal Number	GLUC	RED SUB %	KET	UROBIL	BILI	BL
4M	36	0	0.25	+	0	0	+
4M	37	0	0.25	0	0	0	0
4M	38	0	0.25	+	0	0	++
4M	39	0	0.00	+	0	0	+
4M	40	0	0.00	+	0	0	+
4M	41	0	0.00	+	0	0	++
4M	42	0	0.25	+	0	0	++
4M	43	0	0.25	0	0	0	+
4M	44	0	0.50	+	0	0	+
4M	45	0	0.25	+	0	0	+
5M	46	0	0.00	0	0	0	++
5M	47	0	0.00	0	0	0	+
5M	48	0	0.00	0	0	0	++
5M	49	0	0.25	+	0	0	+++
5M	50	0	0.25	+	0	0	+++
5M	51	0	0.00	0	0	0	++
5M	52	0	0.00	+	0	0	+++
5M	53	0	0.00	0	0	0	++
5M	54	0	0.25	+	0	0	+
5M	55	0	0.00	++	0	0	+++
5M	56	0	0.25	+	0	0	0
5M	57	0	0.00	+	0	0	+++
5M	58	0	0.25	+	0	0	+
5M	59	0	0.25	+	0	0	+++
5M	60	0	0.25	++	0	0	+++

Appendix 8
Individual urine analysis
Occasion: Week 13

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group/ Sex	Animal Number	GLUC	RED SUB %	KET	UROBIL	BILI	BL
1F	61	0	0.00	0	0	0	0
1F	62	0	0.00	0	0	0	0
1F	63	0	0.50	0	0	0	0
1F	64	0	IS	+	0	0	0
1F	65	0	0.00	0	0	0	0
1F	66	0	0.00	0	0	0	0
1F	67	0	0.25	0	0	0	0
1F	68	0	0.00	0	0	0	0
1F	69	0	0.00	0	0	0	0
1F	70	0	0.00	0	0	0	0
1F	71	0	IS	0	0	0	0
1F	72	0	0.00	0	0	0	0
1F	73	+	0.00	0	0	0	0
1F	74	+	0.25	0	0	0	0
1F	75	+	0.00	0	0	0	+
2F	76	0	0.00	0	0	0	0
2F	77	0	0.00	0	0	0	0
2F	78	0	0.00	0	0	0	0
2F	79	0	0.00	0	0	0	0
2F	81	0	0.00	0	0	0	0
2F	82	0	0.25	0	0	0	0
2F	83	0	0.00	0	0	0	0
2F	84	0	0.00	0	0	0	+
2F	85	0	0.25	0	0	0	0
3F	86	0	0.00	0	0	0	0
3F	87	0	0.00	0	0	0	0
3F	88	0	0.00	0	0	0	0
3F	89	0	0.00	0	0	0	0
3F	90	+	0.25	0	0	0	0
3F	91	0	0.00	0	0	0	+
3F	92	0	0.00	0	0	0	+
3F	93	0	0.00	0	0	0	0
3F	94	0	0.00	0	0	0	0
3F	95	0	0.00	0	0	0	+

IS = insufficient sample for analysis

Appendix 8
Individual urine analysis
Occasion: Week 13

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group/ Sex	Animal Number	GLUC	RED SUB %	KET	UROBIL	BILI	BL
4F	96	0	0.25	0	0	0	0
4F	97	0	0.00	0	0	0	++
4F	98	0	0.25	0	0	0	0
4F	99	0	0.00	0	0	0	+
4F	100	0	0.25	0	0	0	0
4F	101	0	0.00	0	0	0	0
4F	102	0	0.00	0	0	0	0
4F	103	++	IS	0	0	0	0
4F	104	0	0.00	0	0	0	0
4F	105	0	0.00	0	0	0	0
5F	106	0	0.00	0	0	0	0
5F	107	0	0.00	0	0	0	+
5F	108	0	0.00	0	0	0	++
5F	109	0	0.25	0	0	0	0
5F	110	0	0.00	0	0	0	+
5F	111	0	0.00	0	0	0	+
5F	112	0	0.25	0	0	0	0
5F	113	0	0.25	0	0	0	0
5F	114	0	0.00	0	0	0	0
5F	115	0	0.00	0	0	0	0
5F	116	0	0.25	+	0	0	+
5F	117	0	0.00	0	0	0	0
5F	118	0	0.00	0	0	0	0
5F	119	0	0.00	0	0	0	0
5F	120	0	0.00	0	0	0	0

Appendix 8
Individual urine analysis
Occasion: Week 13

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group/ Sex	Animal Number	RBC /field	WBC /field	EPITH /field	SPERM	CASTS /field	PHOS
1M	2	+	0	0	0	0	0
1M	3	0	0	+	0	0	+++
1M	4	0	0	0	0	0	+++
1M	5	+	0	+	0	0	0
1M	6	0	0	0	0	0	0
1M	7	0	0	+	++	0	0
1M	8	0	0	+	0	0	0
1M	9	0	0	0	0	0	0
1M	10	0	0	+	++	0	0
1M	11	0	0	0	++	0	+++
1M	12	+	0	0	0	0	+++
1M	13	0	0	0	+	0	++
1M	14	0	0	0	0	0	+++
1M	15	0	0	+	0	0	0
2M	16	0	0	0	+	0	0
2M	17	0	+	+++	+	0	0
2M	18	0	0	0	+	0	+++
2M	19	0	0	0	0	0	0
2M	20	0	0	+	+	0	0
2M	21	0	0	0	0	0	+++
2M	22	0	0	+	++	0	0
2M	23	0	0	0	0	0	+++
2M	24	0	0	0	0	0	0
2M	25	0	0	0	0	0	+++
3M	26	0	0	+	0	0	+++
3M	27	0	0	0	+	0	0
3M	28	0	0	0	0	0	+++
3M	29	+++	0	++	0	0	0
3M	30	0	0	0	0	0	+++
3M	31	0	0	+	0	0	0
3M	32	0	0	0	0	0	0
3M	33	0	0	+	+	0	0
3M	34	0	0	0	+	0	+++
3M	35	0	0	0	0	0	0

Appendix 8
Individual urine analysis
Occasion: Week 13

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group/ Sex	Animal Number	RBC /field	WBC /field	EPITH /field	SPERM	CASTS /field	PHOS
4M	36	0	+	0	0	0	+++
4M	37	0	+	+	+	0	+++
4M	38	+	0	0	++	0	0
4M	39	0	0	0	0	0	0
4M	40	0	0	0	0	0	+++
4M	41	0	0	0	+	0	0
4M	42	0	0	0	++	0	+
4M	43	+	0	0	+++	0	0
4M	44	0	0	0	0	0	0
4M	45	+	0	0	+	0	+++
5M	46	0	0	0	0	0	0
5M	47	0	0	+	0	0	0
5M	48	0	0	0	+	0	++
5M	49	0	0	+	++	0	0
5M	50	0	0	0	0	0	++
5M	51	0	0	0	0	0	+++
5M	52	0	0	+	+	0	0
5M	53	0	0	0	+	0	0
5M	54	0	0	+	0	0	0
5M	55	0	0	0	0	0	0
5M	56	0	0	0	0	0	++
5M	57	0	0	+	+	0	+++
5M	58	0	0	0	0	0	++
5M	59	+	0	0	0	0	+++
5M	60	0	0	0	0	0	0

Appendix 8
Individual urine analysis
Occasion: Week 13

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group/ Sex	Animal Number	RBC /field	WBC /field	EPITH /field	SPERM	CASTS /field	PHOS
1F	61	0	0	0	0	0	++
1F	62	0	+	++	0	0	0
1F	63	0	0	+	0	0	0
1F	64	IS	IS	IS	IS	IS	IS
1F	65	0	0	+	0	0	0
1F	66	0	0	+++	0	0	0
1F	67	0	+	++	0	0	0
1F	68	0	0	+	0	0	0
1F	69	0	0	++	0	0	0
1F	70	0	0	+++	0	0	0
1F	71	IS	IS	IS	IS	IS	IS
1F	72	0	0	0	0	0	+++
1F	73	0	0	+++	0	0	0
1F	74	0	0	++	0	0	0
1F	75	0	++	++	0	0	0
2F	76	0	0	0	0	0	+++
2F	77	0	0	++	0	0	0
2F	78	0	0	+	0	0	0
2F	79	0	0	++	0	0	0
2F	81	0	0	+	0	0	0
2F	82	0	0	+	0	0	+++
2F	83	0	0	++	0	0	0
2F	84	0	0	+	0	0	0
2F	85	0	0	+++	0	0	0
3F	86	0	+	+	0	0	0
3F	87	0	++	+	0	0	0
3F	88	0	0	++	0	0	0
3F	89	0	0	++	0	0	0
3F	90	0	0	++	0	0	0
3F	91	0	0	++	0	0	0
3F	92	0	0	+	0	0	0
3F	93	0	0	++	0	0	0
3F	94	0	0	0	0	0	+++
3F	95	0	0	+	0	0	0

IS = insufficient sample for analysis

Appendix 8
Individual urine analysis
Occasion: Week 13

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group/ Sex	Animal Number	RBC /field	WBC /field	EPITH /field	SPERM	CASTS /field	PHOS
4F	96	0	0	+	0	0	0
4F	97	0	+++	0	0	0	0
4F	98	0	0	+	0	0	0
4F	99	0	0	0	0	0	+++
4F	100	0	0	+++	0	0	0
4F	101	0	0	+	0	0	+++
4F	102	0	0	+	0	0	0
4F	103	IS	IS	IS	IS	IS	IS
4F	104	0	0	+++	0	0	0
4F	105	0	0	++	0	0	0
5F	106	0	0	++	0	0	0
5F	107	0	0	+++	0	0	0
5F	108	0	0	+	0	0	0
5F	109	0	+	++	0	0	0
5F	110	0	+	+	0	0	0
5F	111	0	0	+	0	0	0
5F	112	0	+	+	0	0	0
5F	113	0	0	++	0	0	+
5F	114	0	+	+	0	0	0
5F	115	0	0	+++	0	0	0
5F	116	0	0	+	0	0	0
5F	117	0	0	+	0	0	0
5F	118	0	++	++	0	0	0
5F	119	0	0	+	0	0	0
5F	120	0	+	+	0	0	0

Appendix 8
Individual urine analysis
Occasion: Week 13

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group/ Sex	Animal Number	URATE	UR AC	Ca OX	AM DEB	BACT
1M	2	0	0	0	0	+++
1M	3	+	0	0	0	+++
1M	4	0	0	0	0	+++
1M	5	0	0	0	0	+++
1M	6	0	0	++	+	+++
1M	7	+	0	0	0	++
1M	8	0	0	0	0	+++
1M	9	0	0	0	0	+++
1M	10	0	0	0	0	+++
1M	11	0	0	0	0	+
1M	12	0	0	0	0	+++
1M	13	0	0	0	0	+++
1M	14	0	0	0	0	+++
1M	15	++	0	+	++	+++
2M	16	+	0	0	0	+
2M	17	0	0	0	0	+
2M	18	0	0	0	0	0
2M	19	0	0	0	0	++
2M	20	0	0	0	0	++
2M	21	0	0	0	0	+++
2M	22	0	0	0	0	+++
2M	23	0	0	0	0	+
2M	24	+	0	0	0	++
2M	25	0	0	0	0	+++
3M	26	0	0	0	0	+++
3M	27	0	0	0	0	+++
3M	28	0	0	0	0	+++
3M	29	0	0	0	0	+++
3M	30	0	0	0	0	+++
3M	31	0	0	0	0	+++
3M	32	0	0	0	0	+++
3M	33	0	0	+	0	+
3M	34	0	0	0	0	+++
3M	35	0	0	0	0	+++

Appendix 8
Individual urine analysis
Occasion: Week 13

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group/ Sex	Animal Number	URATE	UR AC	Ca OX	AM DEB	BACT
4M	36	0	0	0	0	+++
4M	37	0	0	0	0	++
4M	38	0	0	0	0	++
4M	39	+	0	0	0	+++
4M	40	0	0	0	0	+++
4M	41	0	0	0	0	+++
4M	42	0	0	0	0	+++
4M	43	0	0	0	0	0
4M	44	0	0	0	0	+++
4M	45	0	0	0	0	+++
5M	46	0	0	0	0	+++
5M	47	0	0	0	0	+++
5M	48	0	0	0	0	+++
5M	49	0	0	0	0	+++
5M	50	0	0	0	0	+++
5M	51	0	0	0	0	+++
5M	52	0	0	0	0	+++
5M	53	0	0	0	0	+++
5M	54	0	0	0	0	+++
5M	55	0	0	0	0	+++
5M	56	0	0	0	++	++
5M	57	0	0	0	0	+++
5M	58	0	0	0	0	++
5M	59	0	0	0	0	+++
5M	60	0	0	0	0	+++

Appendix 8
Individual urine analysis
Occasion: Week 13

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group/ Sex	Animal Number	URATE	UR AC	Ca OX	AM DEB	BACT
1F	61	0	0	0	0	+++
1F	62	0	0	0	0	+++
1F	63	0	0	++	0	+
1F	64	IS	IS	IS	IS	IS
1F	65	0	0	0	0	+++
1F	66	0	0	0	0	++
1F	67	0	0	0	0	+
1F	68	++	0	0	+++	++
1F	69	0	0	0	0	+++
1F	70	0	0	0	0	+++
1F	71	IS	IS	IS	IS	IS
1F	72	0	0	0	+++	+++
1F	73	0	0	0	0	+++
1F	74	0	0	0	0	+
1F	75	0	0	0	0	+++
2F	76	0	0	0	0	+++
2F	77	+	0	0	0	++
2F	78	0	0	0	0	+
2F	79	+	0	0	0	+++
2F	81	0	0	0	0	+++
2F	82	0	0	0	0	+++
2F	83	0	0	0	0	+++
2F	84	0	0	0	0	+++
2F	85	0	++	0	+	+++
3F	86	0	0	0	0	+++
3F	87	0	0	0	0	+++
3F	88	0	0	0	0	+
3F	89	0	0	0	+	+
3F	90	0	0	0	0	+
3F	91	0	0	0	0	+++
3F	92	+	0	0	0	+++
3F	93	+	0	0	0	+++
3F	94	0	0	0	0	+++
3F	95	0	0	0	0	+++

IS = insufficient sample for analysis

Appendix 8
Individual urine analysis
Occasion: Week 13

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group/ Sex	Animal Number	URATE	UR AC	Ca OX	AM DEB	BACT
4F	96	+	0	0	0	++
4F	97	0	0	0	0	+
4F	98	0	0	0	0	+++
4F	99	0	0	0	0	++
4F	100	0	0	0	0	+
4F	101	0	0	0	0	+++
4F	102	0	0	0	0	0
4F	103	IS	IS	IS	IS	IS
4F	104	0	0	0	0	+++
4F	105	++	0	0	0	+
5F	106	0	0	+++	0	+
5F	107	0	0	0	0	+++
5F	108	0	0	0	0	+++
5F	109	0	0	0	0	+++
5F	110	0	0	0	0	+++
5F	111	0	0	0	0	+++
5F	112	0	0	0	0	+++
5F	113	0	0	0	0	+++
5F	114	0	0	0	0	+++
5F	115	++	0	0	0	+++
5F	116	0	0	0	0	+
5F	117	+	0	0	+++	+++
5F	118	+	0	0	+	++
5F	119	0	0	0	0	+
5F	120	0	0	0	0	+++

Appendix 9
Individual organ weights

Terminal kill

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group and Sex	Animal number	Body weight (g)	Individual organ weights (g): Adrenals	Kidneys	Spleen	Liver
1M	1	371.4	0.074	1.677	0.707	8.381
1M	2	354.4	0.090	1.807	0.793	8.024
1M	3	365.5	0.062	1.702	0.558	8.007
1M	4	359.6	0.061	1.836	0.566	8.175
1M	5	390.3	0.060	1.690	0.779	8.860
1M	6	353.6	0.060	1.868	0.773	7.491
1M	7	362.7	0.052	1.672	0.689	8.637
1M	8	369.1	0.080	1.790	0.830	7.920
1M	9	379.8	0.055	1.770	0.699	8.748
1M	10	378.1	0.082	1.802	0.765	8.427
2M	16	359.0	0.053	1.935	0.712	8.683
2M	17	355.1	0.046	1.898	0.679	10.127
2M	18	390.0	0.061	2.007	0.664	8.717
2M	19	384.4	0.078	1.650	0.770	8.570
2M	20	382.2	0.062	1.902	0.696	9.424
2M	21	372.8	0.031	1.666	0.677	9.135
2M	22	386.4	0.069	1.764	0.600	8.695
2M	23	348.1	0.073	1.846	0.663	8.112
2M	24	372.7	0.069	1.927	0.769	9.135
2M	25	368.9	0.068	1.821	0.657	9.131
3M	26	378.3	0.058	1.859	0.638	8.834
3M	27	353.3	0.062	1.669	0.677	8.602
3M	28	373.0	0.084	1.952	0.750	8.094
3M	29	398.2	0.066	2.082	0.674	10.041
3M	30	381.0	0.084	2.272	0.668	8.918
3M	31	330.8	0.070	1.651	0.801	8.634
3M	32	348.7	0.047	1.701	0.676	8.279
3M	33	336.0	0.066	1.761	0.676	7.803
3M	34	388.2	0.085	1.789	0.747	9.662
3M	35	366.4	0.053	1.963	0.570	9.762
4M	36	347.8	0.053	1.840	0.596	8.859
4M	37	396.9	0.067	2.303	0.896	10.330
4M	38	366.8	0.052	1.791	0.723	9.947
4M	39	353.2	0.084	1.861	0.808	9.014
4M	40	412.4	0.057	2.425	0.661	10.692
4M	41	358.0	0.057	1.942	0.700	9.447
4M	42	363.6	0.054	2.010	0.654	9.750
4M	43	322.8	0.065	1.699	0.656	8.606
4M	44	304.9	0.057	1.857	0.540	7.829
4M	45	365.3	0.051	1.745	0.962	9.101
5M	46	321.8	0.071	1.831	0.666	9.825
5M	47	339.0	0.055	1.826	0.727	9.138
5M	48	379.8	0.048	1.894	0.833	10.221
5M	49	289.3	0.046	1.664	0.583	8.190
5M	50	298.4	0.069	1.750	0.474	8.635
5M	51	338.0	0.068	1.855	0.866	10.046
5M	52	391.0	0.075	2.022	0.696	10.858
5M	53	331.2	0.067	2.019	0.582	8.908
5M	54	359.9	0.070	1.975	0.723	10.666
5M	55	328.4	0.050	1.995	0.702	9.454

Appendix 9
Individual organ weights
Terminal kill

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group and Sex	Animal number	Body weight (g)	Individual organ weights (g): Heart	Brain	Thymus	Testes/ Epididymides
1M	1	371.4	1.040	1.980	0.520	5.303
1M	2	354.4	1.082	1.977	0.319	5.678
1M	3	365.5	1.072	2.054	0.437	5.643
1M	4	359.6	1.089	1.800	0.406	5.170
1M	5	390.3	1.100	1.996	0.371	5.549
1M	6	353.6	1.226	1.916	0.481	5.097
1M	7	362.7	0.931	2.049	0.420	5.346
1M	8	369.1	1.022	2.031	0.475	5.000
1M	9	379.8	0.981	1.969	0.408	5.027
1M	10	378.1	1.020	1.980	0.350	4.881
2M	16	359.0	1.060	1.979	0.335	4.996
2M	17	355.1	0.818	2.023	0.571	5.396
2M	18	390.0	1.061	2.119	0.423	5.021
2M	19	384.4	1.018	1.955	0.342	5.209
2M	20	382.2	1.151	2.076	0.388	5.268
2M	21	372.8	1.121	1.833	0.286	4.984
2M	22	386.4	0.970	2.031	0.616	5.701
2M	23	348.1	1.029	1.977	0.388	5.048
2M	24	372.7	1.254	2.093	0.460	5.380
2M	25	368.9	1.134	2.032	0.283	5.661
3M	26	378.3	1.161	2.010	0.378	5.576
3M	27	353.3	0.984	2.008	0.294	4.773
3M	28	373.0	0.888	1.943	0.513	4.935
3M	29	398.2	1.060	2.020	0.350	5.366
3M	30	381.0	1.087	2.147	0.518	4.827
3M	31	330.8	1.067	1.995	0.337	5.338
3M	32	348.7	0.955	2.034	0.393	4.672
3M	33	336.0	0.924	2.015	0.458	5.381
3M	34	388.2	1.065	2.122	0.285	5.448
3M	35	366.4	1.065	1.989	0.268	5.042
4M	36	347.8	0.961	1.925	0.376	5.033
4M	37	396.9	1.106	2.072	0.465	5.173
4M	38	366.8	0.962	2.020	0.341	5.298
4M	39	353.2	1.056	2.049	0.482	5.024
4M	40	412.4	1.036	2.013	0.373	5.489
4M	41	358.0	1.044	2.112	0.383	5.391
4M	42	363.6	1.092	1.915	0.282	4.663
4M	43	322.8	0.993	1.964	0.270	5.158
4M	44	304.9	0.880	1.956	0.331	4.788
4M	45	365.3	1.045	1.946	0.368	5.725
5M	46	321.8	0.926	1.884	0.328	1.308
5M	47	339.0	1.180	2.008	0.504	5.542
5M	48	379.8	1.037	1.984	0.384	5.071
5M	49	289.3	0.949	1.855	0.247	4.691
5M	50	298.4	0.983	1.907	0.221	4.787
5M	51	338.0	1.001	1.982	0.389	4.888
5M	52	391.0	1.341	2.000	0.433	5.106
5M	53	331.2	1.101	1.944	0.322	5.228
5M	54	359.9	1.011	1.973	0.322	5.065
5M	55	328.4	0.901	2.004	0.273	4.885

Appendix 9
Individual organ weights
Terminal kill

Test Article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group and Sex	Animal number	Body weight (g)	Individual organ weights (g): Adrenals	Kidneys	Spleen	Liver
1F	61	193.1	0.057	1.182	0.500	4.485
1F	62	185.1	0.073	1.111	0.411	4.654
1F	63	208.1	0.074	1.200	0.421	5.358
1F	64	208.6	0.070	1.168	0.451	5.560
1F	65	209.3	0.085	1.313	0.806	5.969
1F	66	225.9	0.075	1.203	0.429	4.954
1F	67	212.4	0.086	1.111	0.529	5.290
1F	68	187.7	0.053	1.165	0.416	4.844
1F	69	209.3	0.071	1.158	0.449	5.705
1F	70	218.4	0.085	1.277	0.500	5.499
2F	76	198.0	0.071	1.197	0.354	5.017
2F	77	202.5	0.073	1.195	0.518	5.114
2F	78	197.0	0.079	1.098	0.413	4.866
2F	79	201.3	0.077	1.283	0.390	5.041
2F	81	198.9	0.062	1.041	0.488	5.023
2F	82	196.4	0.064	1.103	0.440	4.898
2F	83	218.3	0.075	1.142	0.407	4.978
2F	84	203.9	0.083	1.152	0.559	5.039
2F	85	202.1	0.056	1.120	0.599	4.526
3F	86	217.8	0.067	1.343	0.481	5.408
3F	87	194.0	0.055	1.092	0.458	4.562
3F	88	227.6	0.057	1.338	0.502	5.911
3F	89	193.3	0.063	1.211	0.414	4.900
3F	90	211.8	0.087	1.384	0.494	6.275
3F	91	217.0	0.076	1.264	0.485	5.558
3F	92	201.9	0.073	1.173	0.452	4.610
3F	93	247.7	0.099	1.302	0.492	5.914
3F	94	207.6	0.088	1.167	0.523	5.019
3F	95	220.0	0.068	1.380	0.485	6.137
4F	96	207.6	0.052	1.146	0.471	5.851
4F	97	165.9	0.057	1.189	0.423	4.930
4F	98	187.2	0.076	1.177	0.338	5.652
4F	99	212.7	0.083	1.335	0.581	5.939
4F	100	205.6	0.074	1.273	0.425	6.190
4F	101	181.7	0.055	0.843	0.498	5.030
4F	102	241.7	0.055	1.325	0.477	6.470
4F	103	181.2	0.092	1.122	0.343	4.916
4F	104	208.3	0.067	1.143	0.441	5.387
4F	105	191.6	0.069	1.241	0.492	5.422
5F	106	207.9	0.075	1.241	0.565	7.035
5F	107	175.5	0.085	1.124	0.331	5.556
5F	108	193.8	0.043	1.425	0.498	5.911
5F	109	197.8	0.065	1.293	0.366	6.389
5F	110	187.7	0.085	1.314	0.446	6.431
5F	111	193.0	0.067	1.206	0.449	5.608
5F	112	172.3	0.065	1.065	0.350	5.271
5F	113	215.0	0.082	1.247	0.447	5.997
5F	114	186.2	0.100	1.210	0.306	6.545
5F	115	174.6	0.063	1.170	0.390	5.692

Appendix 9
Individual organ weights
Terminal kill

Test Article Control [ ]
Group 1 2 3 4 5
Level (ppm) 0 100 500 2500 5000

Group and Sex	Animal number	Body weight (g)	Individual organ weights (g): Heart	Brain	Thymus	Ovaries
1F	61	193.1	0.707	1.739	0.281	0.075
1F	62	185.1	0.575	1.779	0.398	0.090
1F	63	208.1	0.793	1.789	0.354	0.107
1F	64	208.6	0.777	1.812	0.347	0.084
1F	65	209.3	0.752	1.848	0.309	0.077
1F	66	225.9	0.649	1.879	0.312	0.116
1F	67	212.4	0.767	1.894	0.372	0.144
1F	68	187.7	0.669	1.757	0.200	0.076
1F	69	209.3	0.686	1.759	0.238	0.091
1F	70	218.4	0.627	1.859	0.328	0.057
2F	76	198.0	0.726	1.895	0.301	0.063
2F	77	202.5	0.697	1.811	0.233	0.125
2F	78	197.0	0.739	1.837	0.313	0.098
2F	79	201.3	0.727	1.706	0.253	0.081
2F	81	198.9	0.672	1.745	0.323	0.070
2F	82	196.4	0.659	1.741	0.225	0.078
2F	83	218.3	0.731	1.865	0.371	0.089
2F	84	203.9	0.834	1.783	0.322	0.103
2F	85	202.1	0.710	1.840	0.310	0.091
3F	86	217.8	0.736	1.860	0.327	0.070
3F	87	194.0	0.603	1.825	0.243	0.080
3F	88	227.6	0.720	1.871	0.263	0.056
3F	89	193.3	0.667	1.819	0.262	0.057
3F	90	211.8	0.707	1.798	0.306	0.096
3F	91	217.0	0.831	1.849	0.333	0.079
3F	92	201.9	0.659	1.917	0.325	0.070
3F	93	247.7	0.790	1.863	0.245	0.083
3F	94	207.6	0.695	1.846	0.421	0.102
3F	95	220.0	0.825	1.950	0.157	0.082
4F	96	207.6	0.679	1.813	0.184	0.079
4F	97	165.9	0.723	1.765	0.227	0.086
4F	98	187.2	0.606	1.909	0.261	0.090
4F	99	212.7	0.874	1.891	0.376	0.082
4F	100	205.6	0.674	1.870	0.316	0.080
4F	101	181.7	0.660	1.738	0.249	0.082
4F	102	241.7	0.768	1.855	0.341	0.101
4F	103	181.2	0.641	1.690	0.230	0.066
4F	104	208.3	0.630	1.722	0.273	0.078
4F	105	191.6	0.724	1.791	0.369	0.129
5F	106	207.9	0.754	1.857	0.284	0.084
5F	107	175.5	0.577	1.693	0.307	0.093
5F	108	193.8	0.672	1.916	0.222	0.109
5F	109	197.8	0.671	1.817	0.340	0.102
5F	110	187.7	0.674	1.894	0.246	0.082
5F	111	193.0	0.550	1.780	0.270	0.081
5F	112	172.3	0.629	1.710	0.289	0.071
5F	113	215.0	0.771	1.840	0.395	0.090
5F	114	186.2	0.680	1.810	0.360	0.094
5F	115	174.6	0.721	1.744	0.226	0.088

Appendix 9
Individual organ weights
Treatment-free kill

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group and Sex	Animal number	Body weight (g)	Individual organ weights (g): Adrenals	Kidneys	Spleen	Liver
1M	11	467.2	0.068	2.258	0.562	11.145
1M	12	413.3	0.063	1.922	0.726	10.052
1M	13	362.0	0.061	1.900	0.594	8.314
1M	14	434.9	0.066	2.090	0.825	10.026
1M	15	429.7	0.085	2.340	0.704	9.903
5M	56	379.6	0.043	1.978	0.626	9.597
5M	57	399.0	0.075	2.058	0.738	9.794
5M	58	367.8	0.049	1.932	0.679	8.946
5M	59	368.3	0.070	2.114	0.601	8.361
5M	60	368.7	0.061	1.830	0.675	7.718

Group and Sex	Animal number	Body weight (g)	Individual organ weights (g): Heart	Brain	Thymus	Testes/ Epididymides
1M	11	467.2	1.185	2.132	0.486	5.671
1M	12	413.3	1.128	2.157	0.386	5.442
1M	13	362.0	0.982	2.047	0.344	5.578
1M	14	434.9	1.210	2.145	0.290	5.605
1M	15	429.7	1.125	2.079	0.456	5.903
5M	56	379.6	1.103	1.984	0.478	5.353
5M	57	399.0	1.071	1.978	0.315	6.248
5M	58	367.8	1.103	2.084	0.329	5.876
5M	59	368.3	1.054	1.928	0.465	6.072
5M	60	368.7	1.040	2.093	0.221	4.648

Appendix 9
Individual organ weights
Treatment-free kill

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group and Sex	Animal number	Body weight (g)	Individual organ weights (g): Adrenals	Kidneys	Spleen	Liver
1F	71	206.1	0.078	1.066	0.421	4.783
1F	72	255.9	0.065	1.293	0.656	5.706
1F	73	245.1	0.072	1.344	0.593	5.691
1F	74	214.9	0.084	1.140	0.439	5.063
1F	75	232.0	0.044	1.156	0.444	5.269
5F	116	222.2	0.066	1.173	0.482	5.347
5F	117	257.1	0.072	1.497	0.569	6.500
5F	118	216.2	0.083	1.267	0.492	5.653
5F	119	189.1	0.048	1.170	0.416	4.727
5F	120	228.8	0.083	1.372	0.514	5.991

Group and Sex	Animal number	Body weight (g)	Individual organ weights (g): Heart	Brain	Thymus	Ovaries
1F	71	206.1	0.626	1.840	0.231	0.109
1F	72	255.9	0.810	1.850	0.362	0.104
1F	73	245.1	0.923	1.863	0.295	0.120
1F	74	214.9	0.682	1.752	0.196	0.086
1F	75	232.0	0.737	1.907	0.332	0.097
5F	116	222.2	0.735	1.940	0.297	0.091
5F	117	257.1	0.831	1.818	0.403	0.094
5F	118	216.2	0.691	1.918	0.364	0.112
5F	119	189.1	0.679	1.707	0.204	0.095
5F	120	228.8	0.754	1.894	0.336	0.121

Appendix 9
Individual organ weights
Decedent

Test Article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group and Sex	Animal number	Body weight (g)	Individual organ weights (g): Adrenals	Kidneys	Spleen	Liver
2F	80	201.1	0.057	1.144	0.386	6.457

Group and Sex	Animal number	Body weight (g)	Individual organ weights (g): Heart	Brain	Thymus	Ovaries
2F	80	201.1	0.625	1.830	0.417	0.082

Appendix 10
Individual animal pathology data

Test article	Control		[		] .
Group	1	2	3	4	5 .
Level (ppm)	0	100	500	2500	5000 .

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DRAFT

STUDY NUMBER: 0535101

ANIMAL NUMBER: 000001 SEX: MALE DOSE GROUP: 1 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/26/03 STUDY DAY OF DEATH: 93 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 371.4 GRAMS

O B S E R V A T I O N S

NECROPSY

ANIMAL :
-NOT REMARKABLE

HISTOPATHOLOGY

MUSCLE :
-MYOPATHY, OTHER MUSCLE,-MINIMAL
>NOTE:>IN TISSUE PROVIDED IN SECTION OF STERNUM.

LIVER :
-INFLAMMATORY CELL FOCI,-MINIMAL

SPLEEN :
-PIGMENT,-MINIMAL

KIDNEY :
-HYALINE DROPLETS,-MINIMAL
-FOCAL NEPHROPATHY,-MINIMAL
-CORTICAL MINERALISATION,-MINIMAL

EPIDIDYMIS :
-INFLAMMATORY CELL FOCI,-MINIMAL

THYMUS :
-CYST,-PRESENT

LUNG :
-FOAMY HISTIOCYTES,-MINIMAL
-INFLAMMATORY CELL FOCI,-MINIMAL

THYROID :
-CYST,-PRESENT

PARATHYROID :
>UNREMARKABLE

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Appendix 10

Individual animal pathology data

Test article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

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DRAFT

STUDY NUMBER: 0535101

ANIMAL NUMBER: 000001 SEX: MALE DOSE GROUP: 1 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/26/03 STUDY DAY OF DEATH: 93 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 371.4 GRAMS

O B S E R V A T I O N S (CONTINUED)

NECROPSY	HISTOPATHOLOGY
	PARATHYROID : >NOTE:>ONE SAMPLE.

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
EYE, OPTIC NERVE, SKIN + SUBCUTIS, FEMUR + MARROW, STERNUM + MARROW, SCIATIC NERVE, PANCREAS, MESENTERIC LN, STOMACH, DUODENUM, JEJUNUM, ILEUM, CAECUM, COLON, RECTUM, ADRENAL, TESTIS, SEMINAL VESICLE, URINARY BLADDER, PROSTATE, SALIVARY GLAND, MANDIBULAR LN, HEART, AORTA, TRACHEA, OESOPHAGUS, PITUITARY, BRAIN, SPINAL CORD

Appendix 10

Individual animal pathology data

Test article	Control	[			] .
Group	1	2	3	4	5 .
Level (ppm)	0	100	500	2500	5000 .

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STUDY NUMBER: 0535101

ANIMAL NUMBER: 000002 SEX: MALE DOSE GROUP: 1 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/26/03 STUDY DAY OF DEATH: 93 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 354.4 GRAMS

OBSERVATIONS

NECROPSY	HISTOPATHOLOGY
ANIMAL : -NOT REMARKABLE	LIVER : -INFLAMMATORY CELL FOCI,-MINIMAL SPLEEN : -PIGMENT,-MINIMAL KIDNEY : -HYALINE DROPLETS,-MINIMAL

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
EYE, OPTIC NERVE, SKIN + SUBCUTIS, MUSCLE, FEMUR + MARROW, STERNUM + MARROW, SCIATIC NERVE, PANCREAS, MESENTERIC LN, STOMACH, DUODENUM, JEJUNUM, ILEUM, CAECUM, COLON, RECTUM, ADRENAL, TESTIS, EPIDIDYMIS, SEMINAL VESICLE, URINARY BLADDER, PROSTATE, SALIVARY GLAND, MANDIBULAR LN, THYMUS, LUNG, HEART, AORTA, TRACHEA, OESOPHAGUS, THYROID, PARATHYROID, PITUITARY, BRAIN, SPINAL CORD

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Appendix 10

Individual animal pathology data

Test article	Control		[		] .
Group	1	2	3	4	5 .
Level (ppm)	0	100	500	2500	5000 .

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STUDY NUMBER: 0535101

ANIMAL NUMBER: 000003 SEX: MALE DOSE GROUP: 1 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/26/03 STUDY DAY OF DEATH: 93 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 365.5 GRAMS

OBSERVATIONS

NECROPSY

KIDNEY :
-PELVIC DILATATION, MINIMAL; RIGHT

URINARY BLADDER :
-DISTENSION, SLIGHT

THYMUS :
-THICK, MINIMAL; BILATERAL

HISTOPATHOLOGY

MUSCLE :
-MYOPATHY, QUADRICEPS MUSCLE,-MINIMAL

LIVER :
-INFLAMMATORY CELL FOCI,-MINIMAL

SPLEEN :
-PIGMENT,-MINIMAL

KIDNEY :
-HYDRONEPHROSIS,-MINIMAL

URINARY BLADDER :
-BARBITURATE LYSIS,-PRESENT

THYMUS :
>UNREMARKABLE
>NOTE:>NO MICROSCOPIC CORRELATION WITH NECROPSY.

LUNG :
-FOAMY HISTIOCYTES,-MINIMAL
-INFLAMMATORY CELL FOCI,-MINIMAL

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Individual animal pathology data

Test article	Control				[ ] .
Group	1	2	3	4	5 .
Level (ppm)	0	100	500	2500	5000 .

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STUDY NUMBER: 0535101

ANIMAL NUMBER: 000003 SEX: MALE DOSE GROUP: 1 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/26/03 STUDY DAY OF DEATH: 93 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 365.5 GRAMS

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
EYE, OPTIC NERVE, SKIN + SUBCUTIS, FEMUR + MARROW, STERNUM + MARROW, SCIATIC NERVE, PANCREAS, MESENTERIC LN, STOMACH, DUODENUM, JEJUNUM, ILEUM, CAECUM, COLON, RECTUM, ADRENAL, TESTIS, EPIDIDYMIS, SEMINAL VESICLE, PROSTATE, SALIVARY GLAND, MANDIBULAR LN, HEART, AORTA, TRACHEA, OESOPHAGUS, THYROID, PARATHYROID, PITUITARY, BRAIN, SPINAL CORD

Appendix 10

Individual animal pathology data

Test article	Control					] .
Group	1	2	3	4	5	.
Level (ppm)	0	100	500	2500	5000	.

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STUDY NUMBER: 0535101

ANIMAL NUMBER: 000004 SEX: MALE DOSE GROUP: 1 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/26/03 STUDY DAY OF DEATH: 93 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 359.6 GRAMS

OBSERVATIONS

NECROPSY

LIVER :
-MOTTLED, SLIGHT; ALL LOBES

ADRENAL :
-DARK, MODERATE; BILATERAL

HISTOPATHOLOGY

MUSCLE :
-MYOPATHY, QUADRICEPS MUSCLE,-MINIMAL

LIVER :
-INFLAMMATORY CELL FOCI,-MINIMAL
>NOTE:>OTHERWISE UNREMARKABLE.

SPLEEN :
-PIGMENT,-MINIMAL

PANCREAS :
-LOBULAR ATROPHY,-SLIGHT

ADRENAL :
-AGONAL CONGESTION/HAEMORRHAGE,-PRESENT

KIDNEY :
-HYALINE DROPLETS,-MINIMAL
-PAPILLARY MINERALISATION,-MINIMAL

EPIDIDYMIS :
-INFLAMMATORY CELL FOCI,-MINIMAL

THYROID :
-CYST,-PRESENT

PARATHYROID :
>UNREMARKABLE
>NOTE:>ONE SAMPLE.

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Appendix 10

Individual animal pathology data

Test article	Control		[		] .
Group	1	2	3	4	5 .
Level (ppm)	0	100	500	2500	5000 .

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STUDY NUMBER: 0535101

ANIMAL NUMBER: 000004 SEX: MALE DOSE GROUP: 1 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/26/03 STUDY DAY OF DEATH: 93 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 359.6 GRAMS

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
EYE, OPTIC NERVE, SKIN + SUBCUTIS, FEMUR + MARROW, STERNUM + MARROW, SCIATIC NERVE, MESENTERIC LN, STOMACH, DUODENUM, JEJUNUM, ILEUM, CAECUM, COLON, RECTUM, TESTIS, SEMINAL VESICLE, URINARY BLADDER, PROSTATE, SALIVARY GLAND, MANDIBULAR LN, THYMUS, LUNG, HEART, AORTA, TRACHEA, OESOPHAGUS, PITUITARY, BRAIN, SPINAL CORD

Appendix 10

Individual animal pathology data

Test article	Control	[			] .
Group	1	2	3	4	5 .
Level (ppm)	0	100	500	2500	5000 .

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STUDY NUMBER: 0535101

ANIMAL NUMBER: 000005 SEX: MALE DOSE GROUP: 1 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/29/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 390.3 GRAMS

O B S E R V A T I O N S

NECROPSY	HISTOPATHOLOGY
LIVER : -PALE, SLIGHT; ALL LOBES	LIVER : -INFLAMMATORY CELL FOCI,-MINIMAL -SINGLE CELL NECROSIS,-MINIMAL >NOTE:>OTHERWISE UNREMARKABLE. SPLEEN : -PIGMENT,-MINIMAL KIDNEY : -HYALINE DROPLETS,-MINIMAL -HYDRONEPHROSIS,-MINIMAL -FOCAL NEPHROPATHY,-MINIMAL -INFLAMMATORY CELL FOCI,-MINIMAL

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
EYE, OPTIC NERVE, SKIN + SUBCUTIS, MUSCLE, FEMUR + MARROW, STERNUM + MARROW, SCIATIC NERVE, PANCREAS, MESENTERIC LN, STOMACH, DUODENUM, JEJUNUM, ILEUM, CAECUM, COLON, RECTUM, ADRENAL, TESTIS, EPIDIDYMIS, SEMINAL VESICLE, URINARY BLADDER, PROSTATE, SALIVARY GLAND, MANDIBULAR LN, THYMUS, LUNG, HEART, AORTA, TRACHEA, OESOPHAGUS, THYROID, PARATHYROID, PITUITARY, BRAIN, SPINAL CORD

Appendix 10

Individual animal pathology data

Test article	Control	[			] .
Group	1	2	3	4	5 .
Level (ppm)	0	100	500	2500	5000 .

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STUDY NUMBER: 0535101

ANIMAL NUMBER: 000006 SEX: MALE DOSE GROUP: 1 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/29/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 353.6 GRAMS

O B S E R V A T I O N S

NECROPSY	HISTOPATHOLOGY
ANIMAL : -NOT REMARKABLE	LIVER : -INFLAMMATORY CELL FOCI,-MINIMAL -SINGLE CELL NECROSIS,-MINIMAL EPIDIDYMIS : -INFLAMMATORY CELL FOCI,-MINIMAL PROSTATE : -INFLAMMATORY CELL FOCI,-SLIGHT PARATHYROID : >UNREMARKABLE >NOTE:>ONE SAMPLE. PITUITARY : -CYST,-PRESENT

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
EYE, OPTIC NERVE, SKIN + SUBCUTIS, MUSCLE, FEMUR + MARROW, STERNUM + MARROW, SCIATIC NERVE, SPLEEN, PANCREAS, MESENTERIC LN, STOMACH, DUODENUM, JEJUNUM, ILEUM, CAECUM, COLON, RECTUM, ADRENAL, KIDNEY, TESTIS, SEMINAL VESICLE, URINARY BLADDER, SALIVARY GLAND, MANDIBULAR LN, THYMUS, LUNG, HEART, AORTA, TRACHEA, OESOPHAGUS, THYROID, BRAIN, SPINAL CORD

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Appendix 10

Individual animal pathology data

Test article	Control		[		] .
Group	1	2	3	4	5 .
Level (ppm)	0	100	500	2500	5000 .

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STUDY NUMBER: 0535101

ANIMAL NUMBER: 000007 SEX: MALE DOSE GROUP: 1 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/29/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 362.7 GRAMS

OBSERVATIONS

NECROPSY

THYMUS :
-LARGE, MINIMAL; BILATERAL

HISTOPATHOLOGY

LIVER :
-INFLAMMATORY CELL FOCI,-MINIMAL
-SINGLE CELL NECROSIS,-MINIMAL

SPLEEN :
-PIGMENT,-MINIMAL

PANCREAS :
-LOBULAR ATROPHY,-MINIMAL

KIDNEY :
-HYALINE DROPLETS,-MINIMAL

URINARY BLADDER :
-BARBITURATE LYSIS,-PRESENT

THYMUS :
>UNREMARKABLE
>NOTE:>NO MICROSCOPIC CORRELATION WITH NECROPSY.

LUNG :
-FOAMY HISTIOCYTES,-MINIMAL

HEART :
-MYOCARDIAL DEGENERATION/NECROSIS,-MINIMAL

PARATHYROID :
>UNREMARKABLE
>NOTE:>ONE SAMPLE.

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Appendix 10

Individual animal pathology data

Test article	Control				[ ] .
Group	1	2	3	4	5 .
Level (ppm)	0	100	500	2500	5000 .

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STUDY NUMBER: 0535101

ANIMAL NUMBER: 000007 SEX: MALE DOSE GROUP: 1 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/29/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 362.7 GRAMS

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
EYE, OPTIC NERVE, SKIN + SUBCUTIS, MUSCLE, FEMUR + MARROW, STERNUM + MARROW, SCIATIC NERVE, MESENTERIC LN, STOMACH, DUODENUM, JEJUNUM, ILEUM, CAECUM, COLON, RECTUM, ADRENAL, TESTIS, EPIDIDYMIS, SEMINAL VESICLE, PROSTATE, SALIVARY GLAND, MANDIBULAR LN, AORTA, TRACHEA, OESOPHAGUS, THYROID, PITUITARY, BRAIN, SPINAL CORD

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Appendix 10

Individual animal pathology data

Test article	Control				[ ] .
Group	1	2	3	4	5 .
Level (ppm)	0	100	500	2500	5000 .

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STUDY NUMBER: 0535101

ANIMAL NUMBER: 000008 SEX: MALE DOSE GROUP: 1 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/29/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 369.1 GRAMS

OBSERVATIONS

NECROPSY	HISTOPATHOLOGY
ANIMAL : -NOT REMARKABLE	MUSCLE : -MYOPATHY, QUADRICEPS MUSCLE,-MINIMAL LIVER : -INFLAMMATORY CELL FOCI,-MINIMAL -FOCAL NECROSIS,-MINIMAL SPLEEN : -PIGMENT,-MINIMAL PROSTATE : -INFLAMMATORY CELL FOCI,-MINIMAL LUNG : -INFLAMMATORY CELL FOCI,-MINIMAL PARATHYROID : >UNREMARKABLE >NOTE:>ONE SAMPLE.

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
EYE, OPTIC NERVE, SKIN + SUBCUTIS, FEMUR + MARROW, STERNUM + MARROW, SCIATIC NERVE, PANCREAS, MESENTERIC LN, STOMACH, DUODENUM, JEJUNUM, ILEUM, CAECUM, COLON, RECTUM, ADRENAL, KIDNEY, TESTIS, EPIDIDYMIS, SEMINAL VESICLE, URINARY BLADDER, SALIVARY GLAND, MANDIBULAR LN, THYMUS, HEART, AORTA, TRACHEA, OESOPHAGUS, THYROID, PITUITARY, BRAIN, SPINAL CORD

Appendix 10

Individual animal pathology data

Test article	Control	[			] .
Group	1	2	3	4	5 .
Level (ppm)	0	100	500	2500	5000 .

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DRAFT

STUDY NUMBER: 0535101

ANIMAL NUMBER: 000009 SEX: MALE DOSE GROUP: 1 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/29/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 379.8 GRAMS

OBSERVATIONS

NECROPSY	HISTOPATHOLOGY
ANIMAL : -NOT REMARKABLE	LIVER : -INFLAMMATORY CELL FOCI,-MINIMAL KIDNEY : -HYALINE DROPLETS,-MINIMAL -CORTICAL MINERALISATION,-MINIMAL MANDIBULAR LN : -LYMPHOID HYPERPLASIA,-SLIGHT THYMUS : -CYST,-PRESENT LUNG : -FOAMY HISTIOCYTES,-MINIMAL THYROID : -CYST,-PRESENT PARATHYROID : >UNREMARKABLE >NOTE:>ONE SAMPLE.

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Appendix 10

Individual animal pathology data

Test article	Control	[			] .
Group	1	2	3	4	5 .
Level (ppm)	0	100	500	2500	5000 .

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STUDY NUMBER: 0535101

ANIMAL NUMBER: 000009 SEX: MALE DOSE GROUP: 1 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/29/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 379.8 GRAMS

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
EYE, OPTIC NERVE, SKIN + SUBCUTIS, MUSCLE, FEMUR + MARROW, STERNUM + MARROW, SCIATIC NERVE, SPLEEN, PANCREAS, MESENTERIC LN, STOMACH, DUODENUM, JEJUNUM, ILEUM, CAECUM, COLON, RECTUM, ADRENAL, TESTIS, EPIDIDYMIS, SEMINAL VESICLE, URINARY BLADDER, PROSTATE, SALIVARY GLAND, HEART, AORTA, TRACHEA, OESOPHAGUS, PITUITARY, BRAIN, SPINAL CORD

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Appendix 10

Individual animal pathology data

Test article	Control	[			] .
Group	1	2	3	4	5 .
Level (ppm)	0	100	500	2500	5000 .

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STUDY NUMBER: 0535101

ANIMAL NUMBER: 000010 SEX: MALE DOSE GROUP: 1 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/29/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 378.1 GRAMS

OBSERVATIONS

NECROPSY

CAECUM :
-INJECTION LESION

URINARY BLADDER :
-DISTENSION, MODERATE

HISTOPATHOLOGY

LIVER :
-INFLAMMATORY CELL FOCI,-MINIMAL
-SINGLE CELL NECROSIS,-MINIMAL

SPLEEN :
-PIGMENT,-MINIMAL

CAECUM :
-BARBITURATE LYSIS,-PRESENT

KIDNEY :
-HYALINE DROPLETS,-MINIMAL
-INFLAMMATORY CELL FOCI,-MINIMAL

EPIDIDYMIS :
-INFLAMMATORY CELL FOCI,-MINIMAL

URINARY BLADDER :
-BARBITURATE LYSIS,-PRESENT

MANDIBULAR LN :
-LYMPHOID HYPERPLASIA,-SLIGHT

THYMUS :
-CYST,-PRESENT

THYROID :
-CYST,-PRESENT

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Appendix 10

Individual animal pathology data

Test article	Control				[ ]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

COVANCE
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DRAFT

STUDY NUMBER: 0535101

ANIMAL NUMBER: 000010 SEX: MALE DOSE GROUP: 1 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/29/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 378.1 GRAMS

O B S E R V A T I O N S (CONTINUED)

NECROPSY

HISTOPATHOLOGY

PARATHYROID :
>UNREMARKABLE
>NOTE:>ONE SAMPLE.

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
EYE, OPTIC NERVE, SKIN + SUBCUTIS, MUSCLE, FEMUR + MARROW, STERNUM + MARROW, SCIATIC NERVE, PANCREAS, MESENTERIC LN, STOMACH, DUODENUM, JEJUNUM, ILEUM, COLON, RECTUM, ADRENAL, TESTIS, SEMINAL VESICLE, PROSTATE, SALIVARY GLAND, LUNG, HEART, AORTA, TRACHEA, OESOPHAGUS, PITUITARY, BRAIN, SPINAL CORD

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Appendix 10

Individual animal pathology data

Test article	Control		[		] .
Group	1	2	3	4	5 .
Level (ppm)	0	100	500	2500	5000 .

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DRAFT

STUDY NUMBER: 0535101

ANIMAL NUMBER: 000011 SEX: MALE DOSE GROUP: 1 SACRIFICE STATUS: SCHEDULED, FIRST POST-RECOV SAC
DATE OF DEATH: 10/24/03 STUDY DAY OF DEATH: 121 STUDY WEEK OF DEATH: 18 TERMINAL BODY WEIGHT: 467.2 GRAMS

O B S E R V A T I O N S

NECROPSY	HISTOPATHOLOGY
KIDNEY : -PELVIC DILATATION, MODERATELY SEVERE; LEFT	MUSCLE : -MYOPATHY, QUADRICEPS MUSCLE,-MINIMAL LIVER : -INFLAMMATORY CELL FOCI,-MINIMAL -SINGLE CELL NECROSIS,-MINIMAL KIDNEY : -HYDRONEPHROSIS,-MODERATE -INFLAMMATORY CELL FOCI,-MINIMAL

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
PANCREAS, HEART

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Appendix 10

Individual animal pathology data

Test article	Control	[			] .
Group	1	2	3	4	5 .
Level (ppm)	0	100	500	2500	5000 .

COVANCE
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DRAFT

STUDY NUMBER: 0535101

ANIMAL NUMBER: 000012 SEX: MALE DOSE GROUP: 1 SACRIFICE STATUS: SCHEDULED, FIRST POST-RBCOV SAC
DATE OF DEATH: 10/24/03 STUDY DAY OF DEATH: 121 STUDY WEEK OF DEATH: 18 TERMINAL BODY WEIGHT: 413.3 GRAMS

O B S E R V A T I O N S

NECROPSY	HISTOPATHOLOGY
KIDNEY : -PELVIC DILATATION, MODERATE; BILATERAL	MUSCLE : -MYOPATHY, QUADRICEPS MUSCLE,-MINIMAL
LUNG : -PALE AREA; FEW, 2-3MM DIAMETER, LEFT LOBE	LIVER : -INFLAMMATORY CELL FOCI,-MINIMAL -SINGLE CELL NECROSIS,-MINIMAL
	PANCREAS : -INFLAMMATORY CELL FOCI,-MINIMAL
	KIDNEY : -HYALINE DROPLETS,-MINIMAL -HYDRONEPHROSIS,-SLIGHT
	LUNG : -FOAMY HISTIOCYTES,-MINIMAL

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
HEART

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Appendix 10

Individual animal pathology data

Test article	Control		[		] .
Group	1	2	3	4	5 .
Level (ppm)	0	100	500	2500	5000 .

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DRAFT

STUDY NUMBER: 0535101

ANIMAL NUMBER: 000013 SEX: MALE DOSE GROUP: 1 SACRIFICE STATUS: SCHEDULED, FIRST POST-RECOV SAC
DATE OF DEATH: 10/24/03 STUDY DAY OF DEATH: 121 STUDY WEEK OF DEATH: 18 TERMINAL BODY WEIGHT: 362.0 GRAMS

O B S E R V A T I O N S

NECROPSY

ANIMAL :
-NOT REMARKABLE

HISTOPATHOLOGY

MUSCLE :
-MYOPATHY, OTHER MUSCLE,-MINIMAL
-MYOPATHY, QUADRICEPS MUSCLE,-MINIMAL

LIVER :
-INFLAMMATORY CELL FOCI,-MINIMAL
-SINGLE CELL NECROSIS,-MINIMAL

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
PANCREAS, HEART

Appendix 10

Individual animal pathology data

Test article	Control	[			] .
Group	1	2	3	4	5 .
Level (ppm)	0	100	500	2500	5000 .

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DRAFT

STUDY NUMBER: 0535101

ANIMAL NUMBER: 000014 SEX: MALE DOSE GROUP: 1 SACRIFICE STATUS: SCHEDULED, FIRST POST-RECOV SAC
DATE OF DEATH: 10/24/03 STUDY DAY OF DEATH: 121 STUDY WEEK OF DEATH: 18 TERMINAL BODY WEIGHT: 434.9 GRAMS

O B S E R V A T I O N S

NECROPSY

CAECUM :
-INJECTION LESION

KIDNEY :
-MOTTLED, SLIGHT; BILATERAL

HISTOPATHOLOGY

LIVER :
-INFLAMMATORY CELL FOCI,-MINIMAL
-SINGLE CELL NECROSIS,-MINIMAL

CAECUM :
-BARBITURATE LYSIS,-PRESENT

KIDNEY :
-AGONAL CONGESTION/HAEMORRHAGE,-PRESENT
-HYALINE DROPLETS,-MINIMAL
-INFLAMMATORY CELL FOCI,-MINIMAL

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
MUSCLE, PANCREAS, HEART

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Appendix 10

Individual animal pathology data

Test article	Control	[			] .
Group	1	2	3	4	5 .
Level (ppm)	0	100	500	2500	5000 .

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STUDY NUMBER: 0535101

ANIMAL NUMBER: 000015 SEX: MALE DOSE GROUP: 1 SACRIFICE STATUS: SCHEDULED, FIRST POST-RECOV SAC
DATE OF DEATH: 10/24/03 STUDY DAY OF DEATH: 121 STUDY WEEK OF DEATH: 18 TERMINAL BODY WEIGHT: 429.7 GRAMS

O B S E R V A T I O N S

NECROPSY	HISTOPATHOLOGY
ANIMAL : -NOT REMARKABLE	MUSCLE : -MYOPATHY, QUADRICEPS MUSCLE,-MINIMAL LIVER : -INFLAMMATORY CELL FOCI,-MINIMAL HEART : -MYOCARDIAL DEGENERATION/NECROSIS,-MINIMAL

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
PANCREAS

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Appendix 10

Individual animal pathology data

Test article	Control		[		] .
Group	1	2	3	4	5 .
Level (ppm)	0	100	500	2500	5000 .

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DRAFT

STUDY NUMBER: 0535101

ANIMAL NUMBER: 000016 SEX: MALE DOSE GROUP: 2 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/26/03 STUDY DAY OF DEATH: 93 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 359.0 GRAMS

O B S E R V A T I O N S

NECROPSY	HISTOPATHOLOGY
ANIMAL : -NOT REMARKABLE	LIVER : -INFLAMMATORY CELL FOCI,-MINIMAL -CENTRILOBULAR HYPERTROPHY/EOSINOPHILIA,-MINIMAL HEART : -INFLAMMATORY CELL FOCI,-MINIMAL

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
MUSCLE, PANCREAS

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Appendix 10

Individual animal pathology data

Test article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

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STUDY NUMBER: 0535101

ANIMAL NUMBER: 000017 SEX: MALE DOSE GROUP: 2 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/26/03 STUDY DAY OF DEATH: 93 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 355.1 GRAMS

OBSERVATIONS

NECROPSY	HISTOPATHOLOGY
LIVER : -LARGE, MODERATE; ALL LOBES -DARK, SLIGHT; ALL LOBES	LIVER : -AGONAL CONGESTION/HAEMORRHAGE,-PRESENT -HEPATOCYTE VACUOLATION,-MINIMAL -INFLAMMATORY CELL FOCI,-MINIMAL

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
MUSCLE, PANCREAS, HEART

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Appendix 10

Individual animal pathology data

Test article	Control	[			] .
Group	1	2	3	4	5 .
Level (ppm)	0	100	500	2500	5000 .

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STUDY NUMBER: 0535101

ANIMAL NUMBER: 000018 SEX: MALE DOSE GROUP: 2 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/26/03 STUDY DAY OF DEATH: 93 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 390.0 GRAMS

OBSERVATIONS

NECROPSY	HISTOPATHOLOGY
ANIMAL : -NOT REMARKABLE	MUSCLE : -MYOPATHY, QUADRICEPS MUSCLE,-MINIMAL LIVER : -INFLAMMATORY CELL FOCI,-MINIMAL -SINGLE CELL NECROSIS,-MINIMAL

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
PANCREAS, HEART

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Appendix 10

Individual animal pathology data

Test article	Control	[			] .
Group	1	2	3	4	5 .
Level (ppm)	0	100	500	2500	5000 .

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STUDY NUMBER: 0535101

ANIMAL NUMBER: 000019 SEX: MALE DOSE GROUP: 2 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/26/03 STUDY DAY OF DEATH: 93 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 384.4 GRAMS

OBSERVATIONS

NECROPSY

ANIMAL :
-NOT REMARKABLE

HISTOPATHOLOGY

MUSCLE :
-MYOPATHY, OTHER MUSCLE,-MINIMAL

LIVER :
-INFLAMMATORY CELL FOCI,-MINIMAL
-SINGLE CELL NECROSIS,-MINIMAL
-CENTRILOBULAR HYPERTROPHY/EOSINOPHILIA,-MINIMAL

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
PANCREAS, HEART

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Appendix 10

Individual animal pathology data

Test article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

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STUDY NUMBER: 0535101

ANIMAL NUMBER: 000020 SEX: MALE DOSE GROUP: 2 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/29/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 382.2 GRAMS

OBSERVATIONS

NECROPSY	HISTOPATHOLOGY
CAECUM : -INJECTION LESION	MUSCLE : -INFLAMMATORY CELL FOCI,-MINIMAL
ADRENAL : -DARK, SLIGHT; BILATERAL	LIVER : -INFLAMMATORY CELL FOCI,-MINIMAL -SINGLE CELL NECROSIS,-MINIMAL -CENTRILOBULAR HYPERTROPHY/EOSINOPHILIA,-MINIMAL
MANDIBULAR LN : -LARGE, MODERATE -RED FOCUS; FEW	CAECUM : -BARBITURATE LYSIS,-PRESENT
LUNG : -RED FOCUS; FEW, RIGHT ANTERIOR, RIGHT MIDDLE AND RIGHT POSTERIOR LOBES	ADRENAL : -AGONAL CONGESTION/HAEMORRHAGE,-PRESENT
	MANDIBULAR LN : -AGONAL CONGESTION/HAEMORRHAGE,-PRESENT -HISTIOCYTE FOCI,-SLIGHT -LYMPHOID HYPERPLASIA,-MINIMAL
	LUNG : -AGONAL CONGESTION/HAEMORRHAGE,-PRESENT -INFLAMMATORY CELL FOCI,-MINIMAL
	HEART : -INFLAMMATORY CELL FOCI,-MINIMAL

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Appendix 10

Individual animal pathology data

Test article	Control		[		] .
Group	1	2	3	4	5 .
Level (ppm)	0	100	500	2500	5000 .

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STUDY NUMBER: 0535101

ANIMAL NUMBER: 000020 SEX: MALE DOSE GROUP: 2 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/29/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 382.2 GRAMS

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
PANCREAS

Appendix 10

Individual animal pathology data

Test article	Control	[			] .
Group	1	2	3	4	5 .
Level (ppm)	0	100	500	2500	5000 .

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STUDY NUMBER: 0535101

ANIMAL NUMBER: 000021 SEX: MALE DOSE GROUP: 2 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/29/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 372.8 GRAMS

OBSERVATIONS

NECROPSY	HISTOPATHOLOGY
LIVER : -MOTTLED, SLIGHT; ALL LOBES	LIVER : -AGONAL CONGESTION/HAEMORRHAGE,-PRESENT -INFLAMMATORY CELL FOCI,-MINIMAL -SINGLE CELL NECROSIS,-MINIMAL PANCREAS : -LOBULAR ATROPHY,-MINIMAL HEART : -MYOCARDIAL DEGENERATION/NECROSIS,-MINIMAL

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
MUSCLE

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Appendix 10

Individual animal pathology data

Test article	Control		[		] .
Group	1	2	3	4	5 .
Level (ppm)	0	100	500	2500	5000 .

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DRAFT

STUDY NUMBER: 0535101

ANIMAL NUMBER: 000022 SEX: MALE DOSE GROUP: 2 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/29/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 386.4 GRAMS

OBSERVATIONS

NECROPSY	HISTOPATHOLOGY
ANIMAL : -NOT REMARKABLE	LIVER : -INFLAMMATORY CELL FOCI,-MINIMAL -SINGLE CELL NECROSIS,-MINIMAL -CENTRILOBULAR HYPERTROPHY/EOSINOPHILIA,-MINIMAL PANCREAS : -LOBULAR ATROPHY,-MINIMAL

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
MUSCLE, HEART

Appendix 10

Individual animal pathology data

Test article	Control					] .
Group	1	2	3	4	5	.
Level (ppm)	0	100	500	2500	5000	.

COVANCE
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STUDY NUMBER: 0535101

ANIMAL NUMBER: 000023 SEX: MALE DOSE GROUP: 2 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/29/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 348.1 GRAMS

O B S E R V A T I O N S

NECROPSY	HISTOPATHOLOGY
DUODENUM : -PALE, SLIGHT; MUCOSAL SURFACE -THICK, SLIGHT; MUCOSAL SURFACE	LIVER : -INFLAMMATORY CELL FOCI,-MINIMAL -SINGLE CELL NECROSIS,-MINIMAL DUODENUM : >UNREMARKABLE >NOTE:>NO MICROSCOPIC CORRELATION WITH NECROPSY. HEART : -MYOCARDIAL DEGENERATION/NECROSIS,-SLIGHT

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
MUSCLE, PANCREAS

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Appendix 10

Individual animal pathology data

Test article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

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STUDY NUMBER: 0535101

ANIMAL NUMBER: 000024 SEX: MALE DOSE GROUP: 2 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/29/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 372.7 GRAMS

OBSERVATIONS

NECROPSY	HISTOPATHOLOGY
CAECUM : -INJECTION LESION	LIVER : -INFLAMMATORY CELL FOCI,-MINIMAL -SINGLE CELL NECROSIS,-MINIMAL PANCREAS : -LOBULAR ATROPHY,-SLIGHT CAECUM : -BARBITURATE LYSIS,-PRESENT

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
MUSCLE, HEART

Appendix 10

Individual animal pathology data

Test article	Control	[			] .
Group	1	2	3	4	5 .
Level (ppm)	0	100	500	2500	5000 .

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DRAFT

STUDY NUMBER: 0535101

ANIMAL NUMBER: 000025 SEX: MALE DOSE GROUP: 2 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/29/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 368.9 GRAMS

OBSERVATIONS

NECROPSY	HISTOPATHOLOGY
TESTIS : -RED, SLIGHT; LEFT	MUSCLE : -MYOPATHY, QUADRICEPS MUSCLE,-MINIMAL LIVER : -INFLAMMATORY CELL FOCI,-MINIMAL -SINGLE CELL NECROSIS,-MINIMAL -CENTRILOBULAR HYPERTROPHY/EOSINOPHILIA,-MINIMAL TESTIS : -AGONAL CONGESTION/HAEMORRHAGE,-PRESENT

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
PANCREAS, HEART

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Appendix 10

Individual animal pathology data

Test article	Control	[			] .
Group	1	2	3	4	5 .
Level (ppm)	0	100	500	2500	5000 .

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DRAFT

STUDY NUMBER: 0535101

ANIMAL NUMBER: 000026 SEX: MALE DOSE GROUP: 3 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/26/03 STUDY DAY OF DEATH: 93 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 378.3 GRAMS

OBSERVATIONS

NECROPSY	HISTOPATHOLOGY
STOMACH : -ABNORMAL APPEARANCE; RED STRIATION, FEW, FUNDUS REGION, MUCOSAL SURFACE	MUSCLE : -MYOPATHY, QUADRICEPS MUSCLE,-MINIMAL LIVER : -INFLAMMATORY CELL FOCI,-MINIMAL -FOCAL NECROSIS,-MINIMAL -CENTRILOBULAR HYPERTROPHY/EOSINOPHILIA,-MINIMAL STOMACH : -AGONAL CONGESTION/HAEMORRHAGE,-PRESENT -LIMITING RIDGE GASTRITIS,-MINIMAL

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
PANCREAS, HEART

Appendix 10

Individual animal pathology data

Test article	Control	[			] .
Group	1	2	3	4	5 .
Level (ppm)	0	100	500	2500	5000 .

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STUDY NUMBER: 0535101

ANIMAL NUMBER: 000027 SEX: MALE DOSE GROUP: 3 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/26/03 STUDY DAY OF DEATH: 93 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 353.3 GRAMS

OBSERVATIONS

NECROPSY

KIDNEY :
-DARK FOCUS; LEFT

TESTIS :
-SMALL, SLIGHT; BILATERAL

HISTOPATHOLOGY

MUSCLE :
-MYOPATHY, QUADRICEPS MUSCLE,-MINIMAL

LIVER :
-INFLAMMATORY CELL FOCI,-MINIMAL

KIDNEY :
-AGONAL CONGESTION/HAEMORRHAGE,-PRESENT
-HYALINE DROPLETS,-MINIMAL

TESTIS :
>UNREMARKABLE
>NOTE:>NO MICROSCOPIC CORRELATION WITH NECROPSY.

HEART :
-MYOCARDIAL DEGENERATION/NECROSIS,-MINIMAL

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
PANCREAS

Appendix 10

Individual animal pathology data

Test article	Control	[			] .
Group	1	2	3	4	5 .
Level (ppm)	0	100	500	2500	5000 .

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STUDY NUMBER: 0535101

ANIMAL NUMBER: 000028 SEX: MALE DOSE GROUP: 3 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/26/03 STUDY DAY OF DEATH: 93 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 373.0 GRAMS

OBSERVATIONS

NECROPSY	HISTOPATHOLOGY
KIDNEY : -PALE, SLIGHT; BILATERAL	MUSCLE : -MYOPATHY, QUADRICEPS MUSCLE,-MINIMAL
URINARY BLADDER : -DISTENSION, SLIGHT	LIVER : -INFLAMMATORY CELL FOCI,-MINIMAL -SINGLE CELL NECROSIS,-MINIMAL -CENTRILOBULAR HYPERTROPHY/EOSINOPHILIA,-MINIMAL
	KIDNEY : -HYALINE DROPLETS,-MINIMAL -CORTICAL MINERALISATION,-MINIMAL >NOTE:>OTHERWISE UNREMARKABLE.
	URINARY BLADDER : -BARBITURATE LYSIS,-PRESENT

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
PANCREAS, HEART

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Appendix 10

Individual animal pathology data

Test article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

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STUDY NUMBER: 0535101

ANIMAL NUMBER: 000029 SEX: MALE DOSE GROUP: 3 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/26/03 STUDY DAY OF DEATH: 93 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 398.2 GRAMS

OBSERVATIONS

NECROPSY

ANIMAL :
-NOT REMARKABLE

HISTOPATHOLOGY

LIVER :
-INFLAMMATORY CELL FOCI,-MINIMAL
-SINGLE CELL NECROSIS,-MINIMAL
-CENTRILOBULAR HYPERTROPHY/EOSINOPHILIA,-MINIMAL

HEART :
-MYOCARDIAL DEGENERATION/NECROSIS,-MINIMAL

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
MUSCLE, PANCREAS

Appendix 10

Individual animal pathology data

Test article	Control	[			] .
Group	1	2	3	4	5 .
Level (ppm)	0	100	500	2500	5000 .

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STUDY NUMBER: 0535101

ANIMAL NUMBER: 000030 SEX: MALE DOSE GROUP: 3 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/29/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 381.0 GRAMS

OBSERVATIONS

NECROPSY

CAECUM :
-INJECTION LESION

KIDNEY :
-PALE, SLIGHT; BILATERAL

TESTIS :
-DARK, SLIGHT; RIGHT

HISTOPATHOLOGY

STERNUM + MARROW :
-STEATITIS,-SLIGHT
>NOTE:>IN ADIPOSE TISSUE PROVIDED IN SECTION OF INTERCOSTAL MUSCLE ADJACENT TO STERNUM.

LIVER :
-INFLAMMATORY CELL FOCI,-MINIMAL
-SINGLE CELL NECROSIS,-SLIGHT
-CENTRILOBULAR HYPERTROPHY/EOSINOPHILIA,-MINIMAL

CAECUM :
-BARBITURATE LYSIS,-PRESENT

KIDNEY :
-HYALINE DROPLETS,-MINIMAL
-FOCAL NEPHROPATHY,-MINIMAL
>NOTE:>OTHERWISE UNREMARKABLE.

TESTIS :
-TUBULAR ATROPHY,-MINIMAL
-AGONAL CONGESTION/HAEMORRHAGE,-PRESENT

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
MUSCLE, PANCREAS, HEART

Appendix 10

Individual animal pathology data

Test article	Control	[			] .
Group	1	2	3	4	5 .
Level (ppm)	0	100	500	2500	5000 .

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DRAFT

STUDY NUMBER: 0535101

ANIMAL NUMBER: 000031 SEX: MALE DOSE GROUP: 3 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/29/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 330.8 GRAMS

O B S E R V A T I O N S

NECROPSY	HISTOPATHOLOGY
STOMACH : -RED, MINIMAL; CARDIA REGION, MUCOSAL SURFACE	MUSCLE : -MYOPATHY, OTHER MUSCLE,-MINIMAL LIVER : -PIGMENT,-SLIGHT -INFLAMMATORY CELL FOCI,-MINIMAL -PIGMENTED HISTIOCYTES,-SLIGHT STOMACH : -AGONAL CONGESTION/HAEMORRHAGE,-PRESENT

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
PANCREAS, HEART

Appendix 10

Individual animal pathology data

Test article	Control	[			] .
Group	1	2	3	4	5 .
Level (ppm)	0	100	500	2500	5000 .

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DRAFT

STUDY NUMBER: 0535101

ANIMAL NUMBER: 000032 SEX: MALE DOSE GROUP: 3 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/29/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 348.7 GRAMS

OBSERVATIONS

NECROPSY

CAECUM :
-INJECTION LESION

URINARY BLADDER :
-DARK, MODERATE

HISTOPATHOLOGY

LIVER :
-INFLAMMATORY CELL FOCI,-MINIMAL
-SINGLE CELL NECROSIS,-MINIMAL

CAECUM :
-BARBITURATE LYSIS,-PRESENT

URINARY BLADDER :
-BARBITURATE LYSIS,-PRESENT

HEART :
-INFLAMMATORY CELL FOCI,-MINIMAL
-MYOCARDIAL DEGENERATION/NECROSIS,-MINIMAL

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
MUSCLE, PANCREAS

Appendix 10

Individual animal pathology data

Test article	Control					] .
Group	1	2	3	4	5	.
Level (ppm)	0	100	500	2500	5000	.

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DRAFT

STUDY NUMBER: 0535101

ANIMAL NUMBER: 000033 SEX: MALE DOSE GROUP: 3 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/29/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 336.0 GRAMS

O B S E R V A T I O N S

NECROPSY	HISTOPATHOLOGY
ANIMAL : -NOT REMARKABLE	LIVER : -INFLAMMATORY CELL FOCI,-MINIMAL -SINGLE CELL NECROSIS,-MINIMAL PANCREAS : >SECTION EXAMINED; TISSUE NOT PRESENT

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
MUSCLE, HEART

Appendix 10

Individual animal pathology data

Test article	Control	[			] .
Group	1	2	3	4	5 .
Level (ppm)	0	100	500	2500	5000 .

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DRAFT

STUDY NUMBER: 0535101

ANIMAL NUMBER: 000034 SEX: MALE DOSE GROUP: 3 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/29/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 388.2 GRAMS

O B S E R V A T I O N S

NECROPSY	HISTOPATHOLOGY
ANIMAL : -NOT REMARKABLE	LIVER : -INFLAMMATORY CELL FOCI,-MINIMAL -SINGLE CELL NECROSIS,-MINIMAL

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
MUSCLE, PANCREAS, HEART

Appendix 10

Individual animal pathology data

Test article	Control		[		] .
Group	1	2	3	4	5 .
Level (ppm)	0	100	500	2500	5000 .

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DRAFT

STUDY NUMBER: 0535101

ANIMAL NUMBER: 000035 SEX: MALE DOSE GROUP: 3 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/29/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 366.4 GRAMS

OBSERVATIONS

NECROPSY	HISTOPATHOLOGY
LIVER : -MOTTLED, SLIGHT; ALL LOBES -PALE, SLIGHT; ALL LOBES	LIVER : -AGONAL CONGESTION/HAEMORRHAGE,-PRESENT -INFLAMMATORY CELL FOCI,-MINIMAL -SINGLE CELL NECROSIS,-MINIMAL -CENTRILOBULAR HYPERTROPHY/EOSINOPHILIA,-MINIMAL
LUNG : -RED FOCUS; FEW, LEFT LOBE, RIGHT MIDDLE LOBE AND RIGHT POSTERIOR LOBE	LUNG : -AGONAL CONGESTION/HAEMORRHAGE,-PRESENT -INFLAMMATORY CELL FOCI,-MINIMAL
	HEART : -MYOCARDIAL DEGENERATION/NECROSIS,-MINIMAL

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
MUSCLE, PANCREAS

Appendix 10

Individual animal pathology data

Test article	Control		[		] .
Group	1	2	3	4	5 .
Level (ppm)	0	100	500	2500	5000 .

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DRAFT

STUDY NUMBER: 0535101

ANIMAL NUMBER: 000036 SEX: MALE DOSE GROUP: 4 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/26/03 STUDY DAY OF DEATH: 93 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 347.8 GRAMS

O B S E R V A T I O N S

NECROPSY	HISTOPATHOLOGY
ANIMAL : -NOT REMARKABLE	LIVER : -INFLAMMATORY CELL FOCI,-MINIMAL PANCREAS : -ACINAR CELL HYPERTROPHY,-SLIGHT

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
MUSCLE, HEART

Appendix 10

Individual animal pathology data

Test article	Control	[		] .	
Group	1	2	3	4	5 .
Level (ppm)	0	100	500	2500	5000 .

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STUDY NUMBER: 0535101

ANIMAL NUMBER: 000037 SEX: MALE DOSE GROUP: 4 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/26/03 STUDY DAY OF DEATH: 93 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 396.9 GRAMS

OBSERVATIONS

NECROPSY	HISTOPATHOLOGY
KIDNEY : -PALE, SLIGHT; BILATERAL	MUSCLE : -MYOPATHY, QUADRICEPS MUSCLE, -MINIMAL
URINARY BLADDER : -DISTENSION, MODERATE	LIVER : -INFLAMMATORY CELL FOCI, -MINIMAL -SINGLE CELL NECROSIS, -MINIMAL -CENTRILOBULAR HYPERTROPHY/EOSINOPHILIA, -MINIMAL
	KIDNEY : -HYALINE DROPLETS, -MINIMAL >NOTE: >OTHERWISE UNREMARKABLE.
	URINARY BLADDER : -COLLOID PLUG, -PRESENT
	HEART : -MYOCARDIAL DEGENERATION/NECROSIS, -MINIMAL

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
PANCREAS

Appendix 10

Individual animal pathology data

Test article	Control	[			] .
Group	1	2	3	4	5 .
Level (ppm)	0	100	500	2500	5000 .

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DRAFT

STUDY NUMBER: 0535101

ANIMAL NUMBER: 000038 SEX: MALE DOSE GROUP: 4 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/26/03 STUDY DAY OF DEATH: 93 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 366.8 GRAMS

O B S E R V A T I O N S

NECROPSY

ANIMAL :
-NOT REMARKABLE

HISTOPATHOLOGY

MUSCLE :
-MYOPATHY, OTHER MUSCLE,-MINIMAL
-MYOPATHY, QUADRICEPS MUSCLE,-MINIMAL

LIVER :
-INFLAMMATORY CELL FOCI,-MINIMAL
-SINGLE CELL NECROSIS,-MINIMAL
-CENTRILOBULAR HYPERTROPHY/EOSINOPHILIA,-MINIMAL

HEART :
-MYOCARDIAL DEGENERATION/NECROSIS,-MINIMAL

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
PANCREAS

Appendix 10

Individual animal pathology data

Test article	Control	[			] .
Group	1	2	3	4	5 .
Level (ppm)	0	100	500	2500	5000 .

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DRAFT

STUDY NUMBER: 0535101

ANIMAL NUMBER: 000039 SEX: MALE DOSE GROUP: 4 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/26/03 STUDY DAY OF DEATH: 93 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 353.2 GRAMS

O B S E R V A T I O N S

NECROPSY	HISTOPATHOLOGY
SPLEEN : -ABNORMAL SHAPE	MUSCLE : -MYOPATHY, QUADRICEPS MUSCLE,-MINIMAL LIVER : -INFLAMMATORY CELL FOCI,-MINIMAL -SINGLE CELL NECROSIS,-MINIMAL SPLEEN : -PIGMENT,-SLIGHT -ACCESSORY SPLEEN,-PRESENT HEART : -MYOCARDIAL DEGENERATION/NECROSIS,-MINIMAL

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
PANCREAS

Appendix 10

Individual animal pathology data

Test article	Control		[		] .
Group	1	2	3	4	5 .
Level (ppm)	0	100	500	2500	5000 .

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DRAFT

STUDY NUMBER: 0535101

ANIMAL NUMBER: 000040 SEX: MALE DOSE GROUP: 4 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/29/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 412.4 GRAMS

O B S E R V A T I O N S

NECROPSY	HISTOPATHOLOGY
ANIMAL : -NOT REMARKABLE	MUSCLE : -MYOPATHY, QUADRICEPS MUSCLE,-MINIMAL LIVER : -INFLAMMATORY CELL FOCI,-MINIMAL -SINGLE CELL NECROSIS,-MINIMAL HEART : -MYOCARDIAL DEGENERATION/NECROSIS,-MINIMAL

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
PANCREAS

Appendix 10

Individual animal pathology data

Test article	Control				[	] .
Group	1	2	3	4	5	.
Level (ppm)	0	100	500	2500	5000	.

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DRAFT

STUDY NUMBER: 0535101

ANIMAL NUMBER: 000041 SEX: MALE DOSE GROUP: 4 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/29/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 358.0 GRAMS

O B S E R V A T I O N S

NECROPSY	HISTOPATHOLOGY
FOOT/LEG : -FUR LOSS, MODERATELY SEVERE; FOREPAW, BILATERAL	MUSCLE : -MYOPATHY, QUADRICEPS MUSCLE,-MINIMAL LIVER : -INFLAMMATORY CELL FOCI,-MINIMAL -SINGLE CELL NECROSIS,-MINIMAL -CENTRILOBULAR HYPERTROPHY/EOSINOPHILIA,-MINIMAL FOOT/LEG : -ADNEXAL ATROPHY,-MINIMAL

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
PANCREAS, HEART

Appendix 10

Individual animal pathology data

Test article	Control		[		] .
Group	1	2	3	4	5 .
Level (ppm)	0	100	500	2500	5000 .

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STUDY NUMBER: 0535101

ANIMAL NUMBER: 000042 SEX: MALE DOSE GROUP: 4 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/29/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 363.6 GRAMS

O B S E R V A T I O N S

NECROPSY	HISTOPATHOLOGY
LIVER : -MOTTLED, SLIGHT; ALL LOBES	MUSCLE : -MYOPATHY, OTHER MUSCLE,-MINIMAL LIVER : -AGONAL CONGESTION/HAEMORRHAGE,-PRESENT -INFLAMMATORY CELL FOCI,-MINIMAL -SINGLE CELL NECROSIS,-MINIMAL HEART : -MYOCARDIAL DEGENERATION/NECROSIS,-MINIMAL

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
PANCREAS

Appendix 10

Individual animal pathology data

Test article	Control	[			] .
Group	1	2	3	4	5 .
Level (ppm)	0	100	500	2500	5000 .

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STUDY NUMBER: 0535101

ANIMAL NUMBER: 000043 SEX: MALE DOSE GROUP: 4 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/29/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 322.8 GRAMS

OBSERVATIONS

NECROPSY	HISTOPATHOLOGY
LIVER : -MOTTLED, MINIMAL; ALL LOBES -PALE, MINIMAL; ALL LOBES	MUSCLE : -MYOPATHY, OTHER MUSCLE,-MINIMAL -MYOPATHY, QUADRICEPS MUSCLE,-MINIMAL
TESTIS : -RED, SLIGHT; LEFT	LIVER : -AGONAL CONGESTION/HAEMORRHAGE,-PRESENT -INFLAMMATORY CELL FOCI,-MINIMAL -SINGLE CELL NECROSIS,-MINIMAL
EPIDIDYMIS : -RED, SLIGHT; LEFT	TESTIS : -AGONAL CONGESTION/HAEMORRHAGE,-PRESENT
	EPIDIDYMIS : -AGONAL CONGESTION/HAEMORRHAGE,-PRESENT -INFLAMMATORY CELL FOCI,-MINIMAL
	HEART : -MYOCARDIAL DEGENERATION/NECROSIS,-MINIMAL

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
PANCREAS

Appendix 10

Individual animal pathology data

Test article	Control		[		] .
Group	1	2	3	4	5 .
Level (ppm)	0	100	500	2500	5000 .

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DRAFT

STUDY NUMBER: 0535101

ANIMAL NUMBER: 000044 SEX: MALE DOSE GROUP: 4 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/29/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 304.9 GRAMS

O B S E R V A T I O N S

NECROPSY	HISTOPATHOLOGY
TESTIS : -DARK, MINIMAL; LEFT	MUSCLE : -MYOPATHY, OTHER MUSCLE,-MINIMAL
URINARY BLADDER : -DISTENSION, SLIGHT	LIVER : -INFLAMMATORY CELL FOCI,-MINIMAL -CENTRILOBULAR HYPERTROPHY/EOSINOPHILIA,-MINIMAL
	TESTIS : -ACINAL CONGESTION/HAEMORRHAGE,-PRESENT
	URINARY BLADDER : -BARBITURATE LYSIS,-PRESENT
	HEART : -MYOCARDIAL DEGENERATION/NECROSIS,-MINIMAL

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
PANCREAS

Appendix 10

Individual animal pathology data

Test article	Control		[		] .
Group	1	2	3	4	5 .
Level (ppm)	0	100	500	2500	5000 .

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STUDY NUMBER: 0535101

ANIMAL NUMBER: 000045 SEX: MALE DOSE GROUP: 4 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/29/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 365.3 GRAMS

OBSERVATIONS

NECROPSY

ADRENAL :
-DARK, MODERATE; BILATERAL

HISTOPATHOLOGY

MUSCLE :
-MYOPATHY, OTHER MUSCLE,-MINIMAL

LIVER :
-INFLAMMATORY CELL FOCI,-MINIMAL
-SINGLE CELL NECROSIS,-MINIMAL
-CENTRILOBULAR HYPERTROPHY/EOSINOPHILIA,-MINIMAL

ADRENAL :
-AGONAL CONGESTION/HAEMORRHAGE,-PRESENT

HEART :
-MYOCARDIAL DEGENERATION/NECROSIS,-MINIMAL

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
PANCREAS

Appendix 10

Individual animal pathology data

Test article	Control	[			] .
Group	1	2	3	4	5 .
Level (ppm)	0	100	500	2500	5000 .

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DRAFT

STUDY NUMBER: 0535101

ANIMAL NUMBER: 000046 SEX: MALE DOSE GROUP: 5 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/26/03 STUDY DAY OF DEATH: 93 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 321.8 GRAMS

OBSERVATIONS

NECROPSY

TESTIS :
-SMALL, MODERATELY SEVERE; BILATERAL
-SOFT, MODERATE; BILATERAL

HISTOPATHOLOGY

MUSCLE :
-MYOPATHY, OTHER MUSCLE,-MINIMAL
-MYOPATHY, QUADRICEPS MUSCLE,-MINIMAL
>NOTE:>PREDOMINANTLY IN TISSUE PROVIDED IN SECTION OF STERNUM AND, TO A LESSER EXTENT, IN QUADRICEPS MUSCLE.

FEMUR + MARROW :
-MARROW ATROPHY,-SLIGHT
>NOTE:>CHARACTERISED BY A DECREASED CELLULARITY OF THE BONE MARROW.

LIVER :
-HEPATOCYTE VACUOLATION,-MINIMAL
-INFLAMMATORY CELL FOCI,-MINIMAL
-CENTRILOBULAR HYPERTROPHY/EOSINOPHILIA,-MINIMAL
>NOTE:>CENTRILOBULAR HYPERTROPHY/EOSINOPHILIA WAS CHARACTERISED BY ENLARGED HEPATOCYTES WITH GRANULAR PALE EOSINOPHILIC CYTOPLASM.

SPLEEN :
-PIGMENT,-MINIMAL

TESTIS :
-TUBULAR ATROPHY,-SEVERE

EPIDIDYMIS :
-OLIGOSPERMIA,-SEVERE

LUNG :
-INFLAMMATORY CELL FOCI,-MINIMAL

Appendix 10

Individual animal pathology data

Test article	Control	[			] .
Group	1	2	3	4	5 .
Level (ppm)	0	100	500	2500	5000 .

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DRAFT

STUDY NUMBER: 0535101

ANIMAL NUMBER: 000046 SEX: MALE DOSE GROUP: 5 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/26/03 STUDY DAY OF DEATH: 93 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 321.8 GRAMS

O B S E R V A T I O N S (CONTINUED)

NECROPSY	HISTOPATHOLOGY
	HEART : -MYOCARDIAL DEGENERATION/NECROSIS,-SLIGHT >NOTE:>CHARACTERISED BY SMALL FOCI OF DEGENERATING CARDIOMYOFIBRES WITH EOSINOPHILIC AND/OR VACUOLATED SARCOPLASM, LOSS OF CROSS STRIATION AND NECROSIS AND ASSOCIATED WITH AN INCREASE IN SATELLITE CELLS, INFLAMMATORY CELL INFILTRATION AND VERY MINOR EARLY FIBROSIS. PITUITARY : -VACUOLATION,-MINIMAL

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
EYE, OPTIC NERVE, SKIN + SUBCUTIS, STERNUM + MARROW, SCIATIC NERVE, PANCREAS, MESENTERIC LN, STOMACH, DUODENUM, JEJUNUM, ILEUM, CAECUM, COLON, RECTUM, ADRENAL, KIDNEY, SEMINAL VESICLE, URINARY BLADDER, PROSTATE, SALIVARY GLAND, MANDIBULAR LN, THYMUS, AORTA, TRACHEA, OESOPHAGUS, THYROID, PARATHYROID, BRAIN, SPINAL CORD

Appendix 10

Individual animal pathology data

Test article	Control	[			] .
Group	1	2	3	4	5 .
Level (ppm)	0	100	500	2500	5000 .

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DRAFT

STUDY NUMBER: 0535101

ANIMAL NUMBER: 000047 SEX: MALE DOSE GROUP: 5 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/26/03 STUDY DAY OF DEATH: 93 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 339.0 GRAMS

O B S E R V A T I O N S

NECROPSY

THYMUS :
-THICK, MODERATE; BILATERAL

HISTOPATHOLOGY

LIVER :
-INFLAMMATORY CELL FOCI,-MINIMAL
-SINGLE CELL NECROSIS,-MINIMAL
-CENTRILOBULAR HYPERTROPHY/EOSINOPHILIA,-MINIMAL

SPLEEN :
-PIGMENT,-MINIMAL

KIDNEY :
-HYDRONEPHROSIS,-SLIGHT
-FOCAL NEPHROPATHY,-MINIMAL
-INFLAMMATORY CELL FOCI,-MINIMAL

THYMUS :
-CYST,-PRESENT
>NOTE:>OTHERWISE UNREMARKABLE.

LUNG :
-FOAMY HISTIOCYTES,-MINIMAL
-OSSEOUS METAPLASIA,-SLIGHT
-INFLAMMATORY CELL FOCI,-MINIMAL
-PNEUMONITIS,-MINIMAL

HEART :
-MYOCARDIAL DEGENERATION/NECROSIS,-MINIMAL

PARATHYROID :
>SECTION EXAMINED; TISSUE NOT PRESENT

Appendix 10

Individual animal pathology data

Test article	Control		[		] .
Group	1	2	3	4	5 .
Level (ppm)	0	100	500	2500	5000 .

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DRAFT

STUDY NUMBER: 0535101

ANIMAL NUMBER: 000047 SEX: MALE DOSE GROUP: 5 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/26/03 STUDY DAY OF DEATH: 93 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 339.0 GRAMS

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
EYE, OPTIC NERVE, SKIN + SUBCUTIS, MUSCLE, FEMUR + MARROW, STERNUM + MARROW, SCIATIC NERVE, PANCREAS, MESENTERIC LN, STOMACH, DUODENUM, JEJUNUM, ILEUM, CAECUM, COLON, RECTUM, ADRENAL, TESTIS, EPIDIDYMIS, SEMINAL VESICLE, URINARY BLADDER, PROSTATE, SALIVARY GLAND, MANDIBULAR LN, AORTA, TRACHEA, OESOPHAGUS, THYROID, PITUITARY, BRAIN, SPINAL CORD

Appendix 10

Individual animal pathology data

Test article	Control		[		] .
Group	1	2	3	4	5 .
Level (ppm)	0	100	500	2500	5000 .

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DRAFT

STUDY NUMBER: 0535101

ANIMAL NUMBER: 000048 SEX: MALE DOSE GROUP: 5 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/26/03 STUDY DAY OF DEATH: 93 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 379.8 GRAMS

O B S E R V A T I O N S

NECROPSY

ANIMAL :
-NOT REMARKABLE

HISTOPATHOLOGY

MUSCLE :
-MYOPATHY, OTHER MUSCLE,-SLIGHT
-MYOPATHY, QUADRICEPS MUSCLE,-MINIMAL
>NOTE:>CHARACTERISED BY MYOFIBRE DEGENERATION WITH LOSS OF CROSS STRIATION AND SARCOPLASMIC EOSINOPHILIA AND VACUOLATION, MYOFIBRE REGENERATION CHARACTERISED BY BASOPHOLIC SARCOPLASM AND AN INCREASE IN SATELLITE CELLS AND MINOR INFLAMMATORY CELL INFILTRATION, IN TISSUE PROVIDED IN SECTION OF STERNUM AND THYROID AND, TO A LESSER EXTENT, IN QUADRICEPS MUSCLE.

LIVER :
-INFLAMMATORY CELL FOCI,-MINIMAL
-SINGLE CELL NECROSIS,-MINIMAL
-CENTRILOBULAR HYPERTROPHY/EOSINOPHILIA,-MINIMAL

SPLEEN :
-PIGMENT,-MINIMAL

KIDNEY :
-HYDRONEPHROSIS,-SLIGHT

LUNG :
-FOAMY HISTIOCYTES,-MINIMAL
-INFLAMMATORY CELL FOCI,-MINIMAL

HEART :
-MYOCARDIAL DEGENERATION/NECROSIS,-SLIGHT

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Appendix 10

Individual animal pathology data

Test article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

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DRAFT

STUDY NUMBER: 0535101

ANIMAL NUMBER: 000048 SEX: MALE DOSE GROUP: 5 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/26/03 STUDY DAY OF DEATH: 93 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 379.8 GRAMS

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
EYE, OPTIC NERVE, SKIN + SUBCUTIS, FEMUR + MARROW, STERNUM + MARROW, SCIATIC NERVE, PANCREAS, MESENTERIC LN, STOMACH, DUODENUM, JEJUNUM, ILEUM, CAECUM, COLON, RECTUM, ADRENAL, TESTIS, EPIDIDYMIS, SEMINAL VESICLE, URINARY BLADDER, PROSTATE, SALIVARY GLAND, MANDIBULAR LN, THYMUS, AORTA, TRACHEA, OESOPHAGUS, THYROID, PARATHYROID, PITUITARY, BRAIN, SPINAL CORD

Appendix 10

Individual animal pathology data

Test article	Control		{		} .
Group	1	2	3	4	5 .
Level (ppm)	0	100	500	2500	5000 .

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STUDY NUMBER: 0535101

ANIMAL NUMBER: 000049 SEX: MALE DOSE GROUP: 5 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/26/03 STUDY DAY OF DEATH: 93 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 289.3 GRAMS

O B S E R V A T I O N S

NECROPSY

LIVER :
-MOTTLED, SLIGHT; ALL LOBES

HISTOPATHOLOGY

MUSCLE :
-MYOPATHY, OTHER MUSCLE,-SLIGHT
-MYOPATHY, QUADRICEPS MUSCLE,-MINIMAL
>NOTE:>PREDOMINANTLY IN MUSCLE PRESENTED IN SECTION OF STERNUM AND THYROID AND, TO A LESSER EXTENT, IN LONGITUDINAL SECTION OF QUADRICEPS MUSCLE.

LIVER :
-AGONAL CONGESTION/HAEMORRHAGE,-PRESENT
-INFLAMMATORY CELL FOCI,-MINIMAL
-CENTRILOBULAR HYPERTROPHY/EOSINOPHILIA,-MINIMAL

SPLEEN :
-PIGMENT,-SLIGHT
-HAEMOPOIESIS,-MINIMAL

COLON :
-NEMATODE,-PRESENT

TESTIS :
-TUBULAR ATROPHY,-MINIMAL

THYMUS :
-EPITHELIAL HYPERPLASIA,-MINIMAL

LUNG :
-FOAMY HISTIOCYTES,-MINIMAL

HEART :
-MYOCARDIAL DEGENERATION/NECROSIS,-SLIGHT

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Appendix 10

Individual animal pathology data

Test article	Control	[			] .
Group	1	2	3	4	5 .
Level (ppm)	0	100	500	2500	5000 .

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DRAFT

STUDY NUMBER: 0535101

ANIMAL NUMBER: 000049 SEX: MALE DOSE GROUP: 5 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/26/03 STUDY DAY OF DEATH: 93 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 289.3 GRAMS

O B S E R V A T I O N S (CONTINUED)

NECROPSY	HISTOPATHOLOGY
	PARATHYROID : >UNREMARKABLE >NOTE:>ONE SAMPLE.

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
EYE, OPTIC NERVE, SKIN + SUBCUTIS, FEMUR + MARROW, STERNUM + MARROW, SCIATIC NERVE, PANCREAS, MESENTERIC LN, STOMACH, DUODENUM, JEJUNUM, ILEUM, CAECUM, RECTUM, ADRENAL, KIDNEY, EPIDIDYMIS, SEMINAL VESICLE, URINARY BLADDER, PROSTATE, SALIVARY GLAND, MANDIBULAR LN, AORTA, TRACHEA, OESOPHAGUS, THYROID, PITUITARY, BRAIN, SPINAL CORD

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Individual animal pathology data

Test article	Control	[			] .
Group	1	2	3	4	5 .
Level (ppm)	0	100	500	2500	5000 .

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STUDY NUMBER: 0535101

ANIMAL NUMBER: 000050 SEX: MALE DOSE GROUP: 5 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/29/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 298.4 GRAMS

OBSERVATIONS

NECROPSY

CAECUM :
-INJECTION LESION

HISTOPATHOLOGY

MUSCLE :
-MYOPATHY, OTHER MUSCLE,-MINIMAL
-MYOPATHY, QUADRICEPS MUSCLE,-MINIMAL
>NOTE:>IN TISSUE PROVIDED IN SECTION OF STERNUM AND THYROID AND, TO A LESSER EXTENT, IN LONGITUDINAL SECTION OF QUADRICEPS MUSCLE.

LIVER :
-INFLAMMATORY CELL FOCI,-MINIMAL
-SINGLE CELL NECROSIS,-MINIMAL

SPLEEN :
-PIGMENT,-MINIMAL

CAECUM :
-BARBITURATE LYSIS,-PRESENT

KIDNEY :
-HYALINE DROPLETS,-MINIMAL
-HYDRONEPHROSIS,-SLIGHT
-FOCAL NEPHROPATHY,-MINIMAL
-CORTICAL MINERALISATION,-MINIMAL
-INFLAMMATORY CELL FOCI,-MINIMAL

HEART :
-MYOCARDIAL DEGENERATION/NECROSIS,-SLIGHT

PARATHYROID :
>UNREMARKABLE
>NOTE:>ONE SAMPLE.

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Appendix 10

Individual animal pathology data

Test article	Control				[ ] .
Group	1	2	3	4	5 .
Level (ppm)	0	100	500	2500	5000 .

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DRAFT

STUDY NUMBER: 0535101

ANIMAL NUMBER: 000050 SEX: MALE DOSE GROUP: 5 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/29/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 298.4 GRAMS

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
EYE, OPTIC NERVE, SKIN + SUBCUTIS, FEMUR + MARROW, STERNUM + MARROW, SCIATIC NERVE, PANCREAS, MESENTERIC LN, STOMACH, DUODENUM, JEJUNUM, ILEUM, COLON, RECTUM, ADRENAL, TESTIS, EPIDIDYMIS, SEMINAL VESICLE, URINARY BLADDER, PROSTATE, SALIVARY GLAND, MANDIBULAR LN, THYMUS, LUNG, AORTA, TRACHEA, OESOPHAGUS, THYROID, PITUITARY, BRAIN, SPINAL CORD

Appendix 10

Individual animal pathology data

Test article	Control		[		] .
Group	1	2	3	4	5 .
Level (ppm)	0	100	500	2500	5000 .

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STUDY NUMBER: 0535101

ANIMAL NUMBER: 000051 SEX: MALE DOSE GROUP: 5 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/29/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 338.0 GRAMS

OBSERVATIONS

NECROPSY

LIVER :
-LARGE, SLIGHT; ALL LOBES
-MOTTLED, SLIGHT; ALL LOBES

LUNG :
-DARK FOCUS; FEW, LEFT LOBE AND RIGHT POSTERIOR LOBE

HISTOPATHOLOGY

MUSCLE :
-MYOPATHY, OTHER MUSCLE,-SLIGHT
-MYOPATHY, QUADRICEPS MUSCLE,-MINIMAL
>NOTE:>PREDOMINANTLY IN TISSUE PROVIDED IN SECTION OF STERNUM AND THYROID AND, TO A LESSER EXTENT, IN QUADRICEPS MUSCLE.

LIVER :
-AGONAL CONGESTION/HAEMORRHAGE,-PRESENT
-INFLAMMATORY CELL FOCI,-MINIMAL
-CENTRILOBULAR HYPERTROPHY/EOSINOPHILIA,-MINIMAL

SPLEEN :
-PIGMENT,-MINIMAL

KIDNEY :
-HYDRONEPHROSIS,-MINIMAL
-FOCAL NEPHROPATHY,-MINIMAL
-PAPILLARY MINERALISATION,-MINIMAL
-PELVIC MINERALISATION,-MINIMAL

LUNG :
-AGONAL CONGESTION/HAEMORRHAGE,-PRESENT
-INFLAMMATORY CELL FOCI,-MINIMAL

HEART :
-MYOCARDIAL DEGENERATION/NECROSIS,-SLIGHT

THYROID :
-CYST,-PRESENT

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Individual animal pathology data

Test article	Control		[		] .
Group	1	2	3	4	5 .
Level (ppm)	0	100	500	2500	5000 .

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STUDY NUMBER: 0535101

ANIMAL NUMBER: 000051 SEX: MALE DOSE GROUP: 5 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/29/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 338.0 GRAMS

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
EYE, OPTIC NERVE, SKIN + SUBCUTIS, FEMUR + MARROW, STERNUM + MARROW, SCIATIC NERVE, PANCREAS, MESENTERIC LN, STOMACH, DUODENUM, JEJUNUM, ILEUM, CAECUM, COLON, RECTUM, ADRENAL, TESTIS, EPIDIDYMIS, SEMINAL VESICLE, URINARY BLADDER, PROSTATE, SALIVARY GLAND, MANDIBULAR LN, THYMUS, AORTA, TRACHEA, OESOPHAGUS, PARATHYROID, PITUITARY, BRAIN, SPINAL CORD

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Individual animal pathology data

Test article	Control				[ ] .
Group	1	2	3	4	5 .
Level (ppm)	0	100	500	2500	5000 .

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STUDY NUMBER: 0535101

ANIMAL NUMBER: 000052 SEX: MALE DOSE GROUP: 5 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/29/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 391.0 GRAMS

O B S E R V A T I O N S

NECROPSY

STOMACH :
-RAISED AREA; PALE, 3MM DIAMETER, FUNDUS REGION, SEROSAL SURFACE

HISTOPATHOLOGY

MUSCLE :
-MYOPATHY, OTHER MUSCLE,-MINIMAL
-MYOPATHY, QUADRICEPS MUSCLE,-MINIMAL

FEMUR + MARROW :
-MARROW ATROPHY,-MINIMAL

LIVER :
-INFLAMMATORY CELL FOCI,-MINIMAL
-CENTRILOBULAR HYPERTROPHY/EOSINOPHILLIA,-SLIGHT

SPLEEN :
-PIGMENT,-MINIMAL

STOMACH :
-SQUAMOUS CYST,-PRESENT
>NOTE:>EXTRA SAMPLE: ONE.

RECTUM :
-NEMATODE,-PRESENT

KIDNEY :
-HYDRONEPHROSIS,-MINIMAL

PROSTATE :
-INFLAMMATORY CELL FOCI,-MINIMAL

HEART :
-MYOCARDIAL DEGENERATION/NECROSIS,-SLIGHT

Appendix 10

Individual animal pathology data

Test article	Control		[		] .
Group	1	2	3	4	5 .
Level (ppm)	0	100	500	2500	5000 .

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STUDY NUMBER: 0535101

ANIMAL NUMBER: 000052 SEX: MALE DOSE GROUP: 5 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/29/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 391.0 GRAMS

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
EYE, OPTIC NERVE, SKIN + SUBCUTIS, STERNUM + MARROW, SCIATIC NERVE, PANCREAS, MESENTERIC LN, DUODENUM, JEJUNUM, ILEUM, CAECUM, COLON, ADRENAL, TESTIS, EPIDIDYMIS, SEMINAL VESICLE, URINARY BLADDER, SALIVARY GLAND, MANDIBULAR LN, THYMUS, LUNG, AORTA, TRACHEA, OESOPHAGUS, THYROID, PARATHYROID, PITUITARY, BRAIN, SPINAL CORD

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Individual animal pathology data

Test article	Control	[			] .
Group	1	2	3	4	5 .
Level (ppm)	0	100	500	2500	5000 .

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STUDY NUMBER: 0535101

ANIMAL NUMBER: 000053 SEX: MALE DOSE GROUP: 5 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/29/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 331.2 GRAMS

OBSERVATIONS

NECROPSY

LIVER :
-MOTTLED, SLIGHT; ALL LOBES

STOMACH :
-YELLOW; CARDIA REGION, MUCOSAL SURFACE

HISTOPATHOLOGY

MUSCLE :
-MYOPATHY, OTHER MUSCLE,-MINIMAL
>NOTE:>PREDOMINANTLY IN TISSUE PROVIDED IN SECTION OF THYROID.

LIVER :
-AGONAL CONGESTION/HAEMORRHAGE,-PRESENT
-INFLAMMATORY CELL FOCI,-MINIMAL
-SINGLE CELL NECROSIS,-MINIMAL
-CENTRILOBULAR HYPERTROPHY/EOSINOPHILIA,-MINIMAL

SPLEEN :
-PIGMENT,-MINIMAL

STOMACH :
-OEDEMA,-SLIGHT
>NOTE:>OTHERWISE UNREMARKABLE.

KIDNEY :
-HYALINE DROPLETS,-MINIMAL

EPIDIDYMIS :
-INFLAMMATORY CELL FOCI,-MINIMAL

THYMUS :
-CYST,-PRESENT

LUNG :
-FOAMY HISTIOCYTES,-MINIMAL

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Individual animal pathology data

Test article	Control	[			] .
Group	1	2	3	4	5 .
Level (ppm)	0	100	500	2500	5000 .

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STUDY NUMBER: 0535101

ANIMAL NUMBER: 000053 SEX: MALE DOSE GROUP: 5 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/29/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 331.2 GRAMS

O B S E R V A T I O N S (CONTINUED)

NECROPSY	HISTOPATHOLOGY
	HEART : -MYOCARDIAL DEGENERATION/NECROSIS,-SLIGHT
	PARATHYROID : >UNREMARKABLE >NOTE:>ONE SAMPLE.

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
EYE, OPTIC NERVE, SKIN + SUBCUTIS, FEMUR + MARROW, STERNUM + MARROW, SCIATIC NERVE, PANCREAS, MESENTERIC LN, DUODENUM, JEJUNUM, ILEUM, CAECUM, COLON, RECTUM, ADRENAL, TESTIS, SEMINAL VESICLE, URINARY BLADDER, PROSTATE, SALIVARY GLAND, MANDIBULAR LN, AORTA, TRACHEA, OESOPHAGUS, THYROID, PITUITARY, BRAIN, SPINAL CORD

Appendix 10

Individual animal pathology data

Test article	Control	[			] .
Group	1	2	3	4	5 .
Level (ppm)	0	100	500	2500	5000 .

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STUDY NUMBER: 0535101

ANIMAL NUMBER: 000054 SEX: MALE DOSE GROUP: 5 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/29/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 359.9 GRAMS

OBSERVATIONS

NECROPSY	HISTOPATHOLOGY
LIVER : -LARGE, SLIGHT; ALL LOBES	MUSCLE : -MYOPATHY, OTHER MUSCLE,-MINIMAL >NOTE:>PREDOMINANTLY IN TISSUE PROVIDED IN SECTION OF THYROID. LIVER : -PIGMENT,-SLIGHT -INFLAMMATORY CELL FOCI,-MINIMAL -CENTRILOBULAR HYPERTROPHY/EOSINOPHILLIA,-SLIGHT SPLEEN : -PIGMENT,-MINIMAL KIDNEY : -HYALINE DROPLETS,-MINIMAL THYMUS : -CYST,-PRESENT HEART : -MYOCARDIAL DEGENERATION/NECROSIS,-SLIGHT PARATHYROID : >UNREMARKABLE >NOTE:>ONE SAMPLE.

Appendix 10

Individual animal pathology data

Test article	Control	[			] .
Group	1	2	3	4	5 .
Level (ppm)	0	100	500	2500	5000 .

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STUDY NUMBER: 0535101

ANIMAL NUMBER: 000054 SEX: MALE DOSE GROUP: 5 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/29/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 359.9 GRAMS

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
EYE, OPTIC NERVE, SKIN + SUBCUTIS, FEMUR + MARROW, STERNUM + MARROW, SCIATIC NERVE, PANCREAS, MESENTERIC LN, STOMACH, DUODENUM, JEJUNUM, ILEUM, CAECUM, COLON, RECTUM, ADRENAL, TESTIS, EPIDIDYMIS, SEMINAL VESICLE, URINARY BLADDER, PROSTATE, SALIVARY GLAND, MANDIBULAR LN, LUNG, AORTA, TRACHEA, OESOPHAGUS, THYROID, PITUITARY, BRAIN, SPINAL CORD

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Appendix 10

Individual animal pathology data

Test article	Control	[			] .
Group	1	2	3	4	5 .
Level (ppm)	0	100	500	2500	5000 .

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STUDY NUMBER: 0535101

ANIMAL NUMBER: 000055 SEX: MALE DOSE GROUP: 5 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/29/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 328.4 GRAMS

OBSERVATIONS

NECROPSY

LIVER :
-LARGE, SLIGHT; ALL LOBES
-MOTTLED, SLIGHT; ALL LOBES

TAIL :
-KINKED; NEAR END

HISTOPATHOLOGY

MUSCLE :
-MYOPATHY, OTHER MUSCLE,-MINIMAL
>NOTE:>IN TISSUE PROVIDED IN SECTION OF STERNUM.

LIVER :
-AGONAL CONGESTION/HAEMORRHAGE,-PRESENT
-INFLAMMATORY CELL FOCI,-MINIMAL
-CENTRILOBULAR HYPERTROPHY/EOSINOPHILIA,-MINIMAL
>NOTE:>OTHERWISE UNREMARKABLE.

SPLEEN :
-PIGMENT,-MINIMAL

KIDNEY :
-HYDRONEPHROSIS,-SLIGHT
-PELVIC MINERALISATION,-MINIMAL

LUNG :
-INFLAMMATORY CELL FOCI,-MINIMAL

HEART :
-MYOCARDIAL DEGENERATION/NECROSIS,-SLIGHT

PARATHYROID :
>UNREMARKABLE
>NOTE:>ONE SAMPLE.

TAIL :
-DEFORMITY,-PRESENT

Appendix 10

Individual animal pathology data

Test article	Control	[			] .
Group	1	2	3	4	5 .
Level (ppm)	0	100	500	2500	5000 .

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STUDY NUMBER: 0535101

ANIMAL NUMBER: 000055 SEX: MALE DOSE GROUP: 5 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/29/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 328.4 GRAMS

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
EYE, OPTIC NERVE, SKIN + SUBCUTIS, FEMUR + MARROW, STERNUM + MARROW, SCIATIC NERVE, PANCREAS, MESENTERIC LN, STOMACH, DUODENUM, JEJUNUM, ILEUM, CAECUM, COLON, RECTUM, ADRENAL, TESTIS, EPIDIDYMIS, SEMINAL VESICLE, URINARY BLADDER, PROSTATE, SALIVARY GLAND, MANDIBULAR LN, THYMUS, AORTA, TRACHEA, OESOPHAGUS, THYROID, PITUITARY, BRAIN, SPINAL CORD

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Individual animal pathology data

Test article	Control				[ ] .
Group	1	2	3	4	5 .
Level (ppm)	0	100	500	2500	5000 .

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STUDY NUMBER: 0535101

ANIMAL NUMBER: 000056 SEX: MALE DOSE GROUP: 5 SACRIFICE STATUS: SCHEDULED, FIRST POST-RECOV SAC
DATE OF DEATH: 10/24/03 STUDY DAY OF DEATH: 121 STUDY WEEK OF DEATH: 18 TERMINAL BODY WEIGHT: 379.6 GRAMS

OBSERVATIONS

NECROPSY	HISTOPATHOLOGY
LIVER : -MOTTLED, SLIGHT; ALL LOBES	MUSCLE : -MYOPATHY, QUADRICEPS MUSCLE,-MINIMAL
URINARY BLADDER : -DISTENSION, MODERATE	LIVER : -AGONAL CONGESTION/HAEMORRHAGE,-PRESENT -INFLAMMATORY CELL FOCI,-MINIMAL -SINGLE CELL NECROSIS,-SLIGHT
	URINARY BLADDER : -BARBITURATE LYSIS,-PRESENT

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
PANCREAS, HEART

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Appendix 10

Individual animal pathology data

Test article	Control	[			] .
Group	1	2	3	4	5 .
Level (ppm)	0	100	500	2500	5000 .

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STUDY NUMBER: 0535101

ANIMAL NUMBER: 000057 SEX: MALE DOSE GROUP: 5 SACRIFICE STATUS: SCHEDULED, FIRST POST-RECOV SAC
DATE OF DEATH: 10/24/03 STUDY DAY OF DEATH: 121 STUDY WEEK OF DEATH: 18 TERMINAL BODY WEIGHT: 399.0 GRAMS

O B S E R V A T I O N S

NECROPSY	HISTOPATHOLOGY
LIVER : -MOTTLED, SLIGHT; ALL LOBES	LIVER : -AGONAL CONGESTION/HAEMORRHAGE,-PRESENT -INFLAMMATORY CELL FOCI,-MINIMAL -SINGLE CELL NECROSIS,-MINIMAL

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
MUSCLE, PANCREAS, HEART

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Individual animal pathology data

Test article	Control	[			} .
Group	1	2	3	4	5 .
Level (ppm)	0	100	500	2500	5000 .

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STUDY NUMBER: 0535101

ANIMAL NUMBER: 000058 SEX: MALE DOSE GROUP: 5 SACRIFICE STATUS: SCHEDULED, FIRST POST-RECOV SAC
DATE OF DEATH: 10/24/03 STUDY DAY OF DEATH: 121 STUDY WEEK OF DEATH: 18 TERMINAL BODY WEIGHT: 367.8 GRAMS

O B S E R V A T I O N S

NECROPSY	HISTOPATHOLOGY
ANIMAL : -NOT REMARKABLE	LIVER : -INFLAMMATORY CELL FOCI,-MINIMAL

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
MUSCLE, PANCREAS, HEART

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Individual animal pathology data

Test article	Control		[		] .
Group	1	2	3	4	5 .
Level (ppm)	0	100	500	2500	5000 .

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STUDY NUMBER: 0535101

ANIMAL NUMBER: 000059 SEX: MALE DOSE GROUP: 5 SACRIFICE STATUS: SCHEDULED, FIRST POST-RECOV SAC
DATE OF DEATH: 10/24/03 STUDY DAY OF DEATH: 121 STUDY WEEK OF DEATH: 18 TERMINAL BODY WEIGHT: 368.3 GRAMS

O B S E R V A T I O N S

NECROPSY	HISTOPATHOLOGY
LIVER : -MOTTLED, SLIGHT; ALL LOBES	LIVER : -AGONAL CONGESTION/HAEMORRHAGE,-PRESENT -INFLAMMATORY CELL FOCI,-MINIMAL -SINGLE CELL NECROSIS,-MINIMAL

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
MUSCLE, PANCREAS, HEART

Appendix 10

Individual animal pathology data

Test article	Control				[ ] .
Group	1	2	3	4	5 .
Level (ppm)	0	100	500	2500	5000 .

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DRAFT

STUDY NUMBER: 0535101

ANIMAL NUMBER: 000060 SEX: MALE DOSE GROUP: 5 SACRIFICE STATUS: SCHEDULED, FIRST POST-RECOV SAC
DATE OF DEATH: 10/24/03 STUDY DAY OF DEATH: 121 STUDY WEEK OF DEATH: 18 TERMINAL BODY WEIGHT: 368.7 GRAMS

O B S E R V A T I O N S

NECROPSY	HISTOPATHOLOGY
URINARY BLADDER : -DISTENSION, SLIGHT	MUSCLE : -MYOPATHY, QUADRICEPS MUSCLE,-MINIMAL LIVER : -INFLAMMATORY CELL FOCI,-MINIMAL -SINGLE CELL NECROSIS,-MINIMAL URINARY BLADDER : -BARBITURATE LYSIS,-PRESENT HEART : -MYOCARDIAL DEGENERATION/NECROSIS,-MINIMAL

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
PANCREAS

Appendix 10

Individual animal pathology data

Test article	Control	[			] .
Group	1	2	3	4	5 .
Level (ppm)	0	100	500	2500	5000 .

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STUDY NUMBER: 0535101

ANIMAL NUMBER: 000061 SEX: FEMALE DOSE GROUP: 1 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/29/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 193.1 GRAMS

O B S E R V A T I O N S

NECROPSY

LUNG :
-PALE AREA; 2MM DIAMETER, LEFT LOBE

HISTOPATHOLOGY

FEMUR + MARROW :
-MARROW ATROPHY,-SLIGHT

LIVER :
-INFLAMMATORY CELL FOCI,-MINIMAL

SPLEEN :
-PIGMENT,-MINIMAL

KIDNEY :
-PAPILLARY MINERALISATION,-MINIMAL
-CORTICOMEDULLARY MINERALISATION,-MINIMAL

UTERUS :
-DIOESTRUS,-PRESENT

THYMUS :
-CYST,-PRESENT
-ECTOPIC PARATHYROID,-PRESENT

LUNG :
-FOAMY HISTIOCYTES,-MINIMAL
>NOTE:>EXTRA SAMPLE: ONE.

PARATHYROID :
>UNREMARKABLE
>NOTE:>ONE SAMPLE.

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Appendix 10

Individual animal pathology data

Test article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

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DRAFT

STUDY NUMBER: 0535101

ANIMAL NUMBER: 000061 SEX: FEMALE DOSE GROUP: 1 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/29/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 193.1 GRAMS

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
EYE, OPTIC NERVE, MAMMARY GLAND, MUSCLE, STERNUM + MARROW, SCIATIC NERVE, PANCREAS, MESENTERIC LN, STOMACH, DUODENUM, JEJUNUM, ILEUM, CAECUM, COLON, RECTUM, ADRENAL, OVARY, URINARY BLADDER, VAGINA, SALIVARY GLAND, MANDIBULAR LN, HEART, AORTA, TRACHEA, OESOPHAGUS, THYROID, PITUITARY, BRAIN, SPINAL CORD

Appendix 10

Individual animal pathology data

Test article	Control	[			] .
Group	1	2	3	4	5 .
Level (ppm)	0	100	500	2500	5000 .

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DRAFT

STUDY NUMBER: 0535101

ANIMAL NUMBER: 000062 SEX: FEMALE DOSE GROUP: 1 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/29/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 185.1 GRAMS

O B S E R V A T I O N S

NECROPSY

THYMUS :
-RED AREA; FEW, 2-3MM DIAMETER, BILATERAL

HISTOPATHOLOGY

MUSCLE :
-MYOPATHY, OTHER MUSCLE,-MINIMAL
-MYOPATHY, QUADRICEPS MUSCLE,-MINIMAL
>NOTE:>IN PANNICULUS MUSCLE PROVIDED IN SECTION OF SKIN SUBCUTIS AND, TO A LESSER EXTENT IN INTERCOSTAL MUSCLE PROVIDED IN SECTION OF STERNUM.

LIVER :
-INFLAMMATORY CELL FOCI,-MINIMAL
-SINGLE CELL NECROSIS,-MINIMAL

SPLEEN :
-PIGMENT,-MINIMAL

PANCREAS :
-ACINAR CELL HYPERTROPHY,-MINIMAL

UTERUS :
-PRO-OESTRUS,-PRESENT

THYMUS :
-CYST,-PRESENT
-AGONAL CONGESTION/HAEMORRHAGE,-PRESENT

LUNG :
-INFLAMMATORY CELL FOCI,-MINIMAL

PARATHYROID :
>UNREMARKABLE
>NOTE:>ONE SAMPLE.

Appendix 10

Individual animal pathology data

Test article	Control		[		] .
Group	1	2	3	4	5 .
Level (ppm)	0	100	500	2500	5000 .

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DRAFT

STUDY NUMBER: 0535101

ANIMAL NUMBER: 000062 SEX: FEMALE DOSE GROUP: 1 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/29/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 185.1 GRAMS

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
EYE, OPTIC NERVE, SKIN + SUBCUTIS, MAMMARY GLAND, FEMUR + MARROW, STERNUM + MARROW, SCIATIC NERVE, MESENTERIC LN, STOMACH, DUODENUM, JEJUNUM, ILEUM, CAECUM, COLON, RECTUM, ADRENAL, KIDNEY, OVARY, URINARY BLADDER, VAGINA, SALIVARY GLAND, MANDIBULAR LN, HEART, AORTA, TRACHEA, OESOPHAGUS, THYROID, PITUITARY, BRAIN, SPINAL CORD

Appendix 10

Individual animal pathology data

Test article	Control					
Group	1	2	3	4	5	.
Level (ppm)	0	100	500	2500	5000	.

ANIMAL NUMBER: 000063 SEX: FEMALE DOSE GROUP: 1 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/30/03 STUDY DAY OF DEATH: 97 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 208.1 GRAMS

OBSERVATIONS

NECROPSY	HISTOPATHOLOGY
ANIMAL : -NOT REMARKABLE	LIVER : -INFLAMMATORY CELL FOCI,-MINIMAL -SINGLE CELL NECROSIS,-MINIMAL SPLEEN : -PIGMENT,-MINIMAL KIDNEY : -CASTS,-SLIGHT -PAPILLARY MINERALISATION,-SLIGHT -CORTICOMEDULLARY MINERALISATION,-MINIMAL UTERUS : -PRO-OESTRUS,-PRESENT THYMUS : -CYST,-PRESENT PARATHYROID : >UNREMARKABLE >NOTE:>ONE SAMPLE.

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Appendix 10

Individual animal pathology data

Test article	Control					
Group	1	2	3	4	5	.
Level (ppm)	0	100	500	2500	5000	.

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STUDY NUMBER: 0535101

ANIMAL NUMBER: 000063 SEX: FEMALE DOSE GROUP: 1 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/30/03 STUDY DAY OF DEATH: 97 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 208.1 GRAMS

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
EYE, OPTIC NERVE, SKIN + SUBCUTIS, MAMMARY GLAND, MUSCLE, FEMUR + MARROW, STERNUM + MARROW, SCIATIC NERVE, PANCREAS, MESENTERIC LN, STOMACH, DUODENUM, JEJUNUM, ILEUM, CAECUM, COLON, RECTUM, ADRENAL, OVARY, URINARY BLADDER, VAGINA, SALIVARY GLAND, MANDIBULAR LN, LUNG, HEART, AORTA, TRACHEA, OESOPHAGUS, THYROID, PITUITARY, BRAIN, SPINAL CORD

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Appendix 10

Individual animal pathology data

Test article	Control	[			] .
Group	1	2	3	4	5 .
Level (ppm)	0	100	500	2500	5000 .

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DRAFT

STUDY NUMBER: 0535101

ANIMAL NUMBER: 000064 SEX: FEMALE DOSE GROUP: 1 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/30/03 STUDY DAY OF DEATH: 97 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 208.6 GRAMS

O B S E R V A T I O N S

NECROPSY	HISTOPATHOLOGY
ANIMAL : -NOT REMARKABLE	MUSCLE : -MYOPATHY, QUADRICEPS MUSCLE,-MINIMAL LIVER : -INFLAMMATORY CELL FOCI,-MINIMAL -SINGLE CELL NECROSIS,-MINIMAL SPLEEN : -PIGMENT,-MINIMAL STOMACH : -LIMITING RIDGE GASTRITIS,-MINIMAL KIDNEY : -PELVIC MINERALISATION,-MINIMAL UTERUS : -METOESTRUS,-PRESENT MANDIBULAR LN : -LYMPHOID HYPERPLASIA,-MINIMAL LUNG : -FOAMY HISTIOCYTES,-MINIMAL -INFLAMMATORY CELL FOCI,-MINIMAL

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Individual animal pathology data

Test article	Control		[		] .
Group	1	2	3	4	5 .
Level (ppm)	0	100	500	2500	5000 .

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DRAFT

STUDY NUMBER: 0535101

ANIMAL NUMBER: 000064 SEX: FEMALE DOSE GROUP: 1 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/30/03 STUDY DAY OF DEATH: 97 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 208.6 GRAMS

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
EYE, OPTIC NERVE, SKIN + SUBCUTIS, MAMMARY GLAND, FEMUR + MARROW, STERNUM + MARROW, SCIATIC NERVE, PANCREAS, MESENTERIC LN, DUODENUM, JEJUNUM, ILEUM, CAECUM, COLON, RECTUM, ADRENAL, OVARY, URINARY BLADDER, VAGINA, SALIVARY GLAND, THYMUS, HEART, AORTA, TRACHEA, OESOPHAGUS, THYROID, PARATHYROID, PITUITARY, BRAIN, SPINAL CORD

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Appendix 10

Individual animal pathology data

Test article	Control		[		] .
Group	1	2	3	4	5 .
Level (ppm)	0	100	500	2500	5000 .

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STUDY NUMBER: 0535101

ANIMAL NUMBER: 000065 SEX: FEMALE DOSE GROUP: 1 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/30/03 STUDY DAY OF DEATH: 97 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 209.3 GRAMS

OBSERVATIONS

NECROPSY

URINARY BLADDER :
-DISTENSION, SLIGHT

HISTOPATHOLOGY

LIVER :
-INFLAMMATORY CELL FOCI,-MINIMAL

SPLEEN :
-PIGMENT,-MINIMAL

KIDNEY :
-FOCAL NEPHROPATHY,-MINIMAL
-PAPILLARY MINERALISATION,-MINIMAL
-INFLAMMATORY CELL FOCI,-MINIMAL

URINARY BLADDER :
-BARBITURATE LYSIS,-PRESENT
-INFLAMMATORY CELL FOCI,-MINIMAL

UTERUS :
-DIOESTRUS,-PRESENT

MANDIBULAR LN :
-LYMPHOID HYPERPLASIA,-SLIGHT

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Individual animal pathology data

Test article	Control		[		] .
Group	1	2	3	4	5 .
Level (ppm)	0	100	500	2500	5000 .

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STUDY NUMBER: 0535101

ANIMAL NUMBER: 000065 SEX: FEMALE DOSE GROUP: 1 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/30/03 STUDY DAY OF DEATH: 97 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 209.3 GRAMS

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
EYE, OPTIC NERVE, SKIN + SUBCUTIS, MAMMARY GLAND, MUSCLE, FEMUR + MARROW, STERNUM + MARROW, SCIATIC NERVE, PANCREAS, MESENTERIC LN, STOMACH, DUODENUM, JEJUNUM, ILEUM, CAECUM, COLON, RECTUM, ADRENAL, OVARY, VAGINA, SALIVARY GLAND, THYMUS, LUNG, HEART, AORTA, TRACHEA, OESOPHAGUS, THYROID, PARATHYROID, PITUITARY, BRAIN, SPINAL CORD

Appendix 10

Individual animal pathology data

Test article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

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DRAFT

STUDY NUMBER: 0535101

ANIMAL NUMBER: 000066 SEX: FEMALE DOSE GROUP: 1 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/30/03 STUDY DAY OF DEATH: 97 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 225.9 GRAMS

O B S E R V A T I O N S

NECROPSY

CAECUM :
-INJECTION LESION

HISTOPATHOLOGY

MUSCLE :
-MYOPATHY, QUADRICEPS MUSCLE,-MINIMAL

LIVER :
-INFLAMMATORY CELL FOCI,-MINIMAL

SPLEEN :
-PIGMENT,-SLIGHT

ILEUM :
-BARBITURATE LYSIS,-PRESENT

CAECUM :
-BARBITURATE LYSIS,-PRESENT

KIDNEY :
-CORTICOMEDULLARY MINERALISATION,-MINIMAL

UTERUS :
-PRO-OESTRUS,-PRESENT

PARATHYROID :
>UNREMARKABLE
>NOTE:>ONE SAMPLE.

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Appendix 10

Individual animal pathology data

Test article	Control	[			] .
Group	1	2	3	4	5 .
Level (ppm)	0	100	500	2500	5000 .

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DRAFT

STUDY NUMBER: 0535101

ANIMAL NUMBER: 000066 SEX: FEMALE DOSE GROUP: 1 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/30/03 STUDY DAY OF DEATH: 97 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 225.9 GRAMS

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
EYE, OPTIC NERVE, SKIN + SUBCUTIS, MAMMARY GLAND, FEMUR + MARROW, STERNUM + MARROW, SCIATIC NERVE, PANCREAS, MESENTERIC LN, STOMACH, DUODENUM, JEJUNUM, COLON, RECTUM, ADRENAL, OVARY, URINARY BLADDER, VAGINA, SALIVARY GLAND, MANDIBULAR LN, THYMUS, LUNG, HEART, AORTA, TRACHEA, OESOPHAGUS, THYROID, PITUITARY, BRAIN, SPINAL CORD

Appendix 10

Individual animal pathology data

Test article	Control		[		] .
Group	1	2	3	4	5 .
Level (ppm)	0	100	500	2500	5000 .

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STUDY NUMBER: 0535101

ANIMAL NUMBER: 000067 SEX: FEMALE DOSE GROUP: 1 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/30/03 STUDY DAY OF DEATH: 97 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 212.4 GRAMS

O B S E R V A T I O N S

NECROPSY

ANIMAL :
-NOT REMARKABLE

HISTOPATHOLOGY

LIVER :
-INFLAMMATORY CELL FOCI,-MINIMAL
-SINGLE CELL NECROSIS,-MINIMAL

SPLEEN :
-PIGMENT,-MINIMAL

STOMACH :
-CYST,-PRESENT

RECTUM :
-NEMATODE,-PRESENT

KIDNEY :
-HYDRONEPHROSIS,-MINIMAL
-CORTICOMEDULLARY MINERALISATION,-MINIMAL

URINARY BLADDER :
-BARBITURATE LYSIS,-PRESENT

UTERUS :
-OESTRUS,-PRESENT

THYMUS :
-CYST,-PRESENT

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Appendix 10

Individual animal pathology data

Test article	Control					] .
Group	1	2	3	4	5	.
Level (ppm)	0	100	500	2500	5000	.

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DRAFT

STUDY NUMBER: 0535101

ANIMAL NUMBER: 000067 SEX: FEMALE DOSE GROUP: 1 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/30/03 STUDY DAY OF DEATH: 97 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 212.4 GRAMS

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
EYE, OPTIC NERVE, SKIN + SUBCUTIS, MAMMARY GLAND, MUSCLE, FEMUR + MARROW, STERNUM + MARROW, SCIATIC NERVE, PANCREAS, MESENTERIC LN, DUODENUM, JEJUNUM, ILEUM, CAECUM, COLON, ADRENAL, OVARY, VAGINA, SALIVARY GLAND, MANDIBULAR LN, LUNG, HEART, AORTA, TRACHEA, OESOPHAGUS, THYROID, PARATHYROID, PITUITARY, BRAIN, SPINAL CORD

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Appendix 10

Individual animal pathology data

Test article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

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DRAFT

STUDY NUMBER: 0535101

ANIMAL NUMBER: 000068 SEX: FEMALE DOSE GROUP: 1 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/30/03 STUDY DAY OF DEATH: 97 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 187.7 GRAMS

O B S E R V A T I O N S

NECROPSY

ANIMAL :
-NOT REMARKABLE

HISTOPATHOLOGY

MUSCLE :
-MYOPATHY, QUADRICEPS MUSCLE,-MINIMAL

LIVER :
-INFLAMMATORY CELL FOCI,-MINIMAL

SPLEEN :
-PIGMENT,-MINIMAL

KIDNEY :
-FOCAL NEPHROPATHY,-MINIMAL
-PELVIC MINERALISATION,-MINIMAL

UTERUS :
-DIOESTRUS,-PRESENT

LUNG :
-INFLAMMATORY CELL FOCI,-MINIMAL

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
EYE, OPTIC NERVE, SKIN + SUBCUTIS, MAMMARY GLAND, FEMUR + MARROW, STERNUM + MARROW, SCIATIC NERVE, PANCREAS, MESENTERIC LN, STOMACH, DUODENUM, JEJUNUM, ILEUM, CAECUM, COLON, RECTUM, ADRENAL, OVARY, URINARY BLADDER, VAGINA, SALIVARY GLAND, MANDIBULAR LN, THYMUS, HEART, AORTA, TRACHEA, OESOPHAGUS, THYROID, PARATHYROID, PITUITARY, BRAIN, SPINAL CORD

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Appendix 10

Individual animal pathology data

Test article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

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STUDY NUMBER: 0535101

ANIMAL NUMBER: 000069 SEX: FEMALE DOSE GROUP: 1 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/30/03 STUDY DAY OF DEATH: 97 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 209.3 GRAMS

OBSERVATIONS

NECROPSY

STOMACH :
-YELLOW; MUCOSAL SURFACE, CARDIA AND PYLORUS REGIONS
-PALE, SLIGHT; MUCOSAL SURFACE, FUNDUS REGION

UTERUS :
-DISTENSION, SLIGHT; BILATERAL

HISTOPATHOLOGY

LIVER :
-INFLAMMATORY CELL FOCI,-MINIMAL

SPLEEN :
-PIGMENT,-MINIMAL

STOMACH :
>UNREMARKABLE
>NOTE:>NO MICROSCOPIC CORRELATION WITH NECROPSY.

KIDNEY :
-HYDRONEPHROSIS,-MINIMAL
-CORTICOMEDULLARY MINERALISATION,-MINIMAL

UTERUS :
-PRO-OESTRUS,-PRESENT

THYMUS :
-CYST,-PRESENT

LUNG :
-INFLAMMATORY CELL FOCI,-MINIMAL

PARATHYROID :
>UNREMARKABLE
>NOTE:>ONE SAMPLE.

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Appendix 10

Individual animal pathology data

Test article	Control	[			] .
Group	1	2	3	4	5 .
Level (ppm)	0	100	500	2500	5000 .

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DRAFT

STUDY NUMBER: 0535101

ANIMAL NUMBER: 000069 SEX: FEMALE DOSE GROUP: 1 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/30/03 STUDY DAY OF DEATH: 97 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 209.3 GRAMS

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
EYE, OPTIC NERVE, SKIN + SUBCUTIS, MAMMARY GLAND, MUSCLE, FEMUR + MARROW, STERNUM + MARROW, SCIATIC NERVE, PANCREAS, MESENTERIC LN, DUODENUM, JEJUNUM, ILEUM, CAECUM, COLON, RECTUM, ADRENAL, OVARY, URINARY BLADDER, VAGINA, SALIVARY GLAND, MANDIBULAR LN, HEART, AORTA, TRACHEA, OESOPHAGUS, THYROID, PITUITARY, BRAIN, SPINAL CORD

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Appendix 10

Individual animal pathology data

Test article	Control					] .
Group	1	2	3	4	5	.
Level (ppm)	0	100	500	2500	5000	.

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DRAFT

STUDY NUMBER: 0535101

ANIMAL NUMBER: 000070 SEX: FEMALE DOSE GROUP: 1 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/30/03 STUDY DAY OF DEATH: 97 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 218.4 GRAMS

OBSERVATIONS

NECROPSY

ANIMAL :
-NOT REMARKABLE

HISTOPATHOLOGY

LIVER :
-INFLAMMATORY CELL FOCI,-MINIMAL

SPLEEN :
-PIGMENT,-MINIMAL

PANCREAS :
-DEGRANULATION,-MINIMAL

KIDNEY :
-HYDRONEPHROSIS,-MINIMAL

UTERUS :
-DIOESTRUS,-PRESENT

THYMUS :
-CYST,-PRESENT

THYROID :
-CYST,-PRESENT

PARATHYROID :
>UNREMARKABLE
>NOTE:>ONE SAMPLE.

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Appendix 10

Individual animal pathology data

Test article	Control		[		] .
Group	1	2	3	4	5 .
Level (ppm)	0	100	500	2500	5000 .

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DRAFT

STUDY NUMBER: 0535101

ANIMAL NUMBER: 000070 SEX: FEMALE DOSE GROUP: 1 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/30/03 STUDY DAY OF DEATH: 97 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 218.4 GRAMS

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
EYE, OPTIC NERVE, SKIN + SUBCUTIS, MAMMARY GLAND, MUSCLE, FEMUR + MARROW, STERNUM + MARROW, SCIATIC NERVE, MESENTERIC LN, STOMACH, DUODENUM, JEJUNUM, ILEUM, CAECUM, COLON, RECTUM, ADRENAL, OVARY, URINARY BLADDER, VAGINA, SALIVARY GLAND, MANDIBULAR LN, LUNG, HEART, AORTA, TRACHEA, OESOPHAGUS, PITUITARY, BRAIN, SPINAL CORD

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Appendix 10

Individual animal pathology data

Test article	Control				
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

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DRAFT

STUDY NUMBER: 0535101

ANIMAL NUMBER: 000071 SEX: FEMALE DOSE GROUP: 1 SACRIFICE STATUS: SCHEDULED, FIRST POST-RECOV SAC
DATE OF DEATH: 10/24/03 STUDY DAY OF DEATH: 121 STUDY WEEK OF DEATH: 18 TERMINAL BODY WEIGHT: 206.1 GRAMS

O B S E R V A T I O N S

NECROPSY

OVARY :
-LARGE, SLIGHT; BILATERAL

UTERUS :
-DISTENSION, MINIMAL; BILATERAL

HISTOPATHOLOGY

LIVER :
-PIGMENT,-SLIGHT
-INFLAMMATORY CELL FOCI,-SLIGHT
-PIGMENTED HISTIOCYTES,-MINIMAL

OVARY :
-OESTROUS CYCLE,-PRESENT

UTERUS :
-OESTRUS,-PRESENT

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
MUSCLE, PANCREAS, HEART

Appendix 10

Individual animal pathology data

Test article	Control	[			] .
Group	1	2	3	4	5 .
Level (ppm)	0	100	500	2500	5000 .

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DRAFT

STUDY NUMBER: 0535101

ANIMAL NUMBER: 000072 SEX: FEMALE DOSE GROUP: 1 SACRIFICE STATUS: SCHEDULED, FIRST POST-RECOV SAC
DATE OF DEATH: 10/24/03 STUDY DAY OF DEATH: 121 STUDY WEEK OF DEATH: 18 TERMINAL BODY WEIGHT: 255.9 GRAMS

OBSERVATIONS

NECROPSY	HISTOPATHOLOGY
ANIMAL : -NOT REMARKABLE	MUSCLE : -MYOPATHY, QUADRICEPS MUSCLE,-MINIMAL LIVER : -INFLAMMATORY CELL FOCI,-MINIMAL

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
PANCREAS, HEART

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Appendix 10

Individual animal pathology data

Test article	Control				[	] .
Group	1	2	3	4	5	.
Level (ppm)	0	100	500	2500	5000	.

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HARROGATE, ENGLAND

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DRAFT

STUDY NUMBER: 0535101

ANIMAL NUMBER: 000073 SEX: FEMALE DOSE GROUP: 1 SACRIFICE STATUS: SCHEDULED, FIRST POST-RECOV SAC
DATE OF DEATH: 10/24/03 STUDY DAY OF DEATH: 121 STUDY WEEK OF DEATH: 18 TERMINAL BODY WEIGHT: 245.1 GRAMS

O B S E R V A T I O N S

NECROPSY

PANCREAS :
-DARK, SLIGHT

OVARY :
-LARGE, SLIGHT; BILATERAL

HISTOPATHOLOGY

LIVER :
-HEPATOCYTE VACUOLATION,-MINIMAL
-INFLAMMATORY CELL FOCI,-MINIMAL

PANCREAS :
-ACINAL CONGESTION/HAEMORRHAGE,-PRESENT

OVARY :
-OESTROUS CYCLE,-PRESENT

HEART :
-MYOCARDIAL DEGENERATION/NECROSIS,-MINIMAL

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
MUSCLE

Appendix 10

Individual animal pathology data

Test article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

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DRAFT

STUDY NUMBER: 0535101

ANIMAL NUMBER: 000074 SEX: FEMALE DOSE GROUP: 1 SACRIFICE STATUS: SCHEDULED, FIRST POST-RECOV SAC
DATE OF DEATH: 10/24/03 STUDY DAY OF DEATH: 121 STUDY WEEK OF DEATH: 18 TERMINAL BODY WEIGHT: 214.9 GRAMS

OBSERVATIONS

NECROPSY	HISTOPATHOLOGY
ANIMAL : -NOT REMARKABLE	LIVER : -INFLAMMATORY CELL FOCI,-MINIMAL -SINGLE CELL NECROSIS,-MINIMAL

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
MUSCLE, PANCREAS, HEART

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Appendix 10

Individual animal pathology data

Test article	Control				[ ] .
Group	1	2	3	4	5 .
Level (ppm)	0	100	500	2500	5000 .

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DRAFT

STUDY NUMBER: 0535101

ANIMAL NUMBER: 000075 SEX: FEMALE DOSE GROUP: 1 SACRIFICE STATUS: SCHEDULED, FIRST POST-RECOV SAC
DATE OF DEATH: 10/24/03 STUDY DAY OF DEATH: 121 STUDY WEEK OF DEATH: 18 TERMINAL BODY WEIGHT: 232.0 GRAMS

OBSERVATIONS

NECROPSY	HISTOPATHOLOGY
STOMACH : -YELLOW; PYLORUS REGION, MUCOSAL SURFACE	LIVER : -INFLAMMATORY CELL FOCI,-MINIMAL -BASOPHILLIC FOCUS,-MINIMAL STOMACH : >UNREMARKABLE >NOTE:>NO MICROSCOPIC CORRELATION WITH NECROPSY.

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
MUSCLE, PANCREAS, HEART

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Appendix 10

Individual animal pathology data

Test article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

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STUDY NUMBER: 0535101

ANIMAL NUMBER: 000076 SEX: FEMALE DOSE GROUP: 2 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/29/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 198.0 GRAMS

O B S E R V A T I O N S

NECROPSY

STOMACH :
-YELLOW; PYLORUS REGION, MUCOSAL SURFACE

HISTOPATHOLOGY

MUSCLE :
-MYOPATHY, OTHER MUSCLE,-MINIMAL
>NOTE:>ADJACENT TO STERNUM.

LIVER :
-PIGMENT,-SLIGHT
-INFLAMMATORY CELL FOCI,-MINIMAL
-SINGLE CELL NECROSIS,-MINIMAL

PANCREAS :
-LOBULAR ATROPHY,-SLIGHT

STOMACH :
>UNREMARKABLE
>NOTE:>NO MICROSCOPIC CORRELATION WITH NECROPSY.

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
HEART

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Appendix 10

Individual animal pathology data

Test article	Control				[ ] .
Group	1	2	3	4	5 .
Level (ppm)	0	100	500	2500	5000 .

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HARROGATE, ENGLAND

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DRAFT

STUDY NUMBER: 0535101

ANIMAL NUMBER: 000077 SEX: FEMALE DOSE GROUP: 2 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/29/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 202.5 GRAMS

O B S E R V A T I O N S

NECROPSY	HISTOPATHOLOGY
OVARY : -LARGE, MODERATE; BILATERAL	MUSCLE : -MYOPATHY, OTHER MUSCLE,-MINIMAL -MYOPATHY, QUADRICEPS MUSCLE,-MINIMAL >NOTE:>MYOPATHY, OTHER MUSCLE WAS ADJACENT TO STERNUM. LIVER : -INFLAMMATORY CELL FOCI,-MINIMAL -SINGLE CELL NECROSIS,-MINIMAL OVARY : -CYST,-PRESENT >NOTE:>OTHERWISE UNREMARKABLE.

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
PANCREAS, HEART

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Appendix 10

Individual animal pathology data

Test article	Control	[			] .
Group	1	2	3	4	5 .
Level (ppm)	0	100	500	2500	5000 .

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HARROGATE, ENGLAND

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DRAFT

STUDY NUMBER: 0535101

ANIMAL NUMBER: 000078 SEX: FEMALE DOSE GROUP: 2 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/30/03 STUDY DAY OF DEATH: 97 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 197.0 GRAMS

OBSERVATIONS

NECROPSY	HISTOPATHOLOGY
ANIMAL : -NOT REMARKABLE	MUSCLE : -MYOPATHY, QUADRICEPS MUSCLE,-MINIMAL LIVER : -PIGMENT,-MINIMAL -INFLAMMATORY CELL FOCI,-MINIMAL -SINGLE CELL NECROSIS,-MINIMAL -PIGMENTED HISTIOCYTES,-MINIMAL

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
PANCREAS, HEART

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Appendix 10

Individual animal pathology data

Test article	Control		[		] .
Group	1	2	3	4	5 .
Level (ppm)	0	100	500	2500	5000 .

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DRAFT

STUDY NUMBER: 0535101

ANIMAL NUMBER: 000079 SEX: FEMALE DOSE GROUP: 2 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/30/03 STUDY DAY OF DEATH: 97 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 201.3 GRAMS

OBSERVATIONS

NECROPSY	HISTOPATHOLOGY
SPLEEN : -ABNORMAL SHAPE	LIVER : -INFLAMMATORY CELL FOCI,-MINIMAL
DUODENUM : -THICK, SLIGHT; MUCOSAL SURFACE	SPLEEN : -PIGMENT,-MINIMAL -DEFORMITY,-PRESENT >NOTE:>EXTRA SAMPLE: ONE.
ADRENAL : -DARK, MODERATE; BILATERAL	DUODENUM : >UNREMARKABLE >NOTE:>NO MICROSCOPIC CORRELATION WITH NECROPSY.
UTERUS : -DISTENSION, SLIGHT; BILATERAL	ADRENAL : -AGONAL CONGESTION/HAEMORRHAGE,-PRESENT
	UTERUS : -PRO-OESTRUS,-PRESENT

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
MUSCLE, PANCREAS, HEART

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Appendix 10

Individual animal pathology data

Test article	Control		[		] .
Group	1	2	3	4	5 .
Level (ppm)	0	100	500	2500	5000 .

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DRAFT

STUDY NUMBER: 0535101

ANIMAL NUMBER: 000080 SEX: FEMALE DOSE GROUP: 2 SACRIFICE STATUS: UNSCHEDULED (M)
DATE OF DEATH: 09/17/03 STUDY DAY OF DEATH: 84 STUDY WEEK OF DEATH: 12 TERMINAL BODY WEIGHT: 201.1 GRAMS

OBSERVATIONS

NECROPSY

SKIN + SUBCUTIS :
-FUR LOSS, SLIGHT; FORE PAW, BILATERAL

OVARY :
-RED, SLIGHT; BILATERAL

THYMUS :
-LARGE, SLIGHT; BILATERAL

BONE :
-FRACTURE; FOOT, HIND LEFT

HISTOPATHOLOGY

SKIN + SUBCUTIS :
-ADNEXAL ATROPHY,-MINIMAL
>NOTE:>EXTRA SAMPLES: TWO.

MUSCLE :
-MYOPATHY, QUADRICEPS MUSCLE,-MINIMAL

STERNUM + MARROW :
-STEATITIS,-MINIMAL

LIVER :
-INFLAMMATORY CELL FOCI,-MINIMAL

SPLEEN :
-PIGMENT,-SLIGHT

KIDNEY :
-INFLAMMATORY CELL FOCI,-MINIMAL

OVARY :
-AGONAL CONGESTION/HAEMORRHAGE,-PRESENT

UTERUS :
-PRO-OESTRUS,-PRESENT

THYMUS :
>UNREMARKABLE
>NOTE:>NO MICROSCOPIC CORRELATION WITH NECROPSY.

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Appendix 10

Individual animal pathology data

Test article	Control				[ ] .
Group	1	2	3	4	5 .
Level (ppm)	0	100	500	2500	5000 .

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DRAFT

STUDY NUMBER: 0535101

ANIMAL NUMBER: 000080 SEX: FEMALE DOSE GROUP: 2 SACRIFICE STATUS: UNSCHEDULED (M)
DATE OF DEATH: 09/17/03 STUDY DAY OF DEATH: 84 STUDY WEEK OF DEATH: 12 TERMINAL BODY WEIGHT: 201.1 GRAMS

O B S E R V A T I O N S (CONTINUED)

NECROPSY	HISTOPATHOLOGY
	PARATHYROID : >UNREMARKABLE >NOTE:>ONE SAMPLE.
	PITUITARY : >TISSUE MISSING
	BONE : -FRACTURE,-PRESENT -HAEMORRHAGE,-MODERATE >NOTE:>DIAGNOSIS PREDOMINANTLY BASED ON NECROPSY FINDINGS AND CLINICAL OBSERVATIONS.
	CAUSE OF DEMISE : -ACCIDENTAL,-PRESENT

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
EYE, OPTIC NERVE, MAMMARY GLAND, FEMUR + MARROW, SCIATIC NERVE, PANCREAS, MESENTERIC LN, STOMACH, DUODENUM, JEJUNUM, ILEUM, CAECUM, COLON, RECTUM, ADRENAL, URINARY BLADDER, VAGINA, SALIVARY GLAND, MANDIBULAR LN, LUNG, HEART, AORTA, TRACHEA, OESOPHAGUS, THYROID, BRAIN, SPINAL CORD

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Appendix 10

Individual animal pathology data

Test article	Control		[		] .
Group	1	2	3	4	5 .
Level (ppm)	0	100	500	2500	5000 .

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DRAFT

STUDY NUMBER: 0535101

ANIMAL NUMBER: 000081 SEX: FEMALE DOSE GROUP: 2 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/30/03 STUDY DAY OF DEATH: 97 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 198.9 GRAMS

O B S E R V A T I O N S

NECROPSY

URINARY BLADDER :
-DISTENSION, SLIGHT

UTERUS :
-DISTENSION, SLIGHT; BILATERAL

THYMUS :
-RED FOCUS; RIGHT

HISTOPATHOLOGY

MUSCLE :
-INFLAMMATORY CELL FOCI,-MINIMAL

LIVER :
-INFLAMMATORY CELL FOCI,-MINIMAL

URINARY BLADDER :
-BARBITURATE LYSIS,-PRESENT

UTERUS :
-PRO-OESTRUS,-PRESENT

THYMUS :
-CYST,-PRESENT
-AGONAL CONGESTION/HAEMORRHAGE,-PRESENT

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
PANCREAS, HEART

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Appendix 10

Individual animal pathology data

Test article	Control	[			] .
Group	1	2	3	4	5 .
Level (ppm)	0	100	500	2500	5000 .

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DRAFT

STUDY NUMBER: 0535101

ANIMAL NUMBER: 000082 SEX: FEMALE DOSE GROUP: 2 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/30/03 STUDY DAY OF DEATH: 97 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 196.4 GRAMS

OBSERVATIONS

NECROPSY

PANCREAS :
-DARK, MODERATE

HISTOPATHOLOGY

LIVER :
-INFLAMMATORY CELL FOCI,-MINIMAL

PANCREAS :
-AGONAL CONGESTION/HAEMORRHAGE,-PRESENT

HEART :
-INFLAMMATORY CELL FOCI,-MINIMAL

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
MUSCLE

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Appendix 10

Individual animal pathology data

Test article	Control	[			] .
Group	1	2	3	4	5 .
Level (ppm)	0	100	500	2500	5000 .

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DRAFT

STUDY NUMBER: 0535101

ANIMAL NUMBER: 000083 SEX: FEMALE DOSE GROUP: 2 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/30/03 STUDY DAY OF DEATH: 97 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 218.3 GRAMS

OBSERVATIONS

NECROPSY	HISTOPATHOLOGY
ANIMAL : -NOT REMARKABLE	MUSCLE : -MYOPATHY, OTHER MUSCLE,-MINIMAL >NOTE:>ADJACENT TO STERNUM. LIVER : -INFLAMMATORY CELL FOCI,-MINIMAL -SINGLE CELL NECROSIS,-MINIMAL

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
PANCREAS, HEART

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Appendix 10

Individual animal pathology data

Test article	Control	[			] .
Group	1	2	3	4	5 .
Level (ppm)	0	100	500	2500	5000 .

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STUDY NUMBER: 0535101

ANIMAL NUMBER: 000084 SEX: FEMALE DOSE GROUP: 2 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/30/03 STUDY DAY OF DEATH: 97 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 203.9 GRAMS

O B S E R V A T I O N S

NECROPSY

PANCREAS :
-DARK, MODERATE

STOMACH :
-YELLOW; MUCOSAL SURFACE, PYLORUS REGION
-PALE, SLIGHT; MUCOSAL SURFACE, FUNDUS REGION

HISTOPATHOLOGY

LIVER :
-INFLAMMATORY CELL FOCI,-MINIMAL
-SINGLE CELL NECROSIS,-MINIMAL

PANCREAS :
-AGONAL CONGESTION/HAEMORRHAGE,-PRESENT

STOMACH :
>UNREMARKABLE
>NOTE:>NO MICROSCOPIC CORRELATION WITH NECROPSY.

HEART :
-MYOCARDIAL DEGENERATION/NECROSIS,-MINIMAL

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
MUSCLE

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Appendix 10

Individual animal pathology data

Test article	Control	[			] .
Group	1	2	3	4	5 .
Level (ppm)	0	100	500	2500	5000 .

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STUDY NUMBER: 0535101

ANIMAL NUMBER: 000085 SEX: FEMALE DOSE GROUP: 2 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/30/03 STUDY DAY OF DEATH: 97 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 202.1 GRAMS

OBSERVATIONS

NECROPSY	HISTOPATHOLOGY
ANIMAL : -NOT REMARKABLE	LIVER : -INFLAMMATORY CELL FOCI,-MINIMAL

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
MUSCLE, PANCREAS, HEART

Appendix 10

Individual animal pathology data

Test article	Control	[			] .
Group	1	2	3	4	5 .
Level (ppm)	0	100	500	2500	5000 .

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STUDY NUMBER: 0535101

ANIMAL NUMBER: 000086 SEX: FEMALE DOSE GROUP: 3 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/29/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 217.8 GRAMS

OBSERVATIONS

NECROPSY	HISTOPATHOLOGY
ANIMAL : -NOT REMARKABLE	MUSCLE : -MYOPATHY, OTHER MUSCLE,-SLIGHT -MYOPATHY, QUADRICEPS MUSCLE,-MINIMAL >NOTE:>MYOPATHY, OTHER MUSCLE WAS ADJACENT TO STERNUM. LIVER : -INFLAMMATORY CELL FOCI,-MINIMAL -SINGLE CELL NECROSIS,-MINIMAL

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
PANCREAS, HEART

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Appendix 10

Individual animal pathology data

Test article	Control				[ ] .
Group	1	2	3	4	5 .
Level (ppm)	0	100	500	2500	5000 .

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STUDY NUMBER: 0535101

ANIMAL NUMBER: 000087 SEX: FEMALE DOSE GROUP: 3 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/29/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 194.0 GRAMS

O B S E R V A T I O N S

NECROPSY	HISTOPATHOLOGY
ANIMAL : -NOT REMARKABLE	LIVER : -INFLAMMATORY CELL FOCI,-MINIMAL -FOCAL NECROSIS,-MINIMAL

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
MUSCLE, PANCREAS, HEART

Appendix 10

Individual animal pathology data

Test article	Control	[			] .
Group	1	2	3	4	5 .
Level (ppm)	0	100	500	2500	5000 .

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STUDY NUMBER: 0535101

ANIMAL NUMBER: 000088 SEX: FEMALE DOSE GROUP: 3 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/30/03 STUDY DAY OF DEATH: 97 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 227.6 GRAMS

O B S E R V A T I O N S

NECROPSY	HISTOPATHOLOGY
CAECUM : -INJECTION LESION	STERNUM + MARROW : -STEATITIS,-MINIMAL >NOTE:>IN ADIPOSE TISSUE PROVIDED IN SECTION OF INTERCOSTAL MUSCLE. LIVER : -PIGMENT,-SLIGHT -INFLAMMATORY CELL FOCI,-MINIMAL CAECUM : -BARBITURATE LYSIS,-PRESENT

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
MUSCLE, PANCREAS, HEART

Appendix 10

Individual animal pathology data

Test article	Control	[			] .
Group	1	2	3	4	5 .
Level (ppm)	0	100	500	2500	5000 .

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DRAFT

STUDY NUMBER: 0535101

ANIMAL NUMBER: 000089 SEX: FEMALE DOSE GROUP: 3 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/30/03 STUDY DAY OF DEATH: 97 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 193.3 GRAMS

O B S E R V A T I O N S

NECROPSY	HISTOPATHOLOGY
ANIMAL : -NOT REMARKABLE	MUSCLE : -MYOPATHY, OTHER MUSCLE,-SLIGHT >NOTE:>ADJACENT TO STERNUM. LIVER : -INFLAMMATORY CELL FOCI,-MINIMAL

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
PANCREAS, HEART

Appendix 10

Individual animal pathology data

Test article	Control		[		] .
Group	1	2	3	4	5 .
Level (ppm)	0	100	500	2500	5000 .

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DRAFT

STUDY NUMBER: 0535101

ANIMAL NUMBER: 000090 SEX: FEMALE DOSE GROUP: 3 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/30/03 STUDY DAY OF DEATH: 97 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 211.8 GRAMS

O B S E R V A T I O N S

NECROPSY	HISTOPATHOLOGY
CAECUM : -DARK, SLIGHT; (QUERY, INJECTION LESION)	LIVER : -INFLAMMATORY CELL FOCI,-MINIMAL
ADRENAL : -LARGE, SLIGHT; BILATERAL	CAECUM : -BARBITURATE LYSIS,-PRESENT
	ADRENAL : -AGONAL CONGESTION/HAEMORRHAGE,-PRESENT

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
MUSCLE, PANCREAS, HEART

Appendix 10

Individual animal pathology data

Test article	Control	[			] .
Group	1	2	3	4	5 .
Level (ppm)	0	100	500	2500	5000 .

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STUDY NUMBER: 0535101

ANIMAL NUMBER: 000091 SEX: FEMALE DOSE GROUP: 3 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/30/03 STUDY DAY OF DEATH: 97 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 217.0 GRAMS

O B S E R V A T I O N S

NECROPSY	HISTOPATHOLOGY
ANIMAL : -NOT REMARKABLE	MUSCLE : -INFLAMMATORY CELL FOCI,-MINIMAL LIVER : -INFLAMMATORY CELL FOCI,-MINIMAL -FOCAL NECROSIS,-MINIMAL

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
PANCREAS, HEART

Appendix 10

Individual animal pathology data

Test article	Control		[		] .
Group	1	2	3	4	5 .
Level (ppm)	0	100	500	2500	5000 .

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DRAFT

STUDY NUMBER: 0535101

ANIMAL NUMBER: 000092 SEX: FEMALE DOSE GROUP: 3 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/30/03 STUDY DAY OF DEATH: 97 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 201.9 GRAMS

O B S E R V A T I O N S

NECROPSY	HISTOPATHOLOGY
STOMACH : -YELLOW; ALL REGIONS, MUCOSAL SURFACE	MUSCLE : -MYOPATHY, QUADRICEPS MUSCLE,-MINIMAL
DUODENUM : -YELLOW; MUCOSAL SURFACE	LIVER : -INFLAMMATORY CELL FOCI,-MINIMAL -SINGLE CELL NECROSIS,-MINIMAL
CAECUM : -INJECTION LESION	STOMACH : >UNREMARKABLE >NOTE:>NO MICROSCOPIC CORRELATION WITH NECROPSY.
	DUODENUM : >UNREMARKABLE >NOTE:>NO MICROSCOPIC CORRELATION WITH NECROPSY.
	CAECUM : -BARBITURATE LYSIS,-PRESENT

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
PANCREAS, HEART

Appendix 10

Individual animal pathology data

Test article	Control		[		] .
Group	1	2	3	4	5 .
Level (ppm)	0	100	500	2500	5000 .

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DRAFT

STUDY NUMBER: 0535101

ANIMAL NUMBER: 000093 SEX: FEMALE DOSE GROUP: 3 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/30/03 STUDY DAY OF DEATH: 97 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 247.7 GRAMS

O B S E R V A T I O N S

NECROPSY	HISTOPATHOLOGY
CAECUM : -INJECTION LESION	LIVER : -INFLAMMATORY CELL FOCI,-MINIMAL -SINGLE CELL NECROSIS,-MINIMAL
MANDIBULAR LN : -RED, MODERATE	CAECUM : -BARBITURATE LYSIS,-PRESENT
	MANDIBULAR LN : -AGONAL CONGESTION/HAEMORRHAGE,-PRESENT

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
MUSCLE, PANCREAS, HEART

Appendix 10

Individual animal pathology data

Test article	Control		[		] .
Group	1	2	3	4	5 .
Level (ppm)	0	100	500	2500	5000 .

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DRAFT

STUDY NUMBER: 0535101

ANIMAL NUMBER: 000094 SEX: FEMALE DOSE GROUP: 3 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/30/03 STUDY DAY OF DEATH: 97 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 207.6 GRAMS

O B S E R V A T I O N S

NECROPSY

ADRENAL :
-LARGE, SLIGHT; BILATERAL

HISTOPATHOLOGY

MUSCLE :
-MYOPATHY, OTHER MUSCLE,-MINIMAL
>NOTE:>ADJACENT TO STERNUM.

LIVER :
-INFLAMMATORY CELL FOCI,-MINIMAL

ADRENAL :
>UNREMARKABLE
>NOTE:>NO MICROSCOPIC CORRELATION WITH NECROPSY.

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
PANCREAS, HEART

Appendix 10

Individual animal pathology data

Test article	Control	[			] .
Group	1	2	3	4	5 .
Level (ppm)	0	100	500	2500	5000 .

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STUDY NUMBER: 0535101

ANIMAL NUMBER: 000095 SEX: FEMALE DOSE GROUP: 3 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/30/03 STUDY DAY OF DEATH: 97 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 220.0 GRAMS

O B S E R V A T I O N S

NECROPSY	HISTOPATHOLOGY
ANIMAL : -NOT REMARKABLE	MUSCLE : -MYOPATHY, QUADRICEPS MUSCLE,-MINIMAL LIVER : -INFLAMMATORY CELL FOCI,-MINIMAL

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
PANCREAS, HEART

Appendix 10

Individual animal pathology data

Test article	Control		[		] .
Group	1	2	3	4	5 .
Level (ppm)	0	100	500	2500	5000 .

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STUDY NUMBER: 0535101

ANIMAL NUMBER: 000096 SEX: FEMALE DOSE GROUP: 4 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/29/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 207.6 GRAMS

O B S E R V A T I O N S

NECROPSY	HISTOPATHOLOGY
ANIMAL : -NOT REMARKABLE	MUSCLE : -MYOPATHY, OTHER MUSCLE,-MINIMAL >NOTE:>IN TISSUE PROVIDED IN SECTION OF STERNUM AND THYROID. LIVER : -INFLAMMATORY CELL FOCI,-MINIMAL -SINGLE CELL NECROSIS,-MINIMAL HEART : -MYOCARDIAL DEGENERATION/NECROSIS,-MINIMAL

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
PANCREAS

Appendix 10

Individual animal pathology data

Test article	Control	[			] .
Group	1	2	3	4	5 .
Level (ppm)	0	100	500	2500	5000 .

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STUDY NUMBER: 0535101

ANIMAL NUMBER: 000097 SEX: FEMALE DOSE GROUP: 4 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/29/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 165.9 GRAMS

O B S E R V A T I O N S

NECROPSY

PANCREAS :
-DARK, SLIGHT

STOMACH :
-PALE, SLIGHT; MUCOSAL SURFACE, FUNDUS REGION

HISTOPATHOLOGY

MUSCLE :
-MYOPATHY, OTHER MUSCLE,-SLIGHT
-MYOPATHY, QUADRICEPS MUSCLE,-MINIMAL
>NOTE:>MYOPATHY, OTHER MUSCLE WAS IN TISSUE PROVIDED IN SECTION OF STERNUM AND THYROID.

LIVER :
-INFLAMMATORY CELL FOCI,-MINIMAL

PANCREAS :
-AGONAL CONGESTION/HAEMORRHAGE,-PRESENT

STOMACH :
-OEDEMA,-MINIMAL

HEART :
-MYOCARDIAL DEGENERATION/NECROSIS,-MINIMAL

Appendix 10

Individual animal pathology data

Test article	Control		[		] .
Group	1	2	3	4	5 .
Level (ppm)	0	100	500	2500	5000 .

COVANCE
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STUDY NUMBER: 0535101

ANIMAL NUMBER: 000098 SEX: FEMALE DOSE GROUP: 4 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/30/03 STUDY DAY OF DEATH: 97 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 187.2 GRAMS

O B S E R V A T I O N S

NECROPSY	HISTOPATHOLOGY
ADRENAL : -DARK FOCUS; RIGHT	MUSCLE : -MYOPATHY, OTHER MUSCLE,-MINIMAL -MYOPATHY, QUADRICEPS MUSCLE,-MINIMAL >NOTE:>MYOPATHY, OTHER MUSCLE WAS IN TISSUE ADJACENT TO STERNUM. LIVER : -HEPATOCYTE VACUOLATION,-SLIGHT -INFLAMMATORY CELL FOCI,-MINIMAL PANCREAS : -DEGRANULATION,-MINIMAL ADRENAL : -AGONAL CONGESTION/HAEMORRHAGE,-PRESENT HEART : -MYOCARDIAL DEGENERATION/NECROSIS,-MINIMAL

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Appendix 10

Individual animal pathology data

Test article	Control		[		] .
Group	1	2	3	4	5 .
Level (ppm)	0	100	500	2500	5000 .

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STUDY NUMBER: 0535101

ANIMAL NUMBER: 000099 SEX: FEMALE DOSE GROUP: 4 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/30/03 STUDY DAY OF DEATH: 97 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 212.7 GRAMS

O B S E R V A T I O N S

NECROPSY	HISTOPATHOLOGY
ANIMAL : -NOT REMARKABLE	MUSCLE : -MYOPATHY, OTHER MUSCLE,-MINIMAL >NOTE:>ADJACENT TO STERNUM. LIVER : -INFLAMMATORY CELL FOCI,-MINIMAL -SINGLE CELL NECROSIS,-MINIMAL

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
PANCREAS, HEART

Appendix 10

Individual animal pathology data

Test article	Control		[		] .
Group	1	2	3	4	5 .
Level (ppm)	0	100	500	2500	5000 .

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STUDY NUMBER: 0535101

ANIMAL NUMBER: 000100 SEX: FEMALE DOSE GROUP: 4 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/30/03 STUDY DAY OF DEATH: 97 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 205.6 GRAMS

O B S E R V A T I O N S

NECROPSY	HISTOPATHOLOGY
ANIMAL : -NOT REMARKABLE	LIVER : -INFLAMMATORY CELL FOCI,-MINIMAL -SINGLE CELL NECROSIS,-MINIMAL HEART : -MYOCARDIAL DEGENERATION/NECROSIS,-MINIMAL

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
MUSCLE, PANCREAS

Appendix 10

Individual animal pathology data

Test article	Control	[			] .
Group	1	2	3	4	5 .
Level (ppm)	0	100	500	2500	5000 .

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STUDY NUMBER: 0535101

ANIMAL NUMBER: 000101 SEX: FEMALE DOSE GROUP: 4 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/30/03 STUDY DAY OF DEATH: 97 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 181.7 GRAMS

O B S E R V A T I O N S

NECROPSY

KIDNEY :
-ONE NOT PRESENT; LEFT
-LARGE, SLIGHT; RIGHT

ABDOMINAL CAVITY :
-ABNORMAL CONTENTS; SACK LIKE APPEARANCE, BEIGE, 10MM DIAMETER, WHERE LEFT KIDNEY SHOULD HAVE BEEN

HISTOPATHOLOGY

LIVER :
-INFLAMMATORY CELL FOCI,-MINIMAL
-SINGLE CELL NECROSIS,-MINIMAL

PANCREAS :
-LOBULAR ATROPHY,-MINIMAL

KIDNEY :
-DEVELOPMENTAL ANOMALY,-PRESENT
-HYDRONEPHROSIS,-MINIMAL
>NOTE:>URETER AND RENAL PAPILLA MISSING UNILATERAL, PRESENTED IN SECTION WITH ABONORMAL CONTENTS OF ABDOMINAL CAVITY.

HEART :
-MYOCARDIAL DEGENERATION/NECROSIS,-MINIMAL

ABDOMINAL CAVITY :
>UNREMARKABLE
>NOTE:>FOR FINDINGS SEE KIDNEY.

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
MUSCLE

Appendix 10

Individual animal pathology data

Test article	Control	[			] .
Group	1	2	3	4	5 .
Level (ppm)	0	100	500	2500	5000 .

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STUDY NUMBER: 0535101

ANIMAL NUMBER: 000102 SEX: FEMALE DOSE GROUP: 4 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/30/03 STUDY DAY OF DEATH: 97 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 241.7 GRAMS

OBSERVATIONS

NECROPSY	HISTOPATHOLOGY
PANCREAS : -DARK, SLIGHT	MUSCLE : -MYOPATHY, QUADRICEPS MUSCLE,-MINIMAL
CAECUM : -RED, SLIGHT; MUCOSAL SURFACE	LIVER : -INFLAMMATORY CELL FOCI,-MINIMAL
	PANCREAS : -AGONAL CONGESTION/HAEMORRHAGE,-PRESENT
	CAECUM : -BARBITURATE LYSIS,-PRESENT
	HEART : -MYOCARDIAL DEGENERATION/NECROSIS,-MINIMAL

Appendix 10

Individual animal pathology data

Test article	Control	[			] .
Group	1	2	3	4	5 .
Level (ppm)	0	100	500	2500	5000 .

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STUDY NUMBER: 0535101

ANIMAL NUMBER: 000103 SEX: FEMALE DOSE GROUP: 4 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/30/03 STUDY DAY OF DEATH: 97 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 181.2 GRAMS

O B S E R V A T I O N S

NECROPSY

MESENTERIC LN :
-INJECTION LESION

ADRENAL :
-LARGE, SLIGHT; BILATERAL

HISTOPATHOLOGY

LIVER :
-HEPATOCYTE VACUOLATION,-MINIMAL
-INFLAMMATORY CELL FOCI,-MINIMAL
-SINGLE CELL NECROSIS,-MINIMAL

PANCREAS :
-DEGRANULATION,-MINIMAL

MESENTERIC LN :
-BARBITURATE LYSIS,-PRESENT

ADRENAL :
>UNREMARKABLE
>NOTE:>NO MICROSCOPIC CORRELATION WITH NECROPSY.

HEART :
-MYOCARDIAL DEGENERATION/NECROSIS,-MINIMAL

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
MUSCLE

Appendix 10

Individual animal pathology data

Test article	Control	[			] .
Group	1	2	3	4	5 .
Level (ppm)	0	100	500	2500	5000 .

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STUDY NUMBER: 0535101

ANIMAL NUMBER: 000104 SEX: FEMALE DOSE GROUP: 4 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/30/03 STUDY DAY OF DEATH: 97 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 208.3 GRAMS

O B S E R V A T I O N S

NECROPSY	HISTOPATHOLOGY
COLON : -IMPACTION	MUSCLE : -MYOPATHY, QUADRICEPS MUSCLE,-MINIMAL LIVER : -INFLAMMATORY CELL FOCI,-MINIMAL -SINGLE CELL NECROSIS,-MINIMAL COLON : >NOT REQUIRED TO BE EXAMINED FOR ANIMAL >NOTE:>NO EQUIVALENT SAMPLE FOR CORRELATION WITH NECROPSY. . HEART : -MYOCARDIAL DEGENERATION/NECROSIS,-MINIMAL

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
PANCREAS

Appendix 10

Individual animal pathology data

Test article	Control	[			] .
Group	1	2	3	4	5 .
Level (ppm)	0	100	500	2500	5000 .

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STUDY NUMBER: 0535101

ANIMAL NUMBER: 000105 SEX: FEMALE DOSE GROUP: 4 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/30/03 STUDY DAY OF DEATH: 97 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 191.6 GRAMS

OBSERVATIONS

NECROPSY

STOMACH :
-PALE, MODERATE; MUCOSAL SURFACE, FUNDUS REGION

OVARY :
-LARGE, SLIGHT; BILATERAL

UTERUS :
-DISTENSION, SLIGHT; BILATERAL

TAIL :
-TIP MISSING

HISTOPATHOLOGY

LIVER :
-INFLAMMATORY CELL FOCI,-MINIMAL
-SINGLE CELL NECROSIS,-MINIMAL

STOMACH :
-LIMITING RIDGE GASTRITIS,-MINIMAL
>NOTE:>OTHERWISE UNREMARKABLE.

OVARY :
-OESTROUS CYCLE,-PRESENT

UTERUS :
-PRO-OESTRUS,-PRESENT

HEART :
-MYOCARDIAL DEGENERATION/NECROSIS,-MINIMAL

TAIL :
>NOT REQUIRED TO BE EXAMINED FOR ANIMAL
>NOTE:>NO EQUIVALENT SAMPLE FOR CORRELATION WITH NECROPSY.

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
MUSCLE, PANCREAS

Appendix 10

Individual animal pathology data

Test article	Control	[			] .
Group	1	2	3	4	5 .
Level (ppm)	0	100	500	2500	5000 .

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STUDY NUMBER: 0535101

ANIMAL NUMBER: 000106 SEX: FEMALE DOSE GROUP: 5 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/29/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 207.9 GRAMS

OBSERVATIONS

NECROPSY

LIVER :
-MOTTLED, MINIMAL; ALL LOBES

HISTOPATHOLOGY

MUSCLE :
-MYOPATHY, OTHER MUSCLE,-MINIMAL
-MYOPATHY, QUADRICEPS MUSCLE,-SLIGHT
>NOTE:>IN STANDARD SAMPLE AND TISSUE PROVIDED IN SECTION OF STERNUM AND THYROID.

LIVER :
-AGONAL CONGESTION/HAEMORRHAGE,-PRESENT
-HEPATOCYTE VACUOLATION,-MINIMAL
-INFLAMMATORY CELL FOCI,-MINIMAL
-CENTRILOBULAR HYPERTROPHY/EOSINOPHILIA,-MINIMAL
>NOTE:>HEPATOCYTE VACUOLATION WAS CHARACTERISED BY VERY FINE, WELL CIRCUMSCRIBED CYTOPLASMIC VACUOLES ESPECIALLY IN PERIPORTAL HEPATOCYTES.

SPLEEN :
-PIGMENT,-MINIMAL

PANCREAS :
-DEGRANULATION,-MINIMAL
>NOTE:>DEGRANULATION WAS CHARACTERISED BY A DECREASE IN EOSINOPHILIC ZYMOGEN GRANULES NORMALLY PRESENT IN ACINAR CELLS RESULTING IN INCREASED ACINAR CELL BASOPHILIA.

DUODENUM :
-EROSION/ULCER,-MINIMAL

UTERUS :
-OESTRUS,-PRESENT

Appendix 10

Individual animal pathology data

Test article	Control	[			] .
Group	1	2	3	4	5 .
Level (ppm)	0	100	500	2500	5000 .

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STUDY NUMBER: 0535101

ANIMAL NUMBER: 000106 SEX: FEMALE DOSE GROUP: 5 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/29/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 207.9 GRAMS

O B S E R V A T I O N S (CONTINUED)

NECROPSY	HISTOPATHOLOGY
	THYMUS : -EPITHELIAL HYPERPLASIA,-MINIMAL
	LUNG : -FOAMY HISTIOCYTES,-MINIMAL
	HEART : -MYOCARDIAL DEGENERATION/NECROSIS,-SLIGHT
	PARATHYROID : >UNREMARKABLE >NOTE:>ONE SAMPLE.

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
EYE,`OPTIC NERVE, SKIN + SUBCUTIS, MAMMARY GLAND, FEMUR + MARROW, STERNUM + MARROW, SCIATIC NERVE, MESENTERIC LN, STOMACH, JEJUNUM, ILEUM, CAECUM, COLON, RECTUM, ADRENAL, KIDNEY, OVARY, URINARY BLADDER, VAGINA, SALIVARY GLAND, MANDIBULAR LN, AORTA, TRACHEA, OESOPHAGUS, THYROID, PITUITARY, BRAIN, SPINAL CORD

Appendix 10

Individual animal pathology data

Test article	Control		[		] .
Group	1	2	3	4	5 .
Level (ppm)	0	100	500	2500	5000 .

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DRAFT

STUDY NUMBER: 0535101

ANIMAL NUMBER: 000107 SEX: FEMALE DOSE GROUP: 5 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/29/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 175.5 GRAMS

OBSERVATIONS

NECROPSY

LIVER :
-MOTTLED, SLIGHT; ALL LOBES

PANCREAS :
-DARK, MODERATE

GENERAL INFORMATION :
>COMMENT:>POST FIX OBS: LUNG - PALE FOCUS: LEFT LOBE

HISTOPATHOLOGY

MUSCLE :
-MYOPATHY, QUADRICEPS MUSCLE,-MINIMAL

LIVER :
-AGONAL CONGESTION/HAEMORRHAGE,-PRESENT
-HEPATOCYTE VACUOLATION,-MINIMAL
-INFLAMMATORY CELL FOCI,-MINIMAL

SPLEEN :
-PIGMENT,-SLIGHT

PANCREAS :
-DEGRANULATION,-MINIMAL
-AGONAL CONGESTION/HAEMORRHAGE,-PRESENT

UTERUS :
-DIOESTRUS,-PRESENT

THYMUS :
-CYST,-PRESENT

LUNG :
-FOAMY HISTIOCYTES,-MINIMAL

HEART :
-MYOCARDIAL DEGENERATION/NECROSIS,-SLIGHT

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Appendix 10

Individual animal pathology data

Test article	Control	[			] .
Group	1	2	3	4	5 .
Level (ppm)	0	100	500	2500	5000 .

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STUDY NUMBER: 0535101

ANIMAL NUMBER: 000107 SEX: FEMALE DOSE GROUP: 5 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/29/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 175.5 GRAMS

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
EYE, OPTIC NERVE, SKIN + SUBCUTIS, MAMMARY GLAND, FEMUR + MARROW, STERNUM + MARROW, SCIATIC NERVE, MESENTERIC LN, STOMACH, DUODENUM, JEJUNUM, ILEUM, CAECUM, COLON, RECTUM, ADRENAL, KIDNEY, OVARY, URINARY BLADDER, VAGINA, SALIVARY GLAND, MANDIBULAR LN, AORTA, TRACHEA, OESOPHAGUS, THYROID, PARATHYROID, PITUITARY, BRAIN, SPINAL CORD

Appendix 10

Individual animal pathology data

Test article	Control	[			] .
Group	1	2	3	4	5 .
Level (ppm)	0	100	500	2500	5000 .

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STUDY NUMBER: 0535101

ANIMAL NUMBER: 000108 SEX: FEMALE DOSE GROUP: 5 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/30/03 STUDY DAY OF DEATH: 97 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 193.8 GRAMS

OBSERVATIONS

NECROPSY

OVARY :
-LARGE, MODERATE; LEFT

UTERUS :
-DISTENSION, MODERATE; BILATERAL
-RED, MODERATELY SEVERE; LEFT

TAIL :
-KINKED; NEAR TIP

HISTOPATHOLOGY

MUSCLE :
-MYOPATHY, OTHER MUSCLE,-SLIGHT
-MYOPATHY, QUADRICEPS MUSCLE,-MINIMAL
>NOTE:>IN TISSUE PROVIDED IN SECTION OF THYROID AND STERNUM.

LIVER :
-HEPATOCYTE VACUOLATION,-MINIMAL
-INFLAMMATORY CELL FOCI,-MINIMAL

SPLEEN :
-PIGMENT,-MINIMAL

PANCREAS :
-DEGRANULATION,-MINIMAL

OVARY :
-OESTROUS CYCLE,-PRESENT

UTERUS :
-PRO-OESTRUS,-PRESENT
-AGONAL CONGESTION/HAEMORRHAGE,-PRESENT

MANDIBULAR LN :
-LYMPHOID HYPERPLASIA,-MINIMAL

THYMUS :
-EPITHELIAL HYPERPLASIA,-MINIMAL

LUNG :
-FOAMY HISTIOCYTES,-MINIMAL

Appendix 10

Individual animal pathology data

Test article	Control		[		] .
Group	1	2	3	4	5 .
Level (ppm)	0	100	500	2500	5000 .

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DRAFT

STUDY NUMBER: 0535101

ANIMAL NUMBER: 000108 SEX: FEMALE DOSE GROUP: 5 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/30/03 STUDY DAY OF DEATH: 97 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 193.8 GRAMS

O B S E R V A T I O N S (CONTINUED)

NECROPSY	HISTOPATHOLOGY
	HEART : -MYOCARDIAL DEGENERATION/NECROSIS,-SLIGHT
	THYROID : -CYST,-PRESENT -C-CELL HYPERPLASIA,-MINIMAL
	TAIL : -FRACTURE/DISLOCATION,-PRESENT

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
EYE, OPTIC NERVE, SKIN + SUBCUTIS, MAMMARY GLAND, FEMUR + MARROW, STERNUM + MARROW, SCIATIC NERVE, MESENTERIC LN, STOMACH, DUODENUM, JEJUNUM, ILEUM, CAECUM, COLON, RECTUM, ADRENAL, KIDNEY, URINARY BLADDER, VAGINA, SALIVARY GLAND, AORTA, TRACHEA, OESOPHAGUS, PARATHYROID, PITUITARY, BRAIN, SPINAL CORD

Appendix 10

Individual animal pathology data

Test article	Control	[			] .
Group	1	2	3	4	5 .
Level (ppm)	0	100	500	2500	5000 .

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STUDY NUMBER: 0535101

ANIMAL NUMBER: 000109 SEX: FEMALE DOSE GROUP: 5 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/30/03 STUDY DAY OF DEATH: 97 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 197.8 GRAMS

O B S E R V A T I O N S

NECROPSY

LIVER :
-MOTTLED, SLIGHT; ALL LOBES

HISTOPATHOLOGY

MUSCLE :
-MYOPATHY, OTHER MUSCLE,-MINIMAL
>NOTE:>PREDOMINANTLY IN TISSUE PROVIDED IN SECTION OF THYROID.

LIVER :
-AGONAL CONGESTION/HAEMORRHAGE,-PRESENT
-HEPATOCYTE VACUOLATION,-SLIGHT
-INFLAMMATORY CELL FOCI,-MINIMAL
-CENTRILOBULAR HYPERTROPHY/EOSINOPHILIA,-MINIMAL

SPLEEN :
-PIGMENT,-SLIGHT

PANCREAS :
-DEGRANULATION,-MINIMAL

KIDNEY :
-HYDRONEPHROSIS,-MINIMAL
-FOCAL NEPHROPATHY,-MINIMAL
-PELVIC MINERALISATION,-MINIMAL

UTERUS :
-PRO-OESTRUS,-PRESENT

HEART :
-MYOCARDIAL DEGENERATION/NECROSIS,-MINIMAL

Appendix 10

Individual animal pathology data

Test article	Control		[		] .
Group	1	2	3	4	5 .
Level (ppm)	0	100	500	2500	5000 .

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DRAFT

STUDY NUMBER: 0535101

ANIMAL NUMBER: 000109 SEX: FEMALE DOSE GROUP: 5 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/30/03 STUDY DAY OF DEATH: 97 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 197.8 GRAMS

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
EYE, OPTIC NERVE, SKIN + SUBCUTIS, MAMMARY GLAND, FEMUR + MARROW, STERNUM + MARROW, SCIATIC NERVE, MESENTERIC LN, STOMACH, DUODENUM, JEJUNUM, ILEUM, CAECUM, COLON, RECTUM, ADRENAL, OVARY, URINARY BLADDER, VAGINA, SALIVARY GLAND, MANDIBULAR LN, THYMUS, LUNG, AORTA, TRACHEA, OESOPHAGUS, THYROID, PARATHYROID, PITUITARY, BRAIN, SPINAL CORD

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Appendix 10

Individual animal pathology data

Test article	Control	[			] .
Group	1	2	3	4	5 .
Level (ppm)	0	100	500	2500	5000 .

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STUDY NUMBER: 0535101

ANIMAL NUMBER: 000110 SEX: FEMALE DOSE GROUP: 5 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/30/03 STUDY DAY OF DEATH: 97 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 187.7 GRAMS

OBSERVATIONS

NECROPSY

LIVER :
-PALE, SLIGHT; ALL LOBES

PANCREAS :
-DARK, MODERATE

CAECUM :
-INJECTION LESION

ADRENAL :
-LARGE, SLIGHT; BILATERAL

TAIL :
-KINKED; NEAR END

HISTOPATHOLOGY

MUSCLE :
-MYOPATHY, OTHER MUSCLE,-SLIGHT
>NOTE:>IN TISSUE PROVIDED IN SECTION OF STERNUM AND THYROID.

LIVER :
-HEPATOCYTE VACUOLATION,-SLIGHT
-INFLAMMATORY CELL FOCI,-MINIMAL

SPLEEN :
-PIGMENT,-MINIMAL

PANCREAS :
-DEGRANULATION,-SLIGHT

STOMACH :
-EROSION/ULCER,-MINIMAL

CAECUM :
-BARBITURATE LYSIS,-PRESENT

ADRENAL :
-AGONAL CONGESTION/HAEMORRHAGE,-PRESENT

KIDNEY :
-PELVIC MINERALISATION,-MINIMAL

UTERUS :
-DIOESTRUS,-PRESENT

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Appendix 10

Individual animal pathology data

Test article	Control	[			] .
Group	1	2	3	4	5 .
Level (ppm)	0	100	500	2500	5000 .

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DRAFT

STUDY NUMBER: 0535101

ANIMAL NUMBER: 000110 SEX: FEMALE DOSE GROUP: 5 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/30/03 STUDY DAY OF DEATH: 97 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 187.7 GRAMS

O B S E R V A T I O N S (CONTINUED)

NECROPSY	HISTOPATHOLOGY
	LUNG : -FOAMY HISTIOCYTES,-MINIMAL -PIGMENTED HISTIOCYTES,-MINIMAL -INFLAMMATORY CELL FOCI,-MINIMAL HEART : -MYOCARDIAL DEGENERATION/NECROSIS,-MODERATE TAIL : -FRACTURE/DISLOCATION,-PRESENT

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
EYE, OPTIC NERVE, SKIN + SUBCUTIS, MAMMARY GLAND, FEMUR + MARROW, STERNUM + MARROW, SCIATIC NERVE, MESENTERIC LN, DUODENUM, JEJUNUM, ILEUM, COLON, RECTUM, OVARY, URINARY BLADDER, VAGINA, SALIVARY GLAND, MANDIBULAR LN, THYMUS, AORTA, TRACHEA, OESOPHAGUS, THYROID, PARATHYROID, PITUITARY, BRAIN, SPINAL CORD

Appendix 10

Individual animal pathology data

Test article	Control		[		] .
Group	1	2	3	4	5 .
Level (ppm)	0	100	500	2500	5000 .

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STUDY NUMBER: 0535101

ANIMAL NUMBER: 000111 SEX: FEMALE DOSE GROUP: 5 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/30/03 STUDY DAY OF DEATH: 97 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 193.0 GRAMS

OBSERVATIONS

NECROPSY	HISTOPATHOLOGY
ANIMAL : -NOT REMARKABLE	MUSCLE : -MYOPATHY, OTHER MUSCLE,-MINIMAL >NOTE:>IN TISSUE PROVIDED IN SECTION OF THYROID. LIVER : -HEPATOCYTE VACUOLATION,-MINIMAL -INFLAMMATORY CELL FOCI,-MINIMAL SPLEEN : -PIGMENT,-MINIMAL PANCREAS : -DEGRANULATION,-MINIMAL UTERUS : -DIOESTRUS,-PRESENT HEART : -MYOCARDIAL DEGENERATION/NECROSIS,-MINIMAL PARATHYROID : >UNREMARKABLE >NOTE:>ONE SAMPLE.

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Appendix 10

Individual animal pathology data

Test article	Control		[		] .
Group	1	2	3	4	5 .
Level (ppm)	0	100	500	2500	5000 .

ANIMAL NUMBER: 000111 SEX: FEMALE DOSE GROUP: 5 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/30/03 STUDY DAY OF DEATH: 97 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 193.0 GRAMS

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
EYE, OPTIC NERVE, SKIN + SUBCUTIS, MAMMARY GLAND, FEMUR + MARROW, STERNUM + MARROW, SCIATIC NERVE, MESENTERIC LN, STOMACH, DUODENUM, JEJUNUM, ILEUM, CAECUM, COLON, RECTUM, ADRENAL, KIDNEY, OVARY, URINARY BLADDER, VAGINA, SALIVARY GLAND, MANDIBULAR LN, THYMUS, LUNG, AORTA, TRACHEA, OESOPHAGUS, THYROID, PITUITARY, BRAIN, SPINAL CORD

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Appendix 10

Individual animal pathology data

Test article	Control		[		] .
Group	1	2	3	4	5 .
Level (ppm)	0	100	500	2500	5000 .

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STUDY NUMBER: 0535101

ANIMAL NUMBER: 000112 SEX: FEMALE DOSE GROUP: 5 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/30/03 STUDY DAY OF DEATH: 97 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 172.3 GRAMS

OBSERVATIONS

NECROPSY

ANIMAL :
-NOT REMARKABLE

HISTOPATHOLOGY

OPTIC NERVE :
-NEUROPATHY,-SLIGHT

MUSCLE :
-MYOPATHY, OTHER MUSCLE,-MINIMAL
>NOTE:>IN TISSUE PROVIDED IN SECTION OF THYROID.

LIVER :
-HEPATOCYTE VACUOLATION,-MINIMAL
-INFLAMMATORY CELL FOCI,-MINIMAL
-SINGLE CELL NECROSIS,-MINIMAL

SPLEEN :
-PIGMENT,-SLIGHT

UTERUS :
-METOESTRUS,-PRESENT

HEART :
-MYOCARDIAL DEGENERATION/NECROSIS,-MINIMAL

PARATHYROID :
>UNREMARKABLE
>NOTE:>ONE SAMPLE.

Appendix 10

Individual animal pathology data

Test article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

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DRAFT

STUDY NUMBER: 0535101

ANIMAL NUMBER: 000112 SEX: FEMALE DOSE GROUP: 5 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/30/03 STUDY DAY OF DEATH: 97 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 172.3 GRAMS

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
EYE, SKIN + SUBCUTIS, MAMMARY GLAND, FEMUR + MARROW, STERNUM + MARROW, SCIATIC NERVE, PANCREAS, MESENTERIC LN, STOMACH, DUODENUM, JEJUNUM, ILEUM, CAECUM, COLON, RECTUM, ADRENAL, KIDNEY, OVARY, URINARY BLADDER, VAGINA, SALIVARY GLAND, MANDIBULAR LN, THYMUS, LUNG, AORTA, TRACHEA, OESOPHAGUS, THYROID, PITUITARY, BRAIN, SPINAL CORD

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Appendix 10

Individual animal pathology data

Test article	Control		[		] .
Group	1	2	3	4	5 .
Level (ppm)	0	100	500	2500	5000 .

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STUDY NUMBER: 0535101

ANIMAL NUMBER: 000113 SEX: FEMALE DOSE GROUP: 5 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/30/03 STUDY DAY OF DEATH: 97 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 215.0 GRAMS

OBSERVATIONS

NECROPSY

PANCREAS :
-DARK, SLIGHT

STOMACH :
-PALE, MODERATE; MUCOSAL SURFACE, FUNDUS REGION

HISTOPATHOLOGY

MUSCLE :
-MYOPATHY, OTHER MUSCLE,-MINIMAL
>NOTE:>PREDOMINANTLY IN TISSUE PROVIDED IN SECTION OF THYROID.

LIVER :
-HEPATOCYTE VACUOLATION,-MINIMAL
-INFLAMMATORY CELL FOCI,-MINIMAL
-CENTRILOBULAR HYPERTROPHY/EOSINOPHILIA,-MINIMAL

SPLEEN :
-PIGMENT,-SLIGHT

PANCREAS :
-AGONAL CONGESTION/HAEMORRHAGE,-PRESENT

STOMACH :
>UNREMARKABLE
>NOTE:>NO MICROSCOPIC CORRELATION WITH NECROPSY.

UTERUS :
-DIOESTRUS,-PRESENT

THYMUS :
-CYST,-PRESENT

HEART :
-MYOCARDIAL DEGENERATION/NECROSIS,-MINIMAL

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Appendix 10

Individual animal pathology data

Test article	Control		[		] .
Group	1	2	3	4	5 .
Level (ppm)	0	100	500	2500	5000 .

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STUDY NUMBER: 0535101

ANIMAL NUMBER: 000113 SEX: FEMALE DOSE GROUP: 5 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/30/03 STUDY DAY OF DEATH: 97 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 215.0 GRAMS

O B S E R V A T I O N S (CONTINUED)

NECROPSY	HISTOPATHOLOGY
	THYROID : -ECTOPIC THYMUS,-PRESENT PARATHYROID : >UNREMARKABLE >NOTE:>ONE SAMPLE.

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
EYE, OPTIC NERVE, SKIN + SUBCUTIS, MAMMARY GLAND, FEMUR + MARROW, STERNUM + MARROW, SCIATIC NERVE, MESENTERIC LN, DUODENUM, JEJUNUM, ILEUM, CAECUM, COLON, RECTUM, ADRENAL, KIDNEY, OVARY, URINARY BLADDER, VAGINA, SALIVARY GLAND, MANDIBULAR LN, LUNG, AORTA, TRACHEA, OESOPHAGUS, PITUITARY, BRAIN, SPINAL CORD

Appendix 10

Individual animal pathology data

Test article	Control	[			] .
Group	1	2	3	4	5 .
Level (ppm)	0	100	500	2500	5000 .

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STUDY NUMBER: 0535101

ANIMAL NUMBER: 000114 SEX: FEMALE DOSE GROUP: 5 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/30/03 STUDY DAY OF DEATH: 97 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 186.2 GRAMS

OBSERVATIONS

NECROPSY

LIVER :
-PALE, SLIGHT; ALL LOBES

ADRENAL :
-LARGE, SLIGHT; BILATERAL

THYMUS :
-LARGE, SLIGHT; BILATERAL

LUNG :
-PALE, SLIGHT; ALL LOBES ON PERIPHERY

HISTOPATHOLOGY

MUSCLE :
-MYOPATHY, QUADRICEPS MUSCLE,-MINIMAL

LIVER :
-HEPATOCYTE VACUOLATION,-SLIGHT
-INFLAMMATORY CELL FOCI,-MINIMAL
-CENTRILOBULAR HYPERTROPHY/EOSINOPHILIA,-MINIMAL

SPLEEN :
-PIGMENT,-SLIGHT

PANCREAS :
-DEGRANULATION,-MINIMAL

ADRENAL :
>UNREMARKABLE
>NOTE:>NO MICROSCOPIC CORRELATION WITH NECROPSY.

UTERUS :
-OESTRUS,-PRESENT

THYMUS :
-EPITHELIAL HYPERPLASIA,-MINIMAL
>NOTE:>OTHERWISE UNREMARKABLE.

LUNG :
>UNREMARKABLE
>NOTE:>NO MICROSCOPIC CORRELATION WITH NECROPSY.

Appendix 10

Individual animal pathology data

Test article	Control	[			] .
Group	1	2	3	4	5 .
Level (ppm)	0	100	500	2500	5000 .

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DRAFT

STUDY NUMBER: 0535101

ANIMAL NUMBER: 000114 SEX: FEMALE DOSE GROUP: 5 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/30/03 STUDY DAY OF DEATH: 97 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 186.2 GRAMS

O B S E R V A T I O N S (CONTINUED)

NECROPSY	HISTOPATHOLOGY
	HEART : -MYOCARDIAL DEGENERATION/NECROSIS,-MINIMAL THYROID : -CYST,-PRESENT

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
EYE, OPTIC NERVE, SKIN + SUBCUTIS, MAMMARY GLAND, FEMUR + MARROW, STERNUM + MARROW, SCIATIC NERVE, MESENTERIC LN, STOMACH, DUODENUM, JEJUNUM, ILEUM, CAECUM, COLON, RECTUM, KIDNEY, OVARY, URINARY BLADDER, VAGINA, SALIVARY GLAND, MANDIBULAR LN, AORTA, TRACHEA, OESOPHAGUS, PARATHYROID, PITUITARY, BRAIN, SPINAL CORD

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Appendix 10

Individual animal pathology data

Test article	Control	[			] .
Group	1	2	3	4	5 .
Level (ppm)	0	100	500	2500	5000 .

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STUDY NUMBER: 0535101

ANIMAL NUMBER: 000115 SEX: FEMALE DOSE GROUP: 5 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/30/03 STUDY DAY OF DEATH: 97 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 174.6 GRAMS

OBSERVATIONS

NECROPSY

LIVER :
-PALE, SLIGHT; ALL LOBES

PANCREAS :
-DARK, SLIGHT

URINARY BLADDER :
-DISTENSION, SLIGHT

HISTOPATHOLOGY

MUSCLE :
-MYOPATHY, OTHER MUSCLE,-MINIMAL
>NOTE:>PREDOMINANTLY IN TISSUE PROVIDED IN SECTION OF THYROID.

LIVER :
-HEPATOCYTE VACUOLATION,-SLIGHT
-INFLAMMATORY CELL FOCI,-MINIMAL
-SINGLE CELL NECROSIS,-MINIMAL
-CENTRILOBULAR HYPERTROPHY/EOSINOPHILIA,-MINIMAL

SPLEEN :
-PIGMENT,-MINIMAL

PANCREAS :
-DEGRANULATION,-SLIGHT

CAECUM :
>UNREMARKABLE
>NOTE:>TISSUE DAMAGED.

URINARY BLADDER :
-BARBITURATE LYSIS,-PRESENT

UTERUS :
-DIOESTRUS,-PRESENT

LUNG :
-FOAMY HISTIOCYTES,-MINIMAL

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Appendix 10

Individual animal pathology data

Test article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

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STUDY NUMBER: 0535101

ANIMAL NUMBER: 000115 SEX: FEMALE DOSE GROUP: 5 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/30/03 STUDY DAY OF DEATH: 97 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 174.6 GRAMS

O B S E R V A T I O N S (CONTINUED)

NECROPSY	HISTOPATHOLOGY
	HEART : -MYOCARDIAL DEGENERATION/NECROSIS,-MINIMAL

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
EYE, OPTIC NERVE, SKIN + SUBCUTIS, MAMMARY GLAND, FEMUR + MARROW, STERNUM + MARROW, SCIATIC NERVE, MESENTERIC LN, STOMACH, DUODENUM, JEJUNUM, ILEUM, COLON, RECTUM, ADRENAL, KIDNEY, OVARY, VAGINA, SALIVARY GLAND, MANDIBULAR LN, THYMUS, AORTA, TRACHEA, OESOPHAGUS, THYROID, PARATHYROID, PITUITARY, BRAIN, SPINAL CORD

Appendix 10

Individual animal pathology data

Test article	Control	[			] .
Group	1	2	3	4	5 .
Level (ppm)	0	100	500	2500	5000 .

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STUDY NUMBER: 0535101

ANIMAL NUMBER: 000116 SEX: FEMALE DOSE GROUP: 5 SACRIFICE STATUS: SCHEDULED, FIRST POST-RECOV SAC
DATE OF DEATH: 10/24/03 STUDY DAY OF DEATH: 121 STUDY WEEK OF DEATH: 18 TERMINAL BODY WEIGHT: 222.2 GRAMS

OBSERVATIONS

NECROPSY	HISTOPATHOLOGY
ANIMAL : -NOT REMARKABLE	LIVER : -INFLAMMATORY CELL FOCI,-MINIMAL -SINGLE CELL NECROSIS,-MINIMAL HEART : -MYOCARDIAL DEGENERATION/NECROSIS,-MINIMAL

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
MUSCLE, PANCREAS

Appendix 10

Individual animal pathology data

Test article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

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STUDY NUMBER: 0535101

ANIMAL NUMBER: 000117 SEX: FEMALE DOSE GROUP: 5 SACRIFICE STATUS: SCHEDULED, FIRST POST-RECOV SAC
DATE OF DEATH: 10/24/03 STUDY DAY OF DEATH: 121 STUDY WEEK OF DEATH: 18 TERMINAL BODY WEIGHT: 257.1 GRAMS

O B S E R V A T I O N S

NECROPSY	HISTOPATHOLOGY
ANIMAL : -NOT REMARKABLE	LIVER : -INFLAMMATORY CELL FOCI,-MINIMAL

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
MUSCLE, PANCREAS, HEART

Appendix 10

Individual animal pathology data

Test article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

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STUDY NUMBER: 0535101

ANIMAL NUMBER: 000118 SEX: FEMALE DOSE GROUP: 5 SACRIFICE STATUS: SCHEDULED, FIRST POST-RECOV SAC
DATE OF DEATH: 10/24/03 STUDY DAY OF DEATH: 121 STUDY WEEK OF DEATH: 18 TERMINAL BODY WEIGHT: 216.2 GRAMS

O B S E R V A T I O N S

NECROPSY	HISTOPATHOLOGY
ANIMAL :	LIVER :
-NOT REMARKABLE	-INFLAMMATORY CELL FOCI,-MINIMAL

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
MUSCLE, PANCREAS, HEART

Appendix 10

Individual animal pathology data

Test article	Control		[		] .
Group	1	2	3	4	5 .
Level (ppm)	0	100	500	2500	5000 .

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DRAFT

STUDY NUMBER: 0535101

ANIMAL NUMBER: 000119 SEX: FEMALE DOSE GROUP: 5 SACRIFICE STATUS: SCHEDULED, FIRST POST-RECOV SAC
DATE OF DEATH: 10/24/03 STUDY DAY OF DEATH: 121 STUDY WEEK OF DEATH: 18 TERMINAL BODY WEIGHT: 189.1 GRAMS

O B S E R V A T I O N S

NECROPSY	HISTOPATHOLOGY
CAECUM : -INJECTION LESION	LIVER : -INFLAMMATORY CELL FOCI,-MINIMAL -SINGLE CELL NECROSIS,-MINIMAL CAECUM : -BARBITURATE LYSIS,-PRESENT HEART : -MYOCARDIAL DEGENERATION/NECROSIS,-MINIMAL

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
MUSCLE, PANCREAS

Appendix 10

Individual animal pathology data

Test article	Control		[		] .
Group	1	2	3	4	5 .
Level (ppm)	0	100	500	2500	5000 .

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DRAFT

STUDY NUMBER: 0535101

ANIMAL NUMBER: 000120 SEX: FEMALE DOSE GROUP: 5 SACRIFICE STATUS: SCHEDULED, FIRST POST-RECOV SAC
DATE OF DEATH: 10/24/03 STUDY DAY OF DEATH: 121 STUDY WEEK OF DEATH: 18 TERMINAL BODY WEIGHT: 228.8 GRAMS

O B S E R V A T I O N S

NECROPSY	HISTOPATHOLOGY
OVARY : -LARGE, SLIGHT; BILATERAL UTERUS : -DISTENSION, SLIGHT; BILATERAL	LIVER : -PIGMENT,-SLIGHT -HEPATOCYTE VACUOLATION,-MINIMAL -INFLAMMATORY CELL FOCI,-MINIMAL -PIGMENTED HISTIOCYTES,-MINIMAL OVARY : -OESTROUS CYCLE,-PRESENT UTERUS : -OESTRUS,-PRESENT

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
MUSCLE, PANCREAS, HEART

Appendix 11
Sponsor's certificate of test article analysis

Certificate of Analysis

Code Name :	[ ]
Chemical Name :	[ ]
CAS Number :	[ ]
Lot No. :	**RCT301**
Purity :	**99.1 %**
Color :	**White powder**
Method for Analysis :	**HPLC external standard method**
Date of Analysis :	**February 21, 2003**
Date of Synthesis :	**January 22, 2003**
Storage Condition :	**10℃ to 30℃**
Expiry Date :	**February 20, 2004**

This compound was synthesized and analyzed by [ ]

Date March 17, 2003

Signature [ ]

[ ]

[ ]

Appendix 12
Certificates of diet analysis

SDS
Special Diets Services

Special Quality Control Certificate of Analysis

PRODUCT: RM1 (E) SQC FG — BATCH NO: 2870

PREMIX BATCH NO: 12009,12072 — DATE OF MANUFACTURE: 06-FEB-03

Nutrient	Found Analysis		Contaminant	Found Analysis		Limit of Detection
Moisture	10.5	%	Fluoride	6	mg/kg	1.0 mg/kg
Crude Fat	3.4	%	Nitrate as NaNO3	14	mg/kg	1.0 mg/kg
Crude Protein	15.0	%	Nitrite as NaNO2	Non Detected	mg/kg	1.0 mg/kg
Crude Fibre	4.3	%	Lead	Non Detected	mg/kg	0.25 mg/kg
Ash	4.7	%	Arsenic	Non Detected	mg/kg	0.2 mg/kg
Calcium	0.78	%	Cadmium	0.05	mg/kg	0.05 mg/kg
Phosphorus	0.56	%	Mercury	Non Detected	mg/kg	0.01 mg/kg
Sodium	0.24	%	Selenium	0.14	mg/kg	0.05 mg/kg
Chloride	0.44	%				
Potassium	0.75	%				
Magnesium	0.18	%	Total Aflatoxins	Non Detected	mcg/kg	1 mcg/kg each of B1,B2,G1,G2
Iron	147	mg/kg				
Copper	8	mg/kg	Total P.C.B	Non Detected	mcg/kg	10.0 mcg/kg
Manganese	54	mg/kg	Total D.D.T	Non Detected	mcg/kg	10.0 mcg/kg
Zinc	45	mg/kg	Dieldrin	Non Detected	mcg/kg	10.0 mcg/kg
			Lindane	Non Detected	mcg/kg	10.0 mcg/kg
			Heptachlor	Non Detected	mcg/kg	10.0 mcg/kg
			Malathion	Non Detected	mcg/kg	20.0 mcg/kg
Vitamin A	4.1	iu/g	Total Viable Organisms x 1000	Non Detected	per grm	1000/g
Vitamin E	38	mg/kg				
Vitamin C		mg/kg	Mesophilic Spores x 100	Non Detected	per grm	100/g
			Salmonellae Species	Non Detected	per grm	Absent in 20 grm
			Entero Bacteriaceae	Non Detected	per grm	Absent in 20 grm
			Escherichia Coli	Non Detected	per grm	Absent in 20 grm
			Fungal Units	Non Detected	per grm	Absent in 20 grm
			Antibiotic Activity	Non Detected		

Signed .....
Dated 13/3/2003

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Special Quality Control Certificate of Analysis

PRODUCT: RM1 (E) SQC FG — BATCH NO: 2984

PREMIX BATCH NO: 13035 , 12094 — DATE OF MANUFACTURE: 31-MAR-03

Nutrient	Found Analysis		Contaminant	Found Analysis		Limit of Detection
Moisture	9.9	%	Fluoride	4	mg/kg	1.0 mg/kg
Crude Fat	2.9	%	Nitrate as NaNO3	44	mg/kg	1.0 mg/kg
Crude Protein	14.9	%	Nitrite as NaNO2	Non Detected	mg/kg	1.0 mg/kg
Crude Fibre	5.1	%	Lead	Non Detected	mg/kg	0.25 mg/kg
Ash	4.8	%	Arsenic	Non Detected	mg/kg	0.2 mg/kg
Calcium	0.78	%	Cadmium	0.09	mg/kg	0.05 mg/kg
Phosphorus	0.63	%	Mercury	Non Detected	mg/kg	0.01 mg/kg
Sodium	0.24	%	Selenium	0.14	mg/kg	0.05 mg/kg
Chloride	0.42	%				
Potassium	0.77	%				
Magnesium	0.18	%	Total Aflatoxins	Non Detected	mcg/kg	1 mcg/kg each of B1,B2,G1,G2
Iron	170	mg/kg				
Copper	8	mg/kg	Total P.C.B	Non Detected	mcg/kg	10.0 mcg/kg
Manganese	65	mg/kg	Total D.D.T	Non Detected	mcg/kg	10.0 mcg/kg
Zinc	37	mg/kg	Dieldrin	Non Detected	mcg/kg	10.0 mcg/kg
			Lindane	Non Detected	mcg/kg	10.0 mcg/kg
			Heptachlor	Non Detected	mcg/kg	10.0 mcg/kg
			Malathion	Non Detected	mcg/kg	20.0 mcg/kg
Vitamin A	5.3	iu/g	Total Viable Organisms x 1000	Non Detected	per grm	1000/g
Vitamin E	77	mg/kg				
Vitamin C		mg/kg	Mesophilic Spores x 100	Non Detected	per grm	100/g
			Salmonellae Species	Non Detected	per grm	Absent in 20 grm
			Entero Bacteriaceae	Non Detected	per grm	Absent in 20 grm
			Escherichia Coli	Non Detected	per grm	Absent in 20 grm
			Fungal Units	30	per grm	Absent in 20 grm
			Antibiotic Activity	Non Detected		

Signed D.A.Ryman

Dated 12.05.03

SDS
Special Diets Services

Special Quality Control Certificate of Analysis

PRODUCT: RM1 (E) SQC FG — BATCH NO: 3157

PREMIX BATCH NO: 13150,13159 — DATE OF MANUFACTURE: 18-JUN-03

Nutrient	Found Analysis		Contaminant	Found Analysis		Limit of Detection
Moisture	8.6	%	Fluoride	5	mg/kg	1.0 mg/kg
Crude Fat	3.3	%	Nitrate as NaNO3	7	mg/kg	1.0 mg/kg
Crude Protein	14.7	%	Nitrite as NaNO2	Non Detected	mg/kg	1.0 mg/kg
Crude Fibre	4.8	%	Lead	0.40	mg/kg	0.25 mg/kg
Ash	4.7	%	Arsenic	Non Detected	mg/kg	0.2 mg/kg
Calcium	0.81	%	Cadmium	Non Detected	mg/kg	0.05 mg/kg
Phosphorus	0.55	%	Mercury	0.03	mg/kg	0.01 mg/kg
Sodium	0.22	%	Selenium	0.19	mg/kg	0.05 mg/kg
Chloride	0.41	%				
Potassium	0.70	%				
Magnesium	0.16	%	Total Aflatoxins	Non Detected	mcg/kg	1 mcg/kg each of B1,B2,G1,G2
Iron	148	mg/kg				
Copper	9	mg/kg	Total P.C.B	Non Detected	mcg/kg	10.0 mcg/kg
Manganese	61	mg/kg	Total D.D.T	Non Detected	mcg/kg	10.0 mcg/kg
Zinc	35	mg/kg	Dieldrin	Non Detected	mcg/kg	10.0 mcg/kg
			Lindane	Non Detected	mcg/kg	10.0 mcg/kg
			Heptachlor	Non Detected	mcg/kg	10.0 mcg/kg
			Malathion	Non Detected	mcg/kg	20.0 mcg/kg
Vitamin A	5.0	iu/g	Total Viable Organisms x 1000	Non Detected	per grm	1000/g
Vitamin E	64	mg/kg				
Vitamin C		mg/kg	Mesophilic Spores x 100	1.25	per grm	100/g
			Salmonellae Species	Non Detected	per grm	Absent in 20 grm
			Entero Bacteriaceae	Non Detected	per grm	Absent in 20 grm
			Escherichia Coli	Non Detected	per grm	Absent in 20 grm
			Fungal Units	Non Detected	per grm	Absent in 20 grm
			Antibiotic Activity	Non Detected		

Signed R S Fludd
Dated 18/7/2003

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Draft Report

Study Title	[ ] 13 Week Oral (Dietary) Administration Toxicity Study in the Rat with a 4 Week Treatment-free Period
Data Requirement	OPPTS 870.3100
Author	
Sponsor	[ ]
Test facility	Covance Laboratories Ltd Otley Road, Harrogate North Yorkshire HG3 1PY ENGLAND
Covance Study Number	0535/101
Report Issued	December 2003
Volume Number	2 of 3
Page Number	416 of

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Appendix 13
Individual functional observation battery data – Groups 1, 2 and 3

Test Article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1M Animal number 1

	Week -1	Week 1	Week 2	Week 3	Week 4
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1M Animal number 1 (continued)

	Week -1	Week 1	Week 2	Week 3	Week 4
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	HYPERACTIVE	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	13	16	29	14	18
Number of faecal boli	2	0	0	0	0
Number of urine pools	0	0	0	0	3
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	NORMAL	N/A	N/A	N/A	N/A
Touch response	NORMAL	N/A	N/A	N/A	N/A
Tail pinch	NORMAL	N/A	N/A	N/A	N/A
Air righting ability	NORMAL	N/A	N/A	N/A	N/A
Pupillary response	NORMAL	N/A	N/A	N/A	N/A
Corneal tactile response	NORMAL	N/A	N/A	N/A	N/A
Auditory response	PRESENT	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	49	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	0.355	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	0.136	N/A	N/A	N/A	N/A

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1M Animal number 1 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1M Animal number 1 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	HYPERACTIVE	HYPERACTIVE	HYPERACTIVE	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	19	22	24	18	16
Number of faecal boli	0	0	0	0	0
Number of urine pools	1	0	0	13	6
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	N/A	N/A	N/A	N/A	N/A
Touch response	N/A	N/A	N/A	N/A	N/A
Tail pinch	N/A	N/A	N/A	N/A	N/A
Air righting ability	N/A	N/A	N/A	N/A	N/A
Pupillary response	N/A	N/A	N/A	N/A	N/A
Corneal tactile response	N/A	N/A	N/A	N/A	N/A
Auditory response	N/A	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	N/A	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1M Animal number 1 (continued)

	Week 10	Week 11	Week 12	Week 13
OBSERVATIONS BEFORE REMOVAL FROM CAGE:				
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:				
Ease of removal	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1M Animal number 1 (continued)

	Week 10	Week 11	Week 12	Week 13
OPEN FIELD OBSERVATIONS:				
Latency to first step (secs)	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	HYPERACTIVE	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	31	22	16	26
Number of faecal boli	0	0	0	0
Number of urine pools	12	14	21	13
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:				
Approach response	N/A	N/A	N/A	NORMAL
Touch response	N/A	N/A	N/A	NORMAL
Tail pinch	N/A	N/A	N/A	NO REACTION
Air righting ability	N/A	N/A	N/A	NORMAL
Pupillary response	N/A	N/A	N/A	NORMAL
Corneal tactile response	N/A	N/A	N/A	NORMAL
Auditory response	N/A	N/A	N/A	PRESENT
Hindlimb footsplay (mm)	N/A	N/A	N/A	107
Forelimb grip strength (kg)	N/A	N/A	N/A	1.051
Hindlimb grip strength (kg)	N/A	N/A	N/A	0.580

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1M Animal number 2

	Week -1	Week 1	Week 2	Week 3	Week 4
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1M Animal number 2 (continued)

	Week -1	Week 1	Week 2	Week 3	Week 4
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	11	10	31	18	22
Number of faecal boli	0	0	0	0	0
Number of urine pools	3	0	1	1	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	NORMAL	N/A	N/A	N/A	N/A
Touch response	NORMAL	N/A	N/A	N/A	N/A
Tail pinch	NORMAL	N/A	N/A	N/A	N/A
Air righting ability	NORMAL	N/A	N/A	N/A	N/A
Pupillary response	NORMAL	N/A	N/A	N/A	N/A
Corneal tactile response	NORMAL	N/A	N/A	N/A	N/A
Auditory response	PRESENT	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	54	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	0.500	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	0.136	N/A	N/A	N/A	N/A

Appendix 13
Individual functional observation battery data

Test Article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1M Animal number 2 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1M Animal number 2 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	21	12	17	20	21
Number of faecal boli	0	0	0	0	0
Number of urine pools	0	0	0	0	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	N/A	N/A	N/A	N/A	N/A
Touch response	N/A	N/A	N/A	N/A	N/A
Tail pinch	N/A	N/A	N/A	N/A	N/A
Air righting ability	N/A	N/A	N/A	N/A	N/A
Pupillary response	N/A	N/A	N/A	N/A	N/A
Corneal tactile response	N/A	N/A	N/A	N/A	N/A
Auditory response	N/A	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	N/A	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A

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Appendix 13
Individual functional observation battery data

Test Article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1M Animal number 2 (continued)

	Week 10	Week 11	Week 12	Week 13
OBSERVATIONS BEFORE REMOVAL FROM CAGE:				
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:				
Ease of removal	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1M Animal number 2 (continued)

	Week 10	Week 11	Week 12	Week 13
OPEN FIELD OBSERVATIONS:				
Latency to first step (secs)	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	26	21	16	21
Number of faecal boli	0	0	0	0
Number of urine pools	0	1	0	3
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:				
Approach response	N/A	N/A	N/A	NORMAL
Touch response	N/A	N/A	N/A	NORMAL
Tail pinch	N/A	N/A	N/A	NORMAL
Air righting ability	N/A	N/A	N/A	NORMAL
Pupillary response	N/A	N/A	N/A	NORMAL
Corneal tactile response	N/A	N/A	N/A	NORMAL
Auditory response	N/A	N/A	N/A	PRESENT
Hindlimb footsplay (mm)	N/A	N/A	N/A	78
Forelimb grip strength (kg)	N/A	N/A	N/A	1.349
Hindlimb grip strength (kg)	N/A	N/A	N/A	0.929

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1M Animal number 3

	Week -1	Week 1	Week 2	Week 3	Week 4
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1M Animal number 3 (continued)

	Week -1	Week 1	Week 2	Week 3	Week 4
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	12	11	17	17	16
Number of faecal boli	0	1	0	0	0
Number of urine pools	0	1	0	0	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	NORMAL	N/A	N/A	N/A	N/A
Touch response	NORMAL	N/A	N/A	N/A	N/A
Tail pinch	NORMAL	N/A	N/A	N/A	N/A
Air righting ability	NORMAL	N/A	N/A	N/A	N/A
Pupillary response	NORMAL	N/A	N/A	N/A	N/A
Corneal tactile response	NORMAL	N/A	N/A	N/A	N/A
Auditory response	PRESENT	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	84	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	0.423	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	0.095	N/A	N/A	N/A	N/A

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1M Animal number 3 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1M Animal number 3 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	18	18	18	11	21
Number of faecal boli	0	0	0	0	0
Number of urine pools	0	0	0	0	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	N/A	N/A	N/A	N/A	N/A
Touch response	N/A	N/A	N/A	N/A	N/A
Tail pinch	N/A	N/A	N/A	N/A	N/A
Air righting ability	N/A	N/A	N/A	N/A	N/A
Pupillary response	N/A	N/A	N/A	N/A	N/A
Corneal tactile response	N/A	N/A	N/A	N/A	N/A
Auditory response	N/A	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	N/A	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1M Animal number 3 (continued)

	Week 10	Week 11	Week 12	Week 13
OBSERVATIONS BEFORE REMOVAL FROM CAGE:				
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:				
Ease of removal	EASY	EASY	EASY	EVASION
Ease of handling	EASY	EASY	EASY	RIGID IN HAND
Excessive vocalisation	ABSENT	ABSENT	ABSENT	PRESENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1M Animal number 3 (continued)

	Week 10	Week 11	Week 12	Week 13
OPEN FIELD OBSERVATIONS:				
Latency to first step (secs)	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	21	16	18	16
Number of faecal boli	0	0	0	0
Number of urine pools	1	0	1	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:				
Approach response	N/A	N/A	N/A	NORMAL
Touch response	N/A	N/A	N/A	NORMAL
Tail pinch	N/A	N/A	N/A	NORMAL
Air righting ability	N/A	N/A	N/A	NORMAL
Pupillary response	N/A	N/A	N/A	NORMAL
Corneal tactile response	N/A	N/A	N/A	NORMAL
Auditory response	N/A	N/A	N/A	PRESENT
Hindlimb footsplay (mm)	N/A	N/A	N/A	107
Forelimb grip strength (kg)	N/A	N/A	N/A	1.101
Hindlimb grip strength (kg)	N/A	N/A	N/A	0.646

Appendix 13
Individual functional observation battery data

Test Article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1M Animal number 4

	Week -1	Week 1	Week 2	Week 3	Week 4
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1M Animal number 4 (continued)

	Week -1	Week 1	Week 2	Week 3	Week 4
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	8	15	7	10	21
Number of faecal boli	0	0	0	0	0
Number of urine pools	0	0	0	0	4
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	NORMAL	N/A	N/A	N/A	N/A
Touch response	NORMAL	N/A	N/A	N/A	N/A
Tail pinch	NORMAL	N/A	N/A	N/A	N/A
Air righting ability	NORMAL	N/A	N/A	N/A	N/A
Pupillary response	NORMAL	N/A	N/A	N/A	N/A
Corneal tactile response	NORMAL	N/A	N/A	N/A	N/A
Auditory response	PRESENT	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	51	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	0.485	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	0.148	N/A	N/A	N/A	N/A

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1M Animal number 4 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1M Animal number 4 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	1	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	16	20	15	12	16
Number of faecal boli	0	0	0	0	0
Number of urine pools	1	4	4	15	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	N/A	N/A	N/A	N/A	N/A
Touch response	N/A	N/A	N/A	N/A	N/A
Tail pinch	N/A	N/A	N/A	N/A	N/A
Air righting ability	N/A	N/A	N/A	N/A	N/A
Pupillary response	N/A	N/A	N/A	N/A	N/A
Corneal tactile response	N/A	N/A	N/A	N/A	N/A
Auditory response	N/A	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	N/A	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A

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Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1M Animal number 4 (continued)

	Week 10	Week 11	Week 12	Week 13
OBSERVATIONS BEFORE REMOVAL FROM CAGE:				
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:				
Ease of removal	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1M Animal number 4 (continued)

	Week 10	Week 11	Week 12	Week 13
OPEN FIELD OBSERVATIONS:				
Latency to first step (secs)	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	20	18	15	22
Number of faecal boli	0	0	0	0
Number of urine pools	0	1	4	6
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:				
Approach response	N/A	N/A	N/A	NORMAL
Touch response	N/A	N/A	N/A	NORMAL
Tail pinch	N/A	N/A	N/A	NORMAL
Air righting ability	N/A	N/A	N/A	NORMAL
Pupillary response	N/A	N/A	N/A	NORMAL
Corneal tactile response	N/A	N/A	N/A	NORMAL
Auditory response	N/A	N/A	N/A	PRESENT
Hindlimb footsplay (mm)	N/A	N/A	N/A	123
Forelimb grip strength (kg)	N/A	N/A	N/A	1.246
Hindlimb grip strength (kg)	N/A	N/A	N/A	0.901

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1M Animal number 5

	Week -1	Week 1	Week 2	Week 3	Week 4
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1M Animal number 5 (continued)

	Week -1	Week 1	Week 2	Week 3	Week 4
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	1	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	PRESENT#	ABSENT	PRESENT##	ABSENT	PRESENT###
Number of rears	3	10	6	16	3
Number of faecal boli	0	0	0	0	0
Number of urine pools	0	0	2	0	1
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	NORMAL	N/A	N/A	N/A	N/A
Touch response	NORMAL	N/A	N/A	N/A	N/A
Tail pinch	NORMAL	N/A	N/A	N/A	N/A
Air righting ability	NORMAL	N/A	N/A	N/A	N/A
Pupillary response	NORMAL	N/A	N/A	N/A	N/A
Corneal tactile response	NORMAL	N/A	N/A	N/A	N/A
Auditory response	PRESENT	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	57	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	0.379	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	0.284	N/A	N/A	N/A	N/A

\# - animal stayed in same place in arena
- animal stayed in same section of arena for duration
- animal stayed at side of arena for 32 seconds

Appendix 13
Individual functional observation battery data

Test Article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1M Animal number 5 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	AGGRESSIVE	AGGRESSIVE
Ease of handling	EASY	EASY	EASY	DIFFICULT	RIGID IN HAND
Excessive vocalisation	ABSENT	ABSENT	ABSENT	PRESENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control		[	]	
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1M Animal number 5 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	HYPOACTIVE	HYPOACTIVE	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	PRESENT#	PRESENT##	PRESENT###
Number of rears	10	10	2	2	2
Number of faecal boli	0	0	0	0	0
Number of urine pools	0	1	0	1	3
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	N/A	N/A	N/A	N/A	N/A
Touch response	N/A	N/A	N/A	N/A	N/A
Tail pinch	N/A	N/A	N/A	N/A	N/A
Air righting ability	N/A	N/A	N/A	N/A	N/A
Pupillary response	N/A	N/A	N/A	N/A	N/A
Corneal tactile response	N/A	N/A	N/A	N/A	N/A
Auditory response	N/A	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	N/A	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A

- animal sat at side of arena for approximately 45 seconds
- animal sat in same section of arena for 40 seconds
- animal sat at side of arena for 1 minute and 20 seconds

Appendix 13
Individual functional observation battery data

Test Article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1M Animal number 5 (continued)

	Week 10	Week 11[1]	Week 12	Week 13
OBSERVATIONS BEFORE REMOVAL FROM CAGE:				
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:				
Ease of removal	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE

(1) Animal excluded from summary data in Week 11

Appendix 13
Individual functional observation battery data

Test Article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1M Animal number 5 (continued)

	Week 10	Week 11(1)	Week 12	Week 13
OPEN FIELD OBSERVATIONS:				
Latency to first step (secs)	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	HYPOACTIVE	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Other	PRESENT#	PRESENT##	ABSENT	ABSENT
Number of rears	3	2	3	2
Number of faecal boli	0	-###	0	0
Number of urine pools	0	-###	3	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:				
Approach response	N/A	N/A	N/A	NORMAL
Touch response	N/A	N/A	N/A	NORMAL
Tail pinch	N/A	N/A	N/A	NORMAL
Air righting ability	N/A	N/A	N/A	NORMAL
Pupillary response	N/A	N/A	N/A	NORMAL
Corneal tactile response	N/A	N/A	N/A	NORMAL
Auditory response	N/A	N/A	N/A	PRESENT
Hindlimb footsplay (mm)	N/A	N/A	N/A	85
Forelimb grip strength (kg)	N/A	N/A	N/A	1.146
Hindlimb grip strength (kg)	N/A	N/A	N/A	0.658

(1) Animal excluded from summary data in Week 11

\# - animal stayed at side of arena for 1 minute and 32 seconds
- animal stay in 1 quarter of the arena for 1 minute and 42 seconds
- omitted in error

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1M Animal number 6

	Week -1	Week 1	Week 2	Week 3	Week 4
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1M Animal number 6 (continued)

	Week -1	Week 1	Week 2	Week 3	Week 4
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	12	10	7	6	5
Number of faecal boli	0	0	0	0	0
Number of urine pools	0	0	0	0	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	NORMAL	N/A	N/A	N/A	N/A
Touch response	NORMAL	N/A	N/A	N/A	N/A
Tail pinch	NORMAL	N/A	N/A	N/A	N/A
Air righting ability	NORMAL	N/A	N/A	N/A	N/A
Pupillary response	NORMAL	N/A	N/A	N/A	N/A
Corneal tactile response	NORMAL	N/A	N/A	N/A	N/A
Auditory response	PRESENT	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	73	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	0.407	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	0.113	N/A	N/A	N/A	N/A

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1M Animal number 6 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EVASION	EASY	EASY	EVASION
Ease of handling	EASY	MODERATE DIFFICULTY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	PRESENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1M Animal number 6 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	HYPOACTIVE	HYPOACTIVE	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	PRESENT#	PRESENT##	PRESENT###
Number of rears	12	11	4	4	13
Number of faecal boli	0	0	0	0	0
Number of urine pools	0	0	0	1	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	N/A	N/A	N/A	N/A	N/A
Touch response	N/A	N/A	N/A	N/A	N/A
Tail pinch	N/A	N/A	N/A	N/A	N/A
Air righting ability	N/A	N/A	N/A	N/A	N/A
Pupillary response	N/A	N/A	N/A	N/A	N/A
Corneal tactile response	N/A	N/A	N/A	N/A	N/A
Auditory response	N/A	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	N/A	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A

\# - raised tail, animal stayed at side of arena for approximately 50 seconds
- animal sat in one section of the arena for 30 seconds then moved to another section and stayed there for 40 seconds
- raised tail

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Appendix 13
Individual functional observation battery data

Test Article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1M Animal number 6 (continued)

	Week 10	Week 11	Week 12	Week 13
OBSERVATIONS BEFORE REMOVAL FROM CAGE:				
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:				
Ease of removal	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1M Animal number 6 (continued)

	Week 10	Week 11	Week 12	Week 13
OPEN FIELD OBSERVATIONS:				
Latency to first step (secs)	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Other	PRESENT#	PRESENT##	ABSENT	PRESENT@
Number of rears	6	0	11	0
Number of faecal boli	0	-###	0	0
Number of urine pools	0	-###	0	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:				
Approach response	N/A	N/A	N/A	NORMAL
Touch response	N/A	N/A	N/A	NORMAL
Tail pinch	N/A	N/A	N/A	NORMAL
Air righting ability	N/A	N/A	N/A	NORMAL
Pupillary response	N/A	N/A	N/A	NORMAL
Corneal tactile response	N/A	N/A	N/A	NORMAL
Auditory response	N/A	N/A	N/A	PRESENT
Hindlimb footsplay (mm)	N/A	N/A	N/A	124
Forelimb grip strength (kg)	N/A	N/A	N/A	0.701
Hindlimb grip strength (kg)	N/A	N/A	N/A	0.716

\# - animal stayed in same quarter of arena for 1 minute 5 seconds
- animal stayed in 1 quarter of the arena for 1 minute and 52 seconds
- omitted in error
@ - animal sat in same section of arena for duration of test

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Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1M Animal number 7

	Week -1	Week 1	Week 2	Week 3	Week 4
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1M Animal number 7 (continued)

	Week -1	Week 1	Week 2	Week 3	Week 4
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	9	7	15	18	13
Number of faecal boli	4	0	0	0	0
Number of urine pools	8	9	0	2	6
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	NORMAL	N/A	N/A	N/A	N/A
Touch response	NORMAL	N/A	N/A	N/A	N/A
Tail pinch	NORMAL	N/A	N/A	N/A	N/A
Air righting ability	NORMAL	N/A	N/A	N/A	N/A
Pupillary response	NORMAL	N/A	N/A	N/A	N/A
Corneal tactile response	NORMAL	N/A	N/A	N/A	N/A
Auditory response	PRESENT	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	76	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	0.388	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	0.149	N/A	N/A	N/A	N/A

Appendix 13
Individual functional observation battery data

Test Article	Control		[	]	
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1M Animal number 7 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[	]		
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1M Animal number 7 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	11	22	10	15	18
Number of faecal boli	0	0	0	0	0
Number of urine pools	4	4	30	14	11
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	N/A	N/A	N/A	N/A	N/A
Touch response	N/A	N/A	N/A	N/A	N/A
Tail pinch	N/A	N/A	N/A	N/A	N/A
Air righting ability	N/A	N/A	N/A	N/A	N/A
Pupillary response	N/A	N/A	N/A	N/A	N/A
Corneal tactile response	N/A	N/A	N/A	N/A	N/A
Auditory response	N/A	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	N/A	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A

Appendix 13
Individual functional observation battery data

Test Article	Control		[	]	
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1M Animal number 7 (continued)

	Week 10	Week 11	Week 12	Week 13
OBSERVATIONS BEFORE REMOVAL FROM CAGE:				
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:				
Ease of removal	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1M Animal number 7 (continued)

	Week 10	Week 11	Week 12	Week 13
OPEN FIELD OBSERVATIONS:				
Latency to first step (secs)	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	21	14	14	21
Number of faecal boli	0	0	0	0
Number of urine pools	5	6	1	23
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:				
Approach response	N/A	N/A	N/A	NORMAL
Touch response	N/A	N/A	N/A	NORMAL
Tail pinch	N/A	N/A	N/A	NORMAL
Air righting ability	N/A	N/A	N/A	NORMAL
Pupillary response	N/A	N/A	N/A	NORMAL
Corneal tactile response	N/A	N/A	N/A	NORMAL
Auditory response	N/A	N/A	N/A	PRESENT
Hindlimb footsplay (mm)	N/A	N/A	N/A	109
Forelimb grip strength (kg)	N/A	N/A	N/A	1.350
Hindlimb grip strength (kg)	N/A	N/A	N/A	0.705

Appendix 13
Individual functional observation battery data

Test Article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1M Animal number 8

	Week -1	Week 1	Week 2	Week 3	Week 4
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control		[	]	
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1M Animal number 8 (continued)

	Week -1	Week 1	Week 2	Week 3	Week 4
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	1	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	HYPOACTIVE	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	PRESENT##	ABSENT	ABSENT	ABSENT
Number of rears	5	1	11	9	1
Number of faecal boli	0	0	0	0	0
Number of urine pools	0	0	0	0	2
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	NORMAL	N/A	N/A	N/A	N/A
Touch response	NORMAL	N/A	N/A	N/A	N/A
Tail pinch	NORMAL	N/A	N/A	N/A	N/A
Air righting ability	NORMAL	N/A	N/A	N/A	N/A
Pupillary response	NORMAL	N/A	N/A	N/A	N/A
Corneal tactile response	NORMAL	N/A	N/A	N/A	N/A
Auditory response	PRESENT	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	56	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	0.461	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	0.141	N/A	N/A	N/A	N/A

- animal sat by edge of arena in the same section for 2 minutes

Appendix 13
Individual functional observation battery data

Test Article	Control		[	]	
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1M Animal number 8 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	AGGRESSIVE
Ease of handling	EASY	EASY	EASY	EASY	DIFFICULT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	PRESENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1M Animal number 8 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	PRESENT#	ABSENT	ABSENT	ABSENT	PRESENT##
Number of rears	2	10	5	17	9
Number of faecal boli	0	0	0	0	0
Number of urine pools	0	0	0	0	4
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	N/A	N/A	N/A	N/A	N/A
Touch response	N/A	N/A	N/A	N/A	N/A
Tail pinch	N/A	N/A	N/A	N/A	N/A
Air righting ability	N/A	N/A	N/A	N/A	N/A
Pupillary response	N/A	N/A	N/A	N/A	N/A
Corneal tactile response	N/A	N/A	N/A	N/A	N/A
Auditory response	N/A	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	N/A	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A

\# - animal stayed in same quarter of arena for 32 seconds
- raised tail

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1M Animal number 8 (continued)

	Week 10	Week 11	Week 12	Week 13
OBSERVATIONS BEFORE REMOVAL FROM CAGE:				
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:				
Ease of removal	EVASION	EASY	EVASION	EASY
Ease of handling	EASY	EASY	EASY	RIGID IN HAND
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1M Animal number 8 (continued)

	Week 10	Week 11	Week 12	Week 13
OPEN FIELD OBSERVATIONS:				
Latency to first step (secs)	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	11	12	11	5
Number of faecal boli	0	0	0	0
Number of urine pools	0	2	0	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:				
Approach response	N/A	N/A	N/A	NORMAL
Touch response	N/A	N/A	N/A	NORMAL
Tail pinch	N/A	N/A	N/A	NORMAL
Air righting ability	N/A	N/A	N/A	NORMAL
Pupillary response	N/A	N/A	N/A	NORMAL
Corneal tactile response	N/A	N/A	N/A	NORMAL
Auditory response	N/A	N/A	N/A	PRESENT
Hindlimb footsplay (mm)	N/A	N/A	N/A	108
Forelimb grip strength (kg)	N/A	N/A	N/A	1.070
Hindlimb grip strength (kg)	N/A	N/A	N/A	0.668

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1M Animal number 9

	Week -1	Week 1	Week 2	Week 3	Week 4
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1M Animal number 9 (continued)

	Week -1	Week 1	Week 2	Week 3	Week 4
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	1	0	0	4	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	HYPOACTIVE	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	9	6	13	2	12
Number of faecal boli	1	0	0	0	0
Number of urine pools	0	0	2	0	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	NORMAL	N/A	N/A	N/A	N/A
Touch response	NORMAL	N/A	N/A	N/A	N/A
Tail pinch	NORMAL	N/A	N/A	N/A	N/A
Air righting ability	NORMAL	N/A	N/A	N/A	N/A
Pupillary response	NORMAL	N/A	N/A	N/A	N/A
Corneal tactile response	NORMAL	N/A	N/A	N/A	N/A
Auditory response	PRESENT	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	69	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	0.365	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	0.113	N/A	N/A	N/A	N/A

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Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1M Animal number 9 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control		[	]	
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1M Animal number 9 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	7	7	5	11	12
Number of faecal boli	0	0	0	0	0
Number of urine pools	0	0	2	1	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	N/A	N/A	N/A	N/A	N/A
Touch response	N/A	N/A	N/A	N/A	N/A
Tail pinch	N/A	N/A	N/A	N/A	N/A
Air righting ability	N/A	N/A	N/A	N/A	N/A
Pupillary response	N/A	N/A	N/A	N/A	N/A
Corneal tactile response	N/A	N/A	N/A	N/A	N/A
Auditory response	N/A	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	N/A	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A

Appendix 13
Individual functional observation battery data

Test Article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1M Animal number 9 (continued)

	Week 10	Week 11	Week 12	Week 13
OBSERVATIONS BEFORE REMOVAL FROM CAGE:				
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:				
Ease of removal	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1M Animal number 9 (continued)

	Week 10	Week 11	Week 12	Week 13
OPEN FIELD OBSERVATIONS:				
Latency to first step (secs)	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	6	6	14	14
Number of faecal boli	0	0	0	0
Number of urine pools	0	2	1	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:				
Approach response	N/A	N/A	N/A	NORMAL
Touch response	N/A	N/A	N/A	NORMAL
Tail pinch	N/A	N/A	N/A	NORMAL
Air righting ability	N/A	N/A	N/A	NORMAL
Pupillary response	N/A	N/A	N/A	NORMAL
Corneal tactile response	N/A	N/A	N/A	NORMAL
Auditory response	N/A	N/A	N/A	PRESENT
Hindlimb footsplay (mm)	N/A	N/A	N/A	123
Forelimb grip strength (kg)	N/A	N/A	N/A	1.032
Hindlimb grip strength (kg)	N/A	N/A	N/A	0.767

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1M Animal number 10

	Week -1	Week 1	Week 2	Week 3	Week 4
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1M Animal number 10 (continued)

	Week -1	Week 1	Week 2	Week 3	Week 4
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	1	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	HYPOACTIVE	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	8	8	6	2	6
Number of faecal boli	0	0	0	0	0
Number of urine pools	0	0	0	0	1
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	NORMAL	N/A	N/A	N/A	N/A
Touch response	NORMAL	N/A	N/A	N/A	N/A
Tail pinch	NORMAL	N/A	N/A	N/A	N/A
Air righting ability	NORMAL	N/A	N/A	N/A	N/A
Pupillary response	NORMAL	N/A	N/A	N/A	N/A
Corneal tactile response	NORMAL	N/A	N/A	N/A	N/A
Auditory response	PRESENT	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	74	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	0.408	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	0.138	N/A	N/A	N/A	N/A

Appendix 13
Individual functional observation battery data

Test Article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1M Animal number 10 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EVASION##	AGGRESSIVE	EVASION
Ease of handling	EASY	EASY	MODERATE DIFFICULTY	DIFFICULT	EASY
Excessive vocalisation	ABSENT	ABSENT	PRESENT	PRESENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

- aggressive

Appendix 13
Individual functional observation battery data

Test Article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1M Animal number 10 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	2	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	HYPOACTIVE	HYPOACTIVE	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	PRESENT#	PRESENT##	ABSENT
Number of rears	7	6	1	2	6
Number of faecal boli	0	0	0	0	0
Number of urine pools	0	0	0	0	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	N/A	N/A	N/A	N/A	N/A
Touch response	N/A	N/A	N/A	N/A	N/A
Tail pinch	N/A	N/A	N/A	N/A	N/A
Air righting ability	N/A	N/A	N/A	N/A	N/A
Pupillary response	N/A	N/A	N/A	N/A	N/A
Corneal tactile response	N/A	N/A	N/A	N/A	N/A
Auditory response	N/A	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	N/A	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A

- rapid respiration, animal sat at side of arena for 1 minute 40 seconds
- animal sat in same part of arena for 50 seconds

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Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1M Animal number 10 (continued)

	Week 10	Week 11	Week 12	Week 13
OBSERVATIONS BEFORE REMOVAL FROM CAGE:				
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:				
Ease of removal	EVASION	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1M Animal number 10 (continued)

	Week 10	Week 11	Week 12	Week 13
OPEN FIELD OBSERVATIONS:				
Latency to first step (secs)	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Other	PRESENT#	ABSENT	ABSENT	ABSENT
Number of rears	7	9	5	7
Number of faecal boli	0	0	0	0
Number of urine pools	1	1	0	0
Diarrhoea	ABSENT	-##	ABSENT	ABSENT
Polyuria	ABSENT	-##	ABSENT	ABSENT
OPEN FIELD TESTS:				
Approach response	N/A	N/A	N/A	NORMAL
Touch response	N/A	N/A	N/A	NORMAL
Tail pinch	N/A	N/A	N/A	NORMAL
Air righting ability	N/A	N/A	N/A	NORMAL
Pupillary response	N/A	N/A	N/A	NORMAL
Corneal tactile response	N/A	N/A	N/A	NORMAL
Auditory response	N/A	N/A	N/A	PRESENT
Hindlimb footsplay (mm)	N/A	N/A	N/A	113
Forelimb grip strength (kg)	N/A	N/A	N/A	1.048
Hindlimb grip strength (kg)	N/A	N/A	N/A	0.802

\# - animal stayed in same quarter of arena for full 2 minutes; urine pool cloudy
- omitted in error

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1M Animal number 11

	Week -1	Week 1	Week 2	Week 3	Week 4
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1M Animal number 11 (continued)

	Week -1	Week 1	Week 2	Week 3	Week 4
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	HYPOACTIVE	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	PRESENT##	ABSENT
Number of rears	14	7	11	4	7
Number of faecal boli	0	0	0	0	0
Number of urine pools	0	3	0	0	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	NORMAL	N/A	N/A	N/A	N/A
Touch response	NORMAL	N/A	N/A	N/A	N/A
Tail pinch	NORMAL	N/A	N/A	N/A	N/A
Air righting ability	NORMAL	N/A	N/A	N/A	N/A
Pupillary response	NORMAL	N/A	N/A	N/A	N/A
Corneal tactile response	NORMAL	N/A	N/A	N/A	N/A
Auditory response	PRESENT	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	72	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	0.619	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	0.144	N/A	N/A	N/A	N/A

- animal stayed in same quarter of arena for 1 minute 10 seconds

Appendix 13
Individual functional observation battery data

Test Article	Control		[	]	
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1M Animal number 11 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EVASION
Ease of handling	EASY	EASY	EASY	EASY	RIGID IN HAND
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

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Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1M Animal number 11 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	13	8	10	13	13
Number of faecal boli	0	0	0	0	0
Number of urine pools	0	0	0	0	1
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	N/A	N/A	N/A	N/A	N/A
Touch response	N/A	N/A	N/A	N/A	N/A
Tail pinch	N/A	N/A	N/A	N/A	N/A
Air righting ability	N/A	N/A	N/A	N/A	N/A
Pupillary response	N/A	N/A	N/A	N/A	N/A
Corneal tactile response	N/A	N/A	N/A	N/A	N/A
Auditory response	N/A	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	N/A	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1M Animal number 11 (continued)

	Week 10	Week 11	Week 12	Week 13
OBSERVATIONS BEFORE REMOVAL FROM CAGE:				
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:				
Ease of removal	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1M Animal number 11 (continued)

	Week 10	Week 11	Week 12	Week 13
OPEN FIELD OBSERVATIONS:				
Latency to first step (secs)	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Other	PRESENT#	PRESENT###	PRESENT@	ABSENT
Number of rears	12	9	12	12
Number of faecal boli	0	0	0	0
Number of urine pools	-##	0	0	1
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:				
Approach response	N/A	N/A	N/A	NORMAL
Touch response	N/A	N/A	N/A	NORMAL
Tail pinch	N/A	N/A	N/A	NORMAL
Air righting ability	N/A	N/A	N/A	NORMAL
Pupillary response	N/A	N/A	N/A	NORMAL
Corneal tactile response	N/A	N/A	N/A	NORMAL
Auditory response	N/A	N/A	N/A	PRESENT
Hindlimb footsplay (mm)	N/A	N/A	N/A	91
Forelimb grip strength (kg)	N/A	N/A	N/A	1.243
Hindlimb grip strength (kg)	N/A	N/A	N/A	0.726

\# - animal jumped onto rim of arena on 2 occasions
- omitted in error
- animal jumped on to the edge of the arena once
@ - animal jumped onto rim of arena on 2 occasions (for approximately 10 and 20 seconds respectively)

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1M Animal number 12

	Week -1	Week 1	Week 2	Week 3	Week 4
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1M Animal number 12 (continued)

	Week -1	Week 1	Week 2	Week 3	Week 4
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	6	4	12	9	14
Number of faecal boli	0	0	0	0	0
Number of urine pools	0	0	0	0	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	NORMAL	N/A	N/A	N/A	N/A
Touch response	NORMAL	N/A	N/A	N/A	N/A
Tail pinch	NORMAL	N/A	N/A	N/A	N/A
Air righting ability	NORMAL	N/A	N/A	N/A	N/A
Pupillary response	NORMAL	N/A	N/A	N/A	N/A
Corneal tactile response	NORMAL	N/A	N/A	N/A	N/A
Auditory response	PRESENT	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	70	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	0.417	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	0.174	N/A	N/A	N/A	N/A

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Appendix 13
Individual functional observation battery data

Test Article	Control	[	]		
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1M Animal number 12 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	FREEZES	EVASION	EVASION	EASY	EASY
Ease of handling	RIGID IN HAND	EASY	EASY	EASY	EASY
Excessive vocalisation	PRESENT	PRESENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1M Animal number 12 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	PRESENT##	ABSENT
Number of rears	10	6	10	5	2
Number of faecal boli	0	0	0	0	0
Number of urine pools	0	0	0	0	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	N/A	N/A	N/A	N/A	N/A
Touch response	N/A	N/A	N/A	N/A	N/A
Tail pinch	N/A	N/A	N/A	N/A	N/A
Air righting ability	N/A	N/A	N/A	N/A	N/A
Pupillary response	N/A	N/A	N/A	N/A	N/A
Corneal tactile response	N/A	N/A	N/A	N/A	N/A
Auditory response	N/A	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	N/A	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A

- animal sat at same side of arena for 1 minute

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Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1M Animal number 12 (continued)

	Week 10	Week 11	Week 12	Week 13
OBSERVATIONS BEFORE REMOVAL FROM CAGE:				
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:				
Ease of removal	EVASION	EVASION	EASY	EASY
Ease of handling	RIGID IN HAND	EASY	EASY	EASY
Excessive vocalisation	ABSENT	PRESENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1M Animal number 12 (continued)

	Week 10	Week 11	Week 12	Week 13
OPEN FIELD OBSERVATIONS:				
Latency to first step (secs)	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Other	PRESENT##	ABSENT	ABSENT	ABSENT
Number of rears	13	6	6	9
Number of faecal boli	0	0	0	0
Number of urine pools	0	0	2	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:				
Approach response	N/A	N/A	N/A	NORMAL
Touch response	N/A	N/A	N/A	NORMAL
Tail pinch	N/A	N/A	N/A	NORMAL
Air righting ability	N/A	N/A	N/A	NORMAL
Pupillary response	N/A	N/A	N/A	NORMAL
Corneal tactile response	N/A	N/A	N/A	NORMAL
Auditory response	N/A	N/A	N/A	PRESENT
Hindlimb footsplay (mm)	N/A	N/A	N/A	133
Forelimb grip strength (kg)	N/A	N/A	N/A	1.308
Hindlimb grip strength (kg)	N/A	N/A	N/A	0.879

- animal stayed in same quarter of arena for 37 seconds

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1M Animal number 13

	Week -1	Week 1	Week 2	Week 3	Week 4
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1M Animal number 13 (continued)

	Week -1	Week 1	Week 2	Week 3	Week 4
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	1	0	0	1
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	PRESENT##	ABSENT
Number of rears	17	5	10	15	10
Number of faecal boli	0	0	0	0	0
Number of urine pools	0	0	0	0	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	NORMAL	N/A	N/A	N/A	N/A
Touch response	NORMAL	N/A	N/A	N/A	N/A
Tail pinch	NORMAL	N/A	N/A	N/A	N/A
Air righting ability	NORMAL	N/A	N/A	N/A	N/A
Pupillary response	NORMAL	N/A	N/A	N/A	N/A
Corneal tactile response	NORMAL	N/A	N/A	N/A	N/A
Auditory response	PRESENT	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	59	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	0.411	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	0.228	N/A	N/A	N/A	N/A

- raised tail

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1M Animal number 13 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EVASION	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	PRESENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1M Animal number 13 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	1
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	HIGH STEPPING	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	SLIGHT	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	14	12	14	17	10
Number of faecal boli	0	0	0	0	0
Number of urine pools	0	0	0	2	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	N/A	N/A	N/A	N/A	N/A
Touch response	N/A	N/A	N/A	N/A	N/A
Tail pinch	N/A	N/A	N/A	N/A	N/A
Air righting ability	N/A	N/A	N/A	N/A	N/A
Pupillary response	N/A	N/A	N/A	N/A	N/A
Corneal tactile response	N/A	N/A	N/A	N/A	N/A
Auditory response	N/A	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	N/A	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A

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Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1M Animal number 13 (continued)

	Week 10	Week 11	Week 12	Week 13
OBSERVATIONS BEFORE REMOVAL FROM CAGE:				
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:				
Ease of removal	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control		[	]	
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1M Animal number 13 (continued)

	Week 10	Week 11	Week 12	Week 13
OPEN FIELD OBSERVATIONS:				
Latency to first step (secs)	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Other	PRESENT#	PRESENT#	PRESENT##	PRESENT###
Number of rears	14	18	16	10
Number of faecal boli	0	0	0	0
Number of urine pools	0	0	0	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:				
Approach response	N/A	N/A	N/A	NORMAL
Touch response	N/A	N/A	N/A	NORMAL
Tail pinch	N/A	N/A	N/A	NORMAL
Air righting ability	N/A	N/A	N/A	NORMAL
Pupillary response	N/A	N/A	N/A	NORMAL
Corneal tactile response	N/A	N/A	N/A	NORMAL
Auditory response	N/A	N/A	N/A	PRESENT
Hindlimb footsplay (mm)	N/A	N/A	N/A	99
Forelimb grip strength (kg)	N/A	N/A	N/A	1.345
Hindlimb grip strength (kg)	N/A	N/A	N/A	0.951

\# - animal junmped onto rim of arena on one occasion
- animal jumped onto rim of arena on one occasion for approximately 20 seconds
- animal jumped onto edge of arena twice

Appendix 13
Individual functional observation battery data

Test Article	Control	[		]	
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1M Animal number 14

	Week -1	Week 1	Week 2	Week 3	Week 4
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1M Animal number 14 (continued)

	Week -1	Week 1	Week 2	Week 3	Week 4
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	9	12	11	20	21
Number of faecal boli	0	0	0	0	0
Number of urine pools	0	0	0	0	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	NORMAL	N/A	N/A	N/A	N/A
Touch response	NORMAL	N/A	N/A	N/A	N/A
Tail pinch	NORMAL	N/A	N/A	N/A	N/A
Air righting ability	NORMAL	N/A	N/A	N/A	N/A
Pupillary response	NORMAL	N/A	N/A	N/A	N/A
Corneal tactile response	NORMAL	N/A	N/A	N/A	N/A
Auditory response	PRESENT	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	58	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	0.403	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	0.176	N/A	N/A	N/A	N/A

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Appendix 13
Individual functional observation battery data

Test Article	Control	[		]	
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1M Animal number 14 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1M Animal number 14 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	11	20	14	14	16
Number of faecal boli	0	0	0	0	0
Number of urine pools	0	0	0	0	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	N/A	N/A	N/A	N/A	N/A
Touch response	N/A	N/A	N/A	N/A	N/A
Tail pinch	N/A	N/A	N/A	N/A	N/A
Air righting ability	N/A	N/A	N/A	N/A	N/A
Pupillary response	N/A	N/A	N/A	N/A	N/A
Corneal tactile response	N/A	N/A	N/A	N/A	N/A
Auditory response	N/A	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	N/A	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A

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Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1M Animal number 14 (continued)

	Week 10	Week 11	Week 12	Week 13
OBSERVATIONS BEFORE REMOVAL FROM CAGE:				
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:				
Ease of removal	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control		[	]	
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1M Animal number 14 (continued)

	Week 10	Week 11	Week 12	Week 13
OPEN FIELD OBSERVATIONS:				
Latency to first step (secs)	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	20	26	36	22
Number of faecal boli	0	0	0	0
Number of urine pools	0	0	0	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:				
Approach response	N/A	N/A	N/A	NORMAL
Touch response	N/A	N/A	N/A	NORMAL
Tail pinch	N/A	N/A	N/A	NORMAL
Air righting ability	N/A	N/A	N/A	NORMAL
Pupillary response	N/A	N/A	N/A	NORMAL
Corneal tactile response	N/A	N/A	N/A	NORMAL
Auditory response	N/A	N/A	N/A	PRESENT
Hindlimb footsplay (mm)	N/A	N/A	N/A	97
Forelimb grip strength (kg)	N/A	N/A	N/A	1.030
Hindlimb grip strength (kg)	N/A	N/A	N/A	0.794

Appendix 13
Individual functional observation battery data

Test Article	Control		[	]	
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1M Animal number 15

	Week -1	Week 1	Week 2	Week 3	Week 4
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control		[	]	
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1M Animal number 15 (continued)

	Week -1	Week 1	Week 2	Week 3	Week 4
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	2	1	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	HYPOACTIVE	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	PRESENT#	PRESENT##	ABSENT	ABSENT
Number of rears	7	0	1	10	1
Number of faecal boli	0	0	0	0	0
Number of urine pools	2	2	0	1	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	NORMAL	N/A	N/A	N/A	N/A
Touch response	NORMAL	N/A	N/A	N/A	N/A
Tail pinch	NORMAL	N/A	N/A	N/A	N/A
Air righting ability	NORMAL	N/A	N/A	N/A	N/A
Pupillary response	NORMAL	N/A	N/A	N/A	N/A
Corneal tactile response	NORMAL	N/A	N/A	N/A	N/A
Auditory response	PRESENT	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	77	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	0.492	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	0.203	N/A	N/A	N/A	N/A

- animal sat in same section of arena for 2 minutes
- animal stayed in same section of arena for duration

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Appendix 13
Individual functional observation battery data

Test Article	Control	[		]	
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1M Animal number 15 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1M Animal number 15 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	2	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	PRESENT##	ABSENT
Number of rears	6	4	7	6	3
Number of faecal boli	0	0	0	0	0
Number of urine pools	0	0	0	0	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	N/A	N/A	N/A	N/A	N/A
Touch response	N/A	N/A	N/A	N/A	N/A
Tail pinch	N/A	N/A	N/A	N/A	N/A
Air righting ability	N/A	N/A	N/A	N/A	N/A
Pupillary response	N/A	N/A	N/A	N/A	N/A
Corneal tactile response	N/A	N/A	N/A	N/A	N/A
Auditory response	N/A	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	N/A	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A

- animal sat in same part of arena for 1 minute 14 seconds

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Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1M Animal number 15 (continued)

	Week 10	Week 11	Week 12	Week 13
OBSERVATIONS BEFORE REMOVAL FROM CAGE:				
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:				
Ease of removal	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control		[	]	
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1M Animal number 15 (continued)

	Week 10	Week 11	Week 12	Week 13
OPEN FIELD OBSERVATIONS:				
Latency to first step (secs)	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	12	10	13	13
Number of faecal boli	0	0	0	0
Number of urine pools	0	0	0	2
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:				
Approach response	N/A	N/A	N/A	NORMAL
Touch response	N/A	N/A	N/A	NORMAL
Tail pinch	N/A	N/A	N/A	NORMAL
Air righting ability	N/A	N/A	N/A	NORMAL
Pupillary response	N/A	N/A	N/A	NORMAL
Corneal tactile response	N/A	N/A	N/A	NORMAL
Auditory response	N/A	N/A	N/A	PRESENT
Hindlimb footsplay (mm)	N/A	N/A	N/A	124
Forelimb grip strength (kg)	N/A	N/A	N/A	1.122
Hindlimb grip strength (kg)	N/A	N/A	N/A	0.692

Appendix 13
Individual functional observation battery data

Test Article	Control		[	]	
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1F Animal number 61

	Week -1	Week 1	Week 2	Week 3	Week 4
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	PRESENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1F Animal number 61 (continued)

	Week -1	Week 1	Week 2	Week 3	Week 4
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	HIGH STEPPING	NORMAL	HIGH STEPPING	NORMAL
Gait type severity	NORMAL	SLIGHT	NORMAL	SLIGHT	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	20	18	28	22	36
Number of faecal boli	0	0	0	0	0
Number of urine pools	12	4	9	9	4
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	NORMAL	N/A	N/A	N/A	N/A
Touch response	NORMAL	N/A	N/A	N/A	N/A
Tail pinch	NORMAL	N/A	N/A	N/A	N/A
Air righting ability	NORMAL	N/A	N/A	N/A	N/A
Pupillary response	NORMAL	N/A	N/A	N/A	N/A
Corneal tactile response	NORMAL	N/A	N/A	N/A	N/A
Auditory response	PRESENT	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	75	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	0.677	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	0.258	N/A	N/A	N/A	N/A

Appendix 13
Individual functional observation battery data

Test Article	Control		[	]	
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1F Animal number 61 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1F Animal number 61 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	HIGH STEPPING	HIGH STEPPING	HIGH STEPPING	HIGH STEPPING	HIGH STEPPING
Gait type severity	MODERATE	MODERATE	SLIGHT	SLIGHT	SLIGHT
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	33	35	44	28	33
Number of faecal boli	0	0	0	0	0
Number of urine pools	0	1	1	0	2
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	N/A	N/A	N/A	N/A	N/A
Touch response	N/A	N/A	N/A	N/A	N/A
Tail pinch	N/A	N/A	N/A	N/A	N/A
Air righting ability	N/A	N/A	N/A	N/A	N/A
Pupillary response	N/A	N/A	N/A	N/A	N/A
Corneal tactile response	N/A	N/A	N/A	N/A	N/A
Auditory response	N/A	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	N/A	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A

Appendix 13
Individual functional observation battery data

Test Article	Control	[		]	
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1F Animal number 61 (continued)

	Week 10	Week 11	Week 12	Week 13
OBSERVATIONS BEFORE REMOVAL FROM CAGE:				
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:				
Ease of removal	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1F Animal number 61 (continued)

	Week 10	Week 11	Week 12	Week 13
OPEN FIELD OBSERVATIONS:				
Latency to first step (secs)	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	HIGH STEPPING	HIGH STEPPING	NORMAL	NORMAL
Gait type severity	SLIGHT	SLIGHT	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	28	25	22	22
Number of faecal boli	0	0	0	0
Number of urine pools	2	13	1	2
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:				
Approach response	N/A	N/A	N/A	NORMAL
Touch response	N/A	N/A	N/A	NORMAL
Tail pinch	N/A	N/A	N/A	NORMAL
Air righting ability	N/A	N/A	N/A	NORMAL
Pupillary response	N/A	N/A	N/A	NORMAL
Corneal tactile response	N/A	N/A	N/A	NORMAL
Auditory response	N/A	N/A	N/A	PRESENT
Hindlimb footsplay (mm)	N/A	N/A	N/A	84
Forelimb grip strength (kg)	N/A	N/A	N/A	0.994
Hindlimb grip strength (kg)	N/A	N/A	N/A	0.284

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Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1F Animal number 62

	Week -1	Week 1	Week 2	Week 3	Week 4
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control		[	]	
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1F Animal number 62 (continued)

	Week -1	Week 1	Week 2	Week 3	Week 4
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	1	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	23	4	25	21	13
Number of faecal boli	5	0	0	0	0
Number of urine pools	11	2	21	13	6
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	NORMAL	N/A	N/A	N/A	N/A
Touch response	NORMAL	N/A	N/A	N/A	N/A
Tail pinch	NORMAL	N/A	N/A	N/A	N/A
Air righting ability	NORMAL	N/A	N/A	N/A	N/A
Pupillary response	NORMAL	N/A	N/A	N/A	N/A
Corneal tactile response	NORMAL	N/A	N/A	N/A	N/A
Auditory response	PRESENT	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	73	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	0.525	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	0.356	N/A	N/A	N/A	N/A

Appendix 13
Individual functional observation battery data

Test Article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1F Animal number 62 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1F Animal number 62 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	HIGH STEPPING	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	SLIGHT	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	23	22	27	17	23
Number of faecal boli	0	0	0	0	0
Number of urine pools	13	9	11	12	13
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	N/A	N/A	N/A	N/A	N/A
Touch response	N/A	N/A	N/A	N/A	N/A
Tail pinch	N/A	N/A	N/A	N/A	N/A
Air righting ability	N/A	N/A	N/A	N/A	N/A
Pupillary response	N/A	N/A	N/A	N/A	N/A
Corneal tactile response	N/A	N/A	N/A	N/A	N/A
Auditory response	N/A	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	N/A	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1F Animal number 62 (continued)

	Week 10	Week 11	Week 12	Week 13
OBSERVATIONS BEFORE REMOVAL FROM CAGE:				
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:				
Ease of removal	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1F Animal number 62 (continued)

	Week 10	Week 11	Week 12	Week 13
OPEN FIELD OBSERVATIONS:				
Latency to first step (secs)	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	21	21	24	21
Number of faecal boli	0	0	0	0
Number of urine pools	7	6	5	9
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:				
Approach response	N/A	N/A	N/A	NORMAL
Touch response	N/A	N/A	N/A	NORMAL
Tail pinch	N/A	N/A	N/A	NORMAL
Air righting ability	N/A	N/A	N/A	NORMAL
Pupillary response	N/A	N/A	N/A	NORMAL
Corneal tactile response	N/A	N/A	N/A	NORMAL
Auditory response	N/A	N/A	N/A	PRESENT
Hindlimb footsplay (mm)	N/A	N/A	N/A	84
Forelimb grip strength (kg)	N/A	N/A	N/A	0.755
Hindlimb grip strength (kg)	N/A	N/A	N/A	0.498

Appendix 13
Individual functional observation battery data

Test Article	Control	[	]		
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1F Animal number 63

	Week -1	Week 1	Week 2	Week 3	Week 4
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1F Animal number 63 (continued)

	Week -1	Week 1	Week 2	Week 3	Week 4
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	3	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	HYPERACTIVE	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	42	27	34	24	28
Number of faecal boli	0	0	0	0	0
Number of urine pools	1	0	0	0	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	NORMAL	N/A	N/A	N/A	N/A
Touch response	NORMAL	N/A	N/A	N/A	N/A
Tail pinch	NORMAL	N/A	N/A	N/A	N/A
Air righting ability	NORMAL	N/A	N/A	N/A	N/A
Pupillary response	NORMAL	N/A	N/A	N/A	N/A
Corneal tactile response	NORMAL	N/A	N/A	N/A	N/A
Auditory response	PRESENT	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	55	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	0.480	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	0.232	N/A	N/A	N/A	N/A

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1F Animal number 63 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[		]	
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1F Animal number 63 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	31	27	35	33	36
Number of faecal boli	0	0	0	0	0
Number of urine pools	0	0	0	0	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	N/A	N/A	N/A	N/A	N/A
Touch response	N/A	N/A	N/A	N/A	N/A
Tail pinch	N/A	N/A	N/A	N/A	N/A
Air righting ability	N/A	N/A	N/A	N/A	N/A
Pupillary response	N/A	N/A	N/A	N/A	N/A
Corneal tactile response	N/A	N/A	N/A	N/A	N/A
Auditory response	N/A	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	N/A	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1F Animal number 63 (continued)

	Week 10	Week 11	Week 12	Week 13
OBSERVATIONS BEFORE REMOVAL FROM CAGE:				
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:				
Ease of removal	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1F Animal number 63 (continued)

	Week 10	Week 11	Week 12	Week 13
OPEN FIELD OBSERVATIONS:				
Latency to first step (secs)	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	HYPERACTIVE	HYPERACTIVE	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	HIGH STEPPING	HIGH STEPPING	NORMAL	NORMAL
Gait type severity	SLIGHT	SLIGHT	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Other	ABSENT	PRESENT#	PRESENT##	PRESENT###
Number of rears	25	22	44	19
Number of faecal boli	0	0	0	0
Number of urine pools	0	0	0	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:				
Approach response	N/A	N/A	N/A	NORMAL
Touch response	N/A	N/A	N/A	NORMAL
Tail pinch	N/A	N/A	N/A	NORMAL
Air righting ability	N/A	N/A	N/A	NORMAL
Pupillary response	N/A	N/A	N/A	NORMAL
Corneal tactile response	N/A	N/A	N/A	NORMAL
Auditory response	N/A	N/A	N/A	PRESENT
Hindlimb footsplay (mm)	N/A	N/A	N/A	78
Forelimb grip strength (kg)	N/A	N/A	N/A	0.605
Hindlimb grip strength (kg)	N/A	N/A	N/A	0.271

\# - animal jumped onto rim of arena on one occasion for 1 minute
- animal jumped onto rim of arena on three occasions
- animal jumped onto rim of arena on one occasion for approximately 50 seconds

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1F Animal number 64

	Week -1	Week 1	Week 2	Week 3	Week 4
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1F Animal number 64 (continued)

	Week -1	Week 1	Week 2	Week 3	Week 4
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	1	1	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	18	19	22	17	24
Number of faecal boli	0	0	0	0	0
Number of urine pools	3	0	4	0	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	NORMAL	N/A	N/A	N/A	N/A
Touch response	NORMAL	N/A	N/A	N/A	N/A
Tail pinch	NORMAL	N/A	N/A	N/A	N/A
Air righting ability	NORMAL	N/A	N/A	N/A	N/A
Pupillary response	NORMAL	N/A	N/A	N/A	N/A
Corneal tactile response	NORMAL	N/A	N/A	N/A	N/A
Auditory response	PRESENT	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	58	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	0.569	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	0.294	N/A	N/A	N/A	N/A

Appendix 13
Individual functional observation battery data

Test Article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1F Animal number 64 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1F Animal number 64 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	26	28	24	24	34
Number of faecal boli	0	0	0	0	0
Number of urine pools	0	0	4	0	1
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	N/A	N/A	N/A	N/A	N/A
Touch response	N/A	N/A	N/A	N/A	N/A
Tail pinch	N/A	N/A	N/A	N/A	N/A
Air righting ability	N/A	N/A	N/A	N/A	N/A
Pupillary response	N/A	N/A	N/A	N/A	N/A
Corneal tactile response	N/A	N/A	N/A	N/A	N/A
Auditory response	N/A	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	N/A	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1F Animal number 64 (continued)

	Week 10	Week 11	Week 12	Week 13
OBSERVATIONS BEFORE REMOVAL FROM CAGE:				
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:				
Ease of removal	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1F Animal number 64 (continued)

	Week 10	Week 11	Week 12	Week 13
OPEN FIELD OBSERVATIONS:				
Latency to first step (secs)	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	32	38	28	23
Number of faecal boli	0	0	0	0
Number of urine pools	13	4	6	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:				
Approach response	N/A	N/A	N/A	NORMAL
Touch response	N/A	N/A	N/A	NORMAL
Tail pinch	N/A	N/A	N/A	NORMAL
Air righting ability	N/A	N/A	N/A	NORMAL
Pupillary response	N/A	N/A	N/A	NORMAL
Corneal tactile response	N/A	N/A	N/A	NORMAL
Auditory response	N/A	N/A	N/A	PRESENT
Hindlimb footsplay (mm)	N/A	N/A	N/A	53
Forelimb grip strength (kg)	N/A	N/A	N/A	0.698
Hindlimb grip strength (kg)	N/A	N/A	N/A	0.263

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1F Animal number 65

	Week -1	Week 1	Week 2	Week 3	Week 4
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EVASION
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1F Animal number 65 (continued)

	Week -1	Week 1	Week 2	Week 3	Week 4
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	2	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	HYPERACTIVE	NORMAL	NORMAL	HYPERACTIVE	HYPERACTIVE
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	PRESENT##
Number of rears	34	23	21	35	46
Number of faecal boli	4	0	0	0	0
Number of urine pools	0	0	5	6	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	NORMAL	N/A	N/A	N/A	N/A
Touch response	NORMAL	N/A	N/A	N/A	N/A
Tail pinch	NORMAL	N/A	N/A	N/A	N/A
Air righting ability	NORMAL	N/A	N/A	N/A	N/A
Pupillary response	NORMAL	N/A	N/A	N/A	N/A
Corneal tactile response	NORMAL	N/A	N/A	N/A	N/A
Auditory response	PRESENT	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	68	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	0.517	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	0.232	N/A	N/A	N/A	N/A

- animal dashing back and forth across arena, raised tail

Appendix 13
Individual functional observation battery data

Test Article	Control		[	]	
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1F Animal number 65 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1F Animal number 65 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	HYPERACTIVE	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	HIGH STEPPING	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	MODERATE	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	37	28	26	26	37
Number of faecal boli	0	0	0	0	0
Number of urine pools	3	2	3	2	12
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	N/A	N/A	N/A	N/A	N/A
Touch response	N/A	N/A	N/A	N/A	N/A
Tail pinch	N/A	N/A	N/A	N/A	N/A
Air righting ability	N/A	N/A	N/A	N/A	N/A
Pupillary response	N/A	N/A	N/A	N/A	N/A
Corneal tactile response	N/A	N/A	N/A	N/A	N/A
Auditory response	N/A	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	N/A	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1F Animal number 65 (continued)

	Week 10	Week 11	Week 12	Week 13
OBSERVATIONS BEFORE REMOVAL FROM CAGE:				
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:				
Ease of removal	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1F Animal number 65 (continued)

	Week 10	Week 11	Week 12	Week 13
OPEN FIELD OBSERVATIONS:				
Latency to first step (secs)	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	33	32	39	19
Number of faecal boli	0	0	0	0
Number of urine pools	0	3	5	12
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:				
Approach response	N/A	N/A	N/A	NORMAL
Touch response	N/A	N/A	N/A	NORMAL
Tail pinch	N/A	N/A	N/A	NORMAL
Air righting ability	N/A	N/A	N/A	NORMAL
Pupillary response	N/A	N/A	N/A	NORMAL
Corneal tactile response	N/A	N/A	N/A	NORMAL
Auditory response	N/A	N/A	N/A	PRESENT
Hindlimb footsplay (mm)	N/A	N/A	N/A	58
Forelimb grip strength (kg)	N/A	N/A	N/A	0.706
Hindlimb grip strength (kg)	N/A	N/A	N/A	0.313

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1F Animal number 66

	Week -1	Week 1	Week 2	Week 3	Week 4
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1F Animal number 66 (continued)

	Week -1	Week 1	Week 2	Week 3	Week 4
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	17	12	12	20	17
Number of faecal boli	0	0	0	0	0
Number of urine pools	1	0	0	0	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	NORMAL	N/A	N/A	N/A	N/A
Touch response	NORMAL	N/A	N/A	N/A	N/A
Tail pinch	NORMAL	N/A	N/A	N/A	N/A
Air righting ability	NORMAL	N/A	N/A	N/A	N/A
Pupillary response	NORMAL	N/A	N/A	N/A	N/A
Corneal tactile response	NORMAL	N/A	N/A	N/A	N/A
Auditory response	PRESENT	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	60	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	0.590	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	0.281	N/A	N/A	N/A	N/A

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1F Animal number 66 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[		]	
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1F Animal number 66 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	20	19	28	17	24
Number of faecal boli	0	0	0	0	0
Number of urine pools	0	0	0	0	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	N/A	N/A	N/A	N/A	N/A
Touch response	N/A	N/A	N/A	N/A	N/A
Tail pinch	N/A	N/A	N/A	N/A	N/A
Air righting ability	N/A	N/A	N/A	N/A	N/A
Pupillary response	N/A	N/A	N/A	N/A	N/A
Corneal tactile response	N/A	N/A	N/A	N/A	N/A
Auditory response	N/A	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	N/A	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A

Appendix 13
Individual functional observation battery data

Test Article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1F Animal number 66 (continued)

	Week 10	Week 11	Week 12	Week 13
OBSERVATIONS BEFORE REMOVAL FROM CAGE:				
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:				
Ease of removal	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control		[	]	
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1F Animal number 66 (continued)

	Week 10	Week 11	Week 12	Week 13
OPEN FIELD OBSERVATIONS:				
Latency to first step (secs)	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	27	21	24	17
Number of faecal boli	0	0	0	0
Number of urine pools	0	0	0	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:				
Approach response	N/A	N/A	N/A	NORMAL
Touch response	N/A	N/A	N/A	NORMAL
Tail pinch	N/A	N/A	N/A	NORMAL
Air righting ability	N/A	N/A	N/A	NORMAL
Pupillary response	N/A	N/A	N/A	NORMAL
Corneal tactile response	N/A	N/A	N/A	NORMAL
Auditory response	N/A	N/A	N/A	PRESENT
Hindlimb footsplay (mm)	N/A	N/A	N/A	70
Forelimb grip strength (kg)	N/A	N/A	N/A	1.003
Hindlimb grip strength (kg)	N/A	N/A	N/A	0.428

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1F Animal number 67

	Week -1	Week 1	Week 2	Week 3	Week 4
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1F Animal number 67 (continued)

	Week -1	Week 1	Week 2	Week 3	Week 4
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	1	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	HYPERACTIVE#
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	HIGH STEPPING	NORMAL	TIP-TOE	NORMAL
Gait type severity	NORMAL	MODERATE	NORMAL	MODERATE	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	PRESENT##
Number of rears	15	22	33	21	37
Number of faecal boli	0	0	0	0	0
Number of urine pools	0	0	0	0	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	NORMAL	N/A	N/A	N/A	N/A
Touch response	NORMAL	N/A	N/A	N/A	N/A
Tail pinch	NORMAL	N/A	N/A	N/A	N/A
Air righting ability	NORMAL	N/A	N/A	N/A	N/A
Pupillary response	NORMAL	N/A	N/A	N/A	N/A
Corneal tactile response	NORMAL	N/A	N/A	N/A	N/A
Auditory response	PRESENT	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	45	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	0.488	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	0.249	N/A	N/A	N/A	N/A

- animal dashing back and forth across arena
- raised tail

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1F Animal number 67 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1F Animal number 67 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	HIGH STEPPING	HIGH STEPPING	HIGH STEPPING	HIGH STEPPING	HIGH STEPPING
Gait type severity	MODERATE	MODERATE	MODERATE	MODERATE	MODERATE
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	PRESENT##
Number of rears	17	24	37	26	31
Number of faecal boli	0	0	0	0	0
Number of urine pools	0	0	0	0	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	N/A	N/A	N/A	N/A	N/A
Touch response	N/A	N/A	N/A	N/A	N/A
Tail pinch	N/A	N/A	N/A	N/A	N/A
Air righting ability	N/A	N/A	N/A	N/A	N/A
Pupillary response	N/A	N/A	N/A	N/A	N/A
Corneal tactile response	N/A	N/A	N/A	N/A	N/A
Auditory response	N/A	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	N/A	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A

- animal jumped onto rim of arena on one occasion for 4 seconds

Appendix 13
Individual functional observation battery data

Test Article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1F Animal number 67 (continued)

	Week 10	Week 11	Week 12	Week 13
OBSERVATIONS BEFORE REMOVAL FROM CAGE:				
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:				
Ease of removal	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control		[	]	
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1F Animal number 67 (continued)

	Week 10	Week 11	Week 12	Week 13
OPEN FIELD OBSERVATIONS:				
Latency to first step (secs)	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	HIGH STEPPING
Gait type severity	NORMAL	NORMAL	NORMAL	SLIGHT
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Other	PRESENT#	PRESENT##	PRESENT###	PRESENT@
Number of rears	8	13	38	9
Number of faecal boli	0	0	0	0
Number of urine pools	0	0	0	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:				
Approach response	N/A	N/A	N/A	NORMAL
Touch response	N/A	N/A	N/A	NORMAL
Tail pinch	N/A	N/A	N/A	NORMAL
Air righting ability	N/A	N/A	N/A	NORMAL
Pupillary response	N/A	N/A	N/A	NORMAL
Corneal tactile response	N/A	N/A	N/A	NORMAL
Auditory response	N/A	N/A	N/A	PRESENT
Hindlimb footsplay (mm)	N/A	N/A	N/A	61
Forelimb grip strength (kg)	N/A	N/A	N/A	0.766
Hindlimb grip strength (kg)	N/A	N/A	N/A	0.277

\# - animal jumped onto rim of arena on one occasion for approximately 1 minute 20 seconds
- animal jumped onto rim of arena on one occasion for approximately 1 minute 40 seconds
- animal jumped onto rim of arena on 13 occasions
@ - animal jumped onto rim of arena on 3 occasions (for approximately 5, 60, 5 seconds respectively)

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1F Animal number 68

	Week -1	Week 1	Week 2	Week 3	Week 4
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1F Animal number 68 (continued)

	Week -1	Week 1	Week 2	Week 3	Week 4
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	1	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	HYPERACTIVE	NORMAL	NORMAL	NORMAL	HYPERACTIVE
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	HIGH STEPPING	NORMAL	HIGH STEPPING	NORMAL
Gait type severity	NORMAL	SLIGHT	NORMAL	SLIGHT	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	PRESENT##
Number of rears	33	21	25	21	35
Number of faecal boli	0	0	0	0	0
Number of urine pools	3	0	5	0	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	NORMAL	N/A	N/A	N/A	N/A
Touch response	NORMAL	N/A	N/A	N/A	N/A
Tail pinch	NORMAL	N/A	N/A	N/A	N/A
Air righting ability	NORMAL	N/A	N/A	N/A	N/A
Pupillary response	NORMAL	N/A	N/A	N/A	N/A
Corneal tactile response	NORMAL	N/A	N/A	N/A	N/A
Auditory response	PRESENT	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	53	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	0.598	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	0.316	N/A	N/A	N/A	N/A

- animal tried to jump out of arena on one occasion

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1F Animal number 68 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1F Animal number 68 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	HIGH STEPPING	NORMAL	HIGH STEPPING	NORMAL
Gait type severity	NORMAL	SLIGHT	NORMAL	SLIGHT	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	30	33	31	27	32
Number of faecal boli	0	0	0	0	0
Number of urine pools	0	0	1	0	3
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	N/A	N/A	N/A	N/A	N/A
Touch response	N/A	N/A	N/A	N/A	N/A
Tail pinch	N/A	N/A	N/A	N/A	N/A
Air righting ability	N/A	N/A	N/A	N/A	N/A
Pupillary response	N/A	N/A	N/A	N/A	N/A
Corneal tactile response	N/A	N/A	N/A	N/A	N/A
Auditory response	N/A	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	N/A	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1F Animal number 68 (continued)

	Week 10	Week 11	Week 12	Week 13
OBSERVATIONS BEFORE REMOVAL FROM CAGE:				
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:				
Ease of removal	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1F Animal number 68 (continued)

	Week 10	Week 11	Week 12	Week 13
OPEN FIELD OBSERVATIONS:				
Latency to first step (secs)	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	25	22	25	21
Number of faecal boli	0	0	0	0
Number of urine pools	1	2	0	3
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:				
Approach response	N/A	N/A	N/A	NORMAL
Touch response	N/A	N/A	N/A	NORMAL
Tail pinch	N/A	N/A	N/A	NORMAL
Air righting ability	N/A	N/A	N/A	NORMAL
Pupillary response	N/A	N/A	N/A	NORMAL
Corneal tactile response	N/A	N/A	N/A	NORMAL
Auditory response	N/A	N/A	N/A	PRESENT
Hindlimb footsplay (mm)	N/A	N/A	N/A	59
Forelimb grip strength (kg)	N/A	N/A	N/A	0.471
Hindlimb grip strength (kg)	N/A	N/A	N/A	0.336

Appendix 13
Individual functional observation battery data

Test Article	Control	[	]		
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1F Animal number 69

	Week -1	Week 1	Week 2	Week 3	Week 4
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1F Animal number 69 (continued)

	Week -1	Week 1	Week 2	Week 3	Week 4
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	PRESENT##
Number of rears	12	14	27	20	24
Number of faecal boli	2	0	0	0	0
Number of urine pools	16	0	0	0	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	NORMAL	N/A	N/A	N/A	N/A
Touch response	NORMAL	N/A	N/A	N/A	N/A
Tail pinch	NORMAL	N/A	N/A	N/A	N/A
Air righting ability	NORMAL	N/A	N/A	N/A	N/A
Pupillary response	NORMAL	N/A	N/A	N/A	N/A
Corneal tactile response	NORMAL	N/A	N/A	N/A	N/A
Auditory response	PRESENT	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	73	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	0.606	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	0.277	N/A	N/A	N/A	N/A

- raised tail

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1F Animal number 69 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1F Animal number 69 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	PRESENT##	ABSENT
Number of rears	24	25	34	21	31
Number of faecal boli	0	0	0	0	0
Number of urine pools	0	0	0	5	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	N/A	N/A	N/A	N/A	N/A
Touch response	N/A	N/A	N/A	N/A	N/A
Tail pinch	N/A	N/A	N/A	N/A	N/A
Air righting ability	N/A	N/A	N/A	N/A	N/A
Pupillary response	N/A	N/A	N/A	N/A	N/A
Corneal tactile response	N/A	N/A	N/A	N/A	N/A
Auditory response	N/A	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	N/A	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A

- animal jumped onto rim of arena on one occasion for approximately 25 seconds

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1F Animal number 69 (continued)

	Week 10[1]	Week 11	Week 12	Week 13
OBSERVATIONS BEFORE REMOVAL FROM CAGE:				
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:				
Ease of removal	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE

(1) Animal excluded from summary data in Week 10

Appendix 13
Individual functional observation battery data

Test Article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1F Animal number 69 (continued)

	Week 10[1]	Week 11	Week 12	Week 13
OPEN FIELD OBSERVATIONS:				
Latency to first step (secs)	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	25	21	27	15
Number of faecal boli	0	0	0	0
Number of urine pools	0	2	1	2
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:				
Approach response	N/A	N/A	N/A	NORMAL
Touch response	N/A	N/A	N/A	NORMAL
Tail pinch	N/A	N/A	N/A	NORMAL
Air righting ability	N/A	N/A	N/A	NORMAL
Pupillary response	N/A	N/A	N/A	NORMAL
Corneal tactile response	N/A	N/A	N/A	NORMAL
Auditory response	N/A	N/A	N/A	PRESENT
Hindlimb footsplay (mm)	N/A	N/A	N/A	63
Forelimb grip strength (kg)	N/A	N/A	N/A	0.760
Hindlimb grip strength (kg)	N/A	N/A	N/A	0.404

(1) Animal excluded from summary data in Week 10

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Appendix 13
Individual functional observation battery data

Test Article	Control	[	]		
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1F Animal number 70

	Week -1	Week 1	Week 2	Week 3	Week 4
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1F Animal number 70 (continued)

	Week -1	Week 1	Week 2	Week 3	Week 4
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	1	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	20	19	24	23	22
Number of faecal boli	0	0	0	0	0
Number of urine pools	0	0	2	0	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	NORMAL	N/A	N/A	N/A	N/A
Touch response	NORMAL	N/A	N/A	N/A	N/A
Tail pinch	NORMAL	N/A	N/A	N/A	N/A
Air righting ability	NORMAL	N/A	N/A	N/A	N/A
Pupillary response	NORMAL	N/A	N/A	N/A	N/A
Corneal tactile response	NORMAL	N/A	N/A	N/A	N/A
Auditory response	PRESENT	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	55	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	0.441	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	0.312	N/A	N/A	N/A	N/A

Appendix 13
Individual functional observation battery data

Test Article	Control	[	]		
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1F Animal number 70 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1F Animal number 70 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	16	21	20	23	19
Number of faecal boli	0	0	0	0	0
Number of urine pools	0	0	0	2	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	N/A	N/A	N/A	N/A	N/A
Touch response	N/A	N/A	N/A	N/A	N/A
Tail pinch	N/A	N/A	N/A	N/A	N/A
Air righting ability	N/A	N/A	N/A	N/A	N/A
Pupillary response	N/A	N/A	N/A	N/A	N/A
Corneal tactile response	N/A	N/A	N/A	N/A	N/A
Auditory response	N/A	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	N/A	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A

Appendix 13
Individual functional observation battery data

Test Article	Control		[	]	
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1F Animal number 70 (continued)

	Week 10	Week 11	Week 12	Week 13
OBSERVATIONS BEFORE REMOVAL FROM CAGE:				
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:				
Ease of removal	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1F Animal number 70 (continued)

	Week 10	Week 11	Week 12	Week 13
OPEN FIELD OBSERVATIONS:				
Latency to first step (secs)	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	20	17	20	14
Number of faecal boli	0	0	0	0
Number of urine pools	0	3	0	1
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:				
Approach response	N/A	N/A	N/A	NORMAL
Touch response	N/A	N/A	N/A	NORMAL
Tail pinch	N/A	N/A	N/A	NORMAL
Air righting ability	N/A	N/A	N/A	NORMAL
Pupillary response	N/A	N/A	N/A	NORMAL
Corneal tactile response	N/A	N/A	N/A	NORMAL
Auditory response	N/A	N/A	N/A	PRESENT
Hindlimb footsplay (mm)	N/A	N/A	N/A	56
Forelimb grip strength (kg)	N/A	N/A	N/A	0.937
Hindlimb grip strength (kg)	N/A	N/A	N/A	0.320

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Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1F Animal number 71

	Week -1	Week 1	Week 2	Week 3	Week 4
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	PRESENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1F Animal number 71 (continued)

	Week -1	Week 1	Week 2	Week 3	Week 4
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	HIGH STEPPING	NORMAL	HIGH STEPPING	NORMAL
Gait type severity	NORMAL	SLIGHT	NORMAL	SLIGHT	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	19	25	18	25	19
Number of faecal boli	0	0	0	0	0
Number of urine pools	0	0	0	0	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	NORMAL	N/A	N/A	N/A	N/A
Touch response	NORMAL	N/A	N/A	N/A	N/A
Tail pinch	NORMAL	N/A	N/A	N/A	N/A
Air righting ability	NORMAL	N/A	N/A	N/A	N/A
Pupillary response	NORMAL	N/A	N/A	N/A	N/A
Corneal tactile response	NORMAL	N/A	N/A	N/A	N/A
Auditory response	PRESENT	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	55	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	0.501	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	0.318	N/A	N/A	N/A	N/A

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Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1F Animal number 71 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

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Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1F Animal number 71 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	HIGH STEPPING	HIGH STEPPING	HIGH STEPPING	HIGH STEPPING	HIGH STEPPING
Gait type severity	SLIGHT	SLIGHT	SLIGHT	SLIGHT	SLIGHT
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	24	29	40	31	26
Number of faecal boli	0	0	0	0	0
Number of urine pools	0	0	1	0	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	N/A	N/A	N/A	N/A	N/A
Touch response	N/A	N/A	N/A	N/A	N/A
Tail pinch	N/A	N/A	N/A	N/A	N/A
Air righting ability	N/A	N/A	N/A	N/A	N/A
Pupillary response	N/A	N/A	N/A	N/A	N/A
Corneal tactile response	N/A	N/A	N/A	N/A	N/A
Auditory response	N/A	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	N/A	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A

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Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1F Animal number 71 (continued)

	Week 10	Week 11	Week 12	Week 13
OBSERVATIONS BEFORE REMOVAL FROM CAGE:				
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:				
Ease of removal	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[	]		
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1F Animal number 71 (continued)

	Week 10	Week 11	Week 12	Week 13
OPEN FIELD OBSERVATIONS:				
Latency to first step (secs)	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	HIGH STEPPING	HIGH STEPPING	NORMAL	HIGH STEPPING
Gait type severity	SLIGHT	SLIGHT	NORMAL	SLIGHT
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	26	27	25	24
Number of faecal boli	0	0	0	0
Number of urine pools	0	1	0	1
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:				
Approach response	N/A	N/A	N/A	NORMAL
Touch response	N/A	N/A	N/A	NORMAL
Tail pinch	N/A	N/A	N/A	NORMAL
Air righting ability	N/A	N/A	N/A	NORMAL
Pupillary response	N/A	N/A	N/A	NORMAL
Corneal tactile response	N/A	N/A	N/A	NORMAL
Auditory response	N/A	N/A	N/A	PRESENT
Hindlimb footsplay (mm)	N/A	N/A	N/A	48
Forelimb grip strength (kg)	N/A	N/A	N/A	0.759
Hindlimb grip strength (kg)	N/A	N/A	N/A	0.367

Appendix 13
Individual functional observation battery data

Test Article	Control		[	]	
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1F Animal number 72

	Week -1	Week 1	Week 2	Week 3	Week 4
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1F Animal number 72 (continued)

	Week -1	Week 1	Week 2	Week 3	Week 4
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	26	15	20	19	20
Number of faecal boli	0	0	0	0	0
Number of urine pools	1	0	2	0	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	NORMAL	N/A	N/A	N/A	N/A
Touch response	NORMAL	N/A	N/A	N/A	N/A
Tail pinch	NORMAL	N/A	N/A	N/A	N/A
Air righting ability	NORMAL	N/A	N/A	N/A	N/A
Pupillary response	NORMAL	N/A	N/A	N/A	N/A
Corneal tactile response	NORMAL	N/A	N/A	N/A	N/A
Auditory response	PRESENT	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	60	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	0.465	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	0.412	N/A	N/A	N/A	N/A

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Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1F Animal number 72 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1F Animal number 72 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	18	24	24	19	23
Number of faecal boli	0	0	0	0	0
Number of urine pools	0	0	2	2	6
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	N/A	N/A	N/A	N/A	N/A
Touch response	N/A	N/A	N/A	N/A	N/A
Tail pinch	N/A	N/A	N/A	N/A	N/A
Air righting ability	N/A	N/A	N/A	N/A	N/A
Pupillary response	N/A	N/A	N/A	N/A	N/A
Corneal tactile response	N/A	N/A	N/A	N/A	N/A
Auditory response	N/A	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	N/A	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A

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Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1F Animal number 72 (continued)

	Week 10	Week 11	Week 12	Week 13
OBSERVATIONS BEFORE REMOVAL FROM CAGE:				
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:				
Ease of removal	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control		[	]	
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1F Animal number 72 (continued)

	Week 10	Week 11	Week 12	Week 13
OPEN FIELD OBSERVATIONS:				
Latency to first step (secs)	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	16	27	21	12
Number of faecal boli	0	0	0	0
Number of urine pools	0	6	0	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:				
Approach response	N/A	N/A	N/A	NORMAL
Touch response	N/A	N/A	N/A	NORMAL
Tail pinch	N/A	N/A	N/A	NORMAL
Air righting ability	N/A	N/A	N/A	NORMAL
Pupillary response	N/A	N/A	N/A	NORMAL
Corneal tactile response	N/A	N/A	N/A	NORMAL
Auditory response	N/A	N/A	N/A	PRESENT
Hindlimb footsplay (mm)	N/A	N/A	N/A	53
Forelimb grip strength (kg)	N/A	N/A	N/A	1.101
Hindlimb grip strength (kg)	N/A	N/A	N/A	0.365

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1F Animal number 73

	Week -1	Week 1	Week 2	Week 3	Week 4
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1F Animal number 73 (continued)

	Week -1	Week 1	Week 2	Week 3	Week 4
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	HYPERACTIVE
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	15	22	24	31	28
Number of faecal boli	0	0	0	0	0
Number of urine pools	0	0	0	1	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	NORMAL	N/A	N/A	N/A	N/A
Touch response	NORMAL	N/A	N/A	N/A	N/A
Tail pinch	NORMAL	N/A	N/A	N/A	N/A
Air righting ability	NORMAL	N/A	N/A	N/A	N/A
Pupillary response	NORMAL	N/A	N/A	N/A	N/A
Corneal tactile response	NORMAL	N/A	N/A	N/A	N/A
Auditory response	PRESENT	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	63	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	0.531	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	0.290	N/A	N/A	N/A	N/A

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1F Animal number 73 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1F Animal number 73 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	PRESENT#	PRESENT##
Number of rears	32	26	30	30	11
Number of faecal boli	0	0	0	0	0
Number of urine pools	0	0	1	1	2
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	N/A	N/A	N/A	N/A	N/A
Touch response	N/A	N/A	N/A	N/A	N/A
Tail pinch	N/A	N/A	N/A	N/A	N/A
Air righting ability	N/A	N/A	N/A	N/A	N/A
Pupillary response	N/A	N/A	N/A	N/A	N/A
Corneal tactile response	N/A	N/A	N/A	N/A	N/A
Auditory response	N/A	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	N/A	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A

- animal jumped onto rim of arena on one occasion for 1 second
- animal jumped onto rim of arena on 2 occasions
(for approximately 18 seconds and 1 minute respectively)

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1F Animal number 73 (continued)

	Week 10	Week 11	Week 12	Week 13
OBSERVATIONS BEFORE REMOVAL FROM CAGE:				
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:				
Ease of removal	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1F Animal number 73 (continued)

	Week 10	Week 11	Week 12	Week 13
OPEN FIELD OBSERVATIONS:				
Latency to first step (secs)	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Other	PRESENT#	PRESENT##	PRESENT###	PRESENT@
Number of rears	21	13	29	7
Number of faecal boli	0	0	0	0
Number of urine pools	0	2	0	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:				
Approach response	N/A	N/A	N/A	NORMAL
Touch response	N/A	N/A	N/A	NORMAL
Tail pinch	N/A	N/A	N/A	NORMAL
Air righting ability	N/A	N/A	N/A	NORMAL
Pupillary response	N/A	N/A	N/A	NORMAL
Corneal tactile response	N/A	N/A	N/A	NORMAL
Auditory response	N/A	N/A	N/A	PRESENT
Hindlimb footsplay (mm)	N/A	N/A	N/A	45
Forelimb grip strength (kg)	N/A	N/A	N/A	0.714
Hindlimb grip strength (kg)	N/A	N/A	N/A	0.254

\# - animal jumped onto rim of arena on 5 occasions
(for approximately 7, 30, 7, 7, 7 seconds respectively)
- animal jumped onto rim of arena on 3 occasions
(for approximately 7, 50, 7 seconds respectively)
- animal jumped onto rim of arena on 9 occasions
@ - animal jumped onto rim of arena on one occasion for approximately 1 minute 25 seconds

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Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1F Animal number 74

	Week -1	Week 1	Week 2	Week 3	Week 4
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1F Animal number 74 (continued)

	Week -1	Week 1	Week 2	Week 3	Week 4
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	HIGH STEPPING	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	SLIGHT	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	-##	NONE
Other	ABSENT	ABSENT	ABSENT	-##	ABSENT
Number of rears	24	31	23	37	27
Number of faecal boli	0	0	0	0	0
Number of urine pools	0	0	17	0	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	NORMAL	N/A	N/A	N/A	N/A
Touch response	NORMAL	N/A	N/A	N/A	N/A
Tail pinch	NORMAL	N/A	N/A	N/A	N/A
Air righting ability	NORMAL	N/A	N/A	N/A	N/A
Pupillary response	NORMAL	N/A	N/A	N/A	N/A
Corneal tactile response	NORMAL	N/A	N/A	N/A	N/A
Auditory response	PRESENT	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	80	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	0.430	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	0.250	N/A	N/A	N/A	N/A

- omitted in error

Appendix 13
Individual functional observation battery data

Test Article	Control		[	]	
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1F Animal number 74 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[	]		
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1F Animal number 74 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	21	29	33	26	31
Number of faecal boli	0	0	0	0	0
Number of urine pools	1	0	2	1	3
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	N/A	N/A	N/A	N/A	N/A
Touch response	N/A	N/A	N/A	N/A	N/A
Tail pinch	N/A	N/A	N/A	N/A	N/A
Air righting ability	N/A	N/A	N/A	N/A	N/A
Pupillary response	N/A	N/A	N/A	N/A	N/A
Corneal tactile response	N/A	N/A	N/A	N/A	N/A
Auditory response	N/A	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	N/A	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A

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Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1F Animal number 74 (continued)

	Week 10	Week 11	Week 12	Week 13
OBSERVATIONS BEFORE REMOVAL FROM CAGE:				
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:				
Ease of removal	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1F Animal number 74 (continued)

	Week 10	Week 11	Week 12	Week 13
OPEN FIELD OBSERVATIONS:				
Latency to first step (secs)	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	23	34	25	28
Number of faecal boli	0	0	0	0
Number of urine pools	7	3	2	3
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:				
Approach response	N/A	N/A	N/A	NORMAL
Touch response	N/A	N/A	N/A	NORMAL
Tail pinch	N/A	N/A	N/A	NORMAL
Air righting ability	N/A	N/A	N/A	NORMAL
Pupillary response	N/A	N/A	N/A	NORMAL
Corneal tactile response	N/A	N/A	N/A	NORMAL
Auditory response	N/A	N/A	N/A	PRESENT
Hindlimb footsplay (mm)	N/A	N/A	N/A	68
Forelimb grip strength (kg)	N/A	N/A	N/A	0.636
Hindlimb grip strength (kg)	N/A	N/A	N/A	0.220

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Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1F Animal number 75

	Week -1	Week 1	Week 2	Week 3	Week 4
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control		[	]	
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1F Animal number 75 (continued)

	Week -1	Week 1	Week 2	Week 3	Week 4
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	HYPERACTIVE
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	15	21	20	27	30
Number of faecal boli	0	0	0	0	0
Number of urine pools	3	0	0	0	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	NORMAL	N/A	N/A	N/A	N/A
Touch response	NORMAL	N/A	N/A	N/A	N/A
Tail pinch	NORMAL	N/A	N/A	N/A	N/A
Air righting ability	NORMAL	N/A	N/A	N/A	N/A
Pupillary response	NORMAL	N/A	N/A	N/A	N/A
Corneal tactile response	NORMAL	N/A	N/A	N/A	N/A
Auditory response	PRESENT	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	53	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	0.452	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	0.239	N/A	N/A	N/A	N/A

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1F Animal number 75 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1F Animal number 75 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	HIGH STEPPING	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	SLIGHT	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	35	27	25	21	30
Number of faecal boli	0	0	0	0	0
Number of urine pools	0	0	1	0	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	N/A	N/A	N/A	N/A	N/A
Touch response	N/A	N/A	N/A	N/A	N/A
Tail pinch	N/A	N/A	N/A	N/A	N/A
Air righting ability	N/A	N/A	N/A	N/A	N/A
Pupillary response	N/A	N/A	N/A	N/A	N/A
Corneal tactile response	N/A	N/A	N/A	N/A	N/A
Auditory response	N/A	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	N/A	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1F Animal number 75 (continued)

	Week 10	Week 11	Week 12	Week 13
OBSERVATIONS BEFORE REMOVAL FROM CAGE:				
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:				
Ease of removal	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 1F Animal number 75 (continued)

	Week 10	Week 11	Week 12	Week 13
OPEN FIELD OBSERVATIONS:				
Latency to first step (secs)	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	17	28	27	19
Number of faecal boli	0	0	0	0
Number of urine pools	0	2	0	1
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:				
Approach response	N/A	N/A	N/A	NORMAL
Touch response	N/A	N/A	N/A	NORMAL
Tail pinch	N/A	N/A	N/A	NORMAL
Air righting ability	N/A	N/A	N/A	NORMAL
Pupillary response	N/A	N/A	N/A	NORMAL
Corneal tactile response	N/A	N/A	N/A	NORMAL
Auditory response	N/A	N/A	N/A	PRESENT
Hindlimb footsplay (mm)	N/A	N/A	N/A	55
Forelimb grip strength (kg)	N/A	N/A	N/A	0.703
Hindlimb grip strength (kg)	N/A	N/A	N/A	0.292

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Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 2M Animal number 16

	Week -1	Week 1	Week 2	Week 3	Week 4
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control		[	]	
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 2M Animal number 16 (continued)

	Week -1	Week 1	Week 2	Week 3	Week 4
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	HYPERACTIVE	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	6	10	22	19	27
Number of faecal boli	0	0	0	0	0
Number of urine pools	0	1	0	9	9
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	NORMAL	N/A	N/A	N/A	N/A
Touch response	NORMAL	N/A	N/A	N/A	N/A
Tail pinch	NORMAL	N/A	N/A	N/A	N/A
Air righting ability	NORMAL	N/A	N/A	N/A	N/A
Pupillary response	NORMAL	N/A	N/A	N/A	N/A
Corneal tactile response	NORMAL	N/A	N/A	N/A	N/A
Auditory response	PRESENT	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	57	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	0.505	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	0.143	N/A	N/A	N/A	N/A

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Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 2M Animal number 16 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 2M Animal number 16 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	HYPERACTIVE	HYPERACTIVE	NORMAL	HYPERACTIVE	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	HIGH STEPPING GAIT	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	25	19	23	20	23
Number of faecal boli	0	0	0	0	0
Number of urine pools	5	5	9	10	9
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	N/A	N/A	N/A	N/A	N/A
Touch response	N/A	N/A	N/A	N/A	N/A
Tail pinch	N/A	N/A	N/A	N/A	N/A
Air righting ability	N/A	N/A	N/A	N/A	N/A
Pupillary response	N/A	N/A	N/A	N/A	N/A
Corneal tactile response	N/A	N/A	N/A	N/A	N/A
Auditory response	N/A	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	N/A	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 2M Animal number 16 (continued)

	Week 10	Week 11	Week 12	Week 13
OBSERVATIONS BEFORE REMOVAL FROM CAGE:				
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:				
Ease of removal	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control		[	]	
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 2M Animal number 16 (continued)

	Week 10	Week 11	Week 12	Week 13
OPEN FIELD OBSERVATIONS:				
Latency to first step (secs)	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	20	22	18	20
Number of faecal boli	0	0	0	0
Number of urine pools	5	11	4	4
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:				
Approach response	N/A	N/A	N/A	NORMAL
Touch response	N/A	N/A	N/A	NORMAL
Tail pinch	N/A	N/A	N/A	NORMAL
Air righting ability	N/A	N/A	N/A	NORMAL
Pupillary response	N/A	N/A	N/A	NORMAL
Corneal tactile response	N/A	N/A	N/A	NORMAL
Auditory response	N/A	N/A	N/A	PRESENT
Hindlimb footsplay (mm)	N/A	N/A	N/A	84
Forelimb grip strength (kg)	N/A	N/A	N/A	1.010
Hindlimb grip strength (kg)	N/A	N/A	N/A	0.656

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 2M Animal number 17

	Week -1	Week 1	Week 2	Week 3	Week 4
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 2M Animal number 17 (continued)

	Week -1	Week 1	Week 2	Week 3	Week 4
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	HYPERACTIVE	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	PRESENT##	ABSENT	ABSENT
Number of rears	8	16	36	22	15
Number of faecal boli	0	0	0	0	0
Number of urine pools	4	6	0	0	16
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	NORMAL	N/A	N/A	N/A	N/A
Touch response	NORMAL	N/A	N/A	N/A	N/A
Tail pinch	NORMAL	N/A	N/A	N/A	N/A
Air righting ability	NORMAL	N/A	N/A	N/A	N/A
Pupillary response	NORMAL	N/A	N/A	N/A	N/A
Corneal tactile response	NORMAL	N/A	N/A	N/A	N/A
Auditory response	PRESENT	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	40	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	0.425	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	0.129	N/A	N/A	N/A	N/A

- raised tail

Appendix 13
Individual functional observation battery data

Test Article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 2M Animal number 17 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EVASION
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 2M Animal number 17 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	HYPERACTIVE	HYPERACTIVE	HYPERACTIVE	HYPERACTIVE	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	PRESENT##
Number of rears	23	24	27	30	22
Number of faecal boli	0	0	0	0	0
Number of urine pools	4	9	12	23	4
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	N/A	N/A	N/A	N/A	N/A
Touch response	N/A	N/A	N/A	N/A	N/A
Tail pinch	N/A	N/A	N/A	N/A	N/A
Air righting ability	N/A	N/A	N/A	N/A	N/A
Pupillary response	N/A	N/A	N/A	N/A	N/A
Corneal tactile response	N/A	N/A	N/A	N/A	N/A
Auditory response	N/A	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	N/A	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A

- raised tail

Appendix 13
Individual functional observation battery data

Test Article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 2M Animal number 17 (continued)

	Week 10	Week 11	Week 12	Week 13
OBSERVATIONS BEFORE REMOVAL FROM CAGE:				
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:				
Ease of removal	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 2M Animal number 17 (continued)

	Week 10	Week 11	Week 12	Week 13
OPEN FIELD OBSERVATIONS:				
Latency to first step (secs)	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	HYPERACTIVE	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Other	PRESENT##	ABSENT	ABSENT	ABSENT
Number of rears	36	21	16	22
Number of faecal boli	0	0	0	0
Number of urine pools	4	0	5	7
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:				
Approach response	N/A	N/A	N/A	NORMAL
Touch response	N/A	N/A	N/A	NORMAL
Tail pinch	N/A	N/A	N/A	NORMAL
Air righting ability	N/A	N/A	N/A	NORMAL
Pupillary response	N/A	N/A	N/A	NORMAL
Corneal tactile response	N/A	N/A	N/A	NORMAL
Auditory response	N/A	N/A	N/A	PRESENT
Hindlimb footsplay (mm)	N/A	N/A	N/A	79
Forelimb grip strength (kg)	N/A	N/A	N/A	1.036
Hindlimb grip strength (kg)	N/A	N/A	N/A	0.407

- raised tail

Appendix 13
Individual functional observation battery data

Test Article	Control	[	]		
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 2M Animal number 18

	Week -1	Week 1	Week 2	Week 3	Week 4
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 2M Animal number 18 (continued)

	Week -1	Week 1	Week 2	Week 3	Week 4
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	1	1
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	PRESENT#	PRESENT##
Number of rears	12	13	11	16	2
Number of faecal boli	0	0	0	0	0
Number of urine pools	0	2	0	0	2###
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	NORMAL	N/A	N/A	N/A	N/A
Touch response	NORMAL	N/A	N/A	N/A	N/A
Tail pinch	NORMAL	N/A	N/A	N/A	N/A
Air righting ability	NORMAL	N/A	N/A	N/A	N/A
Pupillary response	NORMAL	N/A	N/A	N/A	N/A
Corneal tactile response	NORMAL	N/A	N/A	N/A	N/A
Auditory response	PRESENT	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	58	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	0.481	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	0.134	N/A	N/A	N/A	N/A

\# - slightly raised tail
- animal stayed at side of arena for 33 seconds
- urine appears cloudy

Appendix 13
Individual functional observation battery data

Test Article	Control		[	]	
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 2M Animal number 18 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EVASION	AGGRESSIVE
Ease of handling	EASY	EASY	EASY	EASY	RIGID IN HAND
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 2M Animal number 18 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	PRESENT#	PRESENT##	PRESENT###	PRESENT###	ABSENT
Number of rears	7	9	14	12	11
Number of faecal boli	0	0	-@	0	0
Number of urine pools	0	1	2	3	1
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	N/A	N/A	N/A	N/A	N/A
Touch response	N/A	N/A	N/A	N/A	N/A
Tail pinch	N/A	N/A	N/A	N/A	N/A
Air righting ability	N/A	N/A	N/A	N/A	N/A
Pupillary response	N/A	N/A	N/A	N/A	N/A
Corneal tactile response	N/A	N/A	N/A	N/A	N/A
Auditory response	N/A	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	N/A	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A

\# - animal stayed in same quarter of arena for 46 seconds
- cloudy urine pool
- urine pools white and cloudy
@ - omitted in error

Appendix 13
Individual functional observation battery data

Test Article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 2M Animal number 18 (continued)

	Week 10	Week 11	Week 12	Week 13
OBSERVATIONS BEFORE REMOVAL FROM CAGE:				
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:				
Ease of removal	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control		[	]	
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 2M Animal number 18 (continued)

	Week 10	Week 11	Week 12	Week 13
OPEN FIELD OBSERVATIONS:				
Latency to first step (secs)	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	15	9	12	11
Number of faecal boli	0	0	0	0
Number of urine pools	0	0	0	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:				
Approach response	N/A	N/A	N/A	NORMAL
Touch response	N/A	N/A	N/A	NORMAL
Tail pinch	N/A	N/A	N/A	NORMAL
Air righting ability	N/A	N/A	N/A	NORMAL
Pupillary response	N/A	N/A	N/A	NORMAL
Corneal tactile response	N/A	N/A	N/A	NORMAL
Auditory response	N/A	N/A	N/A	PRESENT
Hindlimb footsplay (mm)	N/A	N/A	N/A	65
Forelimb grip strength (kg)	N/A	N/A	N/A	1.147
Hindlimb grip strength (kg)	N/A	N/A	N/A	0.748

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 2M Animal number 19

	Week -1	Week 1	Week 2	Week 3	Week 4
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control		[	]	
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 2M Animal number 19 (continued)

	Week -1	Week 1	Week 2	Week 3	Week 4
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	PRESENT##
Number of rears	10	9	23	11	23
Number of faecal boli	1	0	0	0	0
Number of urine pools	0	0	0	0	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	NORMAL	N/A	N/A	N/A	N/A
Touch response	NORMAL	N/A	N/A	N/A	N/A
Tail pinch	NORMAL	N/A	N/A	N/A	N/A
Air righting ability	NORMAL	N/A	N/A	N/A	N/A
Pupillary response	NORMAL	N/A	N/A	N/A	N/A
Corneal tactile response	NORMAL	N/A	N/A	N/A	N/A
Auditory response	PRESENT	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	61	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	0.407	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	0.130	N/A	N/A	N/A	N/A

- animal jumped out of arena 3 times

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 2M Animal number 19 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[	]		
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 2M Animal number 19 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	23	17	20	23	20
Number of faecal boli	0	0	0	0	0
Number of urine pools	0	0	0	0	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	N/A	N/A	N/A	N/A	N/A
Touch response	N/A	N/A	N/A	N/A	N/A
Tail pinch	N/A	N/A	N/A	N/A	N/A
Air righting ability	N/A	N/A	N/A	N/A	N/A
Pupillary response	N/A	N/A	N/A	N/A	N/A
Corneal tactile response	N/A	N/A	N/A	N/A	N/A
Auditory response	N/A	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	N/A	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 2M Animal number 19 (continued)

	Week 10	Week 11	Week 12	Week 13
OBSERVATIONS BEFORE REMOVAL FROM CAGE:				
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:				
Ease of removal	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control		[	]	
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 2M Animal number 19 (continued)

	Week 10	Week 11	Week 12	Week 13
OPEN FIELD OBSERVATIONS:				
Latency to first step (secs)	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	25	21	24	22
Number of faecal boli	0	0	0	0
Number of urine pools	0	0	0	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:				
Approach response	N/A	N/A	N/A	NORMAL
Touch response	N/A	N/A	N/A	NORMAL
Tail pinch	N/A	N/A	N/A	NORMAL
Air righting ability	N/A	N/A	N/A	NORMAL
Pupillary response	N/A	N/A	N/A	NORMAL
Corneal tactile response	N/A	N/A	N/A	NORMAL
Auditory response	N/A	N/A	N/A	PRESENT
Hindlimb footsplay (mm)	N/A	N/A	N/A	83
Forelimb grip strength (kg)	N/A	N/A	N/A	0.750
Hindlimb grip strength (kg)	N/A	N/A	N/A	0.571

Appendix 13
Individual functional observation battery data

Test Article	Control		[	]	
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 2M Animal number 20

	Week -1	Week 1	Week 2	Week 3	Week 4
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EVASION
Ease of handling	EASY	EASY	EASY	EASY	RIGID IN HAND
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	PRESENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 2M Animal number 20 (continued)

	Week -1	Week 1	Week 2	Week 3	Week 4
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	1	4	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	HIGH STEPPING	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	SLIGHT	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	20	13	14	10	16
Number of faecal boli	0	0	0	0	0
Number of urine pools	1	1	0	0	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	NORMAL	N/A	N/A	N/A	N/A
Touch response	NORMAL	N/A	N/A	N/A	N/A
Tail pinch	NORMAL	N/A	N/A	N/A	N/A
Air righting ability	NORMAL	N/A	N/A	N/A	N/A
Pupillary response	NORMAL	N/A	N/A	N/A	N/A
Corneal tactile response	NORMAL	N/A	N/A	N/A	N/A
Auditory response	PRESENT	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	66	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	0.419	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	0.142	N/A	N/A	N/A	N/A

Appendix 13
Individual functional observation battery data

Test Article	Control		[	]	
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 2M Animal number 20 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	RIGID IN HAND
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 2M Animal number 20 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	1
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	HYPOACTIVE	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	PRESENT##	ABSENT	ABSENT
Number of rears	13	8	7	11	13
Number of faecal boli	0	0	0	0	0
Number of urine pools	0	0	0	0	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	N/A	N/A	N/A	N/A	N/A
Touch response	N/A	N/A	N/A	N/A	N/A
Tail pinch	N/A	N/A	N/A	N/A	N/A
Air righting ability	N/A	N/A	N/A	N/A	N/A
Pupillary response	N/A	N/A	N/A	N/A	N/A
Corneal tactile response	N/A	N/A	N/A	N/A	N/A
Auditory response	N/A	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	N/A	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A

- animal stayed in same quarter of arena for 45 seconds and was aggressive on removal from arena

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 2M Animal number 20 (continued)

	Week 10	Week 11	Week 12	Week 13
OBSERVATIONS BEFORE REMOVAL FROM CAGE:				
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:				
Ease of removal	EASY	EASY	AGGRESSIVE	EASY
Ease of handling	EASY	EASY	EASY	RIGID IN HAND
Excessive vocalisation	ABSENT	ABSENT	ABSENT	PRESENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control		[	]	
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 2M Animal number 20 (continued)

	Week 10	Week 11	Week 12	Week 13
OPEN FIELD OBSERVATIONS:				
Latency to first step (secs)	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	15	15	6	7
Number of faecal boli	0	0	0	0
Number of urine pools	0	0	0	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:				
Approach response	N/A	N/A	N/A	NORMAL
Touch response	N/A	N/A	N/A	NORMAL
Tail pinch	N/A	N/A	N/A	NORMAL
Air righting ability	N/A	N/A	N/A	NORMAL
Pupillary response	N/A	N/A	N/A	NORMAL
Corneal tactile response	N/A	N/A	N/A	NORMAL
Auditory response	N/A	N/A	N/A	PRESENT
Hindlimb footsplay (mm)	N/A	N/A	N/A	80
Forelimb grip strength (kg)	N/A	N/A	N/A	1.143
Hindlimb grip strength (kg)	N/A	N/A	N/A	0.858

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 2M Animal number 21

	Week -1	Week 1	Week 2	Week 3	Week 4
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 2M Animal number 21 (continued)

	Week -1	Week 1	Week 2	Week 3	Week 4
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	14	14	18	9	15
Number of faecal boli	0	0	0	0	0
Number of urine pools	0	0	0	0	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	NORMAL	N/A	N/A	N/A	N/A
Touch response	NORMAL	N/A	N/A	N/A	N/A
Tail pinch	NORMAL	N/A	N/A	N/A	N/A
Air righting ability	NORMAL	N/A	N/A	N/A	N/A
Pupillary response	NORMAL	N/A	N/A	N/A	N/A
Corneal tactile response	NORMAL	N/A	N/A	N/A	N/A
Auditory response	PRESENT	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	58	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	0.353	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	0.131	N/A	N/A	N/A	N/A

Appendix 13
Individual functional observation battery data

Test Article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 2M Animal number 21 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	MODERATE DIFFICULTY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	PRESENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

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Appendix 13
Individual functional observation battery data

Test Article	Control	[		]	
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 2M Animal number 21 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	18	15	12	16	20
Number of faecal boli	0	0	0	0	0
Number of urine pools	1	0	0	0	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	N/A	N/A	N/A	N/A	N/A
Touch response	N/A	N/A	N/A	N/A	N/A
Tail pinch	N/A	N/A	N/A	N/A	N/A
Air righting ability	N/A	N/A	N/A	N/A	N/A
Pupillary response	N/A	N/A	N/A	N/A	N/A
Corneal tactile response	N/A	N/A	N/A	N/A	N/A
Auditory response	N/A	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	N/A	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 2M Animal number 21 (continued)

	Week 10	Week 11	Week 12	Week 13
OBSERVATIONS BEFORE REMOVAL FROM CAGE:				
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:				
Ease of removal	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	RIGID IN HAND
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 2M Animal number 21 (continued)

	Week 10	Week 11	Week 12	Week 13
OPEN FIELD OBSERVATIONS:				
Latency to first step (secs)	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	HYPERACTIVE	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	19	16	25	23
Number of faecal boli	0	0	0	0
Number of urine pools	0	0	0	2
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:				
Approach response	N/A	N/A	N/A	NORMAL
Touch response	N/A	N/A	N/A	NORMAL
Tail pinch	N/A	N/A	N/A	NORMAL
Air righting ability	N/A	N/A	N/A	NORMAL
Pupillary response	N/A	N/A	N/A	NORMAL
Corneal tactile response	N/A	N/A	N/A	NORMAL
Auditory response	N/A	N/A	N/A	PRESENT
Hindlimb footsplay (mm)	N/A	N/A	N/A	85
Forelimb grip strength (kg)	N/A	N/A	N/A	1.288
Hindlimb grip strength (kg)	N/A	N/A	N/A	0.713

Appendix 13
Individual functional observation battery data

Test Article	Control		[	]	
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 2M Animal number 22

	Week -1	Week 1	Week 2	Week 3	Week 4
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 2M Animal number 22 (continued)

	Week -1	Week 1	Week 2	Week 3	Week 4
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	13	8	18	18	20
Number of faecal boli	0	0	0	0	0
Number of urine pools	0	0	0	0	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	NORMAL	N/A	N/A	N/A	N/A
Touch response	NORMAL	N/A	N/A	N/A	N/A
Tail pinch	NORMAL	N/A	N/A	N/A	N/A
Air righting ability	NORMAL	N/A	N/A	N/A	N/A
Pupillary response	NORMAL	N/A	N/A	N/A	N/A
Corneal tactile response	NORMAL	N/A	N/A	N/A	N/A
Auditory response	PRESENT	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	72	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	0.443	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	0.111	N/A	N/A	N/A	N/A

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Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 2M Animal number 22 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EVASION	EASY	EASY	EASY	EASY
Ease of handling	MODERATE DIFFICULTY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 2M Animal number 22 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	21	17	9	23	28
Number of faecal boli	0	0	0	0	0
Number of urine pools	0	0	1	0	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	N/A	N/A	N/A	N/A	N/A
Touch response	N/A	N/A	N/A	N/A	N/A
Tail pinch	N/A	N/A	N/A	N/A	N/A
Air righting ability	N/A	N/A	N/A	N/A	N/A
Pupillary response	N/A	N/A	N/A	N/A	N/A
Corneal tactile response	N/A	N/A	N/A	N/A	N/A
Auditory response	N/A	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	N/A	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 2M Animal number 22 (continued)

	Week 10	Week 11	Week 12	Week 13
OBSERVATIONS BEFORE REMOVAL FROM CAGE:				
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:				
Ease of removal	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control		[	]	
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 2M Animal number 22 (continued)

	Week 10	Week 11	Week 12	Week 13
OPEN FIELD OBSERVATIONS:				
Latency to first step (secs)	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	23	17	17	23
Number of faecal boli	0	0	0	0
Number of urine pools	0	0	0	2
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:				
Approach response	N/A	N/A	N/A	NORMAL
Touch response	N/A	N/A	N/A	NORMAL
Tail pinch	N/A	N/A	N/A	NORMAL
Air righting ability	N/A	N/A	N/A	NORMAL
Pupillary response	N/A	N/A	N/A	NORMAL
Corneal tactile response	N/A	N/A	N/A	NORMAL
Auditory response	N/A	N/A	N/A	PRESENT
Hindlimb footsplay (mm)	N/A	N/A	N/A	100
Forelimb grip strength (kg)	N/A	N/A	N/A	1.099
Hindlimb grip strength (kg)	N/A	N/A	N/A	0.849

Appendix 13
Individual functional observation battery data

Test Article	Control		[	]	
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 2M Animal number 23

	Week -1	Week 1	Week 2	Week 3	Week 4
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EVASION	AGGRESSIVE	EASY
Ease of handling	EASY	EASY	RIGID IN HAND	RIGID IN HAND	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	PRESENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[		]	
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 2M Animal number 23 (continued)

	Week -1	Week 1	Week 2	Week 3	Week 4
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	9	6	10	9	16
Number of faecal boli	0	0	0	0	0
Number of urine pools	0	0	0	0	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	NORMAL	N/A	N/A	N/A	N/A
Touch response	NORMAL	N/A	N/A	N/A	N/A
Tail pinch	NORMAL	N/A	N/A	N/A	N/A
Air righting ability	NORMAL	N/A	N/A	N/A	N/A
Pupillary response	NORMAL	N/A	N/A	N/A	N/A
Corneal tactile response	NORMAL	N/A	N/A	N/A	N/A
Auditory response	PRESENT	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	70	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	0.381	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	0.136	N/A	N/A	N/A	N/A

Appendix 13
Individual functional observation battery data

Test Article	Control	[	]		
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 2M Animal number 23 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	AGGRESSIVE
Ease of handling	EASY	EASY	EASY	EASY	DIFFICULT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	PRESENT##

- raised tail in cage

Appendix 13
Individual functional observation battery data

Test Article	Control	[		]	
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 2M Animal number 23 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	HYPOACTIVE	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	PRESENT#	ABSENT	ABSENT	ABSENT	PRESENT###
Number of rears	1	8	11	15	14
Number of faecal boli	-##	0	0	0	0
Number of urine pools	-##	0	0	0	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	N/A	N/A	N/A	N/A	N/A
Touch response	N/A	N/A	N/A	N/A	N/A
Tail pinch	N/A	N/A	N/A	N/A	N/A
Air righting ability	N/A	N/A	N/A	N/A	N/A
Pupillary response	N/A	N/A	N/A	N/A	N/A
Corneal tactile response	N/A	N/A	N/A	N/A	N/A
Auditory response	N/A	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	N/A	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A

\# - animal stayed in same quarter of arena for 1 minute 5 seconds
- omitted in error
- raised tail

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 2M Animal number 23 (continued)

	Week 10	Week 11	Week 12	Week 13
OBSERVATIONS BEFORE REMOVAL FROM CAGE:				
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:				
Ease of removal	EVASION	EVASION	EVASION##	EVASION
Ease of handling	EASY	EASY	EASY	MODERATE DIFFICULTY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE

- animal aggressive

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 2M Animal number 23 (continued)

	Week 10	Week 11	Week 12	Week 13
OPEN FIELD OBSERVATIONS:				
Latency to first step (secs)	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Other	PRESENT##	ABSENT	ABSENT	ABSENT
Number of rears	13	3	8	6
Number of faecal boli	0	0	0	0
Number of urine pools	0	0	1	1
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:				
Approach response	N/A	N/A	N/A	NORMAL
Touch response	N/A	N/A	N/A	NORMAL
Tail pinch	N/A	N/A	N/A	NORMAL
Air righting ability	N/A	N/A	N/A	NORMAL
Pupillary response	N/A	N/A	N/A	NORMAL
Corneal tactile response	N/A	N/A	N/A	NORMAL
Auditory response	N/A	N/A	N/A	PRESENT
Hindlimb footsplay (mm)	N/A	N/A	N/A	107
Forelimb grip strength (kg)	N/A	N/A	N/A	1.285
Hindlimb grip strength (kg)	N/A	N/A	N/A	0.866

- animal difficult to remove from arena, showed evasion

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Appendix 13
Individual functional observation battery data

Test Article	Control		[	]	
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 2M Animal number 24

	Week -1	Week 1	Week 2	Week 3	Week 4
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 2M Animal number 24 (continued)

	Week -1	Week 1	Week 2	Week 3	Week 4
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	HYPOACTIVE	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	PRESENT#	PRESENT##
Number of rears	24	8	10	1	1
Number of faecal boli	0	0	0	0	0
Number of urine pools	1	0	0	0	2###
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	NORMAL	N/A	N/A	N/A	N/A
Touch response	NORMAL	N/A	N/A	N/A	N/A
Tail pinch	NORMAL	N/A	N/A	N/A	N/A
Air righting ability	NORMAL	N/A	N/A	N/A	N/A
Pupillary response	NORMAL	N/A	N/A	N/A	N/A
Corneal tactile response	NORMAL	N/A	N/A	N/A	N/A
Auditory response	PRESENT	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	69	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	0.533	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	0.123	N/A	N/A	N/A	N/A

\# - animal stayed in same section of arena for 80 seconds
- animal stayed at side of arena for 1 minute 49 seconds
- urine appears cloudy

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 2M Animal number 24 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EVASION	EASY	EASY	AGGRESSIVE	EVASION
Ease of handling	DIFFICULT	EASY	EASY	EASY	RIGID IN HAND
Excessive vocalisation	ABSENT	ABSENT	ABSENT	PRESENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 2M Animal number 24 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	4	0	9	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	HYPOACTIVE	HYPOACTIVE	HYPOACTIVE	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	PRESENT#	PRESENT##	PRESENT@	PRESENT@@	PRESENT@@@
Number of rears	0	0	0	0	0
Number of faecal boli	0	-###	0	-###	0
Number of urine pools	0	-###	1	2	2
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	N/A	N/A	N/A	N/A	N/A
Touch response	N/A	N/A	N/A	N/A	N/A
Tail pinch	N/A	N/A	N/A	N/A	N/A
Air righting ability	N/A	N/A	N/A	N/A	N/A
Pupillary response	N/A	N/A	N/A	N/A	N/A
Corneal tactile response	N/A	N/A	N/A	N/A	N/A
Auditory response	N/A	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	N/A	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A

\# - animal stayed in same section of arena for duration
- animal stayed in same half of arena for approximately 1 minute 30 seconds
- omitted in error
@ - urine pool white and cloudy, animal sat at side of arena for approximately 1 minute 30 seconds
@@ - animal stayed in the same section of the arena for 1 minute 30 seconds
@@@ - animal sat at side of arena for 1 minute

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 2M Animal number 24 (continued)

	Week 10	Week 11	Week 12	Week 13
OBSERVATIONS BEFORE REMOVAL FROM CAGE:				
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:				
Ease of removal	EVASION#	EASY	EVASION	EASY
Ease of handling	DIFFICULT##	EASY	EASY	EASY
Excessive vocalisation	PRESENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE

\# - animal aggressive
- rigid in hand

Appendix 13
Individual functional observation battery data

Test Article	Control		[	]	
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 2M Animal number 24 (continued)

	Week 10	Week 11	Week 12	Week 13
OPEN FIELD OBSERVATIONS:				
Latency to first step (secs)	0	2	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Other	PRESENT##	ABSENT	ABSENT	ABSENT
Number of rears	5	7	8	10
Number of faecal boli	0	0	0	0
Number of urine pools	0	0	0	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:				
Approach response	N/A	N/A	N/A	NORMAL
Touch response	N/A	N/A	N/A	NORMAL
Tail pinch	N/A	N/A	N/A	NORMAL
Air righting ability	N/A	N/A	N/A	NORMAL
Pupillary response	N/A	N/A	N/A	NORMAL
Corneal tactile response	N/A	N/A	N/A	NORMAL
Auditory response	N/A	N/A	N/A	PRESENT
Hindlimb footsplay (mm)	N/A	N/A	N/A	121
Forelimb grip strength (kg)	N/A	N/A	N/A	1.179
Hindlimb grip strength (kg)	N/A	N/A	N/A	0.742

- animal stayed in same quarter of arena for 1 minute 8 seconds

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Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 2M Animal number 25

	Week -1	Week 1	Week 2	Week 3	Week 4
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[		]	
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 2M Animal number 25 (continued)

	Week -1	Week 1	Week 2	Week 3	Week 4
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	1	1	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	7	9	10	9	13
Number of faecal boli	0	0	0	0	0
Number of urine pools	0	0	2	2	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	NORMAL	N/A	N/A	N/A	N/A
Touch response	NORMAL	N/A	N/A	N/A	N/A
Tail pinch	NORMAL	N/A	N/A	N/A	N/A
Air righting ability	NORMAL	N/A	N/A	N/A	N/A
Pupillary response	NORMAL	N/A	N/A	N/A	N/A
Corneal tactile response	NORMAL	N/A	N/A	N/A	N/A
Auditory response	PRESENT	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	80	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	0.373	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	0.130	N/A	N/A	N/A	N/A

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 2M Animal number 25 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EVASION##	EASY	EASY	EASY
Ease of handling	EASY	MODERATE DIFFICULTY	EASY	EASY	RIGID IN HAND
Excessive vocalisation	ABSENT	PRESENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

- aggressive

Appendix 13
Individual functional observation battery data

Test Article	Control	[	]		
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 2M Animal number 25 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	HYPOACTIVE	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	PRESENT##	ABSENT	ABSENT	ABSENT
Number of rears	5	0	3	8	8
Number of faecal boli	0	0	0	0	0
Number of urine pools	1	0	0	1	1
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	N/A	N/A	N/A	N/A	N/A
Touch response	N/A	N/A	N/A	N/A	N/A
Tail pinch	N/A	N/A	N/A	N/A	N/A
Air righting ability	N/A	N/A	N/A	N/A	N/A
Pupillary response	N/A	N/A	N/A	N/A	N/A
Corneal tactile response	N/A	N/A	N/A	N/A	N/A
Auditory response	N/A	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	N/A	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A

- animal stayed in same section of arena for 1 minute 20 seconds

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 2M Animal number 25 (continued)

	Week 10	Week 11	Week 12	Week 13
OBSERVATIONS BEFORE REMOVAL FROM CAGE:				
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:				
Ease of removal	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 2M Animal number 25 (continued)

	Week 10	Week 11	Week 12	Week 13
OPEN FIELD OBSERVATIONS:				
Latency to first step (secs)	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	9	11	15	18
Number of faecal boli	0	0	0	0
Number of urine pools	3	0	1	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:				
Approach response	N/A	N/A	N/A	NORMAL
Touch response	N/A	N/A	N/A	NORMAL
Tail pinch	N/A	N/A	N/A	NORMAL
Air righting ability	N/A	N/A	N/A	NORMAL
Pupillary response	N/A	N/A	N/A	NORMAL
Corneal tactile response	N/A	N/A	N/A	NORMAL
Auditory response	N/A	N/A	N/A	PRESENT
Hindlimb footsplay (mm)	N/A	N/A	N/A	87
Forelimb grip strength (kg)	N/A	N/A	N/A	0.993
Hindlimb grip strength (kg)	N/A	N/A	N/A	0.634

Appendix 13
Individual functional observation battery data

Test Article	Control		[	]	
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 2F Animal number 76

	Week -1	Week 1	Week 2	Week 3	Week 4
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[	]		
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 2F Animal number 76 (continued)

	Week -1	Week 1	Week 2	Week 3	Week 4
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	1	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	HYPERACTIVE##
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	14	17	22	25	26
Number of faecal boli	0	0	0	0	0
Number of urine pools	3	0	0	0	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	NORMAL	N/A	N/A	N/A	N/A
Touch response	NORMAL	N/A	N/A	N/A	N/A
Tail pinch	NORMAL	N/A	N/A	N/A	N/A
Air righting ability	NORMAL	N/A	N/A	N/A	N/A
Pupillary response	NORMAL	N/A	N/A	N/A	N/A
Corneal tactile response	NORMAL	N/A	N/A	N/A	N/A
Auditory response	PRESENT	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	68	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	0.625	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	0.261	N/A	N/A	N/A	N/A

- animal dashing back and forth across arena

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Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 2F Animal number 76 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control		[	]	
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 2F Animal number 76 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	HIGH STEPPING
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	SLIGHT
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	33	21	24	25	31
Number of faecal boli	0	0	0	0	0
Number of urine pools	0	2	0	1	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	N/A	N/A	N/A	N/A	N/A
Touch response	N/A	N/A	N/A	N/A	N/A
Tail pinch	N/A	N/A	N/A	N/A	N/A
Air righting ability	N/A	N/A	N/A	N/A	N/A
Pupillary response	N/A	N/A	N/A	N/A	N/A
Corneal tactile response	N/A	N/A	N/A	N/A	N/A
Auditory response	N/A	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	N/A	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 2F Animal number 76 (continued)

	Week 10	Week 11	Week 12	Week 13
OBSERVATIONS BEFORE REMOVAL FROM CAGE:				
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:				
Ease of removal	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 2F Animal number 76 (continued)

	Week 10	Week 11	Week 12	Week 13
OPEN FIELD OBSERVATIONS:				
Latency to first step (secs)	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	18	22	24	16
Number of faecal boli	0	0	0	0
Number of urine pools	1	0	1	2
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:				
Approach response	N/A	N/A	N/A	NORMAL
Touch response	N/A	N/A	N/A	NORMAL
Tail pinch	N/A	N/A	N/A	NORMAL
Air righting ability	N/A	N/A	N/A	NORMAL
Pupillary response	N/A	N/A	N/A	NORMAL
Corneal tactile response	N/A	N/A	N/A	NORMAL
Auditory response	N/A	N/A	N/A	PRESENT
Hindlimb footsplay (mm)	N/A	N/A	N/A	67
Forelimb grip strength (kg)	N/A	N/A	N/A	1.044
Hindlimb grip strength (kg)	N/A	N/A	N/A	0.149

Appendix 13
Individual functional observation battery data

Test Article	Control		[	]	
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 2F Animal number 77

	Week -1	Week 1	Week 2	Week 3	Week 4
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 2F Animal number 77 (continued)

	Week -1	Week 1	Week 2	Week 3	Week 4
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	HIGH STEPPING	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	MODERATE	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	34	26	33	25	28
Number of faecal boli	0	0	0	0	0
Number of urine pools	0	0	0	0	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	NORMAL	N/A	N/A	N/A	N/A
Touch response	NORMAL	N/A	N/A	N/A	N/A
Tail pinch	NORMAL	N/A	N/A	N/A	N/A
Air righting ability	NORMAL	N/A	N/A	N/A	N/A
Pupillary response	NORMAL	N/A	N/A	N/A	N/A
Corneal tactile response	NORMAL	N/A	N/A	N/A	N/A
Auditory response	PRESENT	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	63	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	0.651	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	0.257	N/A	N/A	N/A	N/A

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 2F Animal number 77 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 2F Animal number 77 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	HIGH STEPPING	HIGH STEPPING	HIGH STEPPING	HIGH STEPPING
Gait type severity	NORMAL	MODERATE	SLIGHT	MODERATE	SLIGHT
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	20	23	29	31	36
Number of faecal boli	0	0	0	0	0
Number of urine pools	0	0	0	1	2
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	N/A	N/A	N/A	N/A	N/A
Touch response	N/A	N/A	N/A	N/A	N/A
Tail pinch	N/A	N/A	N/A	N/A	N/A
Air righting ability	N/A	N/A	N/A	N/A	N/A
Pupillary response	N/A	N/A	N/A	N/A	N/A
Corneal tactile response	N/A	N/A	N/A	N/A	N/A
Auditory response	N/A	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	N/A	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 2F Animal number 77 (continued)

	Week 10	Week 11	Week 12	Week 13
OBSERVATIONS BEFORE REMOVAL FROM CAGE:				
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:				
Ease of removal	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 2F Animal number 77 (continued)

	Week 10	Week 11	Week 12	Week 13
OPEN FIELD OBSERVATIONS:				
Latency to first step (secs)	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	HIGH STEPPING	HIGH STEPPING	NORMAL	NORMAL
Gait type severity	SLIGHT	MODERATE	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	25	24	24	22
Number of faecal boli	0	0	0	0
Number of urine pools	0	0	1	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:				
Approach response	N/A	N/A	N/A	NORMAL
Touch response	N/A	N/A	N/A	NORMAL
Tail pinch	N/A	N/A	N/A	NORMAL
Air righting ability	N/A	N/A	N/A	NORMAL
Pupillary response	N/A	N/A	N/A	NORMAL
Corneal tactile response	N/A	N/A	N/A	NORMAL
Auditory response	N/A	N/A	N/A	PRESENT
Hindlimb footsplay (mm)	N/A	N/A	N/A	76
Forelimb grip strength (kg)	N/A	N/A	N/A	0.978
Hindlimb grip strength (kg)	N/A	N/A	N/A	0.310

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Appendix 13
Individual functional observation battery data

Test Article	Control	[	]		
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 2F Animal number 78

	Week -1	Week 1	Week 2	Week 3	Week 4
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 2F Animal number 78 (continued)

	Week -1	Week 1	Week 2	Week 3	Week 4
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	PRESENT##
Number of rears	22	11	33	11	16
Number of faecal boli	0	0	0	0	0
Number of urine pools	0	0	0	0	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	NORMAL	N/A	N/A	N/A	N/A
Touch response	NORMAL	N/A	N/A	N/A	N/A
Tail pinch	NORMAL	N/A	N/A	N/A	N/A
Air righting ability	NORMAL	N/A	N/A	N/A	N/A
Pupillary response	NORMAL	N/A	N/A	N/A	N/A
Corneal tactile response	NORMAL	N/A	N/A	N/A	N/A
Auditory response	PRESENT	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	58	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	0.475	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	0.207	N/A	N/A	N/A	N/A

- animal tried to jump from arena on one occasion

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 2F Animal number 78 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 2F Animal number 78 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	22	21	28	24	21
Number of faecal boli	0	0	0	0	0
Number of urine pools	0	0	0	0	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	N/A	N/A	N/A	N/A	N/A
Touch response	N/A	N/A	N/A	N/A	N/A
Tail pinch	N/A	N/A	N/A	N/A	N/A
Air righting ability	N/A	N/A	N/A	N/A	N/A
Pupillary response	N/A	N/A	N/A	N/A	N/A
Corneal tactile response	N/A	N/A	N/A	N/A	N/A
Auditory response	N/A	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	N/A	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 2F Animal number 78 (continued)

	Week 10	Week 11	Week 12	Week 13
OBSERVATIONS BEFORE REMOVAL FROM CAGE:				
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:				
Ease of removal	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control		[	]	
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 2F Animal number 78 (continued)

	Week 10	Week 11	Week 12	Week 13
OPEN FIELD OBSERVATIONS:				
Latency to first step (secs)	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	27	21	24	19
Number of faecal boli	0	0	0	0
Number of urine pools	0	0	0	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:				
Approach response	N/A	N/A	N/A	NORMAL
Touch response	N/A	N/A	N/A	NORMAL
Tail pinch	N/A	N/A	N/A	NORMAL
Air righting ability	N/A	N/A	N/A	NORMAL
Pupillary response	N/A	N/A	N/A	NORMAL
Corneal tactile response	N/A	N/A	N/A	NORMAL
Auditory response	N/A	N/A	N/A	PRESENT
Hindlimb footsplay (mm)	N/A	N/A	N/A	71
Forelimb grip strength (kg)	N/A	N/A	N/A	0.908
Hindlimb grip strength (kg)	N/A	N/A	N/A	0.314

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 2F Animal number 79

	Week -1	Week 1	Week 2	Week 3	Week 4
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 2F Animal number 79 (continued)

	Week -1	Week 1	Week 2	Week 3	Week 4
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	23	20	24	17	18
Number of faecal boli	0	0	0	0	0
Number of urine pools	0	0	0	0	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	NORMAL	N/A	N/A	N/A	N/A
Touch response	NORMAL	N/A	N/A	N/A	N/A
Tail pinch	NORMAL	N/A	N/A	N/A	N/A
Air righting ability	NORMAL	N/A	N/A	N/A	N/A
Pupillary response	NORMAL	N/A	N/A	N/A	N/A
Corneal tactile response	NORMAL	N/A	N/A	N/A	N/A
Auditory response	PRESENT	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	60	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	0.506	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	0.324	N/A	N/A	N/A	N/A

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 2F Animal number 79 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 2F Animal number 79 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	17	24	19	13	19
Number of faecal boli	0	0	0	0	0
Number of urine pools	0	0	6	3	5
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	N/A	N/A	N/A	N/A	N/A
Touch response	N/A	N/A	N/A	N/A	N/A
Tail pinch	N/A	N/A	N/A	N/A	N/A
Air righting ability	N/A	N/A	N/A	N/A	N/A
Pupillary response	N/A	N/A	N/A	N/A	N/A
Corneal tactile response	N/A	N/A	N/A	N/A	N/A
Auditory response	N/A	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	N/A	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 2F Animal number 79 (continued)

	Week 10	Week 11	Week 12	Week 13
OBSERVATIONS BEFORE REMOVAL FROM CAGE:				
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:				
Ease of removal	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 2F Animal number 79 (continued)

	Week 10	Week 11	Week 12	Week 13
OPEN FIELD OBSERVATIONS:				
Latency to first step (secs)	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	12	21	22	18
Number of faecal boli	0	0	0	0
Number of urine pools	3	11	13	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:				
Approach response	N/A	N/A	N/A	NORMAL
Touch response	N/A	N/A	N/A	NORMAL
Tail pinch	N/A	N/A	N/A	NORMAL
Air righting ability	N/A	N/A	N/A	NORMAL
Pupillary response	N/A	N/A	N/A	NORMAL
Corneal tactile response	N/A	N/A	N/A	NORMAL
Auditory response	N/A	N/A	N/A	PRESENT
Hindlimb footsplay (mm)	N/A	N/A	N/A	62
Forelimb grip strength (kg)	N/A	N/A	N/A	0.851
Hindlimb grip strength (kg)	N/A	N/A	N/A	0.409

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 2F Animal number 80

	Week -1	Week 1	Week 2	Week 3	Week 4
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control		[	]	
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 2F Animal number 80 (continued)

	Week -1	Week 1	Week 2	Week 3	Week 4
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	HIGH STEPPING	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	MODERATE	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	PRESENT##
Number of rears	18	22	33	26	22
Number of faecal boli	0	0	0	0	0
Number of urine pools	9	4	3	0	3
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	NORMAL	N/A	N/A	N/A	N/A
Touch response	NORMAL	N/A	N/A	N/A	N/A
Tail pinch	NORMAL	N/A	N/A	N/A	N/A
Air righting ability	NORMAL	N/A	N/A	N/A	N/A
Pupillary response	NORMAL	N/A	N/A	N/A	N/A
Corneal tactile response	NORMAL	N/A	N/A	N/A	N/A
Auditory response	PRESENT	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	45	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	0.452	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	0.313	N/A	N/A	N/A	N/A

- raised tail

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 2F Animal number 80 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 2F Animal number 80 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	HIGH STEPPING	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	MODERATE	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	PRESENT#	PRESENT##	PRESENT###	PRESENT@	PRESENT@@
Number of rears	28	21	17	23	20
Number of faecal boli	0	0	0	0	0
Number of urine pools	0	0	0	0	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	N/A	N/A	N/A	N/A	N/A
Touch response	N/A	N/A	N/A	N/A	N/A
Tail pinch	N/A	N/A	N/A	N/A	N/A
Air righting ability	N/A	N/A	N/A	N/A	N/A
Pupillary response	N/A	N/A	N/A	N/A	N/A
Corneal tactile response	N/A	N/A	N/A	N/A	N/A
Auditory response	N/A	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	N/A	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A

\# - animal jumped onto rim of arena on one occasion for approximately 1 second
- animal jumped onto rim of arena on 5 occasions
(for approximately 10, 5, 10, 10, 10 seconds respectively)
- animal jumped onto rim of arena on 7 occasions (for approximately 10 seconds each time)
@ - animal jumped onto rim of arena on 4 occasions (for approximately 5, 5, 5, 40 seconds respectively)
@@ - animal jumped onto rim of arena on 5 occasions (for approximately 10 seconds each time)

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 2F Animal number 80 (continued)

	Week 10	Week 11	Week 12	Week 13
OBSERVATIONS BEFORE REMOVAL FROM CAGE:				
Posture	NORMAL	NORMAL		
Activity	NORMAL	NORMAL		
Gait	NORMAL	NORMAL		
Tremor	ABSENT	ABSENT		
Convulsion	ABSENT	ABSENT		
Excessive vocalisation	ABSENT	ABSENT		
Arousal upon opening cage	NORMAL	NORMAL		
OBSERVATIONS ON REMOVAL FROM CAGE:				
Ease of removal	EASY	EASY		
Ease of handling	EASY	EASY		
Excessive vocalisation	ABSENT	ABSENT		
Tremor	ABSENT	ABSENT		
Convulsion	NONE	NONE		
Palpebral closure	NORMAL	NORMAL		
Exophthalmus	ABSENT	ABSENT		
Lacrimation	NONE	NONE		
Lacrimation type	NONE	NONE		
Salivation	NONE	NONE		
Respiration	NORMAL	NORMAL		
Piloerection	ABSENT	ABSENT		
Appearance of fur	NORMAL	NORMAL		
Other	NONE	NONE		

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 2F Animal number 80 (continued)

	Week 10	Week 11	Week 12	Week 13
OPEN FIELD OBSERVATIONS:				
Latency to first step (secs)	0	0		
Posture	NORMAL	NORMAL		
Arousal	NORMAL	NORMAL		
Circling	ABSENT	ABSENT		
Gait type	NORMAL	NORMAL		
Gait type severity	NORMAL	NORMAL		
Stereotypy	ABSENT	ABSENT		
Tremor	ABSENT	ABSENT		
Convulsion	NONE	NONE		
Other	PRESENT#	PRESENT##		
Number of rears	14	15		
Number of faecal boli	0	0		
Number of urine pools	0	0		
Diarrhoea	ABSENT	ABSENT		
Polyuria	ABSENT	ABSENT		
OPEN FIELD TESTS:				
Approach response	N/A	N/A		
Touch response	N/A	N/A		
Tail pinch	N/A	N/A		
Air righting ability	N/A	N/A		
Pupillary response	N/A	N/A		
Corneal tactile response	N/A	N/A		
Auditory response	N/A	N/A		
Hindlimb footsplay (mm)	N/A	N/A		
Forelimb grip strength (kg)	N/A	N/A		
Hindlimb grip strength (kg)	N/A	N/A		

- animal jumped onto rim of arena on 6 occasions (for approximately 15 seconds each time)
- animal jumped out of arena on 6 occasions (for approximately 10 seconds each time)

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Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 2F Animal number 81

	Week -1	Week 1	Week 2	Week 3	Week 4
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control		[	]	
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 2F Animal number 81 (continued)

	Week -1	Week 1	Week 2	Week 3	Week 4
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	HYPERACTIVE
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	HIGH STEPPING	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	SLIGHT	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	35	16	20	29	35
Number of faecal boli	0	0	0	0	0
Number of urine pools	2	0	0	0	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	NORMAL	N/A	N/A	N/A	N/A
Touch response	NORMAL	N/A	N/A	N/A	N/A
Tail pinch	NORMAL	N/A	N/A	N/A	N/A
Air righting ability	NORMAL	N/A	N/A	N/A	N/A
Pupillary response	NORMAL	N/A	N/A	N/A	N/A
Corneal tactile response	NORMAL	N/A	N/A	N/A	N/A
Auditory response	PRESENT	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	75	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	0.518	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	0.265	N/A	N/A	N/A	N/A

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 2F Animal number 81 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 2F Animal number 81 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	HIGH STEPPING	HIGH STEPPING	NORMAL	NORMAL	NORMAL
Gait type severity	SLIGHT	MODERATE	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	30	35	32	25	28
Number of faecal boli	0	0	0	0	0
Number of urine pools	0	0	0	0	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	N/A	N/A	N/A	N/A	N/A
Touch response	N/A	N/A	N/A	N/A	N/A
Tail pinch	N/A	N/A	N/A	N/A	N/A
Air righting ability	N/A	N/A	N/A	N/A	N/A
Pupillary response	N/A	N/A	N/A	N/A	N/A
Corneal tactile response	N/A	N/A	N/A	N/A	N/A
Auditory response	N/A	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	N/A	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 2F Animal number 81 (continued)

	Week 10	Week 11	Week 12	Week 13
OBSERVATIONS BEFORE REMOVAL FROM CAGE:				
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:				
Ease of removal	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control		[	]	
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 2F Animal number 81 (continued)

	Week 10	Week 11	Week 12	Week 13
OPEN FIELD OBSERVATIONS:				
Latency to first step (secs)	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	27	28	23	17
Number of faecal boli	0	0	0	0
Number of urine pools	0	0	1	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:				
Approach response	N/A	N/A	N/A	NORMAL
Touch response	N/A	N/A	N/A	NORMAL
Tail pinch	N/A	N/A	N/A	NORMAL
Air righting ability	N/A	N/A	N/A	NORMAL
Pupillary response	N/A	N/A	N/A	NORMAL
Corneal tactile response	N/A	N/A	N/A	NORMAL
Auditory response	N/A	N/A	N/A	PRESENT
Hindlimb footsplay (mm)	N/A	N/A	N/A	41
Forelimb grip strength (kg)	N/A	N/A	N/A	0.401
Hindlimb grip strength (kg)	N/A	N/A	N/A	0.327

Appendix 13
Individual functional observation battery data

Test Article	Control		[	]	
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 2F Animal number 82

	Week -1	Week 1	Week 2	Week 3	Week 4
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[		]	
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 2F Animal number 82 (continued)

	Week -1	Week 1	Week 2	Week 3	Week 4
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	20	21	23	25	31
Number of faecal boli	0	0	0	0	0
Number of urine pools	0	0	0	0	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	NORMAL	N/A	N/A	N/A	N/A
Touch response	NORMAL	N/A	N/A	N/A	N/A
Tail pinch	NORMAL	N/A	N/A	N/A	N/A
Air righting ability	NORMAL	N/A	N/A	N/A	N/A
Pupillary response	NORMAL	N/A	N/A	N/A	N/A
Corneal tactile response	NORMAL	N/A	N/A	N/A	N/A
Auditory response	PRESENT	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	50	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	0.477	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	0.271	N/A	N/A	N/A	N/A

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 2F Animal number 82 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 2F Animal number 82 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	HIGH STEPPING	HIGH STEPPING	NORMAL	NORMAL	NORMAL
Gait type severity	SLIGHT	SLIGHT	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	23	20	21	20	29
Number of faecal boli	0	0	0	0	0
Number of urine pools	0	2	0	0	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	N/A	N/A	N/A	N/A	N/A
Touch response	N/A	N/A	N/A	N/A	N/A
Tail pinch	N/A	N/A	N/A	N/A	N/A
Air righting ability	N/A	N/A	N/A	N/A	N/A
Pupillary response	N/A	N/A	N/A	N/A	N/A
Corneal tactile response	N/A	N/A	N/A	N/A	N/A
Auditory response	N/A	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	N/A	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 2F Animal number 82 (continued)

	Week 10	Week 11	Week 12	Week 13
OBSERVATIONS BEFORE REMOVAL FROM CAGE:				
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:				
Ease of removal	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 2F Animal number 82 (continued)

	Week 10	Week 11	Week 12	Week 13
OPEN FIELD OBSERVATIONS:				
Latency to first step (secs)	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	HIGH STEPPING	NORMAL	NORMAL	NORMAL
Gait type severity	SLIGHT	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	26	27	21	18
Number of faecal boli	0	0	0	0
Number of urine pools	0	0	0	2
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:				
Approach response	N/A	N/A	N/A	NORMAL
Touch response	N/A	N/A	N/A	NORMAL
Tail pinch	N/A	N/A	N/A	NORMAL
Air righting ability	N/A	N/A	N/A	NORMAL
Pupillary response	N/A	N/A	N/A	NORMAL
Corneal tactile response	N/A	N/A	N/A	NORMAL
Auditory response	N/A	N/A	N/A	PRESENT
Hindlimb footsplay (mm)	N/A	N/A	N/A	55
Forelimb grip strength (kg)	N/A	N/A	N/A	0.966
Hindlimb grip strength (kg)	N/A	N/A	N/A	0.322

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 2F Animal number 83

	Week -1	Week 1	Week 2	Week 3	Week 4
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control		[	]	
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 2F Animal number 83 (continued)

	Week -1	Week 1	Week 2	Week 3	Week 4
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	-##
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	HYPERACTIVE
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	HIGH STEPPING	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	SLIGHT	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	PRESENT#	PRESENT#
Number of rears	12	17	32	21	28
Number of faecal boli	0	0	0	0	0
Number of urine pools	0	0	0	0	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	NORMAL	N/A	N/A	N/A	N/A
Touch response	NORMAL	N/A	N/A	N/A	N/A
Tail pinch	NORMAL	N/A	N/A	N/A	N/A
Air righting ability	NORMAL	N/A	N/A	N/A	N/A
Pupillary response	NORMAL	N/A	N/A	N/A	N/A
Corneal tactile response	NORMAL	N/A	N/A	N/A	N/A
Auditory response	PRESENT	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	75	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	0.559	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	0.255	N/A	N/A	N/A	N/A

\# - raised tail
- omitted in error

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 2F Animal number 83 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[	]		
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 2F Animal number 83 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	HIGH STEPPING	NORMAL	HIGH STEPPING	NORMAL
Gait type severity	NORMAL	MODERATE	NORMAL	SLIGHT	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	PRESENT##	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	35	33	26	23	32
Number of faecal boli	0	0	0	0	0
Number of urine pools	0	0	0	0	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	N/A	N/A	N/A	N/A	N/A
Touch response	N/A	N/A	N/A	N/A	N/A
Tail pinch	N/A	N/A	N/A	N/A	N/A
Air righting ability	N/A	N/A	N/A	N/A	N/A
Pupillary response	N/A	N/A	N/A	N/A	N/A
Corneal tactile response	N/A	N/A	N/A	N/A	N/A
Auditory response	N/A	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	N/A	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A

- raised tail

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Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 2F Animal number 83 (continued)

	Week 10	Week 11	Week 12	Week 13
OBSERVATIONS BEFORE REMOVAL FROM CAGE:				
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:				
Ease of removal	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control		[	]	
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 2F Animal number 83 (continued)

	Week 10	Week 11	Week 12	Week 13
OPEN FIELD OBSERVATIONS:				
Latency to first step (secs)	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	33	35	31	16
Number of faecal boli	0	0	0	0
Number of urine pools	0	0	0	4
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:				
Approach response	N/A	N/A	N/A	NORMAL
Touch response	N/A	N/A	N/A	NORMAL
Tail pinch	N/A	N/A	N/A	NORMAL
Air righting ability	N/A	N/A	N/A	NORMAL
Pupillary response	N/A	N/A	N/A	NORMAL
Corneal tactile response	N/A	N/A	N/A	NORMAL
Auditory response	N/A	N/A	N/A	PRESENT
Hindlimb footsplay (mm)	N/A	N/A	N/A	65
Forelimb grip strength (kg)	N/A	N/A	N/A	0.709
Hindlimb grip strength (kg)	N/A	N/A	N/A	0.262

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 2F Animal number 84

	Week -1	Week 1	Week 2	Week 3	Week 4
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[		]	
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 2F Animal number 84 (continued)

	Week -1	Week 1	Week 2	Week 3	Week 4
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	1	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	15	17	28	28	17
Number of faecal boli	0	0	0	0	0
Number of urine pools	1	0	3	0	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	NORMAL	N/A	N/A	N/A	N/A
Touch response	NORMAL	N/A	N/A	N/A	N/A
Tail pinch	NORMAL	N/A	N/A	N/A	N/A
Air righting ability	NORMAL	N/A	N/A	N/A	N/A
Pupillary response	NORMAL	N/A	N/A	N/A	N/A
Corneal tactile response	NORMAL	N/A	N/A	N/A	N/A
Auditory response	PRESENT	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	50	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	0.492	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	0.274	N/A	N/A	N/A	N/A

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 2F Animal number 84 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 2F Animal number 84 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	36	17	23	19	26
Number of faecal boli	0	0	0	0	0
Number of urine pools	0	0	1	0	1
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	N/A	N/A	N/A	N/A	N/A
Touch response	N/A	N/A	N/A	N/A	N/A
Tail pinch	N/A	N/A	N/A	N/A	N/A
Air righting ability	N/A	N/A	N/A	N/A	N/A
Pupillary response	N/A	N/A	N/A	N/A	N/A
Corneal tactile response	N/A	N/A	N/A	N/A	N/A
Auditory response	N/A	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	N/A	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 2F Animal number 84 (continued)

	Week 10	Week 11	Week 12	Week 13
OBSERVATIONS BEFORE REMOVAL FROM CAGE:				
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:				
Ease of removal	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 2F Animal number 84 (continued)

	Week 10	Week 11	Week 12	Week 13
OPEN FIELD OBSERVATIONS:				
Latency to first step (secs)	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	21	24	23	28
Number of faecal boli	0	0	0	0
Number of urine pools	2	2	0	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:				
Approach response	N/A	N/A	N/A	NORMAL
Touch response	N/A	N/A	N/A	NORMAL
Tail pinch	N/A	N/A	N/A	NORMAL
Air righting ability	N/A	N/A	N/A	NORMAL
Pupillary response	N/A	N/A	N/A	NORMAL
Corneal tactile response	N/A	N/A	N/A	NORMAL
Auditory response	N/A	N/A	N/A	PRESENT
Hindlimb footsplay (mm)	N/A	N/A	N/A	46
Forelimb grip strength (kg)	N/A	N/A	N/A	0.686
Hindlimb grip strength (kg)	N/A	N/A	N/A	0.311

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 2F Animal number 85

	Week -1	Week 1	Week 2	Week 3	Week 4
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 2F Animal number 85 (continued)

	Week -1	Week 1	Week 2	Week 3	Week 4
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	2	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	HYPERACTIVE	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	15	13	19	38	30
Number of faecal boli	0	0	0	0	0
Number of urine pools	0	0	0	0	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	NORMAL	N/A	N/A	N/A	N/A
Touch response	NORMAL	N/A	N/A	N/A	N/A
Tail pinch	NORMAL	N/A	N/A	N/A	N/A
Air righting ability	NORMAL	N/A	N/A	N/A	N/A
Pupillary response	NORMAL	N/A	N/A	N/A	N/A
Corneal tactile response	NORMAL	N/A	N/A	N/A	N/A
Auditory response	PRESENT	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	83	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	0.511	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	0.374	N/A	N/A	N/A	N/A

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 2F Animal number 85 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 2F Animal number 85 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	33	33	27	26	44
Number of faecal boli	0	0	0	0	0
Number of urine pools	0	1	0	1	1
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	N/A	N/A	N/A	N/A	N/A
Touch response	N/A	N/A	N/A	N/A	N/A
Tail pinch	N/A	N/A	N/A	N/A	N/A
Air righting ability	N/A	N/A	N/A	N/A	N/A
Pupillary response	N/A	N/A	N/A	N/A	N/A
Corneal tactile response	N/A	N/A	N/A	N/A	N/A
Auditory response	N/A	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	N/A	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A

Appendix 13
Individual functional observation battery data

Test Article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 2F Animal number 85 (continued)

	Week 10	Week 11	Week 12	Week 13
OBSERVATIONS BEFORE REMOVAL FROM CAGE:				
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:				
Ease of removal	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 2F Animal number 85 (continued)

	Week 10	Week 11	Week 12	Week 13
OPEN FIELD OBSERVATIONS:				
Latency to first step (secs)	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	37	31	28	22
Number of faecal boli	0	0	0	0
Number of urine pools	2	0	0	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:				
Approach response	N/A	N/A	N/A	NORMAL
Touch response	N/A	N/A	N/A	NORMAL
Tail pinch	N/A	N/A	N/A	NORMAL
Air righting ability	N/A	N/A	N/A	NORMAL
Pupillary response	N/A	N/A	N/A	NORMAL
Corneal tactile response	N/A	N/A	N/A	NORMAL
Auditory response	N/A	N/A	N/A	PRESENT
Hindlimb footsplay (mm)	N/A	N/A	N/A	59
Forelimb grip strength (kg)	N/A	N/A	N/A	0.892
Hindlimb grip strength (kg)	N/A	N/A	N/A	0.202

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 3M Animal number 26

	Week -1	Week 1	Week 2	Week 3	Week 4
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 3M Animal number 26 (continued)

	Week -1	Week 1	Week 2	Week 3	Week 4
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	1	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	9	9	17	17	19
Number of faecal boli	0	0	0	0	0
Number of urine pools	0	1	0	2	4
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	NORMAL	N/A	N/A	N/A	N/A
Touch response	NORMAL	N/A	N/A	N/A	N/A
Tail pinch	NORMAL	N/A	N/A	N/A	N/A
Air righting ability	NORMAL	N/A	N/A	N/A	N/A
Pupillary response	NORMAL	N/A	N/A	N/A	N/A
Corneal tactile response	NORMAL	N/A	N/A	N/A	N/A
Auditory response	PRESENT	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	63	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	0.415	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	0.165	N/A	N/A	N/A	N/A

Appendix 13
Individual functional observation battery data

Test Article	Control	[	]		
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 3M Animal number 26 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 3M Animal number 26 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	14	13	14	18	13
Number of faecal boli	0	0	0	0	0
Number of urine pools	4	4	8	17	12
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	N/A	N/A	N/A	N/A	N/A
Touch response	N/A	N/A	N/A	N/A	N/A
Tail pinch	N/A	N/A	N/A	N/A	N/A
Air righting ability	N/A	N/A	N/A	N/A	N/A
Pupillary response	N/A	N/A	N/A	N/A	N/A
Corneal tactile response	N/A	N/A	N/A	N/A	N/A
Auditory response	N/A	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	N/A	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 3M Animal number 26 (continued)

	Week 10	Week 11	Week 12	Week 13
OBSERVATIONS BEFORE REMOVAL FROM CAGE:				
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:				
Ease of removal	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 3M Animal number 26 (continued)

	Week 10	Week 11	Week 12	Week 13
OPEN FIELD OBSERVATIONS:				
Latency to first step (secs)	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	15	9	16	20
Number of faecal boli	0	0	0	0
Number of urine pools	9	0	12	8
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:				
Approach response	N/A	N/A	N/A	NORMAL
Touch response	N/A	N/A	N/A	NORMAL
Tail pinch	N/A	N/A	N/A	NORMAL
Air righting ability	N/A	N/A	N/A	NORMAL
Pupillary response	N/A	N/A	N/A	NORMAL
Corneal tactile response	N/A	N/A	N/A	NORMAL
Auditory response	N/A	N/A	N/A	PRESENT
Hindlimb footsplay (mm)	N/A	N/A	N/A	75
Forelimb grip strength (kg)	N/A	N/A	N/A	0.966
Hindlimb grip strength (kg)	N/A	N/A	N/A	0.900

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Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 3M Animal number 27

	Week -1	Week 1	Week 2	Week 3	Week 4
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 3M Animal number 27 (continued)

	Week -1	Week 1	Week 2	Week 3	Week 4
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	17	19	28	12	19
Number of faecal boli	4	1	0	0	0
Number of urine pools	0	1	2	6	12
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	NORMAL	N/A	N/A	N/A	N/A
Touch response	NORMAL	N/A	N/A	N/A	N/A
Tail pinch	NORMAL	N/A	N/A	N/A	N/A
Air righting ability	NORMAL	N/A	N/A	N/A	N/A
Pupillary response	NORMAL	N/A	N/A	N/A	N/A
Corneal tactile response	NORMAL	N/A	N/A	N/A	N/A
Auditory response	PRESENT	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	67	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	0.350	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	0.141	N/A	N/A	N/A	N/A

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Appendix 13
Individual functional observation battery data

Test Article	Control	[	]		
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 3M Animal number 27 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	AGGRESSIVE
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	ROUGH
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 3M Animal number 27 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	18	26	24	25	19
Number of faecal boli	0	0	0	0	0
Number of urine pools	5	8	5	8	4
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	N/A	N/A	N/A	N/A	N/A
Touch response	N/A	N/A	N/A	N/A	N/A
Tail pinch	N/A	N/A	N/A	N/A	N/A
Air righting ability	N/A	N/A	N/A	N/A	N/A
Pupillary response	N/A	N/A	N/A	N/A	N/A
Corneal tactile response	N/A	N/A	N/A	N/A	N/A
Auditory response	N/A	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	N/A	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 3M Animal number 27 (continued)

	Week 10	Week 11	Week 12	Week 13
OBSERVATIONS BEFORE REMOVAL FROM CAGE:				
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:				
Ease of removal	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 3M Animal number 27 (continued)

	Week 10	Week 11	Week 12	Week 13
OPEN FIELD OBSERVATIONS:				
Latency to first step (secs)	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	21	22	20	21
Number of faecal boli	0	0	0	0
Number of urine pools	5	2	11	6
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:				
Approach response	N/A	N/A	N/A	NORMAL
Touch response	N/A	N/A	N/A	NORMAL
Tail pinch	N/A	N/A	N/A	NORMAL
Air righting ability	N/A	N/A	N/A	NORMAL
Pupillary response	N/A	N/A	N/A	NORMAL
Corneal tactile response	N/A	N/A	N/A	NORMAL
Auditory response	N/A	N/A	N/A	PRESENT
Hindlimb footsplay (mm)	N/A	N/A	N/A	93
Forelimb grip strength (kg)	N/A	N/A	N/A	0.877
Hindlimb grip strength (kg)	N/A	N/A	N/A	0.847

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 3M Animal number 28

	Week -1	Week 1	Week 2	Week 3	Week 4
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 3M Animal number 28 (continued)

	Week -1	Week 1	Week 2	Week 3	Week 4
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	5	16	14	17	13
Number of faecal boli	0	0	0	0	0
Number of urine pools	0	1	0	0	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	NORMAL	N/A	N/A	N/A	N/A
Touch response	NORMAL	N/A	N/A	N/A	N/A
Tail pinch	NORMAL	N/A	N/A	N/A	N/A
Air righting ability	NORMAL	N/A	N/A	N/A	N/A
Pupillary response	NORMAL	N/A	N/A	N/A	N/A
Corneal tactile response	NORMAL	N/A	N/A	N/A	N/A
Auditory response	PRESENT	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	61	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	0.408	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	0.125	N/A	N/A	N/A	N/A

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 3M Animal number 28 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[		]	
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 3M Animal number 28 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	12	19	10	27	18
Number of faecal boli	0	0	0	0	0
Number of urine pools	0	0	0	0	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	N/A	N/A	N/A	N/A	N/A
Touch response	N/A	N/A	N/A	N/A	N/A
Tail pinch	N/A	N/A	N/A	N/A	N/A
Air righting ability	N/A	N/A	N/A	N/A	N/A
Pupillary response	N/A	N/A	N/A	N/A	N/A
Corneal tactile response	N/A	N/A	N/A	N/A	N/A
Auditory response	N/A	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	N/A	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 3M Animal number 28 (continued)

	Week 10	Week 11	Week 12	Week 13
OBSERVATIONS BEFORE REMOVAL FROM CAGE:				
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:				
Ease of removal	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 3M Animal number 28 (continued)

	Week 10	Week 11	Week 12	Week 13
OPEN FIELD OBSERVATIONS:				
Latency to first step (secs)	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Other	PRESENT#	ABSENT	PRESENT##	ABSENT
Number of rears	20	11	14	20
Number of faecal boli	0	0	0	0
Number of urine pools	0	3	0	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:				
Approach response	N/A	N/A	N/A	NORMAL
Touch response	N/A	N/A	N/A	NORMAL
Tail pinch	N/A	N/A	N/A	NORMAL
Air righting ability	N/A	N/A	N/A	NORMAL
Pupillary response	N/A	N/A	N/A	NORMAL
Corneal tactile response	N/A	N/A	N/A	NORMAL
Auditory response	N/A	N/A	N/A	PRESENT
Hindlimb footsplay (mm)	N/A	N/A	N/A	84
Forelimb grip strength (kg)	N/A	N/A	N/A	0.868
Hindlimb grip strength (kg)	N/A	N/A	N/A	0.960

- animal jumped onto rim of arena on one occasion for 4 seconds
- animal jumped onto rim of arena on one occasion for 29 seconds

Appendix 13
Individual functional observation battery data

Test Article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 3M Animal number 29

	Week -1	Week 1	Week 2	Week 3	Week 4
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 3M Animal number 29 (continued)

	Week -1	Week 1	Week 2	Week 3	Week 4
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	4	3	12	17	15
Number of faecal boli	0	0	0	0	0
Number of urine pools	0	0	0	0	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	NORMAL	N/A	N/A	N/A	N/A
Touch response	NORMAL	N/A	N/A	N/A	N/A
Tail pinch	NORMAL	N/A	N/A	N/A	N/A
Air righting ability	NORMAL	N/A	N/A	N/A	N/A
Pupillary response	NORMAL	N/A	N/A	N/A	N/A
Corneal tactile response	NORMAL	N/A	N/A	N/A	N/A
Auditory response	PRESENT	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	65	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	0.427	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	0.143	N/A	N/A	N/A	N/A

Appendix 13
Individual functional observation battery data

Test Article	Control	[	]		
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 3M Animal number 29 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EVASION	EASY
Ease of handling	EASY	EASY	EASY	RIGID IN HAND	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 3M Animal number 29 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	PRESENT##	ABSENT	PRESENT##
Number of rears	14	17	10	15	12
Number of faecal boli	0	0	0	0	0
Number of urine pools	0	0	0	0	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	N/A	N/A	N/A	N/A	N/A
Touch response	N/A	N/A	N/A	N/A	N/A
Tail pinch	N/A	N/A	N/A	N/A	N/A
Air righting ability	N/A	N/A	N/A	N/A	N/A
Pupillary response	N/A	N/A	N/A	N/A	N/A
Corneal tactile response	N/A	N/A	N/A	N/A	N/A
Auditory response	N/A	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	N/A	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A

- raised tail

Appendix 13
Individual functional observation battery data

Test Article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 3M Animal number 29 (continued)

	Week 10	Week 11	Week 12	Week 13
OBSERVATIONS BEFORE REMOVAL FROM CAGE:				
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:				
Ease of removal	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 3M Animal number 29 (continued)

	Week 10	Week 11	Week 12	Week 13
OPEN FIELD OBSERVATIONS:				
Latency to first step (secs)	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	16	16	13	17
Number of faecal boli	0	0	0	0
Number of urine pools	0	0	1	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:				
Approach response	N/A	N/A	N/A	NORMAL
Touch response	N/A	N/A	N/A	NORMAL
Tail pinch	N/A	N/A	N/A	NORMAL
Air righting ability	N/A	N/A	N/A	NORMAL
Pupillary response	N/A	N/A	N/A	NORMAL
Corneal tactile response	N/A	N/A	N/A	NORMAL
Auditory response	N/A	N/A	N/A	PRESENT
Hindlimb footsplay (mm)	N/A	N/A	N/A	89
Forelimb grip strength (kg)	N/A	N/A	N/A	1.274
Hindlimb grip strength (kg)	N/A	N/A	N/A	0.916

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 3M Animal number 30

	Week -1	Week 1	Week 2	Week 3	Week 4
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 3M Animal number 30 (continued)

	Week -1	Week 1	Week 2	Week 3	Week 4
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	1	3	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	HYPOACTIVE	HYPOACTIVE	HYPOACTIVE	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	PRESENT#	PRESENT##	PRESENT###	ABSENT
Number of rears	6	0	5	3	16
Number of faecal boli	4	0	0	0	0
Number of urine pools	0	0	0	0	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	NORMAL	N/A	N/A	N/A	N/A
Touch response	NORMAL	N/A	N/A	N/A	N/A
Tail pinch	NORMAL	N/A	N/A	N/A	N/A
Air righting ability	NORMAL	N/A	N/A	N/A	N/A
Pupillary response	NORMAL	N/A	N/A	N/A	N/A
Corneal tactile response	NORMAL	N/A	N/A	N/A	N/A
Auditory response	PRESENT	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	72	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	0.504	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	0.124	N/A	N/A	N/A	N/A

\# - animal remained in centre of arena for 1 minute 30 seconds
- animal stayed in same section of arena for duration
- animal stayed in same quarter of arena for 45 seconds

Appendix 13
Individual functional observation battery data

Test Article	Control	[	]		
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 3M Animal number 30 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 3M Animal number 30 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	11	12	10	11	7
Number of faecal boli	0	0	0	0	0
Number of urine pools	0	0	0	0	3
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	N/A	N/A	N/A	N/A	N/A
Touch response	N/A	N/A	N/A	N/A	N/A
Tail pinch	N/A	N/A	N/A	N/A	N/A
Air righting ability	N/A	N/A	N/A	N/A	N/A
Pupillary response	N/A	N/A	N/A	N/A	N/A
Corneal tactile response	N/A	N/A	N/A	N/A	N/A
Auditory response	N/A	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	N/A	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A

Appendix 13
Individual functional observation battery data

Test Article	Control		[	]	
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 3M Animal number 30 (continued)

	Week 10	Week 11	Week 12	Week 13
OBSERVATIONS BEFORE REMOVAL FROM CAGE:				
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:				
Ease of removal	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control		[	]	
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 3M Animal number 30 (continued)

	Week 10	Week 11	Week 12	Week 13
OPEN FIELD OBSERVATIONS:				
Latency to first step (secs)	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	PRESENT##
Number of rears	12	8	3	1
Number of faecal boli	0	0	0	0
Number of urine pools	0	0	3	2
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:				
Approach response	N/A	N/A	N/A	NORMAL
Touch response	N/A	N/A	N/A	NORMAL
Tail pinch	N/A	N/A	N/A	NORMAL
Air righting ability	N/A	N/A	N/A	NORMAL
Pupillary response	N/A	N/A	N/A	NORMAL
Corneal tactile response	N/A	N/A	N/A	NORMAL
Auditory response	N/A	N/A	N/A	PRESENT
Hindlimb footsplay (mm)	N/A	N/A	N/A	83
Forelimb grip strength (kg)	N/A	N/A	N/A	1.010
Hindlimb grip strength (kg)	N/A	N/A	N/A	0.773

- animal sat in same section of arena for duration of test

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 3M Animal number 31

	Week -1	Week 1	Week 2	Week 3	Week 4
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 3M Animal number 31 (continued)

	Week -1	Week 1	Week 2	Week 3	Week 4
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	6	7	10	7	12
Number of faecal boli	0	0	0	0	0
Number of urine pools	0	2	2	0	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	NORMAL	N/A	N/A	N/A	N/A
Touch response	NORMAL	N/A	N/A	N/A	N/A
Tail pinch	NORMAL	N/A	N/A	N/A	N/A
Air righting ability	NORMAL	N/A	N/A	N/A	N/A
Pupillary response	NORMAL	N/A	N/A	N/A	N/A
Corneal tactile response	NORMAL	N/A	N/A	N/A	N/A
Auditory response	PRESENT	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	66	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	0.426	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	0.167	N/A	N/A	N/A	N/A

Appendix 13
Individual functional observation battery data

Test Article	Control		[	]	
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 3M Animal number 31 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control		[	]	
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 3M Animal number 31 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	HIGH STEPPING	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	SLIGHT	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	PRESENT##	PRESENT##	ABSENT	ABSENT	ABSENT
Number of rears	18	20	15	13	15
Number of faecal boli	0	0	0	0	0
Number of urine pools	0	0	2	2	3
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	N/A	N/A	N/A	N/A	N/A
Touch response	N/A	N/A	N/A	N/A	N/A
Tail pinch	N/A	N/A	N/A	N/A	N/A
Air righting ability	N/A	N/A	N/A	N/A	N/A
Pupillary response	N/A	N/A	N/A	N/A	N/A
Corneal tactile response	N/A	N/A	N/A	N/A	N/A
Auditory response	N/A	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	N/A	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A

- raised tail

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 3M Animal number 31 (continued)

	Week 10	Week 11	Week 12	Week 13
OBSERVATIONS BEFORE REMOVAL FROM CAGE:				
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:				
Ease of removal	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 3M Animal number 31 (continued)

	Week 10	Week 11	Week 12	Week 13
OPEN FIELD OBSERVATIONS:				
Latency to first step (secs)	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	9	16	23	14
Number of faecal boli	0	0	0	0
Number of urine pools	0	1	1	3
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:				
Approach response	N/A	N/A	N/A	NORMAL
Touch response	N/A	N/A	N/A	NORMAL
Tail pinch	N/A	N/A	N/A	NORMAL
Air righting ability	N/A	N/A	N/A	NORMAL
Pupillary response	N/A	N/A	N/A	NORMAL
Corneal tactile response	N/A	N/A	N/A	NORMAL
Auditory response	N/A	N/A	N/A	PRESENT
Hindlimb footsplay (mm)	N/A	N/A	N/A	75
Forelimb grip strength (kg)	N/A	N/A	N/A	1.119
Hindlimb grip strength (kg)	N/A	N/A	N/A	0.544

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 3M Animal number 32

	Week -1	Week 1	Week 2	Week 3	Week 4
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 3M Animal number 32 (continued)

	Week -1	Week 1	Week 2	Week 3	Week 4
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	14	19	12	14	7
Number of faecal boli	0	0	0	0	0
Number of urine pools	0	1	1	0	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	NORMAL	N/A	N/A	N/A	N/A
Touch response	NORMAL	N/A	N/A	N/A	N/A
Tail pinch	NORMAL	N/A	N/A	N/A	N/A
Air righting ability	NORMAL	N/A	N/A	N/A	N/A
Pupillary response	NORMAL	N/A	N/A	N/A	N/A
Corneal tactile response	NORMAL	N/A	N/A	N/A	N/A
Auditory response	PRESENT	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	65	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	0.400	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	0.193	N/A	N/A	N/A	N/A

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 3M Animal number 32 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EVASION##	EVASION	EVASION	EASY
Ease of handling	EASY	DIFFICULT	EASY	MODERATE DIFFICULTY	EASY
Excessive vocalisation	ABSENT	PRESENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

- animal aggressive

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 3M Animal number 32 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	HYPOACTIVE	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	PRESENT#	PRESENT##	ABSENT	ABSENT
Number of rears	10	12	5	17	16
Number of faecal boli	0	0	0	0	0
Number of urine pools	0	3	3	0	2
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	N/A	N/A	N/A	N/A	N/A
Touch response	N/A	N/A	N/A	N/A	N/A
Tail pinch	N/A	N/A	N/A	N/A	N/A
Air righting ability	N/A	N/A	N/A	N/A	N/A
Pupillary response	N/A	N/A	N/A	N/A	N/A
Corneal tactile response	N/A	N/A	N/A	N/A	N/A
Auditory response	N/A	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	N/A	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A

- cloudy urine pools
- animal stayed at side of arena for approximately 45 seconds

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 3M Animal number 32 (continued)

	Week 10	Week 11	Week 12	Week 13
OBSERVATIONS BEFORE REMOVAL FROM CAGE:				
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:				
Ease of removal	AGGRESSIVE	EASY	EASY	EASY
Ease of handling	DIFFICULT##	EASY	EASY	EASY
Excessive vocalisation	PRESENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE
Respiration ,	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE

- rigid in hand

Appendix 13
Individual functional observation battery data

Test Article	Control		[	]	
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 3M Animal number 32 (continued)

	Week 10	Week 11	Week 12	Week 13
OPEN FIELD OBSERVATIONS:				
Latency to first step (secs)	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	11	20	15	19
Number of faecal boli	0	0	0	0
Number of urine pools	0	0	0	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:				
Approach response	N/A	N/A	N/A	NORMAL
Touch response	N/A	N/A	N/A	NORMAL
Tail pinch	N/A	N/A	N/A	NORMAL
Air righting ability	N/A	N/A	N/A	NORMAL
Pupillary response	N/A	N/A	N/A	NORMAL
Corneal tactile response	N/A	N/A	N/A	NORMAL
Auditory response	N/A	N/A	N/A	PRESENT
Hindlimb footsplay (mm)	N/A	N/A	N/A	104
Forelimb grip strength (kg)	N/A	N/A	N/A	1.165
Hindlimb grip strength (kg)	N/A	N/A	N/A	1.032

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 3M Animal number 33

	Week -1	Week 1	Week 2	Week 3	Week 4
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 3M Animal number 33 (continued)

	Week -1	Week 1	Week 2	Week 3	Week 4
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	1
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	18	10	18	11	9
Number of faecal boli	0	3	4	0	0
Number of urine pools	5	0	2	0	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	NORMAL	N/A	N/A	N/A	N/A
Touch response	NORMAL	N/A	N/A	N/A	N/A
Tail pinch	NORMAL	N/A	N/A	N/A	N/A
Air righting ability	NORMAL	N/A	N/A	N/A	N/A
Pupillary response	NORMAL	N/A	N/A	N/A	N/A
Corneal tactile response	NORMAL	N/A	N/A	N/A	N/A
Auditory response	PRESENT	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	62	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	0.457	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	0.496	N/A	N/A	N/A	N/A

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 3M Animal number 33 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[	]		
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 3M Animal number 33 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	14	20	10	13	12
Number of faecal boli	0	0	0	0	0
Number of urine pools	0	2	4	1	3
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	N/A	N/A	N/A	N/A	N/A
Touch response	N/A	N/A	N/A	N/A	N/A
Tail pinch	N/A	N/A	N/A	N/A	N/A
Air righting ability	N/A	N/A	N/A	N/A	N/A
Pupillary response	N/A	N/A	N/A	N/A	N/A
Corneal tactile response	N/A	N/A	N/A	N/A	N/A
Auditory response	N/A	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	N/A	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 3M Animal number 33 (continued)

	Week 10	Week 11	Week 12	Week 13
OBSERVATIONS BEFORE REMOVAL FROM CAGE:				
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:				
Ease of removal	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 3M Animal number 33 (continued)

	Week 10	Week 11	Week 12	Week 13
OPEN FIELD OBSERVATIONS:				
Latency to first step (secs)	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	23	12	20	22
Number of faecal boli	0	0	0	0
Number of urine pools	0	0	2	2
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:				
Approach response	N/A	N/A	N/A	NORMAL
Touch response	N/A	N/A	N/A	NORMAL
Tail pinch	N/A	N/A	N/A	NORMAL
Air righting ability	N/A	N/A	N/A	NORMAL
Pupillary response	N/A	N/A	N/A	NORMAL
Corneal tactile response	N/A	N/A	N/A	NORMAL
Auditory response	N/A	N/A	N/A	PRESENT
Hindlimb footsplay (mm)	N/A	N/A	N/A	98
Forelimb grip strength (kg)	N/A	N/A	N/A	1.006
Hindlimb grip strength (kg)	N/A	N/A	N/A	0.696

Appendix 13
Individual functional observation battery data

Test Article	Control		[	]	
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 3M Animal number 34

	Week -1	Week 1	Week 2	Week 3	Week 4
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	KIH-485			
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 3M Animal number 34 (continued)

	Week -1	Week 1	Week 2	Week 3	Week 4
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	HYPOACTIVE	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	PRESENT##	ABSENT
Number of rears	13	10	4	3	7
Number of faecal boli	0	0	0	0	0
Number of urine pools	0	4	0	1	2
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	NORMAL	N/A	N/A	N/A	N/A
Touch response	NORMAL	N/A	N/A	N/A	N/A
Tail pinch	NORMAL	N/A	N/A	N/A	N/A
Air righting ability	NORMAL	N/A	N/A	N/A	N/A
Pupillary response	NORMAL	N/A	N/A	N/A	N/A
Corneal tactile response	NORMAL	N/A	N/A	N/A	N/A
Auditory response	PRESENT	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	66	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	0.428	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	0.145	N/A	N/A	N/A	N/A

- animal stayed in same quarter of arena for 1 minute

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 3M Animal number 34 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EVASION	EASY	EASY	EASY	EVASION
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 3M Animal number 34 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	PRESENT##	ABSENT	ABSENT	ABSENT
Number of rears	6	5	6	13	13
Number of faecal boli	0	0	0	0	0
Number of urine pools	2	1	4	2	1
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	N/A	N/A	N/A	N/A	N/A
Touch response	N/A	N/A	N/A	N/A	N/A
Tail pinch	N/A	N/A	N/A	N/A	N/A
Air righting ability	N/A	N/A	N/A	N/A	N/A
Pupillary response	N/A	N/A	N/A	N/A	N/A
Corneal tactile response	N/A	N/A	N/A	N/A	N/A
Auditory response	N/A	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	N/A	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A

- animal stayed in same quarter of arena for 47 seconds

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 3M Animal number 34 (continued)

	Week 10	Week 11	Week 12	Week 13
OBSERVATIONS BEFORE REMOVAL FROM CAGE:				
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:				
Ease of removal	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 3M Animal number 34 (continued)

	Week 10	Week 11	Week 12	Week 13
OPEN FIELD OBSERVATIONS:				
Latency to first step (secs)	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	6	8	12	14
Number of faecal boli	0	0	0	0
Number of urine pools	0	0	3	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:				
Approach response	N/A	N/A	N/A	NORMAL
Touch response	N/A	N/A	N/A	NORMAL
Tail pinch	N/A	N/A	N/A	NORMAL
Air righting ability	N/A	N/A	N/A	NORMAL
Pupillary response	N/A	N/A	N/A	NORMAL
Corneal tactile response	N/A	N/A	N/A	NORMAL
Auditory response	N/A	N/A	N/A	PRESENT
Hindlimb footsplay (mm)	N/A	N/A	N/A	73
Forelimb grip strength (kg)	N/A	N/A	N/A	0.988
Hindlimb grip strength (kg)	N/A	N/A	N/A	0.794

Appendix 13
Individual functional observation battery data

Test Article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 3M Animal number 35

	Week -1	Week 1	Week 2	Week 3	Week 4
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 3M Animal number 35 (continued)

	Week -1	Week 1	Week 2	Week 3	Week 4
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	2	0	0	1	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	9	16	6	9	8
Number of faecal boli	0	0	0	0	0
Number of urine pools	0	0	0	0	6
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	NORMAL	N/A	N/A	N/A	N/A
Touch response	NORMAL	N/A	N/A	N/A	N/A
Tail pinch	NORMAL	N/A	N/A	N/A	N/A
Air righting ability	NORMAL	N/A	N/A	N/A	N/A
Pupillary response	NORMAL	N/A	N/A	N/A	N/A
Corneal tactile response	NORMAL	N/A	N/A	N/A	N/A
Auditory response	PRESENT	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	64	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	0.346	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	0.153	N/A	N/A	N/A	N/A

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 3M Animal number 35 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 3M Animal number 35 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	9	10	7	15	19
Number of faecal boli	0	0	0	0	0
Number of urine pools	1	0	4	3	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	N/A	N/A	N/A	N/A	N/A
Touch response	N/A	N/A	N/A	N/A	N/A
Tail pinch	N/A	N/A	N/A	N/A	N/A
Air righting ability	N/A	N/A	N/A	N/A	N/A
Pupillary response	N/A	N/A	N/A	N/A	N/A
Corneal tactile response	N/A	N/A	N/A	N/A	N/A
Auditory response	N/A	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	N/A	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 3M Animal number 35 (continued)

	Week 10	Week 11	Week 12	Week 13
OBSERVATIONS BEFORE REMOVAL FROM CAGE:				
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:				
Ease of removal	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 3M Animal number 35 (continued)

	Week 10	Week 11	Week 12	Week 13
OPEN FIELD OBSERVATIONS:				
Latency to first step (secs)	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	11	15	22	15
Number of faecal boli	0	0	0	0
Number of urine pools	0	1	0	2
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:				
Approach response	N/A	N/A	N/A	NORMAL
Touch response	N/A	N/A	N/A	NORMAL
Tail pinch	N/A	N/A	N/A	NORMAL
Air righting ability	N/A	N/A	N/A	NORMAL
Pupillary response	N/A	N/A	N/A	NORMAL
Corneal tactile response	N/A	N/A	N/A	NORMAL
Auditory response	N/A	N/A	N/A	PRESENT
Hindlimb footsplay (mm)	N/A	N/A	N/A	83
Forelimb grip strength (kg)	N/A	N/A	N/A	1.066
Hindlimb grip strength (kg)	N/A	N/A	N/A	0.686

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 3F Animal number 86

	Week -1	Week 1	Week 2	Week 3	Week 4
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 3F Animal number 86 (continued)

	Week -1	Week 1	Week 2	Week 3	Week 4
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	SPASTIC	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	SLIGHT	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	PRESENT##
Number of rears	30	18	21	23	25
Number of faecal boli	0	0	0	0	0
Number of urine pools	3	0	2	0	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	NORMAL	N/A	N/A	N/A	N/A
Touch response	NORMAL	N/A	N/A	N/A	N/A
Tail pinch	NORMAL	N/A	N/A	N/A	N/A
Air righting ability	NORMAL	N/A	N/A	N/A	N/A
Pupillary response	NORMAL	N/A	N/A	N/A	N/A
Corneal tactile response	NORMAL	N/A	N/A	N/A	N/A
Auditory response	PRESENT	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	63	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	0.583	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	0.233	N/A	N/A	N/A	N/A

- animal crossing back and forth across arena

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 3F Animal number 86 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[		]	
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 3F Animal number 86 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	20	22	28	21	19
Number of faecal boli	0	0	0	0	0
Number of urine pools	0	5	3	0	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	N/A	N/A	N/A	N/A	N/A
Touch response	N/A	N/A	N/A	N/A	N/A
Tail pinch	N/A	N/A	N/A	N/A	N/A
Air righting ability	N/A	N/A	N/A	N/A	N/A
Pupillary response	N/A	N/A	N/A	N/A	N/A
Corneal tactile response	N/A	N/A	N/A	N/A	N/A
Auditory response	N/A	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	N/A	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 3F Animal number 86 (continued)

	Week 10	Week 11	Week 12	Week 13
OBSERVATIONS BEFORE REMOVAL FROM CAGE:				
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:				
Ease of removal	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 3F Animal number 86 (continued)

	Week 10	Week 11	Week 12	Week 13
OPEN FIELD OBSERVATIONS:				
Latency to first step (secs)	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	19	20	16	23
Number of faecal boli	0	0	0	0
Number of urine pools	1	0	1	1
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:				
Approach response	N/A	N/A	N/A	NORMAL
Touch response	N/A	N/A	N/A	NORMAL
Tail pinch	N/A	N/A	N/A	NORMAL
Air righting ability	N/A	N/A	N/A	NORMAL
Pupillary response	N/A	N/A	N/A	NORMAL
Corneal tactile response	N/A	N/A	N/A	NORMAL
Auditory response	N/A	N/A	N/A	PRESENT
Hindlimb footsplay (mm)	N/A	N/A	N/A	69
Forelimb grip strength (kg)	N/A	N/A	N/A	0.936
Hindlimb grip strength (kg)	N/A	N/A	N/A	0.382

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 3F Animal number 87

	Week -1	Week 1	Week 2	Week 3	Week 4
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[	]		
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 3F Animal number 87 (continued)

	Week -1	Week 1	Week 2	Week 3	Week 4
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	HYPERACTIVE	NORMAL	NORMAL	NORMAL	HYPERACTIVE
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	47	22	34	28	31
Number of faecal boli	0	0	0	0	0
Number of urine pools	0	0	0	2	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	NORMAL	N/A	N/A	N/A	N/A
Touch response	NORMAL	N/A	N/A	N/A	N/A
Tail pinch	NORMAL	N/A	N/A	N/A	N/A
Air righting ability	NORMAL	N/A	N/A	N/A	N/A
Pupillary response	NORMAL	N/A	N/A	N/A	N/A
Corneal tactile response	NORMAL	N/A	N/A	N/A	N/A
Auditory response	PRESENT	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	73	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	0.477	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	0.275	N/A	N/A	N/A	N/A

Appendix 13
Individual functional observation battery data

Test Article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 3F Animal number 87 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 3F Animal number 87 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	30	29	27	13	21
Number of faecal boli	0	0	0	0	0
Number of urine pools	1	1	1	1	7
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	N/A	N/A	N/A	N/A	N/A
Touch response	N/A	N/A	N/A	N/A	N/A
Tail pinch	N/A	N/A	N/A	N/A	N/A
Air righting ability	N/A	N/A	N/A	N/A	N/A
Pupillary response	N/A	N/A	N/A	N/A	N/A
Corneal tactile response	N/A	N/A	N/A	N/A	N/A
Auditory response	N/A	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	N/A	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A

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Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 3F Animal number 87 (continued)

	Week 10	Week 11	Week 12	Week 13
OBSERVATIONS BEFORE REMOVAL FROM CAGE:				
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:				
Ease of removal	EASY	EASY	AGGRESSIVE	EASY
Ease of handling	EASY	EASY	DIFFICULT	EASY
Excessive vocalisation	ABSENT	ABSENT	PRESENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 3F Animal number 87 (continued)

	Week 10	Week 11	Week 12	Week 13
OPEN FIELD OBSERVATIONS:				
Latency to first step (secs)	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	15	18	21	16
Number of faecal boli	0	0	0	0
Number of urine pools	6	3	0	6
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:				
Approach response	N/A	N/A	N/A	NORMAL
Touch response	N/A	N/A	N/A	NORMAL
Tail pinch	N/A	N/A	N/A	NORMAL
Air righting ability	N/A	N/A	N/A	NORMAL
Pupillary response	N/A	N/A	N/A	NORMAL
Corneal tactile response	N/A	N/A	N/A	NORMAL
Auditory response	N/A	N/A	N/A	PRESENT
Hindlimb footsplay (mm)	N/A	N/A	N/A	77
Forelimb grip strength (kg)	N/A	N/A	N/A	0.872
Hindlimb grip strength (kg)	N/A	N/A	N/A	0.310

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 3F Animal number 88

	Week -1	Week 1	Week 2	Week 3	Week 4
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 3F Animal number 88 (continued)

	Week -1	Week 1	Week 2	Week 3	Week 4
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	2	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	LOW CARRIAGE
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	PRESENT##
Number of rears	15	17	30	18	23
Number of faecal boli	0	0	0	0	0
Number of urine pools	8	3	15	22	16
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	NORMAL	N/A	N/A	N/A	N/A
Touch response	NORMAL	N/A	N/A	N/A	N/A
Tail pinch	NORMAL	N/A	N/A	N/A	N/A
Air righting ability	NORMAL	N/A	N/A	N/A	N/A
Pupillary response	NORMAL	N/A	N/A	N/A	N/A
Corneal tactile response	NORMAL	N/A	N/A	N/A	N/A
Auditory response	PRESENT	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	63	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	0.544	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	0.310	N/A	N/A	N/A	N/A

- raised tail

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 3F Animal number 88 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 3F Animal number 88 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	HIGH STEPPING	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	SLIGHT	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	26	25	29	27	29
Number of faecal boli	0	0	0	0	0
Number of urine pools	1	20	23	25	22
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	N/A	N/A	N/A	N/A	N/A
Touch response	N/A	N/A	N/A	N/A	N/A
Tail pinch	N/A	N/A	N/A	N/A	N/A
Air righting ability	N/A	N/A	N/A	N/A	N/A
Pupillary response	N/A	N/A	N/A	N/A	N/A
Corneal tactile response	N/A	N/A	N/A	N/A	N/A
Auditory response	N/A	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	N/A	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A

Appendix 13
Individual functional observation battery data

Test Article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 3F Animal number 88 (continued)

	Week 10	Week 11	Week 12	Week 13
OBSERVATIONS BEFORE REMOVAL FROM CAGE:				
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:				
Ease of removal	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 3F Animal number 88 (continued)

	Week 10	Week 11	Week 12	Week 13
OPEN FIELD OBSERVATIONS:				
Latency to first step (secs)	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	22	29	28	20
Number of faecal boli	0	0	0	0
Number of urine pools	22	24	13	17
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:				
Approach response	N/A	N/A	N/A	NORMAL
Touch response	N/A	N/A	N/A	NORMAL
Tail pinch	N/A	N/A	N/A	NORMAL
Air righting ability	N/A	N/A	N/A	NORMAL
Pupillary response	N/A	N/A	N/A	NORMAL
Corneal tactile response	N/A	N/A	N/A	NORMAL
Auditory response	N/A	N/A	N/A	PRESENT
Hindlimb footsplay (mm)	N/A	N/A	N/A	71
Forelimb grip strength (kg)	N/A	N/A	N/A	0.810
Hindlimb grip strength (kg)	N/A	N/A	N/A	0.461

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 3F Animal number 89

	Week -1	Week 1	Week 2	Week 3	Week 4
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 3F Animal number 89 (continued)

	Week -1	Week 1	Week 2	Week 3	Week 4
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	1	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	HYPERACTIVE
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	HIGH STEPPING	NORMAL	HIGH STEPPING	NORMAL
Gait type severity	NORMAL	SLIGHT	NORMAL	SLIGHT	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	19	23	27	28	28
Number of faecal boli	0	0	0	0	0
Number of urine pools	0	1	8	6	5
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	NORMAL	N/A	N/A	N/A	N/A
Touch response	NORMAL	N/A	N/A	N/A	N/A
Tail pinch	NORMAL	N/A	N/A	N/A	N/A
Air righting ability	NORMAL	N/A	N/A	N/A	N/A
Pupillary response	NORMAL	N/A	N/A	N/A	N/A
Corneal tactile response	NORMAL	N/A	N/A	N/A	N/A
Auditory response	PRESENT	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	75	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	0.543	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	0.223	N/A	N/A	N/A	N/A

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Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 3F Animal number 89 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 3F Animal number 89 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	-##	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	HIGH STEPPING	HIGH STEPPING	NORMAL	NORMAL	NORMAL
Gait type severity	SLIGHT	SLIGHT	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	24	29	28	21	27
Number of faecal boli	0	0	0	0	0
Number of urine pools	3	5	7	3	14
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	N/A	N/A	N/A	N/A	N/A
Touch response	N/A	N/A	N/A	N/A	N/A
Tail pinch	N/A	N/A	N/A	N/A	N/A
Air righting ability	N/A	N/A	N/A	N/A	N/A
Pupillary response	N/A	N/A	N/A	N/A	N/A
Corneal tactile response	N/A	N/A	N/A	N/A	N/A
Auditory response	N/A	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	N/A	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A

- omitted in error

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 3F Animal number 89 (continued)

	Week 10	Week 11	Week 12	Week 13
OBSERVATIONS BEFORE REMOVAL FROM CAGE:				
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:				
Ease of removal	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 3F Animal number 89 (continued)

	Week 10	Week 11	Week 12	Week 13
OPEN FIELD OBSERVATIONS:				
Latency to first step (secs)	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	21	27	27	21
Number of faecal boli	0	0	0	0
Number of urine pools	1	1	2	12
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:				
Approach response	N/A	N/A	N/A	NORMAL
Touch response	N/A	N/A	N/A	NORMAL
Tail pinch	N/A	N/A	N/A	NORMAL
Air righting ability	N/A	N/A	N/A	NORMAL
Pupillary response	N/A	N/A	N/A	NORMAL
Corneal tactile response	N/A	N/A	N/A	NORMAL
Auditory response	N/A	N/A	N/A	PRESENT
Hindlimb footsplay (mm)	N/A	N/A	N/A	70
Forelimb grip strength (kg)	N/A	N/A	N/A	0.770
Hindlimb grip strength (kg)	N/A	N/A	N/A	0.341

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 3F Animal number 90

	Week -1	Week 1	Week 2	Week 3	Week 4
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 3F Animal number 90 (continued)

	Week -1	Week 1	Week 2	Week 3	Week 4
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	22	19	24	22	26
Number of faecal boli	0	0	0	0	0
Number of urine pools	0	0	0	0	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	NORMAL	N/A	N/A	N/A	N/A
Touch response	NORMAL	N/A	N/A	N/A	N/A
Tail pinch	NORMAL	N/A	N/A	N/A	N/A
Air righting ability	NORMAL	N/A	N/A	N/A	N/A
Pupillary response	NORMAL	N/A	N/A	N/A	N/A
Corneal tactile response	NORMAL	N/A	N/A	N/A	N/A
Auditory response	PRESENT	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	60	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	0.635	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	0.310	N/A	N/A	N/A	N/A

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Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 3F Animal number 90 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 3F Animal number 90 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	25	33	31	24	25
Number of faecal boli	0	0	0	0	0
Number of urine pools	1	0	2	0	2
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	N/A	N/A	N/A	N/A	N/A
Touch response	N/A	N/A	N/A	N/A	N/A
Tail pinch	N/A	N/A	N/A	N/A	N/A
Air righting ability	N/A	N/A	N/A	N/A	N/A
Pupillary response	N/A	N/A	N/A	N/A	N/A
Corneal tactile response	N/A	N/A	N/A	N/A	N/A
Auditory response	N/A	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	N/A	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 3F Animal number 90 (continued)

	Week 10	Week 11	Week 12	Week 13
OBSERVATIONS BEFORE REMOVAL FROM CAGE:				
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:				
Ease of removal	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 3F Animal number 90 (continued)

	Week 10	Week 11	Week 12	Week 13
OPEN FIELD OBSERVATIONS:				
Latency to first step (secs)	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	PRESENT##
Number of rears	30	28	36	25
Number of faecal boli	0	0	0	0
Number of urine pools	0	0	0	2
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:				
Approach response	N/A	N/A	N/A	NORMAL
Touch response	N/A	N/A	N/A	NORMAL
Tail pinch	N/A	N/A	N/A	NORMAL
Air righting ability	N/A	N/A	N/A	NORMAL
Pupillary response	N/A	N/A	N/A	NORMAL
Corneal tactile response	N/A	N/A	N/A	NORMAL
Auditory response	N/A	N/A	N/A	PRESENT
Hindlimb footsplay (mm)	N/A	N/A	N/A	63
Forelimb grip strength (kg)	N/A	N/A	N/A	0.835
Hindlimb grip strength (kg)	N/A	N/A	N/A	0.281

- animal jumped onto rim of arena on one occasion for approximately 17 seconds

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 3F Animal number 91

	Week -1	Week 1	Week 2	Week 3	Week 4
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 3F Animal number 91 (continued)

	Week -1	Week 1	Week 2	Week 3	Week 4
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	LOW CARRIAGE
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	HIGH STEPPING	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	SLIGHT	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	PRESENT##
Number of rears	22	12	12	18	9
Number of faecal boli	3	0	0	0	0
Number of urine pools	20	6	2	4	16
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	NORMAL	N/A	N/A	N/A	N/A
Touch response	NORMAL	N/A	N/A	N/A	N/A
Tail pinch	NORMAL	N/A	N/A	N/A	N/A
Air righting ability	NORMAL	N/A	N/A	N/A	N/A
Pupillary response	NORMAL	N/A	N/A	N/A	N/A
Corneal tactile response	NORMAL	N/A	N/A	N/A	N/A
Auditory response	PRESENT	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	68	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	0.528	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	0.355	N/A	N/A	N/A	N/A

- raised tail

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 3F Animal number 91 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[		]	
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 3F Animal number 91 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	10	21	22	21	25
Number of faecal boli	0	0	0	0	0
Number of urine pools	1	4	4	3	3
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	N/A	N/A	N/A	N/A	N/A
Touch response	N/A	N/A	N/A	N/A	N/A
Tail pinch	N/A	N/A	N/A	N/A	N/A
Air righting ability	N/A	N/A	N/A	N/A	N/A
Pupillary response	N/A	N/A	N/A	N/A	N/A
Corneal tactile response	N/A	N/A	N/A	N/A	N/A
Auditory response	N/A	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	N/A	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 3F Animal number 91 (continued)

	Week 10	Week 11	Week 12	Week 13
OBSERVATIONS BEFORE REMOVAL FROM CAGE:				
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:				
Ease of removal	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 3F Animal number 91 (continued)

	Week 10	Week 11	Week 12	Week 13
OPEN FIELD OBSERVATIONS:				
Latency to first step (secs)	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Other	PRESENT#	PRESENT##	PRESENT###	PRESENT@
Number of rears	17	15	22	14
Number of faecal boli	0	0	0	0
Number of urine pools	2	1	0	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:				
Approach response	N/A	N/A	N/A	NORMAL
Touch response	N/A	N/A	N/A	NORMAL
Tail pinch	N/A	N/A	N/A	NORMAL
Air righting ability	N/A	N/A	N/A	NORMAL
Pupillary response	N/A	N/A	N/A	NORMAL
Corneal tactile response	N/A	N/A	N/A	NORMAL
Auditory response	N/A	N/A	N/A	PRESENT
Hindlimb footsplay (mm)	N/A	N/A	N/A	65
Forelimb grip strength (kg)	N/A	N/A	N/A	1.108
Hindlimb grip strength (kg)	N/A	N/A	N/A	0.444

\# - animal jumped onto rim of arena on one occasion for approximately 25 seconds
- animal jumped onto rim of arena on one occasion for approximately 40 seconds
- animal jumped onto rim of arena on 3 occasions
@ - animal jumped onto rim of arena on 3 occasions (for approximately 25, 25, 6 seconds respectively)

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 3F Animal number 92

	Week -1	Week 1	Week 2	Week 3	Week 4
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 3F Animal number 92 (continued)

	Week -1	Week 1	Week 2	Week 3	Week 4
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	2	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	PRESENT##
Number of rears	11	13	23	19	18
Number of faecal boli	0	0	0	0	0
Number of urine pools	8	1	0	0	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	NORMAL	N/A	N/A	N/A	N/A
Touch response	NORMAL	N/A	N/A	N/A	N/A
Tail pinch	NORMAL	N/A	N/A	N/A	N/A
Air righting ability	NORMAL	N/A	N/A	N/A	N/A
Pupillary response	NORMAL	N/A	N/A	N/A	N/A
Corneal tactile response	NORMAL	N/A	N/A	N/A	N/A
Auditory response	PRESENT	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	50	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	0.504	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	0.210	N/A	N/A	N/A	N/A

- raised tail

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 3F Animal number 92 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 3F Animal number 92 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	19	18	17	14	20
Number of faecal boli	0	0	0	0	0
Number of urine pools	0	0	0	3	1
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	N/A	N/A	N/A	N/A	N/A
Touch response	N/A	N/A	N/A	N/A	N/A
Tail pinch	N/A	N/A	N/A	N/A	N/A
Air righting ability	N/A	N/A	N/A	N/A	N/A
Pupillary response	N/A	N/A	N/A	N/A	N/A
Corneal tactile response	N/A	N/A	N/A	N/A	N/A
Auditory response	N/A	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	N/A	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 3F Animal number 92 (continued)

	Week 10	Week 11	Week 12	Week 13
OBSERVATIONS BEFORE REMOVAL FROM CAGE:				
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:				
Ease of removal	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE

Appendix 13

Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 3F Animal number 92 (continued)

	Week 10	Week 11	Week 12	Week 13
OPEN FIELD OBSERVATIONS:				
Latency to first step (secs)	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	23	23	22	19
Number of faecal boli	0	0	0	0
Number of urine pools	5	4	4	30
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:				
Approach response	N/A	N/A	N/A	NORMAL
Touch response	N/A	N/A	N/A	NORMAL
Tail pinch	N/A	N/A	N/A	NORMAL
Air righting ability	N/A	N/A	N/A	NORMAL
Pupillary response	N/A	N/A	N/A	NORMAL
Corneal tactile response	N/A	N/A	N/A	NORMAL
Auditory response	N/A	N/A	N/A	PRESENT
Hindlimb footsplay (mm)	N/A	N/A	N/A	62
Forelimb grip strength (kg)	N/A	N/A	N/A	1.112
Hindlimb grip strength (kg)	N/A	N/A	N/A	0.330

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 3F Animal number 93

	Week -1	Week 1	Week 2	Week 3	Week 4
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 3F Animal number 93 (continued)

	Week -1	Week 1	Week 2	Week 3	Week 4
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	1	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	HYPERACTIVE
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	HIGH STEPPING	HIGH STEPPING	HIGH STEPPING	NORMAL
Gait type severity	NORMAL	SLIGHT	NORMAL	MODERATE	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	PRESENT##
Number of rears	24	19	23	21	28
Number of faecal boli	0	0	0	0	0
Number of urine pools	0	0	0	0	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	-#	N/A	N/A	N/A	N/A
Touch response	-#	N/A	N/A	N/A	N/A
Tail pinch	-#	N/A	N/A	N/A	N/A
Air righting ability	-#	N/A	N/A	N/A	N/A
Pupillary response	-#	N/A	N/A	N/A	N/A
Corneal tactile response	-#	N/A	N/A	N/A	N/A
Auditory response	-#	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	53	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	0.428	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	0.177	N/A	N/A	N/A	N/A

- omitted in error
- animal crossing back and forth across arena, raised tail

Appendix 13
Individual functional observation battery data

Test Article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 3F Animal number 93 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 3F Animal number 93 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	HIGH STEPPING	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	MODERATE	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	PRESENT#	PRESENT##	PRESENT###	PRESENT@	PRESENT@@
Number of rears	14	24	17	20	7
Number of faecal boli	0	0	0	0	0
Number of urine pools	0	0	0	1	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	N/A	N/A	N/A	N/A	N/A
Touch response	N/A	N/A	N/A	N/A	N/A
Tail pinch	N/A	N/A	N/A	N/A	N/A
Air righting ability	N/A	N/A	N/A	N/A	N/A
Pupillary response	N/A	N/A	N/A	N/A	N/A
Corneal tactile response	N/A	N/A	N/A	N/A	N/A
Auditory response	N/A	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	N/A	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A

\# - animal jumped onto rim of arena on 2 occasions (for approximately 20 and 30 seconds respectively)
- animal jumped onto rim of arena on 3 occasions (for approximately 10, 10, 20 seconds respectively)
- animal jumped onto rim of arena on one occasion for approximately 40 seconds
@ - animal jumped onto rim of arena on one occasion for 14 seconds
@@ - animal jumped onto rim of arena on one occasion for approximately 1 minute 15 seconds

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 3F Animal number 93 (continued)

	Week 10	Week 11	Week 12	Week 13
OBSERVATIONS BEFORE REMOVAL FROM CAGE:				
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:				
Ease of removal	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 3F Animal number 93 (continued)

	Week 10	Week 11	Week 12	Week 13
OPEN FIELD OBSERVATIONS:				
Latency to first step (secs)	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	HIGH STEPPING	NORMAL	NORMAL	NORMAL
Gait type severity	MODERATE	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Other	PRESENT#	PRESENT##	PRESENT###	PRESENT@
Number of rears	28	5	21	18
Number of faecal boli	0	0	0	0
Number of urine pools	0	0	0	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:				
Approach response	N/A	N/A	N/A	NORMAL
Touch response	N/A	N/A	N/A	NORMAL
Tail pinch	N/A	N/A	N/A	NORMAL
Air righting ability	N/A	N/A	N/A	NORMAL
Pupillary response	N/A	N/A	N/A	NORMAL
Corneal tactile response	N/A	N/A	N/A	NORMAL
Auditory response	N/A	N/A	N/A	PRESENT
Hindlimb footsplay (mm)	N/A	N/A	N/A	47
Forelimb grip strength (kg)	N/A	N/A	N/A	0.662
Hindlimb grip strength (kg)	N/A	N/A	N/A	0.185

\# - animal jumped onto rim of arena on one occasion for 34 seconds
- animal jumped onto rim of arena on one occasion for approximately 1 minute 30 seconds
- animal jumped onto rim of arena 4 times
@ - animal jumped onto rim of arena on one occasion for approximately 10 seconds

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 3F Animal number 94

	Week -1	Week 1	Week 2	Week 3	Week 4
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 3F Animal number 94 (continued)

	Week -1	Week 1	Week 2	Week 3	Week 4
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	HYPERACTIVE#
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	PRESENT##
Number of rears	14	15	26	35	47
Number of faecal boli	0	0	0	0	0
Number of urine pools	0	0	0	0	1
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	NORMAL	N/A	N/A	N/A	N/A
Touch response	NORMAL	N/A	N/A	N/A	N/A
Tail pinch	NORMAL	N/A	N/A	N/A	N/A
Air righting ability	NORMAL	N/A	N/A	N/A	N/A
Pupillary response	NORMAL	N/A	N/A	N/A	N/A
Corneal tactile response	NORMAL	N/A	N/A	N/A	N/A
Auditory response	PRESENT	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	65	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	0.369	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	0.245	N/A	N/A	N/A	N/A

- animal dashing back and forth across arena
- raised tail, animal tried to jump from arena on 3 occasions

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 3F Animal number 94 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control		[	]	
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 3F Animal number 94 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	HYPERACTIVE	HYPERACTIVE	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	33	35	33	22	27
Number of faecal boli	0	0	0	0	0
Number of urine pools	0	1	0	10	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	N/A	N/A	N/A	N/A	N/A
Touch response	N/A	N/A	N/A	N/A	N/A
Tail pinch	N/A	N/A	N/A	N/A	N/A
Air righting ability	N/A	N/A	N/A	N/A	N/A
Pupillary response	N/A	N/A	N/A	N/A	N/A
Corneal tactile response	N/A	N/A	N/A	N/A	N/A
Auditory response	N/A	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	N/A	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A

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Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 3F Animal number 94 (continued)

	Week 10	Week 11	Week 12	Week 13
OBSERVATIONS BEFORE REMOVAL FROM CAGE:				
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:				
Ease of removal	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 3F Animal number 94 (continued)

	Week 10	Week 11	Week 12	Week 13
OPEN FIELD OBSERVATIONS:				
Latency to first step (secs)	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	30	21	24	29
Number of faecal boli	0	0	0	0
Number of urine pools	0	2	2	1
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:				
Approach response	N/A	N/A	N/A	NORMAL
Touch response	N/A	N/A	N/A	NORMAL
Tail pinch	N/A	N/A	N/A	NORMAL
Air righting ability	N/A	N/A	N/A	NORMAL
Pupillary response	N/A	N/A	N/A	NORMAL
Corneal tactile response	N/A	N/A	N/A	NORMAL
Auditory response	N/A	N/A	N/A	PRESENT
Hindlimb footsplay (mm)	N/A	N/A	N/A	46
Forelimb grip strength (kg)	N/A	N/A	N/A	0.539
Hindlimb grip strength (kg)	N/A	N/A	N/A	0.258

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Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 3F Animal number 95

	Week -1	Week 1	Week 2	Week 3	Week 4
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 3F Animal number 95 (continued)

	Week -1	Week 1	Week 2	Week 3	Week 4
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	27	19	23	22	14
Number of faecal boli	0	0	0	0	0
Number of urine pools	2	0	0	0	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	NORMAL	N/A	N/A	N/A	N/A
Touch response	NORMAL	N/A	N/A	N/A	N/A
Tail pinch	NORMAL	N/A	N/A	N/A	N/A
Air righting ability	NORMAL	N/A	N/A	N/A	N/A
Pupillary response	NORMAL	N/A	N/A	N/A	N/A
Corneal tactile response	NORMAL	N/A	N/A	N/A	N/A
Auditory response	PRESENT	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	63	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	0.517	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	0.321	N/A	N/A	N/A	N/A

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 3F Animal number 95 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 3F Animal number 95 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	21	27	32	19	24
Number of faecal boli	0	0	0	0	0
Number of urine pools	0	0	0	0	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	N/A	N/A	N/A	N/A	N/A
Touch response	N/A	N/A	N/A	N/A	N/A
Tail pinch	N/A	N/A	N/A	N/A	N/A
Air righting ability	N/A	N/A	N/A	N/A	N/A
Pupillary response	N/A	N/A	N/A	N/A	N/A
Corneal tactile response	N/A	N/A	N/A	N/A	N/A
Auditory response	N/A	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	N/A	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A

Appendix 13
Individual functional observation battery data

Test Article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 3F Animal number 95 (continued)

	Week 10	Week 11	Week 12	Week 13
OBSERVATIONS BEFORE REMOVAL FROM CAGE:				
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:				
Ease of removal	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control		[	]	
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 3F Animal number 95 (continued)

	Week 10	Week 11	Week 12	Week 13
OPEN FIELD OBSERVATIONS:				
Latency to first step (secs)	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	28	25	30	20
Number of faecal boli	0	0	0	0
Number of urine pools	0	0	0	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:				
Approach response	N/A	N/A	N/A	NORMAL
Touch response	N/A	N/A	N/A	NORMAL
Tail pinch	N/A	N/A	N/A	NORMAL
Air righting ability	N/A	N/A	N/A	NORMAL
Pupillary response	N/A	N/A	N/A	NORMAL
Corneal tactile response	N/A	N/A	N/A	NORMAL
Auditory response	N/A	N/A	N/A	PRESENT
Hindlimb footsplay (mm)	N/A	N/A	N/A	70
Forelimb grip strength (kg)	N/A	N/A	N/A	0.802
Hindlimb grip strength (kg)	N/A	N/A	N/A	0.313

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Draft Report

Study Title	[ ] 13 Week Oral (Dietary) Administration Toxicity Study in the Rat with a 4 Week Treatment-free Period
Data Requirement	OPPTS 870.3100
Author	P W Harvey
Sponsor	[ ]
Test facility	Covance Laboratories Ltd Otley Road, Harrogate North Yorkshire HG3 1PY ENGLAND
Covance Study Number	0535/101
Report Issued	December 2003
Volume Number	3 of 3
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Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 4M Animal number 36

	Week -1	Week 1	Week 2	Week 3	Week 4
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 4M Animal number 36 (continued)

	Week -1	Week 1	Week 2	Week 3	Week 4
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	7	11	15	11	9
Number of faecal boli	0	0	0	0	0
Number of urine pools	1	4	1	0	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	NORMAL	N/A	N/A	N/A	N/A
Touch response	NORMAL	N/A	N/A	N/A	N/A
Tail pinch	NORMAL	N/A	N/A	N/A	N/A
Air righting ability	NORMAL	N/A	N/A	N/A	N/A
Pupillary response	NORMAL	N/A	N/A	N/A	N/A
Corneal tactile response	NORMAL	N/A	N/A	N/A	N/A
Auditory response	PRESENT	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	67	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	0.447	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	0.173	N/A	N/A	N/A	N/A

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 4M Animal number 36 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 4M Animal number 36 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	PRESENT##
Number of rears	15	8	17	17	10
Number of faecal boli	0	0	0	0	0
Number of urine pools	0	0	0	0	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	N/A	N/A	N/A	N/A	N/A
Touch response	N/A	N/A	N/A	N/A	N/A
Tail pinch	N/A	N/A	N/A	N/A	N/A
Air righting ability	N/A	N/A	N/A	N/A	N/A
Pupillary response	N/A	N/A	N/A	N/A	N/A
Corneal tactile response	N/A	N/A	N/A	N/A	N/A
Auditory response	N/A	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	N/A	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A

- raised tail

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 4M Animal number 36 (continued)

	Week 10	Week 11	Week 12	Week 13
OBSERVATIONS BEFORE REMOVAL FROM CAGE:				
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:				
Ease of removal	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 4M Animal number 36 (continued)

	Week 10	Week 11	Week 12	Week 13
OPEN FIELD OBSERVATIONS:				
Latency to first step (secs)	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	PRESENT##	ABSENT
Number of rears	17	18	12	21
Number of faecal boli	0	0	0	0
Number of urine pools	0	0	0	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:				
Approach response	N/A	N/A	N/A	NORMAL
Touch response	N/A	N/A	N/A	NORMAL
Tail pinch	N/A	N/A	N/A	NORMAL
Air righting ability	N/A	N/A	N/A	NORMAL
Pupillary response	N/A	N/A	N/A	NORMAL
Corneal tactile response	N/A	N/A	N/A	NORMAL
Auditory response	N/A	N/A	N/A	PRESENT
Hindlimb footsplay (mm)	N/A	N/A	N/A	146
Forelimb grip strength (kg)	N/A	N/A	N/A	1.210
Hindlimb grip strength (kg)	N/A	N/A	N/A	0.916

- raised tail

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 4M Animal number 37

	Week -1	Week 1	Week 2	Week 3	Week 4
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 4M Animal number 37 (continued)

	Week -1	Week 1	Week 2	Week 3	Week 4
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	17	13	27	16	16
Number of faecal boli	0	0	0	0	0
Number of urine pools	3	1	0	0	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	NORMAL	N/A	N/A	N/A	N/A
Touch response	NORMAL	N/A	N/A	N/A	N/A
Tail pinch	NORMAL	N/A	N/A	N/A	N/A
Air righting ability	NORMAL	N/A	N/A	N/A	N/A
Pupillary response	NORMAL	N/A	N/A	N/A	N/A
Corneal tactile response	NORMAL	N/A	N/A	N/A	N/A
Auditory response	PRESENT	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	76	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	0.434	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	0.150	N/A	N/A	N/A	N/A

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 4M Animal number 37 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	RIGID IN HAND
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 4M Animal number 37 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	13	19	19	20	19
Number of faecal boli	0	0	0	0	0
Number of urine pools	0	0	0	0	1
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	N/A	N/A	N/A	N/A	N/A
Touch response	N/A	N/A	N/A	N/A	N/A
Tail pinch	N/A	N/A	N/A	N/A	N/A
Air righting ability	N/A	N/A	N/A	N/A	N/A
Pupillary response	N/A	N/A	N/A	N/A	N/A
Corneal tactile response	N/A	N/A	N/A	N/A	N/A
Auditory response	N/A	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	N/A	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 4M Animal number 37 (continued)

	Week 10	Week 11	Week 12	Week 13
OBSERVATIONS BEFORE REMOVAL FROM CAGE:				
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:				
Ease of removal	AGGRESSIVE	EASY	EASY	EASY
Ease of handling	MODERATE DIFFICULTY	EASY	EASY	EASY
Excessive vocalisation	PRESENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 4M Animal number 37 (continued)

	Week 10	Week 11	Week 12	Week 13
OPEN FIELD OBSERVATIONS:				
Latency to first step (secs)	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Other	PRESENT##	ABSENT	ABSENT	ABSENT
Number of rears	22	25	16	25
Number of faecal boli	0	0	0	0
Number of urine pools	0	0	0	1
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:				
Approach response	N/A	N/A	N/A	NORMAL
Touch response	N/A	N/A	N/A	NORMAL
Tail pinch	N/A	N/A	N/A	NORMAL
Air righting ability	N/A	N/A	N/A	NORMAL
Pupillary response	N/A	N/A	N/A	NORMAL
Corneal tactile response	N/A	N/A	N/A	NORMAL
Auditory response	N/A	N/A	N/A	PRESENT
Hindlimb footsplay (mm)	N/A	N/A	N/A	125
Forelimb grip strength (kg)	N/A	N/A	N/A	1.109
Hindlimb grip strength (kg)	N/A	N/A	N/A	0.904

- raised tail

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Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 4M Animal number 38

	Week -1	Week 1	Week 2	Week 3	Week 4
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 4M Animal number 38 (continued)

	Week -1	Week 1	Week 2	Week 3	Week 4
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	1	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	PRESENT#	ABSENT
Number of rears	12	12	14	11	4
Number of faecal boli	0	0	0	0	0
Number of urine pools	0	0	1	1	2##
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	NORMAL	N/A	N/A	N/A	N/A
Touch response	NORMAL	N/A	N/A	N/A	N/A
Tail pinch	NORMAL	N/A	N/A	N/A	N/A
Air righting ability	NORMAL	N/A	N/A	N/A	N/A
Pupillary response	NORMAL	N/A	N/A	N/A	N/A
Corneal tactile response	NORMAL	N/A	N/A	N/A	N/A
Auditory response	PRESENT	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	75	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	0.400	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	0.133	N/A	N/A	N/A	N/A

\# - raised tail
- urine appears cloudy

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 4M Animal number 38 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 4M Animal number 38 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	PRESENT##
Number of rears	13	23	11	10	11
Number of faecal boli	0	0	0	0	0
Number of urine pools	0	3	4	3	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	N/A	N/A	N/A	N/A	N/A
Touch response	N/A	N/A	N/A	N/A	N/A
Tail pinch	N/A	N/A	N/A	N/A	N/A
Air righting ability	N/A	N/A	N/A	N/A	N/A
Pupillary response	N/A	N/A	N/A	N/A	N/A
Corneal tactile response	N/A	N/A	N/A	N/A	N/A
Auditory response	N/A	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	N/A	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A

- raised tail

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 4M Animal number 38 (continued)

	Week 10	Week 11	Week 12	Week 13
OBSERVATIONS BEFORE REMOVAL FROM CAGE:				
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:				
Ease of removal	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 4M Animal number 38 (continued)

	Week 10	Week 11	Week 12	Week 13
OPEN FIELD OBSERVATIONS:				
Latency to first step (secs)	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	14	11	10	14
Number of faecal boli	0	0	0	0
Number of urine pools	1	1	3	5
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:				
Approach response	N/A	N/A	N/A	NORMAL
Touch response	N/A	N/A	N/A	NORMAL
Tail pinch	N/A	N/A	N/A	NORMAL
Air righting ability	N/A	N/A	N/A	NORMAL
Pupillary response	N/A	N/A	N/A	NORMAL
Corneal tactile response	N/A	N/A	N/A	NORMAL
Auditory response	N/A	N/A	N/A	PRESENT
Hindlimb footsplay (mm)	N/A	N/A	N/A	101
Forelimb grip strength (kg)	N/A	N/A	N/A	1.475
Hindlimb grip strength (kg)	N/A	N/A	N/A	1.119

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 4M Animal number 39

	Week -1	Week 1	Week 2	Week 3	Week 4
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EVASION	EASY
Ease of handling	EASY	EASY	EASY	MODERATE DIFFICULTY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 4M Animal number 39 (continued)

	Week -1	Week 1	Week 2	Week 3	Week 4
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	12	9	14	7	6
Number of faecal boli	0	0	0	0	0
Number of urine pools	0	0	0	0	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	NORMAL	N/A	N/A	N/A	N/A
Touch response	NORMAL	N/A	N/A	N/A	N/A
Tail pinch	NORMAL	N/A	N/A	N/A	N/A
Air righting ability	NORMAL	N/A	N/A	N/A	N/A
Pupillary response	NORMAL	N/A	N/A	N/A	N/A
Corneal tactile response	NORMAL	N/A	N/A	N/A	N/A
Auditory response	PRESENT	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	65	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	0.482	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	0.143	N/A	N/A	N/A	N/A

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 4M Animal number 39 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	AGGRESSIVE	EASY	EASY
Ease of handling	EASY	EASY	DIFFICULT	EASY	RIGID IN HAND
Excessive vocalisation	ABSENT	ABSENT	PRESENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 4M Animal number 39 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	PRESENT##	ABSENT
Number of rears	8	16	10	12	14
Number of faecal boli	0	0	0	0	0
Number of urine pools	0	0	0	2	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	N/A	N/A	N/A	N/A	N/A
Touch response	N/A	N/A	N/A	N/A	N/A
Tail pinch	N/A	N/A	N/A	N/A	N/A
Air righting ability	N/A	N/A	N/A	N/A	N/A
Pupillary response	N/A	N/A	N/A	N/A	N/A
Corneal tactile response	N/A	N/A	N/A	N/A	N/A
Auditory response	N/A	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	N/A	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A

- raised tail

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 4M Animal number 39 (continued)

	Week 10	Week 11	Week 12	Week 13
OBSERVATIONS BEFORE REMOVAL FROM CAGE:				
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:				
Ease of removal	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 4M Animal number 39 (continued)

	Week 10	Week 11	Week 12	Week 13
OPEN FIELD OBSERVATIONS:				
Latency to first step (secs)	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	16	12	14	9
Number of faecal boli	0	0	0	0
Number of urine pools	0	0	0	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:				
Approach response	N/A	N/A	N/A	NORMAL
Touch response	N/A	N/A	N/A	NORMAL
Tail pinch	N/A	N/A	N/A	NORMAL
Air righting ability	N/A	N/A	N/A	NORMAL
Pupillary response	N/A	N/A	N/A	NORMAL
Corneal tactile response	N/A	N/A	N/A	NORMAL
Auditory response	N/A	N/A	N/A	PRESENT
Hindlimb footsplay (mm)	N/A	N/A	N/A	84
Forelimb grip strength (kg)	N/A	N/A	N/A	0.853
Hindlimb grip strength (kg)	N/A	N/A	N/A	0.743

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 4M Animal number 40

	Week -1	Week 1	Week 2	Week 3	Week 4
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 4M Animal number 40 (continued)

	Week -1	Week 1	Week 2	Week 3	Week 4
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	5	0	0	1	1
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	8	10	7	14	6
Number of faecal boli	0	0	0	0	0
Number of urine pools	0	1	1	0	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	NORMAL	N/A	N/A	N/A	N/A
Touch response	NORMAL	N/A	N/A	N/A	N/A
Tail pinch	NORMAL	N/A	N/A	N/A	N/A
Air righting ability	NORMAL	N/A	N/A	N/A	N/A
Pupillary response	NORMAL	N/A	N/A	N/A	N/A
Corneal tactile response	NORMAL	N/A	N/A	N/A	N/A
Auditory response	PRESENT	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	74	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	0.393	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	0.119	N/A	N/A	N/A	N/A

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 4M Animal number 40 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	AGGRESSIVE
Ease of handling	EASY	EASY	EASY	EASY	DIFFICULT##
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	PRESENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

- aggressive

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 4M Animal number 40 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	11	9	7	10	12
Number of faecal boli	0	0	0	0	0
Number of urine pools	0	0	0	0	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	N/A	N/A	N/A	N/A	N/A
Touch response	N/A	N/A	N/A	N/A	N/A
Tail pinch	N/A	N/A	N/A	N/A	N/A
Air righting ability	N/A	N/A	N/A	N/A	N/A
Pupillary response	N/A	N/A	N/A	N/A	N/A
Corneal tactile response	N/A	N/A	N/A	N/A	N/A
Auditory response	N/A	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	N/A	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 4M Animal number 40 (continued)

	Week 10	Week 11	Week 12	Week 13
OBSERVATIONS BEFORE REMOVAL FROM CAGE:				
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:				
Ease of removal	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY
Excessive vocalisation	PRESENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 4M Animal number 40 (continued)

	Week 10	Week 11	Week 12	Week 13
OPEN FIELD OBSERVATIONS:				
Latency to first step (secs)	0	0	1	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	10	8	8	17
Number of faecal boli	0	0	0	0
Number of urine pools	0	0	0	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:				
Approach response	N/A	N/A	N/A	NORMAL
Touch response	N/A	N/A	N/A	NORMAL
Tail pinch	N/A	N/A	N/A	NORMAL
Air righting ability	N/A	N/A	N/A	NORMAL
Pupillary response	N/A	N/A	N/A	NORMAL
Corneal tactile response	N/A	N/A	N/A	NORMAL
Auditory response	N/A	N/A	N/A	PRESENT
Hindlimb footsplay (mm)	N/A	N/A	N/A	98
Forelimb grip strength (kg)	N/A	N/A	N/A	0.942
Hindlimb grip strength (kg)	N/A	N/A	N/A	0.776

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 4M Animal number 41

	Week -1	Week 1	Week 2	Week 3	Week 4
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 4M Animal number 41 (continued)

	Week -1	Week 1	Week 2	Week 3	Week 4
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	1	0	0	1
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	HYPOACTIVE	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	PRESENT#	PRESENT##
Number of rears	10	5	12	2	1
Number of faecal boli	0	0	0	0	0
Number of urine pools	0	1	1	0	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	NORMAL	N/A	N/A	N/A	N/A
Touch response	NORMAL	N/A	N/A	N/A	N/A
Tail pinch	NORMAL	N/A	N/A	N/A	N/A
Air righting ability	NORMAL	N/A	N/A	N/A	N/A
Pupillary response	NORMAL	N/A	N/A	N/A	N/A
Corneal tactile response	NORMAL	N/A	N/A	N/A	N/A
Auditory response	PRESENT	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	73	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	0.465	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	0.179	N/A	N/A	N/A	N/A

- animal stayed in same quarter of arena for 47 seconds
- animal stayed at side of arena for 44 seconds

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 4M Animal number 41 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 4M Animal number 41 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	PRESENT#	ABSENT	PRESENT###	ABSENT	ABSENT
Number of rears	7	3	4	12	5
Number of faecal boli	-##	0	0	0	0
Number of urine pools	-##	1	1	3	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	N/A	N/A	N/A	N/A	N/A
Touch response	N/A	N/A	N/A	N/A	N/A
Tail pinch	N/A	N/A	N/A	N/A	N/A
Air righting ability	N/A	N/A	N/A	N/A	N/A
Pupillary response	N/A	N/A	N/A	N/A	N/A
Corneal tactile response	N/A	N/A	N/A	N/A	N/A
Auditory response	N/A	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	N/A	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A

\# - animal stayed in same place of arena for 30 seconds
- omitted in error
- animal stayed at side of arena for approximately 1 minute 5 seconds

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Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 4M Animal number 41 (continued)

	Week 10	Week 11	Week 12	Week 13
OBSERVATIONS BEFORE REMOVAL FROM CAGE:				
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:				
Ease of removal	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 4M Animal number 41 (continued)

	Week 10	Week 11	Week 12	Week 13
OPEN FIELD OBSERVATIONS:				
Latency to first step (secs)	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	13	14	11	5
Number of faecal boli	0	0	0	0
Number of urine pools	0	0	0	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:				
Approach response	N/A	N/A	N/A	NORMAL
Touch response	N/A	N/A	N/A	NORMAL
Tail pinch	N/A	N/A	N/A	NORMAL
Air righting ability	N/A	N/A	N/A	NORMAL
Pupillary response	N/A	N/A	N/A	NORMAL
Corneal tactile response	N/A	N/A	N/A	NORMAL
Auditory response	N/A	N/A	N/A	PRESENT
Hindlimb footsplay (mm)	N/A	N/A	N/A	108
Forelimb grip strength (kg)	N/A	N/A	N/A	1.334
Hindlimb grip strength (kg)	N/A	N/A	N/A	0.539

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Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 4M Animal number 42

	Week -1	Week 1	Week 2	Week 3	Week 4
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 4M Animal number 42 (continued)

	Week -1	Week 1	Week 2	Week 3	Week 4
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	HYPOACTIVE	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	PRESENT##	ABSENT
Number of rears	12	9	10	2	14
Number of faecal boli	3	0	0	0	0
Number of urine pools	5	0	0	0	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	NORMAL	N/A	N/A	N/A	N/A
Touch response	NORMAL	N/A	N/A	N/A	N/A
Tail pinch	NORMAL	N/A	N/A	N/A	N/A
Air righting ability	NORMAL	N/A	N/A	N/A	N/A
Pupillary response	NORMAL	N/A	N/A	N/A	N/A
Corneal tactile response	NORMAL	N/A	N/A	N/A	N/A
Auditory response	PRESENT	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	58	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	0.457	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	0.095	N/A	N/A	N/A	N/A

- animal stayed in same quarter of arena for 30 seconds

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Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 4M Animal number 42 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 4M Animal number 42 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	10	18	12	13	19
Number of faecal boli	0	0	0	0	0
Number of urine pools	0	0	0	2	1
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	N/A	N/A	N/A	N/A	N/A
Touch response	N/A	N/A	N/A	N/A	N/A
Tail pinch	N/A	N/A	N/A	N/A	N/A
Air righting ability	N/A	N/A	N/A	N/A	N/A
Pupillary response	N/A	N/A	N/A	N/A	N/A
Corneal tactile response	N/A	N/A	N/A	N/A	N/A
Auditory response	N/A	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	N/A	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 4M Animal number 42 (continued)

	Week 10	Week 11	Week 12	Week 13
OBSERVATIONS BEFORE REMOVAL FROM CAGE:				
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:				
Ease of removal	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 4M Animal number 42 (continued)

	Week 10	Week 11	Week 12	Week 13
OPEN FIELD OBSERVATIONS:				
Latency to first step (secs)	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	15	13	20	19
Number of faecal boli	0	0	0	0
Number of urine pools	0	0	1	2
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:				
Approach response	N/A	N/A	N/A	NORMAL
Touch response	N/A	N/A	N/A	NORMAL
Tail pinch	N/A	N/A	N/A	NORMAL
Air righting ability	N/A	N/A	N/A	NORMAL
Pupillary response	N/A	N/A	N/A	NORMAL
Corneal tactile response	N/A	N/A	N/A	NORMAL
Auditory response	N/A	N/A	N/A	PRESENT
Hindlimb footsplay (mm)	N/A	N/A	N/A	101
Forelimb grip strength (kg)	N/A	N/A	N/A	1.086
Hindlimb grip strength (kg)	N/A	N/A	N/A	0.717

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 4M Animal number 43

	Week -1	Week 1	Week 2	Week 3	Week 4
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 4M Animal number 43 (continued)

	Week -1	Week 1	Week 2	Week 3	Week 4
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	1	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	HYPOACTIVE	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	8	0	17	14	7
Number of faecal boli	0	0	0	0	0
Number of urine pools	0	0	1	0	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	NORMAL	N/A	N/A	N/A	N/A
Touch response	NORMAL	N/A	N/A	N/A	N/A
Tail pinch	NORMAL	N/A	N/A	N/A	N/A
Air righting ability	NORMAL	N/A	N/A	N/A	N/A
Pupillary response	NORMAL	N/A	N/A	N/A	N/A
Corneal tactile response	NORMAL	N/A	N/A	N/A	N/A
Auditory response	PRESENT	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	48	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	0.434	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	0.152	N/A	N/A	N/A	N/A

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Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 4M Animal number 43 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 4M Animal number 43 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	13	22	10	21	17
Number of faecal boli	0	0	0	0	0
Number of urine pools	0	0	3	3	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	N/A	N/A	N/A	N/A	N/A
Touch response	N/A	N/A	N/A	N/A	N/A
Tail pinch	N/A	N/A	N/A	N/A	N/A
Air righting ability	N/A	N/A	N/A	N/A	N/A
Pupillary response	N/A	N/A	N/A	N/A	N/A
Corneal tactile response	N/A	N/A	N/A	N/A	N/A
Auditory response	N/A	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	N/A	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 4M Animal number 43 (continued)

	Week 10	Week 11	Week 12	Week 13
OBSERVATIONS BEFORE REMOVAL FROM CAGE:				
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:				
Ease of removal	EASY	EASY	EASY	EVASION
Ease of handling	EASY	EASY	EASY	MODERATE DIFFICULTY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 4M Animal number 43 (continued)

	Week 10	Week 11	Week 12	Week 13
OPEN FIELD OBSERVATIONS:				
Latency to first step (secs)	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	21	20	19	14
Number of faecal boli	0	0	0	0
Number of urine pools	0	2	0	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:				
Approach response	N/A	N/A	N/A	NORMAL
Touch response	N/A	N/A	N/A	NORMAL
Tail pinch	N/A	N/A	N/A	NORMAL
Air righting ability	N/A	N/A	N/A	NORMAL
Pupillary response	N/A	N/A	N/A	NORMAL
Corneal tactile response	N/A	N/A	N/A	NORMAL
Auditory response	N/A	N/A	N/A	PRESENT
Hindlimb footsplay (mm)	N/A	N/A	N/A	76
Forelimb grip strength (kg)	N/A	N/A	N/A	1.424
Hindlimb grip strength (kg)	N/A	N/A	N/A	0.553

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Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 4M Animal number 44

	Week -1	Week 1	Week 2	Week 3	Week 4
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 4M Animal number 44 (continued)

	Week -1	Week 1	Week 2	Week 3	Week 4
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	-##	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	13	9	24	14	26
Number of faecal boli	2	0	0	0	0
Number of urine pools	0	0	0	2	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	NORMAL	N/A	N/A	N/A	N/A
Touch response	NORMAL	N/A	N/A	N/A	N/A
Tail pinch	NORMAL	N/A	N/A	N/A	N/A
Air righting ability	NORMAL	N/A	N/A	N/A	N/A
Pupillary response	NORMAL	N/A	N/A	N/A	N/A
Corneal tactile response	NORMAL	N/A	N/A	N/A	N/A
Auditory response	PRESENT	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	53	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	0.401	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	0.197	N/A	N/A	N/A	N/A

- unable to determine which data entry is correct

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Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 4M Animal number 44 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 4M Animal number 44 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	PRESENT#	PRESENT##	PRESENT###	PRESENT###	PRESENT@
Number of rears	16	16	22	20	10
Number of faecal boli	0	0	0	0	0
Number of urine pools	0	0	0	0	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	N/A	N/A	N/A	N/A	N/A
Touch response	N/A	N/A	N/A	N/A	N/A
Tail pinch	N/A	N/A	N/A	N/A	N/A
Air righting ability	N/A	N/A	N/A	N/A	N/A
Pupillary response	N/A	N/A	N/A	N/A	N/A
Corneal tactile response	N/A	N/A	N/A	N/A	N/A
Auditory response	N/A	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	N/A	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A

\# - raised tail
- animal jumped onto side of arena on one occasion
- animal jumped onto rim of arena on 6 occasions
@ - animal jumped onto rim of arena on 2 occasions (for approximately 20 and 5 seconds respectively - jumped out of arena onto the floor on 1st occasion)

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 4M Animal number 44 (continued)

	Week 10	Week 11	Week 12	Week 13
OBSERVATIONS BEFORE REMOVAL FROM CAGE:				
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:				
Ease of removal	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 4M Animal number 44 (continued)

	Week 10	Week 11	Week 12	Week 13
OPEN FIELD OBSERVATIONS:				
Latency to first step (secs)	0	1	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Other	PRESENT#	PRESENT##	PRESENT@	PRESENT#
Number of rears	16	24	12	25
Number of faecal boli	0	0	0	0
Number of urine pools	1	0	0	0
Diarrhoea	ABSENT	-###	ABSENT	ABSENT
Polyuria	ABSENT	-###	ABSENT	ABSENT
OPEN FIELD TESTS:				
Approach response	N/A	N/A	N/A	NORMAL
Touch response	N/A	N/A	N/A	NORMAL
Tail pinch	N/A	N/A	N/A	NORMAL
Air righting ability	N/A	N/A	N/A	NORMAL
Pupillary response	N/A	N/A	N/A	NORMAL
Corneal tactile response	N/A	N/A	N/A	NORMAL
Auditory response	N/A	N/A	N/A	PRESENT
Hindlimb footsplay (mm)	N/A	N/A	N/A	94
Forelimb grip strength (kg)	N/A	N/A	N/A	0.919
Hindlimb grip strength (kg)	N/A	N/A	N/A	0.535

\# - animal jumped onto rim of arena on 2 occasions
- animal jumped onto edge of arena on 4 occasions
- omitted in error
@ - animal jumped onto rim of arena on 3 occasions (for approximately 25 seconds each time)

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 4M Animal number 45

	Week -1	Week 1	Week 2	Week 3	Week 4
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 4M Animal number 45 (continued)

	Week -1	Week 1	Week 2	Week 3	Week 4
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	1	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	PRESENT##	ABSENT
Number of rears	5	17	9	7	5
Number of faecal boli	0	0	0	0	0
Number of urine pools	0	0	0	0	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	NORMAL	N/A	N/A	N/A	N/A
Touch response	NORMAL	N/A	N/A	N/A	N/A
Tail pinch	NORMAL	N/A	N/A	N/A	N/A
Air righting ability	NORMAL	N/A	N/A	N/A	N/A
Pupillary response	NORMAL	N/A	N/A	N/A	N/A
Corneal tactile response	NORMAL	N/A	N/A	N/A	N/A
Auditory response	PRESENT	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	49	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	0.440	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	0.124	N/A	N/A	N/A	N/A

- animal stayed in same quarter of arena for 30 seconds

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Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 4M Animal number 45 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 4M Animal number 45 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	12	6	6	9	13
Number of faecal boli	0	0	0	0	0
Number of urine pools	0	1	4	0	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	N/A	N/A	N/A	N/A	N/A
Touch response	N/A	N/A	N/A	N/A	N/A
Tail pinch	N/A	N/A	N/A	N/A	N/A
Air righting ability	N/A	N/A	N/A	N/A	N/A
Pupillary response	N/A	N/A	N/A	N/A	N/A
Corneal tactile response	N/A	N/A	N/A	N/A	N/A
Auditory response	N/A	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	N/A	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 4M Animal number 45 (continued)

	Week 10	Week 11	Week 12	Week 13
OBSERVATIONS BEFORE REMOVAL FROM CAGE:				
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:				
Ease of removal	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 4M Animal number 45 (continued)

	Week 10	Week 11	Week 12	Week 13
OPEN FIELD OBSERVATIONS:				
Latency to first step (secs)	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	15	7	4	4
Number of faecal boli	0	0	0	0
Number of urine pools	0	0	2	3
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:				
Approach response	N/A	N/A	N/A	NORMAL
Touch response	N/A	N/A	N/A	NORMAL
Tail pinch	N/A	N/A	N/A	NORMAL
Air righting ability	N/A	N/A	N/A	NORMAL
Pupillary response	N/A	N/A	N/A	NORMAL
Corneal tactile response	N/A	N/A	N/A	NORMAL
Auditory response	N/A	N/A	N/A	PRESENT
Hindlimb footsplay (mm)	N/A	N/A	N/A	88
Forelimb grip strength (kg)	N/A	N/A	N/A	1.002
Hindlimb grip strength (kg)	N/A	N/A	N/A	0.584

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Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 4F Animal number 96

	Week -1	Week 1	Week 2	Week 3	Week 4
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 4F Animal number 96 (continued)

	Week -1	Week 1	Week 2	Week 3	Week 4
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	1	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	##	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	MODERATE	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	18	23	21	20	20
Number of faecal boli	0	0	0	0	0
Number of urine pools	2	5	20	5	10
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	NORMAL	N/A	N/A	N/A	N/A
Touch response	NORMAL	N/A	N/A	N/A	N/A
Tail pinch	NORMAL	N/A	N/A	N/A	N/A
Air righting ability	NORMAL	N/A	N/A	N/A	N/A
Pupillary response	NORMAL	N/A	N/A	N/A	N/A
Corneal tactile response	NORMAL	N/A	N/A	N/A	N/A
Auditory response	PRESENT	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	50	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	0.641	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	0.230	N/A	N/A	N/A	N/A

- omitted in error

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Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 4F Animal number 96 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 4F Animal number 96 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	HIGH STEPPING	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	SLIGHT	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	14	23	24	23	28
Number of faecal boli	0	0	0	0	0
Number of urine pools	3	7	9	1	3
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	N/A	N/A	N/A	N/A	N/A
Touch response	N/A	N/A	N/A	N/A	N/A
Tail pinch	N/A	N/A	N/A	N/A	N/A
Air righting ability	N/A	N/A	N/A	N/A	N/A
Pupillary response	N/A	N/A	N/A	N/A	N/A
Corneal tactile response	N/A	N/A	N/A	N/A	N/A
Auditory response	N/A	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	N/A	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A

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Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 4F Animal number 96 (continued)

	Week 10	Week 11	Week 12	Week 13
OBSERVATIONS BEFORE REMOVAL FROM CAGE:				
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:				
Ease of removal	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 4F Animal number 96 (continued)

	Week 10	Week 11	Week 12	Week 13
OPEN FIELD OBSERVATIONS:				
Latency to first step (secs)	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	21	24	23	15
Number of faecal boli	0	0	0	0
Number of urine pools	10	5	2	10
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:				
Approach response	N/A	N/A	N/A	NORMAL
Touch response	N/A	N/A	N/A	NORMAL
Tail pinch	N/A	N/A	N/A	NORMAL
Air righting ability	N/A	N/A	N/A	NORMAL
Pupillary response	N/A	N/A	N/A	NORMAL
Corneal tactile response	N/A	N/A	N/A	NORMAL
Auditory response	N/A	N/A	N/A	PRESENT
Hindlimb footsplay (mm)	N/A	N/A	N/A	43
Forelimb grip strength (kg)	N/A	N/A	N/A	0.988
Hindlimb grip strength (kg)	N/A	N/A	N/A	0.272

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 4F Animal number 97

	Week -1	Week 1	Week 2	Week 3	Week 4
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	PRESENT	PRESENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 4F Animal number 97 (continued)

	Week -1	Week 1	Week 2	Week 3	Week 4
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	1	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	HIGH STEPPING	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	SLIGHT	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	PRESENT##
Number of rears	23	16	27	28	27
Number of faecal boli	2	0	0	0	0
Number of urine pools	7	0	0	0	1
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	NORMAL	N/A	N/A	N/A	N/A
Touch response	NORMAL	N/A	N/A	N/A	N/A
Tail pinch	NORMAL	N/A	N/A	N/A	N/A
Air righting ability	NORMAL	N/A	N/A	N/A	N/A
Pupillary response	NORMAL	N/A	N/A	N/A	N/A
Corneal tactile response	NORMAL	N/A	N/A	N/A	N/A
Auditory response	PRESENT	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	65	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	0.558	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	0.206	N/A	N/A	N/A	N/A

- animal tried to jump from arena on one occasion

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 4F Animal number 97 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 4F Animal number 97 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	27	26	39	31	36
Number of faecal boli	0	0	0	0	0
Number of urine pools	4	5	11	3	17
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	N/A	N/A	N/A	N/A	N/A
Touch response	N/A	N/A	N/A	N/A	N/A
Tail pinch	N/A	N/A	N/A	N/A	N/A
Air righting ability	N/A	N/A	N/A	N/A	N/A
Pupillary response	N/A	N/A	N/A	N/A	N/A
Corneal tactile response	N/A	N/A	N/A	N/A	N/A
Auditory response	N/A	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	N/A	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 4F Animal number 97 (continued)

	Week 10	Week 11	Week 12	Week 13
OBSERVATIONS BEFORE REMOVAL FROM CAGE:				
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:				
Ease of removal	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 4F Animal number 97 (continued)

	Week 10	Week 11	Week 12	Week 13
OPEN FIELD OBSERVATIONS:				
Latency to first step (secs)	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	HYPERACTIVE	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	34	31	36	24
Number of faecal boli	0	0	0	0
Number of urine pools	9	1	15	11
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:				
Approach response	N/A	N/A	N/A	NORMAL
Touch response	N/A	N/A	N/A	NORMAL
Tail pinch	N/A	N/A	N/A	NORMAL
Air righting ability	N/A	N/A	N/A	NORMAL
Pupillary response	N/A	N/A	N/A	NORMAL
Corneal tactile response	N/A	N/A	N/A	NORMAL
Auditory response	N/A	N/A	N/A	PRESENT
Hindlimb footsplay (mm)	N/A	N/A	N/A	76
Forelimb grip strength (kg)	N/A	N/A	N/A	0.879
Hindlimb grip strength (kg)	N/A	N/A	N/A	0.179

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 4F Animal number 98

	Week -1	Week 1	Week 2	Week 3	Week 4
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 4F Animal number 98 (continued)

	Week -1	Week 1	Week 2	Week 3	Week 4
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	1	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	PRESENT##
Number of rears	21	7	16	22	23
Number of faecal boli	0	0	0	0	0
Number of urine pools	7	0	5	3	5
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	NORMAL	N/A	N/A	N/A	N/A
Touch response	NORMAL	N/A	N/A	N/A	N/A
Tail pinch	NORMAL	N/A	N/A	N/A	N/A
Air righting ability	NORMAL	N/A	N/A	N/A	N/A
Pupillary response	NORMAL	N/A	N/A	N/A	N/A
Corneal tactile response	NORMAL	N/A	N/A	N/A	N/A
Auditory response	PRESENT	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	63	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	0.604	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	0.264	N/A	N/A	N/A	N/A

- raised tail

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 4F Animal number 98 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 4F Animal number 98 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	HIGH STEPPING	HIGH STEPPING	HIGH STEPPING	NORMAL	NORMAL
Gait type severity	SLIGHT	SLIGHT	SLIGHT	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	19	29	32	27	28
Number of faecal boli	0	0	0	0	0
Number of urine pools	0	13	15	5	2
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	N/A	N/A	N/A	N/A	N/A
Touch response	N/A	N/A	N/A	N/A	N/A
Tail pinch	N/A	N/A	N/A	N/A	N/A
Air righting ability	N/A	N/A	N/A	N/A	N/A
Pupillary response	N/A	N/A	N/A	N/A	N/A
Corneal tactile response	N/A	N/A	N/A	N/A	N/A
Auditory response	N/A	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	N/A	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 4F Animal number 98 (continued)

	Week 10	Week 11	Week 12	Week 13
OBSERVATIONS BEFORE REMOVAL FROM CAGE:				
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:				
Ease of removal	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 4F Animal number 98 (continued)

	Week 10	Week 11	Week 12	Week 13
OPEN FIELD OBSERVATIONS:				
Latency to first step (secs)	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	HIGH STEPPING	HIGH STEPPING	NORMAL	NORMAL
Gait type severity	SLIGHT	SLIGHT	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	26	29	27	19
Number of faecal boli	0	0	0	0
Number of urine pools	8	12	14	26
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:				
Approach response	N/A	N/A	N/A	NORMAL
Touch response	N/A	N/A	N/A	NORMAL
Tail pinch	N/A	N/A	N/A	NORMAL
Air righting ability	N/A	N/A	N/A	NORMAL
Pupillary response	N/A	N/A	N/A	NORMAL
Corneal tactile response	N/A	N/A	N/A	NORMAL
Auditory response	N/A	N/A	N/A	PRESENT
Hindlimb footsplay (mm)	N/A	N/A	N/A	69
Forelimb grip strength (kg)	N/A	N/A	N/A	0.759
Hindlimb grip strength (kg)	N/A	N/A	N/A	0.347

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 4F Animal number 99

	Week -1	Week 1	Week 2	Week 3	Week 4
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 4F Animal number 99 (continued)

	Week -1	Week 1	Week 2	Week 3	Week 4
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	20	14	29	23	27
Number of faecal boli	0	0	0	0	0
Number of urine pools	0	0	3	0	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	NORMAL	N/A	N/A	N/A	N/A
Touch response	NORMAL	N/A	N/A	N/A	N/A
Tail pinch	NORMAL	N/A	N/A	N/A	N/A
Air righting ability	NORMAL	N/A	N/A	N/A	N/A
Pupillary response	NORMAL	N/A	N/A	N/A	N/A
Corneal tactile response	NORMAL	N/A	N/A	N/A	N/A
Auditory response	PRESENT	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	55	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	0.556	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	0.256	N/A	N/A	N/A	N/A

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 4F Animal number 99 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EVASION	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 4F Animal number 99 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	19	26	27	18	26
Number of faecal boli	0	0	0	0	0
Number of urine pools	0	0	2	0	1
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	N/A	N/A	N/A	N/A	N/A
Touch response	N/A	N/A	N/A	N/A	N/A
Tail pinch	N/A	N/A	N/A	N/A	N/A
Air righting ability	N/A	N/A	N/A	N/A	N/A
Pupillary response	N/A	N/A	N/A	N/A	N/A
Corneal tactile response	N/A	N/A	N/A	N/A	N/A
Auditory response	N/A	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	N/A	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A

Appendix 13
Individual functional observation battery data

Test Article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 4F Animal number 99 (continued)

	Week 10	Week 11	Week 12	Week 13
OBSERVATIONS BEFORE REMOVAL FROM CAGE:				
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:				
Ease of removal	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 4F Animal number 99 (continued)

	Week 10	Week 11	Week 12	Week 13
OPEN FIELD OBSERVATIONS:				
Latency to first step (secs)	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	25	28	26	18
Number of faecal boli	0	0	0	0
Number of urine pools	0	0	0	3
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:				
Approach response	N/A	N/A	N/A	NORMAL
Touch response	N/A	N/A	N/A	NORMAL
Tail pinch	N/A	N/A	N/A	NORMAL
Air righting ability	N/A	N/A	N/A	NORMAL
Pupillary response	N/A	N/A	N/A	NORMAL
Corneal tactile response	N/A	N/A	N/A	NORMAL
Auditory response	N/A	N/A	N/A	PRESENT
Hindlimb footsplay (mm)	N/A	N/A	N/A	76
Forelimb grip strength (kg)	N/A	N/A	N/A	0.880
Hindlimb grip strength (kg)	N/A	N/A	N/A	0.339

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 4F Animal number 100

	Week -1	Week 1	Week 2	Week 3	Week 4
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 4F Animal number 100 (continued)

	Week -1	Week 1	Week 2	Week 3	Week 4
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	PRESENT##
Number of rears	25	20	21	14	23
Number of faecal boli	2	0	0	0	0
Number of urine pools	1	0	0	0	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	NORMAL	N/A	N/A	N/A	N/A
Touch response	NORMAL	N/A	N/A	N/A	N/A
Tail pinch	NORMAL	N/A	N/A	N/A	N/A
Air righting ability	NORMAL	N/A	N/A	N/A	N/A
Pupillary response	NORMAL	N/A	N/A	N/A	N/A
Corneal tactile response	NORMAL	N/A	N/A	N/A	N/A
Auditory response	PRESENT	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	48	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	0.548	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	0.279	N/A	N/A	N/A	N/A

- animal tried to jump from arena on one occasion; crossing back and forth across arena

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 4F Animal number 100 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 4F Animal number 100 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	HYPERACTIVE	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	HIGH STEPPING	NORMAL	HIGH STEPPING	NORMAL	NORMAL
Gait type severity	MODERATE	NORMAL	SLIGHT	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	37	28	31	19	24
Number of faecal boli	0	0	0	0	0
Number of urine pools	0	0	0	0	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	N/A	N/A	N/A	N/A	N/A
Touch response	N/A	N/A	N/A	N/A	N/A
Tail pinch	N/A	N/A	N/A	N/A	N/A
Air righting ability	N/A	N/A	N/A	N/A	N/A
Pupillary response	N/A	N/A	N/A	N/A	N/A
Corneal tactile response	N/A	N/A	N/A	N/A	N/A
Auditory response	N/A	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	N/A	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 4F Animal number 100 (continued)

	Week 10	Week 11	Week 12	Week 13
OBSERVATIONS BEFORE REMOVAL FROM CAGE:				
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:				
Ease of removal	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 4F Animal number 100 (continued)

	Week 10	Week 11	Week 12	Week 13
OPEN FIELD OBSERVATIONS:				
Latency to first step (secs)	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	20	23	23	16
Number of faecal boli	0	0	0	0
Number of urine pools	0	0	4	1
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:				
Approach response	N/A	N/A	N/A	NORMAL
Touch response	N/A	N/A	N/A	NORMAL
Tail pinch	N/A	N/A	N/A	NORMAL
Air righting ability	N/A	N/A	N/A	NORMAL
Pupillary response	N/A	N/A	N/A	NORMAL
Corneal tactile response	N/A	N/A	N/A	NORMAL
Auditory response	N/A	N/A	N/A	PRESENT
Hindlimb footsplay (mm)	N/A	N/A	N/A	46
Forelimb grip strength (kg)	N/A	N/A	N/A	0.693
Hindlimb grip strength (kg)	N/A	N/A	N/A	0.394

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 4F Animal number 101

	Week -1	Week 1	Week 2	Week 3	Week 4
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 4F Animal number 101 (continued)

	Week -1	Week 1	Week 2	Week 3	Week 4
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	1	2	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	18	12	25	21	23
Number of faecal boli	0	0	0	0	0
Number of urine pools	0	0	0	0	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	NORMAL	N/A	N/A	N/A	N/A
Touch response	NORMAL	N/A	N/A	N/A	N/A
Tail pinch	NORMAL	N/A	N/A	N/A	N/A
Air righting ability	NORMAL	N/A	N/A	N/A	N/A
Pupillary response	NORMAL	N/A	N/A	N/A	N/A
Corneal tactile response	NORMAL	N/A	N/A	N/A	N/A
Auditory response	PRESENT	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	70	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	0.452	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	0.220	N/A	N/A	N/A	N/A

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 4F Animal number 101 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 4F Animal number 101 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	15	18	23	25	17
Number of faecal boli	0	0	0	0	0
Number of urine pools	0	0	0	1	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	N/A	N/A	N/A	N/A	N/A
Touch response	N/A	N/A	N/A	N/A	N/A
Tail pinch	N/A	N/A	N/A	N/A	N/A
Air righting ability	N/A	N/A	N/A	N/A	N/A
Pupillary response	N/A	N/A	N/A	N/A	N/A
Corneal tactile response	N/A	N/A	N/A	N/A	N/A
Auditory response	N/A	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	N/A	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A

Appendix 13
Individual functional observation battery data

Test Article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 4F Animal number 101 (continued)

	Week 10	Week 11	Week 12	Week 13
OBSERVATIONS BEFORE REMOVAL FROM CAGE:				
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:				
Ease of removal	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 4F Animal number 101 (continued)

	Week 10	Week 11	Week 12	Week 13
OPEN FIELD OBSERVATIONS:				
Latency to first step (secs)	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	22	18	17	18
Number of faecal boli	0	0	0	0
Number of urine pools	0	0	3	4
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:				
Approach response	N/A	N/A	N/A	NORMAL
Touch response	N/A	N/A	N/A	NORMAL
Tail pinch	N/A	N/A	N/A	NORMAL
Air righting ability	N/A	N/A	N/A	NORMAL
Pupillary response	N/A	N/A	N/A	NORMAL
Corneal tactile response	N/A	N/A	N/A	NORMAL
Auditory response	N/A	N/A	N/A	PRESENT
Hindlimb footsplay (mm)	N/A	N/A	N/A	73
Forelimb grip strength (kg)	N/A	N/A	N/A	0.886
Hindlimb grip strength (kg)	N/A	N/A	N/A	0.292

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 4F Animal number 102

	Week -1	Week 1	Week 2	Week 3	Week 4
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 4F Animal number 102 (continued)

	Week -1	Week 1	Week 2	Week 3	Week 4
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	1	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	HYPERACTIVE	HYPERACTIVE#
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	HIGH STEPPING	NORMAL	HIGH STEPPING	NORMAL
Gait type severity	NORMAL	SLIGHT	NORMAL	MODERATE	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	PRESENT##
Number of rears	8	23	36	35	28
Number of faecal boli	0	0	0	0	0
Number of urine pools	2	0	0	1	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	NORMAL	N/A	N/A	N/A	N/A
Touch response	NORMAL	N/A	N/A	N/A	N/A
Tail pinch	NORMAL	N/A	N/A	N/A	N/A
Air righting ability	NORMAL	N/A	N/A	N/A	N/A
Pupillary response	NORMAL	N/A	N/A	N/A	N/A
Corneal tactile response	NORMAL	N/A	N/A	N/A	N/A
Auditory response	PRESENT	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	53	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	0.551	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	0.353	N/A	N/A	N/A	N/A

- animal dashing back and forth across arena
- raised tail

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 4F Animal number 102 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 4F Animal number 102 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	HYPERACTIVE	HYPERACTIVE	NORMAL	NORMAL	HYPERACTIVE
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	HIGH STEPPING	NORMAL	NORMAL	HIGH STEPPING	HIGH STEPPING
Gait type severity	MODERATE	NORMAL	NORMAL	SLIGHT	SLIGHT
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	25	32	31	27	31
Number of faecal boli	0	0	0	0	0
Number of urine pools	0	0	0	2	7
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	N/A	N/A	N/A	N/A	N/A
Touch response	N/A	N/A	N/A	N/A	N/A
Tail pinch	N/A	N/A	N/A	N/A	N/A
Air righting ability	N/A	N/A	N/A	N/A	N/A
Pupillary response	N/A	N/A	N/A	N/A	N/A
Corneal tactile response	N/A	N/A	N/A	N/A	N/A
Auditory response	N/A	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	N/A	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 4F Animal number 102 (continued)

	Week 10	Week 11	Week 12	Week 13
OBSERVATIONS BEFORE REMOVAL FROM CAGE:				
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:				
Ease of removal	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 4F Animal number 102 (continued)

	Week 10	Week 11	Week 12	Week 13
OPEN FIELD OBSERVATIONS:				
Latency to first step (secs)	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	HYPERACTIVE	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	HIGH STEPPING	NORMAL	NORMAL	NORMAL
Gait type severity	SLIGHT	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	33	28	24	15
Number of faecal boli	0	0	0	0
Number of urine pools	3	4	4	7
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:				
Approach response	N/A	N/A	N/A	RAPID
Touch response	N/A	N/A	N/A	NORMAL
Tail pinch	N/A	N/A	N/A	NORMAL
Air righting ability	N/A	N/A	N/A	NORMAL
Pupillary response	N/A	N/A	N/A	NORMAL
Corneal tactile response	N/A	N/A	N/A	NORMAL
Auditory response	N/A	N/A	N/A	PRESENT
Hindlimb footsplay (mm)	N/A	N/A	N/A	46
Forelimb grip strength (kg)	N/A	N/A	N/A	0.662
Hindlimb grip strength (kg)	N/A	N/A	N/A	0.301

Appendix 13
Individual functional observation battery data

Test Article	Control	[		]	
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 4F Animal number 103

	Week -1	Week 1	Week 2	Week 3	Week 4
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 4F Animal number 103 (continued)

	Week -1	Week 1	Week 2	Week 3	Week 4
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	HYPERACTIVE	HYPERACTIVE
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	PRESENT##
Number of rears	15	21	32	27	41
Number of faecal boli	0	0	0	0	0
Number of urine pools	0	6	12	11	17
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	NORMAL	N/A	N/A	N/A	N/A
Touch response	NORMAL	N/A	N/A	N/A	N/A
Tail pinch	NORMAL	N/A	N/A	N/A	N/A
Air righting ability	NORMAL	N/A	N/A	N/A	N/A
Pupillary response	NORMAL	N/A	N/A	N/A	N/A
Corneal tactile response	NORMAL	N/A	N/A	N/A	N/A
Auditory response	PRESENT	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	65	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	0.462	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	0.247	N/A	N/A	N/A	N/A

- raised tail

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 4F Animal number 103 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[		]	
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 4F Animal number 103 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	HYPERACTIVE	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	HIGH STEPPING	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	SLIGHT	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	36	31	31	31	28
Number of faecal boli	0	0	0	0	0
Number of urine pools	10	8	12	23	17
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	N/A	N/A	N/A	N/A	N/A
Touch response	N/A	N/A	N/A	N/A	N/A
Tail pinch	N/A	N/A	N/A	N/A	N/A
Air righting ability	N/A	N/A	N/A	N/A	N/A
Pupillary response	N/A	N/A	N/A	N/A	N/A
Corneal tactile response	N/A	N/A	N/A	N/A	N/A
Auditory response	N/A	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	N/A	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 4F Animal number 103 (continued)

	Week 10	Week 11	Week 12	Week 13
OBSERVATIONS BEFORE REMOVAL FROM CAGE:				
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:				
Ease of removal	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 4F Animal number 103 (continued)

	Week 10	Week 11	Week 12	Week 13
OPEN FIELD OBSERVATIONS:				
Latency to first step (secs)	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	HYPERACTIVE	NORMAL	HYPERACTIVE	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	30	30	34	12
Number of faecal boli	0	0	0	0
Number of urine pools	5	13	0	12
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:				
Approach response	N/A	N/A	N/A	NORMAL
Touch response	N/A	N/A	N/A	NORMAL
Tail pinch	N/A	N/A	N/A	NORMAL
Air righting ability	N/A	N/A	N/A	NORMAL
Pupillary response	N/A	N/A	N/A	NORMAL
Corneal tactile response	N/A	N/A	N/A	NORMAL
Auditory response	N/A	N/A	N/A	PRESENT
Hindlimb footsplay (mm)	N/A	N/A	N/A	68
Forelimb grip strength (kg)	N/A	N/A	N/A	0.859
Hindlimb grip strength (kg)	N/A	N/A	N/A	0.296

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 4F Animal number 104

	Week -1	Week 1	Week 2	Week 3	Week 4
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 4F Animal number 104 (continued)

	Week -1	Week 1	Week 2	Week 3	Week 4
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	1	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	16	15	23	20	26
Number of faecal boli	0	0	-##	0	0
Number of urine pools	0	0	-##	0	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	NORMAL	N/A	N/A	N/A	N/A
Touch response	NORMAL	N/A	N/A	N/A	N/A
Tail pinch	NORMAL	N/A	N/A	N/A	N/A
Air righting ability	NORMAL	N/A	N/A	N/A	N/A
Pupillary response	NORMAL	N/A	N/A	N/A	N/A
Corneal tactile response	NORMAL	N/A	N/A	N/A	N/A
Auditory response	PRESENT	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	58	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	0.554	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	0.348	N/A	N/A	N/A	N/A

- omitted in error

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 4F Animal number 104 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 4F Animal number 104 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	HIGH STEPPING	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	SLIGHT	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	PRESENT#	PRESENT#	PRESENT##
Number of rears	30	24	26	18	19
Number of faecal boli	0	0	0	0	0
Number of urine pools	0	0	0	0	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	N/A	N/A	N/A	N/A	N/A
Touch response	N/A	N/A	N/A	N/A	N/A
Tail pinch	N/A	N/A	N/A	N/A	N/A
Air righting ability	N/A	N/A	N/A	N/A	N/A
Pupillary response	N/A	N/A	N/A	N/A	N/A
Corneal tactile response	N/A	N/A	N/A	N/A	N/A
Auditory response	N/A	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	N/A	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A

- animal jumped onto rim of arena on one occasion for approximately 20 seconds
- animal jumped onto rim of arena on 2 occasions (for approximately 10 seconds each time)

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 4F Animal number 104 (continued)

	Week 10	Week 11	Week 12	Week 13
OBSERVATIONS BEFORE REMOVAL FROM CAGE:				
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:				
Ease of removal	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 4F Animal number 104 (continued)

	Week 10	Week 11	Week 12	Week 13
OPEN FIELD OBSERVATIONS:				
Latency to first step (secs)	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Other	PRESENT#	PRESENT##	PRESENT###	PRESENT@
Number of rears	23	11	28	15
Number of faecal boli	0	0	0	0
Number of urine pools	0	0	0	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:				
Approach response	N/A	N/A	N/A	NORMAL
Touch response	N/A	N/A	N/A	NORMAL
Tail pinch	N/A	N/A	N/A	NORMAL
Air righting ability	N/A	N/A	N/A	NORMAL
Pupillary response	N/A	N/A	N/A	NORMAL
Corneal tactile response	N/A	N/A	N/A	NORMAL
Auditory response	N/A	N/A	N/A	PRESENT
Hindlimb footsplay (mm)	N/A	N/A	N/A	55
Forelimb grip strength (kg)	N/A	N/A	N/A	0.808
Hindlimb grip strength (kg)	N/A	N/A	N/A	0.482

\# - animal jumped onto rim of arena on 2 occasions (for approximately 12 seconds each time)
- animal jumped onto rim of arena on 3 occasions (for approximately 20 seconds each time)
- animal jumped onto rim of arena on 5 occasions
@ - animal jumped onto rim of arena on one occasion for approximately 50 seconds

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 4F Animal number 105

	Week -1	Week 1	Week 2	Week 3	Week 4
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 4F Animal number 105 (continued)

	Week -1	Week 1	Week 2	Week 3	Week 4
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	1	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	16	19	26	30	22
Number of faecal boli	0	0	0	0	0
Number of urine pools	0	0	0	0	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	NORMAL	N/A	N/A	N/A	N/A
Touch response	NORMAL	N/A	N/A	N/A	N/A
Tail pinch	NORMAL	N/A	N/A	N/A	N/A
Air righting ability	NORMAL	N/A	N/A	N/A	N/A
Pupillary response	NORMAL	N/A	N/A	N/A	N/A
Corneal tactile response	NORMAL	N/A	N/A	N/A	N/A
Auditory response	PRESENT	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	58	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	0.552	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	0.284	N/A	N/A	N/A	N/A

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 4F Animal number 105 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 4F Animal number 105 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	18	27	28	21	25
Number of faecal boli	0	0	0	0	0
Number of urine pools	0	0	0	0	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	N/A	N/A	N/A	N/A	N/A
Touch response	N/A	N/A	N/A	N/A	N/A
Tail pinch	N/A	N/A	N/A	N/A	N/A
Air righting ability	N/A	N/A	N/A	N/A	N/A
Pupillary response	N/A	N/A	N/A	N/A	N/A
Corneal tactile response	N/A	N/A	N/A	N/A	N/A
Auditory response	N/A	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	N/A	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 4F Animal number 105 (continued)

	Week 10	Week 11	Week 12	Week 13
OBSERVATIONS BEFORE REMOVAL FROM CAGE:				
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:				
Ease of removal	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 4F Animal number 105 (continued)

	Week 10	Week 11	Week 12	Week 13
OPEN FIELD OBSERVATIONS:				
Latency to first step (secs)	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	28	21	26	13
Number of faecal boli	0	0	0	0
Number of urine pools	0	2	0	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:				
Approach response	N/A	N/A	N/A	NORMAL
Touch response	N/A	N/A	N/A	NORMAL
Tail pinch	N/A	N/A	N/A	NORMAL
Air righting ability	N/A	N/A	N/A	NORMAL
Pupillary response	N/A	N/A	N/A	NORMAL
Corneal tactile response	N/A	N/A	N/A	NORMAL
Auditory response	N/A	N/A	N/A	PRESENT
Hindlimb footsplay (mm)	N/A	N/A	N/A	49
Forelimb grip strength (kg)	N/A	N/A	N/A	0.763
Hindlimb grip strength (kg)	N/A	N/A	N/A	0.282

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5M Animal number 46

	Week -1	Week 1	Week 2	Week 3	Week 4
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5M Animal number 46 (continued)

	Week -1	Week 1	Week 2	Week 3	Week 4
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	6	5	7	7	8
Number of faecal boli	3	0	0	0	0
Number of urine pools	9	2	0	0	2
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	NORMAL	N/A	N/A	N/A	N/A
Touch response	NORMAL	N/A	N/A	N/A	N/A
Tail pinch	NORMAL	N/A	N/A	N/A	N/A
Air righting ability	NORMAL	N/A	N/A	N/A	N/A
Pupillary response	NORMAL	N/A	N/A	N/A	N/A
Corneal tactile response	NORMAL	N/A	N/A	N/A	N/A
Auditory response	PRESENT	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	42	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	0.427	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	0.189	N/A	N/A	N/A	N/A

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5M Animal number 46 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5M Animal number 46 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	10	9	10	11	12
Number of faecal boli	0	0	0	0	0
Number of urine pools	1	4	14	3	3
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	N/A	N/A	N/A	N/A	N/A
Touch response	N/A	N/A	N/A	N/A	N/A
Tail pinch	N/A	N/A	N/A	N/A	N/A
Air righting ability	N/A	N/A	N/A	N/A	N/A
Pupillary response	N/A	N/A	N/A	N/A	N/A
Corneal tactile response	N/A	N/A	N/A	N/A	N/A
Auditory response	N/A	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	N/A	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5M Animal number 46 (continued)

	Week 10	Week 11	Week 12	Week 13
OBSERVATIONS BEFORE REMOVAL FROM CAGE:				
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:				
Ease of removal	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5M Animal number 46 (continued)

	Week 10	Week 11	Week 12	Week 13
OPEN FIELD OBSERVATIONS:				
Latency to first step (secs)	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	14	12	10	12
Number of faecal boli	0	0	0	0
Number of urine pools	3	2	2	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:				
Approach response	N/A	N/A	N/A	NORMAL
Touch response	N/A	N/A	N/A	NORMAL
Tail pinch	N/A	N/A	N/A	NORMAL
Air righting ability	N/A	N/A	N/A	NORMAL
Pupillary response	N/A	N/A	N/A	NORMAL
Corneal tactile response	N/A	N/A	N/A	NORMAL
Auditory response	N/A	N/A	N/A	PRESENT
Hindlimb footsplay (mm)	N/A	N/A	N/A	77
Forelimb grip strength (kg)	N/A	N/A	N/A	1.077
Hindlimb grip strength (kg)	N/A	N/A	N/A	0.837

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5M Animal number 47

	Week -1	Week 1	Week 2	Week 3	Week 4
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5M Animal number 47 (continued)

	Week -1	Week 1	Week 2	Week 3	Week 4
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	1	1
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	20	12	13	10	7
Number of faecal boli	1	0	0	0	0
Number of urine pools	6	0	2	0	3
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	NORMAL	N/A	N/A	N/A	N/A
Touch response	NORMAL	N/A	N/A	N/A	N/A
Tail pinch	NORMAL	N/A	N/A	N/A	N/A
Air righting ability	NORMAL	N/A	N/A	N/A	N/A
Pupillary response	NORMAL	N/A	N/A	N/A	N/A
Corneal tactile response	NORMAL	N/A	N/A	N/A	N/A
Auditory response	PRESENT	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	55	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	0.481	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	0.163	N/A	N/A	N/A	N/A

Appendix 13
Individual functional observation battery data

Test Article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5M Animal number 47 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	AGGRESSIVE	AGGRESSIVE
Ease of handling	EASY	EASY	EASY	DIFFICULT	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	PRESENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5M Animal number 47 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	1	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	15	10	11	13	9
Number of faecal boli	0	0	0	0	0
Number of urine pools	8	15	9	18	6
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	N/A	N/A	N/A	N/A	N/A
Touch response	N/A	N/A	N/A	N/A	N/A
Tail pinch	N/A	N/A	N/A	N/A	N/A
Air righting ability	N/A	N/A	N/A	N/A	N/A
Pupillary response	N/A	N/A	N/A	N/A	N/A
Corneal tactile response	N/A	N/A	N/A	N/A	N/A
Auditory response	N/A	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	N/A	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5M Animal number 47 (continued)

	Week 10	Week 11	Week 12	Week 13
OBSERVATIONS BEFORE REMOVAL FROM CAGE:				
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:				
Ease of removal	EASY	EVASION	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	PRESENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5M Animal number 47 (continued)

	Week 10	Week 11	Week 12	Week 13
OPEN FIELD OBSERVATIONS:				
Latency to first step (secs)	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	9	12	10	14
Number of faecal boli	0	0	0	0
Number of urine pools	17	15	1	18
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:				
Approach response	N/A	N/A	N/A	NORMAL
Touch response	N/A	N/A	N/A	NORMAL
Tail pinch	N/A	N/A	N/A	NORMAL
Air righting ability	N/A	N/A	N/A	NORMAL
Pupillary response	N/A	N/A	N/A	NORMAL
Corneal tactile response	N/A	N/A	N/A	NORMAL
Auditory response	N/A	N/A	N/A	PRESENT
Hindlimb footsplay (mm)	N/A	N/A	N/A	93
Forelimb grip strength (kg)	N/A	N/A	N/A	1.071
Hindlimb grip strength (kg)	N/A	N/A	N/A	0.524

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5M Animal number 48

	Week -1	Week 1	Week 2	Week 3	Week 4
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5M Animal number 48 (continued)

	Week -1	Week 1	Week 2	Week 3	Week 4
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	HYPERACTIVE	HYPERACTIVE
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	HIGH STEPPING	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	SLIGHT	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	PRESENT##
Number of rears	15	19	27	22	29
Number of faecal boli	0	0	0	0	0
Number of urine pools	0	0	0	0	1
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	NORMAL	N/A	N/A	N/A	N/A
Touch response	NORMAL	N/A	N/A	N/A	N/A
Tail pinch	NORMAL	N/A	N/A	N/A	N/A
Air righting ability	NORMAL	N/A	N/A	N/A	N/A
Pupillary response	NORMAL	N/A	N/A	N/A	N/A
Corneal tactile response	NORMAL	N/A	N/A	N/A	N/A
Auditory response	PRESENT	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	56	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	0.429	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	0.175	N/A	N/A	N/A	N/A

- raised tail

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5M Animal number 48 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	AGGRESSIVE	EASY	AGGRESSIVE	EVASION
Ease of handling	EASY	MODERATE DIFFICULTY	EASY	MODERATE DIFFICULTY	EASY
Excessive vocalisation	ABSENT	PRESENT	ABSENT	PRESENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5M Animal number 48 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	HYPERACTIVE	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	23	29	25	11	21
Number of faecal boli	0	0	0	0	0
Number of urine pools	6	5	3	7	21
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	N/A	N/A	N/A	N/A	N/A
Touch response	N/A	N/A	N/A	N/A	N/A
Tail pinch	N/A	N/A	N/A	N/A	N/A
Air righting ability	N/A	N/A	N/A	N/A	N/A
Pupillary response	N/A	N/A	N/A	N/A	N/A
Corneal tactile response	N/A	N/A	N/A	N/A	N/A
Auditory response	N/A	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	N/A	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5M Animal number 48 (continued)

	Week 10	Week 11	Week 12	Week 13
OBSERVATIONS BEFORE REMOVAL FROM CAGE:				
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:				
Ease of removal	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE

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Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5M Animal number 48 (continued)

	Week 10	Week 11	Week 12	Week 13
OPEN FIELD OBSERVATIONS:				
Latency to first step (secs)	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	20	16	13	14
Number of faecal boli	0	0	0	0
Number of urine pools	3	3	3	10
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:				
Approach response	N/A	N/A	N/A	NORMAL
Touch response	N/A	N/A	N/A	NORMAL
Tail pinch	N/A	N/A	N/A	NORMAL
Air righting ability	N/A	N/A	N/A	NORMAL
Pupillary response	N/A	N/A	N/A	NORMAL
Corneal tactile response	N/A	N/A	N/A	NORMAL
Auditory response	N/A	N/A	N/A	PRESENT
Hindlimb footsplay (mm)	N/A	N/A	N/A	104
Forelimb grip strength (kg)	N/A	N/A	N/A	1.112
Hindlimb grip strength (kg)	N/A	N/A	N/A	0.960

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5M Animal number 49

	Week -1	Week 1	Week 2	Week 3	Week 4
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5M Animal number 49 (continued)

	Week -1	Week 1	Week 2	Week 3	Week 4
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	1	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	HYPERACTIVE	HYPERACTIVE
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	PRESENT##	ABSENT	ABSENT	PRESENT##	ABSENT
Number of rears	7	9	21	22	30
Number of faecal boli	0	0	0	0	0
Number of urine pools	2	1	2	5	2
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	NORMAL	N/A	N/A	N/A	N/A
Touch response	NORMAL	N/A	N/A	N/A	N/A
Tail pinch	NORMAL	N/A	N/A	N/A	N/A
Air righting ability	NORMAL	N/A	N/A	N/A	N/A
Pupillary response	NORMAL	N/A	N/A	N/A	N/A
Corneal tactile response	NORMAL	N/A	N/A	N/A	N/A
Auditory response	PRESENT	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	49	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	0.426	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	0.161	N/A	N/A	N/A	N/A

- raised tail

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5M Animal number 49 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5M Animal number 49 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	HYPERACTIVE	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	19	26	24	24	20
Number of faecal boli	0	0	0	0	0
Number of urine pools	10	1	16	13	13
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	N/A	N/A	N/A	N/A	N/A
Touch response	N/A	N/A	N/A	N/A	N/A
Tail pinch	N/A	N/A	N/A	N/A	N/A
Air righting ability	N/A	N/A	N/A	N/A	N/A
Pupillary response	N/A	N/A	N/A	N/A	N/A
Corneal tactile response	N/A	N/A	N/A	N/A	N/A
Auditory response	N/A	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	N/A	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A

Appendix 13
Individual functional observation battery data

Test Article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5M Animal number 49 (continued)

	Week 10	Week 11	Week 12	Week 13
OBSERVATIONS BEFORE REMOVAL FROM CAGE:				
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:				
Ease of removal	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5M Animal number 49 (continued)

	Week 10	Week 11	Week 12	Week 13
OPEN FIELD OBSERVATIONS:				
Latency to first step (secs)	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	HYPERACTIVE	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Other	PRESENT##	ABSENT	ABSENT	ABSENT
Number of rears	28	12	14	21
Number of faecal boli	0	0	0	0
Number of urine pools	3	2	15	5
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:				
Approach response	N/A	N/A	N/A	NORMAL
Touch response	N/A	N/A	N/A	NORMAL
Tail pinch	N/A	N/A	N/A	NORMAL
Air righting ability	N/A	N/A	N/A	NORMAL
Pupillary response	N/A	N/A	N/A	NORMAL
Corneal tactile response	N/A	N/A	N/A	NORMAL
Auditory response	N/A	N/A	N/A	PRESENT
Hindlimb footsplay (mm)	N/A	N/A	N/A	66
Forelimb grip strength (kg)	N/A	N/A	N/A	0.813
Hindlimb grip strength (kg)	N/A	N/A	N/A	0.872

- raised tail

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Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5M Animal number 50

	Week -1	Week 1	Week 2	Week 3	Week 4
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5M Animal number 50 (continued)

	Week -1	Week 1	Week 2	Week 3	Week 4
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	5	10	4	7	9
Number of faecal boli	0	0	0	0	0
Number of urine pools	2	1	1	0	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	NORMAL	N/A	N/A	N/A	N/A
Touch response	NORMAL	N/A	N/A	N/A	N/A
Tail pinch	NORMAL	N/A	N/A	N/A	N/A
Air righting ability	NORMAL	N/A	N/A	N/A	N/A
Pupillary response	NORMAL	N/A	N/A	N/A	N/A
Corneal tactile response	NORMAL	N/A	N/A	N/A	N/A
Auditory response	PRESENT	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	62	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	0.391	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	0.153	N/A	N/A	N/A	N/A

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5M Animal number 50 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	LABOURED##
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

- only when handled

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5M Animal number 50 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	PRESENT##
Number of rears	8	12	9	14	11
Number of faecal boli	0	0	0	0	0
Number of urine pools	0	0	0	2	3
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	N/A	N/A	N/A	N/A	N/A
Touch response	N/A	N/A	N/A	N/A	N/A
Tail pinch	N/A	N/A	N/A	N/A	N/A
Air righting ability	N/A	N/A	N/A	N/A	N/A
Pupillary response	N/A	N/A	N/A	N/A	N/A
Corneal tactile response	N/A	N/A	N/A	N/A	N/A
Auditory response	N/A	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	N/A	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A

- raised tail

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5M Animal number 50 (continued)

	Week 10	Week 11	Week 12	Week 13
OBSERVATIONS BEFORE REMOVAL FROM CAGE:				
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:				
Ease of removal	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5M Animal number 50 (continued)

	Week 10	Week 11	Week 12	Week 13
OPEN FIELD OBSERVATIONS:				
Latency to first step (secs)	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	16	8	13	10
Number of faecal boli	0	0	0	0
Number of urine pools	0	0	0	1
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:				
Approach response	N/A	N/A	N/A	NORMAL
Touch response	N/A	N/A	N/A	NORMAL
Tail pinch	N/A	N/A	N/A	NORMAL
Air righting ability	N/A	N/A	N/A	NORMAL
Pupillary response	N/A	N/A	N/A	NORMAL
Corneal tactile response	N/A	N/A	N/A	NORMAL
Auditory response	N/A	N/A	N/A	PRESENT
Hindlimb footsplay (mm)	N/A	N/A	N/A	59
Forelimb grip strength (kg)	N/A	N/A	N/A	1.003
Hindlimb grip strength (kg)	N/A	N/A	N/A	0.656

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5M Animal number 51

	Week -1	Week 1	Week 2	Week 3	Week 4
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5M Animal number 51 (continued)

	Week -1	Week 1	Week 2	Week 3	Week 4
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	6	11	12	7	8
Number of faecal boli	0	0	0	0	0
Number of urine pools	0	0	0	0	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	NORMAL	N/A	N/A	N/A	N/A
Touch response	NORMAL	N/A	N/A	N/A	N/A
Tail pinch	NORMAL	N/A	N/A	N/A	N/A
Air righting ability	NORMAL	N/A	N/A	N/A	N/A
Pupillary response	NORMAL	N/A	N/A	N/A	N/A
Corneal tactile response	NORMAL	N/A	N/A	N/A	N/A
Auditory response	PRESENT	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	64	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	0.359	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	0.099	N/A	N/A	N/A	N/A

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5M Animal number 51 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5M Animal number 51 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	19	9	10	15	17
Number of faecal boli	0	0	0	0	0
Number of urine pools	0	0	0	0	1
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	N/A	N/A	N/A	N/A	N/A
Touch response	N/A	N/A	N/A	N/A	N/A
Tail pinch	N/A	N/A	N/A	N/A	N/A
Air righting ability	N/A	N/A	N/A	N/A	N/A
Pupillary response	N/A	N/A	N/A	N/A	N/A
Corneal tactile response	N/A	N/A	N/A	N/A	N/A
Auditory response	N/A	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	N/A	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5M Animal number 51 (continued)

	Week 10	Week 11	Week 12	Week 13
OBSERVATIONS BEFORE REMOVAL FROM CAGE:				
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:				
Ease of removal	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5M Animal number 51 (continued)

	Week 10	Week 11	Week 12	Week 13
OPEN FIELD OBSERVATIONS:				
Latency to first step (secs)	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	18	11	16	13
Number of faecal boli	0	0	0	0
Number of urine pools	0	2	1	7
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:				
Approach response	N/A	N/A	N/A	NORMAL
Touch response	N/A	N/A	N/A	NORMAL
Tail pinch	N/A	N/A	N/A	NORMAL
Air righting ability	N/A	N/A	N/A	NORMAL
Pupillary response	N/A	N/A	N/A	NORMAL
Corneal tactile response	N/A	N/A	N/A	NORMAL
Auditory response	N/A	N/A	N/A	PRESENT
Hindlimb footsplay (mm)	N/A	N/A	N/A	91
Forelimb grip strength (kg)	N/A	N/A	N/A	0.906
Hindlimb grip strength (kg)	N/A	N/A	N/A	0.516

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Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5M Animal number 52

	Week -1	Week 1	Week 2	Week 3	Week 4
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5M Animal number 52 (continued)

	Week -1	Week 1	Week 2	Week 3	Week 4
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	1	1	0
Posture	NORMAL	NORMAL	NORMAL	LOW CARRIAGE	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	PRESENT##	PRESENT##	ABSENT
Number of rears	4	7	13	14	10
Number of faecal boli	0	0	0	0	0
Number of urine pools	0	0	0	0	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	NORMAL	N/A	N/A	N/A	N/A
Touch response	NORMAL	N/A	N/A	N/A	N/A
Tail pinch	NORMAL	N/A	N/A	N/A	N/A
Air righting ability	NORMAL	N/A	N/A	N/A	N/A
Pupillary response	NORMAL	N/A	N/A	N/A	N/A
Corneal tactile response	NORMAL	N/A	N/A	N/A	N/A
Auditory response	PRESENT	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	70	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	0.520	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	0.174	N/A	N/A	N/A	N/A

- raised tail

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Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5M Animal number 52 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EVASION
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	PRESENT##	NONE	NONE

- animal was cold on removal from cage

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5M Animal number 52 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	1	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	PRESENT##	PRESENT##	PRESENT##	ABSENT	PRESENT##
Number of rears	7	10	14	13	13
Number of faecal boli	0	0	0	0	0
Number of urine pools	0	0	0	0	2
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	N/A	N/A	N/A	N/A	N/A
Touch response	N/A	N/A	N/A	N/A	N/A
Tail pinch	N/A	N/A	N/A	N/A	N/A
Air righting ability	N/A	N/A	N/A	N/A	N/A
Pupillary response	N/A	N/A	N/A	N/A	N/A
Corneal tactile response	N/A	N/A	N/A	N/A	N/A
Auditory response	N/A	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	N/A	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A

- raised tail

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5M Animal number 52 (continued)

	Week 10	Week 11	Week 12	Week 13
OBSERVATIONS BEFORE REMOVAL FROM CAGE:				
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:				
Ease of removal	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5M Animal number 52 (continued)

	Week 10	Week 11	Week 12	Week 13
OPEN FIELD OBSERVATIONS:				
Latency to first step (secs)	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Other	PRESENT##	ABSENT	ABSENT	ABSENT
Number of rears	9	9	13	14
Number of faecal boli	0	0	0	0
Number of urine pools	6	3	1	6
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:				
Approach response	N/A	N/A	N/A	NORMAL
Touch response	N/A	N/A	N/A	NORMAL
Tail pinch	N/A	N/A	N/A	NORMAL
Air righting ability	N/A	N/A	N/A	NORMAL
Pupillary response	N/A	N/A	N/A	NORMAL
Corneal tactile response	N/A	N/A	N/A	NORMAL
Auditory response	N/A	N/A	N/A	PRESENT
Hindlimb footsplay (mm)	N/A	N/A	N/A	107
Forelimb grip strength (kg)	N/A	N/A	N/A	1.254
Hindlimb grip strength (kg)	N/A	N/A	N/A	0.667

- raised tail

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Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5M Animal number 53

	Week -1	Week 1	Week 2	Week 3	Week 4
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5M Animal number 53 (continued)

	Week -1	Week 1	Week 2	Week 3	Week 4
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	2	0	0	1
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	6	4	9	14	7
Number of faecal boli	0	0	0	0	0
Number of urine pools	1	0	0	0	1
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	NORMAL	N/A	N/A	N/A	N/A
Touch response	NORMAL	N/A	N/A	N/A	N/A
Tail pinch	NORMAL	N/A	N/A	N/A	N/A
Air righting ability	NORMAL	N/A	N/A	N/A	N/A
Pupillary response	NORMAL	N/A	N/A	N/A	N/A
Corneal tactile response	NORMAL	N/A	N/A	N/A	N/A
Auditory response	PRESENT	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	56	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	0.375	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	0.133	N/A	N/A	N/A	N/A

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5M Animal number 53 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EVASION
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5M Animal number 53 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	LOW CARRIAGE	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	HYPOACTIVE	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	7	17	2	8	12
Number of faecal boli	0	0	0	0	0
Number of urine pools	0	0	0	7	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	N/A	N/A	N/A	N/A	N/A
Touch response	N/A	N/A	N/A	N/A	N/A
Tail pinch	N/A	N/A	N/A	N/A	N/A
Air righting ability	N/A	N/A	N/A	N/A	N/A
Pupillary response	N/A	N/A	N/A	N/A	N/A
Corneal tactile response	N/A	N/A	N/A	N/A	N/A
Auditory response	N/A	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	N/A	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5M Animal number 53 (continued)

	Week 10	Week 11	Week 12	Week 13
OBSERVATIONS BEFORE REMOVAL FROM CAGE:				
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:				
Ease of removal	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5M Animal number 53 (continued)

	Week 10	Week 11	Week 12	Week 13
OPEN FIELD OBSERVATIONS:				
Latency to first step (secs)	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	13	9	11	12
Number of faecal boli	0	0	0	0
Number of urine pools	2	13	2	1
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:				
Approach response	N/A	N/A	N/A	NORMAL
Touch response	N/A	N/A	N/A	NORMAL
Tail pinch	N/A	N/A	N/A	NORMAL
Air righting ability	N/A	N/A	N/A	NORMAL
Pupillary response	N/A	N/A	N/A	NORMAL
Corneal tactile response	N/A	N/A	N/A	NORMAL
Auditory response	N/A	N/A	N/A	PRESENT
Hindlimb footsplay (mm)	N/A	N/A	N/A	79
Forelimb grip strength (kg)	N/A	N/A	N/A	0.878
Hindlimb grip strength (kg)	N/A	N/A	N/A	0.769

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5M Animal number 54

	Week -1	Week 1	Week 2	Week 3	Week 4
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5M Animal number 54 (continued)

	Week -1	Week 1	Week 2	Week 3	Week 4
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	1	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	4	10	8	10	8
Number of faecal boli	0	0	0	0	0
Number of urine pools	0	0	0	1	1
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	NORMAL	N/A	N/A	N/A	N/A
Touch response	NORMAL	N/A	N/A	N/A	N/A
Tail pinch	NORMAL	N/A	N/A	N/A	N/A
Air righting ability	NORMAL	N/A	N/A	N/A	N/A
Pupillary response	NORMAL	N/A	N/A	N/A	N/A
Corneal tactile response	NORMAL	N/A	N/A	N/A	N/A
Auditory response	PRESENT	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	50	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	0.365	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	0.127	N/A	N/A	N/A	N/A

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5M Animal number 54 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EVASION
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5M Animal number 54 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	PRESENT#	PRESENT##	ABSENT	PRESENT###	PRESENT##
Number of rears	2	3	9	12	7
Number of faecal boli	0	0	0	0	0
Number of urine pools	0	2	4	4	2
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	N/A	N/A	N/A	N/A	N/A
Touch response	N/A	N/A	N/A	N/A	N/A
Tail pinch	N/A	N/A	N/A	N/A	N/A
Air righting ability	N/A	N/A	N/A	N/A	N/A
Pupillary response	N/A	N/A	N/A	N/A	N/A
Corneal tactile response	N/A	N/A	N/A	N/A	N/A
Auditory response	N/A	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	N/A	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A

\# - animal stayed in same quarter of arena for 47 seconds
- raised tail
- urine pools white and cloudy

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5M Animal number 54 (continued)

	Week 10	Week 11	Week 12	Week 13
OBSERVATIONS BEFORE REMOVAL FROM CAGE:				
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:				
Ease of removal	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5M Animal number 54 (continued)

	Week 10	Week 11	Week 12	Week 13
OPEN FIELD OBSERVATIONS:				
Latency to first step (secs)	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	12	11	14	20
Number of faecal boli	0	0	0	0
Number of urine pools	7	0	9	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:				
Approach response	N/A	N/A	N/A	NORMAL
Touch response	N/A	N/A	N/A	NORMAL
Tail pinch	N/A	N/A	N/A	NORMAL
Air righting ability	N/A	N/A	N/A	NORMAL
Pupillary response	N/A	N/A	N/A	NORMAL
Corneal tactile response	N/A	N/A	N/A	NORMAL
Auditory response	N/A	N/A	N/A	PRESENT
Hindlimb footsplay (mm)	N/A	N/A	N/A	92
Forelimb grip strength (kg)	N/A	N/A	N/A	1.139
Hindlimb grip strength (kg)	N/A	N/A	N/A	0.527

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Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5M Animal number 55

	Week -1	Week 1	Week 2	Week 3	Week 4
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5M Animal number 55 (continued)

	Week -1	Week 1	Week 2	Week 3	Week 4
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	HYPERACTIVE	NORMAL	HYPERACTIVE	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	18	26	17	24	13
Number of faecal boli	0	0	0	0	0
Number of urine pools	1	1	2	2	4
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	NORMAL	N/A	N/A	N/A	N/A
Touch response	NORMAL	N/A	N/A	N/A	N/A
Tail pinch	NORMAL	N/A	N/A	N/A	N/A
Air righting ability	NORMAL	N/A	N/A	N/A	N/A
Pupillary response	NORMAL	N/A	N/A	N/A	N/A
Corneal tactile response	NORMAL	N/A	N/A	N/A	N/A
Auditory response	PRESENT	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	55	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	0.417	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	0.087	N/A	N/A	N/A	N/A

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Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5M Animal number 55 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EVASION	EASY
Ease of handling	EASY	EASY	EASY	MODERATE DIFFICULTY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5M Animal number 55 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	PRESENT##	ABSENT
Number of rears	14	15	15	13	9
Number of faecal boli	0	0	0	0	0
Number of urine pools	7	1	7	5	28
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	N/A	N/A	N/A	N/A	N/A
Touch response	N/A	N/A	N/A	N/A	N/A
Tail pinch	N/A	N/A	N/A	N/A	N/A
Air righting ability	N/A	N/A	N/A	N/A	N/A
Pupillary response	N/A	N/A	N/A	N/A	N/A
Corneal tactile response	N/A	N/A	N/A	N/A	N/A
Auditory response	N/A	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	N/A	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A

- animal evasive on removal from arena

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5M Animal number 55 (continued)

	Week 10	Week 11	Week 12	Week 13
OBSERVATIONS BEFORE REMOVAL FROM CAGE:				
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:				
Ease of removal	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5M Animal number 55 (continued)

	Week 10	Week 11	Week 12	Week 13
OPEN FIELD OBSERVATIONS:				
Latency to first step (secs)	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	16	13	16	13
Number of faecal boli	0	0	0	0
Number of urine pools	11	2	3	6
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:				
Approach response	N/A	N/A	N/A	NORMAL
Touch response	N/A	N/A	N/A	NORMAL
Tail pinch	N/A	N/A	N/A	NORMAL
Air righting ability	N/A	N/A	N/A	NORMAL
Pupillary response	N/A	N/A	N/A	NORMAL
Corneal tactile response	N/A	N/A	N/A	NORMAL
Auditory response	N/A	N/A	N/A	PRESENT
Hindlimb footsplay (mm)	N/A	N/A	N/A	91
Forelimb grip strength (kg)	N/A	N/A	N/A	1.120
Hindlimb grip strength (kg)	N/A	N/A	N/A	0.598

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5M Animal number 56

	Week -1	Week 1	Week 2	Week 3	Week 4
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5M Animal number 56 (continued)

	Week -1	Week 1	Week 2	Week 3	Week 4
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	1
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	6	9	11	10	5
Number of faecal boli	0	0	0	0	0
Number of urine pools	0	1	0	2	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	NORMAL	N/A	N/A	N/A	N/A
Touch response	NORMAL	N/A	N/A	N/A	N/A
Tail pinch	NORMAL	N/A	N/A	N/A	N/A
Air righting ability	NORMAL	N/A	N/A	N/A	N/A
Pupillary response	NORMAL	N/A	N/A	N/A	N/A
Corneal tactile response	NORMAL	N/A	N/A	N/A	N/A
Auditory response	PRESENT	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	58	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	0.455	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	0.112	N/A	N/A	N/A	N/A

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5M Animal number 56 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5M Animal number 56 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	8	10	12	12	10
Number of faecal boli	0	0	0	0	0
Number of urine pools	0	0	0	0	1
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	N/A	N/A	N/A	N/A	N/A
Touch response	N/A	N/A	N/A	N/A	N/A
Tail pinch	N/A	N/A	N/A	N/A	N/A
Air righting ability	N/A	N/A	N/A	N/A	N/A
Pupillary response	N/A	N/A	N/A	N/A	N/A
Corneal tactile response	N/A	N/A	N/A	N/A	N/A
Auditory response	N/A	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	N/A	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5M Animal number 56 (continued)

	Week 10	Week 11	Week 12	Week 13
OBSERVATIONS BEFORE REMOVAL FROM CAGE:				
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:				
Ease of removal	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5M Animal number 56 (continued)

	Week 10	Week 11	Week 12	Week 13
OPEN FIELD OBSERVATIONS:				
Latency to first step (secs)	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	16	13	15	14
Number of faecal boli	0	0	0	0
Number of urine pools	0	0	0	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:				
Approach response	N/A	N/A	N/A	NORMAL
Touch response	N/A	N/A	N/A	NORMAL
Tail pinch	N/A	N/A	N/A	NORMAL
Air righting ability	N/A	N/A	N/A	NORMAL
Pupillary response	N/A	N/A	N/A	NORMAL
Corneal tactile response	N/A	N/A	N/A	NORMAL
Auditory response	N/A	N/A	N/A	PRESENT
Hindlimb footsplay (mm)	N/A	N/A	N/A	95
Forelimb grip strength (kg)	N/A	N/A	N/A	0.927
Hindlimb grip strength (kg)	N/A	N/A	N/A	0.587

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5M Animal number 57

	Week -1	Week 1	Week 2	Week 3	Week 4
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5M Animal number 57 (continued)

	Week -1	Week 1	Week 2	Week 3	Week 4
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	2	1	1	1	1
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	4	16	8	17	7
Number of faecal boli	2	0	0	0	0
Number of urine pools	0	0	0	0	1
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	NORMAL	N/A	N/A	N/A	N/A
Touch response	NORMAL	N/A	N/A	N/A	N/A
Tail pinch	NORMAL	N/A	N/A	N/A	N/A
Air righting ability	NORMAL	N/A	N/A	N/A	N/A
Pupillary response	NORMAL	N/A	N/A	N/A	N/A
Corneal tactile response	NORMAL	N/A	N/A	N/A	N/A
Auditory response	PRESENT	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	56	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	0.326	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	0.118	N/A	N/A	N/A	N/A

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5M Animal number 57 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5M Animal number 57 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	7	10	9	14	10
Number of faecal boli	0	0	0	0	0
Number of urine pools	0	0	0	4	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	N/A	N/A	N/A	N/A	N/A
Touch response	N/A	N/A	N/A	N/A	N/A
Tail pinch	N/A	N/A	N/A	N/A	N/A
Air righting ability	N/A	N/A	N/A	N/A	N/A
Pupillary response	N/A	N/A	N/A	N/A	N/A
Corneal tactile response	N/A	N/A	N/A	N/A	N/A
Auditory response	N/A	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	N/A	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5M Animal number 57 (continued)

	Week 10	Week 11	Week 12	Week 13
OBSERVATIONS BEFORE REMOVAL FROM CAGE:				
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:				
Ease of removal	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5M Animal number 57 (continued)

	Week 10	Week 11	Week 12	Week 13
OPEN FIELD OBSERVATIONS:				
Latency to first step (secs)	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	19	15	16	19
Number of faecal boli	0	0	0	0
Number of urine pools	0	0	0	1
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:				
Approach response	N/A	N/A	N/A	NORMAL
Touch response	N/A	N/A	N/A	NORMAL
Tail pinch	N/A	N/A	N/A	NORMAL
Air righting ability	N/A	N/A	N/A	NORMAL
Pupillary response	N/A	N/A	N/A	NORMAL
Corneal tactile response	N/A	N/A	N/A	NORMAL
Auditory response	N/A	N/A	N/A	PRESENT
Hindlimb footsplay (mm)	N/A	N/A	N/A	111
Forelimb grip strength (kg)	N/A	N/A	N/A	0.838
Hindlimb grip strength (kg)	N/A	N/A	N/A	0.869

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Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5M Animal number 58

	Week -1	Week 1	Week 2	Week 3	Week 4
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5M Animal number 58 (continued)

	Week -1	Week 1	Week 2	Week 3	Week 4
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	2	1
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	PRESENT##	ABSENT
Number of rears	5	4	7	10	12
Number of faecal boli	0	0	0	0	0
Number of urine pools	0	0	0	0	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	NORMAL	N/A	N/A	N/A	N/A
Touch response	NORMAL	N/A	N/A	N/A	N/A
Tail pinch	NORMAL	N/A	N/A	N/A	N/A
Air righting ability	NORMAL	N/A	N/A	N/A	N/A
Pupillary response	NORMAL	N/A	N/A	N/A	N/A
Corneal tactile response	NORMAL	N/A	N/A	N/A	N/A
Auditory response	PRESENT	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	61	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	0.454	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	0.137	N/A	N/A	N/A	N/A

- animal sat in same section of arena for 30 seconds

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Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5M Animal number 58 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EVASION
Ease of handling	RIGID IN HAND	EASY	EASY	EASY	MODERATE DIFFICULTY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5M Animal number 58 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	PRESENT##
Number of rears	18	12	9	8	11
Number of faecal boli	0	0	0	0	0
Number of urine pools	2	0	2	2	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	N/A	N/A	N/A	N/A	N/A
Touch response	N/A	N/A	N/A	N/A	N/A
Tail pinch	N/A	N/A	N/A	N/A	N/A
Air righting ability	N/A	N/A	N/A	N/A	N/A
Pupillary response	N/A	N/A	N/A	N/A	N/A
Corneal tactile response	N/A	N/A	N/A	N/A	N/A
Auditory response	N/A	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	N/A	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A

- raised tail

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5M Animal number 58 (continued)

	Week 10	Week 11	Week 12	Week 13
OBSERVATIONS BEFORE REMOVAL FROM CAGE:				
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:				
Ease of removal	EVASION##	EASY	AGGRESSIVE	EASY
Ease of handling	MODERATE DIFFICULTY	EASY	EASY	EASY
Excessive vocalisation	PRESENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE

- animal aggressive

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5M Animal number 58 (continued)

	Week 10	Week 11	Week 12	Week 13
OPEN FIELD OBSERVATIONS:				
Latency to first step (secs)	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	HYPOACTIVE	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Other	PRESENT##	ABSENT	ABSENT	ABSENT
Number of rears	15	13	0	11
Number of faecal boli	0	0	0	0
Number of urine pools	0	0	0	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:				
Approach response	N/A	N/A	N/A	NORMAL
Touch response	N/A	N/A	N/A	NORMAL
Tail pinch	N/A	N/A	N/A	NORMAL
Air righting ability	N/A	N/A	N/A	NORMAL
Pupillary response	N/A	N/A	N/A	NORMAL
Corneal tactile response	N/A	N/A	N/A	NORMAL
Auditory response	N/A	N/A	N/A	PRESENT
Hindlimb footsplay (mm)	N/A	N/A	N/A	90
Forelimb grip strength (kg)	N/A	N/A	N/A	1.355
Hindlimb grip strength (kg)	N/A	N/A	N/A	0.763

- raised tail

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5M Animal number 59

	Week -1	Week 1	Week 2	Week 3	Week 4
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	MODERATE DIFFICULTY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5M Animal number 59 (continued)

	Week -1	Week 1	Week 2	Week 3	Week 4
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	1	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	6	16	16	12	4
Number of faecal boli	0	0	0	0	0
Number of urine pools	1	0	0	2	6
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	NORMAL	N/A	N/A	N/A	N/A
Touch response	NORMAL	N/A	N/A	N/A	N/A
Tail pinch	NORMAL	N/A	N/A	N/A	N/A
Air righting ability	NORMAL	N/A	N/A	N/A	N/A
Pupillary response	NORMAL	N/A	N/A	N/A	N/A
Corneal tactile response	NORMAL	N/A	N/A	N/A	N/A
Auditory response	PRESENT	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	64	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	0.512	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	0.152	N/A	N/A	N/A	N/A

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5M Animal number 59 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EVASION	EASY	EASY	EVASION
Ease of handling	EASY	MODERATE DIFFICULTY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5M Animal number 59 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	12	16	14	7	5
Number of faecal boli	0	0	0	0	0
Number of urine pools	2	0	4	0	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	N/A	N/A	N/A	N/A	N/A
Touch response	N/A	N/A	N/A	N/A	N/A
Tail pinch	N/A	N/A	N/A	N/A	N/A
Air righting ability	N/A	N/A	N/A	N/A	N/A
Pupillary response	N/A	N/A	N/A	N/A	N/A
Corneal tactile response	N/A	N/A	N/A	N/A	N/A
Auditory response	N/A	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	N/A	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5M Animal number 59 (continued)

	Week 10	Week 11	Week 12	Week 13
OBSERVATIONS BEFORE REMOVAL FROM CAGE:				
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:				
Ease of removal	EASY	EVASION##	EASY	EASY
Ease of handling	EASY	MODERATE DIFFICULTY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE

- animal aggressive

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5M Animal number 59 (continued)

	Week 10	Week 11	Week 12	Week 13
OPEN FIELD OBSERVATIONS:				
Latency to first step (secs)	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	11	14	17	9
Number of faecal boli	0	0	0	0
Number of urine pools	0	0	0	3
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:				
Approach response	N/A	N/A	N/A	NORMAL
Touch response	N/A	N/A	N/A	NORMAL
Tail pinch	N/A	N/A	N/A	NORMAL
Air righting ability	N/A	N/A	N/A	NORMAL
Pupillary response	N/A	N/A	N/A	NORMAL
Corneal tactile response	N/A	N/A	N/A	NORMAL
Auditory response	N/A	N/A	N/A	PRESENT
Hindlimb footsplay (mm)	N/A	N/A	N/A	73
Forelimb grip strength (kg)	N/A	N/A	N/A	0.855
Hindlimb grip strength (kg)	N/A	N/A	N/A	0.513

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5M Animal number 60

	Week -1	Week 1	Week 2	Week 3	Week 4
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	PRESENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EVASION	FREEZES	EVASION
Ease of handling	EASY	EASY	EASY	RIGID IN HAND	MODERATE DIFFICULTY
Excessive vocalisation	ABSENT	ABSENT	PRESENT	PRESENT	PRESENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5M Animal number 60 (continued)

	Week -1	Week 1	Week 2	Week 3	Week 4
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	PRESENT@
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	PRESENT#	PRESENT##	PRESENT###	ABSENT
Number of rears	14	6	19	15	13
Number of faecal boli	0	0	0	0	-@@
Number of urine pools	0	0	2	0	-@@
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	NORMAL	N/A	N/A	N/A	N/A
Touch response	NORMAL	N/A	N/A	N/A	N/A
Tail pinch	NORMAL	N/A	N/A	N/A	N/A
Air righting ability	NORMAL	N/A	N/A	N/A	N/A
Pupillary response	NORMAL	N/A	N/A	N/A	N/A
Corneal tactile response	NORMAL	N/A	N/A	N/A	N/A
Auditory response	PRESENT	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	62	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	0.413	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	0.139	N/A	N/A	N/A	N/A

\# - slightly raised tail
- raised tail
- raised tail; animal jumped onto edge of arena and stayed there for remaining 10 seconds
@ - animal jumping out of arena
@@ - omitted in error

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5M Animal number 60 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	AGGRESSIVE	EVASION	EASY	EVASION	EVASION
Ease of handling	MODERATE DIFFICULTY	DIFFICULT	EASY	EASY	EASY
Excessive vocalisation	PRESENT	PRESENT	ABSENT	PRESENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5M Animal number 60 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	PRESENT#	PRESENT##	PRESENT@	PRESENT@@	PRESENT@@@
Number of rears	17	14	17	17	5
Number of faecal boli	0	0	0	0	0
Number of urine pools	0	-###	0	0	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	N/A	N/A	N/A	N/A	N/A
Touch response	N/A	N/A	N/A	N/A	N/A
Tail pinch	N/A	N/A	N/A	N/A	N/A
Air righting ability	N/A	N/A	N/A	N/A	N/A
Pupillary response	N/A	N/A	N/A	N/A	N/A
Corneal tactile response	N/A	N/A	N/A	N/A	N/A
Auditory response	N/A	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	N/A	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A

\# - raised tail, animal jumped onto edge of arena 10 times
- raised tail, animal jumped onto rim of arena 5 times
- omitted in error
@ - animal jumped onto rim of arena on 5 occasions
@@ - raised tail, animal jumped out of arena 4 times
@@@ - raised tail, animal jumped onto rim of arena on one occasion for 1 minute 30 seconds

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5M Animal number 60 (continued)

	Week 10	Week 11	Week 12	Week 13
OBSERVATIONS BEFORE REMOVAL FROM CAGE:				
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:				
Ease of removal	EASY	EVASION	EASY	EASY
Ease of handling	MODERATE DIFFICULTY	EASY	EASY	EASY
Excessive vocalisation	PRESENT	PRESENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5M Animal number 60 (continued)

	Week 10	Week 11	Week 12	Week 13
OPEN FIELD OBSERVATIONS:				
Latency to first step (secs)	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Other	PRESENT#	PRESENT##	PRESENT@	PRESENT@@
Number of rears	14	14	10	22
Number of faecal boli	0	0	0	0
Number of urine pools	0	0	0	0
Diarrhoea	ABSENT	-###	ABSENT	ABSENT
Polyuria	ABSENT	-###	ABSENT	ABSENT
OPEN FIELD TESTS:				
Approach response	N/A	N/A	N/A	NORMAL
Touch response	N/A	N/A	N/A	NORMAL
Tail pinch	N/A	N/A	N/A	NORMAL
Air righting ability	N/A	N/A	N/A	NORMAL
Pupillary response	N/A	N/A	N/A	NORMAL
Corneal tactile response	N/A	N/A	N/A	NORMAL
Auditory response	N/A	N/A	N/A	PRESENT
Hindlimb footsplay (mm)	N/A	N/A	N/A	91
Forelimb grip strength (kg)	N/A	N/A	N/A	0.956
Hindlimb grip strength (kg)	N/A	N/A	N/A	0.557

\# - raised tail; animal jumped onto rim of arena on 2 occasions
- animal jumped onto edge of arena on 2 occasions
- omitted in error
@ - animal jumped onto rim of arena on one occasion for approximately 40 seconds
@@ - animal jumped onto edge of arena once

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5F Animal number 106

	Week -1	Week 1	Week 2	Week 3	Week 4
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5F Animal number 106 (continued)

	Week -1	Week 1	Week 2	Week 3	Week 4
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	1	1	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	28	16	31	29	22
Number of faecal boli	0	0	0	0	0
Number of urine pools	0	0	5	0	2
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	NORMAL	N/A	N/A	N/A	N/A
Touch response	NORMAL	N/A	N/A	N/A	N/A
Tail pinch	NORMAL	N/A	N/A	N/A	N/A
Air righting ability	NORMAL	N/A	N/A	N/A	N/A
Pupillary response	NORMAL	N/A	N/A	N/A	N/A
Corneal tactile response	NORMAL	N/A	N/A	N/A	N/A
Auditory response	PRESENT	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	60	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	0.604	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	0.277	N/A	N/A	N/A	N/A

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5F Animal number 106 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5F Animal number 106 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	HIGH STEPPING	HIGH STEPPING	HIGH STEPPING	HIGH STEPPING	NORMAL
Gait type severity	SLIGHT	SLIGHT	SLIGHT	SLIGHT	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	28	34	33	30	37
Number of faecal boli	0	0	0	0	0
Number of urine pools	0	0	4	0	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	N/A	N/A	N/A	N/A	N/A
Touch response	N/A	N/A	N/A	N/A	N/A
Tail pinch	N/A	N/A	N/A	N/A	N/A
Air righting ability	N/A	N/A	N/A	N/A	N/A
Pupillary response	N/A	N/A	N/A	N/A	N/A
Corneal tactile response	N/A	N/A	N/A	N/A	N/A
Auditory response	N/A	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	N/A	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5F Animal number 106 (continued)

	Week 10	Week 11	Week 12	Week 13
OBSERVATIONS BEFORE REMOVAL FROM CAGE:				
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:				
Ease of removal	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5F Animal number 106 (continued)

	Week 10	Week 11	Week 12	Week 13
OPEN FIELD OBSERVATIONS:				
Latency to first step (secs)	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	HIGH STEPPING
Gait type severity	NORMAL	NORMAL	NORMAL	MODERATE
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	26	29	29	18
Number of faecal boli	0	0	0	0
Number of urine pools	4	0	0	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:				
Approach response	N/A	N/A	N/A	NORMAL
Touch response	N/A	N/A	N/A	NORMAL
Tail pinch	N/A	N/A	N/A	NORMAL
Air righting ability	N/A	N/A	N/A	NORMAL
Pupillary response	N/A	N/A	N/A	NORMAL
Corneal tactile response	N/A	N/A	N/A	NORMAL
Auditory response	N/A	N/A	N/A	PRESENT
Hindlimb footsplay (mm)	N/A	N/A	N/A	48
Forelimb grip strength (kg)	N/A	N/A	N/A	1.228
Hindlimb grip strength (kg)	N/A	N/A	N/A	0.415

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Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5F Animal number 107

	Week -1	Week 1	Week 2	Week 3	Week 4
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5F Animal number 107 (continued)

	Week -1	Week 1	Week 2	Week 3	Week 4
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	HYPOACTIVE	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	PRESENT##
Number of rears	28	18	7	18	24
Number of faecal boli	2	0	0	0	0
Number of urine pools	1	12	0	0	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	NORMAL	N/A	N/A	N/A	N/A
Touch response	NORMAL	N/A	N/A	N/A	N/A
Tail pinch	NORMAL	N/A	N/A	N/A	N/A
Air righting ability	NORMAL	N/A	N/A	N/A	N/A
Pupillary response	NORMAL	N/A	N/A	N/A	N/A
Corneal tactile response	NORMAL	N/A	N/A	N/A	N/A
Auditory response	PRESENT	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	53	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	0.475	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	0.239	N/A	N/A	N/A	N/A

- animal tried to jump from arena on one occasion

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5F Animal number 107 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5F Animal number 107 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	ATAXIC	HIGH STEPPING	NORMAL	NORMAL	NORMAL
Gait type severity	SLIGHT	SLIGHT	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	24	28	19	22	31
Number of faecal boli	0	0	0	0	0
Number of urine pools	0	0	0	6	2
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	N/A	N/A	N/A	N/A	N/A
Touch response	N/A	N/A	N/A	N/A	N/A
Tail pinch	N/A	N/A	N/A	N/A	N/A
Air righting ability	N/A	N/A	N/A	N/A	N/A
Pupillary response	N/A	N/A	N/A	N/A	N/A
Corneal tactile response	N/A	N/A	N/A	N/A	N/A
Auditory response	N/A	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	N/A	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5F Animal number 107 (continued)

	Week 10	Week 11	Week 12	Week 13
OBSERVATIONS BEFORE REMOVAL FROM CAGE:				
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:				
Ease of removal	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5F Animal number 107 (continued)

	Week 10	Week 11	Week 12	Week 13
OPEN FIELD OBSERVATIONS:				
Latency to first step (secs)	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Other	PRESENT##	ABSENT	ABSENT	ABSENT
Number of rears	24	34	27	16
Number of faecal boli	0	0	0	0
Number of urine pools	0	1	6	13
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:				
Approach response	N/A	N/A	N/A	NORMAL
Touch response	N/A	N/A	N/A	NORMAL
Tail pinch	N/A	N/A	N/A	NORMAL
Air righting ability	N/A	N/A	N/A	NORMAL
Pupillary response	N/A	N/A	N/A	NORMAL
Corneal tactile response	N/A	N/A	N/A	NORMAL
Auditory response	N/A	N/A	N/A	PRESENT
Hindlimb footsplay (mm)	N/A	N/A	N/A	70
Porelimb grip strength (kg)	N/A	N/A	N/A	0.587
Hindlimb grip strength (kg)	N/A	N/A	N/A	0.287

- animal jumped onto rim of arena on one occasion for approximately 20 seconds

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5F Animal number 108

	Week -1	Week 1	Week 2	Week 3	Week 4
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EVASION	EASY	EVASION
Ease of handling	EASY	EASY	RIGID IN HAND	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	PRESENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5F Animal number 108 (continued)

	Week -1	Week 1	Week 2	Week 3	Week 4
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	HIGH STEPPING	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	SLIGHT	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	PRESENT##
Number of rears	32	25	29	25	23
Number of faecal boli	0	0	0	0	0
Number of urine pools	1	0	1	1	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	NORMAL	N/A	N/A	N/A	N/A
Touch response	NORMAL	N/A	N/A	N/A	N/A
Tail pinch	NORMAL	N/A	N/A	N/A	N/A
Air righting ability	NORMAL	N/A	N/A	N/A	N/A
Pupillary response	NORMAL	N/A	N/A	N/A	N/A
Corneal tactile response	NORMAL	N/A	N/A	N/A	N/A
Auditory response	PRESENT	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	63	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	0.539	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	0.270	N/A	N/A	N/A	N/A

- animal vocalised upon removal from arena

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Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5F Animal number 108 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5F Animal number 108 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	HIGH STEPPING	HIGH STEPPING	HIGH STEPPING	HIGH STEPPING	NORMAL
Gait type severity	SLIGHT	SLIGHT	SLIGHT	SLIGHT	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	24	24	25	18	28
Number of faecal boli	0	0	0	0	0
Number of urine pools	1	2	1	0	1
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	N/A	N/A	N/A	N/A	N/A
Touch response	N/A	N/A	N/A	N/A	N/A
Tail pinch	N/A	N/A	N/A	N/A	N/A
Air righting ability	N/A	N/A	N/A	N/A	N/A
Pupillary response	N/A	N/A	N/A	N/A	N/A
Corneal tactile response	N/A	N/A	N/A	N/A	N/A
Auditory response	N/A	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	N/A	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5F Animal number 108 (continued)

	Week 10	Week 11	Week 12	Week 13
OBSERVATIONS BEFORE REMOVAL FROM CAGE:				
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:				
Ease of removal	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5F Animal number 108 (continued)

	Week 10	Week 11	Week 12	Week 13
OPEN FIELD OBSERVATIONS:				
Latency to first step (secs)	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	HIGH STEPPING	HIGH STEPPING	NORMAL	HIGH STEPPING
Gait type severity	SLIGHT	SLIGHT	NORMAL	SLIGHT
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	25	24	26	18
Number of faecal boli	0	0	0	0
Number of urine pools	1	0	0	2
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:				
Approach response	N/A	N/A	N/A	NORMAL
Touch response	N/A	N/A	N/A	NORMAL
Tail pinch	N/A	N/A	N/A	NORMAL
Air righting ability	N/A	N/A	N/A	NORMAL
Pupillary response	N/A	N/A	N/A	NORMAL
Corneal tactile response	N/A	N/A	N/A	NORMAL
Auditory response	N/A	N/A	N/A	PRESENT
Hindlimb footsplay (mm)	N/A	N/A	N/A	53
Forelimb grip strength (kg)	N/A	N/A	N/A	0.871
Hindlimb grip strength (kg)	N/A	N/A	N/A	0.316

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5F Animal number 109

	Week -1	Week 1	Week 2	Week 3	Week 4
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	-##	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

- omitted in error

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5F Animal number 109 (continued)

	Week -1	Week 1	Week 2	Week 3	Week 4
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	1	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	PRESENT##
Number of rears	13	16	19	17	17
Number of faecal boli	0	0	0	0	0
Number of urine pools	8	3	0	0	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	NORMAL	N/A	N/A	N/A	N/A
Touch response	NORMAL	N/A	N/A	N/A	N/A
Tail pinch	NORMAL	N/A	N/A	N/A	N/A
Air righting ability	NORMAL	N/A	N/A	N/A	N/A
Pupillary response	NORMAL	N/A	N/A	N/A	N/A
Corneal tactile response	NORMAL	N/A	N/A	N/A	N/A
Auditory response	PRESENT	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	68	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	0.464	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	0.185	N/A	N/A	N/A	N/A

- animal tried to jump from arena on one occasion

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Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5F Animal number 109 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5F Animal number 109 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	19	21	22	22	28
Number of faecal boli	0	0	0	0	0
Number of urine pools	0	0	3	2	2
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	N/A	N/A	N/A	N/A	N/A
Touch response	N/A	N/A	N/A	N/A	N/A
Tail pinch	N/A	N/A	N/A	N/A	N/A
Air righting ability	N/A	N/A	N/A	N/A	N/A
Pupillary response	N/A	N/A	N/A	N/A	N/A
Corneal tactile response	N/A	N/A	N/A	N/A	N/A
Auditory response	N/A	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	N/A	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A

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Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5F Animal number 109 (continued)

	Week 10	Week 11	Week 12	Week 13
OBSERVATIONS BEFORE REMOVAL FROM CAGE:				
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:				
Ease of removal	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5F Animal number 109 (continued)

	Week 10	Week 11	Week 12	Week 13
OPEN FIELD OBSERVATIONS:				
Latency to first step (secs)	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	14	24	30	15
Number of faecal boli	0	0	0	0
Number of urine pools	1	6	4	8
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:				
Approach response	N/A	N/A	N/A	NORMAL
Touch response	N/A	N/A	N/A	NORMAL
Tail pinch	N/A	N/A	N/A	NORMAL
Air righting ability	N/A	N/A	N/A	NORMAL
Pupillary response	N/A	N/A	N/A	NORMAL
Corneal tactile response	N/A	N/A	N/A	NORMAL
Auditory response	N/A	N/A	N/A	PRESENT
Hindlimb footsplay (mm)	N/A	N/A	N/A	75
Forelimb grip strength (kg)	N/A	N/A	N/A	0.837
Hindlimb grip strength (kg)	N/A	N/A	N/A	0.267

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Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5F Animal number 110

	Week -1[1]	Week 1	Week 2	Week 3	Week 4
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

(1) Animal excluded from summary data in Week -1

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5F Animal number 110 (continued)

	Week -1[1]	Week 1	Week 2	Week 3	Week 4
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	1	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	HIGH STEPPING	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	SLIGHT	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	PRESENT##	ABSENT	ABSENT	PRESENT##
Number of rears	21	16	11	26	26
Number of faecal boli	0	0	0	0	0
Number of urine pools	0	0	1	0	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	NORMAL	N/A	N/A	N/A	N/A
Touch response	NORMAL	N/A	N/A	N/A	N/A
Tail pinch	NORMAL	N/A	N/A	N/A	N/A
Air righting ability	NORMAL	N/A	N/A	N/A	N/A
Pupillary response	NORMAL	N/A	N/A	N/A	N/A
Corneal tactile response	NORMAL	N/A	N/A	N/A	N/A
Auditory response	PRESENT	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	65	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	0.574	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	0.274	N/A	N/A	N/A	N/A

(1) Animal excluded from summary data in Week -1

- raised tail

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5F Animal number 110 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5F Animal number 110 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	HIGH STEPPING	HIGH STEPPING	NORMAL	NORMAL	NORMAL
Gait type severity	MODERATE	SLIGHT	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	PRESENT#	PRESENT##	PRESENT###	PRESENT@
Number of rears	28	17	16	20	12
Number of faecal boli	0	0	0	0	0
Number of urine pools	1	0	0	0	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	N/A	N/A	N/A	N/A	N/A
Touch response	N/A	N/A	N/A	N/A	N/A
Tail pinch	N/A	N/A	N/A	N/A	N/A
Air righting ability	N/A	N/A	N/A	N/A	N/A
Pupillary response	N/A	N/A	N/A	N/A	N/A
Corneal tactile response	N/A	N/A	N/A	N/A	N/A
Auditory response	N/A	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	N/A	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A

\# - animal jumped onto rim of arena on 2 occasions
(for approximately 10 and 35 seconds respectively)
- animal jumped onto rim of arena on 5 occasions (for approximately 10 seconds each time)
- animal jumped out of arena on 6 occasion
(for approximately 25, 10, 10, 10, 10, 10 seconds respectively)
@ - animal jumped onto rim of arena on 8 occasions (for approximately 10 seconds each time)

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Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5F Animal number 110 (continued)

	Week 10	Week 11	Week 12	Week 13
OBSERVATIONS BEFORE REMOVAL FROM CAGE:				
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:				
Ease of removal	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5F Animal number 110 (continued)

	Week 10	Week 11	Week 12	Week 13
OPEN FIELD OBSERVATIONS:				
Latency to first step (secs)	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Other	PRESENT#	PRESENT##	PRESENT###	PRESENT@
Number of rears	9	10	21	8
Number of faecal boli	0	0	0	0
Number of urine pools	0	0	0	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:				
Approach response	N/A	N/A	N/A	NORMAL
Touch response	N/A	N/A	N/A	NORMAL
Tail pinch	N/A	N/A	N/A	NORMAL
Air righting ability	N/A	N/A	N/A	NORMAL
Pupillary response	N/A	N/A	N/A	NORMAL
Corneal tactile response	N/A	N/A	N/A	NORMAL
Auditory response	N/A	N/A	N/A	PRESENT
Hindlimb footsplay (mm)	N/A	N/A	N/A	64
Forelimb grip strength (kg)	N/A	N/A	N/A	0.880
Hindlimb grip strength (kg)	N/A	N/A	N/A	0.341

\# - animal jumped onto rim of arena on 3 occasions
(for approximately 5, 50, 8 seconds respectively)
- animal jumped onto rim of arena on 5 occasions
(for approximately 15, 15, 15, 5, 5 seconds respectively)
- animal jumped onto rim of arena on 11 occasions
@ - animal jumped onto rim of arena on 5 occasions
(for approximately 10, 10, 40, 10, 10 seconds respectively)

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Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5F Animal number 111

	Week -1[1]	Week 1	Week 2	Week 3	Week 4
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

(1) Animal excluded from summary data in Week -1

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5F Animal number 111 (continued)

	Week -1[1]	Week 1	Week 2	Week 3	Week 4
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	1	1	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	PRESENT##
Number of rears	11	11	12	16	12
Number of faecal boli	2	0	0	0	0
Number of urine pools	5	2	2	1	3
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	NORMAL	N/A	N/A	N/A	N/A
Touch response	NORMAL	N/A	N/A	N/A	N/A
Tail pinch	NORMAL	N/A	N/A	N/A	N/A
Air righting ability	NORMAL	N/A	N/A	N/A	N/A
Pupillary response	NORMAL	N/A	N/A	N/A	N/A
Corneal tactile response	NORMAL	N/A	N/A	N/A	N/A
Auditory response	PRESENT	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	68	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	0.495	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	0.239	N/A	N/A	N/A	N/A

(1) Animal excluded from summary data in Week -1

- raised tail

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5F Animal number 111 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5F Animal number 111 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	PRESENT##	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	12	13	18	16	22
Number of faecal boli	0	0	0	0	0
Number of urine pools	8	5	0	3	4
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	N/A	N/A	N/A	N/A	N/A
Touch response	N/A	N/A	N/A	N/A	N/A
Tail pinch	N/A	N/A	N/A	N/A	N/A
Air righting ability	N/A	N/A	N/A	N/A	N/A
Pupillary response	N/A	N/A	N/A	N/A	N/A
Corneal tactile response	N/A	N/A	N/A	N/A	N/A
Auditory response	N/A	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	N/A	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A

- raised tail

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5F Animal number 111 (continued)

	Week 10	Week 11	Week 12	Week 13
OBSERVATIONS BEFORE REMOVAL FROM CAGE:				
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:				
Ease of removal	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5F Animal number 111 (continued)

	Week 10	Week 11	Week 12	Week 13
OPEN FIELD OBSERVATIONS:				
Latency to first step (secs)	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	17	15	17	17
Number of faecal boli	0	0	0	0
Number of urine pools	4	3	2	10
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:				
Approach response	N/A	N/A	N/A	NORMAL
Touch response	N/A	N/A	N/A	NORMAL
Tail pinch	N/A	N/A	N/A	NORMAL
Air righting ability	N/A	N/A	N/A	NORMAL
Pupillary response	N/A	N/A	N/A	NORMAL
Corneal tactile response	N/A	N/A	N/A	NORMAL
Auditory response	N/A	N/A	N/A	PRESENT
Hindlimb footsplay (mm)	N/A	N/A	N/A	66
Forelimb grip strength (kg)	N/A	N/A	N/A	0.821
Hindlimb grip strength (kg)	N/A	N/A	N/A	0.334

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5F Animal number 112

	Week -1	Week 1	Week 2	Week 3	Week 4
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EVASION
Ease of handling	EASY	EASY	EASY	EASY	MODERATE DIFFICULTY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5F Animal number 112 (continued)

	Week -1	Week 1	Week 2	Week 3	Week 4
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	4	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	HYPERACTIVE
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	HIGH STEPPING	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	15	17	22	30	32
Number of faecal boli	0	0	0	0	0
Number of urine pools	0	0	0	0	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	NORMAL	N/A	N/A	N/A	N/A
Touch response	NORMAL	N/A	N/A	N/A	N/A
Tail pinch	NORMAL	N/A	N/A	N/A	N/A
Air righting ability	NORMAL	N/A	N/A	N/A	N/A
Pupillary response	NORMAL	N/A	N/A	N/A	N/A
Corneal tactile response	NORMAL	N/A	N/A	N/A	N/A
Auditory response	PRESENT	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	55	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	0.517	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	0.252	N/A	N/A	N/A	N/A

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5F Animal number 112 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5F Animal number 112 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	32	33	39	28	37
Number of faecal boli	0	0	0	0	0
Number of urine pools	0	0	0	0	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	N/A	N/A	N/A	N/A	N/A
Touch response	N/A	N/A	N/A	N/A	N/A
Tail pinch	N/A	N/A	N/A	N/A	N/A
Air righting ability	N/A	N/A	N/A	N/A	N/A
Pupillary response	N/A	N/A	N/A	N/A	N/A
Corneal tactile response	N/A	N/A	N/A	N/A	N/A
Auditory response	N/A	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	N/A	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A

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Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5F Animal number 112 (continued)

	Week 10	Week 11	Week 12	Week 13
OBSERVATIONS BEFORE REMOVAL FROM CAGE:				
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:				
Ease of removal	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5F Animal number 112 (continued)

	Week 10	Week 11	Week 12	Week 13
OPEN FIELD OBSERVATIONS:				
Latency to first step (secs)	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	35	29	26	8
Number of faecal boli	0	0	0	0
Number of urine pools	0	1	0	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:				
Approach response	N/A	N/A	N/A	NORMAL
Touch response	N/A	N/A	N/A	NORMAL
Tail pinch	N/A	N/A	N/A	NORMAL
Air righting ability	N/A	N/A	N/A	NORMAL
Pupillary response	N/A	N/A	N/A	NORMAL
Corneal tactile response	N/A	N/A	N/A	NORMAL
Auditory response	N/A	N/A	N/A	PRESENT
Hindlimb footsplay (mm)	N/A	N/A	N/A	49
Forelimb grip strength (kg)	N/A	N/A	N/A	0.386
Hindlimb grip strength (kg)	N/A	N/A	N/A	0.231

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Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5F Animal number 113

	Week -1	Week 1	Week 2	Week 3	Week 4
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5F Animal number 113 (continued)

	Week -1	Week 1	Week 2	Week 3	Week 4
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	HYPERACTIVE
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	HIGH STEPPING	NORMAL	HIGH STEPPING	NORMAL
Gait type severity	NORMAL	MODERATE	NORMAL	SLIGHT	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	PRESENT#	ABSENT	ABSENT	PRESENT##
Number of rears	20	18	30	29	45
Number of faecal boli	0	0	0	0	0
Number of urine pools	0	0	5	4	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	NORMAL	N/A	N/A	N/A	N/A
Touch response	NORMAL	N/A	N/A	N/A	N/A
Tail pinch	NORMAL	N/A	N/A	N/A	N/A
Air righting ability	NORMAL	N/A	N/A	N/A	N/A
Pupillary response	NORMAL	N/A	N/A	N/A	N/A
Corneal tactile response	NORMAL	N/A	N/A	N/A	N/A
Auditory response	PRESENT	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	60	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	0.537	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	0.264	N/A	N/A	N/A	N/A

- raised tail
- raised tail, animal jumped from arena on one occasion

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Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5F Animal number 113 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5F Animal number 113 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	HIGH STEPPING	HIGH STEPPING	NORMAL	NORMAL	NORMAL
Gait type severity	SLIGHT	SLIGHT	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	PRESENT#	PRESENT##	PRESENT###	PRESENT@	PRESENT@@
Number of rears	30	13	20	17	17
Number of faecal boli	0	0	0	0	0
Number of urine pools	0	0	0	0	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	N/A	N/A	N/A	N/A	N/A
Touch response	N/A	N/A	N/A	N/A	N/A
Tail pinch	N/A	N/A	N/A	N/A	N/A
Air righting ability	N/A	N/A	N/A	N/A	N/A
Pupillary response	N/A	N/A	N/A	N/A	N/A
Corneal tactile response	N/A	N/A	N/A	N/A	N/A
Auditory response	N/A	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	N/A	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A

\# - animal jumped onto rim of arena on one occasion for approximately 25 seconds
- animal jumped onto rim of arena on 2 occasions
(for approximately minute and 2 seconds respectively)
- animal jumped onto rim of arena on 3 occasions
(for approximately 20 seconds each time - jumped onto the floor on 2nd occasion)
@ - animal jumped onto rim of arena on 4 occasions (
for approximately 25, 5, 25, 25 seconds respectively)
@@ - animal jumped onto rim of arena on 4 occasions
(for approximately 10, 10, 10, 30 seconds respectively

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5F Animal number 113 (continued)

	Week 10	Week 11	Week 12	Week 13
OBSERVATIONS BEFORE REMOVAL FROM CAGE:				
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:				
Ease of removal	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5F Animal number 113 (continued)

	Week 10	Week 11	Week 12	Week 13
OPEN FIELD OBSERVATIONS:				
Latency to first step (secs)	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Other	PRESENT#	PRESENT##	PRESENT###	PRESENT@
Number of rears	8	8	19	4
Number of faecal boli	0	0	0	0
Number of urine pools	0	0	0	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:				
Approach response	N/A	N/A	N/A	NORMAL
Touch response	N/A	N/A	N/A	NORMAL
Tail pinch	N/A	N/A	N/A	NORMAL
Air righting ability	N/A	N/A	N/A	NORMAL
Pupillary response	N/A	N/A	N/A	NORMAL
Corneal tactile response	N/A	N/A	N/A	NORMAL
Auditory response	N/A	N/A	N/A	PRESENT
Hindlimb footsplay (mm)	N/A	N/A	N/A	63
Forelimb grip strength (kg)	N/A	N/A	N/A	1.015
Hindlimb grip strength (kg)	N/A	N/A	N/A	0.373

\# - animal jumped onto rim of arena on one occasion for approximately 1 minute 43 seconds
- animal jumped onto rim of arena on one occasion for approximately 1 minute 30 seconds
- animal jumped onto rim of arena on 17 occasions
@ - animal jumped onto rim of arena on one occasion for approximately 1 minute 40 seconds

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5F Animal number 114

	Week -1	Week 1	Week 2	Week 3	Week 4
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5F Animal number 114 (continued)

	Week -1	Week 1	Week 2	Week 3	Week 4
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	HYPERACTIVE	NORMAL	HYPERACTIVE	HYPERACTIVE	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	HIGH STEPPING	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	SLIGHT	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	PRESENT##
Number of rears	27	12	45	24	23
Number of faecal boli	0	0	0	0	0
Number of urine pools	9	0	5	0	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	NORMAL	N/A	N/A	N/A	N/A
Touch response	NORMAL	N/A	N/A	N/A	N/A
Tail pinch	NORMAL	N/A	N/A	N/A	N/A
Air righting ability	NORMAL	N/A	N/A	N/A	N/A
Pupillary response	NORMAL	N/A	N/A	N/A	N/A
Corneal tactile response	NORMAL	N/A	N/A	N/A	N/A
Auditory response	PRESENT	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	60	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	0.472	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	0.278	N/A	N/A	N/A	N/A

- raised tail

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Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5F Animal number 114 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5F Animal number 114 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	HYPERACTIVE
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	HIGH STEPPING	HIGH STEPPING	NORMAL	NORMAL	NORMAL
Gait type severity	SLIGHT	SLIGHT	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	28	26	28	24	35
Number of faecal boli	0	0	0	0	0
Number of urine pools	0	0	0	4	1
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	N/A	N/A	N/A	N/A	N/A
Touch response	N/A	N/A	N/A	N/A	N/A
Tail pinch	N/A	N/A	N/A	N/A	N/A
Air righting ability	N/A	N/A	N/A	N/A	N/A
Pupillary response	N/A	N/A	N/A	N/A	N/A
Corneal tactile response	N/A	N/A	N/A	N/A	N/A
Auditory response	N/A	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	N/A	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5F Animal number 114 (continued)

	Week 10	Week 11	Week 12	Week 13
OBSERVATIONS BEFORE REMOVAL FROM CAGE:				
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:				
Ease of removal	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5F Animal number 114 (continued)

	Week 10	Week 11	Week 12	Week 13
OPEN FIELD OBSERVATIONS:				
Latency to first step (secs)	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	HIGH STEPPING
Gait type severity	NORMAL	NORMAL	NORMAL	SLIGHT
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	19	22	26	21
Number of faecal boli	0	0	0	0
Number of urine pools	0	6	0	1
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:				
Approach response	N/A	N/A	N/A	NORMAL
Touch response	N/A	N/A	N/A	NORMAL
Tail pinch	N/A	N/A	N/A	NORMAL
Air righting ability	N/A	N/A	N/A	NORMAL
Pupillary response	N/A	N/A	N/A	NORMAL
Corneal tactile response	N/A	N/A	N/A	NORMAL
Auditory response	N/A	N/A	N/A	PRESENT
Hindlimb footsplay (mm)	N/A	N/A	N/A	53
Forelimb grip strength (kg)	N/A	N/A	N/A	0.896
Hindlimb grip strength (kg)	N/A	N/A	N/A	0.414

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5F Animal number 115

	Week -1	Week 1	Week 2	Week 3	Week 4
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5F Animal number 115 (continued)

	Week -1	Week 1	Week 2	Week 3	Week 4
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	PRESENT##
Number of rears	17	21	23	22	22
Number of faecal boli	0	0	0	0	0
Number of urine pools	0	0	0	0	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	NORMAL	N/A	N/A	N/A	N/A
Touch response	NORMAL	N/A	N/A	N/A	N/A
Tail pinch	NORMAL	N/A	N/A	N/A	N/A
Air righting ability	NORMAL	N/A	N/A	N/A	N/A
Pupillary response	NORMAL	N/A	N/A	N/A	N/A
Corneal tactile response	NORMAL	N/A	N/A	N/A	N/A
Auditory response	PRESENT	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	60	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	0.535	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	0.377	N/A	N/A	N/A	N/A

- raised tail

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5F Animal number 115 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

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Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5F Animal number 115 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	HIGH STEPPING	HIGH STEPPING	HIGH STEPPING	HIGH STEPPING	HIGH STEPPING
Gait type severity	SLIGHT	SLIGHT	SLIGHT	SLIGHT	SLIGHT
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	24	31	24	27	35
Number of faecal boli	0	0	0	0	0
Number of urine pools	0	0	0	0	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	N/A	N/A	N/A	N/A	N/A
Touch response	N/A	N/A	N/A	N/A	N/A
Tail pinch	N/A	N/A	N/A	N/A	N/A
Air righting ability	N/A	N/A	N/A	N/A	N/A
Pupillary response	N/A	N/A	N/A	N/A	N/A
Corneal tactile response	N/A	N/A	N/A	N/A	N/A
Auditory response	N/A	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	N/A	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5F Animal number 115 (continued)

	Week 10	Week 11	Week 12	Week 13
OBSERVATIONS BEFORE REMOVAL FROM CAGE:				
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:				
Ease of removal	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5F Animal number 115 (continued)

	Week 10	Week 11	Week 12	Week 13
OPEN FIELD OBSERVATIONS:				
Latency to first step (secs)	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	HIGH STEPPING	NORMAL	HIGH STEPPING
Gait type severity	NORMAL	SLIGHT	NORMAL	SLIGHT
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	30	27	32	23
Number of faecal boli	0	0	0	0
Number of urine pools	0	0	0	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:				
Approach response	N/A	N/A	N/A	NORMAL
Touch response	N/A	N/A	N/A	NORMAL
Tail pinch	N/A	N/A	N/A	NORMAL
Air righting ability	N/A	N/A	N/A	NORMAL
Pupillary response	N/A	N/A	N/A	NORMAL
Corneal tactile response	N/A	N/A	N/A	NORMAL
Auditory response	N/A	N/A	N/A	PRESENT
Hindlimb footsplay (mm)	N/A	N/A	N/A	53
Forelimb grip strength (kg)	N/A	N/A	N/A	0.891
Hindlimb grip strength (kg)	N/A	N/A	N/A	0.352

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5F Animal number 116

	Week -1	Week 1	Week 2	Week 3	Week 4
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5F Animal number 116 (continued)

	Week -1	Week 1	Week 2	Week 3	Week 4
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	1	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	HIGH STEPPING	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	SLIGHT	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	PRESENT##
Number of rears	20	18	-#	35	24
Number of faecal boli	0	0	1	0	0
Number of urine pools	6	0	0	0	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	NORMAL	N/A	N/A	N/A	N/A
Touch response	NORMAL	N/A	N/A	N/A	N/A
Tail pinch	NORMAL	N/A	N/A	N/A	N/A
Air righting ability	NORMAL	N/A	N/A	N/A	N/A
Pupillary response	NORMAL	N/A	N/A	N/A	N/A
Corneal tactile response	NORMAL	N/A	N/A	N/A	N/A
Auditory response	PRESENT	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	68	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	0.531	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	0.364	N/A	N/A	N/A	N/A

- omitted in error
- raised tail

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5F Animal number 116 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5F Animal number 116 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	HIGH STEPPING	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	SLIGHT	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	26	19	28	18	34
Number of faecal boli	0	0	0	0	0
Number of urine pools	0	0	0	0	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	N/A	N/A	N/A	N/A	N/A
Touch response	N/A	N/A	N/A	N/A	N/A
Tail pinch	N/A	N/A	N/A	N/A	N/A
Air righting ability	N/A	N/A	N/A	N/A	N/A
Pupillary response	N/A	N/A	N/A	N/A	N/A
Corneal tactile response	N/A	N/A	N/A	N/A	N/A
Auditory response	N/A	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	N/A	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5F Animal number 116 (continued)

	Week 10	Week 11	Week 12	Week 13
OBSERVATIONS BEFORE REMOVAL FROM CAGE:				
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:				
Ease of removal	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5F Animal number 116 (continued)

	Week 10	Week 11	Week 12	Week 13
OPEN FIELD OBSERVATIONS:				
Latency to first step (secs)	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	26	26	28	14
Number of faecal boli	0	0	0	0
Number of urine pools	0	0	0	3
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:				
Approach response	N/A	N/A	N/A	NORMAL
Touch response	N/A	N/A	N/A	NORMAL
Tail pinch	N/A	N/A	N/A	NORMAL
Air righting ability	N/A	N/A	N/A	NORMAL
Pupillary response	N/A	N/A	N/A	NORMAL
Corneal tactile response	N/A	N/A	N/A	NORMAL
Auditory response	N/A	N/A	N/A	PRESENT
Hindlimb footsplay (mm)	N/A	N/A	N/A	75
Forelimb grip strength (kg)	N/A	N/A	N/A	0.699
Hindlimb grip strength (kg)	N/A	N/A	N/A	0.365

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Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5F Animal number 117

	Week -1	Week 1	Week 2	Week 3	Week 4
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5F Animal number 117 (continued)

	Week -1	Week 1	Week 2	Week 3	Week 4
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	1	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	PRESENT##
Number of rears	19	19	14	20	26
Number of faecal boli	0	0	0	0	0
Number of urine pools	1	0	1	3	8
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	NORMAL	N/A	N/A	N/A	N/A
Touch response	NORMAL	N/A	N/A	N/A	N/A
Tail pinch	NORMAL	N/A	N/A	N/A	N/A
Air righting ability	NORMAL	N/A	N/A	N/A	N/A
Pupillary response	NORMAL	N/A	N/A	N/A	N/A
Corneal tactile response	NORMAL	N/A	N/A	N/A	N/A
Auditory response	PRESENT	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	60	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	0.508	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	0.391	N/A	N/A	N/A	N/A

- raised tail

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5F Animal number 117 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5F Animal number 117 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	PRESENT#	PRESENT##
Number of rears	25	20	29	23	10
Number of faecal boli	0	0	0	0	0
Number of urine pools	2	2	4	0	2
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	N/A	N/A	N/A	N/A	N/A
Touch response	N/A	N/A	N/A	N/A	N/A
Tail pinch	N/A	N/A	N/A	N/A	N/A
Air righting ability	N/A	N/A	N/A	N/A	N/A
Pupillary response	N/A	N/A	N/A	N/A	N/A
Corneal tactile response	N/A	N/A	N/A	N/A	N/A
Auditory response	N/A	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	N/A	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A

- animal jumped onto rim of arena on one occasion for 30 seconds
- animal jumped onto rim of arena on 2 occasions
(for approximately 10 seconds and 1 minute 20 seconds respectively)

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5F Animal number 117 (continued)

	Week 10	Week 11	Week 12	Week 13
OBSERVATIONS BEFORE REMOVAL FROM CAGE:				
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:				
Ease of removal	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5F Animal number 117 (continued)

	Week 10	Week 11	Week 12	Week 13
OPEN FIELD OBSERVATIONS:				
Latency to first step (secs)	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Other	PRESENT#	PRESENT##	PRESENT###	PRESENT@
Number of rears	17	11	22	6
Number of faecal boli	0	0	0	0
Number of urine pools	4	0	2	1
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:				
Approach response	N/A	N/A	N/A	NORMAL
Touch response	N/A	N/A	N/A	NORMAL
Tail pinch	N/A	N/A	N/A	NORMAL
Air righting ability	N/A	N/A	N/A	NORMAL
Pupillary response	N/A	N/A	N/A	NORMAL
Corneal tactile response	N/A	N/A	N/A	NORMAL
Auditory response	N/A	N/A	N/A	PRESENT
Hindlimb footsplay (mm)	N/A	N/A	N/A	51
Forelimb grip strength (kg)	N/A	N/A	N/A	1.011
Hindlimb grip strength (kg)	N/A	N/A	N/A	0.314

\# - animal jumped onto rim of arena on one occasion for approximately 30 seconds
- animal jumped onto rim of arena on 2 occasions (for approximately 20 and 45 seconds respectively)
- animal jumped onto rim of arena on one occasion
@ - animal jumped onto rim of arena for approximately 1 minute 20 seconds

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Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5F Animal number 118

	Week -1	Week 1	Week 2	Week 3	Week 4
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5F Animal number 118 (continued)

	Week -1	Week 1	Week 2	Week 3	Week 4
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	HYPERACTIVE
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	HIGH STEPPING	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	SLIGHT	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	25	21	27	31	26
Number of faecal boli	0	0	0	0	0
Number of urine pools	0	0	0	0	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	NORMAL	N/A	N/A	N/A	N/A
Touch response	NORMAL	N/A	N/A	N/A	N/A
Tail pinch	NORMAL	N/A	N/A	N/A	N/A
Air righting ability	NORMAL	N/A	N/A	N/A	N/A
Pupillary response	NORMAL	N/A	N/A	N/A	N/A
Corneal tactile response	NORMAL	N/A	N/A	N/A	N/A
Auditory response	PRESENT	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	63	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	0.479	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	0.271	N/A	N/A	N/A	N/A

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5F Animal number 118 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5F Animal number 118 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	HYPERACTIVE	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	HIGH STEPPING	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	SLIGHT	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	32	24	30	24	29
Number of faecal boli	0	0	0	0	0
Number of urine pools	0	0	0	1	2
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	N/A	N/A	N/A	N/A	N/A
Touch response	N/A	N/A	N/A	N/A	N/A
Tail pinch	N/A	N/A	N/A	N/A	N/A
Air righting ability	N/A	N/A	N/A	N/A	N/A
Pupillary response	N/A	N/A	N/A	N/A	N/A
Corneal tactile response	N/A	N/A	N/A	N/A	N/A
Auditory response	N/A	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	N/A	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5F Animal number 118 (continued)

	Week 10	Week 11	Week 12	Week 13
OBSERVATIONS BEFORE REMOVAL FROM CAGE:				
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:				
Ease of removal	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5F Animal number 118 (continued)

	Week 10	Week 11	Week 12	Week 13
OPEN FIELD OBSERVATIONS:				
Latency to first step (secs)	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	30	24	29	17
Number of faecal boli	0	0	0	0
Number of urine pools	0	0	2	5
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:				
Approach response	N/A	N/A	N/A	NORMAL
Touch response	N/A	N/A	N/A	NORMAL
Tail pinch	N/A	N/A	N/A	NORMAL
Air righting ability	N/A	N/A	N/A	NORMAL
Pupillary response	N/A	N/A	N/A	NORMAL
Corneal tactile response	N/A	N/A	N/A	NORMAL
Auditory response	N/A	N/A	N/A	PRESENT
Hindlimb footsplay (mm)	N/A	N/A	N/A	69
Forelimb grip strength (kg)	N/A	N/A	N/A	0.980
Hindlimb grip strength (kg)	N/A	N/A	N/A	0.305

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5F Animal number 119

	Week -1	Week 1	Week 2[1]	Week 3	Week 4
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

(1) Animal excluded from summary data in Week 2

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5F Animal number 119 (continued)

	Week -1	Week 1	Week 2[1]	Week 3	Week 4
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	HIGH STEPPING	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	SLIGHT	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	14	14	24	11	17
Number of faecal boli	0	0	0	0	0
Number of urine pools	0	0	0	0	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	NORMAL	N/A	N/A	N/A	N/A
Touch response	NORMAL	N/A	N/A	N/A	N/A
Tail pinch	NORMAL	N/A	N/A	N/A	N/A
Air righting ability	NORMAL	N/A	N/A	N/A	N/A
Pupillary response	NORMAL	N/A	N/A	N/A	N/A
Corneal tactile response	NORMAL	N/A	N/A	N/A	N/A
Auditory response	PRESENT	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	55	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	0.557	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	0.268	N/A	N/A	N/A	N/A

(1) Animal excluded from summary data in Week 2

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5F Animal number 119 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5F Animal number 119 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	HIGH STEPPING	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	SLIGHT	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	29	17	28	17	17
Number of faecal boli	0	0	0	0	0
Number of urine pools	0	0	0	1	1
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	N/A	N/A	N/A	N/A	N/A
Touch response	N/A	N/A	N/A	N/A	N/A
Tail pinch	N/A	N/A	N/A	N/A	N/A
Air righting ability	N/A	N/A	N/A	N/A	N/A
Pupillary response	N/A	N/A	N/A	N/A	N/A
Corneal tactile response	N/A	N/A	N/A	N/A	N/A
Auditory response	N/A	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	N/A	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5F Animal number 119 (continued)

	Week 10	Week 11	Week 12	Week 13
OBSERVATIONS BEFORE REMOVAL FROM CAGE:				
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:				
Ease of removal	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5F Animal number 119 (continued)

	Week 10	Week 11	Week 12	Week 13
OPEN FIELD OBSERVATIONS:				
Latency to first step (secs)	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	21	15	18	19
Number of faecal boli	0	0	0	0
Number of urine pools	0	0	0	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:				
Approach response	N/A	N/A	N/A	NORMAL
Touch response	N/A	N/A	N/A	NORMAL
Tail pinch	N/A	N/A	N/A	NORMAL
Air righting ability	N/A	N/A	N/A	NORMAL
Pupillary response	N/A	N/A	N/A	NORMAL
Corneal tactile response	N/A	N/A	N/A	NORMAL
Auditory response	N/A	N/A	N/A	PRESENT
Hindlimb footsplay (mm)	N/A	N/A	N/A	69
Forelimb grip strength (kg)	N/A	N/A	N/A	0.743
Hindlimb grip strength (kg)	N/A	N/A	N/A	0.207

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5F Animal number 120

	Week -1	Week 1	Week 2	Week 3	Week 4
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5F Animal number 120 (continued)

	Week -1	Week 1	Week 2	Week 3	Week 4
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	HYPERACTIVE
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	PRESENT##
Number of rears	19	21	22	24	29
Number of faecal boli	0	0	0	0	0
Number of urine pools	0	0	0	0	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	NORMAL	N/A	N/A	N/A	N/A
Touch response	NORMAL	N/A	N/A	N/A	N/A
Tail pinch	NORMAL	N/A	N/A	N/A	N/A
Air righting ability	NORMAL	N/A	N/A	N/A	N/A
Pupillary response	NORMAL	N/A	N/A	N/A	N/A
Corneal tactile response	NORMAL	N/A	N/A	N/A	N/A
Auditory response	PRESENT	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	70	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	0.550	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	0.351	N/A	N/A	N/A	N/A

- raised tail

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5F Animal number 120 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OBSERVATIONS BEFORE REMOVAL FROM CAGE:					
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:					
Ease of removal	EASY	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE	NONE

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Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5F Animal number 120 (continued)

	Week 5	Week 6	Week 7	Week 8	Week 9
OPEN FIELD OBSERVATIONS:					
Latency to first step (secs)	0	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	HIGH STEPPING	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	SLIGHT	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE	NONE
Other	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Number of rears	26	24	31	23	30
Number of faecal boli	0	0	0	0	0
Number of urine pools	0	0	0	2	9
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:					
Approach response	N/A	N/A	N/A	N/A	N/A
Touch response	N/A	N/A	N/A	N/A	N/A
Tail pinch	N/A	N/A	N/A	N/A	N/A
Air righting ability	N/A	N/A	N/A	N/A	N/A
Pupillary response	N/A	N/A	N/A	N/A	N/A
Corneal tactile response	N/A	N/A	N/A	N/A	N/A
Auditory response	N/A	N/A	N/A	N/A	N/A
Hindlimb footsplay (mm)	N/A	N/A	N/A	N/A	N/A
Forelimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A
Hindlimb grip strength (kg)	N/A	N/A	N/A	N/A	N/A

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5F Animal number 120 (continued)

	Week 10	Week 11	Week 12	Week 13
OBSERVATIONS BEFORE REMOVAL FROM CAGE:				
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Activity	NORMAL	NORMAL	NORMAL	NORMAL
Gait	NORMAL	NORMAL	NORMAL	NORMAL
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	ABSENT	ABSENT	ABSENT	ABSENT
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Arousal upon opening cage	NORMAL	NORMAL	NORMAL	NORMAL
OBSERVATIONS ON REMOVAL FROM CAGE:				
Ease of removal	EASY	EASY	EASY	EASY
Ease of handling	EASY	EASY	EASY	EASY
Excessive vocalisation	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Palpebral closure	NORMAL	NORMAL	NORMAL	NORMAL
Exophthalmus	ABSENT	ABSENT	ABSENT	ABSENT
Lacrimation	NONE	NONE	NONE	NONE
Lacrimation type	NONE	NONE	NONE	NONE
Salivation	NONE	NONE	NONE	NONE
Respiration	NORMAL	NORMAL	NORMAL	NORMAL
Piloerection	ABSENT	ABSENT	ABSENT	ABSENT
Appearance of fur	NORMAL	NORMAL	NORMAL	NORMAL
Other	NONE	NONE	NONE	NONE

Appendix 13
Individual functional observation battery data

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group 5F Animal number 120 (continued)

	Week 10	Week 11	Week 12	Week 13
OPEN FIELD OBSERVATIONS:				
Latency to first step (secs)	0	0	0	0
Posture	NORMAL	NORMAL	NORMAL	NORMAL
Arousal	NORMAL	NORMAL	NORMAL	NORMAL
Circling	ABSENT	ABSENT	ABSENT	ABSENT
Gait type	NORMAL	NORMAL	NORMAL	NORMAL
Gait type severity	NORMAL	NORMAL	NORMAL	NORMAL
Stereotypy	ABSENT	ABSENT	ABSENT	ABSENT
Tremor	ABSENT	ABSENT	ABSENT	ABSENT
Convulsion	NONE	NONE	NONE	NONE
Other	PRESENT##	ABSENT	ABSENT	ABSENT
Number of rears	16	29	26	15
Number of faecal boli	0	0	0	0
Number of urine pools	7	2	6	0
Diarrhoea	ABSENT	ABSENT	ABSENT	ABSENT
Polyuria	ABSENT	ABSENT	ABSENT	ABSENT
OPEN FIELD TESTS:				
Approach response	N/A	N/A	N/A	NORMAL
Touch response	N/A	N/A	N/A	NORMAL
Tail pinch	N/A	N/A	N/A	NORMAL
Air righting ability	N/A	N/A	N/A	NORMAL
Pupillary response	N/A	N/A	N/A	NORMAL
Corneal tactile response	N/A	N/A	N/A	NORMAL
Auditory response	N/A	N/A	N/A	PRESENT
Hindlimb footsplay (mm)	N/A	N/A	N/A	86
Forelimb grip strength (kg)	N/A	N/A	N/A	0.628
Hindlimb grip strength (kg)	N/A	N/A	N/A	0.407

- animal jumped onto rim of arena on one occasion for approximately 30 seconds

Appendix 14
Individual locomotor activity data

AMB =	Ambulation - number of occasions 2 light beams or more broken within one second
TOT =	Total movement - Total number of occasions a light beam was broken in the interval
m =	Minutes

Appendix 14
Occasion: Week -1

Test Article	Control	[		]	
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group/ Sex	Animal Number	AMB01 0-2m	AMB02 2-4m	AMB03 4-6m	AMB04 6-8m
1M	1	2	10	9	4
1M	2	15	10	10	10
1M	3	12	9	7	8
1M	4	23	19	6	8
1M	5	1	10	6	0
1M	6	15	12	11	8
1M	7	25	19	22	24
1M	8	15	14	11	2
1M	9	15	8	4	2
1M	10	9	9	18	15
1M	11	21	16	18	7
1M	12	10	9	2	9
1M	13	14	12	18	2
1M	14	30	11	18	20
1M	15	16	25	12	8
2M	16	9	8	9	11
2M	17	13	17	12	9
2M	18	26	19	18	10
2M	19	34	21	24	11
2M	20	20	7	4	5
2M	21	25	12	20	33
2M	22	13	11	5	12
2M	23	21	15	13	7
2M	24	13	11	19	6
2M	25	13	16	11	4
3M	26	17	8	11	9
3M	27	24	8	5	6
3M	28	13	6	9	15
3M	29	14	11	12	15
3M	30	17	10	10	8
3M	31	14	5	13	13
3M	32	15	6	10	11
3M	33	9	8	12	4
3M	34	33	31	21	13
3M	35	5	12	12	14

Appendix 14
Individual locomotor activity data
Occasion: Week -1

Test Article	Control	[	]		
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group/ Sex	Animal Number	AMB01 0-2m	AMB02 2-4m	AMB03 4-6m	AMB04 6-8m
4M	36	21	13	7	10
4M	37	15	8	6	8
4M	38	16	14	7	6
4M	39	28	24	18	13
4M	40	17	10	2	14
4M	41	15	7	14	6
4M	42	8	6	12	8
4M	43	10	0	10	8
4M	44	10	12	6	6
4M	45	10	7	10	7
5M	46	9	28	4	10
5M	47	33	10	12	13
5M	48	25	14	18	21
5M	49	18	13	18	4
5M	50	19	8	10	7
5M	51	18	6	16	9
5M	52	21	11	9	6
5M	53	21	15	8	8
5M	54	19	8	10	14
5M	55	8	10	12	5
5M	56	15	16	9	8
5M	57	13	16	10	10
5M	58	15	7	5	11
5M	59	17	13	5	11
5M	60	13	15	6	11

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Appendix 14
Individual locomotor activity data
Occasion: Week -1

Test Article	Control	[	]		
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group/ Sex	Animal Number	AMB01 0-2m	AMB02 2-4m	AMB03 4-6m	AMB04 6-8m
1F	61	4	6	12	3
1F	62	13	22	13	1
1F	63	9	5	6	7
1F	64	14	12	7	8
1F	65	7	11	14	9
1F	66	16	12	12	11
1F	67	8	11	2	0
1F	68	27	6	12	0
1F	69	13	9	5	8
1F	70	16	5	6	2
1F	71	16	9	5	10
1F	72	15	7	10	1
1F	73	12	7	10	2
1F	74	12	13	10	9
1F	75	21	14	11	18
2F	76	6	8	5	7
2F	77	11	10	5	9
2F	78	12	9	10	0
2F	79	15	6	14	9
2F	80	7	5	2	6
2F	81	10	14	6	8
2F	82	15	10	5	4
2F	83	17	4	7	6
2F	84	13	11	3	11
2F	85	9	12	8	9
3F	86	4	0	11	7
3F	87	14	4	7	1
3F	88	14	11	11	7
3F	89	18	17	17	9
3F	90	15	6	12	8
3F	91	14	15	11	3
3F	92	8	9	6	2
3F	93	13	31	12	12
3F	94	13	17	10	2
3F	95	20	12	7	8

Appendix 14
Individual locomotor activity data
Occasion: Week -1

Test Article	Control		[	]	
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group/ Sex	Animal Number	AMB01 0-2m	AMB02 2-4m	AMB03 4-6m	AMB04 6-8m
4F	96	12	16	4	9
4F	97	16	6	8	11
4F	98	17	8	1	6
4F	99	19	12	9	12
4F	100	6	5	6	0
4F	101	9	3	6	2
4F	102	11	6	8	1
4F	103	11	10	2	4
4F	104	15	5	9	5
4F	105	16	14	13	13
5F	106	11	12	4	6
5F	107	2	0	5	0
5F	108	11	0	8	0
5F	109	8	14	13	8
5F	110	10	7	19	8
5F	111	13	15	7	7
5F	112	16	10	8	6
5F	113	13	13	12	4
5F	114	10	10	13	8
5F	115	13	11	13	8
5F	116	19	12	11	11
5F	117	13	6	9	6
5F	118	23	16	13	11
5F	119	17	13	14	4
5F	120	22	23	15	10

Appendix 14
Individual locomotor activity data
Occasion: Week -1

Test Article	Control		[	]	
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group/ Sex	Animal Number	AMB05 8-10m	AMB06 10-12m	AMB07 12-14m	AMB08 14-16m
1M	1	8	7	4	7
1M	2	10	16	3	21
1M	3	3	4	3	4
1M	4	14	8	13	15
1M	5	4	10	6	7
1M	6	10	9	9	8
1M	7	12	15	2	10
1M	8	0	2	0	8
1M	9	4	0	0	0
1M	10	1	11	7	11
1M	11	17	0	6	26
1M	12	10	4	4	12
1M	13	9	3	4	0
1M	14	4	8	6	16
1M	15	24	6	2	2
2M	16	3	4	5	4
2M	17	3	14	13	7
2M	18	25	18	6	20
2M	19	12	8	16	19
2M	20	1	7	0	14
2M	21	14	8	12	12
2M	22	8	1	5	10
2M	23	3	6	13	7
2M	24	11	5	12	11
2M	25	2	4	6	7
3M	26	16	5	10	1
3M	27	9	9	7	8
3M	28	18	10	7	8
3M	29	17	5	14	4
3M	30	8	9	11	9
3M	31	9	2	10	13
3M	32	8	5	8	4
3M	33	0	5	0	0
3M	34	21	19	14	12
3M	35	6	6	1	12

Appendix 14
Individual locomotor activity data
Occasion: Week -1

Test Article	Control	[	]		
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group/ Sex	Animal Number	AMB05 8-10m	AMB06 10-12m	AMB07 12-14m	AMB08 14-16m
4M	36	10	9	9	7
4M	37	13	9	7	8
4M	38	9	5	5	4
4M	39	7	11	12	6
4M	40	7	4	4	8
4M	41	4	4	4	10
4M	42	10	7	4	8
4M	43	3	0	0	0
4M	44	11	1	0	7
4M	45	5	9	12	2
5M	46	20	6	8	11
5M	47	11	17	0	7
5M	48	11	4	12	1
5M	49	7	7	11	6
5M	50	15	6	1	0
5M	51	10	8	0	0
5M	52	0	3	8	10
5M	53	12	2	8	9
5M	54	10	7	12	4
5M	55	7	10	7	10
5M	56	5	11	9	6
5M	57	5	7	12	0
5M	58	4	3	3	5
5M	59	13	7	7	7
5M	60	11	11	19	13

Appendix 14
Individual locomotor activity data
Occasion: Week -1

Test Article	Control	[	]		
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group/ Sex	Animal Number	AMB05 8-10m	AMB06 10-12m	AMB07 12-14m	AMB08 14-16m
1F	61	6	3	2	6
1F	62	14	0	4	2
1F	63	5	8	2	4
1F	64	13	13	11	6
1F	65	18	14	6	8
1F	66	15	3	8	4
1F	67	2	2	3	4
1F	68	20	6	8	0
1F	69	12	6	5	7
1F	70	6	6	8	2
1F	71	10	2	11	6
1F	72	9	4	8	3
1F	73	9	0	7	7
1F	74	14	10	9	9
1F	75	12	12	0	6
2F	76	6	6	9	5
2F	77	5	10	2	1
2F	78	4	0	0	0
2F	79	14	7	2	8
2F	80	6	1	0	2
2F	81	4	2	2	12
2F	82	1	1	0	6
2F	83	6	13	8	2
2F	84	6	5	2	1
2F	85	11	10	7	4
3F	86	5	2	4	0
3F	87	3	5	2	0
3F	88	10	7	4	4
3F	89	7	7	12	8
3F	90	7	5	9	3
3F	91	0	4	0	0
3F	92	6	6	6	8
3F	93	8	13	18	10
3F	94	6	0	8	4
3F	95	8	4	15	4

Appendix 14
Individual locomotor activity data
Occasion: Week -1

Test Article	Control		[	]	
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group/ Sex	Animal Number	AMB05 8-10m	AMB06 10-12m	AMB07 12-14m	AMB08 14-16m
4F	96	0	9	6	7
4F	97	10	6	8	6
4F	98	8	4	1	7
4F	99	10	6	6	8
4F	100	3	9	0	0
4F	101	7	5	1	4
4F	102	6	7	1	1
4F	103	9	12	6	9
4F	104	3	7	5	4
4F	105	18	3	11	2
5F	106	4	8	6	0
5F	107	0	1	4	0
5F	108	0	2	18	2
5F	109	5	3	8	3
5F	110	11	12	0	2
5F	111	10	4	4	7
5F	112	0	2	2	12
5F	113	11	4	4	3
5F	114	6	2	0	4
5F	115	9	10	7	9
5F	116	7	4	7	9
5F	117	8	10	10	0
5F	118	7	1	11	24
5F	119	15	2	10	8
5F	120	12	12	4	10

Appendix 14
Individual locomotor activity data
Occasion: Week -1

Test Article	Control		[	]	
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group/ Sex	Animal Number	AMB09 16-18m	AMB10 18-20m	AMB11 20-22m	AMB12 22-24m
1M	1	0	6	0	3
1M	2	10	14	7	1
1M	3	6	2	10	0
1M	4	9	10	4	4
1M	5	2	2	0	0
1M	6	6	8	11	11
1M	7	15	21	20	11
1M	8	15	16	18	12
1M	9	0	0	0	0
1M	10	9	4	3	10
1M	11	18	11	16	5
1M	12	0	2	6	3
1M	13	8	8	1	10
1M	14	13	4	5	6
1M	15	12	4	0	4
2M	16	7	1	0	0
2M	17	10	10	3	0
2M	18	4	18	0	0
2M	19	7	11	17	14
2M	20	10	4	2	0
2M	21	13	7	15	16
2M	22	7	8	4	2
2M	23	13	8	8	4
2M	24	10	9	12	10
2M	25	19	12	4	4
3M	26	10	10	0	0
3M	27	8	7	9	0
3M	28	8	9	8	5
3M	29	10	11	12	5
3M	30	9	12	14	0
3M	31	9	5	5	9
3M	32	4	4	2	6
3M	33	0	5	5	6
3M	34	19	17	15	8
3M	35	2	13	4	1

Appendix 14
Individual locomotor activity data
Occasion: Week -1

Test Article	Control		[	]	
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group/ Sex	Animal Number	AMB09 16-18m	AMB10 18-20m	AMB11 20-22m	AMB12 22-24m
4M	36	5	4	0	0
4M	37	3	14	1	0
4M	38	6	4	6	4
4M	39	0	0	0	4
4M	40	7	0	7	4
4M	41	3	9	10	14
4M	42	2	10	6	1
4M	43	0	11	11	0
4M	44	0	0	0	0
4M	45	7	6	20	9
5M	46	18	11	0	8
5M	47	13	16	9	8
5M	48	4	7	2	0
5M	49	0	9	8	9
5M	50	5	9	7	7
5M	51	0	6	8	0
5M	52	0	0	6	7
5M	53	4	6	7	0
5M	54	7	10	4	9
5M	55	4	10	2	11
5M	56	11	11	2	1
5M	57	14	4	1	9
5M	58	8	3	4	2
5M	59	8	12	13	4
5M	60	20	9	7	10

Appendix 14
Individual locomotor activity data
Occasion: Week -1

Test Article	Control		[	]	
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group/ Sex	Animal Number	AMB09 16-18m	AMB10 18-20m	AMB11 20-22m	AMB12 22-24m
1F	61	4	2	3	6
1F	62	12	4	10	1
1F	63	8	2	6	1
1F	64	3	6	1	4
1F	65	14	14	1	11
1F	66	6	9	2	5
1F	67	0	0	0	0
1F	68	13	13	7	2
1F	69	3	7	1	5
1F	70	0	0	0	2
1F	71	4	0	4	6
1F	72	0	4	2	4
1F	73	0	2	4	4
1F	74	10	11	12	2
1F	75	0	4	17	1
2F	76	6	7	6	9
2F	77	8	3	3	0
2F	78	3	8	2	4
2F	79	11	6	3	6
2F	80	2	8	1	0
2F	81	7	8	4	9
2F	82	6	0	0	0
2F	83	0	0	0	0
2F	84	5	0	10	3
2F	85	8	5	2	4
3F	86	0	0	0	0
3F	87	0	0	0	0
3F	88	4	4	1	7
3F	89	9	6	4	4
3F	90	6	6	3	0
3F	91	4	4	0	0
3F	92	5	2	2	0
3F	93	10	17	0	9
3F	94	4	10	8	6
3F	95	0	0	6	1

Appendix 14
Individual locomotor activity data
Occasion: Week -1

Test Article	Control		[	]	
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group/ Sex	Animal Number	AMB09 16-18m	AMB10 18-20m	AMB11 20-22m	AMB12 22-24m
4F	96	6	0	16	4
4F	97	4	2	8	5
4F	98	6	9	3	2
4F	99	4	1	11	6
4F	100	0	0	0	0
4F	101	4	3	3	0
4F	102	4	7	7	5
4F	103	4	6	1	3
4F	104	0	4	3	4
4F	105	7	8	13	8
5F	106	0	0	0	4
5F	107	0	0	0	0
5F	108	0	0	0	14
5F	109	3	0	0	10
5F	110	15	9	3	5
5F	111	4	0	0	0
5F	112	4	0	0	0
5F	113	6	2	0	0
5F	114	16	10	9	7
5F	115	5	6	12	0
5F	116	6	7	5	12
5F	117	0	0	0	0
5F	118	15	10	13	20
5F	119	0	8	11	0
5F	120	16	0	13	5

Appendix 14
Individual locomotor activity data
Occasion: Week -1

Test Article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group/ Sex	Animal Number	AMB13 24-26m	AMB14 26-28m	AMB15 28-30m	AMB TOTAL
1M	1	4	3	0	67
1M	2	2	4	5	138
1M	3	0	3	4	75
1M	4	0	8	0	141
1M	5	0	0	0	48
1M	6	13	1	17	149
1M	7	13	19	4	232
1M	8	2	5	15	135
1M	9	9	6	4	52
1M	10	10	17	8	142
1M	11	10	6	10	187
1M	12	6	2	0	79
1M	13	5	4	0	98
1M	14	8	8	5	162
1M	15	7	4	0	126
2M	16	3	7	4	75
2M	17	8	2	5	126
2M	18	0	0	6	170
2M	19	25	7	5	231
2M	20	0	0	0	74
2M	21	5	8	2	202
2M	22	14	14	2	116
2M	23	4	4	9	135
2M	24	9	20	4	162
2M	25	2	0	2	106
3M	26	8	5	14	124
3M	27	5	0	3	108
3M	28	6	16	3	141
3M	29	5	5	6	146
3M	30	7	1	0	125
3M	31	0	3	2	112
3M	32	0	4	4	91
3M	33	0	0	0	54
3M	34	22	11	18	274
3M	35	7	3	0	98

Appendix 14
Individual locomotor activity data
Occasion: Week -1

Test Article	Control		[	]	
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group/ Sex	Animal Number	AMB13 24-26m	AMB14 26-28m	AMB15 28-30m	AMB TOTAL
4M	36	3	1	6	105
4M	37	0	0	0	92
4M	38	3	0	7	96
4M	39	10	3	11	147
4M	40	0	0	0	84
4M	41	7	6	17	130
4M	42	7	3	3	95
4M	43	0	4	0	57
4M	44	3	0	0	56
4M	45	6	12	6	128
5M	46	2	7	12	154
5M	47	0	7	7	163
5M	48	2	0	0	121
5M	49	7	4	2	123
5M	50	15	13	0	122
5M	51	0	0	0	81
5M	52	2	4	0	87
5M	53	1	3	1	105
5M	54	10	2	10	136
5M	55	8	14	4	122
5M	56	9	3	11	127
5M	57	4	0	11	116
5M	58	10	6	7	93
5M	59	5	0	0	122
5M	60	11	2	3	161

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Appendix 14
Individual locomotor activity data
Occasion: Week -1

Test Article	Control	[	]		
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group/ Sex	Animal Number	AMB13 24-26m	AMB14 26-28m	AMB15 28-30m	AMB TOTAL
1F	61	3	2	0	62
1F	62	1	4	2	103
1F	63	2	2	1	68
1F	64	0	2	0	100
1F	65	2	0	4	133
1F	66	7	0	0	110
1F	67	0	0	0	32
1F	68	6	8	2	130
1F	69	7	0	0	88
1F	70	3	2	2	60
1F	71	0	1	6	90
1F	72	9	3	4	83
1F	73	0	0	0	64
1F	74	7	9	9	146
1F	75	9	2	0	127
2F	76	2	4	0	86
2F	77	4	2	2	75
2F	78	6	2	0	60
2F	79	5	7	3	116
2F	80	0	0	0	40
2F	81	7	0	3	96
2F	82	0	0	0	48
2F	83	0	0	0	63
2F	84	0	0	2	72
2F	85	6	6	5	106
3F	86	0	0	0	33
3F	87	0	0	0	36
3F	88	1	1	4	90
3F	89	2	9	0	129
3F	90	0	0	0	80
3F	91	0	0	0	55
3F	92	0	4	3	67
3F	93	7	14	10	184
3F	94	9	5	15	117
3F	95	0	0	0	85

Appendix 14
Individual locomotor activity data
Occasion: Week -1

Test Article	Control	[	]		
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group/ Sex	Animal Number	AMB13 24-26m	AMB14 26-28m	AMB15 28-30m	AMB TOTAL
4F	96	0	1	5	95
4F	97	8	4	7	109
4F	98	2	7	4	85
4F	99	5	15	12	136
4F	100	0	0	0	29
4F	101	0	0	0	47
4F	102	5	5	8	82
4F	103	4	8	7	96
4F	104	7	3	4	78
4F	105	8	3	1	138
5F	106	4	0	0	59
5F	107	0	0	0	12
5F	108	0	10	6	71
5F	109	5	3	3	86
5F	110	5	8	10	124
5F	111	0	0	0	71
5F	112	0	0	0	60
5F	113	8	2	11	93
5F	114	2	11	6	114
5F	115	0	2	6	111
5F	116	5	0	0	115
5F	117	2	0	4	68
5F	118	19	7	10	200
5F	119	0	7	1	110
5F	120	5	5	4	156

Appendix 14
Individual locomotor activity data
Occasion: Week -1

Test Article	Control		[	]	
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group/ Sex	Animal Number	TOT01 0-2m	TOT02 2-4m	TOT03 4-6m	TOT04 6-8m
1M	1	3	36	30	27
1M	2	56	31	28	32
1M	3	35	34	32	33
1M	4	56	56	16	28
1M	5	1	37	18	1
1M	6	32	38	58	41
1M	7	75	63	67	53
1M	8	31	43	39	4
1M	9	72	40	24	18
1M	10	34	52	54	50
1M	11	59	45	71	48
1M	12	45	33	14	38
1M	13	35	29	42	13
1M	14	64	35	50	52
1M	15	52	62	40	43
2M	16	30	28	41	48
2M	17	59	52	38	22
2M	18	69	50	53	43
2M	19	72	54	53	39
2M	20	65	43	30	27
2M	21	71	42	46	71
2M	22	42	61	45	36
2M	23	52	41	56	18
2M	24	36	51	54	25
2M	25	47	43	38	22
3M	26	47	46	41	49
3M	27	53	27	30	26
3M	28	48	35	31	58
3M	29	46	46	31	42
3M	30	45	37	42	23
3M	31	52	33	49	41
3M	32	48	46	44	38
3M	33	45	31	31	25
3M	34	88	67	58	49
3M	35	22	48	45	34

Appendix 14
Individual locomotor activity data
Occasion: Week -1

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group/ Sex	Animal Number	TOI01 0-2m	TOI02 2-4m	TOI03 4-6m	TOI04 6-8m
4M	36	53	40	27	40
4M	37	51	42	36	39
4M	38	50	42	26	38
4M	39	70	82	49	51
4M	40	58	40	37	39
4M	41	43	42	53	41
4M	42	49	40	43	49
4M	43	37	11	40	38
4M	44	29	47	31	32
4M	45	42	24	36	35
5M	46	37	64	23	37
5M	47	73	37	51	45
5M	48	59	65	52	76
5M	49	48	57	63	27
5M	50	43	37	32	29
5M	51	47	24	51	29
5M	52	57	43	31	29
5M	53	61	39	40	41
5M	54	52	38	40	45
5M	55	44	43	43	18
5M	56	56	56	36	41
5M	57	55	38	35	33
5M	58	39	30	17	44
5M	59	56	42	38	43
5M	60	39	44	30	38

Appendix 14
Individual locomotor activity data
Occasion: Week -1

Test Article	Control	[	]		
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group/ Sex	Animal Number	TOT01 0-2m	TOT02 2-4m	TOT03 4-6m	TOT04 6-8m
1F	61	24	27	41	11
1F	62	70	64	41	15
1F	63	30	30	25	32
1F	64	45	37	26	32
1F	65	21	46	50	35
1F	66	57	46	34	40
1F	67	31	31	20	11
1F	68	63	42	34	7
1F	69	25	33	14	30
1F	70	53	35	29	28
1F	71	40	38	27	44
1F	72	49	42	33	18
1F	73	41	48	44	19
1F	74	42	55	47	35
1F	75	59	55	49	51
2F	76	33	34	26	29
2F	77	56	44	34	52
2F	78	50	41	35	8
2F	79	60	40	42	26
2F	80	33	33	18	23
2F	81	43	43	25	29
2F	82	40	43	39	20
2F	83	61	21	51	22
2F	84	48	39	48	25
2F	85	40	39	34	51
3F	86	23	13	44	25
3F	87	48	26	45	12
3F	88	35	29	40	36
3F	89	52	47	57	47
3F	90	46	23	27	24
3F	91	37	52	34	23
3F	92	41	47	31	24
3F	93	65	73	54	44
3F	94	31	50	37	21
3F	95	58	34	32	33

Appendix 14
Individual locomotor activity data
Occasion: Week -1

Test Article	Control	[	]		
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group/ Sex	Animal Number	TOI01 0-2m	TOI02 2-4m	TOI03 4-6m	TOI04 6-8m
4F	96	38	47	32	30
4F	97	53	32	34	38
4F	98	44	45	28	31
4F	99	66	50	52	60
4F	100	31	37	29	23
4F	101	33	32	26	26
4F	102	44	37	43	8
4F	103	36	29	31	25
4F	104	52	29	50	19
4F	105	67	53	42	40
5F	106	63	54	66	23
5F	107	24	25	22	8
5F	108	29	7	34	3
5F	109	56	43	40	25
5F	110	47	50	39	36
5F	111	37	49	44	24
5F	112	69	23	45	39
5F	113	53	42	58	14
5F	114	42	42	38	18
5F	115	67	46	34	32
5F	116	47	33	40	26
5F	117	46	32	55	20
5F	118	53	35	41	29
5F	119	45	36	42	20
5F	120	56	64	41	46

Appendix 14
Individual locomotor activity data
Occasion: Week -1

Test Article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group/ Sex	Animal Number	TOT05 8-10m	TOT06 10-12m	TOT07 12-14m	TOT08 14-16m
1M	1	26	27	26	17
1M	2	43	52	8	54
1M	3	28	39	79	18
1M	4	44	37	36	40
1M	5	27	35	32	42
1M	6	38	22	42	32
1M	7	41	41	33	37
1M	8	0	10	13	33
1M	9	43	0	0	0
1M	10	44	59	39	42
1M	11	54	14	30	76
1M	12	37	31	9	41
1M	13	25	12	33	16
1M	14	20	33	22	45
1M	15	68	30	25	23
2M	16	28	25	31	14
2M	17	26	35	44	39
2M	18	62	67	35	50
2M	19	31	37	50	59
2M	20	24	42	22	46
2M	21	39	31	39	37
2M	22	38	19	39	33
2M	23	11	26	32	18
2M	24	38	32	43	38
2M	25	20	31	45	30
3M	26	42	23	34	34
3M	27	29	32	35	33
3M	28	56	33	30	29
3M	29	41	32	42	46
3M	30	34	33	30	36
3M	31	29	6	36	43
3M	32	42	37	30	24
3M	33	12	35	5	15
3M	34	61	64	32	37
3M	35	23	34	18	40

Appendix 14
Individual locomotor activity data
Occasion: Week -1

Test Article	Control		[	]	
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group/ Sex	Animal Number	TOI05 8-10m	TOI06 10-12m	TOI07 12-14m	TOI08 14-16m
4M	36	43	36	40	19
4M	37	59	52	41	29
4M	38	37	26	35	36
4M	39	30	36	51	36
4M	40	35	19	48	37
4M	41	40	48	27	46
4M	42	46	23	39	26
4M	43	24	10	0	9
4M	44	39	6	16	42
4M	45	21	40	49	11
5M	46	50	16	33	48
5M	47	37	53	2	23
5M	48	46	31	40	23
5M	49	36	26	58	28
5M	50	35	30	3	0
5M	51	31	20	1	4
5M	52	24	16	23	44
5M	53	50	33	35	24
5M	54	31	36	47	22
5M	55	36	49	34	47
5M	56	28	36	27	19
5M	57	34	29	40	9
5M	58	10	9	15	14
5M	59	36	19	31	37
5M	60	41	49	56	37

Appendix 14
Individual locomotor activity data
Occasion: Week -1

Test Article	Control		[	]	
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group/ Sex	Animal Number	TOI05 8-10m	TOI06 10-12m	TOI07 12-14m	TOI08 14-16m
1F	61	24	20	51	38
1F	62	41	17	21	20
1F	63	25	18	27	37
1F	64	45	34	36	33
1F	65	64	46	18	30
1F	66	54	21	29	37
1F	67	24	8	21	21
1F	68	41	34	30	15
1F	69	30	14	21	21
1F	70	33	35	33	12
1F	71	44	24	33	26
1F	72	33	26	36	25
1F	73	25	10	37	30
1F	74	51	49	35	41
1F	75	50	34	17	25
2F	76	40	38	32	30
2F	77	23	47	31	16
2F	78	15	0	0	4
2F	79	36	37	8	27
2F	80	35	24	2	11
2F	81	30	12	14	31
2F	82	8	13	3	32
2F	83	35	32	28	12
2F	84	17	33	16	15
2F	85	40	25	47	27
3F	86	42	27	21	5
3F	87	21	26	10	0
3F	88	39	30	24	30
3F	89	28	43	41	30
3F	90	32	33	33	27
3F	91	12	17	13	11
3F	92	33	33	35	30
3F	93	33	54	64	34
3F	94	40	7	29	38
3F	95	35	31	42	25

Appendix 14
Individual locomotor activity data
Occasion: Week -1

Test Article	Control		[	]	
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group/ Sex	Animal Number	TOI05 8-10m	TOI06 10-12m	TOI07 12-14m	TOI08 14-16m
4F	96	23	34	39	51
4F	97	39	39	44	33
4F	98	36	29	11	15
4F	99	55	28	23	35
4F	100	17	26	2	0
4F	101	25	26	11	23
4F	102	22	29	22	15
4F	103	31	43	35	40
4F	104	20	26	32	38
4F	105	49	20	28	23
5F	106	16	31	15	2
5F	107	0	13	25	0
5F	108	0	7	58	18
5F	109	33	29	40	26
5F	110	35	40	8	11
5F	111	49	18	22	42
5F	112	13	21	19	46
5F	113	48	34	26	18
5F	114	29	23	8	13
5F	115	31	33	19	37
5F	116	43	26	27	36
5F	117	35	59	45	5
5F	118	21	19	34	54
5F	119	46	14	31	29
5F	120	48	37	28	45

Appendix 14
Individual locomotor activity data
Occasion: Week -1

Test Article	Control		[	]	
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group/ Sex	Animal Number	TOT09 16-18m	TOT10 18-20m	TOT11 20-22m	TOT12 22-24m
1M	1	7	25	9	26
1M	2	40	50	25	16
1M	3	26	41	25	0
1M	4	27	29	14	12
1M	5	22	15	0	0
1M	6	14	29	42	37
1M	7	48	69	54	58
1M	8	38	55	41	42
1M	9	0	0	0	0
1M	10	45	30	20	38
1M	11	72	52	59	24
1M	12	10	32	28	15
1M	13	26	21	6	32
1M	14	50	28	18	27
1M	15	35	24	27	29
2M	16	30	14	12	15
2M	17	45	43	11	5
2M	18	14	56	6	0
2M	19	35	39	44	43
2M	20	35	24	24	5
2M	21	64	31	47	55
2M	22	36	41	32	16
2M	23	43	30	40	18
2M	24	37	32	34	37
2M	25	46	42	11	32
3M	26	29	35	12	22
3M	27	35	28	19	9
3M	28	26	50	31	21
3M	29	33	43	42	22
3M	30	27	46	38	18
3M	31	49	21	21	34
3M	32	28	18	28	28
3M	33	12	23	30	29
3M	34	50	65	38	39
3M	35	25	43	26	23

Appendix 14
Individual locomotor activity data
Occasion: Week -1

Test Article	Control	[	]		
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group/ Sex	Animal Number	TOT09 16-18m	TOT10 18-20m	TOT11 20-22m	TOT12 22-24m
4M	36	31	22	72	11
4M	37	23	51	13	10
4M	38	25	32	32	31
4M	39	4	21	3	19
4M	40	37	0	31	33
4M	41	37	41	48	45
4M	42	14	25	33	21
4M	43	6	37	43	8
4M	44	7	0	8	29
4M	45	23	14	59	36
5M	46	49	52	7	19
5M	47	50	46	44	42
5M	48	38	32	23	4
5M	49	18	27	31	39
5M	50	17	21	40	38
5M	51	3	33	29	2
5M	52	11	5	31	21
5M	53	27	38	25	10
5M	54	36	28	23	44
5M	55	34	41	27	47
5M	56	42	27	17	19
5M	57	37	27	23	39
5M	58	24	4	19	28
5M	59	27	35	42	38
5M	60	76	55	41	41

Appendix 14
Individual locomotor activity data
Occasion: Week -1

Test Article	Control		[	]	
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group/ Sex	Animal Number	TOT09 16-18m	TOT10 18-20m	TOT11 20-22m	TOT12 22-24m
1F	61	26	15	34	24
1F	62	44	29	37	4
1F	63	42	25	27	18
1F	64	20	25	29	32
1F	65	55	59	20	47
1F	66	22	41	25	26
1F	67	5	6	5	2
1F	68	22	46	33	3
1F	69	18	23	5	22
1F	70	7	6	2	21
1F	71	26	9	19	23
1F	72	10	45	20	27
1F	73	22	21	22	18
1F	74	36	38	46	23
1F	75	21	28	61	17
2F	76	21	44	29	35
2F	77	35	43	27	9
2F	78	18	33	4	12
2F	79	47	22	28	25
2F	80	16	19	3	0
2F	81	30	23	22	27
2F	82	26	4	6	3
2F	83	12	15	1	1
2F	84	27	13	31	24
2F	85	26	36	16	30
3F	86	0	0	0	0
3F	87	0	0	0	0
3F	88	20	19	11	40
3F	89	22	30	17	15
3F	90	17	27	11	11
3F	91	27	11	0	0
3F	92	31	29	16	1
3F	93	47	64	33	41
3F	94	21	43	33	24
3F	95	26	4	28	18

Appendix 14
Individual locomotor activity data
Occasion: Week -1

Test Article	Control		[	]	
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group/ Sex	Animal Number	TOT09 16-18m	TOT10 18-20m	TOT11 20-22m	TOT12 22-24m
4F	96	29	8	49	33
4F	97	19	16	33	27
4F	98	24	29	19	26
4F	99	30	49	40	24
4F	100	3	0	3	0
4F	101	26	24	16	0
4F	102	25	34	28	22
4F	103	26	25	9	11
4F	104	4	28	31	23
4F	105	34	33	42	27
5F	106	0	0	0	10
5F	107	0	0	0	0
5F	108	0	0	2	37
5F	109	15	0	9	33
5F	110	38	51	27	31
5F	111	24	1	13	2
5F	112	30	13	7	8
5F	113	28	22	11	8
5F	114	36	29	38	25
5F	115	22	31	44	26
5F	116	28	23	31	34
5F	117	2	0	0	0
5F	118	44	29	49	50
5F	119	15	20	35	11
5F	120	58	18	33	26

Appendix 14
Individual locomotor activity data
Occasion: Week -1

Test Article	Control		[	]	
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group/ Sex	Animal Number	TOT13 24-26m	TOT14 26-28m	TOT15 28-30m	TOT TOTAL
1M	1	26	22	10	317
1M	2	17	29	20	501
1M	3	3	14	29	436
1M	4	0	27	16	438
1M	5	0	0	0	230
1M	6	45	44	46	560
1M	7	50	48	25	762
1M	8	12	34	41	436
1M	9	38	33	20	288
1M	10	49	40	29	625
1M	11	40	25	39	708
1M	12	18	13	0	364
1M	13	29	13	13	345
1M	14	34	23	29	530
1M	15	32	18	0	508
2M	16	29	34	20	399
2M	17	23	18	31	491
2M	18	0	0	13	518
2M	19	56	33	27	672
2M	20	4	0	0	391
2M	21	31	37	21	662
2M	22	47	25	27	537
2M	23	21	17	19	442
2M	24	39	51	37	584
2M	25	19	10	6	442
3M	26	33	20	46	513
3M	27	13	23	9	401
3M	28	34	58	10	550
3M	29	19	25	31	541
3M	30	23	6	2	440
3M	31	18	19	14	465
3M	32	19	25	38	493
3M	33	21	15	5	334
3M	34	62	35	66	811
3M	35	32	15	8	436

Appendix 14
Individual locomotor activity data
Occasion: Week -1

Test Article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group/ Sex	Animal Number	TOT13 24-26m	TOT14 26-28m	TOT15 28-30m	TOT TOTAL
4M	36	7	14	25	480
4M	37	4	1	0	451
4M	38	20	1	37	468
4M	39	56	12	33	553
4M	40	0	0	0	414
4M	41	37	31	44	623
4M	42	39	15	14	476
4M	43	10	18	6	297
4M	44	20	0	0	306
4M	45	18	42	29	479
5M	46	10	13	31	489
5M	47	15	21	16	555
5M	48	29	30	0	548
5M	49	33	32	24	547
5M	50	36	35	0	396
5M	51	3	0	3	280
5M	52	29	32	4	400
5M	53	14	12	37	486
5M	54	56	27	50	575
5M	55	41	39	30	573
5M	56	39	46	34	523
5M	57	14	11	31	455
5M	58	37	38	63	391
5M	59	40	35	19	538
5M	60	40	13	22	622

Appendix 14
Individual locomotor activity data
Occasion: Week -1

Test Article	Control		[	]	
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group/ Sex	Animal Number	TOT13 24-26m	TOT14 26-28m	TOT15 28-30m	TOT TOTAL
1F	61	11	20	34	400
1F	62	26	22	24	475
1F	63	6	41	17	400
1F	64	2	9	6	411
1F	65	10	38	18	557
1F	66	43	3	2	480
1F	67	0	0	7	192
1F	68	26	30	7	433
1F	69	23	19	2	300
1F	70	25	26	29	374
1F	71	8	8	27	396
1F	72	33	27	19	443
1F	73	20	12	8	377
1F	74	36	34	26	594
1F	75	38	15	13	533
2F	76	32	39	23	485
2F	77	35	12	14	478
2F	78	21	18	0	259
2F	79	16	18	13	445
2F	80	0	0	0	217
2F	81	37	15	13	394
2F	82	1	3	0	241
2F	83	0	0	8	299
2F	84	9	27	8	380
2F	85	28	24	30	493
3F	86	0	0	0	200
3F	87	0	0	0	188
3F	88	17	13	22	405
3F	89	11	42	8	490
3F	90	15	2	9	337
3F	91	0	0	0	237
3F	92	5	23	15	394
3F	93	43	46	41	736
3F	94	18	19	43	454
3F	95	2	12	33	413

Appendix 14
Individual locomotor activity data
Occasion: Week -1

Test Article	Control		[	]	
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group/ Sex	Animal Number	TOT13 24-26m	TOT14 26-28m	TOT15 28-30m	TOT TOTAL
4F	96	30	5	32	480
4F	97	34	24	29	494
4F	98	8	41	29	415
4F	99	37	44	51	644
4F	100	0	0	0	171
4F	101	0	0	0	268
4F	102	33	18	22	402
4F	103	27	42	36	446
4F	104	37	26	27	442
4F	105	26	21	3	508
5F	106	6	0	0	286
5F	107	0	0	0	117
5F	108	11	26	18	250
5F	109	19	22	31	421
5F	110	28	39	29	509
5F	111	0	0	0	325
5F	112	0	1	5	339
5F	113	30	21	58	471
5F	114	32	31	28	432
5F	115	16	16	36	490
5F	116	26	9	11	440
5F	117	6	1	23	329
5F	118	49	39	27	573
5F	119	18	38	16	416
5F	120	32	13	26	571

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Appendix 14
Individual locomotor activity data
Occasion: Week 13

Test Article	Control		[	]	
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group/ Sex	Animal Number	AMB01 0-2m	AMB02 2-4m	AMB03 4-6m	AMB04 6-8m
1M	1	32	13	4	4
1M	2	12	5	9	4
1M	3	7	16	9	7
1M	4	30	22	9	13
1M	5	36	14	4	12
1M	6	21	15	13	8
1M	7	21	17	28	20
1M	8	28	16	12	18
1M	9	3	10	20	4
1M	10	29	2	14	15
1M	11	10	17	12	7
1M	12	13	7	5	0
1M	13	14	13	7	0
1M	14	22	14	16	14
1M	15	32	17	10	15
2M	16	26	4	0	0
2M	17	18	9	9	13
2M	18	28	15	12	8
2M	19	43	23	25	8
2M	20	23	8	4	10
2M	21	38	10	13	12
2M	22	19	19	19	18
2M	23	23	6	25	12
2M	24	28	31	11	5
2M	25	26	16	17	3
3M	26	17	12	4	11
3M	27	32	9	16	4
3M	28	31	13	18	6
3M	29	30	29	17	6
3M	30	20	17	9	12
3M	31	30	15	8	13
3M	32	24	13	10	3
3M	33	23	15	9	9
3M	34	44	16	12	17
3M	35	27	22	23	8

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Appendix 14
Individual locomotor activity data
Occasion: Week 13

Test Article	Control		[	]	
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group/ Sex	Animal Number	AMB01 0-2m	AMB02 2-4m	AMB03 4-6m	AMB04 6-8m
4M	36	14	9	9	3
4M	37	13	6	0	0
4M	38	13	8	6	2
4M	39	33	17	6	10
4M	40	6	12	6	3
4M	41	17	17	0	7
4M	42	16	12	19	9
4M	43	16	5	0	0
4M	44	15	12	0	0
4M	45	13	22	12	12
5M	46	17	32	17	4
5M	47	22	16	3	3
5M	48	11	2	0	10
5M	49	10	13	17	0
5M	50	15	11	9	0
5M	51	22	7	19	10
5M	52	1	1	7	0
5M	53	23	4	17	6
5M	54	20	13	10	13
5M	55	10	6	12	6
5M	56	33	8	10	13
5M	57	17	2	4	8
5M	58	35	27	24	18
5M	59	14	29	8	2
5M	60	30	15	9	16

Appendix 14
Individual locomotor activity data
Occasion: Week 13

Test Article	Control		[	]	
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group/ Sex	Animal Number	AMB01 0-2m	AMB02 2-4m	AMB03 4-6m	AMB04 6-8m
1F	61	13	7	11	4
1F	62	19	7	11	6
1F	63	21	14	16	3
1F	64	51	20	19	28
1F	65	18	14	23	4
1F	66	31	22	8	5
1F	67	18	10	7	4
1F	68	19	14	5	18
1F	69	7	6	3	8
1F	70	12	7	11	14
1F	71	7	6	2	7
1F	72	23	17	6	11
1F	73	25	2	12	10
1F	74	27	25	6	7
1F	75	25	4	11	5
2F	76	11	12	8	8
2F	77	14	16	16	3
2F	78	21	6	1	0
2F	79	18	21	20	7
2F	81	20	2	19	12
2F	82	8	8	2	4
2F	83	7	20	11	3
2F	84	14	16	9	6
2F	85	21	7	2	5
3F	86	34	15	0	12
3F	87	14	13	7	3
3F	88	19	13	11	21
3F	89	19	10	0	2
3F	90	18	9	9	10
3F	91	3	9	0	0
3F	92	17	11	10	0
3F	93	38	47	29	30
3F	94	14	4	2	5
3F	95	25	11	8	9

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Appendix 14
Individual locomotor activity data
Occasion: Week 13

Test Article	Control		[	]	
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group/ Sex	Animal Number	AMB01 0-2m	AMB02 2-4m	AMB03 4-6m	AMB04 6-8m
4F	96	8	14	2	0
4F	97	15	14	16	7
4F	98	26	7	10	8
4F	99	14	13	13	12
4F	100	14	6	6	0
4F	101	30	15	0	6
4F	102	26	9	24	24
4F	103	6	0	0	10
4F	104	27	5	8	6
4F	105	15	15	17	10
5F	106	17	0	12	8
5F	107	6	3	5	3
5F	108	15	0	0	18
5F	109	18	15	13	16
5F	110	5	0	0	0
5F	111	17	6	18	13
5F	112	8	0	7	0
5F	113	21	17	9	17
5F	114	23	20	9	5
5F	115	16	8	4	13
5F	116	29	20	11	14
5F	117	22	18	17	11
5F	118	16	8	0	4
5F	119	22	16	9	7
5F	120	36	16	9	13

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Appendix 14
Individual locomotor activity data
Occasion: Week 13

Test Article	Control		[	]	
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group/ Sex	Animal Number	AMB05 8-10m	AMB06 10-12m	AMB07 12-14m	AMB08 14-16m
1M	1	2	0	16	2
1M	2	8	0	0	0
1M	3	1	7	7	2
1M	4	10	7	3	14
1M	5	19	4	14	5
1M	6	10	10	7	3
1M	7	17	16	6	13
1M	8	7	7	15	11
1M	9	7	2	12	0
1M	10	16	9	0	6
1M	11	10	18	16	14
1M	12	8	5	0	4
1M	13	2	0	6	10
1M	14	12	10	4	0
1M	15	12	18	14	10
2M	16	7	6	4	0
2M	17	4	2	2	6
2M	18	8	0	4	0
2M	19	23	26	6	24
2M	20	10	0	2	3
2M	21	17	23	6	23
2M	22	14	15	15	14
2M	23	2	22	9	7
2M	24	0	7	14	4
2M	25	11	7	7	20
3M	26	25	8	0	2
3M	27	10	11	13	20
3M	28	6	0	3	1
3M	29	13	11	5	0
3M	30	14	12	10	10
3M	31	14	13	9	0
3M	32	13	12	2	15
3M	33	3	2	0	9
3M	34	11	14	8	10
3M	35	6	13	4	10

Appendix 14
Individual locomotor activity data
Occasion: Week 13

Test Article	Control		[	]	
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group/ Sex	Animal Number	AMB05 8-10m	AMB06 10-12m	AMB07 12-14m	AMB08 14-16m
4M	36	4	6	5	8
4M	37	4	5	8	11
4M	38	2	6	0	0
4M	39	8	7	0	16
4M	40	3	9	0	5
4M	41	8	3	9	2
4M	42	0	15	9	1
4M	43	0	0	2	5
4M	44	0	5	21	8
4M	45	9	14	8	6
5M	46	18	0	0	10
5M	47	12	0	0	0
5M	48	8	0	0	4
5M	49	0	0	8	2
5M	50	0	0	0	16
5M	51	5	10	12	10
5M	52	0	0	9	0
5M	53	0	0	9	9
5M	54	17	3	4	3
5M	55	0	17	12	0
5M	56	25	13	17	10
5M	57	10	8	4	1
5M	58	15	26	17	11
5M	59	2	9	8	10
5M	60	18	17	8	4

Appendix 14
Individual locomotor activity data
Occasion: Week 13

Test Article	Control		[	]	
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group/ Sex	Animal Number	AMB05 8-10m	AMB06 10-12m	AMB07 12-14m	AMB08 14-16m
1F	61	7	0	1	4
1F	62	8	8	0	2
1F	63	8	10	9	9
1F	64	17	20	12	6
1F	65	3	16	2	0
1F	66	9	19	1	5
1F	67	1	3	10	4
1F	68	15	6	0	0
1F	69	10	10	8	2
1F	70	2	9	13	0
1F	71	5	4	0	3
1F	72	5	4	10	7
1F	73	1	4	3	0
1F	74	0	7	27	8
1F	75	8	5	7	14
2F	76	12	9	13	8
2F	77	14	17	20	14
2F	78	0	18	3	6
2F	79	15	2	3	6
2F	81	7	23	14	8
2F	82	0	0	3	9
2F	83	0	8	24	0
2F	84	10	10	6	4
2F	85	10	5	4	5
3F	86	12	8	9	1
3F	87	11	8	2	2
3F	88	7	16	13	4
3F	89	12	2	9	7
3F	90	8	11	9	9
3F	91	0	17	1	3
3F	92	0	1	1	6
3F	93	49	30	42	21
3F	94	0	4	4	0
3F	95	14	4	7	21

Appendix 14
Individual locomotor activity data
Occasion: Week 13

Test Article	Control		[	]	
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group/ Sex	Animal Number	AMB05 8-10m	AMB06 10-12m	AMB07 12-14m	AMB08 14-16m
4F	96	16	6	3	4
4F	97	9	6	4	2
4F	98	0	0	11	13
4F	99	17	7	1	12
4F	100	1	13	0	2
4F	101	1	7	7	11
4F	102	12	8	15	14
4F	103	6	11	9	12
4F	104	6	11	7	13
4F	105	15	10	9	5
5F	106	8	0	1	2
5F	107	0	0	0	0
5F	108	6	14	11	3
5F	109	12	0	7	9
5F	110	0	0	0	0
5F	111	23	4	13	2
5F	112	0	4	16	6
5F	113	2	11	12	6
5F	114	23	22	8	6
5F	115	0	6	4	7
5F	116	22	22	13	21
5F	117	9	7	2	0
5F	118	8	0	0	26
5F	119	16	7	5	11
5F	120	3	10	4	12

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Appendix 14
Individual locomotor activity data
Occasion: Week 13

Test Article	Control	[	]		
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group/ Sex	Animal Number	AMB09 16-18m	AMB10 18-20m	AMB11 20-22m	AMB12 22-24m
1M	1	0	0	0	0
1M	2	0	0	8	18
1M	3	10	0	3	0
1M	4	16	17	13	14
1M	5	24	4	19	6
1M	6	0	12	10	6
1M	7	20	15	6	6
1M	8	12	5	5	5
1M	9	15	8	0	0
1M	10	15	10	0	0
1M	11	9	11	9	7
1M	12	7	0	0	4
1M	13	9	0	0	0
1M	14	4	5	0	8
1M	15	4	1	9	11
2M	16	0	0	0	0
2M	17	0	10	4	4
2M	18	5	10	2	0
2M	19	1	0	2	10
2M	20	0	10	15	5
2M	21	13	9	10	4
2M	22	24	15	7	14
2M	23	10	8	4	5
2M	24	15	4	0	0
2M	25	19	13	12	14
3M	26	0	8	9	24
3M	27	8	0	2	10
3M	28	11	4	3	0
3M	29	0	14	11	11
3M	30	3	4	6	2
3M	31	10	12	9	23
3M	32	6	2	0	0
3M	33	1	0	0	14
3M	34	8	14	23	15
3M	35	3	0	6	0

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Appendix 14
Individual locomotor activity data
Occasion: Week 13

Test Article	Control		[	]	
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group/ Sex	Animal Number	AMB09 16-18m	AMB10 18-20m	AMB11 20-22m	AMB12 22-24m
4M	36	0	0	9	4
4M	37	0	0	0	0
4M	38	9	3	6	10
4M	39	6	9	1	2
4M	40	0	11	1	6
4M	41	0	4	0	0
4M	42	5	5	5	0
4M	43	4	5	0	0
4M	44	7	3	0	0
4M	45	2	8	0	6
5M	46	11	31	3	0
5M	47	0	8	8	2
5M	48	0	7	0	0
5M	49	0	4	0	0
5M	50	0	0	0	0
5M	51	2	3	0	14
5M	52	0	0	13	14
5M	53	0	1	3	0
5M	54	0	0	0	0
5M	55	0	0	0	0
5M	56	6	3	11	6
5M	57	13	6	0	0
5M	58	0	0	0	0
5M	59	5	4	0	6
5M	60	9	1	0	0

Appendix 14
Individual locomotor activity data
Occasion: Week 13

Test Article	Control	[	]		
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group/ Sex	Animal Number	AMB09 16-18m	AMB10 18-20m	AMB11 20-22m	AMB12 22-24m
1F	61	0	0	0	0
1F	62	17	0	8	7
1F	63	3	12	14	16
1F	64	10	17	10	4
1F	65	0	5	2	8
1F	66	8	0	0	0
1F	67	2	3	9	2
1F	68	0	4	0	0
1F	69	1	4	0	2
1F	70	0	0	0	2
1F	71	6	0	0	2
1F	72	7	4	4	4
1F	73	9	0	0	0
1F	74	12	12	0	10
1F	75	1	2	0	0
2F	76	5	7	5	12
2F	77	12	12	2	8
2F	78	3	4	8	2
2F	79	7	4	19	13
2F	81	6	5	0	11
2F	82	4	5	9	4
2F	83	4	4	6	8
2F	84	11	6	0	0
2F	85	4	5	3	11
3F	86	4	0	10	11
3F	87	4	0	5	1
3F	88	4	7	6	0
3F	89	8	0	0	0
3F	90	8	1	11	7
3F	91	0	10	13	1
3F	92	11	8	2	0
3F	93	14	12	17	22
3F	94	1	2	1	6
3F	95	0	12	9	2

Appendix 14
Individual locomotor activity data
Occasion: Week 13

Test Article	Control		[	]	
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group/ Sex	Animal Number	AMB09 16-18m	AMB10 18-20m	AMB11 20-22m	AMB12 22-24m
4F	96	6	12	3	10
4F	97	6	2	0	0
4F	98	10	5	15	2
4F	99	3	8	0	0
4F	100	7	0	0	3
4F	101	10	22	2	11
4F	102	9	8	15	21
4F	103	2	0	0	4
4F	104	2	3	7	6
4F	105	6	9	13	14
5F	106	4	10	1	0
5F	107	18	6	1	3
5F	108	12	6	5	5
5F	109	5	0	11	13
5F	110	2	0	0	0
5F	111	7	8	4	8
5F	112	0	3	0	1
5F	113	8	3	7	0
5F	114	3	5	0	0
5F	115	1	0	11	3
5F	116	8	16	3	13
5F	117	6	0	4	9
5F	118	14	2	8	8
5F	119	12	4	0	0
5F	120	6	7	0	11

Appendix 14
Individual locomotor activity data
Occasion: Week 13

Test Article	Control		[	]	
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group/ Sex	Animal Number	AMB13 24-26m	AMB14 26-28m	AMB15 28-30m	AMB TOTAL
1M	1	0	0	5	78
1M	2	0	4	0	68
1M	3	0	6	4	79
1M	4	7	12	8	195
1M	5	3	21	9	194
1M	6	8	4	15	142
1M	7	5	5	12	207
1M	8	6	0	2	149
1M	9	0	5	8	94
1M	10	19	0	0	135
1M	11	22	11	24	197
1M	12	12	0	0	65
1M	13	2	4	0	67
1M	14	14	8	7	138
1M	15	5	3	0	161
2M	16	0	0	0	47
2M	17	2	5	4	92
2M	18	0	0	7	99
2M	19	17	17	14	239
2M	20	0	0	8	98
2M	21	10	13	9	210
2M	22	15	14	7	229
2M	23	7	0	6	146
2M	24	2	4	5	130
2M	25	16	2	10	193
3M	26	13	4	4	141
3M	27	5	3	0	143
3M	28	0	14	0	110
3M	29	5	2	12	166
3M	30	3	9	3	134
3M	31	14	21	3	194
3M	32	0	0	0	100
3M	33	3	4	0	92
3M	34	3	8	13	216
3M	35	0	0	0	122

Appendix 14
Individual locomotor activity data
Occasion: Week 13

Test Article	Control		[	]	
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group/ Sex	Animal Number	AMB13 24-26m	AMB14 26-28m	AMB15 28-30m	AMB TOTAL
4M	36	2	0	18	91
4M	37	0	0	3	50
4M	38	0	0	0	65
4M	39	0	12	1	128
4M	40	0	0	0	62
4M	41	0	0	0	67
4M	42	0	0	6	102
4M	43	0	0	0	37
4M	44	0	0	0	71
4M	45	2	20	3	137
5M	46	0	0	10	153
5M	47	0	0	0	74
5M	48	0	1	3	46
5M	49	0	0	0	54
5M	50	0	0	0	51
5M	51	17	2	0	133
5M	52	0	0	0	45
5M	53	0	7	9	88
5M	54	0	0	0	83
5M	55	0	0	2	65
5M	56	6	2	0	163
5M	57	0	4	18	95
5M	58	2	6	0	181
5M	59	0	3	2	102
5M	60	10	9	4	150

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Appendix 14
Individual locomotor activity data
Occasion: Week 13

Test Article	Control	[	]		
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group/ Sex	Animal Number	AMB13 24-26m	AMB14 26-28m	AMB15 28-30m	AMB TOTAL
1F	61	8	3	0	58
1F	62	16	4	4	117
1F	63	0	7	19	161
1F	64	20	7	18	259
1F	65	0	0	0	95
1F	66	0	3	2	113
1F	67	0	4	7	84
1F	68	0	0	0	81
1F	69	0	2	0	63
1F	70	4	1	4	79
1F	71	0	0	0	42
1F	72	1	3	6	112
1F	73	0	16	2	84
1F	74	16	5	0	162
1F	75	0	7	7	96
2F	76	3	6	4	123
2F	77	24	11	7	190
2F	78	0	0	0	72
2F	79	3	3	0	141
2F	81	10	9	10	156
2F	82	0	4	1	61
2F	83	0	12	21	128
2F	84	0	0	0	92
2F	85	2	6	4	94
3F	86	11	3	6	136
3F	87	4	2	0	76
3F	88	8	0	0	129
3F	89	0	0	0	69
3F	90	0	4	0	114
3F	91	7	0	9	73
3F	92	0	2	2	71
3F	93	10	12	10	383
3F	94	1	0	4	48
3F	95	0	4	0	126

Appendix 14
Individual locomotor activity data
Occasion: Week 13

Test Article	Control		[	]	
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group/ Sex	Animal Number	AMB13 24-26m	AMB14 26-28m	AMB15 28-30m	AMB TOTAL
4F	96	3	1	0	88
4F	97	6	0	0	87
4F	98	8	11	0	126
4F	99	13	10	0	123
4F	100	0	1	7	60
4F	101	0	0	0	122
4F	102	3	24	3	215
4F	103	8	0	5	73
4F	104	1	1	7	110
4F	105	4	5	9	156
5F	106	0	0	1	64
5F	107	2	5	1	53
5F	108	14	11	0	120
5F	109	9	0	0	128
5F	110	0	0	0	7
5F	111	0	0	6	129
5F	112	15	0	0	60
5F	113	8	7	0	128
5F	114	0	0	5	129
5F	115	0	10	6	89
5F	116	13	4	12	221
5F	117	3	3	0	111
5F	118	14	0	4	112
5F	119	0	0	4	113
5F	120	18	0	1	146

Appendix 14
Individual locomotor activity data
Occasion: Week 13

Test Article	Control	[	]		
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group/ Sex	Animal Number	TOI01 0-2m	TOI02 2-4m	TOI03 4-6m	TOI04 6-8m
1M	1	63	34	30	17
1M	2	51	29	44	13
1M	3	35	58	26	22
1M	4	62	64	48	36
1M	5	76	47	20	31
1M	6	51	46	40	23
1M	7	45	45	60	63
1M	8	89	44	41	35
1M	9	16	42	62	15
1M	10	62	26	42	55
1M	11	30	59	35	26
1M	12	44	19	17	12
1M	13	37	28	14	11
1M	14	64	53	36	58
1M	15	74	32	39	39
2M	16	59	25	5	25
2M	17	39	32	26	31
2M	18	54	30	28	17
2M	19	85	59	65	25
2M	20	45	21	26	21
2M	21	77	26	32	35
2M	22	40	56	37	38
2M	23	51	19	56	39
2M	24	66	66	38	10
2M	25	63	43	58	18
3M	26	54	62	41	25
3M	27	68	32	41	20
3M	28	70	57	44	30
3M	29	61	55	41	22
3M	30	48	55	22	21
3M	31	75	38	51	40
3M	32	55	33	27	16
3M	33	58	51	37	34
3M	34	84	51	30	37
3M	35	50	47	56	52

Appendix 14
Individual locomotor activity data
Occasion: Week 13

Test Article	Control		[	]	
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group/ Sex	Animal Number	TOT01 0-2m	TOT02 2-4m	TOT03 4-6m	TOT04 6-8m
4M	36	48	21	18	12
4M	37	40	15	12	0
4M	38	50	36	36	17
4M	39	72	54	20	25
4M	40	28	42	25	10
4M	41	49	42	14	24
4M	42	36	47	36	32
4M	43	42	31	12	0
4M	44	36	48	10	23
4M	45	28	57	39	29
5M	46	54	58	41	26
5M	47	55	41	10	7
5M	48	39	14	34	28
5M	49	41	59	50	8
5M	50	42	27	30	3
5M	51	47	39	52	31
5M	52	1	3	33	8
5M	53	61	20	46	27
5M	54	61	32	29	42
5M	55	33	38	51	28
5M	56	74	30	41	46
5M	57	42	15	16	21
5M	58	70	65	64	46
5M	59	47	64	35	18
5M	60	61	28	39	47

Appendix 14
Individual locomotor activity data
Occasion: Week 13

Test Article	Control	[	]		
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group/ Sex	Animal Number	TOI01 0-2m	TOI02 2-4m	TOI03 4-6m	TOI04 6-8m
1F	61	37	31	23	29
1F	62	51	46	36	19
1F	63	72	33	47	20
1F	64	106	66	52	64
1F	65	44	43	71	17
1F	66	82	70	37	45
1F	67	37	28	27	28
1F	68	56	33	39	50
1F	69	27	30	21	26
1F	70	45	39	39	41
1F	71	40	29	13	42
1F	72	62	50	33	34
1F	73	57	20	44	33
1F	74	81	57	16	28
1F	75	59	13	45	17
2F	76	36	43	25	23
2F	77	52	56	49	30
2F	78	62	18	4	1
2F	79	38	48	59	20
2F	81	58	18	61	44
2F	82	22	24	13	13
2F	83	34	64	29	16
2F	84	52	54	36	26
2F	85	53	35	15	18
3F	86	66	45	22	26
3F	87	36	42	29	18
3F	88	69	48	50	63
3F	89	45	34	3	25
3F	90	48	41	37	33
3F	91	8	19	0	13
3F	92	46	61	30	6
3F	93	103	104	70	81
3F	94	30	35	11	21
3F	95	62	33	23	31

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Appendix 14
Individual locomotor activity data
Occasion: Week 13

Test Article	Control		[	]	
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group/ Sex	Animal Number	TOI01 0-2m	TOI02 2-4m	TOI03 4-6m	TOI04 6-8m
4F	96	30	50	29	10
4F	97	43	35	38	29
4F	98	70	30	33	27
4F	99	40	49	36	55
4F	100	41	52	23	0
4F	101	73	50	12	25
4F	102	76	32	60	65
4F	103	17	12	18	51
4F	104	74	33	50	32
4F	105	38	36	33	27
5F	106	51	12	41	23
5F	107	33	23	19	18
5F	108	46	9	0	60
5F	109	39	49	43	48
5F	110	25	0	0	0
5F	111	54	36	54	38
5F	112	24	12	30	3
5F	113	52	55	25	41
5F	114	46	63	41	13
5F	115	60	53	19	44
5F	116	60	51	33	37
5F	117	48	50	41	43
5F	118	55	24	12	19
5F	119	47	46	33	22
5F	120	84	53	24	40

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Appendix 14
Individual locomotor activity data
Occasion: Week 13

Test Article	Control	[	]		
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group/ Sex	Animal Number	TOI05 8-10m	TOI06 10-12m	TOI07 12-14m	TOI08 14-16m
1M	1	11	3	38	13
1M	2	26	10	10	7
1M	3	9	19	18	10
1M	4	26	14	18	38
1M	5	47	28	25	18
1M	6	22	28	17	20
1M	7	50	51	30	33
1M	8	34	32	32	39
1M	9	21	12	35	0
1M	10	25	34	20	19
1M	11	47	53	42	46
1M	12	41	27	9	22
1M	13	9	0	10	26
1M	14	55	35	24	6
1M	15	37	39	33	30
2M	16	31	30	14	0
2M	17	12	11	14	21
2M	18	30	2	9	1
2M	19	67	67	28	49
2M	20	22	0	6	9
2M	21	41	44	12	39
2M	22	34	30	38	36
2M	23	7	52	38	18
2M	24	10	21	52	12
2M	25	27	27	20	30
3M	26	70	33	11	8
3M	27	37	23	33	35
3M	28	31	3	18	12
3M	29	49	24	12	0
3M	30	61	42	26	35
3M	31	39	36	26	28
3M	32	44	26	7	42
3M	33	16	9	7	36
3M	34	29	27	32	28
3M	35	40	42	17	24

Appendix 14
Individual locomotor activity data
Occasion: Week 13

Test Article	Control		[	]	
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group/ Sex	Animal Number	TOI05 8-10m	TOI06 10-12m	TOI07 12-14m	TOI08 14-16m
4M	36	10	17	23	26
4M	37	17	12	18	20
4M	38	16	16	13	13
4M	39	35	18	5	45
4M	40	12	16	0	23
4M	41	37	15	36	9
4M	42	2	31	20	16
4M	43	0	0	21	40
4M	44	9	15	56	37
4M	45	29	25	25	18
5M	46	31	2	3	22
5M	47	35	0	0	2
5M	48	25	2	3	15
5M	49	8	18	21	24
5M	50	5	4	4	40
5M	51	23	34	15	38
5M	52	13	1	36	5
5M	53	6	1	25	28
5M	54	32	19	16	17
5M	55	11	49	28	9
5M	56	56	35	40	22
5M	57	23	22	11	21
5M	58	42	51	47	36
5M	59	9	29	24	29
5M	60	37	48	30	27

Appendix 14
Individual locomotor activity data
Occasion: Week 13

Test Article	Control		[	]	
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group/ Sex	Animal Number	TOT05 8-10m	TOT06 10-12m	TOT07 12-14m	TOT08 14-16m
1F	61	28	16	11	29
1F	62	31	29	19	30
1F	63	19	44	47	35
1F	64	49	68	48	29
1F	65	21	50	15	7
1F	66	40	48	22	26
1F	67	9	23	34	10
1F	68	37	54	48	29
1F	69	34	36	22	19
1F	70	20	33	32	2
1F	71	18	10	2	20
1F	72	18	19	33	30
1F	73	16	19	23	3
1F	74	13	44	56	31
1F	75	41	29	22	44
2F	76	43	28	40	17
2F	77	46	56	44	51
2F	78	0	45	16	17
2F	79	32	24	16	27
2F	81	31	67	53	29
2F	82	9	10	14	29
2F	83	9	23	63	2
2F	84	35	28	26	17
2F	85	27	22	26	32
3F	86	25	43	26	9
3F	87	37	15	15	25
3F	88	31	50	49	26
3F	89	46	19	33	25
3F	90	41	46	32	27
3F	91	1	41	3	7
3F	92	10	10	2	15
3F	93	98	79	87	74
3F	94	8	28	20	17
3F	95	34	9	26	42

Appendix 14
Individual locomotor activity data
Occasion: Week 13

Test Article	Control		[	]	
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group/ Sex	Animal Number	TOI05 8-10m	TOI06 10-12m	TOI07 12-14m	TOI08 14-16m
4F	96	37	23	21	19
4F	97	37	22	19	17
4F	98	8	18	31	40
4F	99	56	39	35	57
4F	100	4	48	8	12
4F	101	14	20	28	45
4F	102	33	35	54	48
4F	103	15	37	43	30
4F	104	52	36	25	33
4F	105	34	34	30	35
5F	106	39	5	8	22
5F	107	0	0	0	8
5F	108	27	48	30	18
5F	109	32	7	19	45
5F	110	0	0	0	0
5F	111	64	35	48	23
5F	112	2	21	43	17
5F	113	28	32	27	24
5F	114	55	61	46	27
5F	115	33	32	20	33
5F	116	58	39	35	44
5F	117	36	27	7	0
5F	118	28	1	9	55
5F	119	38	33	21	35
5F	120	15	29	30	43

Appendix 14
Individual locomotor activity data
Occasion: Week 13

Test Article	Control		[	]	
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group/ Sex	Animal Number	TOI09 16-18m	TOI10 18-20m	TOI11 20-22m	TOI12 22-24m
1M	1	0	14	8	30
1M	2	0	2	25	40
1M	3	27	18	22	34
1M	4	50	49	35	48
1M	5	60	19	44	16
1M	6	9	25	40	28
1M	7	47	37	23	22
1M	8	22	14	20	18
1M	9	41	22	0	0
1M	10	37	26	14	9
1M	11	44	28	21	34
1M	12	26	11	15	18
1M	13	22	7	38	8
1M	14	18	45	0	34
1M	15	11	8	25	26
2M	16	4	5	7	2
2M	17	3	27	11	7
2M	18	26	18	10	0
2M	19	2	0	7	27
2M	20	6	21	36	21
2M	21	27	22	26	14
2M	22	53	28	16	39
2M	23	27	28	24	17
2M	24	38	21	8	13
2M	25	55	37	38	32
3M	26	5	19	17	57
3M	27	35	0	6	21
3M	28	43	24	22	0
3M	29	0	34	31	20
3M	30	21	22	12	13
3M	31	60	28	45	56
3M	32	34	12	0	5
3M	33	4	2	5	47
3M	34	19	28	41	38
3M	35	20	13	31	16

Appendix 14
Individual locomotor activity data
Occasion: Week 13

Test Article	Control		[	]	
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group/ Sex	Animal Number	TOI09 16-18m	TOI10 18-20m	TOI11 20-22m	TOI12 22-24m
4M	36	2	0	23	13
4M	37	0	0	1	2
4M	38	38	14	29	37
4M	39	30	29	8	2
4M	40	0	26	5	16
4M	41	11	27	2	0
4M	42	15	24	23	13
4M	43	15	24	4	0
4M	44	23	16	0	0
4M	45	8	16	14	21
5M	46	24	78	24	2
5M	47	0	31	21	8
5M	48	5	12	3	7
5M	49	5	20	1	1
5M	50	0	1	0	0
5M	51	17	13	0	40
5M	52	0	0	34	40
5M	53	5	4	15	0
5M	54	1	0	0	0
5M	55	0	0	0	0
5M	56	25	37	42	25
5M	57	43	21	3	0
5M	58	21	37	6	3
5M	59	9	16	1	15
5M	60	32	29	1	0

Appendix 14
Individual locomotor activity data
Occasion: Week 13

Test Article	Control		[	]	
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group/ Sex	Animal Number	TOT09 16-18m	TOT10 18-20m	TOT11 20-22m	TOT12 22-24m
1F	61	4	0	0	12
1F	62	47	22	31	25
1F	63	11	31	43	55
1F	64	34	35	50	29
1F	65	0	10	10	24
1F	66	24	8	0	0
1F	67	6	5	23	10
1F	68	9	20	0	0
1F	69	11	33	3	15
1F	70	4	9	2	21
1F	71	32	6	8	18
1F	72	38	22	19	21
1F	73	32	13	1	14
1F	74	38	31	24	28
1F	75	11	13	8	3
2F	76	22	33	23	27
2F	77	45	37	25	55
2F	78	8	22	39	13
2F	79	25	13	53	48
2F	81	39	18	1	29
2F	82	23	20	41	17
2F	83	10	12	17	28
2F	84	33	17	2	9
2F	85	27	20	14	22
3F	86	8	14	29	42
3F	87	16	22	31	8
3F	88	20	34	30	18
3F	89	31	14	27	6
3F	90	29	10	31	33
3F	91	0	19	37	12
3F	92	23	40	17	16
3F	93	34	38	38	61
3F	94	12	21	17	27
3F	95	0	27	31	8

Appendix 14
Individual locomotor activity data
Occasion: Week 13

Test Article	Control		[	]	
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group/ Sex	Animal Number	TOI09 16-18m	TOI10 18-20m	TOI11 20-22m	TOI12 22-24m
4F	96	30	51	10	34
4F	97	25	14	25	15
4F	98	36	19	42	23
4F	99	21	34	32	12
4F	100	34	8	29	15
4F	101	23	45	21	30
4F	102	28	23	37	57
4F	103	19	0	0	8
4F	104	34	38	32	32
4F	105	30	33	31	28
5F	106	22	37	16	8
5F	107	32	24	19	15
5F	108	48	20	21	23
5F	109	27	13	27	49
5F	110	15	1	0	0
5F	111	27	33	24	35
5F	112	7	13	7	12
5F	113	27	16	20	25
5F	114	24	20	16	5
5F	115	20	27	53	54
5F	116	30	34	22	25
5F	117	26	1	14	31
5F	118	47	17	33	28
5F	119	45	11	1	2
5F	120	27	33	1	27

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Appendix 14
Individual locomotor activity data
Occasion: Week 13

Test Article	Control	[	]		
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group/ Sex	Animal Number	TOI13 24-26m	TOI14 26-28m	TOI15 28-30m	TOT TOTAL
1M	1	14	17	12	304
1M	2	6	26	4	293
1M	3	8	15	14	335
1M	4	20	18	33	559
1M	5	9	60	25	525
1M	6	31	18	27	425
1M	7	24	23	27	580
1M	8	28	3	3	454
1M	9	6	9	37	318
1M	10	36	2	6	413
1M	11	59	46	47	617
1M	12	41	24	20	346
1M	13	7	20	4	241
1M	14	42	30	24	524
1M	15	13	17	10	433
2M	16	10	0	0	217
2M	17	5	16	20	275
2M	18	5	0	24	254
2M	19	75	49	53	658
2M	20	7	17	15	273
2M	21	21	19	26	461
2M	22	51	34	30	560
2M	23	20	1	19	416
2M	24	18	25	21	419
2M	25	41	11	30	530
3M	26	48	22	9	481
3M	27	16	7	3	377
3M	28	7	39	1	401
3M	29	9	4	22	384
3M	30	16	31	9	434
3M	31	32	38	12	604
3M	32	5	13	3	322
3M	33	27	21	0	354
3M	34	14	25	22	505
3M	35	9	9	19	445

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Appendix 14
Individual locomotor activity data
Occasion: Week 13

Test Article	Control		[	]	
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group/ Sex	Animal Number	TOT13 24-26m	TOT14 26-28m	TOT15 28-30m	TOT TOTAL
4M	36	14	6	47	280
4M	37	0	11	16	164
4M	38	18	24	19	376
4M	39	0	32	20	395
4M	40	0	0	1	204
4M	41	0	0	0	266
4M	42	3	0	10	308
4M	43	0	0	0	189
4M	44	0	1	0	274
4M	45	6	39	5	359
5M	46	0	0	29	394
5M	47	6	4	19	239
5M	48	3	4	7	201
5M	49	0	0	8	264
5M	50	0	0	0	156
5M	51	40	14	3	406
5M	52	0	1	2	177
5M	53	0	13	26	277
5M	54	0	0	0	249
5M	55	0	0	9	256
5M	56	12	15	1	501
5M	57	0	5	34	277
5M	58	18	24	2	532
5M	59	1	11	2	310
5M	60	27	19	26	451

Appendix 14
Individual locomotor activity data
Occasion: Week 13

Test Article	Control	[	]		
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group/ Sex	Animal Number	TOT13 24-26m	TOT14 26-28m	TOT15 28-30m	TOT TOTAL
1F	61	27	21	19	287
1F	62	42	22	28	478
1F	63	5	21	40	523
1F	64	40	32	48	750
1F	65	20	9	14	355
1F	66	0	9	16	427
1F	67	7	28	19	294
1F	68	0	0	0	375
1F	69	8	4	0	289
1F	70	25	8	21	341
1F	71	2	1	0	241
1F	72	7	26	27	439
1F	73	19	42	33	369
1F	74	42	23	1	513
1F	75	30	22	18	375
2F	76	20	31	11	422
2F	77	71	34	36	687
2F	78	1	6	0	252
2F	79	30	14	11	458
2F	81	30	21	45	544
2F	82	0	16	3	254
2F	83	3	20	52	382
2F	84	6	14	0	355
2F	85	16	28	16	371
3F	86	37	20	19	431
3F	87	15	16	0	325
3F	88	19	1	10	518
3F	89	1	0	0	309
3F	90	9	16	3	436
3F	91	24	27	30	241
3F	92	17	10	12	315
3F	93	24	15	26	932
3F	94	18	13	15	293
3F	95	13	14	5	358

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Appendix 14
Individual locomotor activity data
Occasion: Week 13

Test Article	Control		[	]	
Group	1	2	3	4	5
Level (ppm)	0	100	500	2500	5000

Group/ Sex	Animal Number	TOT13 24-26m	TOT14 26-28m	TOT15 28-30m	TOT TOTAL
4F	96	15	5	1	365
4F	97	15	0	2	336
4F	98	29	36	13	455
4F	99	42	47	20	575
4F	100	13	11	25	323
4F	101	2	0	0	388
4F	102	39	44	34	665
4F	103	35	7	11	303
4F	104	25	8	24	528
4F	105	25	16	15	445
5F	106	6	3	8	301
5F	107	18	32	9	250
5F	108	43	30	1	424
5F	109	32	8	15	453
5F	110	0	0	0	41
5F	111	8	10	20	509
5F	112	27	14	0	232
5F	113	26	32	6	436
5F	114	2	13	17	449
5F	115	16	32	32	528
5F	116	34	18	34	554
5F	117	5	17	0	346
5F	118	48	14	17	407
5F	119	6	5	20	365
5F	120	42	4	12	464

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Draft Report

Study Title	[ ]: 13 Week (Dietary) Administration Toxicity Study in the Mouse
Data Requirement	OPPTS 870.3100
Author	Dr P Harvey
Sponsor	[ ]
Test Facility	Covance Laboratories Ltd Otley Road, Harrogate North Yorkshire HG3 1PY ENGLAND
Covance Study Number	0535/103
Report Issued	January 2004
Page Number	1 of 410

STATEMENT OF NO DATA CONFIDENTIALITY CLAIMS

[ ]: 13 Week (Dietary) Administration Toxicity Study in the Mouse

No claim of confidentiality is made for any information contained in this study on the basis of its falling within the scope of the United States Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act §10 (d) (1) (A), (B), or (C).

Company

Company Agent

Date

Title

Signature

COMPLIANCE STATEMENT

[ ]: 13 Week (Dietary) Administration Toxicity Study in the Mouse

The study was conducted in compliance with:

United Kingdom Statutory Instrument 1999 No. 3106, The Good Laboratory Practice Regulations 1999.

OECD Principles on Good Laboratory Practice (revised 1997, Issued Jan 1998) ENV/MC/CHEM(98)17.

P Harvey BSc (Hons), PhD, CBiol, MIBiol
Study Director
Covance Laboratories Ltd

Date

QUALITY ASSURANCE STATEMENT

[ ]: 13 Week (Dietary) Administration Toxicity Study in the Mouse

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SIGNATURE PAGE

[ ]: 13 Week (Dietary) Administration Toxicity Study in the Mouse

I, the undersigned, hereby declare that the work was performed by me or under my supervision and that the findings provide a true and accurate record of the results obtained. The study was performed in accordance with the agreed protocol and with Covance Laboratories Limited Standard Operating Procedures, unless otherwise stated, and the study objectives were achieved.

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ABSTRACT

The purpose of this study was to determine the toxicity of the test article, [ ], following oral (dietary) administration to the mouse for 13 weeks and to help provide a basis for the selection of doses for a carcinogenicity study in this species.

Male and female B6C3F1 mice were assigned to five groups as follows:

Group number	Group description	Dose level (ppm)	Number of animals/group Male	Female
1	Control	0	12	12
2	Low	500	12	12
3	Intermediate I	1000	12	12
4	Intermediate II	5000	12	12
5	High	10000#	12	12

Group 5 animals were taken off treatment on Days 12 to 14 due to poor condition, then recommenced treatment at a dose level of 7500 ppm on Day 15

Assessment of toxicity was based on mortality, clinical observations, and clinical and anatomic pathology evaluations.

Three Group 5 males were killed in Week 2 because of treatment-related deterioration in clinical condition. During the first two weeks of treatment, Group 5 males were hunched, thin, sluggish, cold, and showed tremor and semi-closed eyes. Reduction of the Group 5 dose level from 10,000 ppm to 7,500 ppm produced an improvement in clinical condition. However, bodyweight gains were suppressed throughout the study in Groups 5 and 4.

There were numerous clinical pathological changes in all treatment groups. In the haematology, there was increases in platecrit, red cell distribution width and mean cell volumes, and lowre mean cell haemoglobin concentration in males in all treated groups. Group 5, 4 and 3 males and females had higher reticulocytes. Groups 5, 4 and 3 females had higher neutrophils.

In the chemistry, there was a dose-related reduction in triglycerides in all male treatment groups. In Group 5 and 4 animals there was increased alkaline phosphatase, sodium and chloride and in Groups 5 and 4 females there was increased cholesterol.

In the urine, Group 5 and Group 4 males showed a reduction in specific gravity. There was a dose-related trend for decreased urine volumes in females. There was blood and ketones in the urine of Group 5 and 4 animals.

Liver weights were increased in Group 5, 4 and 3 animals. This was confounded by the effects of treatment on bodyweights but was clear when corrected to bodyweights. Other reductions in testes/epididymides and thymus in males and brain and ovary in females were consistent with the effects of treatment on bodyweight and growth.

Macroscopically, large and/or pale or mottled liver was seen in some Group 4 and 5 animals. Pale kidney and pale focus in the lung was noted in individual Group 5 males. Several organs of the male and female genital tract and of the haemolymphoreticular system were recorded as small in Group 4 and 5 animals.

Microscopically, the main treatment-related findings were in the liver, kidney, heart, lung and genital tract. In addition, there were diffuse atrophic changes in many other organs.

In the liver, there was extensive centrilobular hypertrophy/vacuolation in several Group 3 males and in all Group 4 and 5 animals. In addition, oval cell hyperplasia and pigment was noted in several Group 5 animals. There was also an increase in single cell necrosis/apoptosis especially in Group 5 females and, to a lesser extent, in Group 5 males when compared with the controls.

In the kidney, cortical tubular nephropathy was noted in several Group 3 animals, notably in females, and in all Group 4 and 5 animals.

In the heart, there was focal or multifocal myocardial degeneration/fibrosis in most Group 4 males and females and in several Group 5 animals, notably in males. The incidence of this finding was not dose-dependent.

In the lung, there were foci of foamy histiocytes in several Group 5 animals.

In the male genital tract there was atrophy in the testis and seminal vesicle in Group 4 and 5 animals and in the prostate in Group 5 males. In the female genital tract atrophy was noted in the ovary, uterus and vagina of most Group 4 and 5 animals.

In the stomach, there was an increase in hyperkeratosis in Group 4 and 5 males and in Group 5 females when compared with controls.

In addition, there were diffuse atrophic changes in the haemolymphoreticular system, adrenal, skin, femur, muscle, mammary, salivary and harderian gland and adipose tissue affecting predominantly Group 5 and, to a lesser extent, Group 4 animals.

The most sensitive target organs were the liver in males and the kidney in females and the approximate no observable effect level (NOEL) was in Group 2.

Conclusion

In conclusion, the main target organs (excluding effects secondary to bodyweight and growth retardation) were heart, liver and kidney. The approximate no-observable-effect-level (NOEL) for histopathological change was Group 2 (500 ppm equivalent to a mean of 103 and 96 mg/kg/day for males and females respectively). However, no NOEL could be established for the study because of haematological and clinical chemistry changes occurring at all dose levels.

OBJECTIVES AND PROCEDURES

Introduction

The purpose of this study was to determine the toxicity of the test article, [ ], following oral (dietary) administration to the mouse for 13 weeks and to help provide a basis for the selection of doses for a carcinogenicity study in this species.

The experimental start date was 28 May 2003, animals were first dosed on 6 June 2003 and the final necropsy occurred on 9 September 2003. The experimental end date will be inserted in the final report. The study completion date is the date the final report is signed by the Study Director.

Protocol Adherence

The study was conducted in accordance with the protocol, protocol amendments and minor deviations as presented in Appendix 1. None of the deviations affected the integrity or outcome of the study.

Regulatory test guidelines

This study is designed to meet the known requirements of the Japanese MAFF Agrochemical Test Guidelines 2001 (90 day oral toxicity (2-1-9)). These requirements and guidelines are current at the time the protocol was issued. The protocol is also expected to meet the requirements of the US EPA (OPPTS 870.3100) and the Organisation for Economic Co-operation and Development (OECD 408, 1998).

Test and Control Articles

The test article, a white powder, was supplied as follows:

Test article	Covance lot number	Batch number	Quantity supplied (g)	Purity (%)	Expiry Date	Date of receipt at Covance
[ ]	1	RCT301	5000	99.1	20 February 2004	21 March 2003

A Certificate of Analysis for this material is presented in Appendix 11.

When not in use the test article was stored in a sealed container, at room temperature.

The control article and the vehicle for the test article was SQC Rat and Mouse Maintenance Diet No 1, Expanded (Ground Fine) supplied by Special Diet Services Ltd., Witham.

Test System and Study Design
Male and female B6C3F1 strain mice were obtained from Charles River UK Ltd., Margate on 28 May 2003. Animals were assigned to study groups as follows:

Group number	Group description	Group code	Animal numbers	
			Male	Female
1	Control	Buff	1-12	61-72
2	Low	Green	13-24	73-84
3	Intermediate I	Blue	25-36	85-96
4	Intermediate II	Yellow	37-48	97-108
5	High	Pink	49-60	109-120

At initiation of treatment, the animals were four to five weeks old; the males weighed from 13.6 to 21.9 g, and the females weighed from 11.6 to 19.3 g.

Animals were identified using an implanted microchip identification device coded with a number before initiation of treatment.

Dose levels were selected by the Sponsor.

Rationale for Route of Administration
The oral route of administration was chosen because it is a possible route of human exposure.

Study Procedures
All deviations from protocol (annotated #) are documented in Appendix 1.

Procedure	Frequency/Comment
Dose Preparation	
Vehicle/Control	Used as supplied by Special Diet Services Ltd., Witham
Dosing Formulations	Prepared weekly. The test article was sieved through a 355um sieve then weighed into a pre-labelled beaker. The test article was then transferred to a mortar, the beaker was rinsed out with diet and the rinsings were added to the mortar. The test article/diet mix in the mortar was mixed with a pestle until homogenous and more diet was gradually added to the test article until the capacity of the mortar was reached. This mix was added to the bulk diet, the mortar was rinsed with more diet and the rinsings were added to the bulk. The formulation was then mixed on an electric mixer for five minutes.
Administration#	Orally by incorporation into the diet. Daily for a minimum of 13 weeks.
Dose Analysis	
Method	High Performance Liquid Chromatography
Concentration Analysis#	Weeks 1 and 13. In addition, samples of the diet prepared at the reduced dose level for Group 5 were analysed in Week 3.
Homogeneity and	Performed on study 535/104 for the batch of test article

Procedure	Frequency/Comment
Stability[#]	used on this study, at concentrations of 100 and 20000ppm.
Inlife Procedures	
Clinical Observations	Twice daily (am/pm) for routine health checks and daily for signs of ill health or overt toxicity
Physical Examinations	Weekly
Ophthalmic Examinations	Pre-treatment (all animals) and Week 12 (control and high dose groups)
Body Weights	Week –1, before treatment on the first day of treatment, at weekly intervals and before necropsy.
Food Consumption	Weekly from Week –1.
Haematology	At necropsy
Clinical Chemistry	At necropsy
Urinalysis	Week 13
Anatomic Pathology	
Necropsy	All animals including decedents; terminal kill males on Day 95 and females on Day 96.
Organ weights	Protocol specified organs weighed
Tissue Preservation	Protocol specified tissues preserved in the appropriate fixative.
Histopathology	Protocol specified tissues processed and examined
Record Retention	
	The raw data, documentation, records, specimens, protocol, and final report generated as a result of this study will be archived in the storage facilities of Covance, Harrogate, UK. At least ten years after submission of the final report, the Covance Archives staff will contact the Sponsor. At that time, the Sponsor may choose to have the aforementioned articles returned, archived for an additional period of time, or disposed of by Covance. A fee will be charged based on the option selected by the Sponsor. Specimens requiring storage deep frozen are specifically excluded from the above. These will be retained for as long as the quality of the material permits evaluation but for no longer than three months after issue of the final report.

Statistical Evaluation

Data type	Statistical analysis procedure/Comment[a]
Main Study	**Groups 1 to 5**
Body Weight	One-way ANOVA, dose response and Dunnett's (Procedure I) on body weight gains over specified intervals.
Food Consumption[b]	One-way ANOVA, dose response and Dunnett's (Procedure I).
Haematology	Two-way ANOVA, dose response and Dunnett's (Procedure II).
Clinical Chemistry	Two-way ANOVA, dose response and Dunnett's

Procedure	Frequency/Comment
	(Procedure II). Kruskal-Wallis, Terpstra-Jonckheere and Wilcoxon rank sum test (Procedure III) for parameters with values above or below the limit of the assay.
Urine Analysis[b]	One-way ANOVA, dose response and Dunnett's (Procedure I).
Necropsy Body Weight	One-way ANOVA, dose response and Dunnett's (Procedure I).
Organ Weights	ANCOVA and Dunnett's (Procedure IV) using the necropsy body weight as covariate. One-way ANOVA, dose response and Dunnett's (Procedure I) on absolute organ weight and organ to necropsy body weight ratio where there was significant heterogeneity among the gradients.

a See Appendix 1 for details of statistical procedures.
b Analysis performed on data recorded for each cage.

Major Computer Systems	
Function	**Application** - (Version numbers of the systems will be held on file at Covance)
Scheduling	CMS (Covance Management System)
Formulations	Talisman
Formulations Analysis	Atlas/Talisman
In-life data collection	Connex
Clinical pathology	Clinaxys
Post-life data collection	Xybion
Report generation and statistical analysis	Deliver/Office 97

INTERPRETATION AND CONCLUSION

Dose Analysis
Appendix 2

Test article was formulated into ground diet for administration to the study animals.

Formulations from Weeks 1, 3 and 13 were analysed to determine the achieved concentration. Results were within the range 85 to 110%.

The analytical procedure was validated under study number 535/102.

Mortality

There were three Group 5 male decedents during the study. The animals were killed in Week 2 because of treatment-related poor condition.

In addition to findings associated with terminal events, the range of macroscopic and microscopic findings in decedents was generally similar to those in animals surviving to the terminal kill.

Clinical signs
Appendix 3

Group 5 animals did not tolerate 10,000 ppm and the dose level was reduced to 7,500 ppm on Day 15 (Group 5 animals were taken off treatment from Days 12-14).

At 10, 000 ppm, three Group 5 males were hunched, thin, sluggish and cold, and two of these showed tremors (attributed to general condition and weakness) and semi-closed eyes during Week 2. These three males were killed on humane grounds in Week 2. Four other Group 5 males were also hunched and three showed thinness and one showed raised hair. Group 5 females showed similar signs from Week 5.

The reduction of the Group 5 dose level to 7,500 ppm produced an improvement in condition. Occasional signs of thin, hunched, sluggish or cold were recorded for both Group 5 and Group 4 animals with the incidences increasing as the duration of study progressed, particularly in females.

There were no clinical signs in Groups 3 or 2 that were considered to be related to treatment.

Body weight
Figure 1, Figure 2, Table 1, Table 2, Appendix 4

Group 5 animals showed weight loss during the first week of treatment. There was recovery in the males following the brief period off dose but whilst the reduction in dose level to 7,500 ppm ameliorated weight loss there was only marginal improvement in weight gain from Week 8 with stasis during the remainder of the study.

Body weight loss and reduced weight gain also occurred to a lesser degree in Group 4 animals.

There were no effects of treatment at lower dose levels.

Food consumption
Figure 3, Figure 4, Table 3, Table 4, Appendix 5

Food consumption patterns were highly variable throughout the study, but there was some evidence of lower consumption in Group 5 males during the first week with lower consumption in both Group 5 and 4 females throughout the study.

There were no consistent effects at lower dose levels.

Compound consumption
Table 5

Compound consumption was affected by the effects of treatment on bodyweight gain. However, the approximate means in mg/kg were 103 and 96 for Group 2 males and females respectively; 206 and 202 for Group 3 males and females respectively; 1421 and 1228 for Group 4 males and females respectively; and 3186 and 2478 for Group 5 males and females respectively.

Ophthalmoscopy
There were no effects of treatment.

Haematology
Table 6, Appendix 6

There were numerous statistically significant changes in haematological parameters extending to the lowest dose (Group 2).

There was a treatment-related increase in red cell distribution width (%) in all treated male groups. There was also an overall treatment-related increase in mean cell volumes and reduction in mean cell haemoglobin concentration in males in all treatment groups. In addition, Groups 5, 4 and 3 males and females showed increased reticulocytes (% and absolute) and haemoglobin distribution width. There were reductions in haemoglobin in Group 5 males and increased red cell distribution widths in Group 5 females. There were also reduced red blood cells in Groups 5 and 4 males.

There was also an overall treatment-related increase in plateletcrit in males. There was increased platelet distribution widths and decreased platelets in Group 5 females. There were also higher mean platelet volumes in Groups 4 and 5 males and females.

There was a dose-related decrease in lymphocytes (% white blood cells) and a treatment-related increase in neutrophils (% white blood cells) in all treated female groups (these findings were also present in Group 5 males). Group 5, 4 and 3 females showed increased neutrophils.

Other changes in haematological parameters were considered of equivocal toxicological significance.

Clinical chemistry
Table 7, Appendix 7

There was a treatment-related statistically significant reduction in triglycerides in males in all treatment groups. In Groups 5 and 4 animals there was increased alkaline phosphatase, sodium and chloride and in Groups 5 and 4 females there was increased cholesterol. There was a trend for higher total bilirubin in Groups 3, 4 and 5.

Other changes in clinical chemistry parameters were considered of equivocal toxicological significance.

Urinalysis
Table 8, Appendix 8

Group 5 and Group 4 males showed a dose related statistically significant reduction in specific gravity. There was a dose-related trend for decreased urine volumes in females (access to water was provided for females during urine collection due to apparent dehydration in males after the procedure). There was blood and ketones in urine of Group 4 and 5 animals.

Organ weights
Table 9, Appendix 9

Absolute testes/epididymides and thymus weights were lower in Groups 5 and 4 males which was largely attributed to the effects of treatment on bodyweights (however, weights were still lower after bodyweight adjustment indicating an effect on development). Group 5 and 4 females showed reduced brain and ovary weights, which was also attributed to effects on growth and bodyweight.

Liver weights were increased, but the effects on bodyweight confounded the response in absolute weights particularly in males. However, when corrected for the effects of bodyweight, relative liver weights were clearly increased, which was significant in Groups 3, 4 and 5 males and females.

Macroscopic findings
Table 10, Table 11, Appendix 10

Most tissues were macroscopically unremarkable and the findings seen were generally consistent with the usual pattern of findings in animals of this strain and age.

In addition, two Group 5 females were recorded as thin. There was large liver in several Group 4 males and Group 5 females. Mottled liver was seen in several Group 5 males and females. Pale kidney and pale focus in the lung were noted in individual Group 5 high dose males. Testis, epididymis and prostate were recorded as small in Group 5 males and seminal vesicle was small in Group 4 and 5 males. Small ovary and thin uterus was recorded in several Group 4 and 5 females. Several organs of the haemolymphoreticular system such as spleen, mesenteric lymph node and thymus were recorded as small in a few Group 5 animals. Small spleen was also noted in a few Group 4 dose females and small thymus was seen in a Group 2 male. These changes generally correlated with findings seen microscopically.

There were no other macroscopic findings due to effects of the test article.

Microscopic findings
Table 12, Table 13, Appendix 10

Microscopic findings in controls were generally infrequent, of a minor nature and consistent with the usual pattern of findings in animals of this strain and age.

Additionally, in treated animals, the main findings were in the liver, kidney, heart, lung and genital tract. There were also diffuse atrophic changes in the

haemolymphoreticular system, adrenal, skin, femur, muscle, mammary, salivary and harderian gland and adipose tissue.

In the liver, there was centrilobular hypertrophy/vacuolation in several Group 3 males and in all Group 4 and 5 animals. This finding was characterised by large hepatocytes with eosinophilic cytoplasm containing very fine well circumscribed vacuoles resulting in a slightly foamy and/or granular appearance of the cytoplasm. Oval cell hyperplasia was seen in several Group 5 animals. This finding was characterised by an increase in the numbers of periportal oval cells lining the sinusoids and was in subcapsular areas associated with formation of small bile ductules. A small amount of brown pigment was noted in sinusoidal lining cells of several Group 5 animals notably in females. There was an increased incidence of single cell necrosis/apoptosis in Group 5 females and, to a lesser extent, in Group 5 males when compared with the controls. In addition, an increase in glycogen vacuolation was recorded in Group 4 and 5 males and in Group 3, 4 and 5 females when compared with the controls. The incidence of this change was not dose-dependent. This finding was characterised by variably sized poorly circumscribed vacuoles resulting in a feathery appearance of the cytoplasm. There was a decrease in the incidence of inflammatory foci frequently present in the liver of mice in Group 5 and, to a lesser extent, in Group 4 animals when compared with the controls. These variations in glycogen vacuolation and inflammatory cell foci were considered to be of no toxicological significance.

Group incidence of selected microscopic findings in the liver

		Males					Females				
		1M	2M	3M	4M	5M	1F	2F	3F	4F	5F
Tissue and finding	Level (ppm)	0	500	1000	5000	10000/7500	0	500	1000	5000	10000/7500
Liver	No. examined:	12	12	12	12	9	12	12	12	12	12
centrilobular hypertrophy/vacuolation	Incidence:	0	0	6	12	9	0	0	0	12	12
oval cell hyperplasia	Incidence:	0	0	0	0	4	0	0	0	0	7
pigment	Incidence:	0	0	0	0	5	0	0	0	0	9
single cell necrosis/apoptosis	Incidence:	0	0	2	0	3	2	2	0	2	7
glycogen vacuolation	Incidence:	0	0	1	12	3	1	1	6	11	8
inflammatory cell foci	Incidence:	6	5	4	2	0	9	11	10	3	0

In the kidney, cortical tubular nephropathy was noted in several Group 3 animals, notably in females, and in all Group 4 and 5 animals. This finding was characterised by degeneration and desquamation of tubular epithelial cells and early regeneration with minor tubular basophilia and nuclear crowding. In some animals, it was associated with a decrease in tubular vacuolation normally present especially in male mice of this age, and with occasional cytomegaly and karyomegaly. One Group 2 female had a solitary degenerative/regenerative tubule in the cortex of one kidney. This minor tubular nephropathy was of recent origin and possibly due to unspecific causes such as the stress of terminal procedures. It was considered to be probably of little or no toxicological significance as a single regenerating tubule was also found in one control male.

In the heart, there was myocardial degeneration/fibrosis in most Group 4 animals and in several Group 5 animals notably in males. The incidence of this change was not dose-dependent. This finding was characterised by foci or areas of degenerating cardiomyofibres with dark eosinophilic sarcoplasm, loss of cross striation, vacuolation and necrosis and was associated with inflammatory cell infiltration and early fibrosis.

In the lung, there were minor focal or multifocal accumulations of foamy histiocytes, usually in subpleural alveolar spaces, in several Group 5 males and females.

Group incidence of selected microscopic findings in the kidney, heart and lung

		Males					Females				
		1M	2M	3M	4M	5M	1F	2F	3F	4F	5F
Tissue and finding	Level (ppm)	0	500	1000	5000	10000/7500	0	500	1000	5000	10000/7500
Kidney	No. examined:	12	12	12	12	9	12	12	12	12	12
cortical tubular nephropathy	Incidence:	1	0	1	12	9	0	1	9	12	12
Heart	No. examined:	12	0	12	12	9	12	0	12	12	12
myocardial degeneration/ fibrosis	Incidence:	0	0	0	11	7	0	0	0	11	2
Lung	No. examined:	12	0	12	12	9	12	0	12	12	12
foamy histiocytes	Incidence:	0	0	0	0	5	0	0	0	0	3

In the male genital tract, there was atrophy in the testis and seminal vesicle in Group 4 and 5 animals and in the prostate in Group 5 males. Testicular atrophy was characterised by germ cell degeneration and exfoliation and was associated with Leydig cell atrophy. It was accompanied by cellular debris and/or oligospermia in the epididymis. The atrophy in the seminal vesicle and prostate was characterised by small acinar cells with little cytoplasm and a generalised reduction in gland size.

Group incidence of selected microscopic findings, male genital tract

		Males					Females				
		1M	2M	3M	4M	5M	1F	2F	3F	4F	5F
Tissue and finding	Level (ppm)	0	500	1000	5000	10000/7500	0	500	1000	5000	10000/7500
Testis	No. examined:	12	0	12	12	9	-	-	-	-	-
tubular atrophy	Incidence:	0	0	0	12	9					
Epididymis	No. examined:	12	0	12	12	9	-	-	-	-	-
oligospermia	Incidence:	0	0	0	0	6					
cellular debris	Incidence:	0	0	0	4	8					
Seminal vesicle	No. examined:	12	0	12	12	9	-	-	-	-	-
atrophy	Incidence:	0	0	0	1	8					
Prostate	No. examined:	12	0	12	12	9	-	-	-	-	-
atrophy	Incidence:	0	0	0	0	2					

In the female genital tract, there was atrophy in the ovary, uterus and vagina in most Group 4 and all Group 5 animals. The ovarian atrophy was characterised by a decreased number of viable follicles, an increase in atretic follicles and absence of

corpora lutea. In the uterus, atrophy was characterised by a decrease in size and number of endometrial glands resulting in a decrease in the overall size of the uterus. In addition, the uterus was acyclic in all Group 4 and 5 females. In the vagina atrophy was characterised by a decrease in epithelium and connective tissue.

Group incidence of selected microscopic findings, female genital tract

		Males					Females				
		1M	2M	3M	4M	5M	1F	2F	3F	4F	5F
Tissue and finding	Level (ppm)	0	500	1000	5000	10000/7500	0	500	1000	5000	10000/7500
Ovary	No. examined:	-	-	-	-	-	12	0	12	11	10
atrophy	Incidence:						0	0	0	11	10
Uterus	No. examined:	-	-	-	-	-	12	0	12	12	12
atrophy	Incidence:						0	0	0	12	12
acyclic	Incidence:						0	0	0	12	12
Vagina	No. examined:	-	-	-	-	-	12	0	12	12	12
atrophy	Incidence:						0	0	0	10	12

In addition, there was hyperkeratosis in the stomach and atrophic changes were noted in organs of the haemolymphoreticular system such as the femoral bone marrow, spleen, mesenteric lymph node and thymus, in the adrenal, skin, femur, muscle, mammary, salivary and harderian gland and adipose tissue.

In the stomach, an increase in hyperkeratosis was noted in Group 4 and 5 males and in Group 5 females when compared with the controls. This finding was characterised by an increase in keratin layers in the forestomach.

In the femur, there was marrow atrophy in several Group 5 animals, notably in females. This finding was characterised by a decrease in cellularity and a relative increase in adipose cells. In the spleen, there was atrophy in several Group 4 and all Group 5 animals. This finding was characterised by a decreased cellularity and size of red and white pulp. Atrophy was also noted in the mesenteric lymph node of several Group 4, all Group 5 animals and in the mandibular lymph node of most Group 5 animals, notably in females. Atrophy in the thymus was seen in most Group 5 animals and in several Group 4 animals. In the lymph nodes, atrophy was characterised by a decrease in size and/or numbers of active follicular germinal centres and of the paracortex. Atrophy in the thymus was characterised by a considerable decrease in the numbers of lymphocytes in cortex and medulla resulting in a reduction in the overall size of the thymus.

Group incidence of atrophy in femur, spleen, lymph nodes and thymus

		Males					Females				
		1M	2M	3M	4M	5M	1F	2F	3F	4F	5F
Tissue and finding	Level (ppm)	0	500	1000	5000	10000/7500	0	500	1000	5000	10000/7500
Femur	No. examined:	12	0	12	12	9	12	0	12	12	12
marrow atrophy	Incidence:	0	0	0	0	1	0	0	0	0	6
Spleen	No. examined:	12	12	12	12	9	12	12	12	12	12
atrophy	Incidence:	0	0	0	4	9	0	0	0	8	12
Mesenteric lymph node	No. examined:	12	12	11	12	8	12	12	12	10	12
atrophy	Incidence:	0	0	0	4	8	0	0	0	5	11
Mandibular lymph node	No. examined:	12	0	12	10	7	12	0	12	12	10
atrophy	Incidence:	0	0	0	0	4	0	0	0	0	9
Thymus	No. examined:	12	1	12	12	8	12	0	12	12	11
atrophy	Incidence:	0	0	0	6	8	0	0	0	4	11

In the adrenal of all Group 4 and 5 females there was atrophy of the cortical X-zone. This finding was characterised by a decrease in the size and number of cells and in the overall width of the X-zone normally present in the adrenal of female mice at this age.

In the skin, there was an increased incidence of adnexal atrophy in Group 4 and 5 males and in Group 5 females when compared with the controls and lower dose groups. This finding was characterised by small cells in the hair sheaths and by small sebaceous glands.

In the femur, there was osteochondral atrophy in several Group 4 and most Group 5 animals. This finding was characterised by large vacuolar as well as small chondrocytes in the articular surface of the knee joint, small chondrocytes in the growth plate and a decrease in epiphyseal bone resulting in a decrease in size and in distortion of the articular surface and the growth plate.

In the muscle, atrophy was noted in most Group 4 and 5 animals. This finding was characterised by small myofibre size.

In the mammary gland, there was atrophy in most Group 4 and all Group 5 females. This finding was characterised by few acini lined by small epithelial cells.

In the salivary gland, degranulation/atrophy was seen in a few Group 4 males, in most Group 5 males and in all Group 4 and 5 females. This change was characterised by depletion of secretory granules normally present especially in secretory ducts and a decrease in size of the acinar epithelial cells.

In the harderian gland, atrophy was noted in most Group 5, in a few Group 4 and in individual Group 3 animals. This finding was characterised by a decreased size of the vacuoles normally present in acinar cell cytoplasm and a small size of the acinar epithelial cells.

In the adipose tissues throughout the body, atrophy was noted in most Group 4 and all Group 5 males and females. This change was characterised by small sized lipocytes in

the white and brown adipose tissue especially in abdominal cavity and subcutis, and by increased eosinophilia notably in the white adipose tissue.

Group incidence of atrophy in selected organs

		Males					Females				
		1M	2M	3M	4M	5M	1F	2F	3F	4F	5F
Tissue and finding	Level (ppm)	0	500	1000	5000	10000/7500	0	500	1000	5000	10000/7500
Muscle	No. examined:	12	0	12	12	9	12	0	12	12	12
atrophy	Incidence:	0	0	0	8	9	0	0	0	7	11
Mammary gland	No. examined:	-	-	-	-	-	12	0	11	11	10
atrophy	Incidence:						0	0	0	10	10
Adrenal	No. examined:	12	0	12	12	9	12	0	12	12	12
cortical X-zone atrophy	Incidence:	0	0	0	0	0	0	0	0	12	12
Salivary gland	No. examined:	12	1	12	12	9	12	0	12	12	12
degranulation/atrophy	Incidence:	1	0	1	2	8	0	0	0	12	12

There were no other microscopic findings due to effects of the test article.

In summary, the most sensitive target organs were the liver in males and the kidney in females and the approximate no observable effect level (NOEL) was in Group 2.

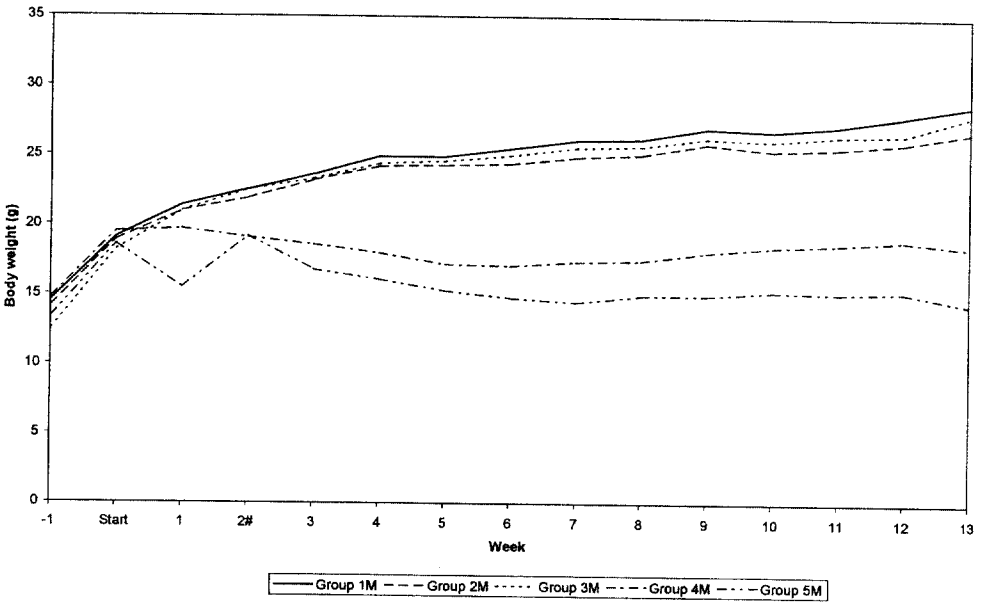
CONCLUSION

In conclusion, the main target organs (excluding effects secondary to bodyweight and growth retardation) were heart, liver and kidney. The approximate no-observable-effect-level (NOEL) for histopathological change was Group 2 (500 ppm equivalent to a mean of 103 and 96 mg/kg/day for males and females respectively). However, no NOEL could be established for the study because of haematological and clinical chemistry changes occurring at all dose levels.

FIGURES

Figure 1
Group mean body weights - males

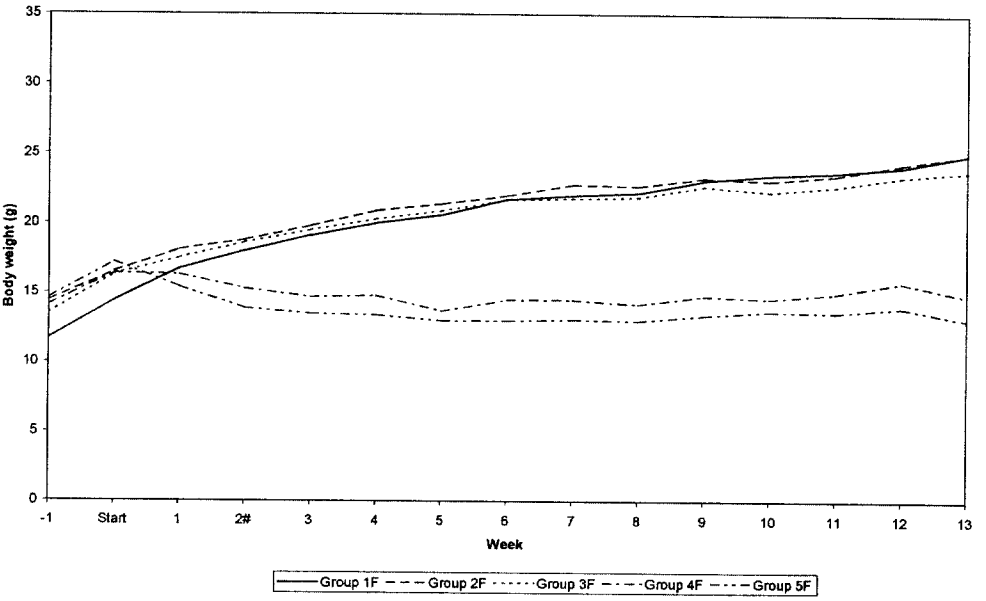
Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500



Group 5 animals kept off-dose on Days 12 to 14 then recommenced dosing at 7500ppm on Day 15

Figure 2
Group mean body weights - females

Test Article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500



Group 5 animals kept off-dose on Days 12 to 14 then recommenced dosing at 7500ppm on Day 15

Figure 3
Group mean food consumption - males

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

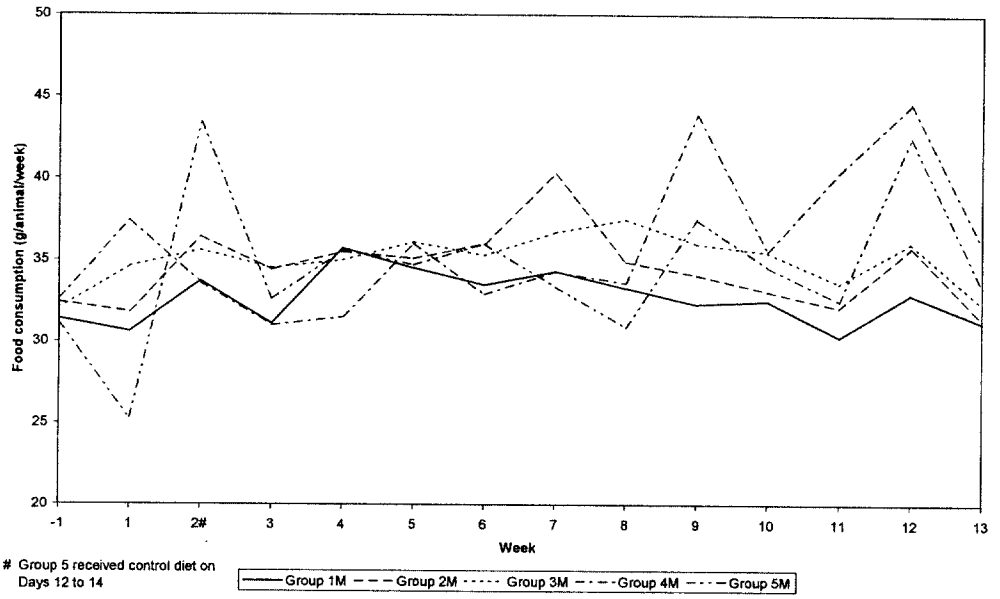
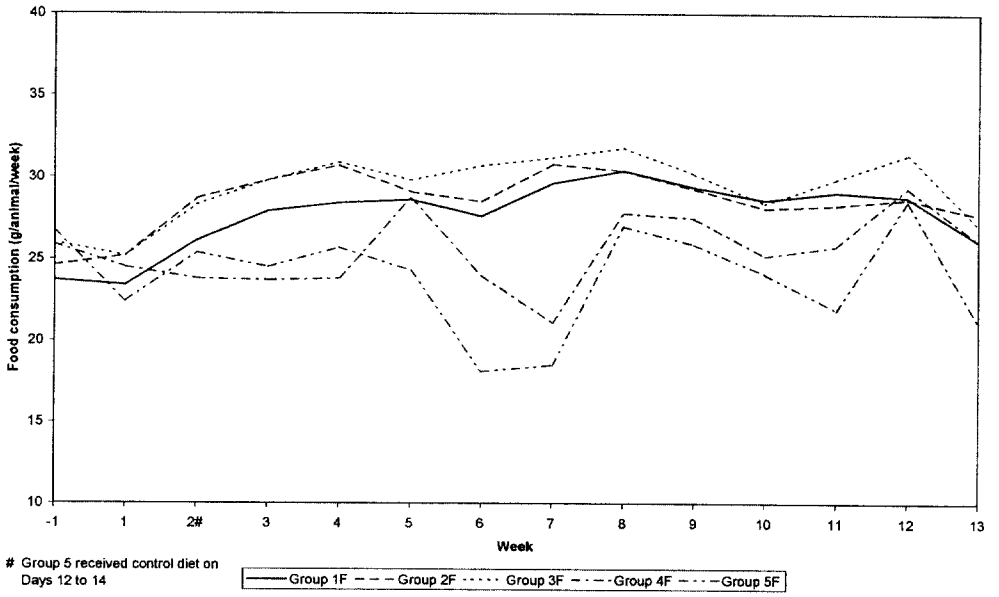


Figure 4
Group mean food consumption - females

Test Article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500



TABLES

Table 1
Group mean body weights

Test Article	Control		[	]	
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

Week		Mean body weights (g) for Group: 1M	2M	3M	4M	5M
-1	Mean	14.5	14.2	12.5	14.8	13.4
	SD	2.83	3.15	3.01	2.38	3.16
Start	Mean	19.1	18.9	18.2	19.5	18.6
	SD	1.96	1.64	2.03	1.33	2.85
1	Mean	21.4	21.0	21.0	19.7	15.5
	SD	1.29	1.26	1.19	1.52	2.84
2	Mean	22.5	21.9	22.5	19.1	19.2#
	SD	1.37	1.41	0.94	1.42	2.41
3	Mean	23.6	23.2	23.3	18.6	16.8
	SD	1.40	1.35	0.79	1.29	2.07
4	Mean	24.9	24.2	24.4	18.0	16.1
	SD	1.46	1.07	0.84	1.35	1.62
5	Mean	24.9	24.3	24.6	17.2	15.3
	SD	1.50	1.12	0.76	1.36	1.52
6	Mean	25.5	24.4	25.0	17.1	14.8
	SD	1.72	1.24	0.74	1.48	1.53
7	Mean	26.1	24.9	25.6	17.4	14.5
	SD	1.72	1.23	0.91	1.46	1.60
8	Mean	26.2	25.1	25.7	17.5	15.0
	SD	1.80	1.24	0.82	1.54	1.65
9	Mean	27.0	25.9	26.3	18.1	15.0
	SD	1.95	1.44	1.13	1.56	1.54
10	Mean	26.8	25.4	26.1	18.5	15.3
	SD	2.27	1.77	1.29	1.70	1.31
11	Mean	27.2	25.6	26.5	18.7	15.2
	SD	2.28	1.44	1.29	1.73	1.49
12	Mean	27.9	26.0	26.6	19.0	15.3
	SD	2.46	1.64	1.19	1.70	1.57
13	Mean	28.7	26.8	28.0	18.5	14.4
	SD	2.01	1.56	1.24	1.85	1.29

Group 5 animals kept off-dose on Days 12 to 14 then recommenced dosing at 7500ppm on Day 15

Table 1
Group mean body weights

Test Article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

Week		Mean body weights (g) for Group: 1F	2F	3F	4F	5F
-1	Mean	11.7	14.4	13.5	14.1	14.6
	SD	2.45	2.63	2.63	2.26	1.43
Start	Mean	14.4	16.5	16.3	16.4	17.2
	SD	1.90	2.15	1.61	1.70	0.95
1	Mean	16.7	18.1	17.5	16.3	15.4
	SD	1.26	1.74	1.14	1.23	0.94
2	Mean	18.0	18.8	18.6	15.3	13.9#
	SD	1.29	1.74	1.24	1.13	0.80
3	Mean	19.1	19.8	19.5	14.7	13.5
	SD	1.06	1.63	1.04	0.94	0.87
4	Mean	20.0	20.9	20.3	14.8	13.4
	SD	1.58	1.53	0.96	1.01	0.98
5	Mean	20.6	21.4	20.9	13.7	13.0
	SD	1.32	1.69	0.87	1.00	1.01
6	Mean	21.7	22.0	21.7	14.5	13.0
	SD	1.41	1.75	0.93	0.94	0.90
7	Mean	22.0	22.8	21.8	14.5	13.1
	SD	1.21	1.68	0.87	1.08	0.94
8	Mean	22.2	22.7	21.9	14.2	13.0
	SD	1.42	1.49	0.74	0.96	0.93
9	Mean	23.1	23.3	22.7	14.8	13.4
	SD	1.38	1.62	0.71	1.01	1.14
10	Mean	23.5	23.1	22.3	14.6	13.7
	SD	1.22	1.82	0.79	0.70	1.20
11	Mean	23.7	23.5	22.7	15.0	13.6
	SD	1.64	1.61	0.97	0.83	0.94
12	Mean	24.1	24.3	23.4	15.8	14.0
	SD	1.64	2.16	1.31	0.94	1.10
13	Mean	25.0	25.0	23.8	14.8	13.1
	SD	1.43	1.62	0.88	0.88	1.17

Group 5 animals kept off-dose on Days 12 to 14 then recommenced dosing at 7500ppm on Day 15

Table 2
Group mean body weight gains

Test Article	Control		[	]	
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

Week		Mean body weight gain (g) for Group: 1M	2M	3M	4M	5M	Statistics
Start-4	Mean	5.8	5.3	6.2	-1.5***	-2.7***	A
	SD	2.04	1.56	1.66	0.55	2.07	
4-13	Mean	3.8	2.6**	3.5	0.5***	-1.7***	A
	SD	0.87	0.72	1.09	1.01	0.78	
Start-13	Mean	9.6	7.9	9.7	-1.0***	-4.4***	A
	SD	2.74	1.75	2.45	1.14	2.43	
Week		1F	2F	3F	4F	5F	Statistics
Start-4	Mean	5.6	4.4*	4.0**	-1.6***	-3.8***	A
	SD	1.15	1.02	1.19	1.03	0.68	
4-13	Mean	5.0	4.1*	3.5***	-0.0***	-0.3***	A
	SD	0.83	0.60	0.88	0.79	0.74	
Start-13	Mean	10.6	8.5**	7.5***	-1.6***	-4.1***	A
	SD	1.66	1.03	1.84	1.65	0.68	

* P<0.05
** P<0.01
*** P<0.001

A = ANOVA, dose response and Dunnett's

Table 3
Group mean food consumption

Test Article	Control		[	]	
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

Week		Mean food consumption (g/animal/week) for Group: 1M	2M	3M	4M	5M
-1	Mean	31.4	32.4	32.0	32.6	31.1
	SD	2.21	1.83	2.91	1.42	4.26
1	Mean	30.6	31.8	34.6	37.4	25.3
	SD	1.91	2.08	3.52	6.13	4.76
2	Mean	33.7	36.4	35.6	33.6	43.4#
	SD	3.79	4.07	3.78	5.98	8.80
3	Mean	31.1	34.4	34.5	31.0	32.6
	SD	1.90	2.93	2.96	3.74	5.90
4	Mean	35.7	35.5	35.0	31.5	35.6
	SD	4.06	3.79	3.64	6.23	7.52
5	Mean	34.5	35.1	36.1	36.0	34.7
	SD	3.42	2.65	5.24	6.16	8.93
6	Mean	33.5	36.0	35.3	32.9	36.0
	SD	3.14	5.01	3.15	5.79	9.65
7	Mean	34.3	40.3	36.7	34.3	33.4
	SD	3.60	6.54	2.92	6.54	9.26
8	Mean	33.3	34.9	37.5	33.6	30.9
	SD	3.16	2.19	3.58	4.08	5.93
9	Mean	32.3	34.1	36.0	43.9	37.5
	SD	2.06	2.38	2.78	7.78	9.60
10	Mean	32.5	33.1	35.5	35.6	34.6
	SD	2.92	2.90	5.79	7.34	9.45
11	Mean	30.3	32.1	33.6	40.4	32.5
	SD	1.91	2.19	2.82	6.37	8.04
12	Mean	32.9	35.8	36.1	44.6	42.5
	SD	2.85	3.29	5.36	6.73	8.58
13	Mean	31.2	31.4	32.3	36.0	33.4
	SD	2.09	1.71	1.27	6.08	6.36

Group 5 received control diet on Days 12 to 14

Table 3
Group mean food consumption

Test Article	Control		[	]	
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

Week		Mean food consumption (g/animal/week) for Group: 1F	2F	3F	4F	5F
-1	Mean	23.7	24.6	26.0	25.9	26.7
	SD	0.51	2.25	0.42	1.07	0.58
1	Mean	23.4	25.2	25.2	24.5	22.4
	SD	0.76	1.22	0.69	1.50	4.64
2	Mean	26.1	28.7	28.3	23.8	25.4#
	SD	0.91	2.05	0.73	3.42	4.43
3	Mean	27.9	29.8	29.8	23.7	24.5
	SD	1.10	2.55	2.29	1.48	1.77
4	Mean	28.4	30.7	30.9	23.8	25.7
	SD	0.89	3.17	2.44	1.23	5.08
5	Mean	28.6	29.1	29.8	28.7	24.3
	SD	0.50	1.62	1.73	6.92	7.09
6	Mean	27.6	28.5	30.7	24.0	18.1
	SD	1.00	1.27	5.08	2.46	5.19
7	Mean	29.6	30.8	31.2	21.1	18.5
	SD	1.42	2.14	3.07	2.38	2.51
8	Mean	30.4	30.4	31.8	27.8	27.0
	SD	0.65	1.97	1.98	3.15	2.92
9	Mean	29.4	29.3	30.2	27.5	25.9
	SD	1.68	2.45	2.58	2.82	4.70
10	Mean	28.6	28.1	28.4	25.2	24.1
	SD	1.13	0.95	1.67	1.23	4.88
11	Mean	29.1	28.3	29.9	25.8	21.9
	SD	1.68	0.87	3.16	1.67	3.94
12	Mean	28.8	28.7	31.4	29.4	28.5
	SD	0.66	1.91	3.49	4.41	4.68
13	Mean	26.1	27.7	27.1	26.1	21.1
	SD	0.96	0.58	2.12	3.89	2.70

Group 5 received control diet on Days 12 to 14

Table 4
Group mean food consumption over selected periods

Test Article	Control		[	]	
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

Week		Mean food consumption (g/animal/week) for Group: 1M	2M	3M	4M	5M	Statistics
1-4	Mean	32.8	34.5	34.9	33.4	34.2	A
	SD	2.28	2.75	3.02	3.70	5.97	
5-13	Mean	32.7	34.8	35.4	37.5**	35.0	A
	SD	2.13	2.39	2.02	3.69	6.71	
1-13	Mean	32.7	34.7	35.3	36.2*	34.8	A
	SD	2.02	2.16	1.94	3.21	6.29	
Week		1F	2F	3F	4F	5F	Statistics
1-4	Mean	26.4	28.6	28.5	23.9	24.5	DR** A
	SD	0.34	1.85	1.40	1.22	2.63	
5-13	Mean	28.7	29.0	30.1	26.2	23.3***	A
	SD	0.80	1.10	2.40	1.23	1.83	
1-13	Mean	28.0	28.9	29.6	25.5	23.6**	A
	SD	0.62	1.19	2.09	1.04	1.65	

* P<0.05
** P<0.01
*** P<0.001
DR = significant dose response test

A = ANOVA, dose response and Dunnett's

Table 5
Group mean compound consumption

Test Article	Control		[	]	
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

Week		Mean compound consumption (mg/kg/day) for Group: 2M	3M	4M	5M
1	Mean	114.197	254.459	1368.065	2163.300
2	Mean	121.605	234.507	1240.626	3560.806
3	Mean	109.349	215.649	1180.803	2590.300
4	Mean	107.324	209.808	1222.876	3111.701
5	Mean	103.904	210.708	1467.572	3160.601
6	Mean	106.233	203.295	1373.534	3431.255
7	Mean	117.922	207.137	1420.773	3243.993
8	Mean	100.053	208.643	1380.160	2977.461
9	Mean	95.627	197.396	1763.790	3599.713
10	Mean	92.496	193.794	1397.163	3296.368
11	Mean	90.255	182.787	1561.015	3057.365
12	Mean	99.643	194.145	1711.421	4009.968
13	Mean	85.170	169.284	1392.977	3226.333
Week		2F	3F	4F	5F
1	Mean	105.130	213.550	1086.039	1970.253
2	Mean	111.872	224.771	1083.585	2493.493
3	Mean	110.766	223.657	1134.027	2553.973
4	Mean	108.053	221.402	1156.283	2718.914
5	Mean	98.674	207.247	1439.803	2600.944
6	Mean	94.032	205.972	1219.524	1987.819
7	Mean	98.455	204.943	1040.392	2035.617
8	Mean	95.579	208.024	1394.163	2982.555
9	Mean	90.877	193.860	1354.464	2817.314
10	Mean	86.810	180.972	1226.649	2549.765
11	Mean	87.304	190.149	1245.152	2298.080
12	Mean	85.952	194.681	1366.067	2982.641
13	Mean	80.567	164.411	1219.254	2236.133

Table 6
Group mean haematology

Key to abbreviations/methods

Code	Parameter	Analyser	Method of determination
Hb	haemoglobin concentration	Bayer ADVIA	Spectrophotometric measurement of cyanmethaemoglobin
RBC	red blood cell count	Bayer ADVIA	Flow cytometry
PCV	packed cell volume	Calculation	PCV = (MCV x RBC) ÷ 10
RETA	reticulocytes	Automated	Supravital staining with oxazine 750, assessed by flow cytometry
RET ABS	absolute reticulocytes	Calculation	RBC x RETA ÷ 100
MCV	mean cell volume	Bayer ADVIA	Flow cytometry
MCH	mean cell haemoglobin	Calculation	MCH = (Hb ÷ RBC) x 10
MCHC	mean cell haemoglobin concentration	Calculation	MCHC = (Hb ÷ PCV) x 100
HDW	haemoglobin distribution width	Bayer ADVIA	Flow cytometry
RDW	red cell distribution width	Bayer ADVIA	Flow cytometry
PLAT	platelets	Bayer ADVIA	Flow cytometry
PCT	plateletcrit	Calculated	PCT = (MPV x PLT) ÷ 10,000
MPV	mean platelet volume	Bayer ADVIA	Flow cytometry
PDW	platelet distribution width	Bayer ADVIA	Flow cytometry
WBC	white blood cell count	Bayer ADVIA	Flow cytometry
N L M E B LUC	neutrophils lymphocytes monocytes eosinophils basophils large unstained cells	Manual: Blood smear Automated: Bayer ADVIA	Manual: Visual appraisal of a blood smear using a Romanowski-type stain Automated: Cytochemical staining with a peroxidase stain and detection of light scatter using a photo-optical method. Basophils enumerated using differential lysis and laser light scattering

Table 6
Group mean haematology
At terminal kill

Test Article	Control		[	]	
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

Group/ Sex		Hb g/dL	RBC mil/cmm	PCV %	RETA %	RET ABS mil/cmm	MCV fL	MCH pg
1M	Mean	15.8	10.19	50.8	3.1	0.32	49.9	15.5
	SD	0.45	0.221	1.66	0.26	0.027	1.00	0.17
2M	Mean	15.8	10.03	53.1	4.2	0.42	53.0*	15.7
	SD	0.73	0.515	4.32	0.95	0.085	3.39	0.28
3M	Mean	15.9	9.85	53.5	6.3***	0.62***	54.4**	16.1***
	SD	0.37	0.271	3.11	1.65	0.161	2.95	0.17
4M	Mean	15.4	9.62*	52.2	5.4**	0.52*	54.3**	16.0***
	SD	0.40	0.174	2.90	1.98	0.182	2.42	0.16
5M	Mean	14.8*	9.48*	50.3	8.3***	0.78***	53.2	15.7
	SD	1.07	0.800	3.01	2.33	0.182	2.72	0.25
Statistics		A2	A2	A2	A2	A2	A2	A2
1F	Mean	15.7	10.08	51.5	3.3	0.33	51.1	15.6
	SD	0.44	0.230	1.62	0.47	0.050	0.91	0.10
2F	Mean	16.2	10.37	52.6	3.2	0.33	50.7	15.7
	SD	0.49	0.338	2.03	0.69	0.066	0.57	0.18
3F	Mean	15.9	10.17	52.2	5.2*	0.53*	51.3	15.7
	SD	0.61	0.336	1.84	0.88	0.079	0.53	0.19
4F	Mean	15.7	10.05	52.2	6.7***	0.67***	52.0	15.6
	SD	0.34	0.213	1.02	0.72	0.072	1.18	0.21
5F	Mean	15.4	10.02	51.3	6.5**	0.65**	51.2	15.4
	SD	0.51	0.440	2.07	1.07	0.110	0.17	0.17
Statistics		A2	A2	A2	A2	A2	A2	A2

* P<0.05
** P<0.01
*** P<0.001

A2 = two-way ANOVA, dose response and Dunnett's

Table 6
Group mean haematology
At terminal kill

Test Article	Control		[	]	
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

Group/ Sex		MCHC g/dL	HDW g/dL	RDW %	PLAT 1000/cmm	PCT %	MPV fl	PDW %
1M	Mean	31.2	1.73	12.9	1128	0.77	6.8	65.3
	SD	0.44	0.090	0.41	45.9	0.049	0.29	8.68
2M	Mean	29.7*	1.88	13.8*	1299*	0.95**	7.3	70.7
	SD	1.57	0.076	0.55	25.5	0.015	0.20	9.74
3M	Mean	29.8	2.06***	14.3***	1308*	0.96**	7.4	64.8
	SD	1.52	0.117	0.60	47.0	0.060	0.40	5.16
4M	Mean	29.5*	2.21***	14.1**	1112	0.97**	8.7***	78.7*
	SD	1.19	0.141	0.67	57.0	0.065	0.61	8.26
5M	Mean	29.5*	2.24***	15.2***	1114	0.92	8.3*	73.9
	SD	1.10	0.258	1.14	181.2	0.147	0.25	6.24
Statistics		A2	A2	A2	A2	A2	A2	A2
1F	Mean	30.4	1.83	13.0	1122	0.63	5.6	51.2
	SD	0.41	0.089	0.22	49.4	0.024	0.15	3.64
2F	Mean	30.9	1.90	13.0	1111	0.67	6.0	53.3
	SD	0.43	0.084	0.37	60.1	0.066	0.74	6.43
3F	Mean	30.5	2.01*	13.4	1113	0.65	5.8	49.2
	SD	0.33	0.030	0.23	134.8	0.065	0.28	3.22
4F	Mean	30.1	2.07**	13.8	975	0.73	7.5***	62.1
	SD	0.64	0.084	0.44	94.6	0.150	1.34	4.93
5F	Mean	30.1	2.21***	14.3**	863*	0.67	8.1***	67.1*
	SD	0.20	0.084	0.10	318.2	0.138	1.79	12.80
Statistics		A2	A2	A2	A2	A2	A2	A2

* P<0.05
** P<0.01
*** P<0.001

A2 = two-way ANOVA, dose response and Dunnett's

Table 6
Group mean haematology
At terminal kill

Test Article	Control		[	]	
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

Group/ Sex		WBC 1000/cmm	N 1000/cmm	L 1000/cmm	M 1000/cmm	E 1000/cmm	B 1000/cmm	LUC 1000/cmm
1M	Mean	1.0	0.3	0.6	0.0	0.0	0.0	0.0
	SD	0.48	0.20	0.35	0.00	0.00	0.00	0.00
2M	Mean	0.8	0.3	0.5	0.0	0.0	0.0	0.0
	SD	0.32	0.12	0.29	0.00	0.04	0.00	0.00
3M	Mean	1.0	0.3	0.7	0.0	0.0	0.0	0.0
	SD	0.23	0.13	0.15	0.00	0.05	0.00	0.00
4M	Mean	1.1	0.4	0.5	0.0	0.0	0.0	0.0
	SD	0.38	0.11	0.26	0.04	0.04	0.00	0.00
5M	Mean	0.9	0.5	0.3	0.0	0.0	0.0	0.0
	SD	0.40	0.25	0.10	0.06	0.00	0.00	0.00
Statistics		A2	A2	A2	X	X	X	X
1F	Mean	1.5	0.3	1.1	0.0	0.1	0.0	0.0
	SD	0.41	0.10	0.33	0.00	0.06	0.00	0.00
2F	Mean	1.4	0.6	0.8	0.0	0.0	0.0	0.0
	SD	0.41	0.15	0.30	0.04	0.04	0.00	0.00
3F	Mean	1.5	0.6*	0.8	0.0	0.0	0.0	0.0
	SD	0.72	0.31	0.37	0.04	0.05	0.00	0.00
4F	Mean	1.9	0.8**	1.0	0.0	0.1	0.0	0.0
	SD	0.33	0.13	0.21	0.00	0.08	0.00	0.00
5F	Mean	1.8	1.0***	0.6	0.0	0.1	0.0	0.0
	SD	0.25	0.31	0.10	0.00	0.10	0.00	0.00
Statistics		A2	A2	A2	X	X	X	X

* P<0.05
** P<0.01
*** P<0.001

A2 = two-way ANOVA, dose response and Dunnett's
X = not analysed

Table 6
Group mean haematology
At terminal kill

Test Article	Control		[	]	
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

Group/ Sex		WBC 1000/cmm	N % WBC	L % WBC	M % WBC	E % WBC	B % WBC	LUC % WBC
1M	Mean	1.0	33	62	2	3	1	0
	SD	0.48	7.7	8.1	0.8	1.4	0.5	0.5
2M	Mean	0.8	36	58	2	4	0	0
	SD	0.32	20.5	19.7	2.2	3.9	0.5	0.4
3M	Mean	1.0	26	68	1	4	0	0
	SD	0.23	9.0	10.2	0.4	4.0	0.5	0.4
4M	Mean	1.1	43	50	3	4	1	0
	SD	0.38	5.2	8.9	1.6	4.4	0.5	0.0
5M	Mean	0.9	59**	35**	5	1	0	0
	SD	0.40	5.0	2.6	2.6	1.2	0.0	0.0
Statistics		A2	A2	A2	X	X	X	X
1F	Mean	1.5	23	72	2	4	0	0
	SD	0.41	2.1	2.9	0.6	1.0	0.5	0.0
2F	Mean	1.4	41*	55*	2	2	0	0
	SD	0.41	9.2	8.4	1.3	2.3	0.4	0.5
3F	Mean	1.5	42*	54*	2	3	0	0
	SD	0.72	5.1	4.9	1.3	2.1	0.0	0.4
4F	Mean	1.9	41*	51**	2	6	1	0
	SD	0.33	6.5	7.6	0.4	3.3	0.5	0.5
5F	Mean	1.8	58***	33***	2	6	0	0
	SD	0.25	9.0	7.5	0.0	4.4	0.0	0.0
Statistics		A2	A2	A2	X	X	X	X

* P<0.05
** P<0.01
*** P<0.001

A2 = two-way ANOVA, dose response and Dunnett's
X = not analysed

Table 7
Group mean clinical chemistry

Key to abbreviations/methods

Code	Parameter	Analyser	Method of determination
AST	Aspartate aminotransferase	Hitachi 917	Optimised UV method using L-aspartate and alpha-oxoglutarate as primary substrates
ALT	Alanine aminotransferase	Hitachi 917	Optimised UV method using L-Alanine and alpha-oxoglutarate as primary substrates
Gamma GT	Gamma glutamyl transpeptidase	Hitachi 917	Colorimetric method using l-gamma-glutamyl-3-carboxy-4nitroanilide as substrate
ALK PHOS	Alkaline phosphatase	Hitachi 917	Colorimetric method using p-nitrophenyl phosphate as substrate
Na/K/Cl	Sodium /potassium /chloride	Hitachi 917	Ion-selective electrode
Ca	Calcium	Hitachi 917	Colorimetric method using o-cresophthalein complexone in alkaline solution
IN PHOS	inorganic phosphorous	Hitachi 917	Colorimetric method based upon ammonium molybdate in acid conditions
UREA	urea	Hitachi 917	UV method using a coupled urease procedure
T BILI	total bilirubin	Hitachi 917	A colorimetric method. Indirect bilirubin is liberated by detergent: Total bilirubin is coupled with a diazonium compound to give corresponding azobilirubin.
CREAT	creatinine	Hitachi 917	Colorimetric method
T PROT	total protein	Hitachi 917	Colorimetric method based on biuret reaction
ALBUMIN	albumin	Hitachi 917	Colorimetric method based on the BCG reaction
GLOBULIN	globulin	Calculation	globulin = total protein - albumin
AG RATIO	albumin/globulin ratio	Calculation	AG ratio = albumin /(total protein - albumin)
TOT CHOL	total cholesterol	Hitachi 917	Enzymatic method using cholesterol oxidase/esterase
TRIGS	triglycerides	Hitachi 917	Enzymatic method using lipase and glycerol kinase as primary enzymes
GLUC	glucose	Hitachi 917	UV method using a coupled hexokinase procedure

Table 7
Group mean clinical chemistry
At terminal kill

	Test Article	Control		[	]	
	Group	1	2	3	4	5
	Level (ppm)	0	500	1000	5000	10000/7500

Group/ Sex		AST IU/L	ALT IU/L	GAMMA GT IU/L	ALK PHOS IU/L	Na mmol/L	K mmol/L	Cl mmol/L
1M	Mean	571	282	1	240	152	7.6	110
	SD	287.3	164.4	0.0	20.2	2.4	1.55	1.0
2M	Mean	594	330	1	253	155*	6.5	111
	SD	235.9	199.9	0.0	43.6	1.7	0.90	1.4
3M	Mean	546	256	1	245	154	6.5	111
	SD	189.0	98.4	0.0	22.1	1.5	0.66	1.7
4M	Mean	543	268	1	468***	155*	5.7	114*
	SD	262.3	183.6	0.0	62.2	1.6	1.04	2.8
5M	Mean	530	327	1	712***	158***	6.2	120***
	SD	234.7	184.1	0.0	59.6	2.1	1.27 DR**	1.0
Statistics		J	A2	X	A2T	A2	J	A2
1F	Mean	436	263	1	288	151	6.3	111
	SD	295.2	232.8	0.0	28.3	1.6	0.75	2.6
2F	Mean	461	299	1	279	153	5.5	112
	SD	360.1	275.3	0.0	28.9	1.5	0.72	1.6
3F	Mean	462	268	1	290	152	7.5	111
	SD	232.2	111.3	0.0	17.1	1.3	1.10	2.1
4F	Mean	538	315	1	659***	154*	6.3	116**
	SD	234.8	178.3	0.0	82.6	2.8	0.72	3.2
5F	Mean	469	358	1	1031***	158***	6.4	121***
	SD	226.1	168.2	0.0	132.1	3.8	0.50	1.0
Statistics		J	A2	X	A2T	A2	A	A2

* P<0.05
** P<0.01
*** P<0.001
DR = significant dose response test

A2 = two-way ANOVA, dose response and Dunnett's
A = ANOVA, dose response and Dunnett's
J = Kruskal-Wallis, Terpstra-Jonckheere, Wilcoxon
T = log-transformed data
X = not analysed

Table 7
Group mean clinical chemistry
At terminal kill

Test Article	Control		[	]	
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

Group/ Sex		Ca mmol/L	IN PHOS mmol/L	UREA mmol/L	T BILI umol/L	CREAT umol/L	T PROT g/L	ALBUMIN g/L
1M	Mean	2.27	3.7	8.7	1.0	37	57	35
	SD	0.071	0.87	0.83	0.58	2.9	2.0	3.4
2M	Mean	2.25	3.6	10.7	1.4	35	58	36
	SD	0.026	0.90	4.23	0.26	3.6	5.2	2.7
3M	Mean	2.27	3.2	10.7	1.9*	36	58	37
	SD	0.057	0.70	2.14	0.25	4.1	2.6	2.2
4M	Mean	2.32	3.1	7.9	1.8	38	58	38
	SD	0.042	1.01	3.15	0.21	1.2	3.1	2.6
5M	Mean	2.30	3.0	7.9E	3.0E	28E	48E	33E
	SD	0.102	0.74	.	.	.	.	.
Statistics		J	A2	J	J	A2	A2	A2
1F	Mean	2.29	3.0	7.7	1.2	36	56	36
	SD	0.027	0.70	0.29	0.64	1.3	1.8	3.5
2F	Mean	2.31	2.7	6.2	1.6	35	54	37
	SD	0.080	0.24	0.71	0.38	2.7	2.1	1.2
3F	Mean	2.27	2.7	5.8	1.7	37	54	35
	SD	0.075	0.47	0.63	0.36	3.3	0.9	1.9
4F	Mean	2.28	2.7	7.5	3.4**	38	56	36
	SD	0.146	0.38	3.24	0.48	2.4	2.1	2.2
5F	Mean	2.28	2.9	9.4E	3.0E	31E	48E	35E
	SD	0.050	0.42	. DR*	.	.	.	.
Statistics		J	A2	J	J	A2	A2	A2

* P<0.05
** P<0.01
*** P<0.001
DR = significant dose response test

A2 = two-way ANOVA, dose response and Dunnett's
E = group excluded from analysis
J = Kruskal-Wallis, Terpstra-Jonckheere, Wilcoxon

Table 7
Group mean clinical chemistry
At terminal kill

Test Article	Control		[	]	
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

Group/ Sex		GLOBULIN g/L	AG RATIO	TOT CHOL mmol/L	TRIGS mmol/L	GLUC mmol/L
1M	Mean	23	1.6	3.6	0.83	9.3
	SD	4.5	0.38	0.21	0.280	2.99
2M	Mean	22	1.7	3.5	0.43***	7.3
	SD	2.9	0.13	0.22	0.092	3.84
3M	Mean	21	1.8	3.7	0.40***	7.1
	SD	1.3	0.17	0.13	0.045	2.32
4M	Mean	20	2.0	3.6	0.45***	12.9
	SD	1.5	0.21	0.50	0.124	3.26
5M	Mean	15E	2.2E	3.0*	0.40***	3.0E
	SD	.	.	0.32	0.078	.
Statistics		A2	A2	A2	A2	A2
1F	Mean	20	1.8	2.6	0.60	7.6
	SD	2.9	0.38	0.26	0.145	1.23
2F	Mean	17	2.2	2.7	0.50	7.1
	SD	2.9	0.41	0.25	0.207	1.40
3F	Mean	19	1.9	2.8	0.63	7.4
	SD	2.5	0.37	0.11	0.095	2.52
4F	Mean	19	1.9	3.1*	0.53	7.0
	SD	1.0	0.16	0.35	0.087	1.43
5F	Mean	13E	2.7E	3.1*	0.46	8.0E
	SD	.	.	0.49	0.119	.
Statistics		A2	A2	A2	A2	A2

* P<0.05
** P<0.01
*** P<0.001

A2 = two-way ANOVA, dose response and Dunnett's
E = group excluded from analysis

Table 8
Group mean urine analysis

Key to abbreviations/methods

Code	parameter	Method of determination	Units
VOL	Volume	Direct visual measurement	mL
SP GR	Specific gravity	Visual measurement	Numerical
pH	pH	Visual assessment following reaction with Methyl Red and Bromothymol Blue	Numerical approximation

Table 8
Group mean urine analysis
Occasion: Week 13

Test Article	Control		[	]	
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

Group/ Sex		VOL mL	SP GR	pH
1M	Mean	0.3	1.031	8
	SD	0.21	0.0075	1.1
2M	Mean	0.4	1.029	8
	SD	0.20	0.0072	0.4
3M	Mean	0.5	1.029	8
	SD	0.08	0.0057	0.5
4M	Mean	0.6	1.020*	7
	SD	0.20	0.0086	0.7
5M	Mean	0.4	1.017*	6
	SD	0.35	0.0048	0.8
Statistics		A	A	X
1F#	Mean	5.8	1.018	6
	SD	3.01	0.0021	0.5
2F#	Mean	7.6	1.017	7
	SD	2.78	0.0047	0.5
3F#	Mean	5.7	1.015	7
	SD	2.64	0.0032	0.8
4F#	Mean	2.4	1.028*	6
	SD	1.02	0.0055	0.0
5F#	Mean	1.7	1.024	6
	SD	1.06 DR**	0.0063	0.5
Statistics		A	A	X

female urine pooled on a cage basis

* P<0.05
** P<0.01
*** P<0.001
DR = significant dose response test

A = ANOVA, dose response and Dunnett's
X = not analysed

Table 9
Group mean organ weights

Group mean organ weights adjusted to overall mean necropsy body weight
Terminal kill

Test Article	Control		[	]	
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

Group and Sex	Body weight (g)		Organ weights (g): Adrenals	Kidneys	Spleen	Heart	Brain	Testes/ Epididymides
1M		Adjusted	0.013	0.357	0.053	0.129	0.452	0.269
	26.7	Unadjusted	(0.011)	(0.421)	(0.063)	(0.148)	(0.468)	(0.310)
2M		Adjusted	0.009	0.349	0.055	0.142	0.460	0.270
	24.9*	Unadjusted	(0.008)	(0.385)	(0.060)	(0.153)	(0.469)	(0.293)
3M		Adjusted	0.012	0.322**	0.059	0.132	0.459	0.269
	26.0	Unadjusted	(0.011)	(0.375)	(0.067)	(0.147)	(0.472)	(0.302)
4M		Adjusted	0.008	0.335	0.060	0.134	0.447	0.229*
	19.0***	Unadjusted	(0.010)	(0.278)	(0.052)	(0.117)	(0.432)	(0.194)
5M		Adjusted	0.004	0.389	0.051	0.137	0.435	0.189***
	14.5***	Unadjusted	(0.008)	(0.261)	(0.032)	(0.099)	(0.403)	(0.108)
Statistics	A		C	C	C	C	C	C

* P<0.05
** P<0.01
*** P<0.001

A = ANOVA, dose response and Dunnett's
C = ANCOVA and Dunnett's

Table 9
Group mean organ weights
Group mean organ weights and organ to body weight ratios
Terminal kill

Test Article	Control		[	]	
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

Group and Sex	Body weight (g)	Liver Unadjusted (g)	Liver Ratio (%)	Thymus Unadjusted (g)	Thymus Ratio (%)
1M	26.7	1.026	3.851	0.026	0.098
2M	24.9*	0.986	3.958	0.022	0.089
3M	26.0	1.103	4.254**	0.023	0.088
4M	19.0***	1.583***	8.322***	0.018**	0.092
5M	14.5***	1.169	8.083***	0.009***	0.064**
Statistics	A	AT	AT	A	A

* P<0.05
** P<0.01
*** P<0.001

A = ANOVA, dose response and Dunnett's
T = log-transformed data

Table 9
Group mean organ weights
Group mean organ weights adjusted to overall mean necropsy body weight
Terminal kill

Test Article	Control		[	]	
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

Group and Sex	Body weight (g)		Organ weights (g): Adrenals	Kidneys	Spleen	Heart	Brain	Thymus
1F	23.5	Adjusted	0.011	0.245	0.057	0.110	0.470	0.030
		Unadjusted	(0.012)	(0.271)	(0.070)	(0.121)	(0.482)	(0.034)
2F	22.6	Adjusted	0.014	0.254	0.060	0.115	0.469	0.030
		Unadjusted	(0.014)	(0.274)	(0.070)	(0.123)	(0.479)	(0.033)
3F	22.4	Adjusted	0.010	0.251	0.068	0.109	0.466	0.028
		Unadjusted	(0.011)	(0.269)	(0.077)	(0.117)	(0.475)	(0.030)
4F	15.6***	Adjusted	0.009	0.238	0.050	0.104	0.424*	0.025
		Unadjusted	(0.008)	(0.213)	(0.038)	(0.093)	(0.412)	(0.021)
5F	13.7***	Adjusted	0.009	0.254	0.049	0.108	0.415**	0.018
		Unadjusted	(0.007)	(0.216)	(0.030)	(0.092)	(0.396)	(0.012)
Statistics	A		C	C	C	C	C	C

* P<0.05
** P<0.01
*** P<0.001

A = ANOVA, dose response and Dunnett's
C = ANCOVA and Dunnett's

Table 9
Group mean organ weights
Group mean organ weights and organ to body weight ratios
Terminal kill

Test Article	Control		[	]	
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

Group and Sex	Body weight (g)	Liver Unadjusted (g)	Liver Ratio (%)	Ovaries Unadjusted (g)	Ovaries Ratio (%)
1F	23.5	0.872	3.725	0.017	0.072
2F	22.6	0.892	3.949	0.016	0.072
3F	22.4	0.950	4.249***	0.017	0.075
4F	15.6***	1.107***	7.088***	0.007***	0.048*
5F	13.7***	1.050***	7.648***	0.008***	0.055
Statistics	A	A	AT	A	A

* P<0.05
** P<0.01
*** P<0.001

A = ANOVA, dose response and Dunnett's
T = log-transformed data

Table 10
Group incidence macroscopic data - decedents

	Test article	Control		[		]	.
	Group	1	2	3	4	5	.
COVANCE	Level (ppm)	0	500	1000	5000	10000/7500	.
HARROGATE, ENGLAND							PRINTED: 19-JAN-04 PAGE: 1
		DRAFT					STUDY NUMBER: 0535103

TABLE INCLUDES:
SEX=ALL;GROUP=ALL;WEEKS=ALL
DEATH=D,M;SUBSET=ALL

ORGAN AND KEYWORD(S) OR PHRASE		--- NUMBER-OF-ANIMALS-AFFECTED ---									
	SEX:	----------MALE---------					---------FEMALE---------				
	GROUP:	-1-	-2-	-3-	-4-	-5-	-1-	-2-	-3-	-4-	-5-
	NUMBER:	0	0	0	0	3	0	0	0	0	0
** TOP OF LIST **											
ANIMAL	NUMBER EXAMINED:	0	0	0	0	3	0	0	0	0	0
THIN		0	0	0	0	3	0	0	0	0	0
EYE	NUMBER EXAMINED:	0	0	0	0	3	0	0	0	0	0
OPTIC NERVE	NUMBER EXAMINED:	0	0	0	0	3	0	0	0	0	0
HARDERIAN GLAND	NUMBER EXAMINED:	0	0	0	0	3	0	0	0	0	0
SKIN + SUBCUTIS	NUMBER EXAMINED:	0	0	0	0	3	0	0	0	0	0
MAMMARY GLAND	NUMBER EXAMINED:	0	0	0	0	3	0	0	0	0	0
MUSCLE	NUMBER EXAMINED:	0	0	0	0	3	0	0	0	0	0
FEMUR + MARROW	NUMBER EXAMINED:	0	0	0	0	3	0	0	0	0	0
STERNUM + MARROW	NUMBER EXAMINED:	0	0	0	0	3	0	0	0	0	0
SCIATIC NERVE	NUMBER EXAMINED:	0	0	0	0	3	0	0	0	0	0
LIVER	NUMBER EXAMINED:	0	0	0	0	3	0	0	0	0	0
LARGE		0	0	0	0	1	0	0	0	0	0
SPLEEN	NUMBER EXAMINED:	0	0	0	0	3	0	0	0	0	0
SMALL		0	0	0	0	3	0	0	0	0	0

Table 10

Group incidence macroscopic data - decedents

Test article	Control		[		]	.
Group	1	2	3	4	5	.
Level (ppm)	0	500	1000	5000	10000/7500	.

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TABLE INCLUDES:
SEX=ALL;GROUP=ALL;WEEKS=ALL
DEATH=D,M;SUBSET=ALL

ORGAN AND KEYWORD(S) OR PHRASE		--- NUMBER-OF-ANIMALS-AFFECTED ---									
SEX:		----------MALE---------					----------FEMALE--------				
GROUP:		-1-	-2-	-3-	-4-	-5-	-1-	-2-	-3-	-4-	-5-
NUMBER:		0	0	0	0	3	0	0	0	0	0
PANCREAS	NUMBER EXAMINED:	0	0	0	0	3	0	0	0	0	0
MESENTERIC LN	NUMBER EXAMINED:	0	0	0	0	3	0	0	0	0	0
STOMACH	NUMBER EXAMINED:	0	0	0	0	3	0	0	0	0	0
DARK CONTENTS		0	0	0	0	1	0	0	0	0	0
DUODENUM	NUMBER EXAMINED:	0	0	0	0	3	0	0	0	0	0
DARK CONTENTS		0	0	0	0	1	0	0	0	0	0
JEJUNUM	NUMBER EXAMINED:	0	0	0	0	3	0	0	0	0	0
DARK CONTENTS		0	0	0	0	1	0	0	0	0	0
ILEUM	NUMBER EXAMINED:	0	0	0	0	3	0	0	0	0	0
CAECUM	NUMBER EXAMINED:	0	0	0	0	3	0	0	0	0	0
COLON	NUMBER EXAMINED:	0	0	0	0	3	0	0	0	0	0
RECTUM	NUMBER EXAMINED:	0	0	0	0	3	0	0	0	0	0
GALL BLADDER	NUMBER EXAMINED:	0	0	0	0	3	0	0	0	0	0
ADRENAL	NUMBER EXAMINED:	0	0	0	0	3	0	0	0	0	0
KIDNEY	NUMBER EXAMINED:	0	0	0	0	3	0	0	0	0	0

Table 10

Group incidence macroscopic data - decedents

Test article	Control		[		]	.
Group	1	2	3	4	5	.
Level (ppm)	0	500	1000	5000	10000/7500	.

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DRAFT

STUDY NUMBER: 0535103

TABLE INCLUDES:
SEX=ALL;GROUP=ALL;WEEKS=ALL
DEATH=D,M;SUBSET=ALL

ORGAN AND KEYWORD(S) OR PHRASE		--- NUMBER-OF-ANIMALS-AFFECTED ---									
	SEX:	----------MALE----------					---------FEMALE---------				
	GROUP:	-1-	-2-	-3-	-4-	-5-	-1-	-2-	-3-	-4-	-5-
	NUMBER:	0	0	0	0	3	0	0	0	0	0
TESTIS	NUMBER EXAMINED:	0	0	0	0	3	0	0	0	0	0
EPIDIDYMIS	NUMBER EXAMINED:	0	0	0	0	3	0	0	0	0	0
OVARY	NUMBER EXAMINED:	0	0	0	0	0	0	0	0	0	0
SEMINAL VESICLE	NUMBER EXAMINED:	0	0	0	0	3	0	0	0	0	0
URINARY BLADDER	NUMBER EXAMINED:	0	0	0	0	3	0	0	0	0	0
PROSTATE	NUMBER EXAMINED:	0	0	0	0	3	0	0	0	0	0
UTERUS	NUMBER EXAMINED:	0	0	0	0	0	0	0	0	0	0
VAGINA	NUMBER EXAMINED:	0	0	0	0	0	0	0	0	0	0
SALIVARY GLAND	NUMBER EXAMINED:	0	0	0	0	3	0	0	0	0	0
MANDIBULAR LN	NUMBER EXAMINED:	0	0	0	0	3	0	0	0	0	0
THYMUS	NUMBER EXAMINED:	0	0	0	0	3	0	0	0	0	0
LUNG	NUMBER EXAMINED:	0	0	0	0	3	0	0	0	0	0
HEART	NUMBER EXAMINED:	0	0	0	0	3	0	0	0	0	0
AORTA	NUMBER EXAMINED:	0	0	0	0	3	0	0	0	0	0

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Table 10

Group incidence macroscopic data - decedents

Test article	Control		[		]	.
Group	1	2	3	4	5	.
Level (ppm)	0	500	1000	5000	10000/7500	.

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STUDY NUMBER: 0535103

TABLE INCLUDES:
SEX=ALL;GROUP=ALL;WEEKS=ALL
DEATH=D,M;SUBSET=ALL

ORGAN AND KEYWORD(S) OR PHRASE		--- NUMBER-OF-ANIMALS-AFFECTED ---									
SEX:		----------MALE----------					---------FEMALE---------				
GROUP:		-1-	-2-	-3-	-4-	-5-	-1-	-2-	-3-	-4-	-5-
NUMBER:		0	0	0	0	3	0	0	0	0	0
TRACHEA	NUMBER EXAMINED:	0	0	0	0	3	0	0	0	0	0
OESOPHAGUS	NUMBER EXAMINED:	0	0	0	0	3	0	0	0	0	0
TONGUE	NUMBER EXAMINED:	0	0	0	0	3	0	0	0	0	0
THYROID	NUMBER EXAMINED:	0	0	0	0	3	0	0	0	0	0
PARATHYROID	NUMBER EXAMINED:	0	0	0	0	3	0	0	0	0	0
LARYNX	NUMBER EXAMINED:	0	0	0	0	3	0	0	0	0	0
PITUITARY	NUMBER EXAMINED:	0	0	0	0	3	0	0	0	0	0
BRAIN	NUMBER EXAMINED:	0	0	0	0	3	0	0	0	0	0
SPINAL CORD	NUMBER EXAMINED:	0	0	0	0	3	0	0	0	0	0
LACRIMAL GLAND	NUMBER EXAMINED:	0	0	0	0	3	0	0	0	0	0
ZYMBAL GLAND	NUMBER EXAMINED:	0	0	0	0	3	0	0	0	0	0
HEAD	NUMBER EXAMINED:	0	0	0	0	3	0	0	0	0	0
NASAL CAVITY	NUMBER EXAMINED:	0	0	0	0	3	0	0	0	0	0
PHARYNX	NUMBER EXAMINED:	0	0	0	0	3	0	0	0	0	0

Table 10

Group incidence macroscopic data - decedents

	Test article	Control		[		]	.
	Group	1	2	3	4	5	.
	Level (ppm)	0	500	1000	5000	10000/7500	.

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STUDY NUMBER: 0535103

TABLE INCLUDES:
SEX=ALL;GROUP=ALL;WEEKS=ALL
DEATH=D,M;SUBSET=ALL

ORGAN AND KEYWORD(S) OR PHRASE		--- NUMBER-OF-ANIMALS-AFFECTED ---									
	SEX:	----------MALE---------					---------FEMALE--------				
	GROUP:	-1-	-2-	-3-	-4-	-5-	-1-	-2-	-3-	-4-	-5-
	NUMBER:	0	0	0	0	3	0	0	0	0	0
THORACIC CAVITY	NUMBER EXAMINED:	0	0	0	0	3	0	0	0	0	0
TAIL	NUMBER EXAMINED:	0	0	0	0	3	0	0	0	0	0
ABDOMINAL CAVITY	NUMBER EXAMINED:	0	0	0	0	3	0	0	0	0	0

** END OF LIST **

Table 11
Group incidence macroscopic data – terminal kill

	Test article	Control		[	]	.
	Group	1	2	3	4	5 .
	Level (ppm)	0	500	1000	5000	10000/7500 .

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STUDY NUMBER: 0535103

TABLE INCLUDES:
SEX=ALL;GROUP=ALL;WEEKS=ALL
DEATH=T;SUBSET=ALL

		--- NUMBER-OF-ANIMALS-AFFECTED ---									
	SEX:	----------MALE----------					---------FEMALE---------				
	GROUP:	-1-	-2-	-3-	-4-	-5-	-1-	-2-	-3-	-4-	-5-
ORGAN AND KEYWORD(S) OR PHRASE	NUMBER:	12	12	12	12	9	12	12	12	12	12
** TOP OF LIST **											
ANIMAL	NUMBER EXAMINED:	12	12	12	12	9	12	12	12	12	12
THIN		0	0	0	0	0	0	0	0	0	2
NOT REMARKABLE		12	10	9	4	1	4	3	1	4	3
EYE	NUMBER EXAMINED:	12	12	12	12	9	12	12	12	12	12
OPTIC NERVE	NUMBER EXAMINED:	12	12	12	12	9	12	12	12	12	12
HARDERIAN GLAND	NUMBER EXAMINED:	12	12	12	12	9	12	12	12	12	12
SKIN + SUBCUTIS	NUMBER EXAMINED:	12	12	12	12	9	12	12	12	12	12
FUR LOSS		0	0	2	0	0	4	3	6	0	0
VIBRISSAE MISSING		0	0	0	0	0	3	5	6	2	1
MAMMARY GLAND	NUMBER EXAMINED:	12	12	12	12	9	12	12	12	12	12
MUSCLE	NUMBER EXAMINED:	12	12	12	12	9	12	12	12	12	12
FEMUR + MARROW	NUMBER EXAMINED:	12	12	12	12	9	12	12	12	12	12
STERNUM + MARROW	NUMBER EXAMINED:	12	12	12	12	9	12	12	12	12	12
SCIATIC NERVE	NUMBER EXAMINED:	12	12	12	12	9	12	12	12	12	12
LIVER	NUMBER EXAMINED:	12	12	12	12	9	12	12	12	12	12
LARGE		0	0	0	4	0	0	0	0	0	3

** CONTINUED ON NEXT PAGE **

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Table 11

Group incidence macroscopic data - terminal kill

Test article	Control		[		]	.
Group	1	2	3	4	5	.
Level (ppm)	0	500	1000	5000	10000/7500	.

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STUDY NUMBER: 0535103

TABLE INCLUDES:
SEX=ALL;GROUP=ALL;WEEKS=ALL
DEATH=T;SUBSET=ALL

ORGAN AND KEYWORD(S) OR PHRASE		--- NUMBER-OF-ANIMALS-AFFECTED ---									
SEX:		----------MALE---------					---------FEMALE--------				
GROUP:		-1-	-2-	-3-	-4-	-5-	-1-	-2-	-3-	-4-	-5-
NUMBER:		12	12	12	12	9	12	12	12	12	12
** FROM PREVIOUS PAGE **											
LIVER	NUMBER EXAMINED:	12	12	12	12	9	12	12	12	12	12
MOTTLED		0	0	0	0	3	0	0	0	0	5
PALE		0	0	0	3	1	1	0	0	1	2
SPLEEN	NUMBER EXAMINED:	12	12	12	12	9	12	12	12	12	12
SMALL		0	0	0	0	1	0	0	0	2	2
LARGE		0	0	0	0	0	0	0	1	0	0
PANCREAS	NUMBER EXAMINED:	12	12	12	12	9	12	12	12	12	12
PALE		0	0	0	0	0	0	0	0	0	1
MESENTERIC LN	NUMBER EXAMINED:	12	12	12	12	9	12	12	12	12	12
SMALL		0	0	0	0	1	0	0	0	0	0
STOMACH	NUMBER EXAMINED:	12	12	12	12	9	12	12	12	12	12
YELLOW		0	0	1	0	0	0	0	0	0	0
ABNORMAL APPEARANCE		0	1	0	0	0	0	0	0	0	0
DUODENUM	NUMBER EXAMINED:	12	12	12	12	9	12	12	12	12	12
JEJUNUM	NUMBER EXAMINED:	12	12	12	12	9	12	12	12	12	12
ILEUM	NUMBER EXAMINED:	12	12	12	12	9	12	12	12	12	12
CAECUM	NUMBER EXAMINED:	12	12	12	12	9	12	12	12	12	12
INJECTION LESION		0	0	0	0	1	0	0	0	0	0

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Table 11

Group incidence macroscopic data - terminal kill

Test article	Control		[		]	.
Group	1	2	3	4	5	.
Level (ppm)	0	500	1000	5000	10000/7500	.

COVANCE
HARROGATE, ENGLAND

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STUDY NUMBER: 0535103

TABLE INCLUDES:
SEX=ALL;GROUP=ALL;WEEKS=ALL
DEATH=T;SUBSET=ALL

--- N U M B E R - O F - A N I M A L S - A F F E C T E D ---

ORGAN AND KEYWORD(S) OR PHRASE		SEX:	MALE					FEMALE				
		GROUP:	-1-	-2-	-3-	-4-	-5-	-1-	-2-	-3-	-4-	-5-
		NUMBER:	12	12	12	12	9	12	12	12	12	12
COLON	NUMBER EXAMINED:		12	12	12	12	9	12	12	12	12	12
RECTUM	NUMBER EXAMINED:		12	12	12	12	9	12	12	12	12	12
GALL BLADDER	NUMBER EXAMINED:		12	12	12	12	9	12	12	12	12	12
ADRENAL	NUMBER EXAMINED:		12	12	12	12	9	12	12	12	12	12
KIDNEY	NUMBER EXAMINED:		12	12	12	12	9	12	12	12	12	12
PALE			0	0	0	0	1	0	0	0	0	0
TESTIS	NUMBER EXAMINED:		12	12	12	12	9	0	0	0	0	0
SMALL			0	0	0	0	5	0	0	0	0	0
EPIDIDYMIS	NUMBER EXAMINED:		12	12	12	12	9	0	0	0	0	0
SMALL			0	0	0	0	2	0	0	0	0	0
OVARY	NUMBER EXAMINED:		0	0	0	0	0	12	12	12	12	12
SMALL			0	0	0	0	0	0	0	0	3	4
SEMINAL VESICLE	NUMBER EXAMINED:		12	12	12	12	9	0	0	0	0	0
SMALL			0	0	0	1	7	0	0	0	0	0
URINARY BLADDER	NUMBER EXAMINED:		12	12	12	12	9	12	12	12	12	12
DISTENSION			0	0	0	1	0	0	0	0	1	2

Table 11

Group incidence macroscopic data - terminal kill

	Test article	Control		[		]	.
	Group	1	2	3	4	5	.
COVANCE	Level (ppm)	0	500	1000	5000	10000/7500	.
HARROGATE, ENGLAND							PRINTED: 19-JAN-04 PAGE: 4
		DRAFT					STUDY NUMBER: 0535103

TABLE INCLUDES:
SEX=ALL;GROUP=ALL;WEEKS=ALL
DEATH=T;SUBSET=ALL

ORGAN AND KEYWORD(S) OR PHRASE		--- NUMBER-OF-ANIMALS-AFFECTED ---									
	SEX:	----------MALE---------					---------FEMALE--------				
	GROUP:	-1-	-2-	-3-	-4-	-5-	-1-	-2-	-3-	-4-	-5-
	NUMBER:	12	12	12	12	9	12	12	12	12	12
PROSTATE	NUMBER EXAMINED:	12	12	12	12	9	0	0	0	0	0
SMALL		0	0	0	0	1	0	0	0	0	0
UTERUS	NUMBER EXAMINED:	0	0	0	0	0	12	12	12	12	12
THIN		0	0	0	0	0	0	0	0	3	6
VAGINA	NUMBER EXAMINED:	0	0	0	0	0	12	12	12	12	12
SALIVARY GLAND	NUMBER EXAMINED:	12	12	12	12	9	12	12	12	12	12
LARGE		0	1	0	0	0	0	0	0	0	0
MANDIBULAR LN	NUMBER EXAMINED:	12	12	12	12	9	12	12	12	12	12
THYMUS	NUMBER EXAMINED:	12	12	12	12	9	12	12	12	12	12
DARK AREA		0	0	0	1	0	0	0	0	0	0
SMALL		0	1	0	0	3	0	0	0	0	1
LUNG	NUMBER EXAMINED:	12	12	12	12	9	12	12	12	12	12
RED		0	0	0	1	0	0	0	0	0	0
PALE FOCUS		0	0	0	0	2	0	0	0	0	0
RED FOCUS		0	0	0	0	0	1	0	0	0	0
HEART	NUMBER EXAMINED:	12	12	12	12	9	12	12	12	12	12
AORTA	NUMBER EXAMINED:	12	12	12	12	9	12	12	12	12	12
TRACHEA	NUMBER EXAMINED:	12	12	12	12	9	12	12	12	12	12

Table 11

Group incidence macroscopic data - terminal kill

Test article	Control		[		]	.
Group	1	2	3	4	5	.
Level (ppm)	0	500	1000	5000	10000/7500	.

COVANCE
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STUDY NUMBER: 0535103

TABLE INCLUDES:
SEX=ALL;GROUP=ALL;WEEKS=ALL
DEATH=T;SUBSET=ALL

ORGAN AND KEYWORD(S) OR PHRASE		--- NUMBER-OF-ANIMALS-AFFECTED ---									
	SEX:	----------MALE----------					---------FEMALE--------				
	GROUP:	-1-	-2-	-3-	-4-	-5-	-1-	-2-	-3-	-4-	-5-
	NUMBER:	12	12	12	12	9	12	12	12	12	12
OESOPHAGUS	NUMBER EXAMINED:	12	12	12	12	9	12	12	12	12	12
TONGUE	NUMBER EXAMINED:	12	12	12	12	9	12	12	12	12	12
THYROID	NUMBER EXAMINED:	12	12	12	12	9	12	12	12	12	12
PARATHYROID	NUMBER EXAMINED:	12	12	12	12	9	12	12	12	12	12
LARYNX	NUMBER EXAMINED:	12	12	12	12	9	12	12	12	12	12
PITUITARY	NUMBER EXAMINED:	12	12	12	12	9	12	12	12	12	12
BRAIN	NUMBER EXAMINED:	12	12	12	12	9	12	12	12	12	12
SPINAL CORD	NUMBER EXAMINED:	12	12	12	12	9	12	12	12	12	12
LACRIMAL GLAND	NUMBER EXAMINED:	12	12	12	12	9	12	12	12	12	12
ZYMBAL GLAND	NUMBER EXAMINED:	12	12	12	12	9	12	12	12	12	12
HEAD	NUMBER EXAMINED:	12	12	12	12	9	12	12	12	12	12
NASAL CAVITY	NUMBER EXAMINED:	12	12	12	12	9	12	12	12	12	12
PHARYNX	NUMBER EXAMINED:	12	12	12	12	9	12	12	12	12	12

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Table 11

Group incidence macroscopic data - terminal kill

	Test article	Control		[		]	
	Group	1	2	3	4	5	
COVANCE	Level (ppm)	0	500	1000	5000	10000/7500	
HARROGATE, ENGLAND							

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STUDY NUMBER: 0535103

TABLE INCLUDES:
SEX=ALL;GROUP=ALL;WEEKS=ALL
DEATH=T;SUBSET=ALL

		--- N U M B E R - O F - A N I M A L S - A F F E C T E D ---									
	SEX:	----------MALE---------					---------FEMALE--------				
	GROUP:	-1-	-2-	-3-	-4-	-5-	-1-	-2-	-3-	-4-	-5-
ORGAN AND KEYWORD(S) OR PHRASE	NUMBER:	12	12	12	12	9	12	12	12	12	12
THORACIC CAVITY	NUMBER EXAMINED:	12	12	12	12	9	12	12	12	12	12
ABNORMAL CONTENTS		0	0	0	0	0	1	0	0	0	0
MASS		0	0	0	0	0	0	1	0	0	0
RED FLUID		0	0	0	0	0	0	0	1	0	0
TAIL	NUMBER EXAMINED:	12	12	12	12	9	12	12	12	12	12
TIP MISSING		0	0	0	0	0	1	0	0	0	0
ABDOMINAL CAVITY	NUMBER EXAMINED:	12	12	12	12	9	12	12	12	12	12
ABNORMAL CONTENTS		0	0	0	0	0	1	0	0	1	0

** END OF LIST **

Table 12
Group incidence microscopic data - decedents

	Test article	Control		[		]				
	Group	1	2	3	4	5				
	Level (ppm)	0	500	1000	5000	10000/7500				
COVANCE										
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DRAFT

STUDY NUMBER: 0535103

TABLE INCLUDES:
SEX=ALL;GROUP=ALL;WEEKS=ALL
DEATH=D,M;FIND=ALL;SUBSET=ALL

--- N U M B E R - O F - A N I M A L S - A F F E C T E D ---

ORGAN AND FINDING DESCRIPTION		SEX:	MALE					FEMALE				
		GROUP:	-1-	-2-	-3-	-4-	-5-	-1-	-2-	-3-	-4-	-5-
		NUMBER:	0	0	0	0	3	0	0	0	0	0
** TOP OF LIST **												
HARDERIAN GLAND	NUMBER EXAMINED:		0	0	0	0	3	0	0	0	0	0
--ATROPHY			0	0	0	0	3	0	0	0	0	0
SKIN + SUBCUTIS	NUMBER EXAMINED:		0	0	0	0	3	0	0	0	0	0
--ADNEXAL ATROPHY			0	0	0	0	3	0	0	0	0	0
MUSCLE	NUMBER EXAMINED:		0	0	0	0	3	0	0	0	0	0
--ATROPHY			0	0	0	0	3	0	0	0	0	0
FEMUR + MARROW	NUMBER EXAMINED:		0	0	0	0	3	0	0	0	0	0
--OSTEOCHONDRAL ATROPHY			0	0	0	0	3	0	0	0	0	0
LIVER	NUMBER EXAMINED:		0	0	0	0	3	0	0	0	0	0
--GLYCOGEN VACUOLATION			0	0	0	0	1	0	0	0	0	0
--CENTRILOBULAR HYPERTROPHY/VACUOLATION			0	0	0	0	3	0	0	0	0	0
SPLEEN	NUMBER EXAMINED:		0	0	0	0	3	0	0	0	0	0
--ATROPHY			0	0	0	0	3	0	0	0	0	0
--HAEMOPOIESIS			0	0	0	0	1	0	0	0	0	0
PANCREAS	NUMBER EXAMINED:		0	0	0	0	3	0	0	0	0	0
--DEGRANULATION			0	0	0	0	1	0	0	0	0	0
STOMACH	NUMBER EXAMINED:		0	0	0	0	3	0	0	0	0	0
--HYPERKERATOSIS			0	0	0	0	2	0	0	0	0	0

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Table 12

Group incidence microscopic data - decedents

Test article	Control		[		]	
Group	1	2	3	4	5	
Level (ppm)	0	500	1000	5000	10000/7500	

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STUDY NUMBER: 0535103

TABLE INCLUDES:
SEX=ALL;GROUP=ALL;WEEKS=ALL
DEATH=D,M;FIND=ALL;SUBSET=ALL

ORGAN AND FINDING DESCRIPTION		--- NUMBER-OF-ANIMALS-AFFECTED ---									
SEX:		----------MALE----------					----------FEMALE----------				
GROUP:		-1-	-2-	-3-	-4-	-5-	-1-	-2-	-3-	-4-	-5-
NUMBER:		0	0	0	0	3	0	0	0	0	0
CAECUM	NUMBER EXAMINED:	0	0	0	0	3	0	0	0	0	0
--BARBITURATE LYSIS		0	0	0	0	1	0	0	0	0	0
COLON	NUMBER EXAMINED:	0	0	0	0	3	0	0	0	0	0
--BARBITURATE LYSIS		0	0	0	0	1	0	0	0	0	0
KIDNEY	NUMBER EXAMINED:	0	0	0	0	3	0	0	0	0	0
--CORTICAL TUBULAR NEPHROPATHY		0	0	0	0	1	0	0	0	0	0
TESTIS	NUMBER EXAMINED:	0	0	0	0	3	0	0	0	0	0
--GERM CELL DEGENERATION		0	0	0	0	3	0	0	0	0	0
EPIDIDYMIS	NUMBER EXAMINED:	0	0	0	0	3	0	0	0	0	0
--CELLULAR DEBRIS		0	0	0	0	2	0	0	0	0	0
SEMINAL VESICLE	NUMBER EXAMINED:	0	0	0	0	3	0	0	0	0	0
--ATROPHY		0	0	0	0	2	0	0	0	0	0
PROSTATE	NUMBER EXAMINED:	0	0	0	0	2	0	0	0	0	0
--ATROPHY		0	0	0	0	2	0	0	0	0	0
SALIVARY GLAND	NUMBER EXAMINED:	0	0	0	0	3	0	0	0	0	0
--DEGRANULATION/ATROPHY		0	0	0	0	3	0	0	0	0	0
MANDIBULAR LN	NUMBER EXAMINED:	0	0	0	0	2	0	0	0	0	0
--ATROPHY		0	0	0	0	1	0	0	0	0	0

Table 12

Group incidence microscopic data - decedents

	Test article	Control		[		]	
	Group	1	2	3	4	5	
	Level (ppm)	0	500	1000	5000	10000/7500	

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TABLE INCLUDES:
SEX=ALL;GROUP=ALL;WEEKS=ALL
DEATH=D,M;FIND=ALL;SUBSET=ALL

--- N U M B E R - O F - A N I M A L S - A F F E C T E D ---

ORGAN AND FINDING DESCRIPTION		SEX:	MALE				FEMALE				
		GROUP:	-1-	-2-	-3-	-4-	-5-	-1-	-2-	-3-	-4-	-5-
		NUMBER:	0	0	0	0	3	0	0	0	0	0
THYMUS	NUMBER EXAMINED:		0	0	0	0	2	0	0	0	0	0
--ATROPHY			0	0	0	0	2	0	0	0	0	0
ADIPOSE TISSUE	NUMBER EXAMINED:		0	0	0	0	3	0	0	0	0	0
--ATROPHY			0	0	0	0	3	0	0	0	0	0
CAUSE OF DEMISE	NUMBER EXAMINED:		0	0	0	0	3	0	0	0	0	0
--TREATMENT-RELATED			0	0	0	0	3	0	0	0	0	0

** END OF LIST **

Table 13
Group incidence microscopic data – terminal kill

	Test article	Control		[		]				
	Group	1	2	3	4	5				
COVANCE	Level (ppm)	0	500	1000	5000	10000/7500				
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									PAGE: 1	
		DRAFT							STUDY NUMBER: 0535103	

TABLE INCLUDES:
SEX=ALL;GROUP=ALL;WEEKS=ALL
DEATH=T;FIND=ALL;SUBSET=ALL

ORGAN AND FINDING DESCRIPTION		--- NUMBER-OF-ANIMALS-AFFECTED ---									
SEX:		----------MALE----------					---------FEMALE--------				
GROUP:		-1-	-2-	-3-	-4-	-5-	-1-	-2-	-3-	-4-	-5-
NUMBER:		12	12	12	12	9	12	12	12	12	12
** TOP OF LIST **											
HARDERIAN GLAND	NUMBER EXAMINED:	12	0	12	12	9	12	0	12	12	12
--ATROPHY		0	0	0	2	9	0	0	0	2	8
--INFLAMMATORY CELL FOCI		0	0	0	0	1	0	0	0	0	0
SKIN + SUBCUTIS	NUMBER EXAMINED:	12	0	12	12	9	12	3	12	12	12
--ADNEXAL ATROPHY		0	0	2	5	9	1	3	4	1	10
--INFLAMMATORY CELL FOCI		0	0	0	0	0	1	0	0	0	0
--DERMATITIS		0	0	0	0	0	1	0	0	0	0
--FOLLICULITIS		0	0	0	0	0	1	0	2	0	0
MAMMARY GLAND	NUMBER EXAMINED:	0	0	0	0	0	12	0	11	11	10
--ATROPHY		0	0	0	0	0	0	0	0	10	10
MUSCLE	NUMBER EXAMINED:	12	0	12	12	9	12	0	12	12	12
--ATROPHY		0	0	0	8	9	0	0	0	7	10
--MYOPATHY		2	0	1	0	2	2	0	1	0	1
--MINERALISATION		0	0	0	0	0	0	0	0	1	0
FEMUR + MARROW	NUMBER EXAMINED:	12	0	12	12	9	12	0	12	12	12
--MARROW ATROPHY		0	0	0	0	1	0	0	0	0	6
--OSTEOCHONDRAL ATROPHY		0	0	0	3	9	0	0	0	6	8
LIVER	NUMBER EXAMINED:	12	12	12	12	9	12	12	12	12	12
--HEPATODIAPHRAGMATIC NODULE		0	0	0	0	0	0	1	0	0	0
--PIGMENT		0	0	0	0	5	0	0	0	0	9
--GLYCOGEN VACUOLATION		0	0	1	12	3	1	1	6	11	8
--INFLAMMATORY CELL FOCI		6	5	4	2	0	9	11	10	3	0

** CONTINUED ON NEXT PAGE **

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Table 13

Group incidence microscopic data - terminal kill

	Test article	Control		[		]	.
	Group	1	2	3	4	5	.
	Level (ppm)	0	500	1000	5000	10000/7500	.

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TABLE INCLUDES:
SEX=ALL;GROUP=ALL;WEEKS=ALL
DEATH=T;FIND=ALL;SUBSET=ALL

--- N U M B E R - O F - A N I M A L S - A F F E C T E D ---

ORGAN AND FINDING DESCRIPTION	SEX:	MALE					FEMALE				
	GROUP:	-1-	-2-	-3-	-4-	-5-	-1-	-2-	-3-	-4-	-5-
	NUMBER:	12	12	12	12	9	12	12	12	12	12
** FROM PREVIOUS PAGE **											
LIVER	NUMBER EXAMINED:	12	12	12	12	9	12	12	12	12	12
--SINGLE CELL NECROSIS/APOPTOSIS		0	0	2	0	3	2	2	0	2	7
--CENTRILOBULAR HYPERTROPHY/VACUOLATION		0	0	6	12	9	0	0	0	12	12
--OVAL CELL HYPERPLASIA		0	0	0	0	4	0	0	0	0	7
--BASOPHILIC FOCUS		0	0	0	0	0	0	1	0	0	0
--HEPATOCYTE VACUOLATION		0	2	1	0	0	0	3	1	0	0
SPLEEN	NUMBER EXAMINED:	12	12	12	12	9	12	12	12	12	12
--ATROPHY		1	0	0	4	9	0	0	0	8	12
--ACCESSORY SPLEEN		0	0	0	0	1	0	0	0	0	0
--HAEMOPOIESIS		3	9	8	11	7	10	10	9	9	11
PANCREAS	NUMBER EXAMINED:	12	0	12	12	9	12	0	12	12	12
--DEGRANULATION		0	0	0	0	1	0	0	1	0	0
--INFLAMMATORY CELL FOCI		0	0	0	0	0	0	0	0	3	1
MESENTERIC LN	NUMBER EXAMINED:	12	12	11	12	8	12	12	12	10	12
--ATROPHY		0	0	0	4	8	0	0	0	5	12
STOMACH	NUMBER EXAMINED:	12	1	12	12	9	12	0	12	12	12
--CYST		1	0	0	0	0	0	0	0	0	1
--CYSTIC GLANDS		0	0	0	0	0	1	0	0	0	0
--GASTRITIS		0	0	4	0	1	1	0	1	0	0
--EROSION/ULCER		1	1	0	0	1	0	0	0	0	0
--HYPERKERATOSIS		1	0	1	4	5	2	0	2	2	5
--JUNCTIONAL METAPLASIA		0	0	0	0	0	0	0	2	0	0

Table 13

Group incidence microscopic data - terminal kill

	Test article	Control		[		]	.
	Group	1	2	3	4	5	.
	Level (ppm)	0	500	1000	5000	10000/7500	.

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TABLE INCLUDES:
SEX=ALL;GROUP=ALL;WEEKS=ALL
DEATH=T;FIND=ALL;SUBSET=ALL

			--- NUMBER-OF-ANIMALS-AFFECTED ---									
		SEX:	----------MALE----------					----------FEMALE----------				
		GROUP:	-1-	-2-	-3-	-4-	-5-	-1-	-2-	-3-	-4-	-5-
ORGAN AND FINDING DESCRIPTION		NUMBER:	12	12	12	12	9	12	12	12	12	12
DUODENUM	NUMBER EXAMINED:		12	0	12	12	9	12	0	12	12	12
--BARBITURATE LYSIS			0	0	0	0	0	0	0	0	0	1
CAECUM	NUMBER EXAMINED:		12	0	12	12	9	12	0	12	12	12
--BARBITURATE LYSIS			1	0	0	0	1	0	0	0	0	3
RECTUM	NUMBER EXAMINED:		12	0	12	12	9	12	0	12	12	10
--PROCTITIS			0	0	0	0	0	0	0	0	0	1
ADRENAL	NUMBER EXAMINED:		12	0	12	12	9	12	0	12	12	12
--CORTICAL X-ZONE ATROPHY			0	0	0	0	0	0	0	0	12	12
--SUBCAPSULAR CELL HYPERPLASIA			4	0	5	0	0	12	0	12	8	9
KIDNEY	NUMBER EXAMINED:		12	12	12	12	9	12	12	12	12	12
--CORTICAL TUBULAR NEPHROPATHY			1	0	1	12	9	0	1	9	12	12
--PAPILLARY MINERALISATION			2	1	0	3	0	0	2	0	1	3
--INFLAMMATORY CELL FOCI			2	3	3	0	0	4	5	3	2	0
--TRANSITIONAL CELL HYPERPLASIA			0	0	1	0	0	0	0	0	0	0
TESTIS	NUMBER EXAMINED:		12	0	12	12	9	0	0	0	0	0
--TUBULAR ATROPHY			0	0	0	12	9	0	0	0	0	0
EPIDIDYMIS	NUMBER EXAMINED:		12	0	12	12	9	0	0	0	0	0
--OLIGOSPERMIA			0	0	0	0	6	0	0	0	0	0
--CELLULAR DEBRIS			0	0	0	4	8	0	0	0	0	0
--INFLAMMATORY CELL FOCI			2	0	0	0	0	0	0	0	0	0

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Table 13

Group incidence microscopic data - terminal kill

Test article: Control [ ]
Group: 1 2 3 4 5
Level (ppm): 0 500 1000 5000 10000/7500

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STUDY NUMBER: 0535103

TABLE INCLUDES:
SEX=ALL;GROUP=ALL;WEEKS=ALL
DEATH=T;FIND=ALL;SUBSET=ALL

ORGAN AND FINDING DESCRIPTION		--- NUMBER-OF-ANIMALS-AFFECTED ---									
SEX:		----------MALE----------					---------FEMALE--------				
GROUP:		-1-	-2-	-3-	-4-	-5-	-1-	-2-	-3-	-4-	-5-
NUMBER:		12	12	12	12	9	12	12	12	12	12
OVARY	NUMBER EXAMINED:	0	0	0	0	0	12	0	12	11	10
--ATROPHY		0	0	0	0	0	0	0	0	11	10
--PIGMENT		0	0	0	0	0	0	0	0	0	1
SEMINAL VESICLE	NUMBER EXAMINED:	12	0	12	12	9	0	0	0	0	0
--ATROPHY		0	0	0	1	8	0	0	0	0	0
--CONTRACTION		0	0	0	1	0	0	0	0	0	0
URINARY BLADDER	NUMBER EXAMINED:	12	0	12	12	9	12	0	12	12	12
--BARBITURATE LYSIS		0	0	0	1	0	0	0	0	1	2
--INFLAMMATORY CELL FOCI		1	0	3	0	0	5	0	4	1	0
PROSTATE	NUMBER EXAMINED:	12	0	12	12	9	0	0	0	0	0
--ATROPHY		0	0	0	0	2	0	0	0	0	0
--INFLAMMATORY CELL FOCI		1	0	0	0	0	0	0	0	0	0
UTERUS	NUMBER EXAMINED:	0	0	0	0	0	12	0	12	12	12
--ATROPHY		0	0	0	0	0	0	0	0	12	12
--ACYCLIC		0	0	0	0	0	0	0	0	12	12
--PRO-OESTRUS		0	0	0	0	0	4	0	1	0	0
--OESTRUS		0	0	0	0	0	0	0	3	0	0
--METOESTRUS		0	0	0	0	0	6	0	7	0	0
--DIOESTRUS		0	0	0	0	0	2	0	1	0	0
--CYSTIC GLANDS		0	0	0	0	0	3	0	1	0	0
VAGINA	NUMBER EXAMINED:	0	0	0	0	0	12	0	12	12	12
--ATROPHY		0	0	0	0	0	0	0	0	10	12

Table 13

Group incidence microscopic data - terminal kill

Test article	Control		[		]	.
Group	1	2	3	4	5	.
Level (ppm)	0	500	1000	5000	10000/7500	.

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TABLE INCLUDES:
SEX=ALL;GROUP=ALL;WEEKS=ALL
DEATH=T;FIND=ALL;SUBSET=ALL

ORGAN AND FINDING DESCRIPTION		--- NUMBER-OF-ANIMALS-AFFECTED ---									
	SEX:	----------MALE---------					---------FEMALE--------				
	GROUP:	-1-	-2-	-3-	-4-	-5-	-1-	-2-	-3-	-4-	-5-
	NUMBER:	12	12	12	12	9	12	12	12	12	12
SALIVARY GLAND	NUMBER EXAMINED:	12	1	12	12	9	12	0	12	12	12
--DEGRANULATION/ATROPHY		1	0	1	2	8	0	0	0	12	12
--INFLAMMATORY CELL FOCI		1	0	2	0	0	4	0	0	2	0
MANDIBULAR LN	NUMBER EXAMINED:	12	0	12	10	7	12	0	12	12	10
--ATROPHY		0	0	0	0	4	0	0	0	0	9
THYMUS	NUMBER EXAMINED:	12	1	12	12	8	12	0	12	12	11
--CYST		5	0	4	2	0	3	0	5	2	0
--ATROPHY		0	0	0	6	8	0	0	0	4	11
--ECTOPIC PARATHYROID		0	0	0	2	0	1	0	1	2	0
--AGONAL CONGESTION/HAEMORRHAGE		0	0	0	1	0	0	0	0	0	0
--MINERALISATION		0	0	1	0	0	0	0	0	0	0
LUNG	NUMBER EXAMINED:	12	0	12	12	9	12	0	12	12	12
--AGONAL CONGESTION/HAEMORRHAGE		0	0	0	1	0	1	0	0	0	0
--FOAMY HISTIOCYTES		0	0	0	0	5	0	0	0	0	3
--INFLAMMATORY CELL FOCI		0	0	0	1	1	2	0	0	0	2
HEART	NUMBER EXAMINED:	12	0	12	12	9	12	0	12	12	12
--MYOCARDIAL DEGENERATION/FIBROSIS		0	0	0	11	7	0	0	0	11	2
--INFLAMMATORY CELL FOCI		0	0	1	0	0	0	0	1	0	0
--MINERALISATION		0	0	0	0	0	0	0	0	1	0
THYROID	NUMBER EXAMINED:	12	0	12	12	9	12	0	11	12	12
--ECTOPIC THYMUS		0	0	0	0	0	1	0	0	0	0

Table 13

Group incidence microscopic data - terminal kill

	Test article	Control		[		]	.
	Group	1	2	3	4	5	.
	Level (ppm)	0	500	1000	5000	10000/7500	.

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STUDY NUMBER: 0535103

TABLE INCLUDES:
SEX=ALL;GROUP=ALL;WEEKS=ALL
DEATH=T;FIND=ALL;SUBSET=ALL

--- N U M B E R - O F - A N I M A L S - A F F E C T E D ---

ORGAN AND FINDING DESCRIPTION		SEX:	MALE				FEMALE				
		GROUP:	-1-	-2-	-3-	-4-	-5-	-1-	-2-	-3-	-4-	-5-
		NUMBER:	12	12	12	12	9	12	12	12	12	12
PARATHYROID	NUMBER EXAMINED:		12	0	9	8	8	11	0	9	8	10
--ECTOPIC THYMUS			1	0	0	3	0	0	0	0	1	0
--CYST			0	0	0	0	1	0	0	0	0	0
ADIPOSE TISSUE	NUMBER EXAMINED:		0	0	0	12	9	0	0	0	8	12
--ATROPHY			0	0	0	10	9	0	0	0	8	12
THORACIC CAVITY	NUMBER EXAMINED:		0	0	0	0	0	0	1	1	0	0
--AGONAL CONGESTION/HAEMORRHAGE			0	0	0	0	0	0	0	1	0	0

** END OF LIST **

APPENDICES

Appendix 1
Study protocol, amendments and minor deviations

Definitive Protocol

Study Title	[ ] 13 Week (Dietary) Administration Toxicity Study in the Mouse
Study Director	Dr Philip W Harvey philip.harvey@covance.com +44 (0) 1423 848421
Sponsor	[ ]
Study Monitor	[ ]
Test Facility	Covance Laboratories Ltd Otley Road, Harrogate North Yorkshire HG3 1PY ENGLAND
Covance Study Number	535/103
Sponsor Number	To be advised
Page Number	1 of 26

The content of this protocol represents our interpretation of the study objectives and the requirements of the regulatory guidelines. The definitive protocol will be presented in a similar format. All procedures described in this protocol are the subject of detailed departmental standard operating procedures.

Sponsors should note that bold italic text indicate information which is important for good study design or is a legal, regulatory requirement.

INTRODUCTION

Study objective

The objective of the study is to determine the toxicity of the test article, [ ] following oral (dietary) administration to the mouse for 13 weeks and to help provide a basis for the selection of doses for a carcinogenicity study in this species.

The route of administration has been chosen because it is a possible route of human exposure.

The mouse has been selected because it is a rodent species recommended by various regulatory authorities. Background data are available.

Proposed study dates

The Study Director aims to gain Sponsor approval of the definitive protocol and have made all preparations for the study at least ten working days before treatment commences. Other relevant materials and information (eg certificates of test article analysis) should also reach Covance before this date. This enables pre-treatment procedures to be carried out and provides the opportunity for participating Covance staff to respond to briefings on any of the scientific or welfare features of the study.

Animals on site & experimental start date	May 2003
First treatment	w/b 2 June 2003
Study termination	w/b 1 September 2003
Pathology completed & experimental completion date	To be advised

Dates relating to the issue of draft and final reports will be supplied to the Sponsor by the Study Director on request.

TEST AND CONTROL ARTICLES

The test article is identified as [ ]

The Sponsor has provided information as possible on the physical appearance, known hazardous properties, purity, stability and a date of expiry. A sample for archive will be the responsibility of the Sponsor.

When not in use the test article will be stored in a sealed container, at room temperature in the dark.

The control article and vehicle for the test article will be ground diet.

EXPERIMENTAL DESIGN

Regulatory test guidelines

This protocol is designed to meet the known requirements of the Japanese MAFF Agrochemical Test Guidelines 2001 (90 day oral toxicity (2-1-9)). These requirements and guidelines are current at the time the protocol was issued. The protocol is also expected to meet the requirements of the US EPA (OPPTS 870.3100) and the Organisation for Economic Co-operation and Development (OECD 408, 1998).

Test article administration

The test article will be administered orally by incorporation into the diet. The animals will have access *ad libitum* to the dietary formulations for at least 13 weeks excluding the day of necropsy.

Dose levels

The following dose levels were selected:

Group number	Group description	Dose level (ppm)	Number of animals	
			Male	Female
1	Control	0	12	12
2	Low	500	12	12
3	Intermediate I	1000	12	12
4	Intermediate II	5000	12	12
5	High	10000	12	12

The rationale for selection of dose levels will be specified in a protocol amendment, however, the high dose should produce toxic effects without causing deaths. The intermediate dose should establish a dose response effect. There should be no toxicity at the low dose. If no toxic effects are seen at the maximum practicable dose or at a dose equivalent to 1000 mg/kg/day it is not required to conduct tests at higher dose levels. Test article inclusion will not routinely be allowed to exceed 5% of the dietary formulation.

It is a requirement of UK law (Animals (Scientific Procedures) Act, 1986) that minimum suffering and distress is caused to animals on study. Therefore it is necessary for the Sponsor to provide Covance with detailed justification for their selection of dose levels. If possible, this should include clinical signs and effects on body weight and food consumption. If appropriate data are not available it may be necessary for a preliminary dose range-finding study to be performed either by the Sponsor or Covance.

TEST ARTICLE FORMULATION

Preparation

Formulations will be prepared weekly and reserve samples will be retained from all batches deep frozen. The reserve samples may be discarded following authorisation by the Study Director.

Storage

The formulations will be stored at room temperature in a sealed container.

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Formulation analysis

Formulations will be analysed for their test article content by the Formulations Analysis section of the Central Dispensary at Covance.

The method used for the analysis will be the current version of Covance 535/102-01F. The method was validated according to Standard Operating Procedures in study 535/102.

Stability and homogeneity

Stability and homogeneity analysis will be performed for each batch of test article used on the study.

Homogeneity and stability were determined at concentrations # and # mg/kg in study 535/102 (Proposal 52715B-1).

Achieved concentration

Analysis of the formulations for achieved concentration will be performed on samples prepared for use in Weeks 1 and 13. The normal target range for the results will be 85% to 110% of nominal concentration.

Initially only two samples will be taken and analysed. If the achieved concentration results are within the target range the results will be accepted.

If one or both of the achieved concentration results are outside of the target range a third sample will be analysed. Results will be expressed in terms of % nominal concentration

A single sample will be taken from control formulations and will be analysed. If test article is not found this analysis will be reported.

If test article is found at a level ≥20% of the LLOQ, a determination as to whether the test article is systematic, interference from the diet, or actually present in the sample will be made. If the reagent blank does not contain test article a second control sample will be analysed at the end of the analytical run. If test article is also found in the reagent blank at a level ≥20% of the LLOQ the cause of the contamination will be investigated. Reagent blanks will be prepared and analysed until the level of test article found is <20% of the LLOQ. A second control sample will then be analysed

TEST SYSTEM

Species, strain and supplier

Sufficient mice of the B6C3F1 strain will be obtained from a recognised supplier in order to provide 60 healthy animals of each sex.

Specification

The animals will be obtained as weanlings of about 24 to 27 days of age on arrival. At randomisation their body weight will be within ±20% of the overall mean for each sex. They will be approximately 5 weeks old at start of dosing.

Environment

The animals will be routinely kept in the following environment except for short periods of time where experimental procedures dictate otherwise. The animals will be housed in a single, exclusive room, air-conditioned to provide a minimum of 15 air changes/hour. The temperature and relative humidity ranges will be 19 to 25°C and 40 to 70% respectively. Fluorescent lighting will be controlled automatically to give a cycle of 12 hours light (0600 to 1800) and 12 hours dark.

The males will be housed singly and the females in groups of three in cages that conform with the 'Code of practice for the housing and care of animals used in scientific procedures' (Home Office, London, 1989).

Environmental enrichment

In order to enrich both the environment and the welfare of the animals, they may be provided with wooden Aspen chew blocks.

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Diet and water

Throughout the study the animals will have access *ad libitum* to SQC Rat and Mouse Maintenance Diet No 1, Expanded Ground Fine (Special Diets Services Ltd. Witham). Each batch of diet is analysed for specific constituents and contaminants. Typical values are presented in Appendix 1.

Mains water will be provided *ad libitum* via an automatic watering system or bottles. The water is periodically analysed for specific contaminants. Typical values are presented in Appendix 2.

No contaminants are expected to be present in diet or water at levels which might interfere with achieving the objective of the study.

ANIMAL HEALTH AND WELFARE

All procedures to be carried out on live animals as part of this study will be subject to the provisions of United Kingdom National Law, in particular the Animals (Scientific Procedures) Act, 1986.

In order to monitor the welfare of an individual or group of animals, additional observations to those already detailed may be instigated at the discretion of the Study Director. In certain instances this may include treatment as advised by a Covance animal welfare veterinary surgeon.

ETHICAL REVIEW

The Animals (Scientific Procedures) Act 1986 obliges all UK laboratories to maintain a local ethical review process. This is intended to ensure all animal use in the establishment is carefully considered and justified; that proper account is taken of all possibilities for reduction, refinement or replacement and that high standards of accommodation and care are achieved. The Study Director may require assistance from the Sponsor in preparing for ethical review of the study protocol.

PRE-EXPERIMENTAL PROCEDURES

Acclimatisation and health procedures

All animals will be given a clinical inspection for ill health on arrival. They will be acclimatised for about two weeks and a veterinary inspection will be performed before the start of dosing to ensure their suitability for study.

Allocation to treatment group

The animals will be assigned to treatment groups on arrival using a total randomisation procedure.

Group mean body weights will be calculated and inspected to ensure there are no unacceptable differences between groups.

Treatment group positions in the cage battery will be assigned using a set of random letter permutations.

Identification of the test system

The animals will be individually identified by a subcutaneous electronic transponder/tattoo. Cages will be appropriately identified with study information including study number and animal number/s.

Group number	Group codes	Animal numbers	
		Male	Female
1	Buff	1-12	61-72
2	Green	13-24	73-84
3	Blue	25-36	85-96
4	Yellow	37-48	97-108
5	Pink	49-60	109-120

EXPERIMENTAL OBSERVATIONS

Clinical signs

All animals will be observed daily for signs of ill health or overt toxicity. In addition, each animal will be given a detailed physical examination at weekly intervals. An individual record will be maintained of the clinical condition of each animal. ***Additional observations may be performed at the discretion of the Study Director.***

Routine health checks

All animals will be examined at the beginning and the end of the working day to ensure the animals are in good health. Any animal which shows marked signs of ill health may be isolated. Moribund animals will be killed and necropsied.

Body weights

Individual body weights will be recorded in Week –1, before treatment on the first day of treatment, at weekly intervals and before necropsy.

Food consumption

The amount of food consumed by each cage of animals will be determined weekly from Week -1. Consumption will be calculated as g/animal/week.

Compound consumption

The amount of test article consumed by each cage of animals will be determined weekly. Consumption will be calculated as mg/kg body weight/day.

Ophthalmoscopy

Investigations will be performed on all animals pre-treatment and on control and high dose animals in Week 12. If treatment-related changes are seen in the high dose group then the eyes of the low and intermediate groups will also be examined (at additional cost). A mydriatic agent will be instilled into the eyes before examinations.

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If treatment-related changes are seen in the high dose group then the eyes of the low and intermediate groups, will also be examined (at additional cost).

Clinical pathology

Samples and occasions

Blood samples (either 0.5 mL EDTA or 0.6 mL lithium heparin nominal) will taken via cardiac puncture of all animals at necropsy (after an overnight period without food). Blood samples from the first six numbered males and females in each group will be analysed for haematology parameters and blood taken from the last six numbered animals will be analysed for clinical chemistry parameters. If there are deaths during the course of the study the distribution of the animals for blood sampling may be altered at the discretion of the Study Director.

Where possible, blood samples will also taken via cardiac puncture from all decedents.

Urine samples will be collected overnight from all animals in Week 13. ***Food and water will be removed during collection.***

Haematology

The following parameters will be determined on blood taken into EDTA anticoagulant:

haemoglobin concentration	red blood cell count
packed cell volume	reticulocytes
mean cell volume	mean cell haemoglobin
mean cell haemoglobin concentration	haemoglobin distribution width
red cell distribution width	platelet count
platelet crit	mean platelet volume
platelet distribution width	total and differential white cell count

Bone marrow smears

Bone marrow smears will be prepared at necropsy. They will be fixed in methanol but only examined by a haematologist if a blood disorder is suspected.

Clinical chemistry

The following parameters will be determined on plasma derived from whole blood collected into lithium heparin anticoagulant:

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aspartate aminotransferase	alanine aminotransferase
alkaline phosphatase	sodium
potassium	calcium
inorganic phosphorus	chloride
total protein	albumin
globulin	albumin/globulin ratio
total cholesterol	glucose
urea	total bilirubin
creatinine	triglycerides
gamma glutamyl transpeptidase	

Urine analysis

microscopy of sediment	turbidity
colour	volume
specific gravity	pH¤
protein¤	glucose¤
ketones¤	bilirubin¤
blood¤	urobilinogen¤
reducing substances¤	

¤ - urine parameters will be determined semi-quantitatively

TERMINAL PROCEDURES

Necropsy and tissue preservation (Appendix 3)
All animals including decedents will be subject to necropsy.

Where possible the scheduled necropsies will be carried out in cage order. An intraperitoneal sodium pentobarbitone overdose will be given prior to exsanguination and a full macroscopic examination will be performed under the general supervision of a pathologist and all lesions will be recorded.

All tissues denoted by (•) from all animals will be preserved in the appropriate fixative/s.

Organ weights (Appendix 3)
Animals will be weighed before necropsy. The organs denoted by (†) will be dissected free from fat and other contiguous tissue and weighed before fixation.

Histology (Appendix 3)
Gross lesions from all animals and tissues denoted by (Š) from:

- control and high dose animals
- decedents (all groups)

will be embedded in paraffin wax BP, sectioned at a nominal 5 µm and stained with haematoxylin and eosin.

Liver, spleen and kidney from low and intermediate dose animals will be processed to the slide stage.

Additional tissues may also be included to complete standard tissue blocks at no extra cost to the Sponsor. This will be done in accordance with relevant Histology SOP's.

Pathology (Appendix 3)
Gross lesions from all animals and tissues denoted by (Š) from:

- control and high dose animals
- decedents (all groups)

will be examined microscopically by the study pathologist.

If a treatment-related effect is indicated in any tissue at the high dose level, then the pertinent tissue from one or all of the lower dose groups will be examined at additional cost and within an additional time frame.

DATA EVALUATION

Data from treated animals will be compared with control data.

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Statistical analysis will be performed where appropriate using the methods specified in the appendices.

MAJOR COMPUTER SYSTEMS

The following computerised systems may be used during the conduct of this study:

Scheduling	CMS (Covance Management System)
Formulations	Talisman
In-life data collection	Connex
Clinical pathology	Clinaxys
Bioanalytical analysis	Atlas/Analyst/Nautilus
Post-life data collection	Xybion
Report generation and statistical analysis	Deliver/Office 97

Version numbers of the systems will be held on file at Covance.

GOOD LABORATORY PRACTICE COMPLIANCE

The study will be performed in compliance with the United Kingdom Statutory Instrument 1999 No. 3106, the Good Laboratory Practice Regulations 1999 and the OECD Principles on Good Laboratory Practice (revised 1997, Issued Jan 1998) ENV/MC/CHEM(98)17.

All procedures will be performed in accordance with detailed Standard Operating Procedures. The records to be kept for this study are indicated in the appendices. Wherever appropriate, any change to this protocol will be made by an amendment issued in agreement with the Sponsor.

For aspects of study performed at Covance, protocol review, in-life and report audits will be performed in accordance with Standard Operating Procedures laid down by the Covance Quality Assurance department.

In the event of inspection by an outside authority, the Sponsor will be consulted before the inspectors are permitted access to any of the study records (unless required by law or regulation).

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REPORTS

The Sponsor will be informed promptly of any significant findings and issued progress reports at appropriate intervals.

Following completion of the study a draft report will be issued. Client comments should be supplied for inclusion into a final document within six months of receipt of the draft document. In accordance with requirements of the UK Medicines Control Agency GLP Monitoring Authority, if no client comments are received within six months of issue, the report will be finalised. Any further changes after this time will be addressed as an amended final report and may result in additional costs.

ARCHIVE

All primary data, or authenticated copies thereof, specimens and the final report will be retained in the Covance Laboratories Limited archives for ten years after issue of the final report. At this time the sponsor will be contacted to determine whether the data should be returned, retained or destroyed on their behalf. Sponsors will be notified of the financial implications of each of these options at that time.

Specimens requiring storage deep frozen are specifically excluded from the above. These will be retained for as long as the quality of the material permits evaluation but for no longer than three months after issue of the final report. The Study Sponsor will be notified of the intent to destroy samples and any financial implications before specimens are destroyed on their behalf.

Appendix 1
Diet Summary (Year Ending 31 December 2002)

Nutrients		Mean	SD
Moisture	%	9.9	0.7
Crude Fat	%	2.8	0.4
Crude protein	%	14.6	0.2
Crude Fibre	%	4.7	0.5
Ash	%	4.6	0.1
Calcium	%	0.74	0.03
Phosphorus	%	0.53	0.02
Sodium	%	0.23	0.04
Chloride	%	0.42	0.02
Potassium	%	0.74	0.02
Magnesium	%	0.16	0.01
Iron	mg/kg	163	18
Copper	mg/kg	8	1
Manganese	mg/kg	50	3
Zinc	mg/kg	38	3
Vitamin A	iu/g	5.7	1.5
Vitamin E	mg/kg	61.0	11

Contaminants			
Fluoride	mg/kg	4	2
Nitrate as $NaNO_3$	mg/kg	9	2
Nitrite as $NaNO_2$	mg/kg	0.2	0.6
Lead	mg/kg	0.07	0.14
Arsenic	mg/kg	ND	ND
Cadmium	mg/kg	0.01	0.03
Mercury	mg/kg	0.00	0.01
Selenium	mg/kg	0.06	0.06
Total Aflatoxins	mcg/kg	ND	ND
Total PCB	mcg/kg	ND	ND
Total DDT	mcg/kg	ND	ND
Dieldrin	mcg/kg	ND	ND
Lindane	mcg/kg	ND	ND
Heptachlor	mcg/kg	ND	ND
Malathion	mcg/kg	4	8
Total viable organisms $x 10^3$	per g	ND	ND
Mesophilic spores $x 10^2$	per g	0.2	0.42
Salmonellae species	per g	ND	ND
Entero Bacteriaceae	per g	ND	ND
Escherichia coli	per g	ND	ND
Fungal units	per g	21	41
Antibiotic activity		ND	ND

ND = Non detected

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Appendix 2
Summary of Water Analysis (Year Ending 31 December 2002)

Covance water supply sampled at point of use (treated water)

Parameter	Unit	Range	Mean
Nitro total axid	mg/L	3.844 - 6.988	4.22
Conductivity 20c	uS/cm	145 - 183	149
pH		7.2 - 8.1	7.4
Turbidity	FTU	<0.15 - 0.51	<0.18
Nitrate	mg/L NO_3	3.840 - 6.988	4.155
Nitrite	mg/L NO_2	<0.010	<0.010
Nitrogen ammoniacal	mg/L NH_4	<0.03 - 0.06	<0.03
Iron	ug/L Fe	<7 - 55	<19
Aluminium	ug/L Al	<13 - 60	<34
Manganese	ug/L Mn	<1.5 - 39.7	<3.5
Colour True	Hazen	<1.7 - 5.2	<3.4
Aldrin	ug/L	<0.0050 - <0.0053	<0.0052
DDT (pp)	ug/L	<0.0036 - <0.0050	<0.0043
Dieldrin	ug/L	<0.0022 - <0.0040	<0.0031
Endrin	ug/L	<0.0032 - <0.0060	<0.0046
HCH - gamma	ug/L	<0.0008 - <0.0050	<0.0029
Copper	ug/L Cu	9 - 1990	110
Lead	ug/L Pb	<0.3 - 1.7	<0.5
Zinc	ug/L Zn	<6 - 208	<22
Chloride	mg/L Cl	11.5 - 15.0	12.7
Sulphate	mg/L SO^4	30.5 - 36.6	32.3
Calcium	mg/L Ca	14.2 - 17.7	15
Magnesium	mg/L Mg	2.47 - 3.53	2.75
Sodium	mg/L Na	9.14 - 11.40	10.03
Potassium	mg/L K	1.28 - 1.52	1.38
Phosphorus	ug/L P	160 - 998	920
Cadmium	ug/L Cd	<0.09	<0.09
Hardness total	mg/L Ca	19 - 25	20
Alkalinity total	mg/L HCO_3	15.9 - 29.6	19.2
Total coliforms	No/100ml	0	0
Faecal coliforms	No/100ml	0	0
Escherichia coli	No/100ml	0	0
Chlorine free	mg/L Cl	<0.05 - 0.16	<0.07
Chlorine total	mg/L Cl	<0.05 - 0.20	<0.11
Colonies 1 day 37c	No/ml	0 - 1100	45
Colonies 3 day 22c	No/ml	0 - 512	53

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Appendix 3
Terminal Procedures

(• - Tissues preserved) († - Organs weighed) (§ - Tissues examined)

Ref. no	Tissue/organ	(•)	(†)	(§)
0	Blood sample	•		
0	Bone marrow smear (femur)	•ac		
1	Eyes (x2)	•b		§
1.1	Optic nerves (x2)	•		§
2	Harderian glands	•d		§
3	Skin	•		§
3	Mammary	•f		§
3	Muscle (quadriceps)	•		§
4	Femur with bone marrow and articular surface	•		§
5	Sternum with bone marrow	•		§
6	Sciatic nerves (x2)	•		§
7	Liver (x2)	•	†	§
7	Spleen	•	†	§
7	Pancreas	•		§
7	Mesenteric lymph nodes	•		§
8	Stomach	•		§
8	Duodenum	•		§
8	Jejunum	•		§
9	Ileum	•		§
9	Caecum	•		§
9	Colon	•		§
9	Rectum	•		§
10	Gall bladder	•		§
11	Adrenals (x2)	•	†	§
12	Kidney (x2)	•	†	§
13	Testes + epididymides	•	†	§
13	Ovaries (x2)	•	†	§
14	Seminal vesicles (x2)	•		§
14	Urinary bladder	•		§
14	Prostate	•		§
14	Uterus (x3)	•		§
14	Vagina	•		§
15	Salivary glands	•		§
15	Mandibular lymph nodes	•		§
15.1	Thymus	•	†	§
16	Lungs (x2)	•		§
18	Heart	•	†	§
18	Aorta	•		§
18	Trachea	•		§
18	Oesophagus	•		§
18	Tongue	•		
19	Thyroids + parathyroids	•		§
19.1	Larynx	•		
20	Pituitary	•		§
21	Brain (x3)	•	†	§
21	Spinal cord cervical	•		§
21	Spinal cord thoracic	•		§
22	Spinal cord lumbar	•		§
23	Lacrimal glands (x2)	•d		
24	Zymbal glands (x2)	•d		
25	Bronchial lymph nodes			
25.1	Trachea bifurcation	•		
25.2	Head	•		
26	Nasal cavity (x2)	•d		
27	Nasal cavity (x2)	•d		
28	Nasopharynx / nares (x2)	•d		
99.	Additional tissue			
99.1	Injection sites			
99.2	Dosing sites			
99.3	Animal identification	•		
99.4				
99.5				
99.6				
100	Gross lesions	•		§

Fixative: 10% Neutral Buffered Formalin except where stated as: a – methanol b - Davidson's

c - see clinical pathology section of protocol

d - will be preserved with the head (in situ) unless histopathological processing is required
f - female only
Left and right organs will be weighed together.
Lungs to include mainstem bronchi.
Bone tissue designated for histopathological examination will be decalcified using Kristensons fluid.

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Appendix 4
Blood sampling requirements

Terminal blood sampling schedule – necropsy

Occasion	Sample site	Animals fasted	Sample type	Anticoagulant	Sample volume (mL)#	Total number of samples
Terminal	AA	Yes	Haematology	EDTA	0.5	60
			Clinical chemistry	Lithium heparin	0.6	60
Unscheduled	AA	NA	Haematology	EDTA	0.5	1
			Clinical chemistry	Lithium heparin	0.6	1

AA = Abdominal aorta
NA = not applicable
# = the maximum practicable volume will be collected
Blood samples for clinical chemistry are taken into lithium heparin gel tubes.

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Appendix 5
Statistical Methods

General statistical procedures
Tests will be performed using a two-sided risk.

The vehicle control group (Group 1) will be taken as the baseline group with which the treated groups (Groups 2-5) will be compared.

Significant results will be reported as $P<0.05$, $P<0.01$ or $P<0.001$.

In general, where analysis of variance (ANOVA) is indicated in the following methods, two-way ANOVA will be used where the smallest group size is between 4 and 6, and data for both sexes are available. Otherwise, one-way ANOVA will be used. No analysis will be performed where there are less than 4 animals per group.

Methods for in-life and necropsy parameters
Body weight gains over specified intervals and, where required, absolute body weights at pre-determined study durations will be analysed using analysis of variance (ANOVA) (Procedure I or II; see below).

For food and water consumption, the mean consumption per animal will be estimated over specified periods for each animal (individually housed) or for each cage (group housed) and ANOVA will be performed (Procedure I or II). Where there are less than 4 cages per group, no analysis will be performed.

Clinical pathology parameters will be analysed using ANOVA (Procedure I or II). Non-parametric tests (Procedure III) will be used for parameters containing values outside the limits of detection.

Organ weights will be analysed using analysis of covariance (ANCOVA) (Procedure IV), adjusting for necropsy body weight. For paired organs the total weight will be analysed. Unadjusted organ weights and organ/body weight ratios may be analysed instead if requested by the Sponsor or thought to be appropriate by the Study Director/Study Biostatistician; ANOVA (Procedure I) will then be used.

Necropsy body weights will be analysed using ANOVA (Procedure I or II).

Where data are unsuitable for analysis by these methods, the Statisticians will use appropriate alternative methods. Any such analysis will be described in the report.

Procedures for quantitative data

Procedure I (ANOVA)
Male and female data will be analysed separately.

One-way ANALYSIS OF VARIANCE (ANOVA) will be performed. Levene's test will be used to test for equality of variances among groups. Where Levene's test is non-significant ($P \geq 0.01$), comparisons between each treated group and control will be made using DUNNETT'S test. A LINEAR CONTRAST will be used to test for dose response. A log transformation may be applied to achieve variance stability.

Where the data prove unsuitable for this procedure, non-parametric methods (Procedure III) will be used.

Where data for only two groups are available, a two-sample t-test will be used.

Procedure II (Two-way ANOVA)
Two-way ANALYSIS OF VARIANCE (ANOVA) will be performed on the data from both sexes. LEVENE's test will be used to test for equality of variance between sexes, among groups and for any interaction. Where none of the Levene's tests is significant ($P \geq 0.01$ for all 3 tests), comparisons between each treated group and control will be made for each sex separately using DUNNETT'S test. A LINEAR CONTRAST will be used to test for dose response for each sex separately. The Dunnett's tests and regression analyses will use the mean square error from the combined ANOVA for testing the significance of results. A log transformation may be applied to achieve variance stability.

Where either of the Levene's tests for group or interaction differences is significant, the data will be analysed using Procedure III. Where only the test for a sex difference is significant, the data will be analysed using Procedure I.

Where data for only two groups are available, a two-way ANOVA will be used; comparisons between treated and control groups will be made for each sex separately using t-tests.

Procedure III (non-parametric)
Male and female data will be analysed separately.

The KRUSKAL-WALLIS non-parametric ANOVA will be performed, together with the WILCOXON RANK SUM TEST for each treated group against control. Where the ANOVA is not significant, the Wilcoxon tests will not be reported. The TERPSTRA-JONCKHEERE TEST for dose response will also be performed.

Where data for only two groups are available, the Wilcoxon Rank Sum test will be used.

Procedure IV (ANCOVA)
Male and female data will be analysed separately.

This procedure will be used when adjustment is required for a second variable.

ANALYSIS OF COVARIANCE (ANCOVA) will be performed. Where there is no significant heterogeneity among the gradients ($P \geq 0.01$), Levene's test will be performed to test for equality of variances between groups. If Levene's test is non-significant ($P \geq 0.01$), the adjusted means for treated groups will be compared against control using DUNNETT'S test. Where data for only two groups are available, the GROUP effect from the ANCOVA will be reported.

Where there is significant heterogeneity among the gradients, the data will be inspected and the Biostatistician will decide how to proceed. Where Levene's test is significant, both the organ weight and organ/body weight ratio will be analysed using Procedure I.

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Appendix 6
Study Records

The following study records will be routinely maintained and will include but may not be limited to the following:

Definitive protocol
Protocol amendment(s)
File notes(s)
Study schedule
Study correspondence
Despatch/receipt of samples from Covance

Dispensary information pertaining to:
Test article receipt
Test article description
Test article usage
Test article disposal
Preparation of dosing formulations (if appropriate)

Animal house information pertaining to:
Diet batches used
Diet and water analysis §
Supplier's animal data
Acceptability and randomisation of animals
Details of experimental environment

§ - central records maintained

Animal house experimental procedures, observations and recording as listed in the protocol

The following data will be maintained if the analyses are required by protocol and performed by Covance:

Analysis of formulations
Analysis of toxicokinetic samples
Clinical pathology
Macro/micro pathological observations and recording as specified in the protocol

Statistical analyses (if appropriate)

Appendix 7
Study Reports

Unaudited draft report
A draft report will be issued for comment by the study Sponsor. The report will contain the following information:

The name and address of the testing facility/s, location of all raw data and final report.

The objectives and procedures stated in the approved protocol including any amendments made to the original protocol and any unforeseen circumstances, which may have affected the quality or integrity of the study.

The identity of the test and control substances, by name or code number, their quality or purity and accuracy of formulation will be presented if appropriate. The experimental design including study start and completion dates, dose levels, route, frequency and duration of dosing.

The supplier, species, strain, sex of the animals and the method of identification.

The reports of the individual scientists involved in the study e.g. pathologist.

Data collected and pertaining to the observations as indicated in the protocol will be presented in the report unless considered not appropriate by the Study Director. In these circumstances a textual comment will describe any effects, relationship or absence thereof to dosing.

Other data not specified in the above sections (e.g. results of statistical analyses, and data supplied by the Sponsor or suppliers) may be reported where appropriate.

Final report
The final report will be produced on paper. In addition to the detail described for the draft report it will contain the signature of the Study Director and other scientists involved in the conduct of the study. It will also contain a signed statement indicating that the study has been subject to evaluation by the Quality Assurance Unit.

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Electronic reports

An electronic copy of the final report above may be made available on request from the Sponsor. The study report/s will be provided in PDF format unless agreed otherwise by Covance before the start of the study. Reports requiring specialised Sponsor formats/alternative computer software packages may be possible on request from the Sponsor but may involve extra time and cost.

It should be noted that an electronic final report will be despatched only at the request of the Sponsor and will contain, to the best of our knowledge, a full copy of the available information presented in the original and verified hard copy of the final report. However, the electronic copy will not be subject to quality assurance approval. Covance will accept no responsibility for subsequent operations carried out on this electronic information, or copies thereof, after despatched to the Sponsor. Furthermore the electronic copy will be scanned by Covance prior to dispatch for the presence of computer viruses; however, we advise the Sponsor to recheck this prior to accessing as no warranty can be given as to its being virus-free.

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Appendix 8
Study personnel

Study Director	Dr Philip W Harvey

(Any change in Study Director will be documented by protocol amendment).

Distribution

In addition to the above the following personnel should receive copies of the protocol, protocol amendments and file notes.

Animal Health & Welfare/Ophthalmoscopy	A Basford
Animal House Supervisor (2 copies)	**To be advised**
Animal House Manager	T Jameson
Bioanalytical Services	L Bentley
Clinical Pathology Services	Sample Reception, B Johnson, F Palou
Deputy Study Director	**To be advised**
Ethical Review	J Gardner
Formulations & Formulations Analysis	C Wood
Histology	S Brogden
Necropsy	I Wilkins
Pathology	J Glaister
Quality Assurance	C Clare
Report Co-ordination	P Lancaster
Resource Management	Estimation
Resource Management	Scheduling
Sample Management M.E.S	L Dunn
Statistics	C Gardner

APPENDIX 9
PROTOCOL APPROVAL

[ ]

14 April 2003
Date

[ ]

P.W. Harvey

8 April 2003
Date

Dr Philip W Harvey
Study Director
Covance Laboratories Ltd

D Everett

8 Apr 03
Date

D Everett BSc CBiol FIBiol
Head of Toxicology Study Directors/Home Office Project Licence Holder/
Project Licence Number:PPL 60/2100 (9)
Covance Laboratories Ltd

Protocol Amendment

Study Title	[ ] 13 Week (Dietary) Administration Toxicity Study in the Mouse
Data Requirement	OPPTS 870.3100
Study Director	Dr Philip W Harvey philip.harvey@covance.com +44 (0) 1423 848421
Sponsor	[ ]
Study Monitor	[ ]
Test Facility	Covance Laboratories Ltd Otley Road, Harrogate North Yorkshire HG3 1PY ENGLAND
Covance Study Number	535/103
Sponsor Number	To be advised
Amendment Number	1
Page Number	1 of 6

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This amendment confirms the address of the sponsor as indicated on the front page of the protocol amendment. It also confirms study dates, concentrations of trial formulations, method of terminal blood sampling and study personnel as below.

Proposed study dates

Animals on site & experimental start date	20 May 2003
First treatment	6 June 2003
Study termination	9 September 2003
Pathology completed & experimental completion date	To be advised

Stability and homogeneity

Stability and homogeneity analysis will be performed for each batch of test article used on the study.

Homogeneity and stability will be determined at concentrations of 100 ppm and 20,000 ppm in Covance study 535/102.

The method of terminal blood sampling is cardiac puncture and not abdominal aorta as specified in Appendix 4 (the correct Appendix information is below).

Appendix 4
Blood sampling requirements

Terminal blood sampling schedule – necropsy

Occasion	Sample site	Animals fasted	Sample type	Anticoagulant	Sample volume (mL)#	Total number of samples
Terminal	CP	Yes	Haematology	EDTA	0.5	60
			Clinical chemistry	Lithium heparin	0.6	60
Unscheduled	CP	NA	Haematology	EDTA	0.5	1
			Clinical chemistry	Lithium heparin	0.6	1

CP = Cardiac puncture
NA = not applicable
# = the maximum practicable volume will be collected
Blood samples for clinical chemistry are taken into lithium heparin gel tubes.

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The Animal House Supervisor will be Phil Leggett and the Deputy Study Director will be Colin Green (revised Appendix 8 is given below).

Appendix 8
Study personnel

Study Director	Dr Philip W Harvey

(Any change in Study Director will be documented by protocol amendment).

Distribution

In addition to the above the following personnel should receive copies of the protocol, protocol amendments and file notes.

Animal Health & Welfare/Ophthalmoscopy	A Basford
Animal House Supervisor (2 copies)	P Leggett
Animal House Manager	T Jameson
Bioanalytical Services	L Bentley
Clinical Pathology Services	Sample Reception, B Johnson, F Palou
Deputy Study Director	C Green
Ethical Review	J Gardner
Formulations & Formulations Analysis	C Wood
Histology	S Brogden
Necropsy	I Wilkins
Pathology	J Glaister
Quality Assurance	C Clare
Report Co-ordination	P Lancaster
Resource Management	Estimation
Resource Management	Scheduling
Sample Management M.E.S	L Dunn
Statistics	C Gardner

Covance Study Number 535/103
Protocol Amendment Number 1

AMENDMENT APPROVAL

for [ ]
[ ]

28 April, 2003
Date

P.W. Harvey
Dr Philip W Harvey
Study Director
Covance Laboratories Ltd

23 April 2003
Date

D Everett
D Everett BSc CBiol FIBiol
Head of Toxicology Study Directors/Home Office Project Licence Holder/
Project Licence Number:PPL 60/2100 (5)
Covance Laboratories Ltd

23 Apr 03
Date

Protocol Amendment

Study Title	[ ] 13 Week (Dietary) Administration Toxicity Study in the Mouse
Data Requirement	OPPTS 870.3100
Study Director	Dr Philip W Harvey philip.harvey@covance.com +44 (0) 1423 848421
Sponsor	[ ]
Study Monitor	[ ]
Test Facility	Covance Laboratories Ltd Otley Road, Harrogate North Yorkshire HG3 1PY ENGLAND
Covance Study Number	535/103
Sponsor Number	To be advised
Amendment Number	2
Page Number	1 of 3

This protocol amendment details the change in sponsors monitor and clarifies the reference to data requirement that appeared in amendment 1.

Sponsors monitor

[ ] has been replaced by [ ]

Data Requirement

Protocol amendment 1 corrected the data requirement on the front page.

AMENDMENT APPROVAL

[ ] May 2, 2003
Date

[ ]

P.W. Harvey
Dr Philip W Harvey
Study Director
Covance Laboratories Ltd

29 April 2003
Date

D Everett
D Everett BSc CBiol FIBiol
Head of Toxicology Study Directors/Home Office Project Licence Holder/
Project Licence Number:PPL 60/2100 (5)
Covance Laboratories Ltd

29 Apr 03
Date

Protocol Amendment

Study Title	[ ] : 13 Week (Dietary) Administration Toxicity Study in the Mouse
Data Requirement	OPPTS 870.3100
Study Director	Dr Philip W Harvey philip.harvey@covance.com +44 (0) 1423 848421
Sponsor	[ ]
Study Monitor	[ ]
Test Facility	Covance Laboratories Ltd Otley Road, Harrogate North Yorkshire HG3 1PY ENGLAND
Covance Study Number	535/103
Sponsor Number	To be advised
Amendment Number	3
Page Number	1 of 3

COVANCE
THE DEVELOPMENT SERVICES COMPANY

This amendment changes the arrival date and age specification of animals at arrival (from protocol amendment 1).

Proposed study dates

Animals on site & experimental start date	28 May 2003
First treatment	6 June 2003
Study termination	9 September 2003
Pathology completed & experimental completion date	To be advised

Specification

The animals will be ordered as weanlings of about 21 to 35 days of age on arrival. At randomisation their body weight will be within ±20% of the overall mean for each sex. They will be approximately 5 weeks old at start of dosing.

Covance Study Number 535/103
Protocol Amendment Number 3

[redacted]

Date

P.W. Harvey

Dr Philip W Harvey
Study Director
Covance Laboratories Ltd

13 May 2003
Date

D Everett

D Everett BSc CBiol FIBiol
Head of Toxicology Study Directors/Home Office Project Licence Holder/
Project Licence Number:PPL 60/2100 (5)
Covance Laboratories Ltd

15 May 03
Date

Protocol Amendment

Study Title	[ ] 13 Week (Dietary) Administration Toxicity Study in the Mouse
Data Requirement	OPPTS 870.3100
Study Director	Dr Philip W Harvey philip.harvey@covance.com +44 (0) 1423 848421
Sponsor	[ ]
Study Monitor	[ ]
Test Facility	Covance Laboratories Ltd Otley Road, Harrogate North Yorkshire HG3 1PY ENGLAND
Covance Study Number	535/103
Sponsor Number	To be advised
Amendment Number	4
Page Number	1 of 3

COVANCE
THE DEVELOPMENT SERVICES COMPANY

This amendment details a reduction of dose level in Group 5 animals, from 10,000 ppm to 7,500 ppm to take effect on 20 June 2003. This is because animals have shown bodyweight losses with three males previously sent to unscheduled necropsy due to poor condition. The relevant protocol section is given below.

Dose levels

Group number	Group description	Dose level (ppm)	Number of animals	
			Male	Female
1	Control	0	12	12
2	Low	500	12	12
3	Intermediate I	1000	12	12
4	Intermediate II	5000	12	12
5	High	7500	12	12

Original dose levels were selected by the sponsor and the reduction of dose level in Group 5 has been agreed by the sponsor.

AMENDMENT APPROVAL

[ ] June 23, 2003
Date

[ ]

P.W. Harvey 19 June 2003
Dr Philip W Harvey Date
Study Director
Covance Laboratories Ltd

D Everett 19 June 03
D Everett BSc CBiol FIBiol Date
Head of Toxicology Study Directors/Home Office Project Licence Holder/
Project Licence Number:PPL 60/2100 (5)
Covance Laboratories Ltd

Protocol Amendment

Study Title	[ ] 13 Week (Dietary) Administration Toxicity Study in the Mouse
Data Requirement	OPPTS 870.3100
Study Director	Dr Philip W Harvey philip.harvey@covance.com +44 (0) 1423 848421
Sponsor	[ ]
Study Monitor	[ ]
Test Facility	Covance Laboratories Ltd Otley Road, Harrogate North Yorkshire HG3 1PY ENGLAND
Covance Study Number	535/103
Sponsor Number	To be advised
Amendment Number	5
Page Number	1 of 4

COVANCE
THE DEVELOPMENT SERVICES COMPANY

This protocol amendment details identification of test material and retention of dietary samples.

The test material was identified in the protocol as [ ] Documentation received from the sponsor indicated the test material as [ ] This is equivalent material.

TEST ARTICLE FORMULATION

Preparation
Formulations will be prepared weekly and reserve samples will be retained from all batches and frozen at nominal –20C. The reserve samples may be discarded following authorisation by the Study Director.

Covance Study Number 535/103
Protocol Amendment Number 5

AMENDMENT APPROVAL

[ ] July 11, 2003
Date

[ ]

P.W. Harvey 7 July 2003
Dr Philip W Harvey Date
Study Director
Covance Laboratories Ltd

D Everett 7 July 03
D Everett BSc CBiol FIBiol Date
Head of Toxicology Study Directors/Home Office Project Licence Holder/
Project Licence Number:PPL 60/2100 (5)
Covance Laboratories Ltd

Protocol Amendment

Study Title	[ ] 13 Week (Dietary) Administration Toxicity Study in the Mouse
Data Requirement	OPPTS 870.3100
Study Director	Dr Philip W Harvey philip.harvey@covance.com +44 (0) 1423 848421
Sponsor	[ ]
Study Monitor	[ ]
Test Facility	Covance Laboratories Ltd Otley Road, Harrogate North Yorkshire HG3 1PY ENGLAND
Covance Study Number	535/103
Sponsor Number	To be advised
Amendment Number	6
Page Number	1 of 4

COVANCE
THE DEVELOPMENT SERVICES COMPANY

This protocol amendment details additional samples to be taken at necropsy of liver and heart from all control animals and all high dose animals and processed to resin block in histology for possible electron microscopy. The appropriate wording is below. This amendment also changes the pathology personnel.

Necropsy and tissue preservation (Appendix 3)
All animals including decedents will be subject to necropsy.

Where possible the scheduled necropsies will be carried out in cage order. An intraperitoneal sodium pentobarbitone overdose will be given prior to exsanguination and a full macroscopic examination will be performed under the general supervision of a pathologist and all lesions will be recorded.

All tissues denoted by (•) from all animals will be preserved in the appropriate fixative/s.

Electron microscopy
In addition, samples will be taken from the liver and heart of all control and high dose animals at scheduled necropsy (including treatment free animals) for possible electron microscopy. Samples (approximately 1 mm^3) of liver (left lateral lobe) and heart (left ventricular apex) will be taken from all control (Group 1) and high dose (Group 5) animals at scheduled necropsies into EM storage fixative, and processed to epoxy resin blocks for possible transmission electron microscopy (TEM). Following histopathology, blocks from appropriate animals (1 animal per sex per group) will be chosen for TEM. Semi-thin sections will be prepared and examined by the study pathologist and selected areas within the tissue evaluated by TEM. Evaluation will be performed by a sub-contractor. If additional tissues are required for TEM evaluation, this will be subject to a separate costing and time frame agreement.

SANITIZED COPY

Study personnel

Study Director	Dr Philip W Harvey

(Any change in Study Director will be documented by protocol amendment).

Distribution

In addition to the above the following personnel should receive copies of the protocol, protocol amendments and file notes.

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Clinical Pathology Services	Sample Reception, B Johnson, F Palou
Deputy Study Director	C Green
Ethical Review	J Gardner
Formulations & Formulations Analysis	C Wood
Histology	S Brogden
Necropsy	I Wilkins
Pathology	**C Barton**
Quality Assurance	C Clare
Report Co-ordination	P Lancaster
Resource Management	Estimation
Resource Management	Scheduling
Sample Management M.E.S	
Statistics	C Gardner

AMENDMENT APPROVAL

[ ] August 9, 2003
Date

[ ]

P.W. Harvey 13/8/03
Dr Philip W Harvey Date
Study Director
Covance Laboratories Ltd

D Everett 13 Aug 03
D Everett BSc CBiol FIBiol Date
Head of Toxicology Study Directors/Home Office Project Licence Holder/
Project Licence Number:PPL 60/2100 (5)
Covance Laboratories Ltd

Protocol Amendment

Study Title	[ ] 13 Week (Dietary) Administration Toxicity Study in the Mouse
Data Requirement	OPPTS 870.3100
Study Director	Dr Philip W Harvey philip.harvey@covance.com +44 (0) 1423 848421
Sponsor	[ ]
Study Monitor	[ ]
Test Facility	Covance Laboratories Ltd Otley Road, Harrogate North Yorkshire HG3 1PY ENGLAND
Covance Study Number	535/103
Sponsor Number	To be advised
Amendment Number	7
Page Number	1 of 3

COVANCE
THE DEVELOPMENT SERVICES COMPANY

This protocol amendment supersedes Amendment 6 and filenote 1. It also clarifies that animals will be fasted prior to necropsy (as indicated for blood sampling)

Necropsy and tissue preservation (Appendix 3)
Additional samples from liver and heart will **NOT** be taken at necropsy for processing for possible electron microscopy.

Urine collection
It was decided not to dose male mice with water prior to urine collection (see file note 1). This was based on advice from P Leggett based on the condition of the animals and that such a procedure would not significantly benefit urine production over the collection period. However, due to the poor condition of males after urine collection (following food and water restriction) females will be **allowed access to water** during the collection period.

Necropsy and tissue preservation (Appendix 3)
All animals including decedents will be subject to necropsy.

Where possible the scheduled necropsies will be carried out in cage order after fasting overnight.

AMENDMENT APPROVAL

[ ] September 8, 2003
Date

[ ]

P.W. Harvey 2/9/03
Dr Philip W Harvey Date
Study Director
Covance Laboratories Ltd

D Everett 2 Sept 03
D Everett BSc CBiol FIBiol Date
Head of Toxicology Study Directors/Home Office Project Licence Holder/
Project Licence Number:PPL 60/2100 (5)
Covance Laboratories Ltd

Protocol Deviations

Procedure	Protocol Deviations
Test article formulation	
Concentration analysis	Due to the reduction in dose level for Group 5 animals, formulations prepared for these animals were analysed in Week 3 for achieved concentration in addition to the protocol specified occasions.
Homogeneity and stability	Contrary to the protocol, analysis of the test article for stability and homogeneity was not performed in study 535/103. Homogeneity and stability was determined in Covance study 535/104.
Inlife Procedures	
Environment	The temperature and humidity were occasionally recorded outside the protocol limits. The lowest recorded temperature was 15.9°C and the highest recorded humidity was 81%. Bedding was provided on a weekly basis by use of clean wood shavings. Each batch of bedding is analysed for specific contaminants and the results retained on file at Covance.
Dose administration	On Day 6, a total of ten male cages and eight female cages had diet topped up using control diet in error during routine husbandry. The error was recognised after approximately 45 mins and diet discarded and hoppers re-filled and weighed with correct diet. Food consumption calculations were conducted over corrected periods with no subsequent data differences due to this event apparent. There was no discontinuation of treatment.

These deviations are expected not to have affected the results of the study

Appendix 2
Analysis of test article formulations

SUMMARY

Test article was formulated into ground diet for administration to the study animals.

Formulations from Weeks 1, 3 and 13 were analysed to determine the achieved concentration. Results were within the range 85 to 110%.

The analytical procedure was validated under study number 535/102.

PROCEDURES

Achieved concentration

Samples removed from dietary formulations prepared in Weeks 1, 3 and 13 were analysed in duplicate (apart from the control where a single analysis was performed).

Analytical procedure

The written analytical procedure Covance 535/102-01F was used to determine achieved concentration.

RESULTS AND DISCUSSION

Achieved concentration analysis

Week	Results as % nominal							
	Group 2		Group 3		Group 4		Group 5	
1	99	97	103	100	99	97	101	99
3#							101	102
13	102	101	102	103	101	101	103	102

Analysed as Group concentration reduced

The target range for preparation of diets in this study was 85 to 110% of nominal. Results were within this range. Test article was not detected in the Group 1 (control) formulations.

Appendix 3
Individual clinical observations

Test Article	Control		[	]	
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

Group/ Sex	Animal number	Clinical sign	Observations present during Week: 2	3	4	5
1M	11	Raised hair - back				P
3M	32	Thinning fur - dorsal - front legs	P			
5M	49	Hunched	P			
		Thin	P			
		Tremors	P			
		Sluggish	P			
		Cold	P			
		Semi closed - eyes both	P			
		Moribund/Sporadic kill	K			
	50	Hunched	P			
		Thin	P			
	52	Hunched	P		P	P
		Thin	P			
		Raised hair - back			P	P
	55	Hunched	P			
		Thin	P			
		Sluggish	P			
		Cold	P			
		Moribund/Sporadic kill	K			
	57	Hunched	P			
		Thin	P			
		Tremors	P			
		Sluggish	P			
		Cold	P			
		Semi closed - eyes both	P			
		Moribund/Sporadic kill	K			
	58	Hunched	P			P
		Thin	P			
	60	Hunched				P
4F	100	Sluggish				P
	101	Sluggish				P
	102	Sluggish				P
5F	115	Thin				P
		Sluggish				P

P = clinical sign present
K = unscheduled death/removal
Any other animal, any other week - no clinical signs present

Appendix 3
Individual clinical observations

Test Article	Control		[	]	
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

Group/ Sex	Animal number	Clinical sign	Observations present during Week: 2	3	4	5
5F	116	Sluggish				P
	117	Hunched				P
		Thin				P
		Sluggish				P
	118	Thin				P
	119	Sluggish				P
	120	Thin				P

P = clinical sign present
Any other animal, any other week - no clinical signs present

Appendix 3
Individual clinical observations

Test Article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

Group/ Sex	Animal number	Clinical sign	Observations present during Week: 6	7	8	9
5M	50	Hunched		P	P	P
	52	Hunched	P	P	P	P
		Raised hair - back	P			
	58	Hunched	P	P	P	P
	60	Hunched	P	P	P	P
1F	61	Hair loss - head				P
	62	Hair loss - head				P
	63	Hair loss - head				P
	68	Hair loss - head				P
		Damaged/missing - tail		P	P	P
		Tip of tail missing				
	69	Hair loss - head				P
2F	76	Hair loss - head				P
	78	Hair loss - head				P
	79	Hair loss - head				P
	80	Hair loss - head				P
3F	85	Hair loss - head				P
	87	Hair loss - head				P
		Thinning fur - head			P	
	91	Hair loss - head				P
	94	Hair loss - head				P
	95	Hair loss - head				P
	96	Thinning fur - head			P	P
4F	97	Sluggish	P	P	P	P
	98	Sluggish	P	P	P	P
	99	Sluggish	P	P	P	P

P = clinical sign present
Any other animal - no clinical signs present

Appendix 3
Individual clinical observations

Test Article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

Group/ Sex	Animal number	Clinical sign	Observations present during Week: 6	7	8	9
4F	100	Sluggish			P	P
	101	Sluggish			P	P
	102	Sluggish			P	P
		Cold			P	P
	103	Found escaped, identity confirmed, found in cage 27, smeared and returned to home cage			P	
		Sluggish		P	P	P
	104	Tremors			P	
		Sluggish			P	P
		Cold			P	P
		Semi closed - eyes both			P	
	105	Sluggish			P	P
	106	Hunched	P			
	107	Hunched	P	P	P	P
		Sluggish		P	P	P
	108	Hunched	P			
5F	111	Hunched	P	P	P	P
	112	Hunched	P	P	P	P
	113	Hunched				P
	114	Hunched	P	P	P	P
	115	Hunched	P	P	P	P
		Thin	P	P	P	P
	116	Hunched				P
	117	Hunched	P	P	P	P
		Thin	P	P	P	P
	118	Hunched	P	P	P	P
	119	Hunched	P	P	P	P
	120	Hunched	P	P	P	P

P = clinical sign present
Any other animal - no clinical signs present

Appendix 3
Individual clinical observations

Test Article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

Group/ Sex	Animal number	Clinical sign	Observations present during Week: 10	11	12	13
2M	23	Thinning fur - head		P	P	
3M	29	Hair loss - dorsal - left fore leg	P	P	P	P
		Thinning fur - dorsal				P
	31	Thinning fur - head			P	P
5M	50	Hunched	P	P		
		Sluggish		P		
		Cold		P		
	52	Hunched	P	P		
		Thin	P	P	P	
		Sluggish	P	P		
	53	Cold			P	
	58	Hunched	P	P		
		Thin	P	P	P	
		Sluggish	P	P		
1F	61	Hair loss - head	P	P	P	P
	62	Hair loss - head	P	P	P	P
	63	Hair loss - head	P	P	P	P
	68	Hair loss - head	P	P	P	P
		Damaged/missing - tail	P	P	P	P
		Tip of tail missing				
	69	Hair loss - head	P	P	P	P
2F	76	Hair loss - head	P	P	P	P
	77	Hair loss - head	P	P	P	P
	78	Hair loss - head	P	P	P	P
	79	Hair loss - head	P	P	P	P
	80	Hair loss - head	P	P	P	P
	83	Hair loss - head				P
	84	Hair loss - head				P

P = clinical sign present
Any other animal - no clinical signs present

Appendix 3
Individual clinical observations

Test Article	Control		[	]	
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

Group/ Sex	Animal number	Clinical sign	Observations present during Week: 10	11	12	13
3F	85	Hair loss - head	P	P	P	P
	87	Found escaped, identity confirmed, returned to home cage, animal escaped for approx. 10 mins	P			
		Hair loss - head	P	P	P	P
	88	Hair loss - head				P
	89	Hair loss - head				P
		Thinning fur - head			P	
	90	Hair loss - head				P
	93	Hair loss - head				P
	94	Hair loss - head	P	P	P	P
	95	Hair loss - head	P	P	P	P
	96	Hair loss - head		P	P	P
		Thinning fur - head	P			
4F	97	Sluggish	P			
		Thinning fur - head		P	P	P
	98	Sluggish	P			
	99	Sluggish	P	P		
		Hair loss - head				P
	100	Sluggish	P			
	101	Sluggish	P			
	102	Sluggish	P			
	103	Sluggish	P			
		Cold				P
	104	Sluggish	P			
		Cold	P			
	105	Sluggish	P			
		Cold	P			
	106	Sluggish	P			
		Cold		P	P	
		Thinning fur - head				P
	107	Hunched	P	P		

P = clinical sign present
Any other animal - no clinical signs present

Appendix 3
Individual clinical observations

Test Article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

Group/ Sex	Animal number	Clinical sign	Observations present during Week: 10	11	12	13
4F	107	Thin	P	P		
		Sluggish	P			
		Cold	P	P		
	108	Sluggish	P			
		Cold	P	P	P	
5F	109	Sluggish	P	P		
		Cold	P	P		
	110	Sluggish	P			
	111	Hunched	P	P		
		Sluggish	P	P		
	112	Hunched	P	P		
		Sluggish	P	P		
		Cold	P	P	P	
	113	Hunched	P	P		
		Thin	P	P	P	P
		Sluggish	P	P		
		Cold		P	P	
	114	Hunched	P	P		
	115	Hunched	P	P		
		Thin	P	P	P	P
		Sluggish	P	P		
	116	Hunched	P	P		
	117	Hunched	P	P		
		Thin	P	P	P	P
	118	Hunched	P	P		
	119	Hunched	P	P		
	120	Hunched	P	P		
		Hair loss - head		P	P	P

P = clinical sign present
Any other animal - no clinical signs present

Appendix 3
Individual clinical observations

Test Article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

Group/ Sex	Animal number	Clinical sign	Observations present during Week: 14#
3M	29	Hair loss - dorsal - left fore leg	P
		Thinning fur - dorsal	P
	31	Thinning fur - head	P
	32	Hair loss - head	P
4M	45	Sluggish	P
5M	50	Hunched	P
		Sluggish	P
	53	Hunched	P
		Sluggish	P
	54	Sluggish	P
	56	Hunched	P
		Sluggish	P
	60	Hunched	P
1F	61	Hair loss - head	P
	62	Hair loss - head	P
	63	Hair loss - head	P
	67	Skin other - back - grey fur	P
	68	Hair loss - head	P
		Damaged/missing - tail	P
		Tip of tail missing	
	69	Hair loss - head	P
	72	Hair loss - head	P
2F	76	Hair loss - head	P
	77	Hair loss - head	P
	78	Hair loss - head	P
	79	Hair loss - head	P
	80	Hair loss - head	P

P = clinical sign present
# terminal necropsies performed on fourth and fifth days of Week 14
Any other animal - no clinical signs present

Appendix 3
Individual clinical observations

Test Article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

Group/ Sex	Animal number	Clinical sign	Observations present during Week: 14#
2F	82	Hair loss - head	P
	83	Hair loss - head	P
	84	Hair loss - head	P
3F	85	Hair loss - dorsal	P
	87	Hair loss - head	P
	88	Hair loss - head	P
	89	Hair loss - head	P
	90	Hair loss - head	P
	91	Hair loss - head	P
	93	Hair loss - head	P
	94	Hair loss - head	P
		Thinning fur - dorsal	P
	95	Hair loss - head	P
	96	Hair loss - head	P
4F	97	Hunched	P
		Sluggish	P
		Cold	P
		Thinning fur - head	P
	98	Hunched	P
		Sluggish	P
		Cold	P
	99	Hunched	P
		Sluggish	P
		Cold	P
		Hair loss - head	P
	100	Hunched	P
		Sluggish	P
		Cold	P
	102	Hunched	P
		Sluggish	P
		Cold	P

P = clinical sign present
# terminal necropsies performed on fifth day of Week 14
Any other animal - no clinical signs present

Appendix 3
Individual clinical observations

Test Article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

Group/ Sex	Animal number	Clinical sign	Observations present during Week: 14#
4F	103	Cold	P
	104	Sluggish	P
	106	Hunched	P
		Sluggish	P
		Thinning fur - head	P
	107	Cold	P
	108	Hunched	P
		Sluggish	P
5F	109	Hunched	P
		Sluggish	P
	110	Hunched	P
		Sluggish	P
	111	Hunched	P
		Sluggish	P
	112	Hunched	P
		Sluggish	P
		Cold	P
	113	Hunched	P
		Thin	P
		Sluggish	P
		Cold	P
	114	Hunched	P
		Sluggish	P
		Cold	P
	115	Hunched	P
		Thin	P
		Sluggish	P
		Cold	P
	116	Hunched	P
		Sluggish	P
		Cold	P
	117	Hunched	P
		Thin	P
		Sluggish	P
		Cold	P
	118	Hunched	P

P = clinical sign present
# terminal necropsies performed on fifth day of Week 14
Any other animal - no clinical signs present

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Appendix 3
Individual clinical observations

Test Article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

Group/ Sex	Animal number	Clinical sign	Observations present during Week: 14#
5F	118	Tremors	P
		Sluggish	P
	119	Hunched	P
		Tremors	P
		Sluggish	P
	120	Sluggish	P
		Hair loss - head	P

P = clinical sign present
# terminal necropsies performed on fifth day of Week 14
Any other animal - no clinical signs present

Appendix 4
Individual body weights

Test Article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

Group/ Sex	Animal Number	Individual body weights (g) for Week: -1	Start	1	2	3	4	5
1M	1	18.0	21.4	22.4	24.6	25.0	26.3	26.7
1M	2	16.3	20.1	21.7	22.9	23.9	25.1	24.9
1M	3	10.3	16.4	21.2	23.1	24.9	26.5	26.8
1M	4	10.4	17.1	21.2	22.5	24.2	25.6	25.7
1M	5	14.1	20.1	22.2	23.2	24.4	25.6	25.8
1M	6	16.4	21.5	23.6	24.0	25.2	26.6	26.1
1M	7	10.1	16.1	20.6	21.6	23.0	24.4	24.3
1M	8	15.5	19.3	20.9	21.8	22.8	24.0	24.2
1M	9	16.2	20.8	22.3	23.4	24.0	25.6	25.6
1M	10	13.2	17.0	18.5	19.5	20.6	21.8	21.7
1M	11	17.0	20.3	21.7	22.3	23.3	24.3	24.4
1M	12	16.3	19.5	20.2	21.2	21.6	23.0	23.1
2M	13	17.4	20.9	22.4	22.7	23.5	24.1	24.2
2M	14	17.1	20.0	21.2	21.8	23.2	23.9	24.4
2M	15	17.1	19.2	20.8	21.1	22.7	24.1	24.6
2M	16	10.5	17.9	22.2	24.3	25.4	26.1	26.3
2M	17	17.7	21.4	22.8	23.9	24.8	25.6	26.1
2M	18	14.4	18.1	19.8	20.0	21.3	22.3	22.4
2M	19	10.9	17.9	21.4	22.7	24.3	23.8	23.9
2M	20	11.4	17.2	20.0	21.4	23.1	23.9	24.3
2M	21	11.0	16.9	18.8	20.1	20.9	23.1	23.5
2M	22	16.5	20.6	21.9	22.8	23.9	25.5	25.1
2M	23	10.2	16.6	19.5	20.5	22.0	24.1	23.3
2M	24	16.6	19.6	21.4	21.4	22.7	23.8	23.7
3M	25	13.1	18.4	20.5	21.7	22.5	23.5	23.6
3M	26	16.0	19.7	21.3	22.2	23.0	24.1	24.1
3M	27	15.3	21.0	22.0	22.8	23.5	24.5	24.4
3M	28	17.4	21.5	23.7	24.7	24.9	26.1	25.8
3M	29	16.0	19.5	21.5	22.6	23.5	24.9	23.8
3M	30	11.2	18.6	21.9	23.4	23.8	25.6	25.2
3M	31	10.4	16.8	20.5	21.9	23.1	23.9	24.2
3M	32	9.7	16.5	20.3	22.0	22.4	24.1	24.4
3M	33	12.3	18.9	21.0	22.3	23.0	24.3	25.3
3M	34	9.6	16.2	20.1	22.7	23.6	24.8	24.6
3M	35	8.7	14.8	19.0	20.9	21.9	23.1	23.7
3M	36	10.0	17.0	20.4	22.8	23.9	24.3	25.7

Appendix 4
Individual body weights

Test Article	Control		[	]	
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

Group/ Sex	Animal Number	Individual body weights (g) for Week: -1	Start	1	2#	3	4	5
4M	37	12.8	19.1	18.7	19.4	18.5	17.8	17.0
4M	38	13.2	19.1	19.2	18.5	17.5	17.8	17.5
4M	39	19.0	21.1	21.9	21.4	19.9	18.5	17.7
4M	40	13.9	19.8	19.4	19.0	18.2	18.0	17.0
4M	41	17.5	19.7	19.7	19.0	18.6	18.0	17.2
4M	42	16.2	21.3	22.0	21.2	20.6	20.3	19.6
4M	43	11.8	17.3	17.3	16.7	16.9	16.2	15.7
4M	44	17.2	21.2	21.3	20.3	19.9	20.0	18.7
4M	45	15.0	18.1	18.2	17.3	17.0	16.4	15.2
4M	46	15.8	20.0	21.1	19.7	20.3	19.3	18.7
4M	47	11.4	17.7	18.6	18.1	17.5	16.4	15.4
4M	48	14.0	19.8	19.4	18.8	18.3	17.5	16.9
5M	49	13.1	18.5	14.1	-	-	-	-
5M	50	11.2	18.2	13.6	17.6	15.6	14.9	14.2
5M	51	19.0	21.1	18.7	21.6	18.2	18.3	17.8
5M	52	14.2	13.6	11.7	16.3	13.6	14.2	14.0
5M	53	16.4	20.9	17.4	21.3	18.6	16.4	16.1
5M	54	15.3	21.9	18.1	21.2	18.0	16.6	16.3
5M	55	12.1	19.7	14.3	-	-	-	-
5M	56	13.7	20.5	16.8	19.7	17.0	16.0	14.9
5M	57	9.5	15.8	12.9	-	-	-	-
5M	58	8.5	13.9	11.2	14.9	13.8	13.4	12.7
5M	59	11.1	17.6	17.6	19.4	17.1	17.0	15.3
5M	60	17.1	21.1	19.4	20.8	19.4	17.7	16.2

Group 5 animals kept off-dose on Days 12 to 14 then recommenced dosing at 7500ppm on Day 15

Appendix 4
Individual body weights

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

Group/ Sex	Animal Number	Individual body weights (g) for Week: -1	Start	1	2	3	4	5
1F	61	16.0	16.4	18.1	19.3	19.6	20.6	21.8
1F	62	15.3	16.7	17.3	18.2	19.0	20.0	20.5
1F	63	14.0	17.5	18.5	20.1	20.8	23.1	22.8
1F	64	10.4	12.5	14.8	16.4	17.6	17.7	19.0
1F	65	14.2	16.1	18.4	20.1	20.7	22.7	22.9
1F	66	9.2	12.0	15.2	16.8	18.2	19.0	19.8
1F	67	11.4	14.2	16.6	18.1	19.8	20.4	20.1
1F	68	10.3	13.1	16.5	17.2	19.1	19.9	20.9
1F	69	9.3	13.0	16.1	17.4	19.0	19.1	21.0
1F	70	9.8	12.6	15.2	16.8	17.4	18.5	19.0
1F	71	10.9	15.4	17.1	18.5	18.7	19.6	20.1
1F	72	9.9	13.5	16.2	17.0	18.8	19.4	19.5
2F	73	17.4	19.3	21.1	21.9	21.7	22.6	24.5
2F	74	16.4	18.5	20.4	20.8	21.4	23.7	23.7
2F	75	14.5	17.7	18.1	18.9	20.8	21.5	21.5
2F	76	10.3	14.1	16.7	16.9	17.4	19.6	19.7
2F	77	14.1	16.8	17.6	18.7	20.0	20.8	21.2
2F	78	13.7	15.2	16.9	17.7	18.1	19.4	20.7
2F	79	15.4	16.4	17.8	18.5	19.5	21.1	21.3
2F	80	18.4	18.8	19.8	21.1	21.7	22.3	22.1
2F	81	9.3	11.6	14.6	15.9	17.2	18.4	18.1
2F	82	14.1	17.0	17.6	18.9	20.1	21.3	22.1
2F	83	13.3	15.9	18.2	17.7	18.4	19.4	20.3
2F	84	15.5	17.0	18.0	19.0	20.8	20.8	21.5
3F	85	16.9	17.2	18.0	19.5	20.4	21.0	20.8
3F	86	14.8	17.8	17.7	19.1	20.6	20.5	21.9
3F	87	17.6	18.4	18.5	20.2	20.9	20.7	20.7
3F	88	14.7	18.0	18.1	19.6	19.7	20.3	21.0
3F	89	14.7	16.5	17.0	19.1	19.2	19.8	20.9
3F	90	9.6	13.6	15.4	16.3	17.7	18.3	19.3
3F	91	14.2	17.6	19.4	19.8	20.7	22.4	22.2
3F	92	14.8	16.7	17.6	18.4	19.1	20.5	20.9
3F	93	10.1	13.9	15.7	16.4	17.8	19.8	19.8
3F	94	10.3	14.7	18.1	18.1	19.5	20.4	22.1
3F	95	12.1	16.1	18.0	18.5	19.6	20.3	20.8
3F	96	12.0	15.6	16.8	18.2	19.3	19.6	20.3

Appendix 4
Individual body weights

Test Article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

Group/ Sex	Animal Number	Individual body weights (g) for Week: -1	Start	1	2#	3	4	5
4F	97	9.6	16.3	16.2	15.1	14.6	14.1	13.0
4F	98	14.2	13.5	14.6	14.1	13.7	13.6	13.0
4F	99	15.0	15.6	16.0	15.4	15.1	14.8	14.1
4F	100	14.5	18.0	17.4	16.0	14.8	15.3	14.3
4F	101	16.7	17.4	17.2	17.0	15.5	16.6	15.2
4F	102	16.8	18.6	17.8	16.5	15.6	15.9	14.5
4F	103	12.2	15.4	16.0	15.3	14.4	14.8	13.5
4F	104	17.0	17.7	17.5	16.2	15.7	15.6	15.0
4F	105	13.3	16.9	16.3	15.7	14.8	15.0	13.9
4F	106	12.3	16.9	16.1	14.7	14.0	14.8	12.9
4F	107	12.4	13.1	13.5	12.8	12.4	12.9	11.8
4F	108	15.6	16.9	16.4	14.9	15.2	14.2	13.0
5F	109	16.3	18.6	17.0	15.3	15.0	15.0	15.0
5F	110	17.9	18.3	17.0	15.0	14.8	14.0	14.1
5F	111	15.2	17.8	15.7	14.4	13.7	13.6	13.6
5F	112	14.2	17.2	15.5	14.3	14.5	14.1	13.5
5F	113	15.0	16.9	15.5	14.1	13.1	13.9	13.6
5F	114	12.8	16.0	14.9	13.9	12.9	13.4	12.2
5F	115	12.9	15.4	13.7	12.8	12.6	11.6	11.5
5F	116	13.8	17.5	15.4	13.8	13.7	13.7	12.9
5F	117	14.6	17.2	14.8	13.2	12.5	12.1	11.7
5F	118	13.8	16.7	15.1	13.2	13.3	13.0	12.9
5F	119	13.9	16.6	14.5	12.8	12.6	12.3	12.3
5F	120	14.8	18.2	15.2	14.1	13.8	14.1	13.2

Group 5 animals kept off-dose on Days 12 to 14 then recommenced dosing at 7500ppm on Day 15

Appendix 4
Individual body weights

Test Article	Control		[	]	
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

Group/ Sex	Animal Number	Individual body weights (g) for Week: 6	7	8	9	10	11	12	13
1M	1	28.0	28.7	29.0	29.8	30.1	30.4	30.7	30.7
1M	2	25.7	26.1	26.2	26.8	25.8	26.2	26.2	27.8
1M	3	27.2	28.5	28.7	30.0	29.9	30.4	31.3	31.7
1M	4	26.3	26.1	27.2	27.8	27.4	28.4	29.8	30.6
1M	5	27.1	27.4	27.3	27.6	28.6	28.8	30.0	29.8
1M	6	26.7	27.1	26.8	28.3	28.6	28.9	29.4	30.1
1M	7	24.5	25.6	25.3	25.9	26.5	27.0	27.8	28.6
1M	8	24.4	25.5	25.3	26.6	26.4	26.4	27.9	28.4
1M	9	25.7	26.0	25.9	26.7	25.7	26.2	27.1	28.3
1M	10	21.8	22.4	22.6	23.0	22.5	22.8	23.2	24.7
1M	11	25.2	25.5	25.8	26.8	26.2	26.5	27.0	27.8
1M	12	23.9	24.5	24.2	24.8	24.0	24.5	24.7	26.1
2M	13	24.2	24.6	24.8	25.6	24.9	25.4	25.6	26.7
2M	14	24.6	25.1	24.4	25.6	25.0	25.2	24.9	26.5
2M	15	24.4	24.9	24.7	25.4	25.1	25.3	26.2	27.1
2M	16	26.6	26.8	27.1	28.5	29.6	28.6	29.5	29.9
2M	17	25.9	27.0	27.0	28.1	27.3	27.9	28.8	28.4
2M	18	22.3	23.3	23.4	23.9	23.1	23.5	24.4	24.1
2M	19	24.0	24.4	25.0	26.5	25.5	25.7	25.4	27.1
2M	20	24.2	24.6	25.2	26.1	25.1	25.7	25.4	24.9
2M	21	22.8	23.0	24.0	24.8	23.8	24.5	25.0	25.8
2M	22	25.5	26.0	26.7	27.4	26.8	26.3	27.1	28.2
2M	23	23.3	24.0	23.7	25.0	24.4	24.9	24.8	26.1
2M	24	24.6	24.6	24.9	24.4	24.1	24.3	24.9	26.6
3M	25	23.9	24.2	24.7	24.1	24.3	24.7	24.8	26.1
3M	26	24.7	24.9	25.3	25.8	24.8	25.0	25.4	26.5
3M	27	24.9	25.6	25.3	25.2	25.0	25.2	25.8	27.2
3M	28	26.1	26.2	27.1	27.5	27.5	28.0	28.2	29.7
3M	29	24.3	24.6	25.3	26.0	25.5	25.5	26.4	26.7
3M	30	25.2	25.9	26.2	26.9	26.6	27.1	26.6	28.9
3M	31	25.3	25.4	25.3	26.2	26.1	26.3	26.0	28.2
3M	32	24.6	25.5	25.6	25.6	26.2	26.6	26.7	27.8
3M	33	24.9	25.8	26.4	27.0	27.4	28.0	27.9	28.5
3M	34	25.5	26.7	25.5	27.1	26.6	26.8	27.1	28.3
3M	35	24.6	24.8	24.8	25.8	24.7	25.6	25.9	27.6
3M	36	26.5	27.4	27.2	28.3	28.5	28.6	28.8	30.1

Appendix 4
Individual body weights

Test Article	Control		[	]	
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

Group/ Sex	Animal Number	Individual body weights (g) for Week: 6	7	8	9	10	11	12	13
4M	37	17.2	17.9	17.8	18.8	19.1	19.9	20.2	20.1
4M	38	16.8	17.0	16.7	17.2	17.6	17.8	17.9	17.7
4M	39	16.9	17.2	17.4	18.0	18.0	18.6	19.9	18.6
4M	40	16.9	18.4	17.9	18.9	19.1	19.2	19.4	19.5
4M	41	17.2	16.6	16.8	17.0	17.8	17.6	17.4	17.4
4M	42	19.7	19.5	20.1	20.4	21.3	21.5	21.8	21.1
4M	43	15.4	15.0	16.1	16.4	16.7	16.4	17.4	16.9
4M	44	19.0	19.5	19.7	19.8	20.7	19.9	20.7	20.4
4M	45	15.0	15.2	15.3	15.7	15.8	15.9	16.2	15.3
4M	46	18.8	18.6	18.8	19.4	19.4	19.9	19.4	19.7
4M	47	15.3	16.7	15.4	16.2	16.4	17.0	17.2	15.8
4M	48	17.4	17.5	18.0	19.3	19.6	20.3	20.1	19.2
5M	49	-	-	-	-	-	-	-	-
5M	50	13.8	13.1	13.3	13.5	14.3	14.1	13.9	14.0
5M	51	17.2	16.8	17.2	17.1	17.2	17.6	17.9	16.6
5M	52	13.5	12.9	13.0	13.2	13.7	13.7	13.9	13.5
5M	53	15.8	16.1	15.9	16.4	16.1	16.1	16.3	14.5
5M	54	15.8	15.0	16.0	15.8	16.6	16.2	16.4	15.5
5M	55	-	-	-	-	-	-	-	-
5M	56	14.8	14.4	15.0	14.7	14.9	14.5	14.7	13.3
5M	57	-	-	-	-	-	-	-	-
5M	58	12.1	12.0	12.5	12.9	13.4	12.8	12.9	12.2
5M	59	14.3	14.8	15.7	15.0	15.1	15.7	15.6	14.7
5M	60	15.7	15.7	16.2	16.4	16.0	15.8	16.1	14.9

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Appendix 4
Individual body weights

Test Article	Control		[	]	
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

Group/ Sex	Animal Number	Individual body weights (g) for Week: 6	7	8	9	10	11	12	13
1F	61	21.7	21.6	22.5	23.9	23.3	23.3	23.7	25.1
1F	62	20.6	21.1	22.0	22.7	22.7	22.7	23.9	24.4
1F	63	25.2	24.6	25.1	25.9	25.9	27.1	26.1	26.5
1F	64	20.8	20.9	20.7	21.9	23.5	23.4	23.0	23.9
1F	65	23.4	23.7	24.8	24.6	25.6	27.1	28.3	28.5
1F	66	21.4	22.4	21.7	22.8	24.0	23.6	23.1	24.5
1F	67	21.4	22.4	21.8	22.7	22.8	23.5	23.7	25.4
1F	68	21.5	22.7	22.4	23.5	23.7	23.5	23.2	25.5
1F	69	22.2	21.9	22.1	23.8	23.4	22.8	24.8	25.1
1F	70	20.1	20.3	20.4	20.8	21.9	22.1	22.7	23.1
1F	71	21.3	21.3	21.3	21.9	23.2	22.4	23.3	24.6
1F	72	20.5	21.6	21.8	22.1	22.1	23.2	22.9	23.6
2F	73	25.0	25.4	24.9	25.8	25.4	25.6	28.2	27.6
2F	74	24.0	24.0	25.1	25.9	25.8	25.8	27.9	27.7
2F	75	22.4	24.2	23.6	23.9	25.0	23.5	24.5	25.6
2F	76	20.5	21.2	21.3	21.6	22.6	22.6	23.1	24.3
2F	77	22.2	23.5	23.0	23.6	24.2	25.2	25.5	25.5
2F	78	20.5	22.0	21.6	21.7	21.7	22.7	22.9	23.9
2F	79	21.1	21.7	21.9	22.8	21.8	22.2	23.1	24.3
2F	80	23.6	24.3	23.4	24.5	23.6	23.6	25.3	25.9
2F	81	18.6	19.4	20.2	20.8	19.6	20.1	20.8	21.9
2F	82	22.9	23.4	23.6	24.1	22.9	23.8	24.2	24.8
2F	83	21.7	21.6	21.4	22.1	21.7	22.5	22.6	23.9
2F	84	22.0	23.3	22.9	23.1	22.4	23.9	23.6	24.3
3F	85	22.6	22.6	22.5	22.5	22.1	22.6	22.6	23.3
3F	86	22.0	22.0	22.7	23.9	23.1	23.5	23.3	24.3
3F	87	21.8	21.6	21.4	22.0	21.4	21.6	22.2	22.3
3F	88	22.3	22.1	21.6	22.0	22.5	23.0	22.8	23.6
3F	89	21.1	21.3	21.7	21.9	22.0	22.7	22.7	23.1
3F	90	20.6	21.0	21.1	22.5	22.7	23.3	23.0	23.4
3F	91	22.9	23.4	23.4	23.5	23.5	24.8	26.7	25.9
3F	92	21.6	21.7	21.4	22.7	22.1	21.9	23.4	24.1
3F	93	20.2	20.2	21.0	23.1	21.7	21.6	22.7	23.9
3F	94	21.7	22.4	22.4	23.2	22.3	23.0	25.1	24.3
3F	95	22.8	22.5	22.3	23.0	23.1	23.3	24.1	24.1
3F	96	20.4	21.0	21.4	21.6	20.7	21.5	22.4	23.4

Appendix 4
Individual body weights

Test Article	Control		[	]	
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

Group/ Sex	Animal Number	Individual body weights (g) for Week: 6	7	8	9	10	11	12	13
4F	97	14.3	14.6	14.4	15.0	14.5	15.2	16.0	14.8
4F	98	13.8	13.2	13.8	14.6	14.3	14.9	16.0	15.6
4F	99	15.1	14.9	14.7	15.4	14.7	15.1	16.1	14.7
4F	100	14.7	14.4	14.1	14.3	13.8	14.3	15.4	14.3
4F	101	16.1	16.4	16.0	16.5	15.7	16.3	16.7	16.4
4F	102	15.5	15.7	15.4	16.2	15.6	16.0	17.1	15.5
4F	103	13.9	14.0	13.7	14.1	14.2	15.1	15.9	15.0
4F	104	15.2	15.5	14.4	15.1	14.6	15.2	16.1	14.8
4F	105	14.8	15.0	14.5	15.3	15.5	15.7	16.3	14.9
4F	106	14.3	14.0	13.9	14.8	15.0	14.6	15.8	14.3
4F	107	12.7	12.6	12.4	12.9	13.5	13.5	13.5	13.0
4F	108	13.5	13.7	13.1	13.7	14.3	13.8	14.7	13.8
5F	109	14.3	14.9	14.4	16.1	16.0	15.7	16.2	15.2
5F	110	14.2	14.2	14.4	14.5	15.0	14.3	15.2	14.8
5F	111	13.1	13.2	12.8	13.0	14.1	13.8	14.4	14.2
5F	112	13.4	13.4	12.8	13.2	13.6	13.0	13.8	13.0
5F	113	13.5	13.1	12.9	13.0	13.5	13.4	13.9	12.6
5F	114	13.0	13.0	12.6	13.3	13.8	13.6	13.6	12.6
5F	115	11.2	11.3	11.1	11.6	11.3	11.7	12.1	11.0
5F	116	13.0	13.3	13.1	13.8	13.3	13.9	14.3	12.8
5F	117	11.9	12.1	11.9	12.6	12.4	13.0	12.7	11.9
5F	118	12.6	12.8	13.4	13.2	14.0	13.7	14.1	13.3
5F	119	12.1	12.2	12.7	12.3	12.8	13.0	13.0	12.7
5F	120	13.2	13.1	13.6	13.8	14.0	13.8	14.6	13.1

Appendix 5
Individual food consumption

Test Article	Control	[	]		
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

Group/ Sex	Animal Number	Individual food consumption (g/animal/week) at Week: -1	1	2	3	4	5	6
1M	1	35.3	31.1	34.4	32.5	31.4	32.6	31.2
1M	2	31.4	30.5	35.4	33.4	39.2	35.0	35.7
1M	3	28.1	34.7	42.9	32.3	42.6	40.1	39.9
1M	4	28.4	31.7	29.9	31.9	30.8	35.3	34.8
1M	5	32.1	31.0	33.6	29.8	36.9	37.3	31.3
1M	6	34.0	32.2	35.6	33.7	37.4	37.4	37.9
1M	7	29.0	30.9	31.8	30.9	38.4	34.8	33.3
1M	8	30.0	30.1	30.9	27.7	30.9	30.1	33.1
1M	9	32.9	30.5	34.9	31.1	30.6	33.3	31.8
1M	10	31.4	27.2	35.5	31.2	37.7	37.9	32.1
1M	11	32.5	28.8	29.8	30.0	39.0	30.9	31.6
1M	12	31.5	28.6	29.2	28.1	33.8	28.9	28.7
2M	13	31.6	33.0	42.1	34.4	39.0	34.1	31.8
2M	14	32.8	32.1	38.9	31.2	34.8	36.1	39.2
2M	15	32.5	30.3	40.8	32.5	33.2	31.9	33.7
2M	16	32.1	34.3	35.4	35.1	35.2	34.0	35.1
2M	17	33.3	31.6	32.1	32.2	33.2	33.5	33.2
2M	18	33.3	34.1	38.4	33.8	35.9	41.2	36.6
2M	19	36.1	35.3	41.7	40.5	45.1	37.4	40.1
2M	20	33.4	31.6	37.8	39.3	36.8	36.6	35.7
2M	21	30.4	30.3†	33.4	35.6	36.4	35.0	48.9
2M	22	33.5	30.3	31.3	31.8	30.7	31.3	31.6
2M	23	28.8	29.4†	34.0	33.8	33.4	36.3	36.1
2M	24	31.2	28.7	30.9	32.2	32.0	34.3	30.4
3M	25	35.5	30.2	33.0	30.6	31.1	35.0	31.7
3M	26	31.2	30.4	30.3	32.1	30.4	31.2	31.3
3M	27	34.3	31.3	34.0	32.7	33.2	32.9	34.7
3M	28	33.4	34.2	32.4	33.0	33.8	31.5	34.1
3M	29	36.6	30.2	31.7	32.0	31.9	31.9	32.7
3M	30	31.1	35.4	34.9	38.0	37.2	34.6	34.0
3M	31	32.5	37.8	40.5	33.1	43.1	34.8	34.9
3M	32	28.7	39.2	41.4	41.3	38.4	37.5	35.5
3M	33	30.4	36.0†	34.6	35.5	36.3	38.7	37.2
3M	34	27.4	33.7	38.8	34.5	32.8	32.8	42.4
3M	35	34.3	40.1†	40.5	35.4	34.2	44.3	39.2
3M	36	28.7	36.6	34.5	35.6	37.4	47.8	35.8

† see Appendix 1, deviations from protocol

Appendix 5
Individual food consumption

Test Article	Control		[	]	
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

Group/ Sex	Animal Number	-1	Individual food consumption (g/animal/week) at Week: 1	2#	3	4	5	6
4M	37	30.4	45.8	43.1	37.3	28.9	34.4	35.5
4M	38	32.2	33.2	33.2	29.7	33.3	38.5	42.2
4M	39	32.9	38.6	41.1	29.6	33.1	44.7	33.1
4M	40	31.9	32.3	30.1	29.5	27.5	32.5	32.1
4M	41	31.6	29.7	34.3	28.5	33.2	36.5	28.7
4M	42	34.7	36.1	32.3	31.5	46.7	40.7	38.2
4M	43	34.1	29.4	37.9	30.3	30.0	39.9	34.5
4M	44	35.1	31.9	28.3	25.3	27.4	25.0	26.8
4M	45	31.5	41.5†	26.7	27.2	22.5	24.3	22.5
4M	46	32.6	40.8†	24.3	32.4	34.3	37.1	33.7
4M	47	31.5	42.8†	31.0	33.2	25.1	40.1	39.9
4M	48	32.2	46.6†	40.3	37.9	35.4	38.7	27.3
5M	49	29.7	18.7	-	-	-	-	-
5M	50	30.1	29.2	57.0	35.1	43.6	38.1	45.4
5M	51	34.0	30.4	49.2	33.3	39.2	34.6	31.2
5M	52	23.0	15.3	27.0	18.9	20.8	17.7	21.5
5M	53	33.4	24.4	42.5	31.2	41.8	26.5	30.6
5M	54	36.3	24.9	43.1	35.0	30.0	40.2	37.9
5M	55	32.4	25.1	-	-	-	-	-
5M	56	36.6	23.3	52.3	39.0	43.6	44.8	50.3
5M	57	24.0	32.1†	-	-	-	-	-
5M	58	29.7	26.4	38.1	29.7	36.6	27.9	27.8
5M	59	30.2	25.4†	42.8	33.7	31.8	42.4	32.7
5M	60	33.3	28.8	38.6	37.7	33.0	40.4	46.4

Group 5 received control diet on Days 12 to 14
† see Appendix 1, deviations from protocol

Appendix 5
Individual food consumption

Test Article	Control		[	]	
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

Group/ Sex	Animal Number	Individual food consumption (g/animal/week) at Week: -1	1	2	3	4	5	6
1F	61	24.1	23.6	26.0	26.8	28.2	29.2	27.6
1F	62	24.1	23.6	26.0	26.8	28.2	29.2	27.6
1F	63	24.1	23.6	26.0	26.8	28.2	29.2	27.6
1F	64	23.0	22.3	26.3	27.2	29.6	28.2	27.2
1F	65	23.0	22.3	26.3	27.2	29.6	28.2	27.2
1F	66	23.0	22.3	26.3	27.2	29.6	28.2	27.2
1F	67	23.6	24.1	27.0	28.2	28.3	28.8	29.0
1F	68	23.6	24.1	27.0	28.2	28.3	28.8	29.0
1F	69	23.6	24.1	27.0	28.2	28.3	28.8	29.0
1F	70	24.1	23.5	24.8	29.3	27.4	28.2	26.7
1F	71	24.1	23.5	24.8	29.3	27.4	28.2	26.7
1F	72	24.1	23.5	24.8	29.3	27.4	28.2	26.7
2F	73	27.4	26.5†	29.9	30.0	31.8	31.5	30.1
2F	74	27.4	26.5†	29.9	30.0	31.8	31.5	30.1
2F	75	27.4	26.5†	29.9	30.0	31.8	31.5	30.1
2F	76	22.3	23.5	26.1	26.7	27.7	28.0	27.2
2F	77	22.3	23.5	26.1	26.7	27.7	28.0	27.2
2F	78	22.3	23.5	26.1	26.7	27.7	28.0	27.2
2F	79	23.3	25.4†	30.7	29.4	28.6	28.4	28.8
2F	80	23.3	25.4†	30.7	29.4	28.6	28.4	28.8
2F	81	23.3	25.4†	30.7	29.4	28.6	28.4	28.8
2F	82	25.2	25.4	28.1	32.9	34.6	28.6	27.8
2F	83	25.2	25.4	28.1	32.9	34.6	28.6	27.8
2F	84	25.2	25.4	28.1	32.9	34.6	28.6	27.8
3F	85	25.7	25.1†	29.3	31.9	34.1	31.8	38.2
3F	86	25.7	25.1†	29.3	31.9	34.1	31.8	38.2
3F	87	25.7	25.1†	29.3	31.9	34.1	31.8	38.2
3F	88	25.8	25.2	27.6	27.6	28.7	28.8	28.2
3F	89	25.8	25.2	27.6	27.6	28.7	28.8	28.2
3F	90	25.8	25.2	27.6	27.6	28.7	28.8	28.2
3F	91	25.9	24.3†	28.2	28.0	29.2	28.1	27.2
3F	92	25.9	24.3†	28.2	28.0	29.2	28.1	27.2
3F	93	25.9	24.3†	28.2	28.0	29.2	28.1	27.2
3F	94	26.6	26.0	28.1	31.6	31.4	30.7	29.2
3F	95	26.6	26.0	28.1	31.6	31.4	30.7	29.2
3F	96	26.6	26.0	28.1	31.6	31.4	30.7	29.2

† see Appendix 1, deviations from protocol

Appendix 5
Individual food consumption

Test Article	Control		[	]	
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

Group/ Sex	Animal Number	Individual food consumption (g/animal/week) at Week: -1	1	2#	3	4	5	6
4F	97	25.5	26.7†	28.7	25.3	22.0	36.2	26.4
4F	98	25.5	26.7†	28.7	25.3	22.0	36.2	26.4
4F	99	25.5	26.7†	28.7	25.3	22.0	36.2	26.4
4F	100	27.0	23.3	23.3	24.3	23.9	31.7	25.5
4F	101	27.0	23.3	23.3	24.3	23.9	31.7	25.5
4F	102	27.0	23.3	23.3	24.3	23.9	31.7	25.5
4F	103	26.4	23.7†	21.2	21.9	24.5	26.9	20.9
4F	104	26.4	23.7†	21.2	21.9	24.5	26.9	20.9
4F	105	26.4	23.7†	21.2	21.9	24.5	26.9	20.9
4F	106	24.6	24.4	21.9	23.1	24.6	20.0	23.1
4F	107	24.6	24.4	21.9	23.1	24.6	20.0	23.1
4F	108	24.6	24.4	21.9	23.1	24.6	20.0	23.1
5F	109	26.3	23.2†	25.6	26.1	29.5	29.8	15.0
5F	110	26.3	23.2†	25.6	26.1	29.5	29.8	15.0
5F	111	26.3	23.2†	25.6	26.1	29.5	29.8	15.0
5F	112	26.9	28.7	21.2	23.6	24.2	29.9	25.4
5F	113	26.9	28.7	21.2	23.6	24.2	29.9	25.4
5F	114	26.9	28.7	21.2	23.6	24.2	29.9	25.4
5F	115	27.4	18.3†	23.4	22.4	19.1	15.0	13.9
5F	116	27.4	18.3†	23.4	22.4	19.1	15.0	13.9
5F	117	27.4	18.3†	23.4	22.4	19.1	15.0	13.9
5F	118	26.1	19.5	31.5	25.8	29.9	22.4	17.9
5F	119	26.1	19.5	31.5	25.8	29.9	22.4	17.9
5F	120	26.1	19.5	31.5	25.8	29.9	22.4	17.9

Group 5 received control diet on Days 12 to 14
† see Appendix 1, deviations from protocol

Appendix 5
Individual food consumption

Test Article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

Group/ Sex	Animal Number	Individual food consumption (g/animal/week) at Week: 7	8	9	10	11	12	13
1M	1	30.8	30.3	30.2	31.5	28.6	28.9	28.4
1M	2	34.2	33.8	32.2	32.3	29.7	31.3	31.9
1M	3	37.9	34.3	32.7	34.1	34.1	37.9	31.3
1M	4	33.1	35.1	35.3	33.0	31.5	34.7	36.0
1M	5	31.1	31.5	30.5	31.2	29.9	34.1	30.2
1M	6	34.4	33.2	34.9	37.2	30.2	32.3	32.6
1M	7	33.8	33.0	32.9	32.1	31.3	37.7	29.2
1M	8	30.8	30.8	29.8	29.5	28.0	30.8	29.2
1M	9	34.0	33.7	32.7	32.1	33.2	32.1	32.4
1M	10	43.9	41.9	35.2	38.0	28.5	33.6	32.8
1M	11	33.7	32.1	32.1	30.8	29.6	31.1	30.8
1M	12	33.6	30.0	29.5	27.6	28.7	29.9	29.9
2M	13	37.3	33.6	33.4	32.5	31.1	32.3	31.0
2M	14	40.7	36.0	38.9	38.3	32.8	38.0	34.8
2M	15	32.6	31.8	32.2	29.0	29.1	31.1	30.5
2M	16	37.4	34.9	34.4	33.7	32.4	35.9	32.8
2M	17	34.1	33.3	33.3	31.6	32.4	34.9	30.3
2M	18	42.2	37.7	36.1	34.7	34.8	43.5	29.8
2M	19	40.1	37.3	34.8	34.9	35.5	36.4	33.9
2M	20	40.8	38.0	36.8	35.3	33.7	37.0	28.9
2M	21	58.1	35.6	31.3	33.1	31.4	37.9	32.0
2M	22	38.2	32.9	31.0	27.2	29.0	32.2	31.0
2M	23	45.0	35.4	34.5	33.4	33.7	35.4	31.2
2M	24	37.6	31.8	31.9	33.3	29.3	35.2	30.5
3M	25	36.0	37.6	33.3	35.0	32.1	37.2	32.1
3M	26	39.9	34.0	34.3	31.9	31.1	33.4	32.3
3M	27	36.3	40.7	37.0	34.5	31.3	38.3	33.4
3M	28	38.3	45.5	41.1	49.1	36.3	50.8	32.0
3M	29	37.0	33.1	32.4	30.7	30.1	33.1	28.8
3M	30	34.8	40.4	36.2	34.1	35.4	35.6	33.8
3M	31	35.9	37.9	33.7	32.9	33.6	33.5	32.3
3M	32	43.5	38.1	34.5	34.7	33.1	38.6	32.3
3M	33	33.0	33.7	39.2	33.8	36.2	31.4	32.3
3M	34	34.7	34.1	35.0	32.1	31.8	33.2	33.5
3M	35	33.3	37.0	35.0	45.7	39.8	30.4	32.0
3M	36	37.3	37.5	39.9	31.2	32.1	37.4	32.9

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Appendix 5
Individual food consumption

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

Group/ Sex	Animal Number	Individual food consumption (g/animal/week) at Week: 7	8	9	10	11	12	13
4M	37	43.5	33.5	47.1	30.6	38.6	35.1	29.8
4M	38	48.2	31.9	49.6	38.2	43.2	49.5	45.6
4M	39	34.2	40.7	54.9	37.5	33.7	37.0	34.3
4M	40	37.1	32.8	40.6	27.2	37.5	41.9	31.9
4M	41	32.7	33.6	44.3	39.7	44.1	43.4	39.2
4M	42	32.4	38.9	54.5	46.9	53.4	35.4	31.8
4M	43	28.8	37.1	36.5	42.3	45.2	46.3	44.7
4M	44	35.4	31.0	31.1	27.6	37.5	54.7	29.8
4M	45	23.7	24.9	33.2	23.6	28.6	51.4	31.0
4M	46	34.6	34.7	46.3	44.8	41.7	51.3	30.5
4M	47	32.8	32.9	39.7	33.4	44.4	40.3	41.2
4M	48	28.6	31.5	48.7	35.8	37.0	48.8	41.7
5M	49	-	-	-	-	-	-	-
5M	50	40.5	32.5	58.1	54.4	38.5	47.6	39.1
5M	51	34.6	37.1	35.8	27.2	26.2	38.7	32.0
5M	52	16.2	19.4	27.1	23.2	22.5	25.1	23.4
5M	53	27.3	32.6	31.8	43.4	37.6	51.9	30.3
5M	54	40.7	34.3	44.7	35.3	36.9	43.3	40.0
5M	55	-	-	-	-	-	-	-
5M	56	40.7	30.6	36.5	36.6	45.9	53.1	30.7
5M	57	-	-	-	-	-	-	-
5M	58	24.5	22.8	27.1	31.6	22.5	41.4	32.6
5M	59	31.8	35.6	39.9	29.2	28.6	44.8	28.5
5M	60	44.0	33.3	36.1	30.4	33.7	36.4	43.6

Appendix 5
Individual food consumption

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

Group/ Sex	Animal Number	Individual food consumption (g/animal/week) at Week: 7	8	9	10	11	12	13
1F	61	29.3	30.3	29.1	28.2	28.1	28.1	26.1
1F	62	29.3	30.3	29.1	28.2	28.1	28.1	26.1
1F	63	29.3	30.3	29.1	28.2	28.1	28.1	26.1
1F	64	30.5	30.3	31.0	28.7	31.6	29.7	27.5
1F	65	30.5	30.3	31.0	28.7	31.6	29.7	27.5
1F	66	30.5	30.3	31.0	28.7	31.6	29.7	27.5
1F	67	30.8	31.2	30.4	30.1	28.4	28.8	25.6
1F	68	30.8	31.2	30.4	30.1	28.4	28.8	25.6
1F	69	30.8	31.2	30.4	30.1	28.4	28.8	25.6
1F	70	27.6	29.7	27.2	27.5	28.3	28.6	25.4
1F	71	27.6	29.7	27.2	27.5	28.3	28.6	25.4
1F	72	27.6	29.7	27.2	27.5	28.3	28.6	25.4
2F	73	32.8	31.7	30.9	28.7	29.4	31.5	28.0
2F	74	32.8	31.7	30.9	28.7	29.4	31.5	28.0
2F	75	32.8	31.7	30.9	28.7	29.4	31.5	28.0
2F	76	32.4	28.1	27.3	27.4	27.5	27.5	27.9
2F	77	32.4	28.1	27.3	27.4	27.5	27.5	27.9
2F	78	32.4	28.1	27.3	27.4	27.5	27.5	27.9
2F	79	29.4	29.4	27.0	27.2	28.6	27.6	27.9
2F	80	29.4	29.4	27.0	27.2	28.6	27.6	27.9
2F	81	29.4	29.4	27.0	27.2	28.6	27.6	27.9
2F	82	28.5	32.4	31.8	29.1	27.8	28.0	26.8
2F	83	28.5	32.4	31.8	29.1	27.8	28.0	26.8
2F	84	28.5	32.4	31.8	29.1	27.8	28.0	26.8
3F	85	33.9	34.2	34.0	28.7	33.8	33.5	27.5
3F	86	33.9	34.2	34.0	28.7	33.8	33.5	27.5
3F	87	33.9	34.2	34.0	28.7	33.8	33.5	27.5
3F	88	29.7	29.4	28.1	27.2	26.9	28.5	25.8
3F	89	29.7	29.4	28.1	27.2	26.9	28.5	25.8
3F	90	29.7	29.4	28.1	27.2	26.9	28.5	25.8
3F	91	27.5	32.0	29.3	27.1	27.8	28.3	25.2
3F	92	27.5	32.0	29.3	27.1	27.8	28.3	25.2
3F	93	27.5	32.0	29.3	27.1	27.8	28.3	25.2
3F	94	33.5	31.7	29.5	30.7	31.1	35.2	30.0
3F	95	33.5	31.7	29.5	30.7	31.1	35.2	30.0
3F	96	33.5	31.7	29.5	30.7	31.1	35.2	30.0

Appendix 5
Individual food consumption

Test Article	Control		[	]	
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

Group/ Sex	Animal Number	Individual food consumption (g/animal/week) at Week: 7	8	9	10	11	12	13
4F	97	19.5	29.1	26.5	23.5	26.3	31.4	21.3
4F	98	19.5	29.1	26.5	23.5	26.3	31.4	21.3
4F	99	19.5	29.1	26.5	23.5	26.3	31.4	21.3
4F	100	24.6	28.2	30.2	26.3	27.5	23.9	29.8
4F	101	24.6	28.2	30.2	26.3	27.5	23.9	29.8
4F	102	24.6	28.2	30.2	26.3	27.5	23.9	29.8
4F	103	20.0	23.3	29.3	25.6	23.5	34.1	28.5
4F	104	20.0	23.3	29.3	25.6	23.5	34.1	28.5
4F	105	20.0	23.3	29.3	25.6	23.5	34.1	28.5
4F	106	20.3	30.6	24.0	25.5	25.8	27.9	24.6
4F	107	20.3	30.6	24.0	25.5	25.8	27.9	24.6
4F	108	20.3	30.6	24.0	25.5	25.8	27.9	24.6
5F	109	19.4	27.5	29.7	24.4	26.2	26.0	22.2
5F	110	19.4	27.5	29.7	24.4	26.2	26.0	22.2
5F	111	19.4	27.5	29.7	24.4	26.2	26.0	22.2
5F	112	21.5	23.8	29.6	29.7	24.1	24.7	17.8
5F	113	21.5	23.8	29.6	29.7	24.1	24.7	17.8
5F	114	21.5	23.8	29.6	29.7	24.1	24.7	17.8
5F	115	15.7	30.7	24.4	17.8	19.7	35.2	24.1
5F	116	15.7	30.7	24.4	17.8	19.7	35.2	24.1
5F	117	15.7	30.7	24.4	17.8	19.7	35.2	24.1
5F	118	17.5	25.9	19.9	24.5	17.6	28.1	20.1
5F	119	17.5	25.9	19.9	24.5	17.6	28.1	20.1
5F	120	17.5	25.9	19.9	24.5	17.6	28.1	20.1

Appendix 6
Individual haematology

Key to abbreviations/methods

Code	Parameter	Analyser	Method of determination
Hb	haemoglobin concentration	Bayer ADVIA	Spectrophotometric measurement of cyanmethaemoglobin
RBC	red blood cell count	Bayer ADVIA	Flow cytometry
PCV	packed cell volume	Calculation	PCV = (MCV x RBC) ÷ 10
RETA	reticulocytes	Automated	Supravital staining with oxazine 750, assessed by flow cytometry
RET ABS	absolute reticulocytes	Calculation	RBC x RETA ÷ 100
MCV	mean cell volume	Bayer ADVIA	Flow cytometry
MCH	mean cell haemoglobin	Calculation	MCH = (Hb ÷ RBC) x 10
MCHC	mean cell haemoglobin concentration	Calculation	MCHC = (Hb ÷ PCV) x 100
HDW	haemoglobin distribution width	Bayer ADVIA	Flow cytometry
RDW	red cell distribution width	Bayer ADVIA	Flow cytometry
PLAT	platelets	Bayer ADVIA	Flow cytometry
PCT	plateletcrit	Calculated	PCT = (MPV x PLT) ÷ 10,000
MPV	mean platelet volume	Bayer ADVIA	Flow cytometry
PDW	platelet distribution width	Bayer ADVIA	Flow cytometry
WBC	white blood cell count	Bayer ADVIA	Flow cytometry
N L M E B LUC	neutrophils lymphocytes monocytes eosinophils basophils large unstained cells	Manual: Blood smear Automated: Bayer ADVIA	Manual: Visual appraisal of a blood smear using a Romanowski-type stain Automated: Cytochemical staining with a peroxidase stain and detection of light scatter using a photo-optical method. Basophils enumerated using differential lysis and laser light scattering

Appendix 6
Individual haematology
At terminal kill

Test Article	Control		[	]	
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

Group/ Sex	Animal Number	Hb g/dL	RBC mil/cmm	PCV %	RETA %	RET ABS mil/cmm	MCV fL	MCH pg
1M	1	16.0	10.40	51.3	3.0	0.31	49.3	15.4
1M	2	15.5	10.12	50.4	3.5	0.35	49.8	15.3
1M	3	15.9	10.16	50.4	3.4	0.35	49.6	15.6
1M	4	15.9	10.10	52.0	3.0	0.30	51.5	15.7
1M	5	16.5	10.49	52.8	2.9	0.30	50.4	15.7
1M	6	15.2	9.88	48.0	2.9	0.29	48.6	15.4
2M	13	16.1	10.43	51.5	4.7	0.49	49.4	15.4
2M	14	14.9	9.60	47.2	5.0	0.48	49.2	15.5
2M	15	16.8	10.71	59.0	2.6	0.28	55.1	15.6
2M	16	15.3	9.57	53.2	4.3	0.41	55.6	16.0
2M	17	IS	IS	IS	IS	NC	IS	IS
2M	18	15.7	9.83	54.7	4.6	0.45	55.7	16.0
3M	25	16.0	10.00	50.7	8.3	0.83	50.7	16.0
3M	26	15.7	9.73	50.2	7.3	0.71	51.6	16.2
3M	27	15.6	9.76	54.9	4.6	0.45	56.3	16.0
3M	28	SC	SC	SC	SC	NC	SC	SC
3M	29	16.5	10.24	57.7	4.6	0.47	56.4	16.1
3M	30	15.7	9.54	54.2	6.7	0.64	56.8	16.4
4M	37	14.9	9.43	47.1	8.3	0.78	50.0	15.8
4M	38	IS	IS	IS	IS	NC	IS	IS
4M	39	15.5	9.71	53.3	3.9	0.38	54.9	16.0
4M	40	15.1	9.48	53.0	6.6	0.63	55.9	15.9
4M	41	15.9	9.86	54.2	3.6	0.35	55.0	16.1
4M	42	15.6	9.63	53.5	4.8	0.46	55.5	16.2
5M	51	15.4	9.97	50.0	9.0	0.90	50.2	15.4
5M	52	13.6	8.56	47.5	10.2	0.87	55.5	15.9
5M	53	15.5	9.92	53.5	5.7	0.57	53.9	15.7
5M	54	IS	IS	IS	IS	NC	IS	IS

IS = insufficient sample for analysis
NC = not calculated
SC = sample clotted

Appendix 6
Individual haematology
At terminal kill

Test Article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

Group/ Sex	Animal Number	Hb g/dL	RBC mil/cmm	PCV %	RETA %	RET ABS mil/cmm	MCV fL	MCH pg
1F	61	15.2	9.85	49.2	2.6	0.26	49.9	15.4
1F	62	15.4	9.91	51.7	3.6	0.36	52.1	15.6
1F	63	16.0	10.26	52.4	3.3	0.34	51.1	15.6
1F	64	16.1	10.29	52.8	3.6	0.37	51.3	15.6
1F	65	SC	SC	SC	SC	NC	SC	SC
1F	66	SC	SC	SC	SC	NC	SC	SC
2F	73	16.4	10.41	53.6	2.6	0.27	51.5	15.8
2F	74	15.6	9.97	50.6	3.6	0.36	50.7	15.7
2F	75	16.9	10.97	56.0	2.2	0.24	51.0	15.4
2F	76	16.4	10.36	52.7	3.8	0.39	50.9	15.8
2F	77	16.3	10.35	51.7	3.0	0.31	50.0	15.8
2F	78	15.7	10.15	50.8	3.9	0.40	50.1	15.5
3F	85	16.5	10.58	53.4	4.3	0.45	50.5	15.6
3F	86	16.5	10.49	54.6	5.1	0.53	52.0	15.7
3F	87	15.8	9.95	51.2	4.3	0.43	51.5	15.9
3F	88	15.2	9.78	49.9	6.2	0.61	51.0	15.5
3F	89	15.2	9.90	50.7	6.3	0.62	51.3	15.4
3F	90	16.3	10.31	53.3	5.1	0.53	51.7	15.8
4F	97	15.4	9.87	53.3	7.2	0.71	54.0	15.6
4F	98	15.3	9.89	50.8	5.5	0.54	51.4	15.4
4F	99	15.9	10.12	51.6	6.6	0.67	51.0	15.7
4F	100	15.7	10.07	51.7	7.3	0.74	51.4	15.6
4F	101	15.9	9.91	52.3	7.3	0.72	52.8	16.0
4F	102	16.2	10.43	53.4	6.3	0.66	51.2	15.5
5F	109	15.0	9.68	49.6	5.6	0.54	51.3	15.5
5F	110	16.0	10.52	53.6	6.3	0.66	51.0	15.2
5F	111	IS	IS	IS	IS	NC	IS	IS
5F	112	IS	IS	IS	IS	NC	IS	IS
5F	113	15.3	9.87	50.7	7.7	0.76	51.3	15.5
5F	114	SC	SC	SC	SC	NC	SC	SC

IS = insufficient sample for analysis
NC = not calculated
SC = sample clotted

Appendix 6
Individual haematology
At terminal kill

Test Article	Control		[	]	
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

Group/ Sex	Animal Number	MCHC g/dL	HDW g/dL	RDW %	PLAT 1000/cmm	PCT %	MPV fl	PDW %
1M	1	31.2	1.78	12.8	1191	0.81	6.8	68.9
1M	2	30.8	1.62	12.7	1138	0.80	7.0	54.7
1M	3	31.5	1.82	13.4	1148	0.83	7.2	74.2
1M	4	30.6	1.82	13.5	1055	0.73	6.9	71.6
1M	5	31.2	1.73	12.5	1135	0.72	6.4	68.0
1M	6	31.8	1.63	12.7	1102	0.73	6.6	54.1
2M	13	31.3	1.94	13.7	1323	0.97	7.3	71.6
2M	14	31.6	1.81	14.0	1313	0.93	7.0	58.3
2M	15	28.4	1.78	13.0	1281	0.96	7.5	66.7
2M	16	28.7	1.94	14.5	1264	0.95	7.5	85.1
2M	17	IS	IS	IS	IS	IS	IS	IS
2M	18	28.7	1.91	14.0	1316	0.96	7.3	71.8
3M	25	31.6	2.18	14.9	1338	0.97	7.2	61.9
3M	26	31.3	2.18	14.7	1269	0.86	6.8	63.2
3M	27	28.5	2.03	14.0	1293	1.01	7.8	72.5
3M	28	SC	SC	SC	SC	SC	SC	SC
3M	29	28.6	2.01	13.4	1265	0.97	7.7	67.0
3M	30	29.0	1.91	14.5	1374	1.00	7.3	59.2
4M	37	31.6	2.26	15.0	1087	0.94	8.6	87.1
4M	38	IS	IS	IS	IS	IS	IS	IS
4M	39	29.1	2.09	13.4	1079	0.92	8.6	76.2
4M	40	28.5	2.43	14.4	1192	1.06	8.9	65.7
4M	41	29.3	2.10	13.5	1148	0.91	7.9	81.1
4M	42	29.2	2.16	14.3	1052	1.01	9.6	83.3
5M	51	30.7	2.01	14.3	1103	0.89	8.0	66.8
5M	52	28.6	2.52	16.5	1300	1.08	8.3	78.6
5M	53	29.1	2.20	14.9	938	0.79	8.5	76.2
5M	54	IS	IS	IS	IS	IS	IS	IS

IS = insufficient sample for analysis
SC = sample clotted

Appendix 6
Individual haematology
At terminal kill

Test Article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

Group/ Sex	Animal Number	MCHC g/dL	HDW g/dL	RDW %	PLAT 1000/cmm	PCT %	MPV fl	PDW %
1F	61	30.9	1.79	12.8	1164	0.64	5.5	49.1
1F	62	29.9	1.73	13.1	1166	0.64	5.5	48.0
1F	63	30.5	1.84	12.9	1077	0.59	5.5	56.2
1F	64	30.4	1.94	13.3	1082	0.63	5.8	51.5
1F	65	SC	SC	SC	SC	SC	SC	SC
1F	66	SC	SC	SC	SC	SC	SC	SC
2F	73	30.7	1.84	12.9	1071	0.79	7.4	63.8
2F	74	30.9	1.96	13.2	1175	0.67	5.7	55.6
2F	75	30.2	1.75	12.4	1140	0.67	5.9	53.9
2F	76	31.1	1.95	13.5	1018	0.63	6.2	53.3
2F	77	31.5	1.92	12.8	1097	0.60	5.4	46.5
2F	78	31.0	1.95	13.0	1163	0.64	5.5	46.6
3F	85	30.8	2.03	13.0	1145	0.67	5.8	44.6
3F	86	30.2	1.99	13.5	868	0.55	6.3	52.9
3F	87	30.8	2.05	13.3	1051	0.60	5.7	50.7
3F	88	30.4	1.99	13.4	1183	0.65	5.5	46.2
3F	89	30.0	1.98	13.3	1208	0.69	5.7	51.6
3F	90	30.6	2.04	13.7	1223	0.73	6.0	49.4
4F	97	28.9	1.96	13.8	956	0.67	7.0	61.3
4F	98	30.0	1.99	13.0	945	0.57	6.0	54.0
4F	99	30.8	2.03	13.6	898	0.62	6.9	68.0
4F	100	30.3	2.16	14.3	1101	0.98	8.9	61.1
4F	101	30.3	2.14	14.0	872	0.82	9.4	66.5
4F	102	30.3	2.12	13.9	1080	0.73	6.8	61.6
5F	109	30.3	2.31	14.2	497	0.51	10.2	79.8
5F	110	29.9	2.17	14.4	1071	0.77	7.2	54.2
5F	111	IS	IS	IS	IS	IS	IS	IS
5F	112	IS	IS	IS	IS	IS	IS	IS
5F	113	30.1	2.16	14.3	1022	0.72	7.0	67.3
5F	114	SC	SC	SC	SC	SC	SC	SC

IS = insufficient sample for analysis
SC = sample clotted

Appendix 6
Individual haematology
At terminal kill

Test Article	Control		[	]	
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

Group/ Sex	Animal Number	WBC 1000/cmm	N 1000/cmm	L 1000/cmm	M 1000/cmm	E 1000/cmm	B 1000/cmm	LUC 1000/cmm
1M	1	1.5	0.7	0.8	0.0	0.0	0.0	0.0
1M	2	0.5	0.2	0.3	0.0	0.0	0.0	0.0
1M	3	0.6	0.2	0.3	0.0	0.0	0.0	0.0
1M	4	0.5	0.2	0.3	0.0	0.0	0.0	0.0
1M	5	1.3	0.4	0.8	0.0	0.0	0.0	0.0
1M	6	1.4	0.3	1.1	0.0	0.0	0.0	0.0
2M	13	1.0	0.4	0.6	0.0	0.0	0.0	0.0
2M	14	1.0	0.3	0.7	0.0	0.0	0.0	0.0
2M	15	1.1	0.3	0.8	0.0	0.1	0.0	0.0
2M	16	0.4	0.1	0.3	0.0	0.0	0.0	0.0
2M	17	IS	NC	NC	NC	NC	NC	NC
2M	18	0.5	0.4	0.1	0.0	0.0	0.0	0.0
3M	25	1.1	0.4	0.6	0.0	0.0	0.0	0.0
3M	26	1.2	0.3	0.9	0.0	0.0	0.0	0.0
3M	27	1.2	0.4	0.7	0.0	0.1	0.0	0.0
3M	28	SC	NC	NC	NC	NC	NC	NC
3M	29	0.8	0.2	0.6	0.0	0.0	0.0	0.0
3M	30	0.7	0.1	0.5	0.0	0.1	0.0	0.0
4M	37	1.4	0.5	0.8	0.0	0.0	0.0	0.0
4M	38	IS	NC	NC	NC	NC	NC	NC
4M	39	1.5	0.6	0.8	0.1	0.0	0.0	0.0
4M	40	1.0	0.4	0.5	0.0	0.0	0.0	0.0
4M	41	0.6	0.3	0.2	0.0	0.1	0.0	0.0
4M	42	0.8	0.4	0.4	0.0	0.0	0.0	0.0
5M	51	1.3	0.8	0.4	0.0	0.0	0.0	0.0
5M	52	0.5	0.3	0.2	0.0	0.0	0.0	0.0
5M	53	0.8	0.5	0.3	0.1	0.0	0.0	0.0
5M	54	IS	NC	NC	NC	NC	NC	NC

IS = insufficient sample for analysis
NC = not calculated
SC = sample clotted

Appendix 6
Individual haematology
At terminal kill

Test Article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

Group/ Sex	Animal Number	WBC 1000/cmm	N 1000/cmm	L 1000/cmm	M 1000/cmm	E 1000/cmm	B 1000/cmm	LUC 1000/cmm
1F	61	2.0	0.4	1.5	0.0	0.1	0.0	0.0
1F	62	1.4	0.4	1.0	0.0	0.0	0.0	0.0
1F	63	1.4	0.3	1.0	0.0	0.1	0.0	0.0
1F	64	1.0	0.2	0.7	0.0	0.0	0.0	0.0
1F	65	SC	NC	NC	NC	NC	NC	NC
1F	66	SC	NC	NC	NC	NC	NC	NC
2F	73	1.8	0.8	0.9	0.1	0.0	0.0	0.0
2F	74	1.4	0.6	0.8	0.0	0.0	0.0	0.0
2F	75	2.0	0.7	1.2	0.0	0.1	0.0	0.0
2F	76	1.1	0.5	0.5	0.0	0.0	0.0	0.0
2F	77	1.4	0.4	1.0	0.0	0.0	0.0	0.0
2F	78	0.9	0.5	0.4	0.0	0.0	0.0	0.0
3F	85	1.7	0.8	0.8	0.0	0.1	0.0	0.0
3F	86	1.8	0.7	1.0	0.1	0.0	0.0	0.0
3F	87	2.3	1.0	1.2	0.0	0.0	0.0	0.0
3F	88	1.9	0.7	1.0	0.0	0.1	0.0	0.0
3F	89	1.0	0.5	0.5	0.0	0.0	0.0	0.0
3F	90	0.3	0.1	0.2	0.0	0.0	0.0	0.0
4F	97	2.3	1.0	1.1	0.0	0.2	0.0	0.0
4F	98	2.1	0.8	1.2	0.0	0.1	0.0	0.0
4F	99	1.6	0.6	0.9	0.0	0.0	0.0	0.0
4F	100	1.5	0.8	0.6	0.0	0.1	0.0	0.0
4F	101	2.2	0.8	1.1	0.0	0.2	0.0	0.0
4F	102	1.9	0.7	1.0	0.0	0.2	0.0	0.0
5F	109	1.5	0.7	0.6	0.0	0.1	0.0	0.0
5F	110	2.0	1.3	0.7	0.0	0.0	0.0	0.0
5F	111	IS	NC	NC	NC	NC	NC	NC
5F	112	IS	NC	NC	NC	NC	NC	NC
5F	113	1.8	1.1	0.5	0.0	0.2	0.0	0.0
5F	114	SC	NC	NC	NC	NC	NC	NC

IS = insufficient sample for analysis
NC = not calculated
SC = sample clotted

Appendix 6
Individual haematology
At terminal kill

Test Article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

Group/ Sex	Animal Number	WBC 1000/cmm	N % WBC	L % WBC	M % WBC	E % WBC	B % WBC	LUC % WBC
1M	1	1.5	44	51	2	3	1	1
1M	2	0.5	32	63	0	5	0	0
1M	3	0.6	39	57	2	2	0	0
1M	4	0.5	31	61	2	5	1	1
1M	5	1.3	29	65	2	3	1	0
1M	6	1.4	22	75	1	2	0	0
2M	13	1.0	37	58	2	2	1	0
2M	14	1.0	30	67	1	2	0	0
2M	15	1.1	23	71	1	5	0	0
2M	16	0.4	18	70	1	10	1	1
2M	17	IS	IS	IS	IS	IS	IS	IS
2M	18	0.5	70	24	6	0	0	0
3M	25	1.1	40	56	1	2	1	1
3M	26	1.2	22	74	1	2	1	0
3M	27	1.2	31	58	1	9	0	0
3M	28	SC	SC	SC	SC	SC	SC	SC
3M	29	0.8	19	79	2	0	0	0
3M	30	0.7	20	72	1	8	0	0
4M	37	1.4	36	60	2	2	1	0
4M	38	IS	IS	IS	IS	IS	IS	IS
4M	39	1.5	40	54	5	1	0	0
4M	40	1.0	44	49	2	4	1	0
4M	41	0.6	50	36	2	11	1	0
4M	42	0.8	44	51	5	0	0	0
5M	51	1.3	64	33	2	2	0	0
5M	52	0.5	54	38	6	2	0	0
5M	53	0.8	59	34	7	0	0	0
5M	54	IS	IS	IS	IS	IS	IS	IS

IS = insufficient sample for analysis
SC = sample clotted

Appendix 6
Individual haematology
At terminal kill

Test Article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

Group/ Sex	Animal Number	WBC 1000/cmm	N % WBC	L % WBC	M % WBC	E % WBC	B % WBC	LUC % WBC
1F	61	2.0	20	76	1	3	0	0
1F	62	1.4	25	70	2	3	0	0
1F	63	1.4	23	71	1	5	0	0
1F	64	1.0	23	70	2	4	1	0
1F	65	SC	SC	SC	SC	SC	SC	SC
1F	66	SC	SC	SC	SC	SC	SC	SC
2F	73	1.8	45	51	4	0	0	0
2F	74	1.4	42	54	1	1	1	1
2F	75	2.0	34	58	1	6	0	1
2F	76	1.1	49	48	3	0	0	0
2F	77	1.4	27	70	1	2	0	0
2F	78	0.9	51	48	1	0	0	0
3F	85	1.7	47	49	1	3	0	0
3F	86	1.8	40	56	3	1	0	0
3F	87	2.3	44	53	1	2	0	0
3F	88	1.9	39	53	1	6	0	0
3F	89	1.0	47	49	1	3	0	1
3F	90	0.3	34	62	4	0	0	0
4F	97	2.3	42	49	2	7	0	0
4F	98	2.1	36	58	2	4	0	1
4F	99	1.6	39	59	2	0	0	0
4F	100	1.5	53	38	2	6	1	1
4F	101	2.2	37	52	2	8	1	0
4F	102	1.9	36	52	1	9	1	0
5F	109	1.5	48	41	2	8	0	0
5F	110	2.0	64	33	2	1	0	0
5F	111	IS	IS	IS	IS	IS	IS	IS
5F	112	IS	IS	IS	IS	IS	IS	IS
5F	113	1.8	63	26	2	9	0	0
5F	114	SC	SC	SC	SC	SC	SC	SC

IS = insufficient sample for analysis
SC = sample clotted

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Appendix 6
Individual haematology
Decedent animals

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000

Group/ Sex	Animal Number	Hb g/dL	RBC mil/cmm	PCV %	RETA %	RET ABS mil/cmm	MCV fL	MCH pg
5M	49	16.1	10.16	47.4	2.1	0.21	46.7	15.8
5M	55	14.7	9.08	44.8	8.7	0.79	49.3	16.2
5M	57	17.0	10.73	50.2	3.2	0.34	46.8	15.8

Group/ Sex	Animal Number	MCHC g/dL	HDW g/dL	RDW %	PLAT 1000/cmm	PCT %	MPV fl	PDW %
5M	49	33.9	2.11	15.3	1144	0.78	6.8	64.7
5M	55	33.0	2.32	17.1	1344	0.91	6.8	64.1
5M	57	33.8	2.16	16.3	1187	0.82	6.9	76.9

Group/ Sex	Animal Number	WBC 1000/cmm	N 1000/cmm	L 1000/cmm	M 1000/cmm	E 1000/cmm	B 1000/cmm	LUC 1000/cmm
5M	49	1.0	0.5	0.5	0.0	0.0	0.0	0.0
5M	55	1.4	1.0	0.4	0.0	0.0	0.0	0.0
5M	57	0.7	0.5	0.1	0.0	0.0	0.0	0.0

Group/ Sex	Animal Number	WBC 1000/cmm	N % WBC	L % WBC	M % WBC	E % WBC	B % WBC	LUC % WBC
5M	49	1.0	52	48	0	0	0	0
5M	55	1.4	69	25	2	1	1	3
5M	57	0.7	71	18	2	6	1	2

Appendix 7
Individual clinical chemistry

Key to abbreviations/methods

Code	Parameter	Analyser	Method of determination
AST	Aspartate aminotransferase	Hitachi 917	Optimised UV method using L-aspartate and alpha-oxoglutarate as primary substrates
ALT	Alanine aminotransferase	Hitachi 917	Optimised UV method using L-Alanine and alpha-oxoglutarate as primary substrates
Gamma GT	Gamma glutamyl transpeptidase	Hitachi 917	Colorimetric method using l-gamma-glutamyl-3-carboxy-4nitroanilide as substrate
ALK PHOS	Alkaline phosphatase	Hitachi 917	Colorimetric method using p-nitrophenyl phosphate as substrate
Na/K/Cl	Sodium /potassium /chloride	Hitachi 917	Ion-selective electrode
Ca	Calcium	Hitachi 917	Colorimetric method using o-cresophthalein complexone in alkaline solution
IN PHOS	inorganic phosphorous	Hitachi 917	Colorimetric method based upon ammonium molybdate in acid conditions
UREA	urea	Hitachi 917	UV method using a coupled urease procedure
T BILI	total bilirubin	Hitachi 917	A colorimetric method. Indirect bilirubin is liberated by detergent: Total bilirubin is coupled with a diazonium compound to give corresponding azobilirubin.
CREAT	creatinine	Hitachi 917	Colorimetric method
T PROT	total protein	Hitachi 917	Colorimetric method based on biuret reaction
ALBUMIN	albumin	Hitachi 917	Colorimetric method based on the BCG reaction
GLOBULIN	globulin	Calculation	globulin = total protein - albumin
AG RATIO	albumin/globulin ratio	Calculation	AG ratio = albumin /(total protein - albumin)
TOT CHOL	total cholesterol	Hitachi 917	Enzymatic method using cholesterol oxidase/esterase
TRIGS	triglycerides	Hitachi 917	Enzymatic method using lipase and glycerol kinase as primary enzymes
GLUC	glucose	Hitachi 917	UV method using a coupled hexokinase procedure

Appendix 7
Individual clinical chemistry
At terminal kill

Test Article	Control		[	]	
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

Group/ Sex	Animal Number	AST IU/L	ALT IU/L	GAMMA GT IU/L	ALK PHOS IU/L	Na mmol/L	K mmol/L	Cl mmol/L
1M	7	640	331	<2	235	152	6.8	111
1M	8	512	204	<2	255	152	8.2	111
1M	9	>800	406	<2	254	155	7.7	111
1M	10	IS	IS	IS	IS	150	7.7	109
1M	11	105	34	<2	207	153	5.3	110
1M	12	>800	433	<2	250	148	>10.0	109
2M	19	>800	514	<2	298	156	7.5	111
2M	20	458	148	<2	273	155	7.2	112
2M	21	>800	568	<2	232	152	6.5	109
2M	22	>800	440	<2	209	155	6.3	111
2M	23	443	183	<2	302	157	6.5	112
2M	24	263	124	<2	205	154	4.9	113
3M	31	312	133	<2	230	154	5.9	112
3M	32	>800	418	<2	258	154	7.5	111
3M	33	539	256	<2	224	152	7.1	109
3M	34	526	235	<2	283	156	6.2	110
3M	35	721	303	<2	236	156	6.2	114
3M	36	378	190	<2	236	154	6.0	111
4M	43	>800	405	<2	467	155	7.3	111
4M	44	236	80	<2	406	155	4.7	113
4M	45	318	123	<2	512	157	5.1	119
4M	46	>800	550	<2	421	157	6.5	114
4M	47	735	295	<2	568	154	5.7	112
4M	48	369	153	<2	431	153	4.8	113
5M	56	368	240	<2	770	155	4.5	120
5M	58	302	193	<2	739	157	5.9	118
5M	59	649	275	<2	631	160	7.0	120
5M	60	>800	598	<2	708	158	7.3	120

< = half value used in calculations
> = value used in calculations
IS = insufficient sample for analysis

Appendix 7
Individual clinical chemistry
At terminal kill

Test Article	Control		[	]	
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

Group/ Sex	Animal Number	AST IU/L	ALT IU/L	GAMMA GT IU/L	ALK PHOS IU/L	Na mmol/L	K mmol/L	Cl mmol/L
1F	67	122	39	<2	250	149	6.7	111
1F	68	561	381	<2	284	149	6.2	110
1F	69	>800	586	<2	273	153	6.5	114
1F	70	155	40	<2	320	152	4.9	115
1F	71	261	104	<2	276	150	6.2	109
1F	72	718	429	<2	322	151	7.1	109
2F	79	102	35	<2	288	155	4.6	114
2F	80	763	435	<2	266	152	5.1	110
2F	81	>800	712	<2	322	151	6.5	113
2F	82	204	135	<2	246	152	5.8	112
2F	83	97	32	<2	253	153	5.7	111
2F	84	>800	447	<2	297	IS	IS	IS
3F	91	296	175	<2	283	153	7.2	113
3F	92	777	338	<2	293	153	9.1	114
3F	93	256	148	<2	265	152	6.3	111
3F	95	641	415	<2	297	150	6.9	110
3F	96	342	264	<2	311	151	8.1	109
4F	103	455	125	<2	757	153	6.6	116
4F	104	555	388	<2	662	151	6.4	112
4F	105	122	66	<2	516	154	5.1	114
4F	106	>800	522	<2	632	151	7.3	115
4F	107	686	394	<2	673	156	6.1	118
4F	108	608	395	<2	715	158	6.4	121
5F	115	499	442	<2	1176	IS	IS	IS
5F	116	566	441	<2	932	161	7.1	122
5F	117	410	249	<2	921	IS	IS	IS
5F	118	>800	572	<2	1118	161	6.3	120
5F	119	434	350	<2	1153	158	5.9	120
5F	120	107	94	<2	883	153	6.4	120

< = half value used in calculations
> = value used in calculations
IS = insufficient sample for analysis

Appendix 7
Individual clinical chemistry
At terminal kill

Test Article	Control		[	]	
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

Group/ Sex	Animal Number	Ca mmol/L	IN PHOS mmol/L	UREA mmol/L	T BILI umol/L	CREAT umol/L	T PROT g/L	ALBUMIN g/L
1M	7	2.31	2.8	9.6	<1.0	37	57	36
1M	8	2.21	3.5	8.3	1.1	36	57	34
1M	9	2.29	3.7	9.3	1.2	37	59	38
1M	10	2.29	IS	IS	IS	IS	IS	IS
1M	11	2.34	3.2	7.5	1.9	33	54	36
1M	12	2.15	5.1	8.8	<1.0	41	59	29
2M	19	2.26	4.5	15.8	1.3	40	64	38
2M	20	2.21	3.9	13.5	1.2	33	62	40
2M	21	2.25	2.7	7.4	1.7	35	55	34
2M	22	2.29	2.6	6.8	1.1	31	55	35
2M	23	2.26	4.6	14.0	1.3	39	62	38
2M	24	2.24	3.0	6.4	1.7	33	51	33
3M	31	2.30	2.7	10.4	1.8	35	57	37
3M	32	2.31	3.4	8.5	2.1	38	61	38
3M	33	2.18	2.8	IS	IS	IS	IS	IS
3M	34	2.33	4.5	13.5	2.1	41	61	40
3M	35	2.25	3.0	8.9	1.8	30	56	34
3M	36	2.23	2.7	12.2	1.5	36	56	36
4M	43	2.27	4.1	IS	IS	IS	IS	IS
4M	44	2.31	2.5	5.9	2.0	37	57	39
4M	45	2.30	2.1	IS	IS	IS	IS	IS
4M	46	2.30	2.6	11.5	1.7	39	61	40
4M	47	2.34	4.6	IS	IS	IS	IS	IS
4M	48	2.39	2.6	6.2	1.6	39	55	35
5M	56	2.33	2.5	7.9	3.0	28	48	33
5M	58	2.42	4.1	IS	IS	IS	IS	IS
5M	59	2.26	2.6	IS	IS	IS	IS	IS
5M	60	2.18	2.8	IS	IS	IS	IS	IS

< = half value used in calculations
IS = insufficient sample for analysis

Appendix 7
Individual clinical chemistry
At terminal kill

Test Article	Control		[	]	
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

Group/ Sex	Animal Number	Ca mmol/L	IN PHOS mmol/L	UREA mmol/L	T BILI umol/L	CREAT umol/L	T PROT g/L	ALBUMIN g/L
1F	67	2.31	2.7	7.7	1.7	35	56	36
1F	68	2.31	2.6	8.1	<1.0	38	55	36
1F	69	2.24	2.6	7.6	<1.0	37	55	35
1F	70	2.29	2.5	7.2	1.0	35	55	39
1F	71	2.27	4.2	7.7	2.1	35	54	29
1F	72	2.29	3.6	7.7	1.2	36	59	38
2F	79	2.42	3.0	7.0	1.2	35	56	36
2F	80	2.28	2.9	5.9	1.2	37	54	39
2F	81	2.21	2.4	7.0	1.7	38	57	36
2F	82	2.35	2.6	5.5	2.1	31	53	37
2F	83	2.28	2.6	5.8	1.6	34	52	37
2F	84	IS	IS	IS	IS	IS	IS	IS
3F	91	2.32	3.1	6.0	1.6	32	55	33
3F	92	2.18	3.0	6.4	1.7	37	55	34
3F	93	2.35	2.1	6.4	1.2	38	54	38
3F	95	2.20	2.2	5.2	1.7	38	53	36
3F	96	2.30	2.9	5.1	2.2	41	55	36
4F	103	2.47	3.1	IS	IS	IS	IS	IS
4F	104	2.39	2.2	4.7	3.2	41	58	38
4F	105	2.36	2.5	4.9	3.0	35	55	37
4F	106	2.10	3.0	9.3	3.4	38	53	33
4F	107	2.19	3.0	IS	IS	IS	IS	IS
4F	108	2.17	2.4	11.2	4.1	38	56	37
5F	115	IS	IS	IS	IS	IS	IS	IS
5F	116	2.27	2.9	IS	IS	IS	IS	IS
5F	117	IS	IS	IS	IS	IS	IS	IS
5F	118	2.23	3.0	IS	IS	IS	IS	IS
5F	119	2.27	3.3	IS	IS	IS	IS	IS
5F	120	2.35	2.3	9.4	3.0	31	48	35

< = half value used in calculations
IS = insufficient sample for analysis

Appendix 7
Individual clinical chemistry
At terminal kill

Test Article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

Group/ Sex	Animal Number	GLOBULIN g/L	AG RATIO	TOT CHOL mmol/L	TRIGS mmol/L	GLUC mmol/L
1M	7	21	1.7	3.5	0.94	6.5
1M	8	23	1.5	3.8	1.11	10.2
1M	9	21	1.8	3.8	0.72	10.1
1M	10	NC	NC	IS	IS	IS
1M	11	18	2.0	3.3	0.40	13.4
1M	12	30	1.0	3.6	0.99	6.2
2M	19	26	1.5	3.4	0.52	3.8
2M	20	22	1.8	3.2	0.55	4.2
2M	21	21	1.6	3.6	0.42	12.6
2M	22	20	1.8	3.8	0.36	8.0
2M	23	24	1.6	3.3	0.41	4.3
2M	24	18	1.8	3.4	0.31	11.1
3M	31	20	1.9	3.7	0.37	8.4
3M	32	23	1.7	3.9	0.43	8.1
3M	33	NC	NC	3.6	0.47	IS
3M	34	21	1.9	3.7	0.37	3.3
3M	35	22	1.5	3.5	0.38	6.5
3M	36	20	1.8	3.7	0.35	9.1
4M	43	NC	NC	4.0	0.59	IS
4M	44	18	2.2	3.6	0.39	13.2
4M	45	NC	NC	3.0	0.38	IS
4M	46	21	1.9	4.4	0.57	9.5
4M	47	NC	NC	3.3	0.50	IS
4M	48	20	1.8	3.5	0.27	16.0
5M	56	15	2.2	2.7	0.34	3.0
5M	58	NC	NC	2.8	0.39	IS
5M	59	NC	NC	3.3	0.35	IS
5M	60	NC	NC	3.3	0.51	IS

IS = insufficient sample for analysis
NC = not calculated

Appendix 7
Individual clinical chemistry
At terminal kill

Test Article	Control		[	]	
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

Group/ Sex	Animal Number	GLOBULIN g/L	AG RATIO	TOT CHOL mmol/L	TRIGS mmol/L	GLUC mmol/L
1F	67	20	1.8	2.9	0.62	7.4
1F	68	19	1.9	2.6	0.61	9.8
1F	69	20	1.8	2.4	0.72	7.9
1F	70	16	2.4	2.3	0.42	7.0
1F	71	25	1.2	2.4	0.44	7.4
1F	72	21	1.8	2.9	0.78	6.1
2F	79	20	1.8	2.9	0.34	7.6
2F	80	15	2.6	2.6	0.50	9.0
2F	81	21	1.7	2.4	0.63	5.2
2F	82	16	2.3	2.4	0.40	7.2
2F	83	15	2.5	2.6	0.30	6.5
2F	84	NC	NC	3.0	0.85	IS
3F	91	22	1.5	2.7	0.60	6.4
3F	92	21	1.6	2.8	0.73	4.7
3F	93	16	2.4	3.0	0.51	6.5
3F	95	17	2.1	2.9	0.58	11.4
3F	96	19	1.9	2.8	0.72	8.0
4F	103	NC	NC	3.6	0.52	IS
4F	104	20	1.9	3.1	0.66	8.1
4F	105	18	2.1	3.4	0.39	8.3
4F	106	20	1.7	2.7	0.55	6.4
4F	107	NC	NC	2.8	0.54	IS
4F	108	19	1.9	2.9	0.50	5.3
5F	115	NC	NC	3.8	0.51	IS
5F	116	NC	NC	3.3	0.60	IS
5F	117	NC	NC	2.7	0.58	IS
5F	118	NC	NC	3.2	0.41	IS
5F	119	NC	NC	3.0	0.33	IS
5F	120	13	2.7	2.4	0.34	8.0

IS = insufficient sample for analysis
NC = not calculated

Appendix 8
Individual urine analysis

Key to abbreviations/methods

Code	parameter	Method of determination	Units
VOL	Volume	Direct visual measurement	mL
COLOUR	Colour	Visual assessment	C = colourless VPS = Very pale straw PS = Pale straw S = Straw DS = Dark straw VDS = Very dark straw B = Brown BL = Blood stained
TURB	Turbidity	Visual assessment	0 = none observed + = Slight ++ = Marked
SP GR	Specific gravity	Visual measurement	Numerical
pH	pH	Visual assessment following reaction with Methyl Red and Bromothymol Blue	Numerical approximation
PROT	Protein	Visual assessment following reaction with tetrachlorophenol-tetrabromosulphothalein	0 = none detected + = approx 0.3 g/L ++ = approx 1.0 g/L +++ = approx 5.0 g/L
GLUC	Glucose	Visual assessment following reaction with glucose oxidase/peroxidase reaction.	0 = none detected + = approx 2.8 mmol/L ++ = approx 5.6 mmol/L +++ = approx 16.7 mmol/L ++++ = approx 55.5 mmol/L
RED SUB	Reducing substances	Visual assessment following reaction with copper sulphate/sodium hydroxide	Percentage (%)
KET	Ketones	Visual assessment following reaction with aceto-acetic acid and sodium nitroprusside	0 = none detected + = approx 0.5 - 4 mmol/L ++ = approx 4 - 10 mmol/L +++ = >10 mmol/L
UROBIL	Urobilinogen	Visual assessment following reaction with 4-methoxybenzene-diazonium-tetrafluoroborate	0 = <17 umol/L + = approx 17 umol/L ++ = approx 70 umol/L +++ = approx 140 umol/L ++++ = approx 200 umol/L
BILI	Bilirubin	Visual assessment following reaction with 2,6-Dichlorobenzene-tetrafluroborate	0 = none detected + = small amount ++ = moderate +++ = large
BL	Blood	Visual assessment following reaction with organic peroxide	0 = <5 x 10^6 RBC/L + = approx 5 x 10^6 RBC/L ++ = approx 50 x 10^6 RBC/L +++ = approx 250 x 10^6 RBC/L
RBC WBC EPITH	Red blood cells White blood cells Epithelial cells	Visual assessment: parameters measured on deposits after at least 10 minutes standing in microwells	0 = none observed + = 1-10 /field ++ = 11-30 /field +++ = >30 /field
SPERM	Sperm cells	Visual assessment: parameters measured on deposits after at least 10 minutes standing in microwells	0 = none observed + = scanty presence ++ = some present/field +++ = heavy presence/field
CASTS	Casts	Visual assessment: parameters measured on deposits after at least 10 minutes standing in microwells	Quantitative assessment: number per field
PHOS URATE UR AC Ca OX AM DEB BACT	Phosphates Urates Uric acid Calcium oxalate Amorphous debris Bacteria	Visual assessment: parameters measured on deposits after at least 10 minutes standing in microwells	0 = none observed + = scanty presence ++ = some present/field +++ = heavy presence/field

Appendix 8
Individual urine analysis
Occasion: Week 13

Test Article	Control		[	]	
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

Group/ Sex	Animal Number	VOL mL	COLOUR	TURB	SP GR	pH	PROT
1M	1	0.5	VPS	0	1.019	9	+
1M	2	0.1	VPS	0	IS	9	+
1M	5	0.5	S	0	1.035	6	+
1M	6	0.6	S	0	1.035	7	+
1M	9	0.1	VPS	0	IS	7	+
1M	10	0.3	PS	0	1.027	8	+
1M	11	0.4	S	0	1.037	8	+
1M	12	0.1	S	0	IS	7	+
2M	14	0.5	S	0	1.031	8	+
2M	15	0.1	PS	0	1.039	7	+
2M	16	0.3	S	0	1.028	8	+
2M	17	0.6	S	0	1.028	8	+
2M	22	0.5	VPS	0	1.019	8	+
3M	26	0.5	VPS	0	1.034	8	+
3M	27	0.7	S	0	1.033	7	+
3M	28	0.5	PS	0	1.027	8	+
3M	29	0.6	S	0	1.035	8	+
3M	30	0.5	VPS	0	1.025	7	+
3M	31	0.5	PS	0	1.029	7	+
3M	32	0.5	VPS	0	1.019	8	+
4M	37	1.0	PS	0	1.027	6	+
4M	38	0.5	PS	0	1.034	6	+
4M	39	0.6	VPS	0	1.019	7	++
4M	40	0.6	VPS	0	1.030	6	+
4M	41	0.4	C	0	1.010	8	+
4M	42	0.6	C	0	1.017	7	+
4M	43	0.6	C	0	1.010	7	+
4M	44	0.5	VPS	0	1.018	7	+
4M	45	0.2	VPS	0	1.027	6	+
4M	48	0.5	C	0	1.012	7	+
5M	50	0.1	C	0	1.016	7	+
5M	52	1.0	VPS	0	1.012	7	+
5M	53	0.5	C	0	1.013	7	+
5M	54	0.5	PS	0	1.024	6	+
5M	56	0.2	C	0	1.018	6	+
5M	59	0.1	S	0	IS	5	++

IS = insufficient sample for analysis
Any other animal - no sample available

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Appendix 8
Individual urine analysis
Occasion: Week 13

Test Article	Control		[	]	
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

Group/ Sex	Animal Numbers	VOL mL	COLOUR	TURB	SP GR	pH	PROT
1F	61-63	8.8	S	+	1.016	6	+
1F	64-66	4.9	S	+	1.020	6	0
1F	67-69	7.5	S	+	1.020	6	0
1F	70-72	2.0	S	+	1.017	7	0
2F	73-75	10.5	S	+	1.012	7	+
2F	76-78	9.0	S	+	1.013	7	0
2F	79-81	4.1	S	+	1.020	7	0
2F	82-84	6.8	S	+	1.021	6	+
3F	85-87	7.5	S	+	1.016	6	+
3F	88-90	7.8	S	0	1.019	7	+
3F	91-93	5.2	PS	0	1.013	7	0
3F	94-96	2.1	PS	+	1.012	8	0
4F	97-99	3.8	S	+	1.023	6	+
4F	100-102	1.4	S	+	1.035	6	+
4F	103-105	2.1	S	+	1.029	6	++
4F	106-108	2.1	S	+	1.024	6	+
5F	109-111	3.2	S	+	1.022	6	++
5F	112-114	0.9	S	+	1.026	6	++
5F	115-117	1.8	DS	+	1.031	6	++
5F	118-120	1.0	PS	+	1.016	7	0

Appendix 8
Individual urine analysis
Occasion: Week 13

Test Article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

Group/ Sex	Animal Number	GLUC	RED SUB %	KET	UROBIL	BILI	BL
1M	1	0	IS	0	0	0	0
1M	2	0	IS	0	0	0	0
1M	5	0	IS	0	0	0	0
1M	6	0	IS	0	0	0	0
1M	9	0	IS	0	0	0	0
1M	10	0	0.00	0	0	0	0
1M	11	0	IS	0	0	0	0
1M	12	0	IS	0	0	0	0
2M	14	0	IS	0	0	0	0
2M	15	0	IS	+	0	0	0
2M	16	0	IS	0	0	0	++
2M	17	0	IS	0	0	0	0
2M	22	0	0.00	0	0	0	0
3M	26	0	IS	0	0	0	0
3M	27	0	0.00	0	0	0	0
3M	28	0	IS	0	0	0	0
3M	29	0	0.00	0	0	0	0
3M	30	0	IS	0	0	0	0
3M	31	0	0.00	0	0	0	0
3M	32	0	IS	0	0	0	0
4M	37	0	IS	+++	0	0	+++
4M	38	0	IS	+++	0	0	+++
4M	39	0	0.00	+++	0	0	+++
4M	40	0	0.00	+++	0	0	+++
4M	41	0	IS	0	0	0	+
4M	42	0	0.00	+++	0	0	+
4M	43	0	0.00	0	0	0	0
4M	44	0	IS	0	0	0	+
4M	45	0	IS	+++	0	0	+++
4M	48	0	IS	0	0	0	0
5M	50	0	IS	+	0	0	+
5M	52	0	0.00	0	0	0	0
5M	53	0	0.00	+++	0	0	+++
5M	54	0	IS	+++	0	0	+++
5M	56	0	IS	++	0	0	+++
5M	59	0	IS	+++	0	0	+++

IS = insufficient sample for analysis
Any other animal - no sample available

Appendix 8
Individual urine analysis
Occasion: Week 13

Test Article	Control		[	]	
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

Group/ Sex	Animal Numbers	GLUC	RED SUB %	KET	UROBIL	BILI	BL
1F	61-63	0	0.00	+	0	0	0
1F	64-66	0	0.00	+	0	0	0
1F	67-69	0	0.00	0	0	0	0
1F	70-72	0	0.00	0	0	0	0
2F	73-75	0	0.00	0	0	0	0
2F	76-78	0	0.00	0	0	0	0
2F	79-81	0	0.00	0	0	0	0
2F	82-84	0	0.00	0	0	0	0
3F	85-87	0	0.00	+	0	0	0
3F	88-90	0	0.00	++	0	0	++
3F	91-93	0	0.00	0	0	0	0
3F	94-96	0	0.00	0	0	0	0
4F	97-99	0	0.00	+++	0	0	++
4F	100-102	+	0.00	+++	0	0	+++
4F	103-105	0	0.00	++	0	0	+++
4F	106-108	0	0.00	+++	0	0	++
5F	109-111	0	0.00	+++	0	0	+++
5F	112-114	++	0.25	+++	0	0	+++
5F	115-117	++	0.25	+++	0	0	+++
5F	118-120	+	0.00	++	0	0	++

Appendix 8
Individual urine analysis
Occasion: Week 13

Test Article	Control		[	]	
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

Group/ Sex	Animal Number	RBC /field	WBC /field	EPTTH /field	SPERM	CASTS /field	PHOS
1M	1	0	0	0	0	0	0
1M	2	IS	IS	IS	IS	IS	IS
1M	5	0	0	0	0	0	+
1M	6	0	0	0	+	0	++
1M	9	IS	IS	IS	IS	IS	IS
1M	10	0	0	0	0	0	0
1M	11	0	0	0	0	0	+
1M	12	0	0	0	0	0	0
2M	14	0	0	0	0	0	++
2M	15	0	0	0	0	0	+
2M	16	0	0	0	0	0	++
2M	17	0	0	0	0	0	0
2M	22	0	0	0	0	0	++
3M	26	0	0	0	0	0	++
3M	27	0	0	0	0	0	++
3M	28	0	0	0	0	0	+++
3M	29	0	0	0	0	0	+++
3M	30	0	0	0	0	0	0
3M	31	0	0	0	0	0	0
3M	32	0	0	0	0	0	0
4M	37	0	0	0	0	0	0
4M	38	0	0	0	0	0	0
4M	39	0	0	0	0	0	+
4M	40	0	0	0	0	0	+
4M	41	0	0	0	0	0	0
4M	42	0	0	0	0	0	0
4M	43	0	0	0	0	0	0
4M	44	0	0	0	0	0	0
4M	45	0	0	0	0	0	0
4M	48	0	0	0	0	0	0
5M	50	0	0	0	0	0	0
5M	52	0	0	0	0	0	+
5M	53	0	0	0	0	0	0
5M	54	0	0	0	0	0	0
5M	56	0	0	0	0	0	0
5M	59	0	0	0	0	0	++

IS = insufficient sample for analysis
Any other animal - no sample available

Appendix 8
Individual urine analysis
Occasion: Week 13

Test Article	Control		[	]	
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

Group/ Sex	Animal Numbers	RBC /field	WBC /field	EPITH /field	SPERM	CASTS /field	PHOS
1F	61-63	0	0	0	0	0	0
1F	64-66	0	0	0	0	0	0
1F	67-69	0	0	0	0	0	0
1F	70-72	0	0	0	0	0	+
2F	73-75	0	0	0	0	0	0
2F	76-78	0	0	+	0	0	0
2F	79-81	0	0	0	0	0	++
2F	82-84	0	0	0	0	0	0
3F	85-87	0	0	0	0	0	+
3F	88-90	0	0	0	0	0	+
3F	91-93	0	0	0	0	0	+
3F	94-96	0	0	0	0	0	0
4F	97-99	0	0	0	0	0	+
4F	100-102	+	0	+	0	0	0
4F	103-105	+	0	0	0	0	+
4F	106-108	+	0	+	0	0	0
5F	109-111	+	0	0	0	0	0
5F	112-114	+	0	0	0	0	0
5F	115-117	+	0	+	0	0	0
5F	118-120	0	0	0	0	0	0

Appendix 8
Individual urine analysis
Occasion: Week 13

Test Article	Control		[	]	
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

Group/ Sex	Animal Number	URATE	UR AC	Ca OX	AM DEB	BACT
1M	1	0	0	0	0	0
1M	2	IS	IS	IS	IS	IS
1M	5	+	0	0	0	+
1M	6	0	0	0	0	++
1M	9	IS	IS	IS	IS	IS
1M	10	+	0	0	0	+
1M	11	++	0	0	0	++
1M	12	+	0	0	+	0
2M	14	++	0	0	0	++
2M	15	+	0	0	0	++
2M	16	+	0	0	0	+++
2M	17	+	0	0	+++	+++
2M	22	++	0	0	0	+++
3M	26	++	0	0	0	0
3M	27	++	0	0	0	0
3M	28	++	0	0	0	0
3M	29	+	0	0	0	0
3M	30	+	0	0	0	0
3M	31	++	0	0	0	+
3M	32	++	0	0	0	++
4M	37	+	0	0	0	+++
4M	38	++	0	0	0	0
4M	39	+	0	0	0	+++
4M	40	++	0	0	0	+
4M	41	++	0	0	++	+++
4M	42	++	0	0	0	+++
4M	43	+	0	0	0	+++
4M	44	+	0	0	0	+++
4M	45	+	0	0	0	+
4M	48	+	0	0	0	++
5M	50	++	0	0	0	+++
5M	52	+	0	0	0	0
5M	53	++	0	0	0	+++
5M	54	+	0	0	0	0
5M	56	++	0	0	0	+
5M	59	+	0	0	0	0

IS = insufficient sample for analysis
Any other animal - no sample available

Appendix 8
Individual urine analysis
Occasion: Week 13

Test Article	Control		[	]	
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

Group/ Sex	Animal Numbers	URATE	UR AC	Ca OX	AM DEB	BACT
1F	61-63	0	0	0	+	++
1F	64-66	0	0	0	+	+++
1F	67-69	+	0	0	0	+++
1F	70-72	0	0	0	0	+++
2F	73-75	0	0	0	+	++
2F	76-78	0	0	0	+	+++
2F	79-81	0	0	0	0	+++
2F	82-84	+	0	0	+	+
3F	85-87	+	0	0	0	+
3F	88-90	0	0	0	+	+
3F	91-93	0	0	0	+	+++
3F	94-96	0	0	0	+	+++
4F	97-99	0	0	0	+	++
4F	100-102	+	0	0	+	+
4F	103-105	0	0	0	+	+
4F	106-108	+	0	0	0	++
5F	109-111	0	0	++	++	++
5F	112-114	0	0	0	++	+++
5F	115-117	0	0	0	++	++
5F	118-120	0	0	0	+	+++

Appendix 9
Individual organ weights

Terminal kill

Test Article	Control		[	]	
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

Group and Sex	Animal number	Body weight (g)	Individual organ weights (g): Adrenals	Kidneys	Spleen	Liver
1M	1	28.8	0.004	0.453	0.060	1.067
1M	2	25.7	0.009	0.410	0.061	0.997
1M	3	28.6	0.008	0.447	0.076	1.113
1M	4	28.0	0.014	0.434	0.077	1.014
1M	5	28.2	0.005	0.434	0.066	1.062
1M	6	28.1	0.020	0.494	0.054	1.117
1M	7	26.2	0.011	0.428	0.057	0.984
1M	8	26.4	0.011	0.418	0.081	0.917
1M	9	26.3	0.009	0.383	0.050	1.016
1M	10	23.8	0.011	0.346	0.051	0.977
1M	11	26.3	0.014	0.428	0.058	1.009
1M	12	24.0	0.013	0.378	0.063	1.042
2M	13	25.9	0.007	0.429	0.059	1.062
2M	14	24.3	0.007	0.405	0.055	1.019
2M	15	25.4	0.008	0.377	0.049	0.969
2M	16	26.5	0.009	0.453	0.071	1.055
2M	17	26.1	0.006	0.431	0.080	1.092
2M	18	22.7	0.011	0.340	0.055	0.841
2M	19	24.7	0.007	0.359	0.067	0.958
2M	20	23.7	0.006	0.361	0.065	0.937
2M	21	25.1	0.010	0.378	0.055	1.055
2M	22	25.7	0.009	0.391	0.052	0.973
2M	23	24.2	0.010	0.353	0.058	0.949
2M	24	24.5	0.007	0.344	0.055	0.926
3M	25	23.9	0.006	0.381	0.065	1.101
3M	26	24.5	0.019	0.346	0.076	1.060
3M	27	26.4	0.014	0.387	0.076	1.253
3M	28	28.8	0.006	0.406	0.077	1.279
3M	29	25.0	0.009	0.364	0.058	1.010
3M	30	25.6	0.018	0.395	0.078	1.124
3M	31	24.8	0.008	0.352	0.053	1.029
3M	32	25.9	0.008	0.372	0.076	1.121
3M	33	27.5	0.004	0.369	0.062	1.050
3M	34	25.2	0.011	0.350	0.061	1.075
3M	35	25.4	0.015	0.367	0.052	1.051
3M	36	28.5	0.012	0.406	0.068	1.084

Appendix 9
Individual organ weights
Terminal kill

Test Article	Control	[		]	
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

Group and Sex	Animal number	Body weight (g)	Individual organ weights (g): Heart	Brain	Thymus	Testes/ Epididymides
1M	1	28.8	0.168	0.468	0.040	0.334
1M	2	25.7	0.150	0.501	0.029	0.270
1M	3	28.6	0.163	0.478	0.020	0.346
1M	4	28.0	0.166	0.467	0.024	0.329
1M	5	28.2	0.123	0.445	0.023	0.319
1M	6	28.1	0.159	0.492	0.029	0.334
1M	7	26.2	0.140	0.459	0.030	0.320
1M	8	26.4	0.144	0.456	0.032	0.313
1M	9	26.3	0.164	0.464	0.015	0.274
1M	10	23.8	0.126	0.444	0.028	0.315
1M	11	26.3	0.137	0.480	0.028	0.282
1M	12	24.0	0.139	0.466	0.017	0.281
2M	13	25.9	0.164	0.464	0.026	0.301
2M	14	24.3	0.151	0.479	0.032	0.304
2M	15	25.4	0.142	0.458	0.017	0.323
2M	16	26.5	0.184	0.496	0.027	0.333
2M	17	26.1	0.127	0.473	0.015	0.329
2M	18	22.7	0.143	0.460	0.018	0.243
2M	19	24.7	0.129	0.455	0.008	0.261
2M	20	23.7	0.163	0.505	0.024	0.248
2M	21	25.1	0.173	0.450	0.029	0.287
2M	22	25.7	0.161	0.457	0.029	0.291
2M	23	24.2	0.153	0.474	0.020	0.294
2M	24	24.5	0.143	0.459	0.022	0.298
3M	25	23.9	0.134	0.462	0.024	0.296
3M	26	24.5	0.155	0.455	0.017	0.276
3M	27	26.4	0.160	0.455	0.024	0.286
3M	28	28.8	0.145	0.466	0.022	0.297
3M	29	25.0	0.143	0.495	0.021	0.316
3M	30	25.6	0.157	0.484	0.028	0.314
3M	31	24.8	0.140	0.477	0.019	0.325
3M	32	25.9	0.164	0.471	0.021	0.305
3M	33	27.5	0.148	0.480	0.025	0.312
3M	34	25.2	0.146	0.472	0.028	0.287
3M	35	25.4	0.116	0.469	0.019	0.276
3M	36	28.5	0.160	0.475	0.025	0.330

Appendix 9
Individual organ weights
Terminal kill

Test Article	Control	[		]	
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

Group and Sex	Animal number	Body weight (g)	Individual organ weights (g): Adrenals	Kidneys	Spleen	Liver
4M	37	20.9	0.007	0.300	0.078	1.832
4M	38	18.0	0.009	0.267	0.056	1.576
4M	39	20.3	0.012	0.311	0.042	1.836
4M	40	19.9	0.009	0.283	0.047	1.730
4M	41	17.6	0.007	0.281	0.054	1.514
4M	42	21.5	0.007	0.321	0.061	1.824
4M	43	16.8	0.015	0.227	0.048	1.343
4M	44	20.4	0.009	0.305	0.056	1.553
4M	45	16.1	0.011	0.248	0.032	1.351
4M	46	19.7	0.008	0.279	0.055	1.572
4M	47	16.4	0.012	0.245	0.040	1.268
4M	48	20.4	0.015	0.265	0.052	1.593
5M	50	13.5	0.013	0.234	0.027	1.018
5M	51	17.1	0.007	0.279	0.032	1.482
5M	52	12.2	0.006	0.250	0.036	1.324
5M	53	15.1	0.010	0.286	0.028	1.170
5M	54	16.2	0.008	0.297	0.028	1.326
5M	56	13.6	0.007	0.274	0.062	0.875
5M	58	12.1	0.005	0.179	0.014	0.902
5M	59	15.0	0.009	0.253	0.031	1.243
5M	60	15.6	0.006	0.300	0.031	1.182

Appendix 9
Individual organ weights
Terminal kill

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

Group and Sex	Animal number	Body weight (g)	Individual organ weights (g): Heart	Brain	Thymus	Testes/ Epididymides
4M	37	20.9	0.120	0.443	0.023	0.221
4M	38	18.0	0.120	0.424	0.016	0.198
4M	39	20.3	0.131	0.431	0.013	0.191
4M	40	19.9	0.120	0.432	0.026	0.200
4M	41	17.6	0.100	0.450	0.010	0.172
4M	42	21.5	0.148	0.447	0.022	0.227
4M	43	16.8	0.109	0.425	0.016	0.176
4M	44	20.4	0.126	0.458	0.021	0.204
4M	45	16.1	0.095	0.390	0.014	0.180
4M	46	19.7	0.106	0.440	0.013	0.199
4M	47	16.4	0.110	0.416	0.015	0.161
4M	48	20.4	0.113	0.431	0.023	0.194
5M	50	13.5	0.093	0.400	0.012	0.113
5M	51	17.1	0.113	0.442	0.014	0.140
5M	52	12.2	0.089	0.409	0.007	0.082
5M	53	15.1	0.105	0.421	0.010	0.110
5M	54	16.2	0.106	0.404	0.009	0.120
5M	56	13.6	0.097	0.392	0.007	0.073
5M	58	12.1	0.083	0.366	0.005	0.079
5M	59	15.0	0.106	0.380	0.010	0.135
5M	60	15.6	0.099	0.415	0.010	0.123

Appendix 9
Individual organ weights
Terminal kill

Test Article	Control	[		]	
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

Group and Sex	Animal number	Body weight (g)	Individual organ weights (g): Adrenals	Kidneys	Spleen	Liver
1F	61	23.0	0.020	0.280	0.070	0.850
1F	62	22.5	0.012	0.267	0.063	0.907
1F	63	25.1	0.012	0.294	0.074	0.971
1F	64	22.7	0.008	0.265	0.087	0.950
1F	65	26.4	0.013	0.298	0.087	1.002
1F	66	22.7	0.008	0.286	0.083	0.916
1F	67	29.5	0.009	0.272	0.070	0.846
1F	68	23.1	0.011	0.265	0.067	0.877
1F	69	22.4	0.016	0.272	0.070	0.824
1F	70	21.0	0.010	0.254	0.055	0.760
1F	71	22.3	0.012	0.256	0.047	0.742
1F	72	21.6	0.010	0.243	0.070	0.821
2F	73	24.8	0.012	0.300	0.060	0.977
2F	74	25.5	0.018	0.290	0.087	0.924
2F	75	23.5	0.011	0.271	0.082	0.903
2F	76	21.9	0.014	0.267	0.075	0.789
2F	77	23.5	0.015	0.272	0.068	0.901
2F	78	20.7	0.007	0.276	0.073	0.855
2F	79	21.9	0.014	0.263	0.056	0.900
2F	80	23.2	0.020	0.288	0.089	0.979
2F	81	19.4	0.009	0.232	0.048	0.775
2F	82	23.3	0.012	0.283	0.062	0.884
2F	83	21.5	0.012	0.273	0.063	0.894
2F	84	22.3	0.028	0.271	0.071	0.924
3F	85	21.9	0.010	0.264	0.078	0.940
3F	86	23.0	0.012	0.283	0.093	1.005
3F	87	21.5	0.010	0.273	0.066	0.981
3F	88	21.9	0.014	0.259	0.068	0.924
3F	89	20.7	0.008	0.251	0.062	0.836
3F	90	21.8	0.012	0.278	0.086	0.947
3F	91	23.4	0.008	0.290	0.086	0.929
3F	92	21.9	0.018	0.246	0.091	0.893
3F	93	21.2	0.011	0.253	0.069	0.863
3F	94	23.6	0.001	0.272	0.082	0.990
3F	95	24.3	0.016	0.284	0.069	1.121
3F	96	23.0	0.013	0.272	0.075	0.974

Appendix 9
Individual organ weights
Terminal kill

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

Group and Sex	Animal number	Body weight (g)	Individual organ weights (g): Heart	Brain	Thymus	Ovaries
1F	61	23.0	0.116	0.495	0.028	0.012
1F	62	22.5	0.115	0.467	0.034	0.015
1F	63	25.1	0.121	0.473	0.033	0.021
1F	64	22.7	0.128	0.486	0.026	0.013
1F	65	26.4	0.125	0.495	0.037	0.012
1F	66	22.7	0.119	0.486	0.043	0.034
1F	67	29.5	0.126	0.492	0.038	0.014
1F	68	23.1	0.126	0.490	0.033	0.020
1F	69	22.4	0.123	0.445	0.035	0.025
1F	70	21.0	0.110	0.488	0.026	0.012
1F	71	22.3	0.127	0.471	0.038	0.010
1F	72	21.6	0.116	0.498	0.036	0.012
2F	73	24.8	0.119	0.512	0.042	0.012
2F	74	25.5	0.142	0.456	0.039	0.029
2F	75	23.5	0.119	0.485	0.040	0.015
2F	76	21.9	0.104	0.481	0.031	0.021
2F	77	23.5	0.126	0.477	0.037	0.019
2F	78	20.7	0.129	0.489	0.029	0.011
2F	79	21.9	0.122	0.477	0.033	0.007
2F	80	23.2	0.142	0.471	0.024	0.023
2F	81	19.4	0.101	0.479	0.029	0.021
2F	82	23.3	0.140	0.492	0.033	0.015
2F	83	21.5	0.118	0.475	0.031	0.012
2F	84	22.3	0.117	0.451	0.031	0.010
3F	85	21.9	0.114	0.493	0.028	0.017
3F	86	23.0	0.119	0.483	0.032	0.020
3F	87	21.5	0.123	0.471	0.035	0.015
3F	88	21.9	0.117	0.468	0.027	0.015
3F	89	20.7	0.114	0.455	0.026	0.015
3F	90	21.8	0.124	0.473	0.038	0.018
3F	91	23.4	0.119	0.501	0.022	0.016
3F	92	21.9	0.130	0.489	0.032	0.015
3F	93	21.2	0.106	0.462	0.033	0.018
3F	94	23.6	0.114	0.484	0.032	0.015
3F	95	24.3	0.111	0.463	0.030	0.020
3F	96	23.0	0.115	0.455	0.030	0.018

Appendix 9
Individual organ weights
Terminal kill

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

Group and Sex	Animal number	Body weight (g)	Individual organ weights (g): Adrenals	Kidneys	Spleen	Liver
4F	97	16.2	0.010	0.215	0.041	1.183
4F	98	15.7	0.008	0.186	0.043	1.081
4F	99	15.5	0.006	0.206	0.037	1.109
4F	100	15.0	0.011	0.203	0.043	1.042
4F	101	17.2	0.010	0.221	0.047	1.247
4F	102	16.6	0.009	0.223	0.040	1.178
4F	103	15.7	0.006	0.224	0.030	1.196
4F	104	15.7	0.014	0.214	0.040	1.066
4F	105	16.3	0.008	0.200	0.042	1.111
4F	106	15.4	0.005	0.238	0.039	1.196
4F	107	13.5	0.005	0.206	0.033	0.902
4F	108	14.4	0.008	0.218	0.015	0.971
5F	109	16.1	0.007	0.242	0.043	1.486
5F	110	14.3	0.003	0.229	0.023	1.117
5F	111	14.3	0.006	0.220	0.039	1.156
5F	112	13.5	0.010	0.223	0.045	1.086
5F	113	13.5	0.006	0.193	0.024	1.085
5F	114	14.1	0.010	0.235	0.045	1.110
5F	115	11.9	0.007	0.182	0.005	0.894
5F	116	12.8	0.006	0.198	0.034	0.957
5F	117	12.9	0.009	0.183	0.019	0.831
5F	118	13.8	0.006	0.266	0.034	1.038
5F	119	13.2	0.009	0.204	0.024	0.909
5F	120	13.5	0.008	0.217	0.023	0.926

Appendix 9
Individual organ weights
Terminal kill

Test Article	Control		[	]	
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

Group and Sex	Animal number	Body weight (g)	Individual organ weights (g): Heart	Brain	Thymus	Ovaries
4F	97	16.2	0.104	0.387	0.020	0.012
4F	98	15.7	0.094	0.418	0.033	0.007
4F	99	15.5	0.090	0.439	0.028	0.004
4F	100	15.0	0.080	0.403	0.016	0.013
4F	101	17.2	0.097	0.418	0.023	0.006
4F	102	16.6	0.112	0.439	0.021	0.008
4F	103	15.7	0.084	0.443	0.025	0.005
4F	104	15.7	0.116	0.400	0.014	0.012
4F	105	16.3	0.099	0.412	0.024	0.004
4F	106	15.4	0.091	0.418	0.014	0.004
4F	107	13.5	0.085	0.367	0.018	0.007
4F	108	14.4	0.067	0.399	0.010	0.007
5F	109	16.1	0.103	0.418	0.016	0.009
5F	110	14.3	0.088	0.402	0.004	0.010
5F	111	14.3	0.096	0.400	0.009	0.007
5F	112	13.5	0.106	0.404	0.016	0.007
5F	113	13.5	0.093	0.396	0.009	0.002
5F	114	14.1	0.097	0.411	0.016	0.008
5F	115	11.9	0.088	0.388	0.011	0.006
5F	116	12.8	0.083	0.398	0.012	0.009
5F	117	12.9	0.076	0.336	0.012	0.011
5F	118	13.8	0.093	0.409	0.011	0.007
5F	119	13.2	0.092	0.384	0.014	0.009
5F	120	13.5	0.090	0.405	0.015	0.005

Appendix 9
Individual organ weights
Decedent animals

Test Article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000

Group and Sex	Animal number	Body weight (g)	Individual organ weights (g): Adrenals	Kidneys	Spleen	Liver
5M	49	13.4	0.005	0.228	0.016	0.960
5M	55	14.0	0.006	0.228	0.020	1.144
5M	57	12.4	0.006	0.208	0.016	0.838

Group and Sex	Animal number	Body weight (g)	Individual organ weights (g): Heart	Brain	Thymus	Testes/ Epididymides
5M	49	13.4	0.071	0.392	0.007	0.123
5M	55	14.0	0.091	0.413	0.013	0.122
5M	57	12.4	0.086	0.411	0.010	0.107

Appendix 10
Individual animal pathology data

Test article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

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HARROGATE, ENGLAND

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DRAFT

STUDY NUMBER: 0535103

ANIMAL NUMBER: 000001 SEX: MALE DOSE GROUP: 1 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/08/03 STUDY DAY OF DEATH: 95 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 28.8 GRAMS

OBSERVATIONS

NECROPSY

ANIMAL :
-NOT REMARKABLE

HISTOPATHOLOGY

KIDNEY :
-INFLAMMATORY CELL FOCI,-MINIMAL

EPIDIDYMIS :
-INFLAMMATORY CELL FOCI,-MINIMAL

SALIVARY GLAND :
-INFLAMMATORY CELL FOCI,-MINIMAL

THYMUS :
-CYST,-PRESENT

PARATHYROID :
>UNREMARKABLE
>NOTE:>ONE SAMPLE.

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
EYE, OPTIC NERVE, HARDERIAN GLAND, SKIN + SUBCUTIS, MUSCLE, FEMUR + MARROW, STERNUM + MARROW, SCIATIC NERVE, LIVER, SPLEEN, PANCREAS, MESENTERIC LN, STOMACH, DUODENUM, JEJUNUM, ILEUM, CAECUM, COLON, RECTUM, GALL BLADDER, ADRENAL, TESTIS, SEMINAL VESICLE, URINARY BLADDER, PROSTATE, MANDIBULAR LN, LUNG, HEART, AORTA, TRACHEA, OESOPHAGUS, THYROID, PITUITARY, BRAIN, SPINAL CORD

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Appendix 10

Individual animal pathology data

Test article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

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HARROGATE, ENGLAND

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DRAFT

STUDY NUMBER: 0535103

ANIMAL NUMBER: 000002 SEX: MALE DOSE GROUP: 1 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/08/03 STUDY DAY OF DEATH: 95 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 25.7 GRAMS

O B S E R V A T I O N S

NECROPSY	HISTOPATHOLOGY
ANIMAL : -NOT REMARKABLE	OPTIC NERVE : >UNREMARKABLE >NOTE:>ONE SAMPLE.

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
EYE, HARDERIAN GLAND, SKIN + SUBCUTIS, MUSCLE, FEMUR + MARROW, STERNUM + MARROW, SCIATIC NERVE, LIVER, SPLEEN, PANCREAS, MESENTERIC LN, STOMACH, DUODENUM, JEJUNUM, ILEUM, CAECUM, COLON, RECTUM, GALL BLADDER, ADRENAL, KIDNEY, TESTIS, EPIDIDYMIS, SEMINAL VESICLE, URINARY BLADDER, PROSTATE, SALIVARY GLAND, MANDIBULAR LN, THYMUS, LUNG, HEART, AORTA, TRACHEA, OESOPHAGUS, THYROID, PARATHYROID, PITUITARY, BRAIN, SPINAL CORD

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Appendix 10

Individual animal pathology data

Test article	Control			[	]
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

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DRAFT

STUDY NUMBER: 0535103

ANIMAL NUMBER: 000003 SEX: MALE DOSE GROUP: 1 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/08/03 STUDY DAY OF DEATH: 95 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 28.6 GRAMS

O B S E R V A T I O N S

NECROPSY

ANIMAL :
-NOT REMARKABLE

HISTOPATHOLOGY

URINARY BLADDER :
-INFLAMMATORY CELL FOCI,-MINIMAL

THYMUS :
-CYST,-PRESENT

PARATHYROID :
-ECTOPIC THYMUS,-PRESENT
>NOTE:>ONE SAMPLE.

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
EYE, OPTIC NERVE, HARDERIAN GLAND, SKIN + SUBCUTIS, MUSCLE, FEMUR + MARROW, STERNUM + MARROW, SCIATIC NERVE, LIVER, SPLEEN, PANCREAS, MESENTERIC LN, STOMACH, DUODENUM, JEJUNUM, ILEUM, CAECUM, COLON, RECTUM, GALL BLADDER, ADRENAL, KIDNEY, TESTIS, EPIDIDYMIS, SEMINAL VESICLE, PROSTATE, SALIVARY GLAND, MANDIBULAR LN, LUNG, HEART, AORTA, TRACHEA, OESOPHAGUS, THYROID, PITUITARY, BRAIN, SPINAL CORD

Appendix 10

Individual animal pathology data

Test article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

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DRAFT

STUDY NUMBER: 0535103

ANIMAL NUMBER: 000004 SEX: MALE DOSE GROUP: 1 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/08/03 STUDY DAY OF DEATH: 95 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 28.0 GRAMS

OBSERVATIONS

NECROPSY	HISTOPATHOLOGY
ANIMAL : -NOT REMARKABLE	STOMACH : -EROSION/ULCER,-MINIMAL SALIVARY GLAND : -DEGRANULATION/ATROPHY,-MINIMAL THYMUS : -CYST,-PRESENT PARATHYROID : >UNREMARKABLE >NOTE:>ONE SAMPLE.

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
EYE, OPTIC NERVE, HARDERIAN GLAND, SKIN + SUBCUTIS, MUSCLE, FEMUR + MARROW, STERNUM + MARROW, SCIATIC NERVE, LIVER, SPLEEN, PANCREAS, MESENTERIC LN, DUODENUM, JEJUNUM, ILEUM, CAECUM, COLON, RECTUM, GALL BLADDER, ADRENAL, KIDNEY, TESTIS, EPIDIDYMIS, SEMINAL VESICLE, URINARY BLADDER, PROSTATE, MANDIBULAR LN, LUNG, HEART, AORTA, TRACHEA, OESOPHAGUS, THYROID, PITUITARY, BRAIN, SPINAL CORD

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Appendix 10

Individual animal pathology data

Test article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

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DRAFT

STUDY NUMBER: 0535103

ANIMAL NUMBER: 000005 SEX: MALE DOSE GROUP: 1 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/08/03 STUDY DAY OF DEATH: 95 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 28.2 GRAMS

O B S E R V A T I O N S

NECROPSY

ANIMAL :
-NOT REMARKABLE

HISTOPATHOLOGY

LIVER :
-INFLAMMATORY CELL FOCI,-MINIMAL

CAECUM :
-BARBITURATE LYSIS,-PRESENT

ADRENAL :
-SUBCAPSULAR CELL HYPERPLASIA,-MINIMAL

PARATHYROID :
>UNREMARKABLE
>NOTE:>ONE SAMPLE.

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
EYE, OPTIC NERVE, HARDERIAN GLAND, SKIN + SUBCUTIS, MUSCLE, FEMUR + MARROW, STERNUM + MARROW, SCIATIC NERVE, SPLEEN, PANCREAS, MESENTERIC LN, STOMACH, DUODENUM, JEJUNUM, ILEUM, COLON, RECTUM, GALL BLADDER, KIDNEY, TESTIS, EPIDIDYMIS, SEMINAL VESICLE, URINARY BLADDER, PROSTATE, SALIVARY GLAND, MANDIBULAR LN, THYMUS, LUNG, HEART, AORTA, TRACHEA, OESOPHAGUS, THYROID, PITUITARY, BRAIN, SPINAL CORD

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Appendix 10

Individual animal pathology data

Test article	Control				[ ]
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

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HARROGATE, ENGLAND

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STUDY NUMBER: 0535103

ANIMAL NUMBER: 000006 SEX: MALE DOSE GROUP: 1 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/08/03 STUDY DAY OF DEATH: 95 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 28.1 GRAMS

OBSERVATIONS

NECROPSY	HISTOPATHOLOGY
ANIMAL : -NOT REMARKABLE	LIVER : -INFLAMMATORY CELL FOCI,-MINIMAL KIDNEY : -PAPILLARY MINERALISATION,-MINIMAL

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
EYE, OPTIC NERVE, HARDERIAN GLAND, SKIN + SUBCUTIS, MUSCLE, FEMUR + MARROW, STERNUM + MARROW, SCIATIC NERVE, SPLEEN, PANCREAS, MESENTERIC LN, STOMACH, DUODENUM, JEJUNUM, ILEUM, CAECUM, COLON, RECTUM, GALL BLADDER, ADRENAL, TESTIS, EPIDIDYMIS, SEMINAL VESICLE, URINARY BLADDER, PROSTATE, SALIVARY GLAND, MANDIBULAR LN, THYMUS, LUNG, HEART, AORTA, TRACHEA, OESOPHAGUS, THYROID, PARATHYROID, PITUITARY, BRAIN, SPINAL CORD

Appendix 10

Individual animal pathology data

Test article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

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DRAFT

STUDY NUMBER: 0535103

ANIMAL NUMBER: 000007 SEX: MALE DOSE GROUP: 1 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/08/03 STUDY DAY OF DEATH: 95 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 26.2 GRAMS

OBSERVATIONS

NECROPSY

ANIMAL :
-NOT REMARKABLE

HISTOPATHOLOGY

MUSCLE :
-MYOPATHY,-SLIGHT
>NOTE:>IN MUSCLE PRESENTED IN SECTION OF FEMUR.

LIVER :
-INFLAMMATORY CELL FOCI,-MINIMAL

SPLEEN :
-HAEMOPOIESIS,-MINIMAL

ADRENAL :
>UNREMARKABLE
>NOTE:>ONE MEDULLA.

THYMUS :
-CYST,-PRESENT

PARATHYROID :
>UNREMARKABLE
>NOTE:>ONE SAMPLE.

Appendix 10

Individual animal pathology data

Test article	Control				[ ]
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

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DRAFT

STUDY NUMBER: 0535103

ANIMAL NUMBER: 000007 SEX: MALE DOSE GROUP: 1 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/08/03 STUDY DAY OF DEATH: 95 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 26.2 GRAMS

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
EYE, OPTIC NERVE, HARDERIAN GLAND, SKIN + SUBCUTIS, FEMUR + MARROW, STERNUM + MARROW, SCIATIC NERVE, PANCREAS, MESENTERIC LN, STOMACH, DUODENUM, JEJUNUM, ILEUM, CAECUM, COLON, RECTUM, GALL BLADDER, KIDNEY, TESTIS, EPIDIDYMIS, SEMINAL VESICLE, URINARY BLADDER, PROSTATE, SALIVARY GLAND, MANDIBULAR LN, LUNG, HEART, AORTA, TRACHEA, OESOPHAGUS, THYROID, PITUITARY, BRAIN, SPINAL CORD

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Individual animal pathology data

Test article	Control				[	]
Group	1	2	3	4	5	
Level (ppm)	0	500	1000	5000	10000/7500	

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DRAFT

STUDY NUMBER: 0535103

ANIMAL NUMBER: 000008 SEX: MALE DOSE GROUP: 1 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/08/03 STUDY DAY OF DEATH: 95 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 26.4 GRAMS

OBSERVATIONS

NECROPSY

ANIMAL :
-NOT REMARKABLE

HISTOPATHOLOGY

LIVER :
-INFLAMMATORY CELL FOCI,-MINIMAL

KIDNEY :
-INFLAMMATORY CELL FOCI,-MINIMAL

PARATHYROID :
>UNREMARKABLE
>NOTE:>ONE SAMPLE.

PITUITARY :
>TISSUE MISSING

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
EYE, OPTIC NERVE, HARDERIAN GLAND, SKIN + SUBCUTIS, MUSCLE, FEMUR + MARROW, STERNUM + MARROW, SCIATIC NERVE, SPLEEN, PANCREAS, MESENTERIC LN, STOMACH, DUODENUM, JEJUNUM, ILEUM, CAECUM, COLON, RECTUM, GALL BLADDER, ADRENAL, TESTIS, EPIDIDYMIS, SEMINAL VESICLE, URINARY BLADDER, PROSTATE, SALIVARY GLAND, MANDIBULAR LN, THYMUS, LUNG, HEART, AORTA, TRACHEA, OESOPHAGUS, THYROID, BRAIN, SPINAL CORD

Appendix 10

Individual animal pathology data

Test article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

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DRAFT

STUDY NUMBER: 0535103

ANIMAL NUMBER: 000009 SEX: MALE DOSE GROUP: 1 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/08/03 STUDY DAY OF DEATH: 95 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 26.3 GRAMS

OBSERVATIONS

NECROPSY	HISTOPATHOLOGY
ANIMAL : -NOT REMARKABLE	LIVER : -INFLAMMATORY CELL FOCI,-MINIMAL ADRENAL : -SUBCAPSULAR CELL HYPERPLASIA,-MINIMAL KIDNEY : -CORTICAL TUBULAR NEPHROPATHY,-MINIMAL -PAPILLARY MINERALISATION,-MINIMAL PARATHYROID : >UNREMARKABLE >NOTE:>ONE SAMPLE.

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
EYE, OPTIC NERVE, HARDERIAN GLAND, SKIN + SUBCUTIS, MUSCLE, FEMUR + MARROW, STERNUM + MARROW, SCIATIC NERVE, SPLEEN, PANCREAS, MESENTERIC LN, STOMACH, DUODENUM, JEJUNUM, ILEUM, CAECUM, COLON, RECTUM, GALL BLADDER, TESTIS, EPIDIDYMIS, SEMINAL VESICLE, URINARY BLADDER, PROSTATE, SALIVARY GLAND, MANDIBULAR LN, THYMUS, LUNG, HEART, AORTA, TRACHEA, OESOPHAGUS, THYROID, PITUITARY, BRAIN, SPINAL CORD

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Appendix 10

Individual animal pathology data

Test article	Control				[ ]	.
Group	1	2	3	4	5	.
Level (ppm)	0	500	1000	5000	10000/7500	.

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DRAFT STUDY NUMBER: 0535103

ANIMAL NUMBER: 000010 SEX: MALE DOSE GROUP: 1 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/08/03 STUDY DAY OF DEATH: 95 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 23.8 GRAMS

O B S E R V A T I O N S

NECROPSY	HISTOPATHOLOGY
ANIMAL : -NOT REMARKABLE	MUSCLE : -MYOPATHY,-MINIMAL FEMUR + MARROW : >UNREMARKABLE >NOTE:>IN TISSUE PRESENTED IN SECTION OF FEMUR. LIVER : -INFLAMMATORY CELL FOCI,-MINIMAL SPLEEN : -HAEMOPOIESIS,-SLIGHT ADRENAL : -SUBCAPSULAR CELL HYPERPLASIA,-MINIMAL PARATHYROID : >UNREMARKABLE >NOTE:>ONE SAMPLE.

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
EYE, OPTIC NERVE, HARDERIAN GLAND, SKIN + SUBCUTIS, STERNUM + MARROW, SCIATIC NERVE, PANCREAS, MESENTERIC LN, STOMACH, DUODENUM, JEJUNUM, ILEUM, CAECUM, COLON, RECTUM, GALL BLADDER, KIDNEY, TESTIS, EPIDIDYMIS, SEMINAL VESICLE, URINARY BLADDER, PROSTATE, SALIVARY GLAND, MANDIBULAR LN, THYMUS, LUNG, HEART, AORTA, TRACHEA, OESOPHAGUS, THYROID, PITUITARY, BRAIN, SPINAL CORD

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Individual animal pathology data

Test article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

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STUDY NUMBER: 0535103

ANIMAL NUMBER: 000011 SEX: MALE DOSE GROUP: 1 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/08/03 STUDY DAY OF DEATH: 95 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 26.3 GRAMS

OBSERVATIONS

NECROPSY	HISTOPATHOLOGY
ANIMAL : -NOT REMARKABLE	SPLEEN : -HAEMOPOIESIS,-MINIMAL STOMACH : -CYST,-PRESENT ADRENAL : -SUBCAPSULAR CELL HYPERPLASIA,-MINIMAL EPIDIDYMIS : -INFLAMMATORY CELL FOCI,-MINIMAL THYMUS : -CYST,-PRESENT

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
EYE, OPTIC NERVE, HARDERIAN GLAND, SKIN + SUBCUTIS, MUSCLE, FEMUR + MARROW, STERNUM + MARROW, SCIATIC NERVE, LIVER, PANCREAS, MESENTERIC LN, DUODENUM, JEJUNUM, ILEUM, CAECUM, COLON, RECTUM, GALL BLADDER, KIDNEY, TESTIS, SEMINAL VESICLE, URINARY BLADDER, PROSTATE, SALIVARY GLAND, MANDIBULAR LN, LUNG, HEART, AORTA, TRACHEA, OESOPHAGUS, THYROID, PARATHYROID, PITUITARY, BRAIN, SPINAL CORD

Appendix 10

Individual animal pathology data

Test article	Control		[		]	.
Group	1	2	3	4	5	.
Level (ppm)	0	500	1000	5000	10000/7500	.

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STUDY NUMBER: 0535103

ANIMAL NUMBER: 000012 SEX: MALE DOSE GROUP: 1 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/08/03 STUDY DAY OF DEATH: 95 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 24.0 GRAMS

O B S E R V A T I O N S

NECROPSY	HISTOPATHOLOGY
ANIMAL : -NOT REMARKABLE	SPLEEN : -ATROPHY,-MINIMAL STOMACH : -HYPERKERATOSIS,-MINIMAL PROSTATE : , -INFLAMMATORY CELL FOCI,-MINIMAL

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
EYE, OPTIC NERVE, HARDERIAN GLAND, SKIN + SUBCUTIS, MUSCLE, FEMUR + MARROW, STERNUM + MARROW, SCIATIC NERVE, LIVER, PANCREAS, MESENTERIC LN, DUODENUM, JEJUNUM, ILEUM, CAECUM, COLON, RECTUM, GALL BLADDER, ADRENAL, KIDNEY, TESTIS, EPIDIDYMIS, SEMINAL VESICLE, URINARY BLADDER, SALIVARY GLAND, MANDIBULAR LN, THYMUS, LUNG, HEART, AORTA, TRACHEA, OESOPHAGUS, THYROID, PARATHYROID, PITUITARY, BRAIN, SPINAL CORD

Appendix 10

Individual animal pathology data

Test article	Control		[		]	.
Group	1	2	3	4	5	.
Level (ppm)	0	500	1000	5000	10000/7500	.

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STUDY NUMBER: 0535103

ANIMAL NUMBER: 000013 SEX: MALE DOSE GROUP: 2 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/08/03 STUDY DAY OF DEATH: 95 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 25.9 GRAMS

O B S E R V A T I O N S

NECROPSY	HISTOPATHOLOGY
ANIMAL : -NOT REMARKABLE	LIVER : -INFLAMMATORY CELL FOCI,-MINIMAL SPLEEN : -HAEMOPOIESIS,-SLIGHT

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
MESENTERIC LN, KIDNEY

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Individual animal pathology data

Test article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

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STUDY NUMBER: 0535103

ANIMAL NUMBER: 000014 SEX: MALE DOSE GROUP: 2 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/08/03 STUDY DAY OF DEATH: 95 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 24.3 GRAMS

OBSERVATIONS

NECROPSY	HISTOPATHOLOGY
ANIMAL : -NOT REMARKABLE	SPLEEN : -HAEMOPOIESIS,-SLIGHT KIDNEY : -PAPILLARY MINERALISATION,-MINIMAL -INFLAMMATORY CELL FOCI,-MINIMAL

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
LIVER, MESENTERIC LN

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Individual animal pathology data

Test article	Control		[		]	.
Group	1	2	3	4	5	.
Level (ppm)	0	500	1000	5000	10000/7500	.

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STUDY NUMBER: 0535103

ANIMAL NUMBER: 000015 SEX: MALE DOSE GROUP: 2 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/08/03 STUDY DAY OF DEATH: 95 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 25.4 GRAMS

O B S E R V A T I O N S

NECROPSY	HISTOPATHOLOGY
ANIMAL : -NOT REMARKABLE	LIVER : -INFLAMMATORY CELL FOCI,-MINIMAL SPLEEN : -HAEMOPOIESIS,-MINIMAL

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
MESENTERIC LN, KIDNEY

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Individual animal pathology data

Test article	Control		[	]	.
Group	1	2	3	4	5 .
Level (ppm)	0	500	1000	5000	10000/7500 .

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STUDY NUMBER: 0535103

ANIMAL NUMBER: 000016 SEX: MALE DOSE GROUP: 2 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/08/03 STUDY DAY OF DEATH: 95 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 26.5 GRAMS

O B S E R V A T I O N S

NECROPSY	HISTOPATHOLOGY
ANIMAL : -NOT REMARKABLE	KIDNEY : -INFLAMMATORY CELL FOCI,-MINIMAL

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
LIVER, SPLEEN, MESENTERIC LN

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Individual animal pathology data

Test article	Control			[	]	.
Group	1	2	3	4	5	.
Level (ppm)	0	500	1000	5000	10000/7500	.

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STUDY NUMBER: 0535103

ANIMAL NUMBER: 000017 SEX: MALE DOSE GROUP: 2 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/08/03 STUDY DAY OF DEATH: 95 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 26.1 GRAMS

O B S E R V A T I O N S

NECROPSY	HISTOPATHOLOGY
ANIMAL : -NOT REMARKABLE	SPLEEN : -HAEMOPOIESIS,-MINIMAL

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
LIVER, MESENTERIC LN, KIDNEY

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Individual animal pathology data

Test article	Control			[	]	.
Group	1	2	3	4	5	.
Level (ppm)	0	500	1000	5000	10000/7500	.

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STUDY NUMBER: 0535103

ANIMAL NUMBER: 000018 SEX: MALE DOSE GROUP: 2 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/08/03 STUDY DAY OF DEATH: 95 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 22.7 GRAMS

O B S E R V A T I O N S

NECROPSY	HISTOPATHOLOGY
ANIMAL : -NOT REMARKABLE	LIVER : -INFLAMMATORY CELL FOCI,-MINIMAL

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
SPLEEN, MESENTERIC LN, KIDNEY

Appendix 10

Individual animal pathology data

Test article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

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STUDY NUMBER: 0535103

ANIMAL NUMBER: 000019 SEX: MALE DOSE GROUP: 2 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/08/03 STUDY DAY OF DEATH: 95 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 24.7 GRAMS

OBSERVATIONS

NECROPSY

STOMACH :
-ABNORMAL APPEARANCE; 'HOLE' 2MM DIAMETER, MUCOSAL SURFACE, FUNDUS REGION

THYMUS :
-SMALL, MODERATE; BILATERAL

HISTOPATHOLOGY

SPLEEN :
-HAEMOPOIESIS,-MINIMAL

STOMACH :
-EROSION/ULCER,-SLIGHT

THYMUS :
>UNREMARKABLE
>NOTE:>NO MICROSCOPIC CORRELATION WITH NECROPSY.

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
LIVER, MESENTERIC LN, KIDNEY

Appendix 10

Individual animal pathology data

Test article	Control			[	]	.
Group	1	2	3	4	5	.
Level (ppm)	0	500	1000	5000	10000/7500	.

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STUDY NUMBER: 0535103

ANIMAL NUMBER: 000020 SEX: MALE DOSE GROUP: 2 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/08/03 STUDY DAY OF DEATH: 95 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 23.7 GRAMS

O B S E R V A T I O N S

NECROPSY	HISTOPATHOLOGY
ANIMAL : -NOT REMARKABLE	SPLEEN : -HAEMOPOIESIS,-SLIGHT

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
LIVER, MESENTERIC LN, KIDNEY

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Individual animal pathology data

Test article	Control				[ ]
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

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STUDY NUMBER: 0535103

ANIMAL NUMBER: 000021 SEX: MALE DOSE GROUP: 2 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/08/03 STUDY DAY OF DEATH: 95 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 25.1 GRAMS

OBSERVATIONS

NECROPSY

SALIVARY GLAND :
-LARGE, SLIGHT; BILATERAL

HISTOPATHOLOGY

SPLEEN :
-HAEMOPOIESIS,-MINIMAL

KIDNEY :
-INFLAMMATORY CELL FOCI,-MINIMAL

SALIVARY GLAND :
>UNREMARKABLE
>NOTE:>NO MICROSCOPIC CORRELATION WITH NECROPSY.

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
LIVER, MESENTERIC LN

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Individual animal pathology data

Test article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

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STUDY NUMBER: 0535103

ANIMAL NUMBER: 000022 SEX: MALE DOSE GROUP: 2 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/08/03 STUDY DAY OF DEATH: 95 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 25.7 GRAMS

OBSERVATIONS

NECROPSY	HISTOPATHOLOGY
ANIMAL : -NOT REMARKABLE	LIVER : -INFLAMMATORY CELL FOCI,-MINIMAL SPLEEN : -HAEMOPOIESIS,-MINIMAL

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
MESENTERIC LN, KIDNEY

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Individual animal pathology data

	Test article	Control				[ ]
	Group	1	2	3	4	5
	Level (ppm)	0	500	1000	5000	10000/7500

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STUDY NUMBER: 0535103

ANIMAL NUMBER: 000023 SEX: MALE DOSE GROUP: 2 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/08/03 STUDY DAY OF DEATH: 95 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 24.2 GRAMS

OBSERVATIONS

NECROPSY	HISTOPATHOLOGY
ANIMAL : -NOT REMARKABLE	LIVER : -HEPATOCYTE VACUOLATION,-MINIMAL SPLEEN : -HAEMOPOIESIS,-MINIMAL

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
MESENTERIC LN, KIDNEY

Appendix 10

Individual animal pathology data

Test article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

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STUDY NUMBER: 0535103

ANIMAL NUMBER: 000024 SEX: MALE DOSE GROUP: 2 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/08/03 STUDY DAY OF DEATH: 95 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 24.5 GRAMS

OBSERVATIONS

NECROPSY	HISTOPATHOLOGY
ANIMAL : -NOT REMARKABLE	LIVER : -INFLAMMATORY CELL FOCI,-MINIMAL -HEPATOCYTE VACUOLATION,-MINIMAL

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
SPLEEN, MESENTERIC LN, KIDNEY

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Individual animal pathology data

Test article	Control		[		]	.
Group	1	2	3	4	5	.
Level (ppm)	0	500	1000	5000	10000/7500	.

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STUDY NUMBER: 0535103

ANIMAL NUMBER: 000025 SEX: MALE DOSE GROUP: 3 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/08/03 STUDY DAY OF DEATH: 95 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 23.9 GRAMS

OBSERVATIONS

NECROPSY

ANIMAL :
-NOT REMARKABLE

HISTOPATHOLOGY

MUSCLE :
-MYOPATHY,-MINIMAL
>NOTE:>IN TISSUE PROVIDED IN SECTION OF FEMUR.

LIVER :
-INFLAMMATORY CELL FOCI,-MINIMAL

SPLEEN :
-HAEMOPOIESIS,-SLIGHT

ADRENAL :
-SUBCAPSULAR CELL HYPERPLASIA,-MINIMAL

THYMUS :
-CYST,-PRESENT

PARATHYROID :
>SECTION EXAMINED; TISSUE NOT PRESENT

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
EYE, OPTIC NERVE, HARDERIAN GLAND, SKIN + SUBCUTIS, FEMUR + MARROW, STERNUM + MARROW, SCIATIC NERVE, PANCREAS, MESENTERIC LN, STOMACH, DUODENUM, JEJUNUM, ILEUM, CAECUM, COLON, RECTUM, GALL BLADDER, KIDNEY, TESTIS, EPIDIDYMIS, SEMINAL VESICLE, URINARY BLADDER, PROSTATE, SALIVARY GLAND, MANDIBULAR LN, LUNG, HEART, AORTA, TRACHEA, OESOPHAGUS, THYROID, PITUITARY, BRAIN, SPINAL CORD

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Individual animal pathology data

Test article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

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STUDY NUMBER: 0535103

ANIMAL NUMBER: 000026 SEX: MALE DOSE GROUP: 3 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/08/03 STUDY DAY OF DEATH: 95 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 24.5 GRAMS

OBSERVATIONS

NECROPSY

ANIMAL :
-NOT REMARKABLE

HISTOPATHOLOGY

LIVER :
-CENTRILOBULAR HYPERTROPHY/VACUOLATION,-MINIMAL

SPLEEN :
-HAEMOPOIESIS,-SLIGHT

STOMACH :
-HYPERKERATOSIS,-MINIMAL

GALL BLADDER :
>SECTION EXAMINED; TISSUE NOT PRESENT

ADRENAL :
-SUBCAPSULAR CELL HYPERPLASIA,-MINIMAL

KIDNEY :
-INFLAMMATORY CELL FOCI,-MINIMAL
-TRANSITIONAL CELL HYPERPLASIA,-MINIMAL, FOCAL

THYMUS :
-CYST,-PRESENT
-MINERALISATION,-MINIMAL

PARATHYROID :
>UNREMARKABLE
>NOTE:>ONE SAMPLE.

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Individual animal pathology data

Test article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

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STUDY NUMBER: 0535103

ANIMAL NUMBER: 000026 SEX: MALE DOSE GROUP: 3 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/08/03 STUDY DAY OF DEATH: 95 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 24.5 GRAMS

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
EYE, OPTIC NERVE, HARDERIAN GLAND, SKIN + SUBCUTIS, MUSCLE, FEMUR + MARROW, STERNUM + MARROW, SCIATIC NERVE, PANCREAS, MESENTERIC LN, DUODENUM, JEJUNUM, ILEUM, CAECUM, COLON, RECTUM, TESTIS, EPIDIDYMIS, SEMINAL VESICLE, URINARY BLADDER, PROSTATE, SALIVARY GLAND, MANDIBULAR LN, LUNG, HEART, AORTA, TRACHEA, OESOPHAGUS, THYROID, PITUITARY, BRAIN, SPINAL CORD

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Appendix 10

Individual animal pathology data

Test article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

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STUDY NUMBER: 0535103

ANIMAL NUMBER: 000027 SEX: MALE DOSE GROUP: 3 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/08/03 STUDY DAY OF DEATH: 95 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 26.4 GRAMS

OBSERVATIONS

NECROPSY

ANIMAL :
-NOT REMARKABLE

HISTOPATHOLOGY

OPTIC NERVE :
>UNREMARKABLE
>NOTE:>ONE SAMPLE.

LIVER :
-GLYCOGEN VACUOLATION,-MINIMAL

SPLEEN :
-HAEMOPOIESIS,-MINIMAL

ADRENAL :
-SUBCAPSULAR CELL HYPERPLASIA,-MINIMAL

PARATHYROID :
>UNREMARKABLE
>NOTE:>ONE SAMPLE.

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
EYE, HARDERIAN GLAND, SKIN + SUBCUTIS, MUSCLE, FEMUR + MARROW, STERNUM + MARROW, SCIATIC NERVE, PANCREAS, MESENTERIC LN, STOMACH, DUODENUM, JEJUNUM, ILEUM, CAECUM, COLON, RECTUM, GALL BLADDER, KIDNEY, TESTIS, EPIDIDYMIS, SEMINAL VESICLE, URINARY BLADDER, PROSTATE, SALIVARY GLAND, MANDIBULAR LN, THYMUS, LUNG, HEART, AORTA, TRACHEA, OESOPHAGUS, THYROID, PITUITARY, BRAIN, SPINAL CORD

Appendix 10

Individual animal pathology data

Test article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

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STUDY NUMBER: 0535103

ANIMAL NUMBER: 000028 SEX: MALE DOSE GROUP: 3 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/08/03 STUDY DAY OF DEATH: 95 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 28.8 GRAMS

OBSERVATIONS

NECROPSY

ANIMAL :
-NOT REMARKABLE

HISTOPATHOLOGY

LIVER :
-INFLAMMATORY CELL FOCI,-MINIMAL
-SINGLE CELL NECROSIS/APOPTOSIS,-MINIMAL
-CENTRILOBULAR HYPERTROPHY/VACUOLATION,-MINIMAL

STOMACH :
-GASTRITIS,-MINIMAL

ADRENAL :
-SUBCAPSULAR CELL HYPERPLASIA,-MINIMAL

PARATHYROID :
>SECTION EXAMINED; TISSUE NOT PRESENT

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
EYE, OPTIC NERVE, HARDERIAN GLAND, SKIN + SUBCUTIS, MUSCLE, FEMUR + MARROW, STERNUM + MARROW, SCIATIC NERVE, SPLEEN, PANCREAS, MESENTERIC LN, DUODENUM, JEJUNUM, ILEUM, CAECUM, COLON, RECTUM, GALL BLADDER, KIDNEY, TESTIS, EPIDIDYMIS, SEMINAL VESICLE, URINARY BLADDER, PROSTATE, SALIVARY GLAND, MANDIBULAR LN, THYMUS, LUNG, HEART, AORTA, TRACHEA, OESOPHAGUS, THYROID, PITUITARY, BRAIN, SPINAL CORD

Appendix 10

Individual animal pathology data

Test article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

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STUDY NUMBER: 0535103

ANIMAL NUMBER: 000029 SEX: MALE DOSE GROUP: 3 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/08/03 STUDY DAY OF DEATH: 95 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 25.0 GRAMS

OBSERVATIONS

NECROPSY	HISTOPATHOLOGY
SKIN + SUBCUTIS : -FUR LOSS, SLIGHT; FORE LEG, LEFT	SKIN + SUBCUTIS : -ADNEXAL ATROPHY,-MINIMAL >NOTE:>EXTRA SAMPLE: ONE. SPLEEN : -HAEMOPOIESIS,-MINIMAL STOMACH : -GASTRITIS,-MINIMAL ADRENAL : -SUBCAPSULAR CELL HYPERPLASIA,-MINIMAL THYMUS : -CYST,-PRESENT PARATHYROID : >UNREMARKABLE >NOTE:>ONE SAMPLE.

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
EYE, OPTIC NERVE, HARDERIAN GLAND, MUSCLE, FEMUR + MARROW, STERNUM + MARROW, SCIATIC NERVE, LIVER, PANCREAS, MESENTERIC LN, DUODENUM, JEJUNUM, ILEUM, CAECUM, COLON, RECTUM, GALL BLADDER, KIDNEY, TESTIS, EPIDIDYMIS, SEMINAL VESICLE, URINARY BLADDER, PROSTATE, SALIVARY GLAND, MANDIBULAR LN, LUNG, HEART, AORTA, TRACHEA, OESOPHAGUS, THYROID, PITUITARY, BRAIN, SPINAL CORD

Appendix 10

Individual animal pathology data

Test article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

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STUDY NUMBER: 0535103

ANIMAL NUMBER: 000030 SEX: MALE DOSE GROUP: 3 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/08/03 STUDY DAY OF DEATH: 95 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 25.6 GRAMS

OBSERVATIONS

NECROPSY

STOMACH :
-YELLOW; MUCOSAL SURFACE, PYLORUS REGION

HISTOPATHOLOGY

OPTIC NERVE :
>UNREMARKABLE
>NOTE:>ONE SAMPLE.

SCIATIC NERVE :
>UNREMARKABLE
>NOTE:>ONE SAMPLE.

LIVER :
-SINGLE CELL NECROSIS/APOPTOSIS,-MINIMAL
-CENTRILOBULAR HYPERTROPHY/VACUOLATION,-SLIGHT

SPLEEN :
-HAEMOPOIESIS,-MINIMAL

STOMACH :
-GASTRITIS,-MINIMAL
>NOTE:>OTHERWISE UNREMARKABLE.
EXTRA SAMPLE: ONE.

THYMUS :
-CYST,-PRESENT

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Individual animal pathology data

Test article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

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STUDY NUMBER: 0535103

ANIMAL NUMBER: 000030 SEX: MALE DOSE GROUP: 3 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/08/03 STUDY DAY OF DEATH: 95 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 25.6 GRAMS

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
EYE, HARDERIAN GLAND, SKIN + SUBCUTIS, MUSCLE, FEMUR + MARROW, STERNUM + MARROW, PANCREAS, MESENTERIC LN, DUODENUM, JEJUNUM, ILEUM, CAECUM, COLON, RECTUM, GALL BLADDER, ADRENAL, KIDNEY, TESTIS, EPIDIDYMIS, SEMINAL VESICLE, URINARY BLADDER, PROSTATE, SALIVARY GLAND, MANDIBULAR LN, LUNG, HEART, AORTA, TRACHEA, OESOPHAGUS, THYROID, PARATHYROID, PITUITARY, BRAIN, SPINAL CORD

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Individual animal pathology data

Test article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

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STUDY NUMBER: 0535103

ANIMAL NUMBER: 000031 SEX: MALE DOSE GROUP: 3 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/08/03 STUDY DAY OF DEATH: 95 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 24.8 GRAMS

OBSERVATIONS

NECROPSY	HISTOPATHOLOGY
ANIMAL : -NOT REMARKABLE	LIVER : -CENTRILOBULAR HYPERTROPHY/VACUOLATION,-MINIMAL ADRENAL : >UNREMARKABLE >NOTE:>ONE MEDULLA. PITUITARY : >TISSUE MISSING

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
EYE, OPTIC NERVE, HARDERIAN GLAND, SKIN + SUBCUTIS, MUSCLE, FEMUR + MARROW, STERNUM + MARROW, SCIATIC NERVE, SPLEEN, PANCREAS, MESENTERIC LN, STOMACH, DUODENUM, JEJUNUM, ILEUM, CAECUM, COLON, RECTUM, GALL BLADDER, KIDNEY, TESTIS, EPIDIDYMIS, SEMINAL VESICLE, URINARY BLADDER, PROSTATE, SALIVARY GLAND, MANDIBULAR LN, THYMUS, LUNG, HEART, AORTA, TRACHEA, OESOPHAGUS, THYROID, PARATHYROID, BRAIN, SPINAL CORD

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Individual animal pathology data

Test article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

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STUDY NUMBER: 0535103

ANIMAL NUMBER: 000032 SEX: MALE DOSE GROUP: 3 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/08/03 STUDY DAY OF DEATH: 95 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 25.9 GRAMS

OBSERVATIONS

NECROPSY

SKIN + SUBCUTIS :
-FUR LOSS, SLIGHT; ON HEAD

HISTOPATHOLOGY

OPTIC NERVE :
>UNREMARKABLE
>NOTE:>ONE SAMPLE.

SKIN + SUBCUTIS :
-ADNEXAL ATROPHY,-MINIMAL
>NOTE:>EXTRA SAMPLE: ONE.

LIVER :
-INFLAMMATORY CELL FOCI,-MINIMAL
-CENTRILOBULAR HYPERTROPHY/VACUOLATION,-MINIMAL

SPLEEN :
-HAEMOPOIESIS,-MINIMAL

MESENTERIC LN :
>SECTION EXAMINED; TISSUE NOT PRESENT

STOMACH :
-GASTRITIS,-MINIMAL

KIDNEY :
>UNREMARKABLE
>NOTE:>ONE SAMPLE.

SALIVARY GLAND :
-INFLAMMATORY CELL FOCI,-MINIMAL

HEART :
-INFLAMMATORY CELL FOCI,-MINIMAL

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Individual animal pathology data

Test article	Control			[	]	.
Group	1	2	3	4	5	.
Level (ppm)	0	500	1000	5000	10000/7500	.

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STUDY NUMBER: 0535103

ANIMAL NUMBER: 000032 SEX: MALE DOSE GROUP: 3 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/08/03 STUDY DAY OF DEATH: 95 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 25.9 GRAMS

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
EYE, HARDERIAN GLAND, MUSCLE, FEMUR + MARROW, STERNUM + MARROW, SCIATIC NERVE, PANCREAS, DUODENUM, JEJUNUM, ILEUM, CAECUM, COLON, RECTUM, GALL BLADDER, ADRENAL, TESTIS, EPIDIDYMIS, SEMINAL VESICLE, URINARY BLADDER, PROSTATE, MANDIBULAR LN, THYMUS, LUNG, AORTA, TRACHEA, OESOPHAGUS, THYROID, PARATHYROID, PITUITARY, BRAIN, SPINAL CORD

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Individual animal pathology data

Test article	Control		[		]	.
Group	1	2	3	4	5	.
Level (ppm)	0	500	1000	5000	10000/7500	.

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STUDY NUMBER: 0535103

ANIMAL NUMBER: 000033 SEX: MALE DOSE GROUP: 3 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/08/03 STUDY DAY OF DEATH: 95 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 27.5 GRAMS

O B S E R V A T I O N S

NECROPSY	HISTOPATHOLOGY
ANIMAL : -NOT REMARKABLE	SPLEEN : -HAEMOPOIESIS,-MINIMAL KIDNEY : -CORTICAL TUBULAR NEPHROPATHY,-MINIMAL URINARY BLADDER : -INFLAMMATORY CELL FOCI,-MINIMAL

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
EYE, OPTIC NERVE, HARDERIAN GLAND, SKIN + SUBCUTIS, MUSCLE, FEMUR + MARROW, STERNUM + MARROW, SCIATIC NERVE, LIVER, PANCREAS, MESENTERIC LN, STOMACH, DUODENUM, JEJUNUM, ILEUM, CAECUM, COLON, RECTUM, GALL BLADDER, ADRENAL, TESTIS, EPIDIDYMIS, SEMINAL VESICLE, PROSTATE, SALIVARY GLAND, MANDIBULAR LN, THYMUS, LUNG, HEART, AORTA, TRACHEA, OESOPHAGUS, THYROID, PARATHYROID, PITUITARY, BRAIN, SPINAL CORD

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Individual animal pathology data

Test article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

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STUDY NUMBER: 0535103

ANIMAL NUMBER: 000034 SEX: MALE DOSE GROUP: 3 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/08/03 STUDY DAY OF DEATH: 95 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 25.2 GRAMS

OBSERVATIONS

NECROPSY

ANIMAL :
-NOT REMARKABLE

HISTOPATHOLOGY

LIVER :
-HEPATOCYTE VACUOLATION,-MINIMAL

SPLEEN :
-HAEMOPOIESIS,-SLIGHT

KIDNEY :
-INFLAMMATORY CELL FOCI,-MINIMAL

URINARY BLADDER :
-INFLAMMATORY CELL FOCI,-MINIMAL

PARATHYROID :
>UNREMARKABLE
>NOTE:>ONE SAMPLE.

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
EYE, OPTIC NERVE, HARDERIAN GLAND, SKIN + SUBCUTIS, MUSCLE, FEMUR + MARROW, STERNUM + MARROW, SCIATIC NERVE, PANCREAS, MESENTERIC LN, STOMACH, DUODENUM, JEJUNUM, ILEUM, CAECUM, COLON, RECTUM, GALL BLADDER, ADRENAL, TESTIS, EPIDIDYMIS, SEMINAL VESICLE, PROSTATE, SALIVARY GLAND, MANDIBULAR LN, THYMUS, LUNG, HEART, AORTA, TRACHEA, OESOPHAGUS, THYROID, PITUITARY, BRAIN, SPINAL CORD

Appendix 10

Individual animal pathology data

	Test article	Control				[ ]
	Group	1	2	3	4	5
	Level (ppm)	0	500	1000	5000	10000/7500

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STUDY NUMBER: 0535103

ANIMAL NUMBER: 000035 SEX: MALE DOSE GROUP: 3 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/08/03 STUDY DAY OF DEATH: 95 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 25.4 GRAMS

OBSERVATIONS

NECROPSY	HISTOPATHOLOGY
ANIMAL : -NOT REMARKABLE	KIDNEY : -INFLAMMATORY CELL FOCI,-MINIMAL URINARY BLADDER : -INFLAMMATORY CELL FOCI,-MINIMAL SALIVARY GLAND : -INFLAMMATORY CELL FOCI,-MINIMAL PARATHYROID : >SECTION EXAMINED; TISSUE NOT PRESENT

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
EYE, OPTIC NERVE, HARDERIAN GLAND, SKIN + SUBCUTIS, MUSCLE, FEMUR + MARROW, STERNUM + MARROW, SCIATIC NERVE, LIVER, SPLEEN, PANCREAS, MESENTERIC LN, STOMACH, DUODENUM, JEJUNUM, ILEUM, CAECUM, COLON, RECTUM, GALL BLADDER, ADRENAL, TESTIS, EPIDIDYMIS, SEMINAL VESICLE, PROSTATE, MANDIBULAR LN, THYMUS, LUNG, HEART, AORTA, TRACHEA, OESOPHAGUS, THYROID, PITUITARY, BRAIN, SPINAL CORD

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Individual animal pathology data

	Test article	Control				[ ]
	Group	1	2	3	4	5
	Level (ppm)	0	500	1000	5000	10000/7500

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STUDY NUMBER: 0535103

ANIMAL NUMBER: 000036 SEX: MALE DOSE GROUP: 3 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/08/03 STUDY DAY OF DEATH: 95 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 28.5 GRAMS

OBSERVATIONS

NECROPSY	HISTOPATHOLOGY
ANIMAL : -NOT REMARKABLE	LIVER : -INFLAMMATORY CELL FOCI,-MINIMAL -CENTRILOBULAR HYPERTROPHY/VACUOLATION,-MINIMAL SALIVARY GLAND : -DEGRANULATION/ATROPHY,-SLIGHT PARATHYROID : >UNREMARKABLE >NOTE:>ONE SAMPLE.

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
EYE, OPTIC NERVE, HARDERIAN GLAND, SKIN + SUBCUTIS, MUSCLE, FEMUR + MARROW, STERNUM + MARROW, SCIATIC NERVE, SPLEEN, PANCREAS, MESENTERIC LN, STOMACH, DUODENUM, JEJUNUM, ILEUM, CAECUM, COLON, RECTUM, GALL BLADDER, ADRENAL, KIDNEY, TESTIS, EPIDIDYMIS, SEMINAL VESICLE, URINARY BLADDER, PROSTATE, MANDIBULAR LN, THYMUS, LUNG, HEART, AORTA, TRACHEA, OESOPHAGUS, THYROID, PITUITARY, BRAIN, SPINAL CORD

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Individual animal pathology data

Test article	Control		[	]	.
Group	1	2	3	4	5 .
Level (ppm)	0	500	1000	5000	10000/7500 .

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STUDY NUMBER: 0535103

ANIMAL NUMBER: 000037 SEX: MALE DOSE GROUP: 4 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/08/03 STUDY DAY OF DEATH: 95 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 20.9 GRAMS

OBSERVATIONS

NECROPSY

ANIMAL :
-NOT REMARKABLE

HISTOPATHOLOGY

SKIN + SUBCUTIS :
-ADNEXAL ATROPHY,-MINIMAL

MUSCLE :
-ATROPHY,-MINIMAL

LIVER :
-GLYCOGEN VACUOLATION,-SLIGHT
-CENTRILOBULAR HYPERTROPHY/VACUOLATION,-SLIGHT

SPLEEN :
-HAEMOPOIESIS,-SLIGHT

STOMACH :
-HYPERKERATOSIS,-SLIGHT

KIDNEY :
-CORTICAL TUBULAR NEPHROPATHY,-SLIGHT
-PAPILLARY MINERALISATION,-MINIMAL

TESTIS :
-TUBULAR ATROPHY,-SLIGHT

EPIDIDYMIS :
-CELLULAR DEBRIS,-MINIMAL

THYMUS :
-CYST,-PRESENT
-ECTOPIC PARATHYROID,-PRESENT

Appendix 10

Individual animal pathology data

Test article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

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STUDY NUMBER: 0535103

ANIMAL NUMBER: 000037 SEX: MALE DOSE GROUP: 4 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/08/03 STUDY DAY OF DEATH: 95 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 20.9 GRAMS

OBSERVATIONS (CONTINUED)

NECROPSY	HISTOPATHOLOGY
	HEART : -MYOCARDIAL DEGENERATION/FIBROSIS,-MINIMAL
	PARATHYROID : >UNREMARKABLE >NOTE:>ONE SAMPLE.
	ADIPOSE TISSUE : -ATROPHY,-MINIMAL

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
EYE, OPTIC NERVE, HARDERIAN GLAND, FEMUR + MARROW, STERNUM + MARROW, SCIATIC NERVE, PANCREAS, MESENTERIC LN, DUODENUM, JEJUNUM, ILEUM, CAECUM, COLON, RECTUM, GALL BLADDER, ADRENAL, SEMINAL VESICLE, URINARY BLADDER, PROSTATE, SALIVARY GLAND, MANDIBULAR LN, LUNG, AORTA, TRACHEA, OESOPHAGUS, THYROID, PITUITARY, BRAIN, SPINAL CORD

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Individual animal pathology data

Test article	Control	[			]	.
Group	1	2	3	4	5	.
Level (ppm)	0	500	1000	5000	10000/7500	.

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STUDY NUMBER: 0535103

ANIMAL NUMBER: 000038 SEX: MALE DOSE GROUP: 4 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/08/03 STUDY DAY OF DEATH: 95 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 18.0 GRAMS

OBSERVATIONS

NECROPSY

THYMUS :
-DARK AREA; 4 X 1MM, LEFT

HISTOPATHOLOGY

SKIN + SUBCUTIS :
-ADNEXAL ATROPHY,-MINIMAL

LIVER :
-GLYCOGEN VACUOLATION,-SLIGHT
-CENTRILOBULAR HYPERTROPHY/VACUOLATION,-MODERATE

SPLEEN :
-ATROPHY,-MINIMAL
-HAEMOPOIESIS,-MODERATE

MESENTERIC LN :
-ATROPHY,-MINIMAL

KIDNEY :
-CORTICAL TUBULAR NEPHROPATHY,-MODERATE

TESTIS :
-TUBULAR ATROPHY,-MINIMAL

THYMUS :
-AGONAL CONGESTION/HAEMORRHAGE,-PRESENT

PARATHYROID :
>SECTION EXAMINED; TISSUE NOT PRESENT

ADIPOSE TISSUE :
-ATROPHY,-MINIMAL

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Individual animal pathology data

	Test article	Control				[ ]
	Group	1	2	3	4	5
	Level (ppm)	0	500	1000	5000	10000/7500

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STUDY NUMBER: 0535103

ANIMAL NUMBER: 000038 SEX: MALE DOSE GROUP: 4 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/08/03 STUDY DAY OF DEATH: 95 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 18.0 GRAMS

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
EYE, OPTIC NERVE, HARDERIAN GLAND, MUSCLE, FEMUR + MARROW, STERNUM + MARROW, SCIATIC NERVE, PANCREAS, STOMACH, DUODENUM, JEJUNUM, ILEUM, CAECUM, COLON, RECTUM, GALL BLADDER, ADRENAL, EPIDIDYMIS, SEMINAL VESICLE, URINARY BLADDER, PROSTATE, SALIVARY GLAND, MANDIBULAR LN, LUNG, HEART, AORTA, TRACHEA, OESOPHAGUS, THYROID, PITUITARY, BRAIN, SPINAL CORD

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Individual animal pathology data

Test article	Control				[ ]
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

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STUDY NUMBER: 0535103

ANIMAL NUMBER: 000039 SEX: MALE DOSE GROUP: 4 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/08/03 STUDY DAY OF DEATH: 95 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 20.3 GRAMS

OBSERVATIONS

NECROPSY

URINARY BLADDER :
-DISTENSION, SLIGHT

HISTOPATHOLOGY

HARDERIAN GLAND :
-ATROPHY,-MINIMAL

MUSCLE :
-ATROPHY,-MINIMAL

LIVER :
-GLYCOGEN VACUOLATION,-MODERATE
-CENTRILOBULAR HYPERTROPHY/VACUOLATION,-MODERATE

SPLEEN :
-HAEMOPOIESIS,-SLIGHT

STOMACH :
-HYPERKERATOSIS,-MINIMAL

KIDNEY :
-CORTICAL TUBULAR NEPHROPATHY,-MODERATE

TESTIS :
-TUBULAR ATROPHY,-MINIMAL

EPIDIDYMIS :
-CELLULAR DEBRIS,-MINIMAL

URINARY BLADDER :
-BARBITURATE LYSIS,-PRESENT

HEART :
-MYOCARDIAL DEGENERATION/FIBROSIS,-SLIGHT

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Appendix 10

Individual animal pathology data

	Test article	Control				[ ]
	Group	1	2	3	4	5
COVANCE	Level (ppm)	0	500	1000	5000	10000/7500

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DRAFT

STUDY NUMBER: 0535103

ANIMAL NUMBER: 000039 SEX: MALE DOSE GROUP: 4 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/08/03 STUDY DAY OF DEATH: 95 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 20.3 GRAMS

OBSERVATIONS (CONTINUED)

NECROPSY

HISTOPATHOLOGY

PARATHYROID :
>SECTION EXAMINED; TISSUE NOT PRESENT

ADIPOSE TISSUE :
-ATROPHY,-MINIMAL

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
EYE, OPTIC NERVE, SKIN + SUBCUTIS, FEMUR + MARROW, STERNUM + MARROW, SCIATIC NERVE, PANCREAS, MESENTERIC LN, DUODENUM, JEJUNUM, ILEUM, CAECUM, COLON, RECTUM, GALL BLADDER, ADRENAL, SEMINAL VESICLE, PROSTATE, SALIVARY GLAND, MANDIBULAR LN, THYMUS, LUNG, AORTA, TRACHEA, OESOPHAGUS, THYROID, PITUITARY, BRAIN, SPINAL CORD

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Appendix 10

Individual animal pathology data

Test article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

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DRAFT

STUDY NUMBER: 0535103

ANIMAL NUMBER: 000040 SEX: MALE DOSE GROUP: 4 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/08/03 STUDY DAY OF DEATH: 95 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 19.9 GRAMS

OBSERVATIONS

NECROPSY

LIVER :
-LARGE, SLIGHT; ALL LOBES
-PALE, SLIGHT; ALL LOBES

HISTOPATHOLOGY

FEMUR + MARROW :
-OSTEOCHONDRAL ATROPHY,-MINIMAL

LIVER :
-GLYCOGEN VACUOLATION,-SLIGHT
-CENTRILOBULAR HYPERTROPHY/VACUOLATION,-SLIGHT

SPLEEN :
-HAEMOPOIESIS,-SLIGHT

KIDNEY :
-CORTICAL TUBULAR NEPHROPATHY,-MODERATE

TESTIS :
-TUBULAR ATROPHY,-MINIMAL

THYMUS :
-CYST,-PRESENT

HEART :
-MYOCARDIAL DEGENERATION/FIBROSIS,-MINIMAL

PARATHYROID :
>SECTION EXAMINED; TISSUE NOT PRESENT

PITUITARY :
>SECTION EXAMINED; TISSUE NOT PRESENT

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Appendix 10

Individual animal pathology data

	Test article	Control		[		]
	Group	1	2	3	4	5
	Level (ppm)	0	500	1000	5000	10000/7500

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DRAFT

STUDY NUMBER: 0535103

ANIMAL NUMBER: 000040 SEX: MALE DOSE GROUP: 4 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/08/03 STUDY DAY OF DEATH: 95 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 19.9 GRAMS

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
EYE, OPTIC NERVE, HARDERIAN GLAND, SKIN + SUBCUTIS, MUSCLE, STERNUM + MARROW, SCIATIC NERVE, PANCREAS, MESENTERIC LN, STOMACH, DUODENUM, JEJUNUM, ILEUM, CAECUM, COLON, RECTUM, GALL BLADDER, ADRENAL, EPIDIDYMIS, SEMINAL VESICLE, URINARY BLADDER, PROSTATE, SALIVARY GLAND, MANDIBULAR LN, LUNG, AORTA, TRACHEA, OESOPHAGUS, THYROID, BRAIN, SPINAL CORD, ADIPOSE TISSUE

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Appendix 10

Individual animal pathology data

Test article	Control			[	]	.
Group	1	2	3	4	5	.
Level (ppm)	0	500	1000	5000	10000/7500	.

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STUDY NUMBER: 0535103

ANIMAL NUMBER: 000041 SEX: MALE DOSE GROUP: 4 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/08/03 STUDY DAY OF DEATH: 95 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 17.6 GRAMS

OBSERVATIONS

NECROPSY

LUNG :
-RED, SLIGHT; ALL LOBES

HISTOPATHOLOGY

HARDERIAN GLAND :
-ATROPHY,-SLIGHT

MUSCLE :
-ATROPHY,-MINIMAL

LIVER :
-GLYCOGEN VACUOLATION,-MINIMAL
-CENTRILOBULAR HYPERTROPHY/VACUOLATION,-MODERATE

SPLEEN :
-ATROPHY,-SLIGHT
-HAEMOPOIESIS,-MINIMAL

MESENTERIC LN :
-ATROPHY,-MINIMAL

GALL BLADDER :
>TISSUE MISSING

KIDNEY :
-CORTICAL TUBULAR NEPHROPATHY,-SLIGHT

TESTIS :
-TUBULAR ATROPHY,-SLIGHT

SEMINAL VESICLE :
-ATROPHY,-MINIMAL

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Appendix 10

Individual animal pathology data

	Test article	Control				[ ]
	Group	1	2	3	4	5
	Level (ppm)	0	500	1000	5000	10000/7500

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DRAFT

STUDY NUMBER: 0535103

ANIMAL NUMBER: 000041 SEX: MALE DOSE GROUP: 4 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/08/03 STUDY DAY OF DEATH: 95 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 17.6 GRAMS

O B S E R V A T I O N S (CONTINUED)

NECROPSY	HISTOPATHOLOGY
	THYMUS : -ATROPHY,-MINIMAL
	LUNG : -AGONAL CONGESTION/HAEMORRHAGE,-PRESENT >NOTE:>EXTRA SAMPLES: TWO.
	HEART : -MYOCARDIAL DEGENERATION/FIBROSIS,-SLIGHT
	PARATHYROID : -ECTOPIC THYMUS,-PRESENT
	ADIPOSE TISSUE : -ATROPHY,-MINIMAL

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
EYE, OPTIC NERVE, SKIN + SUBCUTIS, FEMUR + MARROW, STERNUM + MARROW, SCIATIC NERVE, PANCREAS, STOMACH, DUODENUM, JEJUNUM, ILEUM, CAECUM, COLON, RECTUM, ADRENAL, EPIDIDYMIS, URINARY BLADDER, PROSTATE, SALIVARY GLAND, MANDIBULAR LN, AORTA, TRACHEA, OESOPHAGUS, THYROID, PITUITARY, BRAIN, SPINAL CORD

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Individual animal pathology data

	Test article	Control			[	]	
	Group	1	2	3	4	5	
	Level (ppm)	0	500	1000	5000	10000/7500	

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DRAFT

STUDY NUMBER: 0535103

ANIMAL NUMBER: 000042 SEX: MALE DOSE GROUP: 4 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/08/03 STUDY DAY OF DEATH: 95 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 21.5 GRAMS

O B S E R V A T I O N S

NECROPSY

ANIMAL :
-NOT REMARKABLE

HISTOPATHOLOGY

FEMUR + MARROW :
-OSTEOCHONDRAL ATROPHY,-SLIGHT

LIVER :
-GLYCOGEN VACUOLATION,-MINIMAL
-CENTRILOBULAR HYPERTROPHY/VACUOLATION,-MODERATE

SPLEEN :
-HAEMOPOIESIS,-MINIMAL

MESENTERIC LN :
-ATROPHY,-MINIMAL

KIDNEY :
-CORTICAL TUBULAR NEPHROPATHY,-MODERATE
-PAPILLARY MINERALISATION,-MINIMAL

TESTIS :
-TUBULAR ATROPHY,-SLIGHT

MANDIBULAR LN :
>SECTION EXAMINED; TISSUE NOT PRESENT

THYMUS :
-ATROPHY,-MINIMAL

HEART :
-MYOCARDIAL DEGENERATION/FIBROSIS,-MINIMAL

Appendix 10

Individual animal pathology data

Test article	Control				[	]
Group	1	2	3	4	5	
Level (ppm)	0	500	1000	5000	10000/7500	

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DRAFT

STUDY NUMBER: 0535103

ANIMAL NUMBER: 000042 SEX: MALE DOSE GROUP: 4 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/08/03 STUDY DAY OF DEATH: 95 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 21.5 GRAMS

O B S E R V A T I O N S (CONTINUED)

NECROPSY	HISTOPATHOLOGY
	PARATHYROID : >UNREMARKABLE >NOTE:>ONE SAMPLE. ADIPOSE TISSUE : -ATROPHY,-MINIMAL

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
EYE, OPTIC NERVE, HARDERIAN GLAND, SKIN + SUBCUTIS, MUSCLE, STERNUM + MARROW, SCIATIC NERVE, PANCREAS, STOMACH, DUODENUM, JEJUNUM, ILEUM, CAECUM, COLON, RECTUM, GALL BLADDER, ADRENAL, EPIDIDYMIS, SEMINAL VESICLE, URINARY BLADDER, PROSTATE, SALIVARY GLAND, LUNG, AORTA, TRACHEA, OESOPHAGUS, THYROID, PITUITARY, BRAIN, SPINAL CORD

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Individual animal pathology data

Test article	Control			[	]
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

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STUDY NUMBER: 0535103

ANIMAL NUMBER: 000043 SEX: MALE DOSE GROUP: 4 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/08/03 STUDY DAY OF DEATH: 95 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 16.8 GRAMS

OBSERVATIONS

NECROPSY

ANIMAL :
-NOT REMARKABLE

HISTOPATHOLOGY

LIVER :
-GLYCOGEN VACUOLATION,-MINIMAL
-CENTRILOBULAR HYPERTROPHY/VACUOLATION,-SLIGHT

SPLEEN :
-ATROPHY,-SLIGHT
-HAEMOPOIESIS,-MINIMAL

KIDNEY :
-CORTICAL TUBULAR NEPHROPATHY,-MODERATE
-PAPILLARY MINERALISATION,-MINIMAL

TESTIS :
-TUBULAR ATROPHY,-MINIMAL

THYMUS :
-ATROPHY,-MINIMAL

HEART :
-MYOCARDIAL DEGENERATION/FIBROSIS,-MINIMAL

PARATHYROID :
-ECTOPIC THYMUS,-PRESENT
>NOTE:>ONE SAMPLE.

ADIPOSE TISSUE :
-ATROPHY,-MINIMAL

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Individual animal pathology data

	Test article	Control		[		]
	Group	1	2	3	4	5
COVANCE	Level (ppm)	0	500	1000	5000	10000/7500

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DRAFT

STUDY NUMBER: 0535103

ANIMAL NUMBER: 000043 SEX: MALE DOSE GROUP: 4 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/08/03 STUDY DAY OF DEATH: 95 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 16.8 GRAMS

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
EYE, OPTIC NERVE, HARDERIAN GLAND, SKIN + SUBCUTIS, MUSCLE, FEMUR + MARROW, STERNUM + MARROW, SCIATIC NERVE, PANCREAS, MESENTERIC LN, STOMACH, DUODENUM, JEJUNUM, ILEUM, CAECUM, COLON, RECTUM, GALL BLADDER, ADRENAL, EPIDIDYMIS, SEMINAL VESICLE, URINARY BLADDER, PROSTATE, SALIVARY GLAND, MANDIBULAR LN, LUNG, AORTA, TRACHEA, OESOPHAGUS, THYROID, PITUITARY, BRAIN, SPINAL CORD

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Appendix 10

Individual animal pathology data

Test article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

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DRAFT

STUDY NUMBER: 0535103

ANIMAL NUMBER: 000044 SEX: MALE DOSE GROUP: 4 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/08/03 STUDY DAY OF DEATH: 95 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 20.4 GRAMS

O B S E R V A T I O N S

NECROPSY

LIVER :
-LARGE, SLIGHT; ALL LOBES
-PALE, SLIGHT; ALL LOBES

HISTOPATHOLOGY

MUSCLE :
-ATROPHY,-MINIMAL

LIVER :
-GLYCOGEN VACUOLATION,-MINIMAL
-CENTRILOBULAR HYPERTROPHY/VACUOLATION,-MODERATE

SPLEEN :
-HAEMOPOIESIS,-SLIGHT

STOMACH :
-HYPERKERATOSIS,-MINIMAL

KIDNEY :
-CORTICAL TUBULAR NEPHROPATHY,-SLIGHT

TESTIS :
-TUBULAR ATROPHY,-MINIMAL

THYMUS :
-ATROPHY,-SLIGHT

LUNG :
-INFLAMMATORY CELL FOCI,-MINIMAL

HEART :
-MYOCARDIAL DEGENERATION/FIBROSIS,-SLIGHT

ADIPOSE TISSUE :
-ATROPHY,-MINIMAL

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Appendix 10

Individual animal pathology data

	Test article	Control				[	]
	Group	1	2	3	4	5	.
	Level (ppm)	0	500	1000	5000	10000/7500	.

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DRAFT

STUDY NUMBER: 0535103

ANIMAL NUMBER: 000044 SEX: MALE DOSE GROUP: 4 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/08/03 STUDY DAY OF DEATH: 95 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 20.4 GRAMS

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
EYE, OPTIC NERVE, HARDERIAN GLAND, SKIN + SUBCUTIS, FEMUR + MARROW, STERNUM + MARROW, SCIATIC NERVE, PANCREAS, MESENTERIC LN, DUODENUM, JEJUNUM, ILEUM, CAECUM, COLON, RECTUM, GALL BLADDER, ADRENAL, EPIDIDYMIS, SEMINAL VESICLE, URINARY BLADDER, PROSTATE, SALIVARY GLAND, MANDIBULAR LN, AORTA, TRACHEA, OESOPHAGUS, THYROID, PARATHYROID, PITUITARY, BRAIN, SPINAL CORD

Appendix 10

Individual animal pathology data

Test article	Control			[	]	.
Group	1	2	3	4	5	.
Level (ppm)	0	500	1000	5000	10000/7500	.

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STUDY NUMBER: 0535103

ANIMAL NUMBER: 000045 SEX: MALE DOSE GROUP: 4 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/08/03 STUDY DAY OF DEATH: 95 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 16.1 GRAMS

OBSERVATIONS

NECROPSY

LIVER :
-LARGE, SLIGHT; ALL LOBES

HISTOPATHOLOGY

SKIN + SUBCUTIS :
-ADNEXAL ATROPHY,-MINIMAL

MUSCLE :
-ATROPHY,-MINIMAL

LIVER :
-GLYCOGEN VACUOLATION,-SLIGHT
-INFLAMMATORY CELL FOCI,-MINIMAL
-CENTRILOBULAR HYPERTROPHY/VACUOLATION,-MODERATE

SPLEEN :
-HAEMOPOIESIS,-SLIGHT

KIDNEY :
-CORTICAL TUBULAR NEPHROPATHY,-MODERATE

TESTIS :
-TUBULAR ATROPHY,-MINIMAL

SALIVARY GLAND :
-DEGRANULATION/ATROPHY,-MINIMAL

HEART :
-MYOCARDIAL DEGENERATION/FIBROSIS,-MINIMAL

PARATHYROID :
>UNREMARKABLE
>NOTE:>ONE SAMPLE.

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Appendix 10

Individual animal pathology data

	Test article	Control				[	]
	Group	1	2	3	4	5	.
	Level (ppm)	0	500	1000	5000	10000/7500	.

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STUDY NUMBER: 0535103

ANIMAL NUMBER: 000045 SEX: MALE DOSE GROUP: 4 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/08/03 STUDY DAY OF DEATH: 95 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 16.1 GRAMS

OBSERVATIONS (CONTINUED)

NECROPSY	HISTOPATHOLOGY
	ADIPOSE TISSUE : -ATROPHY,-MINIMAL

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
EYE, OPTIC NERVE, HARDERIAN GLAND, FEMUR + MARROW, STERNUM + MARROW, SCIATIC NERVE, PANCREAS, MESENTERIC LN, STOMACH, DUODENUM, JEJUNUM, ILEUM, CAECUM, COLON, RECTUM, GALL BLADDER, ADRENAL, EPIDIDYMIS, SEMINAL VESICLE, URINARY BLADDER, PROSTATE, MANDIBULAR LN, THYMUS, LUNG, AORTA, TRACHEA, OESOPHAGUS, THYROID, PITUITARY, BRAIN, SPINAL CORD

Appendix 10

Individual animal pathology data

Test article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

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STUDY NUMBER: 0535103

ANIMAL NUMBER: 000046 SEX: MALE DOSE GROUP: 4 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/08/03 STUDY DAY OF DEATH: 95 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 19.7 GRAMS

OBSERVATIONS

NECROPSY

SEMINAL VESICLE :
-SMALL, SLIGHT; BILATERAL

HISTOPATHOLOGY

MUSCLE :
-ATROPHY,-MINIMAL

LIVER :
-GLYCOGEN VACUOLATION,-MINIMAL
-INFLAMMATORY CELL FOCI,-MINIMAL
-CENTRILOBULAR HYPERTROPHY/VACUOLATION,-SLIGHT

SPLEEN :
-ATROPHY,-SLIGHT
-HAEMOPOIESIS,-MINIMAL

STOMACH :
-HYPERKERATOSIS,-MINIMAL

KIDNEY :
-CORTICAL TUBULAR NEPHROPATHY,-SLIGHT

TESTIS :
-TUBULAR ATROPHY,-MINIMAL

SEMINAL VESICLE :
-CONTRACTION,-PRESENT

MANDIBULAR LN :
>SECTION EXAMINED; TISSUE NOT PRESENT

THYMUS :
-ATROPHY,-MINIMAL

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Appendix 10

Individual animal pathology data

	Test article	Control				[ ]
	Group	1	2	3	4	5
COVANCE	Level (ppm)	0	500	1000	5000	10000/7500
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DRAFT

STUDY NUMBER: 0535103

ANIMAL NUMBER: 000046 SEX: MALE DOSE GROUP: 4 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/08/03 STUDY DAY OF DEATH: 95 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 19.7 GRAMS

OBSERVATIONS (CONTINUED)

NECROPSY	HISTOPATHOLOGY
	HEART : -MYOCARDIAL DEGENERATION/FIBROSIS,-SLIGHT ADIPOSE TISSUE : -ATROPHY,-MINIMAL

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
EYE, OPTIC NERVE, HARDERIAN GLAND, SKIN + SUBCUTIS, FEMUR + MARROW, STERNUM + MARROW, SCIATIC NERVE, PANCREAS, MESENTERIC LN, DUODENUM, JEJUNUM, ILEUM, CAECUM, COLON, RECTUM, GALL BLADDER, ADRENAL, EPIDIDYMIS, URINARY BLADDER, PROSTATE, SALIVARY GLAND, LUNG, AORTA, TRACHEA, OESOPHAGUS, THYROID, PARATHYROID, PITUITARY, BRAIN, SPINAL CORD

Appendix 10

Individual animal pathology data

Test article	Control			[	]	.
Group	1	2	3	4	5	.
Level (ppm)	0	500	1000	5000	10000/7500	.

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DRAFT

STUDY NUMBER: 0535103

ANIMAL NUMBER: 000047 SEX: MALE DOSE GROUP: 4 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/08/03 STUDY DAY OF DEATH: 95 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 16.4 GRAMS

OBSERVATIONS

NECROPSY

ANIMAL :
-NOT REMARKABLE

HISTOPATHOLOGY

SKIN + SUBCUTIS :
-ADNEXAL ATROPHY,-MINIMAL

MUSCLE :
-ATROPHY,-MINIMAL

LIVER :
-GLYCOGEN VACUOLATION,-MINIMAL
-CENTRILOBULAR HYPERTROPHY/VACUOLATION,-MODERATE

ADRENAL :
>UNREMARKABLE
>NOTE:>ONE MEDULLA.

KIDNEY :
-CORTICAL TUBULAR NEPHROPATHY,-MODERATE

TESTIS :
-TUBULAR ATROPHY,-MINIMAL

EPIDIDYMIS :
-CELLULAR DEBRIS,-MINIMAL

SALIVARY GLAND :
-DEGRANULATION/ATROPHY,-MINIMAL

THYMUS :
-ATROPHY,-SLIGHT
-ECTOPIC PARATHYROID,-PRESENT

Appendix 10

Individual animal pathology data

Test article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

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DRAFT

STUDY NUMBER: 0535103

ANIMAL NUMBER: 000047 SEX: MALE DOSE GROUP: 4 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/08/03 STUDY DAY OF DEATH: 95 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 16.4 GRAMS

OBSERVATIONS (CONTINUED)

NECROPSY	HISTOPATHOLOGY
	HEART : -MYOCARDIAL DEGENERATION/FIBROSIS,-MINIMAL
	PARATHYROID : -ECTOPIC THYMUS,-PRESENT
	PITUITARY : >TISSUE MISSING
	ADIPOSE TISSUE : -ATROPHY,-MINIMAL

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
EYE, OPTIC NERVE, HARDERIAN GLAND, FEMUR + MARROW, STERNUM + MARROW, SCIATIC NERVE, SPLEEN, PANCREAS, MESENTERIC LN, STOMACH, DUODENUM, JEJUNUM, ILEUM, CAECUM, COLON, RECTUM, GALL BLADDER, SEMINAL VESICLE, URINARY BLADDER, PROSTATE, MANDIBULAR LN, LUNG, AORTA, TRACHEA, OESOPHAGUS, THYROID, BRAIN, SPINAL CORD

Appendix 10

Individual animal pathology data

Test article	Control		[		]	.
Group	1	2	3	4	5	.
Level (ppm)	0	500	1000	5000	10000/7500	.

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DRAFT

STUDY NUMBER: 0535103

ANIMAL NUMBER: 000048 SEX: MALE DOSE GROUP: 4 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/08/03 STUDY DAY OF DEATH: 95 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 20.4 GRAMS

OBSERVATIONS

NECROPSY

LIVER :
-LARGE, SLIGHT; ALL LOBES
-PALE, SLIGHT; ALL LOBES

HISTOPATHOLOGY

SKIN + SUBCUTIS :
-ADNEXAL ATROPHY,-MINIMAL

MUSCLE :
-ATROPHY,-MINIMAL

FEMUR + MARROW :
-OSTEOCHONDRAL ATROPHY,-MINIMAL

LIVER :
-GLYCOGEN VACUOLATION,-MINIMAL
-CENTRILOBULAR HYPERTROPHY/VACUOLATION,-SLIGHT

SPLEEN :
-HAEMOPOIESIS,-MODERATE

MESENTERIC LN :
-ATROPHY,-SLIGHT

KIDNEY :
-CORTICAL TUBULAR NEPHROPATHY,-SLIGHT

TESTIS :
-TUBULAR ATROPHY,-MINIMAL

EPIDIDYMIS :
-CELLULAR DEBRIS,-MINIMAL

HEART :
-MYOCARDIAL DEGENERATION/FIBROSIS,-MINIMAL

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Appendix 10

Individual animal pathology data

Test article	Control				[	]
Group	1	2	3	4	5	.
Level (ppm)	0	500	1000	5000	10000/7500	.

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HARROGATE, ENGLAND

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DRAFT

STUDY NUMBER: 0535103

ANIMAL NUMBER: 000048 SEX: MALE DOSE GROUP: 4 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/08/03 STUDY DAY OF DEATH: 95 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 20.4 GRAMS

O B S E R V A T I O N S (CONTINUED)

NECROPSY	HISTOPATHOLOGY
	PARATHYROID : >SECTION EXAMINED; TISSUE NOT PRESENT
	SPINAL CORD : >UNREMARKABLE >NOTE:>TWO SAMPLES.

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
EYE, OPTIC NERVE, HARDERIAN GLAND, STERNUM + MARROW, SCIATIC NERVE, PANCREAS, STOMACH, DUODENUM, JEJUNUM, ILEUM, CAECUM, COLON, RECTUM, GALL BLADDER, ADRENAL, SEMINAL VESICLE, URINARY BLADDER, PROSTATE, SALIVARY GLAND, MANDIBULAR LN, THYMUS, LUNG, AORTA, TRACHEA, OESOPHAGUS, THYROID, PITUITARY, BRAIN, ADIPOSE TISSUE

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Appendix 10

Individual animal pathology data

Test article	Control		[		]	.
Group	1	2	3	4	5	.
Level (ppm)	0	500	1000	5000	10000/7500	.

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DRAFT

STUDY NUMBER: 0535103

ANIMAL NUMBER: 000049 SEX: MALE DOSE GROUP: 5 SACRIFICE STATUS: UNSCHEDULED (M)
DATE OF DEATH: 06/17/03 STUDY DAY OF DEATH: 12 STUDY WEEK OF DEATH: 2 TERMINAL BODY WEIGHT: 13.4 GRAMS

O B S E R V A T I O N S

NECROPSY

LIVER :
-LARGE, MINIMAL; ALL LOBES

SPLEEN :
-SMALL, MINIMAL

STOMACH :
-DARK CONTENTS

DUODENUM :
-DARK CONTENTS

JEJUNUM :
-DARK CONTENTS

ANIMAL :
-THIN

HISTOPATHOLOGY

HARDERIAN GLAND :
-ATROPHY,-MODERATE

SKIN + SUBCUTIS :
-ADNEXAL ATROPHY,-SLIGHT

MUSCLE :
-ATROPHY,-SLIGHT

FEMUR + MARROW :
-OSTEOCHONDRAL ATROPHY,-MINIMAL
>NOTE:>CHARACTERISED BY LARGE VACUOLAR AS WELL AS SMALL CHONDROCYTES IN THE ARTICULAR SURFACE OF THE KNEE JOINT, SMALL CHONDROCYTES IN THE GROWTH PLATE AND A DECREASE IN EPIPHYSEAL BONE RESULTING IN A DECREASE IN SIZE AND IN DISTORTION OF THE ARTICULAR SURFACE AND THE GROWTH PLATE.

LIVER :
-CENTRILOBULAR HYPERTROPHY/VACUOLATION,-SLIGHT
>NOTE:>CENTRILOBULAR HYPERTROPHY WAS CHARACTERISED BY LARGE HEPATOCYTES WITH EOSINOPHILIC CYTOPLASM CONTAINING VERY FINE WELL CIRCUMSCRIBED VACUOLES RESULTING IN A SLIGHTLY FOAMY AND/OR GRANULAR APPEARANCE OF THE HEPATOCYTE CYTOPLASM.

SPLEEN :
-ATROPHY,-MINIMAL

Appendix 10

Individual animal pathology data

Test article	Control		[		]	.
Group	1	2	3	4	5	.
Level (ppm)	0	500	1000	5000	10000/7500	.

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DRAFT

STUDY NUMBER: 0535103

ANIMAL NUMBER: 000049 SEX: MALE DOSE GROUP: 5 SACRIFICE STATUS: UNSCHEDULED (M)
DATE OF DEATH: 06/17/03 STUDY DAY OF DEATH: 12 STUDY WEEK OF DEATH: 2 TERMINAL BODY WEIGHT: 13.4 GRAMS

OBSERVATIONS (CONTINUED)

NECROPSY

HISTOPATHOLOGY

PANCREAS :
-DEGRANULATION,-SLIGHT
>NOTE:>CHARACTERISED BY A DECREASE IN ZYMOGEN GRANULES NORMALLY PRESENT IN ACINAR CELLS.

STOMACH :
>UNREMARKABLE
>NOTE:>NO MICROSCOPIC CORRELATION WITH NECROPSY.

DUODENUM :
>UNREMARKABLE
>NOTE:>NO MICROSCOPIC CORRELATION WITH NECROPSY.

JEJUNUM :
>UNREMARKABLE
>NOTE:>NO MICROSCOPIC CORRELATION WITH NECROPSY.

TESTIS :
-GERM CELL DEGENERATION,-MINIMAL
>NOTE:>CHARACTERISED BY PYKNOTIC GERM CELLS WITHIN THE TUBULAR LUMEN.

EPIDIDYMIS :
-CELLULAR DEBRIS,-MINIMAL

SEMINAL VESICLE :
-ATROPHY,-SLIGHT
>NOTE:>CHARACTERISED BY SMALL ACINAR CELLS WITH LITTLE CYTOPLASM AND A GENERALISED REDUCTION IN GLAND SIZE.

Appendix 10

Individual animal pathology data

Test article	Control			[	]	.
Group	1	2	3	4	5	.
Level (ppm)	0	500	1000	5000	10000/7500	.

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HARROGATE, ENGLAND

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DRAFT

STUDY NUMBER: 0535103

ANIMAL NUMBER: 000049 SEX: MALE DOSE GROUP: 5 SACRIFICE STATUS: UNSCHEDULED (M)
DATE OF DEATH: 06/17/03 STUDY DAY OF DEATH: 12 STUDY WEEK OF DEATH: 2 TERMINAL BODY WEIGHT: 13.4 GRAMS

OBSERVATIONS (CONTINUED)

NECROPSY

HISTOPATHOLOGY

PROSTATE :
-ATROPHY,-SLIGHT
>NOTE:>CHARACTERISED BY SMALL ACINAR CELLS WITH LITTLE CYTOPLASM AND A GENERALISED REDUCTION IN GLAND SIZE.

SALIVARY GLAND :
-DEGRANULATION/ATROPHY,-SLIGHT
>NOTE:>CHARACTERISED BY DEPLETION OF SECRETORY GRANULES NORMALLY PRESENT ESPECIALLY IN SECRETORY DUCTS AND A DECREASE IN SIZE OF THE ACINAR EPITHELIAL CELLS.

MANDIBULAR LN :
-ATROPHY,-SLIGHT

THYMUS :
-ATROPHY,-MODERATELY SEVERE
>NOTE:>ATROPHY WAS CHARACTERISED BY A CONSIDERABLE DECREASE IN THE NUMBERS OF LYMPHOCYTES IN CORTEX AND MEDULLA RESULTING IN A REDUCTION IN THE OVERALL SIZE OF THE THYMUS.

ADIPOSE TISSUE :
-ATROPHY,-MODERATE
>NOTE:>CHARACTERISED BY A SMALL SIZE OF THE LIPOCYTES IN THE WHITE AND BROWN ADIPOSE TISSUE ESPECIALLY IN ABDOMINAL CAVITY AND SUBCUTIS, AND BY INCREASED CYTOPLASMIC EOSINOPHILLIA NOTABLY IN THE WHITE ADIPOSE TISSUE.

CAUSE OF DEMISE :
-TREATMENT-RELATED,-PRESENT

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Appendix 10

Individual animal pathology data

Test article	Control		[		]	.
Group	1	2	3	4	5	.
Level (ppm)	0	500	1000	5000	10000/7500	.

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DRAFT

STUDY NUMBER: 0535103

ANIMAL NUMBER: 000049 SEX: MALE DOSE GROUP: 5 SACRIFICE STATUS: UNSCHEDULED (M)
DATE OF DEATH: 06/17/03 STUDY DAY OF DEATH: 12 STUDY WEEK OF DEATH: 2 TERMINAL BODY WEIGHT: 13.4 GRAMS

O B S E R V A T I O N S (CONTINUED)

NECROPSY

HISTOPATHOLOGY

CAUSE OF DEMISE :
>NOTE:>TREATMENT-RELATED DETERIORATION IN BODY CONDITION.

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
EYE, OPTIC NERVE, STERNUM + MARROW, SCIATIC NERVE, MESENTERIC LN, ILEUM, CAECUM, COLON, RECTUM, GALL BLADDER, ADRENAL, KIDNEY, URINARY BLADDER, LUNG, HEART, AORTA, TRACHEA, OESOPHAGUS, THYROID, PARATHYROID, PITUITARY, BRAIN, SPINAL CORD

Appendix 10

Individual animal pathology data

Test article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

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HARROGATE, ENGLAND

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STUDY NUMBER: 0535103

ANIMAL NUMBER: 000050 SEX: MALE DOSE GROUP: 5 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/08/03 STUDY DAY OF DEATH: 95 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 13.5 GRAMS

O B S E R V A T I O N S

NECROPSY

LIVER :
-MOTTLED, SLIGHT; ALL LOBES

TESTIS :
-SMALL, MODERATE; BILATERAL

SEMINAL VESICLE :
-SMALL, SLIGHT; BILATERAL

HISTOPATHOLOGY

OPTIC NERVE :
>UNREMARKABLE
>NOTE:>ONE SAMPLE.

HARDERIAN GLAND :
-ATROPHY,-MINIMAL
>NOTE:>ONE SAMPLE.

SKIN + SUBCUTIS :
-ADNEXAL ATROPHY,-SLIGHT
>NOTE:>ADNEXAL ATROPHY WAS CHARACTERISED BY SMALL CELLS IN THE HAIR SHEATHS AND SMALL SEBACEOUS GLANDS.

MUSCLE :
-ATROPHY,-SLIGHT
-MYOPATHY,-MINIMAL
>NOTE:>ATROPHY WAS CHARACTERISED BY A SMALL SIZE OF THE MYOFIBRES.

FEMUR + MARROW :
-OSTEOCHONDRAL ATROPHY,-SLIGHT

LIVER :
-CENTRILOBULAR HYPERTROPHY/VACUOLATION,-MODERATELY SEVERE
-OVAL CELL HYPERPLASIA,-SLIGHT
>NOTE:>OVAL CELL HYPERPLASIA WAS CHARACTERISED BY AN INCREASE IN THE NUMBER OF PERIPORTAL OVAL CELLS LINING THE SINUSOIDS AND WAS IN SUBCAPSULAR AREAS SOMETIMES ASSOCIATED WITH FORMATION OF SMALL BILE DUCTULES.

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Individual animal pathology data

Test article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

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DRAFT

STUDY NUMBER: 0535103

ANIMAL NUMBER: 000050 SEX: MALE DOSE GROUP: 5 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/08/03 STUDY DAY OF DEATH: 95 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 13.5 GRAMS

OBSERVATIONS (CONTINUED)

NECROPSY

HISTOPATHOLOGY

SPLEEN :
-ATROPHY,-MODERATE
>NOTE:>ATROPHY WAS CHARACTERISED BY A DECREASE IN CELLULARITY AND SIZE OF RED AND WHITE PULP.

MESENTERIC LN :
-ATROPHY,-SLIGHT
>NOTE:>CHARACTERISED BY A DECREASE IN SIZE OF THE PARACORTEX AND/OR THE NUMBER OF ACTIVE FOLLICULAR GERMINAL CENTRES.

STOMACH :
-HYPERKERATOSIS,-MINIMAL

GALL BLADDER :
>SECTION EXAMINED; TISSUE NOT PRESENT

KIDNEY :
-CORTICAL TUBULAR NEPHROPATHY,-MODERATELY SEVERE
>NOTE:>TUBULAR NEPHROPATHY WAS CHARACTERISED BY DEGENERATION AND DESQUAMATION OF TUBULAR EPITHELIAL CELLS AND EARLY REGENERATION WITH MINOR TUBULAR BASOPHILIA AND NUCLEAR CROWDING, AND WAS ASSOCIATED WITH A DECREASE OF TUBULAR VACUOLATION NORMALLY PRESENT ESPECIALLY IN MALE MICE, AND WITH OCCASIONAL CYTOMEGALY AND KARYOMEGALY.

TESTIS :
-TUBULAR ATROPHY,-MODERATE

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Individual animal pathology data

Test article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

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DRAFT

STUDY NUMBER: 0535103

ANIMAL NUMBER: 000050 SEX: MALE DOSE GROUP: 5 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/08/03 STUDY DAY OF DEATH: 95 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 13.5 GRAMS

OBSERVATIONS (CONTINUED)

NECROPSY	HISTOPATHOLOGY
	TESTIS : >NOTE:>CHARACTERISED BY GERM CELL DEGENERATION AND EXFOLIATION AND ASSOCIATED WITH LEYDIG CELL ATROPHY. EPIDIDYMIS : -CELLULAR DEBRIS,-SLIGHT SEMINAL VESICLE : -ATROPHY,-SLIGHT SALIVARY GLAND : -DEGRANULATION/ATROPHY,-SLIGHT MANDIBULAR LN : >SECTION EXAMINED; TISSUE NOT PRESENT THYMUS : -ATROPHY,-MODERATELY SEVERE HEART : -MYOCARDIAL DEGENERATION/FIBROSIS,-MODERATE >NOTE:>MYOCARDIAL DEGENERATION/FIBROSIS WAS CHARACTERISED BY AREAS OF DEGENERATING CARDIOMYOFIBRES WITH DARK EOSINOPHILIC SARCOPLASM, LOSS OF CROSS STRIATION, VACUOLATION AND NECROSIS AND WAS ASSOCIATED WITH INFLAMMATORY CELL INFILTRATION AND EARLY FIBROSIS. PARATHYROID : -CYST,-PRESENT >NOTE:>ONE SAMPLE.

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Appendix 10

Individual animal pathology data

Test article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

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DRAFT

STUDY NUMBER: 0535103

ANIMAL NUMBER: 000050 SEX: MALE DOSE GROUP: 5 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/08/03 STUDY DAY OF DEATH: 95 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 13.5 GRAMS

O B S E R V A T I O N S (CONTINUED)

NECROPSY	HISTOPATHOLOGY
	PITUITARY : >TISSUE MISSING
	ADIPOSE TISSUE : -ATROPHY,-SLIGHT

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
EYE, STERNUM + MARROW, SCIATIC NERVE, PANCREAS, DUODENUM, JEJUNUM, ILEUM, CAECUM, COLON, RECTUM, ADRENAL, URINARY BLADDER, PROSTATE, LUNG, AORTA, TRACHEA, OESOPHAGUS, THYROID, BRAIN, SPINAL CORD

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Appendix 10

Individual animal pathology data

Test article	Control				[	]
Group	1	2	3	4	5	
Level (ppm)	0	500	1000	5000	10000/7500	

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STUDY NUMBER: 0535103

ANIMAL NUMBER: 000051 SEX: MALE DOSE GROUP: 5 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/08/03 STUDY DAY OF DEATH: 95 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 17.1 GRAMS

OBSERVATIONS

NECROPSY

TESTIS :
-SMALL, MODERATE; BILATERAL

SEMINAL VESICLE :
-SMALL, MODERATE; BILATERAL

HISTOPATHOLOGY

HARDERIAN GLAND :
-ATROPHY,-MINIMAL
-INFLAMMATORY CELL FOCI,-MINIMAL

SKIN + SUBCUTIS :
-ADNEXAL ATROPHY,-SLIGHT

MUSCLE :
-ATROPHY,-SLIGHT

FEMUR + MARROW :
-OSTEOCHONDRAL ATROPHY,-MINIMAL

LIVER :
-GLYCOGEN VACUOLATION,-MINIMAL
-SINGLE CELL NECROSIS/APOPTOSIS,-MINIMAL
-CENTRILOBULAR HYPERTROPHY/VACUOLATION,-MODERATELY SEVERE

SPLEEN :
-ATROPHY,-MODERATE
-HAEMOPOIESIS,-SLIGHT

MESENTERIC LN :
-ATROPHY,-MINIMAL

KIDNEY :
-CORTICAL TUBULAR NEPHROPATHY,-MODERATELY SEVERE

TESTIS :
-TUBULAR ATROPHY,-MODERATE

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Appendix 10

Individual animal pathology data

Test article	Control		[		]	
Group	1	2	3	4	5	
Level (ppm)	0	500	1000	5000	10000/7500	

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DRAFT

STUDY NUMBER: 0535103

ANIMAL NUMBER: 000051 SEX: MALE DOSE GROUP: 5 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/08/03 STUDY DAY OF DEATH: 95 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 17.1 GRAMS

OBSERVATIONS (CONTINUED)

NECROPSY

HISTOPATHOLOGY

EPIDIDYMIS :
-CELLULAR DEBRIS,-MINIMAL

SEMINAL VESICLE :
-ATROPHY,-SLIGHT

THYMUS :
-ATROPHY,-MODERATE

LUNG :
-FOAMY HISTIOCYTES,-SLIGHT
>NOTE:>MINOR MULTIFOCAL ACCUMULATIONS OF FOAMY HISTIOCYTES IN SUBPLEURAL ALVEOLAR SPACES.

HEART :
-MYOCARDIAL DEGENERATION/FIBROSIS,-MINIMAL

PARATHYROID :
>SECTION EXAMINED; TISSUE NOT PRESENT

ADIPOSE TISSUE :
-ATROPHY,-MINIMAL

GENERAL INFORMATION :
>COMMENT:>POST FIX OBS: LUNG - PALE FOCUS: RIGHT POSTERIOR LOBE

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Appendix 10

Individual animal pathology data

Test article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

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DRAFT

STUDY NUMBER: 0535103

ANIMAL NUMBER: 000051 SEX: MALE DOSE GROUP: 5 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/08/03 STUDY DAY OF DEATH: 95 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 17.1 GRAMS

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
EYE, OPTIC NERVE, STERNUM + MARROW, SCIATIC NERVE, PANCREAS, STOMACH, DUODENUM, JEJUNUM, ILEUM, CAECUM, COLON, RECTUM, GALL BLADDER, ADRENAL, URINARY BLADDER, PROSTATE, SALIVARY GLAND, MANDIBULAR LN, AORTA, TRACHEA, OESOPHAGUS, THYROID, PITUITARY, BRAIN, SPINAL CORD

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Appendix 10

Individual animal pathology data

Test article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

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STUDY NUMBER: 0535103

ANIMAL NUMBER: 000052 SEX: MALE DOSE GROUP: 5 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/08/03 STUDY DAY OF DEATH: 95 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 12.2 GRAMS

OBSERVATIONS

NECROPSY

TESTIS :
-SMALL, MODERATE; BILATERAL

SEMINAL VESICLE :
-SMALL, MODERATE; BILATERAL

HISTOPATHOLOGY

HARDERIAN GLAND :
-ATROPHY,-MINIMAL

SKIN + SUBCUTIS :
-ADNEXAL ATROPHY,-MINIMAL

MUSCLE :
-ATROPHY,-MINIMAL

FEMUR + MARROW :
-OSTEOCHONDRAL ATROPHY,-MODERATE

LIVER :
-PIGMENT,-MINIMAL
-SINGLE CELL NECROSIS/APOPTOSIS,-MINIMAL
-CENTRILOBULAR HYPERTROPHY/VACUOLATION,-MODERATELY SEVERE
>NOTE:>SMALL AMOUNTS OF BROWN PIGMENT PREDOMINANTLY IN SINUSOIDAL LINING CELLS.

SPLEEN :
-ATROPHY,-SLIGHT
-HAEMOPOIESIS,-MODERATE

MESENTERIC LN :
-ATROPHY,-SLIGHT

KIDNEY :
-CORTICAL TUBULAR NEPHROPATHY,-SLIGHT

Appendix 10

Individual animal pathology data

Test article	Control	[			]
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

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DRAFT

STUDY NUMBER: 0535103

ANIMAL NUMBER: 000052 SEX: MALE DOSE GROUP: 5 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/08/03 STUDY DAY OF DEATH: 95 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 12.2 GRAMS

OBSERVATIONS (CONTINUED)

NECROPSY

HISTOPATHOLOGY

TESTIS :
-TUBULAR ATROPHY,-MODERATELY SEVERE

EPIDIDYMIS :
-OLIGOSPERMIA,-MODERATELY SEVERE
-CELLULAR DEBRIS,-MINIMAL

SEMINAL VESICLE :
-ATROPHY,-MODERATE

SALIVARY GLAND :
-DEGRANULATION/ATROPHY,-SLIGHT

MANDIBULAR LN :
-ATROPHY,-SLIGHT

THYMUS :
-ATROPHY,-MODERATE

PARATHYROID :
>UNREMARKABLE
>NOTE:>ONE SAMPLE.

ADIPOSE TISSUE :
-ATROPHY,-SLIGHT

GENERAL INFORMATION :
>COMMENT:>POST FIX OBS: LUNG - PALE FOCUS: RIGHT POSTERIOR LOBE

Appendix 10

Individual animal pathology data

Test article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

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DRAFT

STUDY NUMBER: 0535103

ANIMAL NUMBER: 000052 SEX: MALE DOSE GROUP: 5 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/08/03 STUDY DAY OF DEATH: 95 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 12.2 GRAMS

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
EYE, OPTIC NERVE, STERNUM + MARROW, SCIATIC NERVE, PANCREAS, STOMACH, DUODENUM, JEJUNUM, ILEUM, CAECUM, COLON, RECTUM, GALL BLADDER, ADRENAL, URINARY BLADDER, PROSTATE, LUNG, HEART, AORTA, TRACHEA, OESOPHAGUS, THYROID, PITUITARY, BRAIN, SPINAL CORD

Appendix 10

Individual animal pathology data

Test article	Control		[		]	.
Group	1	2	3	4	5	.
Level (ppm)	0	500	1000	5000	10000/7500	.

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DRAFT

STUDY NUMBER: 0535103

ANIMAL NUMBER: 000053 SEX: MALE DOSE GROUP: 5 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/08/03 STUDY DAY OF DEATH: 95 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 15.1 GRAMS

O B S E R V A T I O N S

NECROPSY

THYMUS :
-SMALL, MODERATE; BILATERAL

HISTOPATHOLOGY

HARDERIAN GLAND :
-ATROPHY,-SLIGHT
>NOTE:>CHARACTERISED BE A DECREASED SIZE OF THE VACUOLES NORMALLY PRESENT IN ACINAR CELL CYTOPLASM AND A SMALL SIZE OF THE ACINAR CELLS.

SKIN + SUBCUTIS :
-ADNEXAL ATROPHY,-SLIGHT

MUSCLE :
-ATROPHY,-SLIGHT

FEMUR + MARROW :
-OSTEOCHONDRAL ATROPHY,-MINIMAL

LIVER :
-PIGMENT,-MINIMAL
-GLYCOGEN VACUOLATION,-MINIMAL
-CENTRILOBULAR HYPERTROPHY/VACUOLATION,-MODERATELY SEVERE
-OVAL CELL HYPERPLASIA,-MINIMAL

SPLEEN :
-ATROPHY,-SLIGHT
-HAEMOPOIESIS,-MINIMAL

MESENTERIC LN :
-ATROPHY,-MINIMAL

STOMACH :
-HYPERKERATOSIS,-MINIMAL

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Individual animal pathology data

Test article	Control				[ ]
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

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DRAFT

STUDY NUMBER: 0535103

ANIMAL NUMBER: 000053 SEX: MALE DOSE GROUP: 5 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/08/03 STUDY DAY OF DEATH: 95 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 15.1 GRAMS

OBSERVATIONS (CONTINUED)

NECROPSY

HISTOPATHOLOGY

KIDNEY :
-CORTICAL TUBULAR NEPHROPATHY,-MODERATE

TESTIS :
-TUBULAR ATROPHY,-MODERATE

EPIDIDYMIS :
-OLIGOSPERMIA,-SLIGHT
-CELLULAR DEBRIS,-SLIGHT

SEMINAL VESICLE :
-ATROPHY,-SLIGHT

SALIVARY GLAND :
-DEGRANULATION/ATROPHY,-SLIGHT

MANDIBULAR LN :
-ATROPHY,-SLIGHT

THYMUS :
-ATROPHY,-MODERATE

LUNG :
-FOAMY HISTIOCYTES,-SLIGHT

HEART :
-MYOCARDIAL DEGENERATION/FIBROSIS,-SLIGHT

PARATHYROID :
>UNREMARKABLE

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Appendix 10

Individual animal pathology data

Test article	Control				[ ]
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

COVANCE
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DRAFT

STUDY NUMBER: 0535103

ANIMAL NUMBER: 000053 SEX: MALE DOSE GROUP: 5 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/08/03 STUDY DAY OF DEATH: 95 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 15.1 GRAMS

OBSERVATIONS (CONTINUED)

NECROPSY	HISTOPATHOLOGY
	PARATHYROID : >NOTE:>ONE SAMPLE.
	ADIPOSE TISSUE : -ATROPHY,-SLIGHT

GENERAL INFORMATION :
>COMMENT:>POST FIX OBS: LUNG - PALE FOCUS: RIGHT POSTERIOR LOBE

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
EYE, OPTIC NERVE, STERNUM + MARROW, SCIATIC NERVE, PANCREAS, DUODENUM, JEJUNUM, ILEUM, CAECUM, COLON, RECTUM, GALL BLADDER, ADRENAL, URINARY BLADDER, PROSTATE, AORTA, TRACHEA, OESOPHAGUS, THYROID, PITUITARY, BRAIN, SPINAL CORD

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Appendix 10

Individual animal pathology data

Test article	Control		[		]	.
Group	1	2	3	4	5	.
Level (ppm)	0	500	1000	5000	10000/7500	.

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HARROGATE, ENGLAND

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DRAFT

STUDY NUMBER: 0535103

ANIMAL NUMBER: 000054 SEX: MALE DOSE GROUP: 5 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/08/03 STUDY DAY OF DEATH: 95 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 16.2 GRAMS

OBSERVATIONS

NECROPSY

LIVER :
-MOTTLED, SLIGHT; ALL LOBES
-PALE, SLIGHT; ALL LOBES

KIDNEY :
-PALE, SLIGHT; BILATERAL

SEMINAL VESICLE :
-SMALL, MODERATE; BILATERAL

LUNG :
-PALE FOCUS; SEVERAL, ALL LOBES

HISTOPATHOLOGY

HARDERIAN GLAND :
-ATROPHY,-MINIMAL

SKIN + SUBCUTIS :
-ADNEXAL ATROPHY,-MINIMAL

MUSCLE :
-ATROPHY,-SLIGHT
-MYOPATHY,-MINIMAL

FEMUR + MARROW :
-MARROW ATROPHY,-MINIMAL
-OSTEOCHONDRAL ATROPHY,-SLIGHT

LIVER :
-PIGMENT,-MINIMAL
-SINGLE CELL NECROSIS/APOPTOSIS,-MINIMAL
-CENTRILOBULAR HYPERTROPHY/VACUOLATION,-MODERATELY SEVERE
-OVAL CELL HYPERPLASIA,-SLIGHT

SPLEEN :
-ATROPHY,-MODERATE
-HAEMOPOIESIS,-MINIMAL

PANCREAS :
-DEGRANULATION,-SLIGHT

MESENTERIC LN :
-ATROPHY,-MINIMAL

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Appendix 10

Individual animal pathology data

Test article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

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DRAFT

STUDY NUMBER: 0535103

ANIMAL NUMBER: 000054 SEX: MALE DOSE GROUP: 5 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/08/03 STUDY DAY OF DEATH: 95 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 16.2 GRAMS

OBSERVATIONS (CONTINUED)

NECROPSY

HISTOPATHOLOGY

KIDNEY :
-CORTICAL TUBULAR NEPHROPATHY,-MODERATELY SEVERE

TESTIS :
-TUBULAR ATROPHY,-MODERATE

EPIDIDYMIS :
-OLIGOSPERMIA,-MODERATELY SEVERE
-CELLULAR DEBRIS,-SLIGHT

SEMINAL VESICLE :
-ATROPHY,-MODERATE

SALIVARY GLAND :
-DEGRANULATION/ATROPHY,-SLIGHT

MANDIBULAR LN :
>SECTION EXAMINED; TISSUE NOT PRESENT

THYMUS :
-ATROPHY,-MODERATELY SEVERE

LUNG :
-FOAMY HISTIOCYTES,-MINIMAL

HEART :
-MYOCARDIAL DEGENERATION/FIBROSIS,-MINIMAL

PARATHYROID :
>UNREMARKABLE

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Appendix 10

Individual animal pathology data

	Test article	Control				[ ]
	Group	1	2	3	4	5
COVANCE	Level (ppm)	0	500	1000	5000	10000/7500
HARROGATE, ENGLAND						

DRAFT

STUDY NUMBER: 0535103

ANIMAL NUMBER: 000054 SEX: MALE DOSE GROUP: 5 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/08/03 STUDY DAY OF DEATH: 95 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 16.2 GRAMS

OBSERVATIONS (CONTINUED)

NECROPSY

HISTOPATHOLOGY

PARATHYROID :
>NOTE:>ONE SAMPLE.

ADIPOSE TISSUE :
-ATROPHY,-SLIGHT

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
EYE, OPTIC NERVE, STERNUM + MARROW, SCIATIC NERVE, STOMACH, DUODENUM, JEJUNUM, ILEUM, CAECUM, COLON, RECTUM, GALL BLADDER, ADRENAL, URINARY BLADDER, PROSTATE, AORTA, TRACHEA, OESOPHAGUS, THYROID, PITUITARY, BRAIN, SPINAL CORD

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Appendix 10

Individual animal pathology data

Test article	Control				[ ]
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

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HARROGATE, ENGLAND

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DRAFT

STUDY NUMBER: 0535103

ANIMAL NUMBER: 000055 SEX: MALE DOSE GROUP: 5 SACRIFICE STATUS: UNSCHEDULED (M)
DATE OF DEATH: 06/17/03 STUDY DAY OF DEATH: 12 STUDY WEEK OF DEATH: 2 TERMINAL BODY WEIGHT: 14.0 GRAMS

OBSERVATIONS

NECROPSY

SPLEEN :
-SMALL, MINIMAL

ANIMAL :
-THIN

HISTOPATHOLOGY

OPTIC NERVE :
>TISSUE MISSING

HARDERIAN GLAND :
-ATROPHY,-MODERATE

SKIN + SUBCUTIS :
-ADNEXAL ATROPHY,-SLIGHT

MUSCLE :
-ATROPHY,-SLIGHT

FEMUR + MARROW :
-OSTEOCHONDRAL ATROPHY,-MINIMAL

LIVER :
-GLYCOGEN VACUOLATION,-MINIMAL
-CENTRILOBULAR HYPERTROPHY/VACUOLATION,-SLIGHT

SPLEEN :
-ATROPHY,-MINIMAL
-HAEMOPOIESIS,-MINIMAL

STOMACH :
-HYPERKERATOSIS,-MINIMAL
>NOTE:>HYPERKERATOSIS WAS CHARACTERISED BY AN INCREASE IN KERATIN LAYERS IN THE FORESTOMACH.

TESTIS :
-GERM CELL DEGENERATION,-MINIMAL

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Appendix 10

Individual animal pathology data

Test article	Control		[		]	.
Group	1	2	3	4	5	.
Level (ppm)	0	500	1000	5000	10000/7500	.

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DRAFT

STUDY NUMBER: 0535103

ANIMAL NUMBER: 000055 SEX: MALE DOSE GROUP: 5 SACRIFICE STATUS: UNSCHEDULED (M)
DATE OF DEATH: 06/17/03 STUDY DAY OF DEATH: 12 STUDY WEEK OF DEATH: 2 TERMINAL BODY WEIGHT: 14.0 GRAMS

OBSERVATIONS (CONTINUED)

NECROPSY	HISTOPATHOLOGY
	EPIDIDYMIS : -CELLULAR DEBRIS,-MINIMAL
	PROSTATE : >SECTION EXAMINED; TISSUE NOT PRESENT
	SALIVARY GLAND : -DEGRANULATION/ATROPHY,-SLIGHT
	THYMUS : -ATROPHY,-MODERATE
	PARATHYROID : >UNREMARKABLE >NOTE:>ONE SAMPLE.
	ADIPOSE TISSUE : -ATROPHY,-MODERATE
	CAUSE OF DEMISE : -TREATMENT-RELATED,-PRESENT >NOTE:>TREATMENT-RELATED DETERIORATION IN BODY CONDITION.

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Appendix 10

Individual animal pathology data

	Test article	Control				[	]	.
	Group	1	2	3	4	5		.
COVANCE	Level (ppm)	0	500	1000	5000	10000/7500		.

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DRAFT

STUDY NUMBER: 0535103

ANIMAL NUMBER: 000055 SEX: MALE DOSE GROUP: 5 SACRIFICE STATUS: UNSCHEDULED (M)
DATE OF DEATH: 06/17/03 STUDY DAY OF DEATH: 12 STUDY WEEK OF DEATH: 2 TERMINAL BODY WEIGHT: 14.0 GRAMS

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
EYE, STERNUM + MARROW, SCIATIC NERVE, PANCREAS, MESENTERIC LN, DUODENUM, JEJUNUM, ILEUM, CAECUM, COLON, RECTUM, GALL BLADDER, ADRENAL, KIDNEY, SEMINAL VESICLE, URINARY BLADDER, MANDIBULAR LN, LUNG, HEART, AORTA, TRACHEA, OESOPHAGUS, THYROID, PITUITARY, BRAIN, SPINAL CORD

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Appendix 10

Individual animal pathology data

Test article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

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STUDY NUMBER: 0535103

ANIMAL NUMBER: 000056 SEX: MALE DOSE GROUP: 5 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/08/03 STUDY DAY OF DEATH: 95 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 13.6 GRAMS

OBSERVATIONS

NECROPSY

MESENTERIC LN :
-SMALL, MODERATE

CAECUM :
-INJECTION LESION

TESTIS :
-SMALL, MODERATE; BILATERAL

EPIDIDYMIS :
-SMALL, MODERATE; BILATERAL

SEMINAL VESICLE :
-SMALL, SLIGHT; BILATERAL

PROSTATE :
-SMALL, SLIGHT; BILATERAL

THYMUS :
-SMALL, SLIGHT; BILATERAL

LUNG :
-PALE FOCUS; LEFT LOBE

HISTOPATHOLOGY

HARDERIAN GLAND :
-ATROPHY,-SLIGHT

SKIN + SUBCUTIS :
-ADNEXAL ATROPHY,-SLIGHT

MUSCLE :
-ATROPHY,-SLIGHT
>NOTE:>IN STANDARD SAMPLE AND TISSUE PRESENTED IN SECTION OF FEMUR AND STERNUM.

FEMUR + MARROW :
-OSTEOCHONDRAL ATROPHY,-MINIMAL

LIVER :
-PIGMENT,-MINIMAL
-CENTRILOBULAR HYPERTROPHY/VACUOLATION,-MODERATELY SEVERE
-OVAL CELL HYPERPLASIA,-MINIMAL

SPLEEN :
-ATROPHY,-SLIGHT
-HAEMOPOIESIS,-MODERATELY SEVERE
>NOTE:>LYMPHOID ATROPHY.

MESENTERIC LN :
-ATROPHY,-SLIGHT

STOMACH :
-GASTRITIS,-MINIMAL
-EROSION/ULCER,-SLIGHT

Appendix 10

Individual animal pathology data

Test article	Control		[		]	.
Group	1	2	3	4	5	.
Level (ppm)	0	500	1000	5000	10000/7500	.

ANIMAL NUMBER: 000056 SEX: MALE DOSE GROUP: 5 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/08/03 STUDY DAY OF DEATH: 95 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 13.6 GRAMS

OBSERVATIONS (CONTINUED)

NECROPSY

HISTOPATHOLOGY

STOMACH :
-HYPERKERATOSIS,-SLIGHT

CAECUM :
-BARBITURATE LYSIS,-PRESENT

KIDNEY :
-CORTICAL TUBULAR NEPHROPATHY,-MODERATE

TESTIS :
-TUBULAR ATROPHY,-MODERATE

EPIDIDYMIS :
-OLIGOSPERMIA,-MODERATE
-CELLULAR DEBRIS,-SLIGHT

SEMINAL VESICLE :
-ATROPHY,-MODERATE

PROSTATE :
-ATROPHY,-SLIGHT

SALIVARY GLAND :
-DEGRANULATION/ATROPHY,-MODERATE

THYMUS :
>SECTION EXAMINED; TISSUE NOT PRESENT

LUNG :
-FOAMY HISTIOCYTES,-SLIGHT

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Appendix 10

Individual animal pathology data

	Test article	Control				[ ]
	Group	1	2	3	4	5
COVANCE	Level (ppm)	0	500	1000	5000	10000/7500

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DRAFT

STUDY NUMBER: 0535103

ANIMAL NUMBER: 000056 SEX: MALE DOSE GROUP: 5 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/08/03 STUDY DAY OF DEATH: 95 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 13.6 GRAMS

OBSERVATIONS (CONTINUED)

NECROPSY	HISTOPATHOLOGY
	LUNG : -INFLAMMATORY CELL FOCI,-MINIMAL
	PARATHYROID : >UNREMARKABLE >NOTE:>ONE SAMPLE.
	ADIPOSE TISSUE : -ATROPHY,-SLIGHT

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
EYE, OPTIC NERVE, STERNUM + MARROW, SCIATIC NERVE, PANCREAS, DUODENUM, JEJUNUM, ILEUM, COLON, RECTUM, GALL BLADDER, ADRENAL, URINARY BLADDER, MANDIBULAR LN, HEART, AORTA, TRACHEA, OESOPHAGUS, THYROID, PITUITARY, BRAIN, SPINAL CORD

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Appendix 10

Individual animal pathology data

Test article	Control		[		]	.
Group	1	2	3	4	5	.
Level (ppm)	0	500	1000	5000	10000/7500	.

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DRAFT

STUDY NUMBER: 0535103

ANIMAL NUMBER: 000057 SEX: MALE DOSE GROUP: 5 SACRIFICE STATUS: UNSCHEDULED (M)
DATE OF DEATH: 06/17/03 STUDY DAY OF DEATH: 12 STUDY WEEK OF DEATH: 2 TERMINAL BODY WEIGHT: 12.4 GRAMS

OBSERVATIONS

NECROPSY

SPLEEN :
-SMALL, SLIGHT

ANIMAL :
-THIN

HISTOPATHOLOGY

OPTIC NERVE :
>TISSUE MISSING

HARDERIAN GLAND :
-ATROPHY,-SLIGHT

SKIN + SUBCUTIS :
-ADNEXAL ATROPHY,-SLIGHT

MUSCLE :
-ATROPHY,-SLIGHT

FEMUR + MARROW :
-OSTEOCHONDRAL ATROPHY,-SLIGHT

LIVER :
-CENTRILOBULAR HYPERTROPHY/VACUOLATION,-SLIGHT

SPLEEN :
-ATROPHY,-SLIGHT

STOMACH :
-HYPERKERATOSIS,-MINIMAL

CAECUM :
-BARBITURATE LYSIS,-PRESENT

COLON :
-BARBITURATE LYSIS,-PRESENT

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Appendix 10

Individual animal pathology data

Test article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

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DRAFT

STUDY NUMBER: 0535103

ANIMAL NUMBER: 000057 SEX: MALE DOSE GROUP: 5 SACRIFICE STATUS: UNSCHEDULED (M)
DATE OF DEATH: 06/17/03 STUDY DAY OF DEATH: 12 STUDY WEEK OF DEATH: 2 TERMINAL BODY WEIGHT: 12.4 GRAMS

OBSERVATIONS (CONTINUED)

NECROPSY

HISTOPATHOLOGY

KIDNEY :
-CORTICAL TUBULAR NEPHROPATHY,-MINIMAL

TESTIS :
-GERM CELL DEGENERATION,-MINIMAL

SEMINAL VESICLE :
-ATROPHY,-SLIGHT

PROSTATE :
-ATROPHY,-MODERATE

SALIVARY GLAND :
-DEGRANULATION/ATROPHY,-MODERATE

MANDIBULAR LN :
>SECTION EXAMINED; TISSUE NOT PRESENT

THYMUS :
>SECTION EXAMINED; TISSUE NOT PRESENT

PARATHYROID :
>SECTION EXAMINED; TISSUE NOT PRESENT

ADIPOSE TISSUE :
-ATROPHY,-MODERATE

CAUSE OF DEMISE :
-TREATMENT-RELATED,-PRESENT
>NOTE:>TREATMENT-RELATED DETERIORATION IN BODY CONDITION.

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Appendix 10

Individual animal pathology data

	Test article	Control		[		]
	Group	1	2	3	4	5
	Level (ppm)	0	500	1000	5000	10000/7500

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HARROGATE, ENGLAND

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DRAFT

STUDY NUMBER: 0535103

ANIMAL NUMBER: 000057 SEX: MALE DOSE GROUP: 5 SACRIFICE STATUS: UNSCHEDULED (M)
DATE OF DEATH: 06/17/03 STUDY DAY OF DEATH: 12 STUDY WEEK OF DEATH: 2 TERMINAL BODY WEIGHT: 12.4 GRAMS

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
EYE, STERNUM + MARROW, SCIATIC NERVE, PANCREAS, MESENTERIC LN, DUODENUM, JEJUNUM, ILEUM, RECTUM, GALL BLADDER, ADRENAL, EPIDIDYMIS, URINARY BLADDER, LUNG, HEART, AORTA, TRACHEA, OESOPHAGUS, THYROID, PITUITARY, BRAIN, SPINAL CORD

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Appendix 10

Individual animal pathology data

Test article	Control		[		]	.
Group	1	2	3	4	5	.
Level (ppm)	0	500	1000	5000	10000/7500	.

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STUDY NUMBER: 0535103

ANIMAL NUMBER: 000058 SEX: MALE DOSE GROUP: 5 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/08/03 STUDY DAY OF DEATH: 95 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 12.1 GRAMS

OBSERVATIONS

NECROPSY

LIVER :
-MOTTLED, MODERATE; ALL LOBES

SPLEEN :
-SMALL, SLIGHT

TESTIS :
-SMALL, MINIMAL; BILATERAL

EPIDIDYMIS :
-SMALL, MINIMAL; BILATERAL

SEMINAL VESICLE :
-SMALL, SLIGHT; BILATERAL

THYMUS :
-SMALL, SLIGHT; BILATERAL

HISTOPATHOLOGY

HARDERIAN GLAND :
-ATROPHY,-SLIGHT

SKIN + SUBCUTIS :
-ADNEXAL ATROPHY,-SLIGHT

MUSCLE :
-ATROPHY,-SLIGHT

FEMUR + MARROW :
-OSTEOCHONDRAL ATROPHY,-MINIMAL

LIVER :
-PIGMENT,-MINIMAL
-CENTRILOBULAR HYPERTROPHY/VACUOLATION,-MODERATELY SEVERE

SPLEEN :
-ATROPHY,-MODERATE
-HAEMOPOIESIS,-MINIMAL

MESENTERIC LN :
-ATROPHY,-MINIMAL

STOMACH :
-HYPERKERATOSIS,-SLIGHT

ADRENAL :
>UNREMARKABLE
>NOTE:>ONE SAMPLE.

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Appendix 10

Individual animal pathology data

	Test article	Control				[ ]
	Group	1	2	3	4	5
COVANCE	Level (ppm)	0	500	1000	5000	10000/7500
HARROGATE, ENGLAND						

DRAFT

STUDY NUMBER: 0535103

ANIMAL NUMBER: 000058 SEX: MALE DOSE GROUP: 5 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/08/03 STUDY DAY OF DEATH: 95 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 12.1 GRAMS

OBSERVATIONS (CONTINUED)

NECROPSY

HISTOPATHOLOGY

KIDNEY :
-CORTICAL TUBULAR NEPHROPATHY,-MODERATELY SEVERE

TESTIS :
-TUBULAR ATROPHY,-MODERATE

EPIDIDYMIS :
-OLIGOSPERMIA,-MODERATE
-CELLULAR DEBRIS,-SLIGHT

SEMINAL VESICLE :
-ATROPHY,-SLIGHT

PROSTATE :
-ATROPHY,-SLIGHT

SALIVARY GLAND :
-DEGRANULATION/ATROPHY,-MODERATE

THYMUS :
-ATROPHY,-MODERATE

LUNG :
-FOAMY HISTIOCYTES,-SLIGHT

HEART :
-MYOCARDIAL DEGENERATION/FIBROSIS,-SLIGHT

ADIPOSE TISSUE :
-ATROPHY,-SLIGHT

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Appendix 10

Individual animal pathology data

Test article	Control				[	]
Group	1	2	3	4	5	
Level (ppm)	0	500	1000	5000	10000/7500	

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STUDY NUMBER: 0535103

ANIMAL NUMBER: 000058 SEX: MALE DOSE GROUP: 5 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/08/03 STUDY DAY OF DEATH: 95 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 12.1 GRAMS

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
EYE, OPTIC NERVE, STERNUM + MARROW, SCIATIC NERVE, PANCREAS, DUODENUM, JEJUNUM, ILEUM, CAECUM, COLON, RECTUM, GALL BLADDER, URINARY BLADDER, MANDIBULAR LN, AORTA, TRACHEA, OESOPHAGUS, THYROID, PARATHYROID, PITUITARY, BRAIN, SPINAL CORD

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Appendix 10

Individual animal pathology data

Test article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

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DRAFT

STUDY NUMBER: 0535103

ANIMAL NUMBER: 000059 SEX: MALE DOSE GROUP: 5 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/08/03 STUDY DAY OF DEATH: 95 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 15.0 GRAMS

OBSERVATIONS

NECROPSY

ANIMAL :
-NOT REMARKABLE

HISTOPATHOLOGY

OPTIC NERVE :
>TISSUE MISSING

HARDERIAN GLAND :
-ATROPHY,-MINIMAL

SKIN + SUBCUTIS :
-ADNEXAL ATROPHY,-SLIGHT

MUSCLE :
-ATROPHY,-SLIGHT

FEMUR + MARROW :
-OSTEOCHONDRAL ATROPHY,-SLIGHT

LIVER :
-CENTRILOBULAR HYPERTROPHY/VACUOLATION,-MODERATELY SEVERE

SPLEEN :
-ATROPHY,-SLIGHT
-HAEMOPOIESIS,-MINIMAL

MESENTERIC LN :
>SECTION EXAMINED; TISSUE NOT PRESENT

ADRENAL :
>UNREMARKABLE
>NOTE:>ONE SAMPLE.

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Appendix 10

Individual animal pathology data

Test article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

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DRAFT

STUDY NUMBER: 0535103

ANIMAL NUMBER: 000059 SEX: MALE DOSE GROUP: 5 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/08/03 STUDY DAY OF DEATH: 95 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 15.0 GRAMS

OBSERVATIONS (CONTINUED)

NECROPSY

HISTOPATHOLOGY

KIDNEY :
-CORTICAL TUBULAR NEPHROPATHY,-MODERATE

TESTIS :
-TUBULAR ATROPHY,-SLIGHT

SALIVARY GLAND :
-DEGRANULATION/ATROPHY,-MINIMAL

MANDIBULAR LN :
-ATROPHY,-SLIGHT

THYMUS :
-ATROPHY,-SLIGHT

HEART :
-MYOCARDIAL DEGENERATION/FIBROSIS,-SLIGHT

PARATHYROID :
>UNREMARKABLE
>NOTE:>ONE SAMPLE.

ADIPOSE TISSUE :
-ATROPHY,-SLIGHT

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Appendix 10

Individual animal pathology data

Test article	Control				[ ]
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

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DRAFT

STUDY NUMBER: 0535103

ANIMAL NUMBER: 000059 SEX: MALE DOSE GROUP: 5 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/08/03 STUDY DAY OF DEATH: 95 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 15.0 GRAMS

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
EYE, STERNUM + MARROW, SCIATIC NERVE, PANCREAS, STOMACH, DUODENUM, JEJUNUM, ILEUM, CAECUM, COLON, RECTUM, GALL BLADDER, EPIDIDYMIS, SEMINAL VESICLE, URINARY BLADDER, PROSTATE, LUNG, AORTA, TRACHEA, OESOPHAGUS, THYROID, PITUITARY, BRAIN, SPINAL CORD

Appendix 10

Individual animal pathology data

Test article	Control				[	]
Group	1	2	3	4	5	
Level (ppm)	0	500	1000	5000	10000/7500	

COVANCE
HARROGATE, ENGLAND

DRAFT

STUDY NUMBER: 0535103

ANIMAL NUMBER: 000060 SEX: MALE DOSE GROUP: 5 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/08/03 STUDY DAY OF DEATH: 95 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 15.6 GRAMS

O B S E R V A T I O N S

NECROPSY

SEMINAL VESICLE :
-SMALL, SLIGHT; BILATERAL

HISTOPATHOLOGY

HARDERIAN GLAND :
-ATROPHY,-MINIMAL

SKIN + SUBCUTIS :
-ADNEXAL ATROPHY,-SLIGHT

MUSCLE :
-ATROPHY,-SLIGHT

FEMUR + MARROW :
-OSTEOCHONDRAL ATROPHY,-MINIMAL

LIVER :
-GLYCOGEN VACUOLATION,-MINIMAL
-CENTRILOBULAR HYPERTROPHY/VACUOLATION,-MODERATELY SEVERE

SPLEEN :
-ATROPHY,-SLIGHT
-ACCESSORY SPLEEN,-PRESENT

MESENTERIC LN :
-ATROPHY,-SLIGHT

STOMACH :
-HYPERKERATOSIS,-MINIMAL

ADRENAL :
>UNREMARKABLE
>NOTE:>ONE MEDULLA.

Appendix 10

Individual animal pathology data

Test article	Control		[		]	.
Group	1	2	3	4	5	.
Level (ppm)	0	500	1000	5000	10000/7500	.

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DRAFT STUDY NUMBER: 0535103

ANIMAL NUMBER: 000060 SEX: MALE DOSE GROUP: 5 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/08/03 STUDY DAY OF DEATH: 95 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 15.6 GRAMS

O B S E R V A T I O N S (CONTINUED)

NECROPSY	HISTOPATHOLOGY
	KIDNEY : -CORTICAL TUBULAR NEPHROPATHY,-MODERATE TESTIS : -TUBULAR ATROPHY,-SLIGHT EPIDIDYMIS : -OLIGOSPERMIA,-MINIMAL -CELLULAR DEBRIS,-SLIGHT SEMINAL VESICLE : -ATROPHY,-SLIGHT SALIVARY GLAND : -DEGRANULATION/ATROPHY,-MINIMAL MANDIBULAR LN : -ATROPHY,-SLIGHT THYMUS : -ATROPHY,-MODERATE HEART : -MYOCARDIAL DEGENERATION/FIBROSIS,-SLIGHT ADIPOSE TISSUE : -ATROPHY,-MODERATE

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Appendix 10

Individual animal pathology data

Test article	Control			[	]	.
Group	1	2	3	4	5	.
Level (ppm)	0	500	1000	5000	10000/7500	.

COVANCE
HARROGATE, ENGLAND

DRAFT

STUDY NUMBER: 0535103

ANIMAL NUMBER: 000060 SEX: MALE DOSE GROUP: 5 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/08/03 STUDY DAY OF DEATH: 95 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 15.6 GRAMS

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
EYE, OPTIC NERVE, STERNUM + MARROW, SCIATIC NERVE, PANCREAS, DUODENUM, JEJUNUM, ILEUM, CAECUM, COLON, RECTUM, GALL BLADDER, URINARY BLADDER, PROSTATE, LUNG, AORTA, TRACHEA, OESOPHAGUS, THYROID, PARATHYROID, PITUITARY, BRAIN, SPINAL CORD

Appendix 10

Individual animal pathology data

Test article	Control			[	]
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

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DRAFT

STUDY NUMBER: 0535103

ANIMAL NUMBER: 000061 SEX: FEMALE DOSE GROUP: 1 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/09/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 23.0 GRAMS

OBSERVATIONS

NECROPSY

SKIN + SUBCUTIS :
-FUR LOSS, SLIGHT; ON HEAD

HISTOPATHOLOGY

SKIN + SUBCUTIS :
-DERMATITIS,-MINIMAL
>NOTE:>EXTRA SAMPLE: ONE.

LIVER :
-INFLAMMATORY CELL FOCI,-MINIMAL

SPLEEN :
-HAEMOPOIESIS,-MINIMAL

ADRENAL :
-SUBCAPSULAR CELL HYPERPLASIA,-MINIMAL

KIDNEY :
-INFLAMMATORY CELL FOCI,-MINIMAL

UTERUS :
-METOESTRUS,-PRESENT
-CYSTIC GLANDS,-MINIMAL

THYMUS :
-CYST,-PRESENT

PARATHYROID :
>UNREMARKABLE
>NOTE:>ONE SAMPLE.

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Appendix 10

Individual animal pathology data

Test article	Control			[	]
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

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DRAFT

STUDY NUMBER: 0535103

ANIMAL NUMBER: 000061 SEX: FEMALE DOSE GROUP: 1 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/09/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 23.0 GRAMS

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
EYE, OPTIC NERVE, HARDERIAN GLAND, MAMMARY GLAND, MUSCLE, FEMUR + MARROW, STERNUM + MARROW, SCIATIC NERVE, PANCREAS, MESENTERIC LN, STOMACH, DUODENUM, JEJUNUM, ILEUM, CAECUM, COLON, RECTUM, GALL BLADDER, OVARY, URINARY BLADDER, VAGINA, SALIVARY GLAND, MANDIBULAR LN, LUNG, HEART, AORTA, TRACHEA, OESOPHAGUS, THYROID, PITUITARY, BRAIN

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Appendix 10

Individual animal pathology data

Test article	Control		[		]	.
Group	1	2	3	4	5	.
Level (ppm)	0	500	1000	5000	10000/7500	.

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DRAFT

STUDY NUMBER: 0535103

ANIMAL NUMBER: 000062 SEX: FEMALE DOSE GROUP: 1 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/09/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 22.5 GRAMS

OBSERVATIONS

NECROPSY	HISTOPATHOLOGY
SKIN + SUBCUTIS : -VIBRISSAE MISSING	SKIN + SUBCUTIS : >UNREMARKABLE
LIVER : -PALE, SLIGHT; ALL LOBES	MUSCLE : -MYOPATHY,-MINIMAL >NOTE:>IN MUSCLE PROVIDED IN SECTION OF FEMUR.
	LIVER : -INFLAMMATORY CELL FOCI,-MINIMAL >NOTE:>OTHERWISE UNREMARKABLE.
	SPLEEN : -HAEMOPOIESIS,-SLIGHT
	ADRENAL : -SUBCAPSULAR CELL HYPERPLASIA,-SLIGHT
	URINARY BLADDER : -INFLAMMATORY CELL FOCI,-MINIMAL
	UTERUS : -PRO-OESTRUS,-PRESENT
	SALIVARY GLAND : -INFLAMMATORY CELL FOCI,-MINIMAL

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Individual animal pathology data

Test article	Control		[		]	.
Group	1	2	3	4	5	.
Level (ppm)	0	500	1000	5000	10000/7500	.

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DRAFT

STUDY NUMBER: 0535103

ANIMAL NUMBER: 000062 SEX: FEMALE DOSE GROUP: 1 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/09/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 22.5 GRAMS

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
EYE, OPTIC NERVE, HARDERIAN GLAND, MAMMARY GLAND, FEMUR + MARROW, STERNUM + MARROW, SCIATIC NERVE, PANCREAS, MESENTERIC LN, STOMACH, DUODENUM, JEJUNUM, ILEUM, CAECUM, COLON, RECTUM, GALL BLADDER, KIDNEY, OVARY, VAGINA, MANDIBULAR LN, THYMUS, LUNG, HEART, AORTA, TRACHEA, OESOPHAGUS, THYROID, PARATHYROID, PITUITARY, BRAIN, SPINAL CORD

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Individual animal pathology data

Test article	Control		[		]	.
Group	1	2	3	4	5	.
Level (ppm)	0	500	1000	5000	10000/7500	.

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DRAFT

STUDY NUMBER: 0535103

ANIMAL NUMBER: 000063 SEX: FEMALE DOSE GROUP: 1 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/09/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 25.1 GRAMS

O B S E R V A T I O N S

NECROPSY

SKIN + SUBCUTIS :
-FUR LOSS, MINIMAL; ON HEAD
-VIBRISSAE MISSING

HISTOPATHOLOGY

SKIN + SUBCUTIS :
-INFLAMMATORY CELL FOCI,-MINIMAL
>NOTE:>OTHERWISE UNREMARKABLE.
EXTRA SAMPLE: ONE.

LIVER :
-GLYCOGEN VACUOLATION,-MINIMAL
-SINGLE CELL NECROSIS/APOPTOSIS,-MINIMAL

SPLEEN :
-HAEMOPOIESIS,-SLIGHT

STOMACH :
-HYPERKERATOSIS,-MINIMAL

ADRENAL :
-SUBCAPSULAR CELL HYPERPLASIA,-SLIGHT

URINARY BLADDER :
-INFLAMMATORY CELL FOCI,-MINIMAL

UTERUS :
-PRO-OESTRUS,-PRESENT

SALIVARY GLAND :
-INFLAMMATORY CELL FOCI,-MINIMAL

PARATHYROID :
>UNREMARKABLE
>NOTE:>ONE SAMPLE.

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Individual animal pathology data

Test article	Control		[		]	.
Group	1	2	3	4	5	.
Level (ppm)	0	500	1000	5000	10000/7500	.

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STUDY NUMBER: 0535103

ANIMAL NUMBER: 000063 SEX: FEMALE DOSE GROUP: 1 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/09/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 25.1 GRAMS

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
EYE, OPTIC NERVE, HARDERIAN GLAND, MAMMARY GLAND, MUSCLE, FEMUR + MARROW, STERNUM + MARROW, SCIATIC NERVE, PANCREAS, MESENTERIC LN, DUODENUM, JEJUNUM, ILEUM, CAECUM, COLON, RECTUM, GALL BLADDER, KIDNEY, OVARY, VAGINA, MANDIBULAR LN, THYMUS, LUNG, HEART, AORTA, TRACHEA, OESOPHAGUS, THYROID, PITUITARY, BRAIN, SPINAL CORD

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Individual animal pathology data

Test article	Control			[	]
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

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DRAFT

STUDY NUMBER: 0535103

ANIMAL NUMBER: 000064 SEX: FEMALE DOSE GROUP: 1 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/09/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 22.7 GRAMS

OBSERVATIONS

NECROPSY	HISTOPATHOLOGY
THORACIC CAVITY : -ABNORMAL CONTENTS; IMPLANT FOUND	LIVER : -INFLAMMATORY CELL FOCI,-MINIMAL SPLEEN : -HAEMOPOIESIS,-MINIMAL ADRENAL : -SUBCAPSULAR CELL HYPERPLASIA,-MINIMAL UTERUS : -DIOESTRUS,-PRESENT THORACIC CAVITY : >NOT REQUIRED TO BE EXAMINED FOR ANIMAL >NOTE:>NO EQUIVALENT SAMPLE FOR CORRELATION WITH NECROPSY.

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
EYE, OPTIC NERVE, HARDERIAN GLAND, SKIN + SUBCUTIS, MAMMARY GLAND, MUSCLE, FEMUR + MARROW, STERNUM + MARROW, SCIATIC NERVE, PANCREAS, MESENTERIC LN, STOMACH, DUODENUM, JEJUNUM, ILEUM, CAECUM, COLON, RECTUM, GALL BLADDER, KIDNEY, OVARY, URINARY BLADDER, VAGINA, SALIVARY GLAND, MANDIBULAR LN, THYMUS, LUNG, HEART, AORTA, TRACHEA, OESOPHAGUS, THYROID, PARATHYROID, PITUITARY, BRAIN, SPINAL CORD

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Individual animal pathology data

Test article	Control		[	]	.
Group	1	2	3	4	5 .
Level (ppm)	0	500	1000	5000	10000/7500 .

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DRAFT

STUDY NUMBER: 0535103

ANIMAL NUMBER: 000065 SEX: FEMALE DOSE GROUP: 1 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/09/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 26.4 GRAMS

OBSERVATIONS

NECROPSY

ANIMAL :
-NOT REMARKABLE

HISTOPATHOLOGY

LIVER :
-INFLAMMATORY CELL FOCI,-MINIMAL

ADRENAL :
-SUBCAPSULAR CELL HYPERPLASIA,-SLIGHT

KIDNEY :
-INFLAMMATORY CELL FOCI,-MINIMAL

URINARY BLADDER :
-INFLAMMATORY CELL FOCI,-MINIMAL

UTERUS :
-METOESTRUS,-PRESENT
-CYSTIC GLANDS,-MINIMAL

SALIVARY GLAND :
-INFLAMMATORY CELL FOCI,-MINIMAL

THYMUS :
-CYST,-PRESENT
-ECTOPIC PARATHYROID,-PRESENT

LUNG :
-INFLAMMATORY CELL FOCI,-MINIMAL

PARATHYROID :
>SECTION EXAMINED; TISSUE NOT PRESENT

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Appendix 10

Individual animal pathology data

Test article	Control			[	]
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

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DRAFT

STUDY NUMBER: 0535103

ANIMAL NUMBER: 000065 SEX: FEMALE DOSE GROUP: 1 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/09/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 26.4 GRAMS

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
EYE, OPTIC NERVE, HARDERIAN GLAND, SKIN + SUBCUTIS, MAMMARY GLAND, MUSCLE, FEMUR + MARROW, STERNUM + MARROW, SCIATIC NERVE, SPLEEN, PANCREAS, MESENTERIC LN, STOMACH, DUODENUM, JEJUNUM, ILEUM, CAECUM, COLON, RECTUM, GALL BLADDER, OVARY, VAGINA, MANDIBULAR LN, HEART, AORTA, TRACHEA, OESOPHAGUS, THYROID, PITUITARY, BRAIN, SPINAL CORD

Appendix 10

Individual animal pathology data

Test article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

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HARROGATE, ENGLAND

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STUDY NUMBER: 0535103

ANIMAL NUMBER: 000066 SEX: FEMALE DOSE GROUP: 1 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/09/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 22.7 GRAMS

OBSERVATIONS

NECROPSY	HISTOPATHOLOGY
ANIMAL : -NOT REMARKABLE	LIVER : -INFLAMMATORY CELL FOCI,-MINIMAL ADRENAL : -SUBCAPSULAR CELL HYPERPLASIA,-MINIMAL UTERUS : -METOESTRUS,-PRESENT PARATHYROID : >UNREMARKABLE >NOTE:>ONE SAMPLE.

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
EYE, OPTIC NERVE, HARDERIAN GLAND, SKIN + SUBCUTIS, MAMMARY GLAND, MUSCLE, FEMUR + MARROW, STERNUM + MARROW, SCIATIC NERVE, SPLEEN, PANCREAS, MESENTERIC LN, STOMACH, DUODENUM, JEJUNUM, ILEUM, CAECUM, COLON, RECTUM, GALL BLADDER, KIDNEY, OVARY, URINARY BLADDER, VAGINA, SALIVARY GLAND, MANDIBULAR LN, THYMUS, LUNG, HEART, AORTA, TRACHEA, OESOPHAGUS, THYROID, PITUITARY, BRAIN, SPINAL CORD

Appendix 10

Individual animal pathology data

Test article	Control		[	]	.
Group	1	2	3	4	5 .
Level (ppm)	0	500	1000	5000	10000/7500 .

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DRAFT

STUDY NUMBER: 0535103

ANIMAL NUMBER: 000067 SEX: FEMALE DOSE GROUP: 1 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/09/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 29.5 GRAMS

O B S E R V A T I O N S

NECROPSY

ABDOMINAL CAVITY :
-ABNORMAL CONTENTS; IMPLANT

HISTOPATHOLOGY

LIVER :
-INFLAMMATORY CELL FOCI,-MINIMAL

SPLEEN :
-HAEMOPOIESIS,-SLIGHT

ADRENAL :
-SUBCAPSULAR CELL HYPERPLASIA,-SLIGHT

URINARY BLADDER :
-INFLAMMATORY CELL FOCI,-MINIMAL

UTERUS :
-PRO-OESTRUS,-PRESENT
-CYSTIC GLANDS,-MINIMAL

PARATHYROID :
>UNREMARKABLE
>NOTE:>ONE SAMPLE.

ABDOMINAL CAVITY :
>NOT REQUIRED TO BE EXAMINED FOR ANIMAL
>NOTE:>NO EQUIVALENT SAMPLE FOR CORRELATION WITH NECROPSY.

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Appendix 10

Individual animal pathology data

Test article	Control			[	]	.
Group	1	2	3	4	5	.
Level (ppm)	0	500	1000	5000	10000/7500	.

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DRAFT

STUDY NUMBER: 0535103

ANIMAL NUMBER: 000067 SEX: FEMALE DOSE GROUP: 1 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/09/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 29.5 GRAMS

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
EYE, OPTIC NERVE, HARDERIAN GLAND, SKIN + SUBCUTIS, MAMMARY GLAND, MUSCLE, FEMUR + MARROW, STERNUM + MARROW, SCIATIC NERVE, PANCREAS, MESENTERIC LN, STOMACH, DUODENUM, JEJUNUM, ILEUM, CAECUM, COLON, RECTUM, GALL BLADDER, KIDNEY, OVARY, VAGINA, SALIVARY GLAND, MANDIBULAR LN, THYMUS, LUNG, HEART, AORTA, TRACHEA, OESOPHAGUS, THYROID, PITUITTARY, BRAIN, SPINAL CORD

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Appendix 10

Individual animal pathology data

Test article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

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STUDY NUMBER: 0535103

ANIMAL NUMBER: 000068 SEX: FEMALE DOSE GROUP: 1 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/09/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 23.1 GRAMS

OBSERVATIONS

NECROPSY

SKIN + SUBCUTIS :
-VIBRISSAE MISSING

LUNG :
-RED FOCUS; RIGHT MIDDLE LOBE

TAIL :
-TIP MISSING

HISTOPATHOLOGY

SKIN + SUBCUTIS :
>UNREMARKABLE
>NOTE:>NO EQUIVALENT SAMPLE FOR CORRELATION WITH NECROPSY.

LIVER :
-INFLAMMATORY CELL FOCI,-MINIMAL

SPLEEN :
-HAEMOPOIESIS,-SLIGHT

ADRENAL :
-SUBCAPSULAR CELL HYPERPLASIA,-SLIGHT

KIDNEY :
-INFLAMMATORY CELL FOCI,-MINIMAL

UTERUS :
-METOESTRUS,-PRESENT

SALIVARY GLAND :
-INFLAMMATORY CELL FOCI,-MINIMAL

LUNG :
-AGONAL CONGESTION/HAEMORRHAGE,-PRESENT
>NOTE:>EXTRA SAMPLE: ONE.

TAIL :
>NOT REQUIRED TO BE EXAMINED FOR ANIMAL
>NOTE:>NO EQUIVALENT SAMPLE FOR CORRELATION WITH NECROPSY.

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Appendix 10

Individual animal pathology data

Test article	Control		[		]	.
Group	1	2	3	4	5	.
Level (ppm)	0	500	1000	5000	10000/7500	.

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DRAFT

STUDY NUMBER: 0535103

ANIMAL NUMBER: 000068 SEX: FEMALE DOSE GROUP: 1 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/09/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 23.1 GRAMS

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
EYE, OPTIC NERVE, HARDERIAN GLAND, MAMMARY GLAND, MUSCLE, FEMUR + MARROW, STERNUM + MARROW, SCIATIC NERVE, PANCREAS, MESENTERIC LN, STOMACH, DUODENUM, JEJUNUM, ILEUM, CAECUM, COLON, RECTUM, GALL BLADDER, OVARY, URINARY BLADDER, VAGINA, MANDIBULAR LN, THYMUS, HEART, AORTA, TRACHEA, OESOPHAGUS, THYROID, PARATHYROID, PITUITARY, BRAIN, SPINAL CORD

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Appendix 10

Individual animal pathology data

Test article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

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DRAFT

STUDY NUMBER: 0535103

ANIMAL NUMBER: 000069 SEX: FEMALE DOSE GROUP: 1 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/09/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 22.4 GRAMS

OBSERVATIONS

NECROPSY	HISTOPATHOLOGY
SKIN + SUBCUTIS : -FUR LOSS, SLIGHT; ON HEAD	SKIN + SUBCUTIS : -ADNEXAL ATROPHY,-SLIGHT >NOTE:>EXTRA SAMPLE: ONE. MUSCLE : -MYOPATHY,-MINIMAL >NOTE:>IN TISSUE PRESENTED IN SECTION OF FEMUR. LIVER : -INFLAMMATORY CELL FOCI,-MINIMAL SPLEEN : -HAEMOPOIESIS,-SLIGHT ADRENAL : -SUBCAPSULAR CELL HYPERPLASIA,-MINIMAL UTERUS : -PRO-OESTRUS,-PRESENT

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
EYE, OPTIC NERVE, HARDERIAN GLAND, MAMMARY GLAND, FEMUR + MARROW, STERNUM + MARROW, SCIATIC NERVE, PANCREAS, MESENTERIC LN, STOMACH, DUODENUM, JEJUNUM, ILEUM, CAECUM, COLON, RECTUM, GALL BLADDER, KIDNEY, OVARY, URINARY BLADDER, VAGINA, SALIVARY GLAND, MANDIBULAR LN, THYMUS, LUNG, HEART, AORTA, TRACHEA, OESOPHAGUS, THYROID, PARATHYROID, PITUITARY, BRAIN, SPINAL CORD

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Appendix 10

Individual animal pathology data

Test article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

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STUDY NUMBER: 0535103

ANIMAL NUMBER: 000070 SEX: FEMALE DOSE GROUP: 1 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/09/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 21.0 GRAMS

OBSERVATIONS

NECROPSY	HISTOPATHOLOGY
ANIMAL : -NOT REMARKABLE	LIVER : -INFLAMMATORY CELL FOCI,-MINIMAL SPLEEN : -HAEMOPOIESIS,-MINIMAL ADRENAL : -SUBCAPSULAR CELL HYPERPLASIA,-SLIGHT KIDNEY : -INFLAMMATORY CELL FOCI,-MINIMAL UTERUS : -METOESTRUS,-PRESENT THYMUS : -CYST,-PRESENT THYROID : -ECTOPIC THYMUS,-PRESENT

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Appendix 10

Individual animal pathology data

Test article	Control		[		]	.
Group	1	2	3	4	5	.
Level (ppm)	0	500	1000	5000	10000/7500	.

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STUDY NUMBER: 0535103

ANIMAL NUMBER: 000070 SEX: FEMALE DOSE GROUP: 1 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/09/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 21.0 GRAMS

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
EYE, OPTIC NERVE, HARDERIAN GLAND, SKIN + SUBCUTIS, MAMMARY GLAND, MUSCLE, FEMUR + MARROW, STERNUM + MARROW, SCIATIC NERVE, PANCREAS, MESENTERIC LN, STOMACH, DUODENUM, JEJUNUM, ILEUM, CAECUM, COLON, RECTUM, GALL BLADDER, OVARY, URINARY BLADDER, VAGINA, SALIVARY GLAND, MANDIBULAR LN, LUNG, HEART, AORTA, TRACHEA, OESOPHAGUS, PARATHYROID, PITUITARY, BRAIN, SPINAL CORD

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Appendix 10

Individual animal pathology data

Test article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

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STUDY NUMBER: 0535103

ANIMAL NUMBER: 000071 SEX: FEMALE DOSE GROUP: 1 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/09/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 22.3 GRAMS

O B S E R V A T I O N S

NECROPSY

ANIMAL :
-NOT REMARKABLE

HISTOPATHOLOGY

SPLEEN :
-HAEMOPOIESIS,-MINIMAL

STOMACH :
-CYSTIC GLANDS,-MINIMAL

ADRENAL :
-SUBCAPSULAR CELL HYPERPLASIA,-SLIGHT

URINARY BLADDER :
-INFLAMMATORY CELL FOCI,-MINIMAL

UTERUS :
-METOESTRUS,-PRESENT

PARATHYROID :
>UNREMARKABLE
>NOTE:>ONE SAMPLE.

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
EYE, OPTIC NERVE, HARDERIAN GLAND, SKIN + SUBCUTIS, MAMMARY GLAND, MUSCLE, FEMUR + MARROW, STERNUM + MARROW, SCIATIC NERVE, LIVER, PANCREAS, MESENTERIC LN, DUODENUM, JEJUNUM, ILEUM, CAECUM, COLON, RECTUM, GALL BLADDER, KIDNEY, OVARY, VAGINA, SALIVARY GLAND, MANDIBULAR LN, THYMUS, LUNG, HEART, AORTA, TRACHEA, OESOPHAGUS, THYROID, PITUITARY, BRAIN, SPINAL CORD

Appendix 10

Individual animal pathology data

Test article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

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STUDY NUMBER: 0535103

ANIMAL NUMBER: 000072 SEX: FEMALE DOSE GROUP: 1 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/09/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 21.6 GRAMS

OBSERVATIONS

NECROPSY	HISTOPATHOLOGY
SKIN + SUBCUTIS : -FUR LOSS, MINIMAL; ON HEAD	SKIN + SUBCUTIS : -FOLLICULITIS,-MINIMAL >NOTE:>EXTRA SAMPLE: ONE. LIVER : -SINGLE CELL NECROSIS/APOPTOSIS,-MINIMAL SPLEEN : -HAEMOPOIESIS,-SLIGHT STOMACH : -GASTRITIS,-MINIMAL -HYPERKERATOSIS,-MINIMAL ADRENAL : -SUBCAPSULAR CELL HYPERPLASIA,-MINIMAL >NOTE:>ONE SAMPLE. UTERUS : -DIOESTRUS,-PRESENT LUNG : -INFLAMMATORY CELL FOCI,-MINIMAL PARATHYROID : >UNREMARKABLE >NOTE:>ONE SAMPLE.

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Individual animal pathology data

Test article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

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DRAFT

STUDY NUMBER: 0535103

ANIMAL NUMBER: 000072 SEX: FEMALE DOSE GROUP: 1 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/09/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 21.6 GRAMS

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
EYE, OPTIC NERVE, HARDERIAN GLAND, MAMMARY GLAND, MUSCLE, FEMUR + MARROW, STERNUM + MARROW, SCIATIC NERVE, PANCREAS, MESENTERIC LN, DUODENUM, JEJUNUM, ILEUM, CAECUM, COLON, RECTUM, GALL BLADDER, KIDNEY, OVARY, URINARY BLADDER, VAGINA, SALIVARY GLAND, MANDIBULAR LN, THYMUS, HEART, AORTA, TRACHEA, OESOPHAGUS, THYROID, PITUITARY, BRAIN, SPINAL CORD

Appendix 10

Individual animal pathology data

Test article	Control		[		]	.
Group	1	2	3	4	5	.
Level (ppm)	0	500	1000	5000	10000/7500	.

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STUDY NUMBER: 0535103

ANIMAL NUMBER: 000073 SEX: FEMALE DOSE GROUP: 2 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/09/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 24.8 GRAMS

O B S E R V A T I O N S

NECROPSY	HISTOPATHOLOGY
ANIMAL : -NOT REMARKABLE	LIVER : -GLYCOGEN VACUOLATION,-MINIMAL -INFLAMMATORY CELL FOCI,-MINIMAL -SINGLE CELL NECROSIS/APOPTOSIS,-MINIMAL SPLEEN : -HAEMOPOIESIS,-MINIMAL KIDNEY : -INFLAMMATORY CELL FOCI,-MINIMAL

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
MESENTERIC LN

Appendix 10

Individual animal pathology data

Test article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

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STUDY NUMBER: 0535103

ANIMAL NUMBER: 000074 SEX: FEMALE DOSE GROUP: 2 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/09/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 25.5 GRAMS

OBSERVATIONS

NECROPSY

ANIMAL :
-NOT REMARKABLE

HISTOPATHOLOGY

LIVER :
-INFLAMMATORY CELL FOCI,-MINIMAL

SPLEEN :
-HAEMOPOIESIS,-MINIMAL

KIDNEY :
-PAPILLARY MINERALISATION,-MINIMAL
-INFLAMMATORY CELL FOCI,-MINIMAL

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
MESENTERIC LN

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Individual animal pathology data

	Test article	Control		[	]	.
	Group	1	2	3	4	5 .
	Level (ppm)	0	500	1000	5000	10000/7500 .

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STUDY NUMBER: 0535103

ANIMAL NUMBER: 000075 SEX: FEMALE DOSE GROUP: 2 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/09/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 23.5 GRAMS

OBSERVATIONS

NECROPSY	HISTOPATHOLOGY
ANIMAL : -NOT REMARKABLE	LIVER : -INFLAMMATORY CELL FOCI,-MINIMAL SPLEEN : -HAEMOPOIESIS,-MINIMAL

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
MESENTERIC LN, KIDNEY

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Individual animal pathology data

Test article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

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STUDY NUMBER: 0535103

ANIMAL NUMBER: 000076 SEX: FEMALE DOSE GROUP: 2 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/09/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 21.9 GRAMS

OBSERVATIONS

NECROPSY	HISTOPATHOLOGY
SKIN + SUBCUTIS : -FUR LOSS, SLIGHT; TO HEAD	SKIN + SUBCUTIS : -ADNEXAL ATROPHY,-MINIMAL LIVER : -INFLAMMATORY CELL FOCI,-MINIMAL KIDNEY : -INFLAMMATORY CELL FOCI,-MINIMAL

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
SPLEEN, MESENTERIC LN

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Individual animal pathology data

Test article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

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STUDY NUMBER: 0535103

ANIMAL NUMBER: 000077 SEX: FEMALE DOSE GROUP: 2 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/09/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 23.5 GRAMS

OBSERVATIONS

NECROPSY	HISTOPATHOLOGY
SKIN + SUBCUTIS : -VIBRISSAE MISSING	SKIN + SUBCUTIS : >NOT REQUIRED TO BE EXAMINED FOR ANIMAL >NOTE:>NO EQUIVALENT SAMPLE FOR CORRELATION WITH NECROPSY. LIVER : -INFLAMMATORY CELL FOCI,-MINIMAL -HEPATOCYTE VACUOLATION,-MINIMAL >NOTE:>HEPATOCYTE VACUOLATION WAS CHARACTERISED BY SMALL WELL CIRCUMSCRIBED CYTOPLASMIC VACUOLES PREDOMINANTLY IN CENTRILOBULAR AND MIDZONAL HEPATOCYTES. SPLEEN : -HAEMOPOIESIS,-MINIMAL KIDNEY : -INFLAMMATORY CELL FOCI,-MINIMAL

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
MESENTERIC LN

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Individual animal pathology data

Test article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

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STUDY NUMBER: 0535103

ANIMAL NUMBER: 000078 SEX: FEMALE DOSE GROUP: 2 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/09/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 20.7 GRAMS

OBSERVATIONS

NECROPSY	HISTOPATHOLOGY
SKIN + SUBCUTIS : -VIBRISSAE MISSING	SKIN + SUBCUTIS : >NOT REQUIRED TO BE EXAMINED FOR ANIMAL >NOTE:>NO EQUIVALENT SAMPLE FOR CORRELATION WITH NECROPSY. LIVER : -INFLAMMATORY CELL FOCI,-MINIMAL

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
SPLEEN, MESENTERIC LN, KIDNEY

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Appendix 10

Individual animal pathology data

Test article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

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STUDY NUMBER: 0535103

ANIMAL NUMBER: 000079 SEX: FEMALE DOSE GROUP: 2 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/09/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 21.9 GRAMS

OBSERVATIONS

NECROPSY	HISTOPATHOLOGY
SKIN + SUBCUTIS : -VIBRISSAE MISSING	SKIN + SUBCUTIS : >NOT REQUIRED TO BE EXAMINED FOR ANIMAL >NOTE:>NO EQUIVALENT SAMPLE FOR CORRELATION WITH NECROPSY. LIVER : -INFLAMMATORY CELL FOCI,-MINIMAL -BASOPHILIC FOCUS,-MINIMAL SPLEEN : -HAEMOPOIESIS,-MINIMAL

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
MESENTERIC LN, KIDNEY

Appendix 10

Individual animal pathology data

Test article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

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STUDY NUMBER: 0535103

ANIMAL NUMBER: 000080 SEX: FEMALE DOSE GROUP: 2 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/09/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 23.2 GRAMS

OBSERVATIONS

NECROPSY	HISTOPATHOLOGY
SKIN + SUBCUTIS : -FUR LOSS, SLIGHT; ON HEAD	SKIN + SUBCUTIS : -ADNEXAL ATROPHY,-MINIMAL LIVER : -INFLAMMATORY CELL FOCI,-MINIMAL -SINGLE CELL NECROSIS/APOPTOSIS,-MINIMAL SPLEEN : -HAEMOPOIESIS,-SLIGHT KIDNEY : -INFLAMMATORY CELL FOCI,-MINIMAL

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
MESENTERIC LN

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Individual animal pathology data

Test article	Control				[ ]
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

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STUDY NUMBER: 0535103

ANIMAL NUMBER: 000081 SEX: FEMALE DOSE GROUP: 2 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/09/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 19.4 GRAMS

OBSERVATIONS

NECROPSY	HISTOPATHOLOGY
THORACIC CAVITY : -MASS; SOFT, DARK, REGULAR, 5MM DIAMETER, LOOSELY ATTACHED TO AORTA	LIVER : -HEPATODIAPHRAGMATIC NODULE,-PRESENT -INFLAMMATORY CELL FOCI,-MINIMAL SPLEEN : -HAEMOPOIESIS,-MINIMAL KIDNEY : -CORTICAL TUBULAR NEPHROPATHY,-MINIMAL THORACIC CAVITY : >UNREMARKABLE >NOTE:>FOR FINDINGS SEE LIVER.

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
MESENTERIC LN

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Individual animal pathology data

Test article	Control				[ ]
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

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STUDY NUMBER: 0535103

ANIMAL NUMBER: 000082 SEX: FEMALE DOSE GROUP: 2 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/09/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 23.3 GRAMS

OBSERVATIONS

NECROPSY	HISTOPATHOLOGY
SKIN + SUBCUTIS : -VIBRISSAE MISSING	SKIN + SUBCUTIS : >NOT REQUIRED TO BE EXAMINED FOR ANIMAL >NOTE:>NO EQUIVALENT SAMPLE FOR CORRELATION WITH NECROPSY. LIVER : -INFLAMMATORY CELL FOCI,-MINIMAL -HEPATOCYTE VACUOLATION,-MINIMAL SPLEEN : -HAEMOPOIESIS,-MINIMAL

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
MESENTERIC LN, KIDNEY

Appendix 10

Individual animal pathology data

Test article	Control		[		]	.
Group	1	2	3	4	5	.
Level (ppm)	0	500	1000	5000	10000/7500	.

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STUDY NUMBER: 0535103

ANIMAL NUMBER: 000083 SEX: FEMALE DOSE GROUP: 2 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/09/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 21.5 GRAMS

OBSERVATIONS

NECROPSY	HISTOPATHOLOGY
SKIN + SUBCUTIS : -VIBRISSAE MISSING	SKIN + SUBCUTIS : >NOT REQUIRED TO BE EXAMINED FOR ANIMAL >NOTE:>NO EQUIVALENT SAMPLE FOR CORRELATION WITH NECROPSY. . LIVER : -INFLAMMATORY CELL FOCI,-MINIMAL SPLEEN : -HAEMOPOIESIS,-MINIMAL KIDNEY : -PAPILLARY MINERALISATION,-MINIMAL

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
MESENTERIC LN

Appendix 10

Individual animal pathology data

Test article	Control				[	]
Group	1	2	3	4	5	
Level (ppm)	0	500	1000	5000	10000/7500	

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STUDY NUMBER: 0535103

ANIMAL NUMBER: 000084 SEX: FEMALE DOSE GROUP: 2 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/09/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 22.3 GRAMS

OBSERVATIONS

NECROPSY	HISTOPATHOLOGY
SKIN + SUBCUTIS : -FUR LOSS, MODERATE; ON HEAD	SKIN + SUBCUTIS : -ADNEXAL ATROPHY,-MINIMAL LIVER : -HEPATOCYTE VACUOLATION,-MINIMAL SPLEEN : -HAEMOPOIESIS,-SLIGHT

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
MESENTERIC LN, KIDNEY

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Appendix 10

Individual animal pathology data

Test article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

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STUDY NUMBER: 0535103

ANIMAL NUMBER: 000085 SEX: FEMALE DOSE GROUP: 3 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/09/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 21.9 GRAMS

OBSERVATIONS

NECROPSY

SKIN + SUBCUTIS :
-FUR LOSS, MODERATE; HEAD, NECK, UPPER BACK, CHEST AND ABDOMEN
-VIBRISSAE MISSING

HISTOPATHOLOGY

SKIN + SUBCUTIS :
-FOLLICULITIS,-SLIGHT
>NOTE:>EXTRA SAMPLE: ONE.

SCIATIC NERVE :
>UNREMARKABLE
>NOTE:>ONE SAMPLE.

LIVER :
-INFLAMMATORY CELL FOCI,-MINIMAL

SPLEEN :
-HAEMOPOIESIS,-SLIGHT

ADRENAL :
-SUBCAPSULAR CELL HYPERPLASIA,-MINIMAL
>NOTE:>ONE MEDULLA.

KIDNEY :
-CORTICAL TUBULAR NEPHROPATHY,-MINIMAL

UTERUS :
-METOESTRUS,-PRESENT

PARATHYROID :
>UNREMARKABLE
>NOTE:>ONE SAMPLE.

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Appendix 10

Individual animal pathology data

Test article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

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STUDY NUMBER: 0535103

ANIMAL NUMBER: 000085 SEX: FEMALE DOSE GROUP: 3 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/09/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 21.9 GRAMS

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
EYE, OPTIC NERVE, HARDERIAN GLAND, MAMMARY GLAND, MUSCLE, FEMUR + MARROW, STERNUM + MARROW, PANCREAS, MESENTERIC LN, STOMACH, DUODENUM, JEJUNUM, ILEUM, CAECUM, COLON, RECTUM, GALL BLADDER, OVARY, URINARY BLADDER, VAGINA, SALIVARY GLAND, MANDIBULAR LN, THYMUS, LUNG, HEART, AORTA, TRACHEA, OESOPHAGUS, THYROID, PITUITARY, BRAIN, SPINAL CORD

Appendix 10

Individual animal pathology data

Test article	Control		[		]	.
Group	1	2	3	4	5	.
Level (ppm)	0	500	1000	5000	10000/7500	.

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STUDY NUMBER: 0535103

ANIMAL NUMBER: 000086 SEX: FEMALE DOSE GROUP: 3 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/09/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 23.0 GRAMS

OBSERVATIONS

NECROPSY

SPLEEN :
-LARGE, SLIGHT

HISTOPATHOLOGY

MAMMARY GLAND :
>SECTION EXAMINED; TISSUE NOT PRESENT

LIVER :
-GLYCOGEN VACUOLATION,-MINIMAL
-INFLAMMATORY CELL FOCI,-MINIMAL

SPLEEN :
-HAEMOPOIESIS,-SLIGHT

GALL BLADDER :
>SECTION EXAMINED; TISSUE NOT PRESENT

ADRENAL :
-SUBCAPSULAR CELL HYPERPLASIA,-MINIMAL

KIDNEY :
-CORTICAL TUBULAR NEPHROPATHY,-MINIMAL
-INFLAMMATORY CELL FOCI,-MINIMAL

UTERUS :
-METOESTRUS,-PRESENT

PARATHYROID :
>UNREMARKABLE
>NOTE:>ONE SAMPLE.

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Individual animal pathology data

Test article	Control		[		]	.
Group	1	2	3	4	5	.
Level (ppm)	0	500	1000	5000	10000/7500	.

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STUDY NUMBER: 0535103

ANIMAL NUMBER: 000086 SEX: FEMALE DOSE GROUP: 3 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/09/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 23.0 GRAMS

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
EYE, OPTIC NERVE, HARDERIAN GLAND, SKIN + SUBCUTIS, MUSCLE, FEMUR + MARROW, STERNUM + MARROW, SCIATIC NERVE, PANCREAS, MESENTERIC LN, STOMACH, DUODENUM, JEJUNUM, ILEUM, CAECUM, COLON, RECTUM, OVARY, URINARY BLADDER, VAGINA, SALIVARY GLAND, MANDIBULAR LN, THYMUS, LUNG, HEART, AORTA, TRACHEA, OESOPHAGUS, THYROID, PITUITARY, BRAIN, SPINAL CORD

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Appendix 10

Individual animal pathology data

Test article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

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STUDY NUMBER: 0535103

ANIMAL NUMBER: 000087 SEX: FEMALE DOSE GROUP: 3 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/09/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 21.5 GRAMS

OBSERVATIONS

NECROPSY	HISTOPATHOLOGY
SKIN + SUBCUTIS : -FUR LOSS, MODERATE; ON HEAD	SKIN + SUBCUTIS : -ADNEXAL ATROPHY,-MINIMAL >NOTE:>EXTRA SAMPLE: ONE. LIVER : -GLYCOGEN VACUOLATION,-MINIMAL ADRENAL : -SUBCAPSULAR CELL HYPERPLASIA,-MINIMAL KIDNEY : -CORTICAL TUBULAR NEPHROPATHY,-MINIMAL UTERUS : -METOESTRUS,-PRESENT THYMUS : -CYST,-PRESENT PARATHYROID : >UNREMARKABLE >NOTE:>ONE SAMPLE.

Appendix 10

Individual animal pathology data

Test article	Control		[		]	.
Group	1	2	3	4	5	.
Level (ppm)	0	500	1000	5000	10000/7500	.

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STUDY NUMBER: 0535103

ANIMAL NUMBER: 000087 SEX: FEMALE DOSE GROUP: 3 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/09/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 21.5 GRAMS

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
EYE, OPTIC NERVE, HARDERIAN GLAND, MAMMARY GLAND, MUSCLE, FEMUR + MARROW, STERNUM + MARROW, SCIATIC NERVE, SPLEEN, PANCREAS, MESENTERIC LN, STOMACH, DUODENUM, JEJUNUM, ILEUM, CAECUM, COLON, RECTUM, GALL BLADDER, OVARY, URINARY BLADDER, VAGINA, SALIVARY GLAND, MANDIBULAR LN, LUNG, HEART, AORTA, TRACHEA, OESOPHAGUS, THYROID, PITUITARY, BRAIN, SPINAL CORD

Appendix 10

Individual animal pathology data

Test article	Control		[		]	.
Group	1	2	3	4	5	.
Level (ppm)	0	500	1000	5000	10000/7500	.

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DRAFT

STUDY NUMBER: 0535103

ANIMAL NUMBER: 000088 SEX: FEMALE DOSE GROUP: 3 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/09/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 21.9 GRAMS

OBSERVATIONS

NECROPSY	HISTOPATHOLOGY
SKIN + SUBCUTIS : -VIBRISSAE MISSING	SKIN + SUBCUTIS : >UNREMARKABLE >NOTE:>NO EQUIVALENT SAMPLE FOR CORRELATION WITH NECROPSY.
	LIVER : -GLYCOGEN VACUOLATION,-MINIMAL -INFLAMMATORY CELL FOCI,-MINIMAL
	SPLEEN : -HAEMOPOIESIS,-SLIGHT
	ADRENAL : -SUBCAPSULAR CELL HYPERPLASIA,-MINIMAL
	KIDNEY : -CORTICAL TUBULAR NEPHROPATHY,-MINIMAL
	UTERUS : -METOESTRUS,-PRESENT
	PARATHYROID : >UNREMARKABLE >NOTE:>ONE SAMPLE.

Appendix 10

Individual animal pathology data

Test article	Control				[ ]	.
Group	1	2	3	4	5	.
Level (ppm)	0	500	1000	5000	10000/7500	.

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DRAFT

STUDY NUMBER: 0535103

ANIMAL NUMBER: 000088 SEX: FEMALE DOSE GROUP: 3 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/09/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 21.9 GRAMS

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
EYE, OPTIC NERVE, HARDERIAN GLAND, MAMMARY GLAND, MUSCLE, FEMUR + MARROW, STERNUM + MARROW, SCIATIC NERVE, PANCREAS, MESENTERIC LN, STOMACH, DUODENUM, JEJUNUM, ILEUM, CAECUM, COLON, RECTUM, GALL BLADDER, OVARY, URINARY BLADDER, VAGINA, SALIVARY GLAND, MANDIBULAR LN, THYMUS, LUNG, HEART, AORTA, TRACHEA, OESOPHAGUS, THYROID, PITUITARY, BRAIN, SPINAL CORD

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Appendix 10

Individual animal pathology data

Test article	Control				[ ]
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

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DRAFT

STUDY NUMBER: 0535103

ANIMAL NUMBER: 000089 SEX: FEMALE DOSE GROUP: 3 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/09/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 20.7 GRAMS

OBSERVATIONS

NECROPSY

SKIN + SUBCUTIS :
-VIBRISSAE MISSING

HISTOPATHOLOGY

SKIN + SUBCUTIS :
>UNREMARKABLE
>NOTE:>NO EQUIVALENT SAMPLE FOR CORRELATION WITH NECROPSY.

LIVER :
-INFLAMMATORY CELL FOCI,-MINIMAL
-HEPATOCYTE VACUOLATION,-MINIMAL

SPLEEN :
-HAEMOPOIESIS,-MINIMAL

PANCREAS :
-DEGRANULATION,-MINIMAL

STOMACH :
-GASTRITIS,-SLIGHT
-HYPERKERATOSIS,-MINIMAL

ADRENAL :
-SUBCAPSULAR CELL HYPERPLASIA,-MINIMAL

KIDNEY :
-INFLAMMATORY CELL FOCI,-MINIMAL

URINARY BLADDER :
-INFLAMMATORY CELL FOCI,-MINIMAL

UTERUS :
-OESTRUS,-PRESENT

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Appendix 10

Individual animal pathology data

Test article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

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DRAFT

STUDY NUMBER: 0535103

ANIMAL NUMBER: 000089 SEX: FEMALE DOSE GROUP: 3 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/09/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 20.7 GRAMS

OBSERVATIONS (CONTINUED)

NECROPSY

HISTOPATHOLOGY

THYMUS :
-CYST,-PRESENT

HEART :
-INFLAMMATORY CELL FOCI,-MINIMAL

PARATHYROID :
>SECTION EXAMINED; TISSUE NOT PRESENT

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
EYE, OPTIC NERVE, HARDERIAN GLAND, MAMMARY GLAND, MUSCLE, FEMUR + MARROW, STERNUM + MARROW, SCIATIC NERVE, MESENTERIC LN, DUODENUM, JEJUNUM, ILEUM, CAECUM, COLON, RECTUM, GALL BLADDER, OVARY, VAGINA, SALIVARY GLAND, MANDIBULAR LN, LUNG, AORTA, TRACHEA, OESOPHAGUS, THYROID, PITUITARY, BRAIN, SPINAL CORD

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Appendix 10

Individual animal pathology data

Test article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

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DRAFT

STUDY NUMBER: 0535103

ANIMAL NUMBER: 000090 SEX: FEMALE DOSE GROUP: 3 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/09/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 21.8 GRAMS

OBSERVATIONS

NECROPSY	HISTOPATHOLOGY
SKIN + SUBCUTIS : -FUR LOSS, MINIMAL; ON HEAD	SKIN + SUBCUTIS : -ADNEXAL ATROPHY,-SLIGHT >NOTE:>EXTRA SAMPLE: ONE. SPLEEN : -HAEMOPOIESIS,-SLIGHT STOMACH : -HYPERKERATOSIS,-MINIMAL ADRENAL : -SUBCAPSULAR CELL HYPERPLASIA,-MINIMAL KIDNEY : -CORTICAL TUBULAR NEPHROPATHY,-SLIGHT URINARY BLADDER : -INFLAMMATORY CELL FOCI,-MINIMAL UTERUS : -OESTRUS,-PRESENT THYROID : >SECTION EXAMINED; TISSUE NOT PRESENT PARATHYROID : >SECTION EXAMINED; TISSUE NOT PRESENT

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Individual animal pathology data

	Test article	Control		[		]
	Group	1	2	3	4	5
	Level (ppm)	0	500	1000	5000	10000/7500

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DRAFT

STUDY NUMBER: 0535103

ANIMAL NUMBER: 000090 SEX: FEMALE DOSE GROUP: 3 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/09/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 21.8 GRAMS

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
EYE, OPTIC NERVE, HARDERIAN GLAND, MAMMARY GLAND, MUSCLE, FEMUR + MARROW, STERNUM + MARROW, SCIATIC NERVE, LIVER, PANCREAS, MESENTERIC LN, DUODENUM, JEJUNUM, ILEUM, CAECUM, COLON, RECTUM, GALL BLADDER, OVARY, VAGINA, SALIVARY GLAND, MANDIBULAR LN, THYMUS, LUNG, HEART, AORTA, TRACHEA, OESOPHAGUS, PITUITARY, BRAIN, SPINAL CORD

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Individual animal pathology data

Test article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

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STUDY NUMBER: 0535103

ANIMAL NUMBER: 000091 SEX: FEMALE DOSE GROUP: 3 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/09/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 23.4 GRAMS

OBSERVATIONS

NECROPSY	HISTOPATHOLOGY
SKIN + SUBCUTIS : -VIBRISSAE MISSING	SKIN + SUBCUTIS : >UNREMARKABLE >NOTE:>NO EQUIVALENT SAMPLE FOR CORRELATION WITH NECROPSY. LIVER : -INFLAMMATORY CELL FOCI,-MINIMAL STOMACH : -JUNCTIONAL METAPLASIA,-SLIGHT ADRENAL : -SUBCAPSULAR CELL HYPERPLASIA,-MINIMAL UTERUS : -METOESTRUS,-PRESENT PARATHYROID : >SECTION EXAMINED; TISSUE NOT PRESENT

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
EYE, OPTIC NERVE, HARDERIAN GLAND, MAMMARY GLAND, MUSCLE, FEMUR + MARROW, STERNUM + MARROW, SCIATIC NERVE, SPLEEN, PANCREAS, MESENTERIC LN, DUODENUM, JEJUNUM, ILEUM, CAECUM, COLON, RECTUM, GALL BLADDER, KIDNEY, OVARY, URINARY BLADDER, VAGINA, SALIVARY GLAND, MANDIBULAR LN, THYMUS, LUNG, HEART, AORTA, TRACHEA, OESOPHAGUS, THYROID, PITUITARY, BRAIN, SPINAL CORD

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Individual animal pathology data

Test article	Control		[	]	
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

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STUDY NUMBER: 0535103

ANIMAL NUMBER: 000092 SEX: FEMALE DOSE GROUP: 3 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/09/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 21.9 GRAMS

OBSERVATIONS

NECROPSY

ANIMAL :
-NOT REMARKABLE

HISTOPATHOLOGY

MUSCLE :
-MYOPATHY,-MINIMAL

LIVER :
-INFLAMMATORY CELL FOCI,-MINIMAL

ADRENAL :
-SUBCAPSULAR CELL HYPERPLASIA,-MINIMAL
>NOTE:>ONE MEDULLA.

KIDNEY :
-CORTICAL TUBULAR NEPHROPATHY,-MINIMAL

URINARY BLADDER :
-INFLAMMATORY CELL FOCI,-MINIMAL

UTERUS :
-METOESTRUS,-PRESENT
-CYSTIC GLANDS,-SLIGHT

THYMUS :
-CYST,-PRESENT

PARATHYROID :
>UNREMARKABLE
>NOTE:>ONE SAMPLE.

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Individual animal pathology data

Test article	Control		[		]	.
Group	1	2	3	4	5	.
Level (ppm)	0	500	1000	5000	10000/7500	.

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STUDY NUMBER: 0535103

ANIMAL NUMBER: 000092 SEX: FEMALE DOSE GROUP: 3 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/09/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 21.9 GRAMS

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
EYE, OPTIC NERVE, HARDERIAN GLAND, SKIN + SUBCUTIS, MAMMARY GLAND, FEMUR + MARROW, STERNUM + MARROW, SCIATIC NERVE, SPLEEN, PANCREAS, MESENTERIC LN, STOMACH, DUODENUM, JEJUNUM, ILEUM, CAECUM, COLON, RECTUM, GALL BLADDER, OVARY, VAGINA, SALIVARY GLAND, MANDIBULAR LN, LUNG, HEART, AORTA, TRACHEA, OESOPHAGUS, THYROID, PITUITARY, BRAIN, SPINAL CORD

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Appendix 10

Individual animal pathology data

Test article	Control		[		]	
Group	1	2	3	4	5	
Level (ppm)	0	500	1000	5000	10000/7500	

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STUDY NUMBER: 0535103

ANIMAL NUMBER: 000093 SEX: FEMALE DOSE GROUP: 3 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/09/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 21.2 GRAMS

OBSERVATIONS

NECROPSY	HISTOPATHOLOGY
SKIN + SUBCUTIS : -VIBRISSAE MISSING	SKIN + SUBCUTIS : >UNREMARKABLE >NOTE:>NO EQUIVALENT SAMPLE FOR CORRELATION WITH NECROPSY. LIVER : -INFLAMMATORY CELL FOCI,-MINIMAL SPLEEN : -HAEMOPOIESIS,-SLIGHT ADRENAL : -SUBCAPSULAR CELL HYPERPLASIA,-MINIMAL KIDNEY : -CORTICAL TUBULAR NEPHROPATHY,-MINIMAL -INFLAMMATORY CELL FOCI,-MINIMAL URINARY BLADDER : -INFLAMMATORY CELL FOCI,-MINIMAL UTERUS : -PRO-OESTRUS,-PRESENT PARATHYROID : >UNREMARKABLE >NOTE:>ONE SAMPLE.

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Appendix 10

Individual animal pathology data

	Test article	Control				[ ]
	Group	1	2	3	4	5
COVANCE	Level (ppm)	0	500	1000	5000	10000/7500

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STUDY NUMBER: 0535103

ANIMAL NUMBER: 000093 SEX: FEMALE DOSE GROUP: 3 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/09/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 21.2 GRAMS

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
EYE, OPTIC NERVE, HARDERIAN GLAND, MAMMARY GLAND, MUSCLE, FEMUR + MARROW, STERNUM + MARROW, SCIATIC NERVE, PANCREAS, MESENTERIC LN, STOMACH, DUODENUM, JEJUNUM, ILEUM, CAECUM, COLON, RECTUM, GALL BLADDER, OVARY, VAGINA, SALIVARY GLAND, MANDIBULAR LN, THYMUS, LUNG, HEART, AORTA, TRACHEA, OESOPHAGUS, THYROID, PITUITARY, BRAIN, SPINAL CORD

Appendix 10

Individual animal pathology data

Test article	Control		[		]	.
Group	1	2	3	4	5	.
Level (ppm)	0	500	1000	5000	10000/7500	.

ANIMAL NUMBER: 000094 SEX: FEMALE DOSE GROUP: 3 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/09/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 23.6 GRAMS

O B S E R V A T I O N S

NECROPSY

SKIN + SUBCUTIS :
-FUR LOSS, SLIGHT; ON HEAD

THORACIC CAVITY :
-RED FLUID; APPROXIMATELY 0.5ML

HISTOPATHOLOGY

SKIN + SUBCUTIS :
-ADNEXAL ATROPHY,-MINIMAL
>NOTE:>EXTRA SAMPLE: ONE.

LIVER :
-GLYCOGEN VACUOLATION,-MINIMAL
-INFLAMMATORY CELL FOCI,-MINIMAL

SPLEEN :
-HAEMOPOIESIS,-MINIMAL

ADRENAL :
-SUBCAPSULAR CELL HYPERPLASIA,-MINIMAL

KIDNEY :
-CORTICAL TUBULAR NEPHROPATHY,-MINIMAL

UTERUS :
-OESTRUS,-PRESENT

THYMUS :
-CYST,-PRESENT

PARATHYROID :
>UNREMARKABLE
>NOTE:>ONE SAMPLE.

THORACIC CAVITY :
-AGONAL CONGESTION/HAEMORRHAGE,-PRESENT
>NOTE:>EXTENDING TO TISSUES ADJACENT TO THYMUS.

Appendix 10

Individual animal pathology data

Test article	Control				[	]
Group	1	2	3	4	5	
Level (ppm)	0	500	1000	5000	10000/7500	

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STUDY NUMBER: 0535103

ANIMAL NUMBER: 000094 SEX: FEMALE DOSE GROUP: 3 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/09/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 23.6 GRAMS

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
EYE, OPTIC NERVE, HARDERIAN GLAND, MAMMARY GLAND, MUSCLE, FEMUR + MARROW, STERNUM + MARROW, SCIATIC NERVE, PANCREAS, MESENTERIC LN, STOMACH, DUODENUM, JEJUNUM, ILEUM, CAECUM, COLON, RECTUM, GALL BLADDER, OVARY, URINARY BLADDER, VAGINA, SALIVARY GLAND, MANDIBULAR LN, LUNG, HEART, AORTA, TRACHEA, OESOPHAGUS, THYROID, PITUITARY, BRAIN, SPINAL CORD

Appendix 10

Individual animal pathology data

Test article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

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STUDY NUMBER: 0535103

ANIMAL NUMBER: 000095 SEX: FEMALE DOSE GROUP: 3 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/09/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 24.3 GRAMS

OBSERVATIONS

NECROPSY

SKIN + SUBCUTIS :
-FUR LOSS, MODERATE; AROUND MOUTH
-VIBRISSAE MISSING

HISTOPATHOLOGY

OPTIC NERVE :
>UNREMARKABLE
>NOTE:>ONE SAMPLE.

SKIN + SUBCUTIS :
-FOLLICULITIS,-MINIMAL
>NOTE:>EXTRA SAMPLE: ONE.

LIVER :
-GLYCOGEN VACUOLATION,-MINIMAL
-INFLAMMATORY CELL FOCI,-MINIMAL

SPLEEN :
-HAEMOPOIESIS,-SLIGHT

ADRENAL :
-SUBCAPSULAR CELL HYPERPLASIA,-MINIMAL

KIDNEY :
-CORTICAL TUBULAR NEPHROPATHY,-MINIMAL

UTERUS :
-DIOESTRUS,-PRESENT

THYMUS :
-ECTOPIC PARATHYROID,-PRESENT

PARATHYROID :
>UNREMARKABLE
>NOTE:>ONE SAMPLE.

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Individual animal pathology data

Test article	Control		[		]	.
Group	1	2	3	4	5	.
Level (ppm)	0	500	1000	5000	10000/7500	.

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DRAFT

STUDY NUMBER: 0535103

ANIMAL NUMBER: 000095 SEX: FEMALE DOSE GROUP: 3 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/09/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 24.3 GRAMS

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
EYE, HARDERIAN GLAND, MAMMARY GLAND, MUSCLE, FEMUR + MARROW, STERNUM + MARROW, SCIATIC NERVE, PANCREAS, MESENTERIC LN, STOMACH, DUODENUM, JEJUNUM, ILEUM, CAECUM, COLON, RECTUM, GALL BLADDER, OVARY, URINARY BLADDER, VAGINA, SALIVARY GLAND, MANDIBULAR LN, LUNG, HEART, AORTA, TRACHEA, OESOPHAGUS, THYROID, PITUITARY, BRAIN, SPINAL CORD

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Appendix 10

Individual animal pathology data

Test article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

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STUDY NUMBER: 0535103

ANIMAL NUMBER: 000096 SEX: FEMALE DOSE GROUP: 3 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/09/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 23.0 GRAMS

O B S E R V A T I O N S

NECROPSY	HISTOPATHOLOGY
SKIN + SUBCUTIS : -FUR LOSS, MODERATE; ON HEAD	SKIN + SUBCUTIS : -ADNEXAL ATROPHY,-SLIGHT >NOTE:>EXTRA SAMPLE: ONE. LIVER : -GLYCOGEN VACUOLATION,-MINIMAL -INFLAMMATORY CELL FOCI,-MINIMAL SPLEEN : -HAEMOPOIESIS,-MINIMAL STOMACH : -JUNCTIONAL METAPLASIA,-MINIMAL ADRENAL : -SUBCAPSULAR CELL HYPERPLASIA,-MINIMAL UTERUS : -METOESTRUS,-PRESENT THYMUS : -CYST,-PRESENT

Appendix 10

Individual animal pathology data

Test article	Control			[	]	.
Group	1	2	3	4	5	.
Level (ppm)	0	500	1000	5000	10000/7500	.

ANIMAL NUMBER: 000096 SEX: FEMALE DOSE GROUP: 3 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/09/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 23.0 GRAMS

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
EYE, OPTIC NERVE, HARDERIAN GLAND, MAMMARY GLAND, MUSCLE, FEMUR + MARROW, STERNUM + MARROW, SCIATIC NERVE, PANCREAS, MESENTERIC LN, DUODENUM, JEJUNUM, ILEUM, CAECUM, COLON, RECTUM, GALL BLADDER, KIDNEY, OVARY, URINARY BLADDER, VAGINA, SALIVARY GLAND, MANDIBULAR LN, LUNG, HEART, AORTA, TRACHEA, OESOPHAGUS, THYROID, PARATHYROID, PITUITARY, BRAIN, SPINAL CORD

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Individual animal pathology data

Test article	Control				[	]	.
Group	1	2	3	4	5		.
Level (ppm)	0	500	1000	5000	10000/7500		.

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STUDY NUMBER: 0535103

ANIMAL NUMBER: 000097 SEX: FEMALE DOSE GROUP: 4 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/09/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 16.2 GRAMS

O B S E R V A T I O N S

NECROPSY

URINARY BLADDER :
-DISTENSION, SLIGHT

HISTOPATHOLOGY

MAMMARY GLAND :
-ATROPHY,-MINIMAL

MUSCLE :
-ATROPHY,-MINIMAL

FEMUR + MARROW :
-OSTEOCHONDRAL ATROPHY,-MINIMAL

LIVER :
-GLYCOGEN VACUOLATION,-SLIGHT
-CENTRILOBULAR HYPERTROPHY/VACUOLATION,-MODERATE

SPLEEN :
-ATROPHY,-SLIGHT
-HAEMOPOIESIS,-MINIMAL

MESENTERIC LN :
>SECTION EXAMINED; TISSUE NOT PRESENT

ADRENAL :
-CORTICAL X-ZONE ATROPHY,-MINIMAL

KIDNEY :
-CORTICAL TUBULAR NEPHROPATHY,-SLIGHT

OVARY :
-ATROPHY,-MODERATE

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Individual animal pathology data

Test article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

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STUDY NUMBER: 0535103

ANIMAL NUMBER: 000097 SEX: FEMALE DOSE GROUP: 4 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/09/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 16.2 GRAMS

OBSERVATIONS (CONTINUED)

NECROPSY

HISTOPATHOLOGY

URINARY BLADDER :
-BARBITURATE LYSIS,-PRESENT

UTERUS :
-ATROPHY,-MODERATE
-ACYCLIC,-PRESENT

VAGINA :
-ATROPHY,-SLIGHT

SALIVARY GLAND :
-DEGRANULATION/ATROPHY,-MINIMAL

THYMUS :
-CYST,-PRESENT

HEART :
-MYOCARDIAL DEGENERATION/FIBROSIS,-SLIGHT

THYROID :
>UNREMARKABLE
>NOTE:>ONE SAMPLE.

PARATHYROID :
>UNREMARKABLE
>NOTE:>ONE SAMPLE.

ADIPOSE TISSUE :
-ATROPHY,-MINIMAL

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Appendix 10

Individual animal pathology data

Test article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

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DRAFT

STUDY NUMBER: 0535103

ANIMAL NUMBER: 000097 SEX: FEMALE DOSE GROUP: 4 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/09/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 16.2 GRAMS

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
EYE, OPTIC NERVE, HARDERIAN GLAND, SKIN + SUBCUTIS, STERNUM + MARROW, SCIATIC NERVE, PANCREAS, STOMACH, DUODENUM, JEJUNUM, ILEUM, CAECUM, COLON, RECTUM, GALL BLADDER, MANDIBULAR LN, LUNG, AORTA, TRACHEA, OESOPHAGUS, PITUITARY, BRAIN, SPINAL CORD

Appendix 10

Individual animal pathology data

Test article	Control		[		]	.
Group	1	2	3	4	5	.
Level (ppm)	0	500	1000	5000	10000/7500	.

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DRAFT

STUDY NUMBER: 0535103

ANIMAL NUMBER: 000098 SEX: FEMALE DOSE GROUP: 4 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/09/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 15.7 GRAMS

O B S E R V A T I O N S

NECROPSY

LIVER :
-PALE, SLIGHT; ALL LOBES

SPLEEN :
-SMALL, MINIMAL

HISTOPATHOLOGY

MAMMARY GLAND :
>SECTION EXAMINED; TISSUE NOT PRESENT

FEMUR + MARROW :
-OSTEOCHONDRAL ATROPHY,-MINIMAL

LIVER :
-GLYCOGEN VACUOLATION,-MINIMAL
-INFLAMMATORY CELL FOCI,-MINIMAL
-CENTRILOBULAR HYPERTROPHY/VACUOLATION,-MODERATE

SPLEEN :
-HAEMOPOIESIS,-MINIMAL
>NOTE:>OTHERWISE UNREMARKABLE.

ADRENAL :
-CORTICAL X-ZONE ATROPHY,-MODERATE
-SUBCAPSULAR CELL HYPERPLASIA,-MINIMAL

KIDNEY :
-CORTICAL TUBULAR NEPHROPATHY,-MODERATE

OVARY :
-ATROPHY,-MODERATE
>NOTE:>ONE SAMPLE.

UTERUS :
-ATROPHY,-MODERATE
-ACYCLIC,-PRESENT

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Appendix 10

Individual animal pathology data

Test article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

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DRAFT

STUDY NUMBER: 0535103

ANIMAL NUMBER: 000098 SEX: FEMALE DOSE GROUP: 4 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/09/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 15.7 GRAMS

O B S E R V A T I O N S (CONTINUED)

NECROPSY	HISTOPATHOLOGY
	VAGINA : -ATROPHY,-SLIGHT
	SALIVARY GLAND : -DEGRANULATION/ATROPHY,-MINIMAL
	HEART : -MYOCARDIAL DEGENERATION/FIBROSIS,-SLIGHT
	THYROID : >UNREMARKABLE >NOTE:>ONE SAMPLE.
	PARATHYROID : >SECTION EXAMINED; TISSUE NOT PRESENT

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
EYE, OPTIC NERVE, HARDERIAN GLAND, SKIN + SUBCUTIS, MUSCLE, STERNUM + MARROW, SCIATIC NERVE, PANCREAS, MESENTERIC LN, STOMACH, DUODENUM, JEJUNUM, ILEUM, CAECUM, COLON, RECTUM, GALL BLADDER, URINARY BLADDER, MANDIBULAR LN, THYMUS, LUNG, AORTA, TRACHEA, OESOPHAGUS, PITUITARY, BRAIN, SPINAL CORD

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Appendix 10

Individual animal pathology data

	Test article	Control			[	]	.
	Group	1	2	3	4	5	.
	Level (ppm)	0	500	1000	5000	10000/7500	.

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DRAFT

STUDY NUMBER: 0535103

ANIMAL NUMBER: 000099 SEX: FEMALE DOSE GROUP: 4 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/09/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 15.5 GRAMS

O B S E R V A T I O N S

NECROPSY

SKIN + SUBCUTIS :
-VIBRISSAE MISSING

OVARY :
-SMALL, SLIGHT; BILATERAL

HISTOPATHOLOGY

SKIN + SUBCUTIS :
>UNREMARKABLE
>NOTE:>NO EQUIVALENT SAMPLE FOR CORRELATION WITH NECROPSY. .

MAMMARY GLAND :
-ATROPHY,-SLIGHT

LIVER :
-GLYCOGEN VACUOLATION,-MINIMAL
-INFLAMMATORY CELL FOCI,-MINIMAL
-SINGLE CELL NECROSIS/APOPTOSIS,-MINIMAL
-CENTRILOBULAR HYPERTROPHY/VACUOLATION,-MODERATE

SPLEEN :
-ATROPHY,-MODERATE
-HAEMOPOIESIS,-MINIMAL

MESENTERIC LN :
-ATROPHY,-SLIGHT

ADRENAL :
-CORTICAL X-ZONE ATROPHY,-SLIGHT
-SUBCAPSULAR CELL HYPERPLASIA,-MINIMAL

KIDNEY :
-CORTICAL TUBULAR NEPHROPATHY,-MODERATE

OVARY :
-ATROPHY,-MODERATE

Appendix 10

Individual animal pathology data

Test article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

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DRAFT

STUDY NUMBER: 0535103

ANIMAL NUMBER: 000099 SEX: FEMALE DOSE GROUP: 4 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/09/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 15.5 GRAMS

O B S E R V A T I O N S (CONTINUED)

NECROPSY	HISTOPATHOLOGY
	UTERUS : -ATROPHY,-MODERATE -ACYCLIC,-PRESENT VAGINA : -ATROPHY,-MODERATE SALIVARY GLAND : -DEGRANULATION/ATROPHY,-MINIMAL HEART : -MYOCARDIAL DEGENERATION/FIBROSIS,-MINIMAL PARATHYROID : >UNREMARKABLE >NOTE:>ONE SAMPLE. PITUITARY : >TISSUE MISSING ADIPOSE TISSUE : -ATROPHY,-MINIMAL

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Individual animal pathology data

Test article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

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DRAFT

STUDY NUMBER: 0535103

ANIMAL NUMBER: 000099 SEX: FEMALE DOSE GROUP: 4 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/09/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 15.5 GRAMS

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
EYE, OPTIC NERVE, HARDERIAN GLAND, MUSCLE, FEMUR + MARROW, STERNUM + MARROW, SCIATIC NERVE, PANCREAS, STOMACH, DUODENUM, JEJUNUM, ILEUM, CAECUM, COLON, RECTUM, GALL BLADDER, URINARY BLADDER, MANDIBULAR LN, THYMUS, LUNG, AORTA, TRACHEA, OESOPHAGUS, THYROID, BRAIN, SPINAL CORD

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Individual animal pathology data

Test article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

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STUDY NUMBER: 0535103

ANIMAL NUMBER: 000100 SEX: FEMALE DOSE GROUP: 4 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/09/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 15.0 GRAMS

OBSERVATIONS

NECROPSY

ANIMAL :
-NOT REMARKABLE

HISTOPATHOLOGY

HARDERIAN GLAND :
-ATROPHY,-MINIMAL

MAMMARY GLAND :
-ATROPHY,-MINIMAL

MUSCLE :
-ATROPHY,-MINIMAL

LIVER :
-GLYCOGEN VACUOLATION,-MINIMAL
-CENTRILOBULAR HYPERTROPHY/VACUOLATION,-MODERATE

SPLEEN :
-ATROPHY,-MINIMAL
-HAEMOPOIESIS,-MINIMAL

PANCREAS :
-INFLAMMATORY CELL FOCI,-MINIMAL

MESENTERIC LN :
-ATROPHY,-MINIMAL

ADRENAL :
-CORTICAL X-ZONE ATROPHY,-MODERATE
-SUBCAPSULAR CELL HYPERPLASIA,-MINIMAL

KIDNEY :
-CORTICAL TUBULAR NEPHROPATHY,-SLIGHT

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Individual animal pathology data

Test article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

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STUDY NUMBER: 0535103

ANIMAL NUMBER: 000100 SEX: FEMALE DOSE GROUP: 4 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/09/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 15.0 GRAMS

OBSERVATIONS (CONTINUED)

NECROPSY	HISTOPATHOLOGY
	OVARY : -ATROPHY,-MODERATE
	UTERUS : -ATROPHY,-MODERATE -ACYCLIC,-PRESENT
	VAGINA : -ATROPHY,-MODERATE
	SALIVARY GLAND : -DEGRANULATION/ATROPHY,-MINIMAL
	THYMUS : -CYST,-PRESENT -ATROPHY,-MINIMAL
	HEART : -MYOCARDIAL DEGENERATION/FIBROSIS,-MINIMAL
	PARATHYROID : >SECTION EXAMINED; TISSUE NOT PRESENT

Appendix 10

Individual animal pathology data

Test article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

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STUDY NUMBER: 0535103

ANIMAL NUMBER: 000100 SEX: FEMALE DOSE GROUP: 4 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/09/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 15.0 GRAMS

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
EYE, OPTIC NERVE, SKIN + SUBCUTIS, FEMUR + MARROW, STERNUM + MARROW, SCIATIC NERVE, STOMACH, DUODENUM, JEJUNUM, ILEUM, CAECUM, COLON, RECTUM, GALL BLADDER, URINARY BLADDER, MANDIBULAR LN, LUNG, AORTA, TRACHEA, OESOPHAGUS, THYROID, PITUITARY, BRAIN, SPINAL CORD

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Appendix 10

Individual animal pathology data

Test article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

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STUDY NUMBER: 0535103

ANIMAL NUMBER: 000101 SEX: FEMALE DOSE GROUP: 4 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/09/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 17.2 GRAMS

OBSERVATIONS

NECROPSY

OVARY :
-SMALL, MODERATE; BILATERAL

UTERUS :
-THIN, MODERATE; BILATERAL

HISTOPATHOLOGY

MAMMARY GLAND :
-ATROPHY,-MINIMAL

MUSCLE :
-ATROPHY,-MINIMAL

FEMUR + MARROW :
-OSTEOCHONDRAL ATROPHY,-MINIMAL

LIVER :
-GLYCOGEN VACUOLATION,-SLIGHT
-CENTRILOBULAR HYPERTROPHY/VACUOLATION,-MODERATE

SPLEEN :
-ATROPHY,-SLIGHT

MESENTERIC LN :
-ATROPHY,-MINIMAL

ADRENAL :
-CORTICAL X-ZONE ATROPHY,-SLIGHT
-SUBCAPSULAR CELL HYPERPLASIA,-MINIMAL

KIDNEY :
-CORTICAL TUBULAR NEPHROPATHY,-MODERATE

OVARY :
-ATROPHY,-MODERATE

Appendix 10

Individual animal pathology data

Test article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

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STUDY NUMBER: 0535103

ANIMAL NUMBER: 000101 SEX: FEMALE DOSE GROUP: 4 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/09/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 17.2 GRAMS

OBSERVATIONS (CONTINUED)

NECROPSY	HISTOPATHOLOGY
	UTERUS : -ATROPHY,-SLIGHT -ACYCLIC,-PRESENT SALIVARY GLAND : -DEGRANULATION/ATROPHY,-MINIMAL HEART : -MYOCARDIAL DEGENERATION/FIBROSIS,-SLIGHT PARATHYROID : >SECTION EXAMINED; TISSUE NOT PRESENT

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
EYE, OPTIC NERVE, HARDERIAN GLAND, SKIN + SUBCUTIS, STERNUM + MARROW, SCIATIC NERVE, PANCREAS, STOMACH, DUODENUM, JEJUNUM, ILEUM, CAECUM, COLON, RECTUM, GALL BLADDER, URINARY BLADDER, VAGINA, MANDIBULAR LN, THYMUS, LUNG, AORTA, TRACHEA, OESOPHAGUS, THYROID, PITUITARY, BRAIN, SPINAL CORD

Appendix 10

Individual animal pathology data

Test article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

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STUDY NUMBER: 0535103

ANIMAL NUMBER: 000102 SEX: FEMALE DOSE GROUP: 4 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/09/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 16.6 GRAMS

OBSERVATIONS

NECROPSY

ANIMAL :
-NOT REMARKABLE

HISTOPATHOLOGY

MAMMARY GLAND :
-ATROPHY,-MINIMAL

FEMUR + MARROW :
-OSTEOCHONDRAL ATROPHY,-MINIMAL

LIVER :
-GLYCOGEN VACUOLATION,-MINIMAL
-CENTRILOBULAR HYPERTROPHY/VACUOLATION,-MODERATE

SPLEEN :
-HAEMOPOIESIS,-MINIMAL

PANCREAS :
-INFLAMMATORY CELL FOCI,-MINIMAL

MESENTERIC LN :
-ATROPHY,-MINIMAL

STOMACH :
-HYPERKERATOSIS,-MINIMAL

ADRENAL :
-CORTICAL X-ZONE ATROPHY,-MODERATE

KIDNEY :
-CORTICAL TUBULAR NEPHROPATHY,-SLIGHT
-PAPILLARY MINERALISATION,-MINIMAL
-INFLAMMATORY CELL FOCI,-MINIMAL

Appendix 10

Individual animal pathology data

Test article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

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STUDY NUMBER: 0535103

ANIMAL NUMBER: 000102 SEX: FEMALE DOSE GROUP: 4 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/09/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 16.6 GRAMS

OBSERVATIONS (CONTINUED)

NECROPSY

HISTOPATHOLOGY

OVARY :
-ATROPHY,-MODERATE

UTERUS :
-ATROPHY,-MODERATE
-ACYCLIC,-PRESENT

VAGINA :
-ATROPHY,-MODERATE

SALIVARY GLAND :
-DEGRANULATION/ATROPHY,-MINIMAL

HEART :
-MYOCARDIAL DEGENERATION/FIBROSIS,-MINIMAL

PARATHYROID :
>SECTION EXAMINED; TISSUE NOT PRESENT

ADIPOSE TISSUE :
-ATROPHY,-MINIMAL

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Appendix 10

Individual animal pathology data

Test article	Control		[		]	.
Group	1	2	3	4	5	.
Level (ppm)	0	500	1000	5000	10000/7500	.

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STUDY NUMBER: 0535103

ANIMAL NUMBER: 000102 SEX: FEMALE DOSE GROUP: 4 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/09/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 16.6 GRAMS

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
EYE, OPTIC NERVE, HARDERIAN GLAND, SKIN + SUBCUTIS, MUSCLE, STERNUM + MARROW, SCIATIC NERVE, DUODENUM, JEJUNUM, ILEUM, CAECUM, COLON, RECTUM, GALL BLADDER, URINARY BLADDER, MANDIBULAR LN, THYMUS, LUNG, AORTA, TRACHEA, OESOPHAGUS, THYROID, PITUITARY, BRAIN, SPINAL CORD

Appendix 10

Individual animal pathology data

Test article	Control		[		]	.
Group	1	2	3	4	5	.
Level (ppm)	0	500	1000	5000	10000/7500	.

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STUDY NUMBER: 0535103

ANIMAL NUMBER: 000103 SEX: FEMALE DOSE GROUP: 4 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/09/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 15.7 GRAMS

O B S E R V A T I O N S

NECROPSY

ANIMAL :
-NOT REMARKABLE

HISTOPATHOLOGY

MAMMARY GLAND :
-ATROPHY,-MINIMAL

MUSCLE :
-ATROPHY,-MINIMAL

LIVER :
-GLYCOGEN VACUOLATION,-SLIGHT
-CENTRILOBULAR HYPERTROPHY/VACUOLATION,-MODERATE

SPLEEN :
-ATROPHY,-SLIGHT
-HAEMOPOIESIS,-MINIMAL

PANCREAS :
-INFLAMMATORY CELL FOCI,-MINIMAL

ADRENAL :
-CORTICAL X-ZONE ATROPHY,-SLIGHT

KIDNEY :
-CORTICAL TUBULAR NEPHROPATHY,-MODERATE

OVARY :
-ATROPHY,-MODERATE

URINARY BLADDER :
-INFLAMMATORY CELL FOCI,-MINIMAL

Appendix 10

Individual animal pathology data

Test article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

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STUDY NUMBER: 0535103

ANIMAL NUMBER: 000103 SEX: FEMALE DOSE GROUP: 4 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/09/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 15.7 GRAMS

OBSERVATIONS (CONTINUED)

NECROPSY	HISTOPATHOLOGY
	UTERUS : -ATROPHY,-MODERATE -ACYCLIC,-PRESENT VAGINA : -ATROPHY,-MODERATE SALIVARY GLAND : -DEGRANULATION/ATROPHY,-MINIMAL THYMUS : -ECTOPIC PARATHYROID,-PRESENT HEART : -MYOCARDIAL DEGENERATION/FIBROSIS,-MINIMAL PARATHYROID : >UNREMARKABLE >NOTE:>ONE SAMPLE. ADIPOSE TISSUE : -ATROPHY,-MINIMAL

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Appendix 10

Individual animal pathology data

Test article	Control				[ ]	.
Group	1	2	3	4	5	.
Level (ppm)	0	500	1000	5000	10000/7500	.

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DRAFT

STUDY NUMBER: 0535103

ANIMAL NUMBER: 000103 SEX: FEMALE DOSE GROUP: 4 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/09/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 15.7 GRAMS

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
EYE, OPTIC NERVE, HARDERIAN GLAND, SKIN + SUBCUTIS, FEMUR + MARROW, STERNUM + MARROW, SCIATIC NERVE, MESENTERIC LN, STOMACH, DUODENUM, JEJUNUM, ILEUM, CAECUM, COLON, RECTUM, GALL BLADDER, MANDIBULAR LN, LUNG, AORTA, TRACHEA, OESOPHAGUS, THYROID, PITUITARY, BRAIN, SPINAL CORD

Appendix 10

Individual animal pathology data

Test article	Control		[		]	.
Group	1	2	3	4	5	.
Level (ppm)	0	500	1000	5000	10000/7500	.

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DRAFT

STUDY NUMBER: 0535103

ANIMAL NUMBER: 000104 SEX: FEMALE DOSE GROUP: 4 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/09/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 15.7 GRAMS

OBSERVATIONS

NECROPSY

ABDOMINAL CAVITY :
-ABNORMAL CONTENTS; IMPLANT

HISTOPATHOLOGY

SKIN + SUBCUTIS :
-ADNEXAL ATROPHY,-MINIMAL

MAMMARY GLAND :
-ATROPHY,-MINIMAL

FEMUR + MARROW :
-OSTEOCHONDRAL ATROPHY,-MINIMAL

LIVER :
-GLYCOGEN VACUOLATION,-SLIGHT
-CENTRILOBULAR HYPERTROPHY/VACUOLATION,-MODERATE

SPLEEN :
-ATROPHY,-MINIMAL

ADRENAL :
-CORTICAL X-ZONE ATROPHY,-SLIGHT
-SUBCAPSULAR CELL HYPERPLASIA,-MINIMAL

KIDNEY :
-CORTICAL TUBULAR NEPHROPATHY,-MODERATE

OVARY :
-ATROPHY,-MODERATE
>NOTE:>ONE SAMPLE.

UTERUS :
-ATROPHY,-MODERATE
-ACYCLIC,-PRESENT

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Appendix 10

Individual animal pathology data

Test article	Control			[	]	
Group	1	2	3	4	5	
Level (ppm)	0	500	1000	5000	10000/7500	

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DRAFT

STUDY NUMBER: 0535103

ANIMAL NUMBER: 000104 SEX: FEMALE DOSE GROUP: 4 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/09/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 15.7 GRAMS

OBSERVATIONS (CONTINUED)

NECROPSY

HISTOPATHOLOGY

VAGINA :
-ATROPHY,-MODERATE

SALIVARY GLAND :
-DEGRANULATION/ATROPHY,-MINIMAL

THYMUS :
-ATROPHY,-MINIMAL

HEART :
-MYOCARDIAL DEGENERATION/FIBROSIS,-SLIGHT

PARATHYROID :
>UNREMARKABLE
>NOTE:>ONE SAMPLE.

ADIPOSE TISSUE :
-ATROPHY,-MINIMAL

ABDOMINAL CAVITY :
>NOT REQUIRED TO BE EXAMINED FOR ANIMAL
>NOTE:>NO EQUIVALENT SAMPLE FOR CORRELATION WITH NECROPSY.

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Appendix 10

Individual animal pathology data

	Test article	Control				[	]
	Group	1	2	3	4	5	
	Level (ppm)	0	500	1000	5000	10000/7500	

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DRAFT

STUDY NUMBER: 0535103

ANIMAL NUMBER: 000104 SEX: FEMALE DOSE GROUP: 4 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/09/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 15.7 GRAMS

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
EYE, OPTIC NERVE, HARDERIAN GLAND, MUSCLE, STERNUM + MARROW, SCIATIC NERVE, PANCREAS, MESENTERIC LN, STOMACH, DUODENUM, JEJUNUM, ILEUM, CAECUM, COLON, RECTUM, GALL BLADDER, URINARY BLADDER, MANDIBULAR LN, LUNG, AORTA, TRACHEA, OESOPHAGUS, THYROID, PITUITARY, BRAIN, SPINAL CORD

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Appendix 10

Individual animal pathology data

Test article	Control			[	]	.
Group	1	2	3	4	5	.
Level (ppm)	0	500	1000	5000	10000/7500	.

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DRAFT

STUDY NUMBER: 0535103

ANIMAL NUMBER: 000105 SEX: FEMALE DOSE GROUP: 4 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/09/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 16.3 GRAMS

OBSERVATIONS

NECROPSY

OVARY :
-SMALL, SLIGHT; BILATERAL

UTERUS :
-THIN, SLIGHT; BILATERAL

HISTOPATHOLOGY

MAMMARY GLAND :
-ATROPHY,-MINIMAL

MUSCLE :
-ATROPHY,-MINIMAL

FEMUR + MARROW :
-OSTEOCHONDRAL ATROPHY,-MINIMAL

LIVER :
-GLYCOGEN VACUOLATION,-SLIGHT
-CENTRILOBULAR HYPERTROPHY/VACUOLATION,-SLIGHT

SPLEEN :
-HAEMOPOIESIS,-MINIMAL

STOMACH :
-HYPERKERATOSIS,-MINIMAL

ADRENAL :
-CORTICAL X-ZONE ATROPHY,-MINIMAL
-SUBCAPSULAR CELL HYPERPLASIA,-MINIMAL

KIDNEY :
-CORTICAL TUBULAR NEPHROPATHY,-SLIGHT

OVARY :
-ATROPHY,-MODERATE

Appendix 10

Individual animal pathology data

Test article	Control		[		]	.
Group	1	2	3	4	5	.
Level (ppm)	0	500	1000	5000	10000/7500	.

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STUDY NUMBER: 0535103

ANIMAL NUMBER: 000105 SEX: FEMALE DOSE GROUP: 4 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/09/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 16.3 GRAMS

O B S E R V A T I O N S (CONTINUED)

NECROPSY	HISTOPATHOLOGY
	UTERUS : -ATROPHY,-SLIGHT -ACYCLIC,-PRESENT VAGINA : -ATROPHY,-MODERATE SALIVARY GLAND : -DEGRANULATION/ATROPHY,-MINIMAL -INFLAMMATORY CELL FOCI,-MINIMAL HEART : -MYOCARDIAL DEGENERATION/FIBROSIS,-SLIGHT PARATHYROID : -ECTOPIC THYMUS,-PRESENT ADIPOSE TISSUE : -ATROPHY,-MINIMAL

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
EYE, OPTIC NERVE, HARDERIAN GLAND, SKIN + SUBCUTIS, STERNUM + MARROW, SCIATIC NERVE, PANCREAS, MESENTERIC LN, DUODENUM, JEJUNUM, ILEUM, CAECUM, COLON, RECTUM, GALL BLADDER, URINARY BLADDER, MANDIBULAR LN, THYMUS, LUNG, AORTA, TRACHEA, OESOPHAGUS, THYROID, PITUITARY, BRAIN, SPINAL CORD

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Appendix 10

Individual animal pathology data

Test article	Control			[	]	
Group	1	2	3	4	5	
Level (ppm)	0	500	1000	5000	10000/7500	

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STUDY NUMBER: 0535103

ANIMAL NUMBER: 000106 SEX: FEMALE DOSE GROUP: 4 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/09/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 15.4 GRAMS

OBSERVATIONS

NECROPSY

ANIMAL :
-NOT REMARKABLE

HISTOPATHOLOGY

HARDERIAN GLAND :
-ATROPHY,-MINIMAL

MAMMARY GLAND :
-ATROPHY,-SLIGHT

LIVER :
-GLYCOGEN VACUOLATION,-MINIMAL
-CENTRILOBULAR HYPERTROPHY/VACUOLATION,-MODERATE

SPLEEN :
-ATROPHY,-MINIMAL
-HAEMOPOIESIS,-MINIMAL

ADRENAL :
-CORTICAL X-ZONE ATROPHY,-SLIGHT
-SUBCAPSULAR CELL HYPERPLASIA,-MINIMAL

KIDNEY :
-CORTICAL TUBULAR NEPHROPATHY,-MODERATE
-INFLAMMATORY CELL FOCI,-MINIMAL

OVARY :
-ATROPHY,-MODERATE

UTERUS :
-ATROPHY,-MODERATE
-ACYCLIC,-PRESENT

Appendix 10

Individual animal pathology data

Test article	Control		[		]	.
Group	1	2	3	4	5	.
Level (ppm)	0	500	1000	5000	10000/7500	.

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DRAFT

STUDY NUMBER: 0535103

ANIMAL NUMBER: 000106 SEX: FEMALE DOSE GROUP: 4 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/09/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 15.4 GRAMS

O B S E R V A T I O N S (CONTINUED)

NECROPSY	HISTOPATHOLOGY
	VAGINA : -ATROPHY,-MODERATE
	SALIVARY GLAND : -DEGRANULATION/ATROPHY,-MINIMAL
	THYMUS : -ATROPHY,-SLIGHT
	HEART : -MYOCARDIAL DEGENERATION/FIBROSIS,-SLIGHT
	PARATHYROID : >UNREMARKABLE >NOTE:>ONE SAMPLE.
	ADIPOSE TISSUE : -ATROPHY,-MINIMAL

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
EYE, OPTIC NERVE, SKIN + SUBCUTIS, MUSCLE, FEMUR + MARROW, STERNUM + MARROW, SCIATIC NERVE, PANCREAS, MESENTERIC LN, STOMACH, DUODENUM, JEJUNUM, ILEUM, CAECUM, COLON, RECTUM, GALL BLADDER, URINARY BLADDER, MANDIBULAR LN, LUNG, AORTA, TRACHEA, OESOPHAGUS, THYROID, PITUITARY, BRAIN, SPINAL CORD

Appendix 10

Individual animal pathology data

Test article	Control		[		]	.
Group	1	2	3	4	5	.
Level (ppm)	0	500	1000	5000	10000/7500	.

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STUDY NUMBER: 0535103

ANIMAL NUMBER: 000107 SEX: FEMALE DOSE GROUP: 4 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/09/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 13.5 GRAMS

OBSERVATIONS

NECROPSY	HISTOPATHOLOGY
SKIN + SUBCUTIS : -VIBRISSAE MISSING	SKIN + SUBCUTIS : >UNREMARKABLE >NOTE:>NO EQUIVALENT SAMPLE FOR CORRELATION WITH NECROPSY. . MUSCLE : -ATROPHY,-MINIMAL -MINERALISATION,-SLIGHT SCIATIC NERVE : >UNREMARKABLE >NOTE:>ONE SAMPLE. LIVER : -GLYCOGEN VACUOLATION,-MINIMAL -INFLAMMATORY CELL FOCI,-MINIMAL -CENTRILOBULAR HYPERTROPHY/VACUOLATION,-MODERATE SPLEEN : -ATROPHY,-SLIGHT MESENTERIC LN : -ATROPHY,-MINIMAL ADRENAL : -CORTICAL X-ZONE ATROPHY,-MINIMAL KIDNEY : -CORTICAL TUBULAR NEPHROPATHY,-MODERATE

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Individual animal pathology data

Test article	Control			[	]
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

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STUDY NUMBER: 0535103

ANIMAL NUMBER: 000107 SEX: FEMALE DOSE GROUP: 4 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/09/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 13.5 GRAMS

OBSERVATIONS (CONTINUED)

NECROPSY	HISTOPATHOLOGY
	OVARY : -ATROPHY,-MODERATE
	UTERUS : -ATROPHY,-MODERATE -ACYCLIC,-PRESENT
	SALIVARY GLAND : -DEGRANULATION/ATROPHY,-MINIMAL
	THYMUS : -ECTOPIC PARATHYROID,-PRESENT
	HEART : -MYOCARDIAL DEGENERATION/FIBROSIS,-SLIGHT -MINERALISATION,-MINIMAL
	PARATHYROID : >UNREMARKABLE >NOTE:>ONE SAMPLE.

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
EYE, OPTIC NERVE, HARDERIAN GLAND, MAMMARY GLAND, FEMUR + MARROW, STERNUM + MARROW, PANCREAS, STOMACH, DUODENUM, JEJUNUM, ILEUM, CAECUM, COLON, RECTUM, GALL BLADDER, URINARY BLADDER, VAGINA, MANDIBULAR LN, LUNG, AORTA, TRACHEA, OESOPHAGUS, THYROID, PITUITARY, BRAIN, SPINAL CORD

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Appendix 10

Individual animal pathology data

Test article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

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STUDY NUMBER: 0535103

ANIMAL NUMBER: 000108 SEX: FEMALE DOSE GROUP: 4 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/09/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 14.4 GRAMS

OBSERVATIONS

NECROPSY

SPLEEN :
-SMALL, MODERATE

UTERUS :
-THIN, MODERATE; BILATERAL

HISTOPATHOLOGY

MAMMARY GLAND :
-ATROPHY,-MINIMAL

MUSCLE :
-ATROPHY,-MINIMAL

LIVER :
-SINGLE CELL NECROSIS/APOPTOSIS,-MINIMAL
-CENTRILOBULAR HYPERTROPHY/VACUOLATION,-MODERATE

SPLEEN :
-HAEMOPOIESIS,-MINIMAL
>NOTE:>OTHERWISE UNREMARKABLE.

MESENTERIC LN :
>SECTION EXAMINED; TISSUE NOT PRESENT

GALL BLADDER :
>SECTION EXAMINED; TISSUE NOT PRESENT

ADRENAL :
-CORTICAL X-ZONE ATROPHY,-SLIGHT
-SUBCAPSULAR CELL HYPERPLASIA,-MINIMAL

KIDNEY :
-CORTICAL TUBULAR NEPHROPATHY,-MODERATE

OVARY :
>TISSUE MISSING

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Appendix 10

Individual animal pathology data

Test article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

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STUDY NUMBER: 0535103

ANIMAL NUMBER: 000108 SEX: FEMALE DOSE GROUP: 4 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/09/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 14.4 GRAMS

OBSERVATIONS (CONTINUED)

NECROPSY	HISTOPATHOLOGY
	UTERUS : -ATROPHY,-MODERATE -ACYCLIC,-PRESENT VAGINA : -ATROPHY,-MODERATE SALIVARY GLAND : -DEGRANULATION/ATROPHY,-SLIGHT -INFLAMMATORY CELL FOCI,-MINIMAL THYMUS : -ATROPHY,-SLIGHT ADIPOSE TISSUE : -ATROPHY,-MINIMAL

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
EYE, OPTIC NERVE, HARDERIAN GLAND, SKIN + SUBCUTIS, FEMUR + MARROW, STERNUM + MARROW, SCIATIC NERVE, PANCREAS, STOMACH, DUODENUM, JEJUNUM, ILEUM, CAECUM, COLON, RECTUM, URINARY BLADDER, MANDIBULAR LN, LUNG, HEART, AORTA, TRACHEA, OESOPHAGUS, THYROID, PARATHYROID, PITUITARY, BRAIN, SPINAL CORD

Appendix 10

Individual animal pathology data

Test article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

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DRAFT

STUDY NUMBER: 0535103

ANIMAL NUMBER: 000109 SEX: FEMALE DOSE GROUP: 5 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/09/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 16.1 GRAMS

OBSERVATIONS

NECROPSY

ANIMAL :
-NOT REMARKABLE

HISTOPATHOLOGY

HARDERIAN GLAND :
-ATROPHY,-MINIMAL

SKIN + SUBCUTIS :
-ADNEXAL ATROPHY,-MINIMAL

MAMMARY GLAND :
-ATROPHY,-SLIGHT
>NOTE:>ATROPHY WAS CHARACTERISED BY FEW ACINI LINED BY SMALL EPITHELIAL CELLS.

MUSCLE :
-ATROPHY,-MINIMAL

LIVER :
-GLYCOGEN VACUOLATION,-SLIGHT
-SINGLE CELL NECROSIS/APOPTOSIS,-MINIMAL
-CENTRILOBULAR HYPERTROPHY/VACUOLATION,-MODERATELY SEVERE
>NOTE:>GLYCOGEN VACUOLATION WAS CHARACTERISED BY VARIABLY SIZED POORLY CIRCUMSCRIBED VACUOLES RESULTING IN A FEATHERY APPEARANCE OF THE CYTOPLASM.

SPLEEN :
-ATROPHY,-SLIGHT
-HAEMOPOIESIS,-MINIMAL

MESENTERIC LN :
-ATROPHY,-SLIGHT

Appendix 10

Individual animal pathology data

Test article	Control		[		]	.
Group	1	2	3	4	5	.
Level (ppm)	0	500	1000	5000	10000/7500	.

ANIMAL NUMBER: 000109 SEX: FEMALE DOSE GROUP: 5 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/09/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 16.1 GRAMS

O B S E R V A T I O N S (CONTINUED)

NECROPSY

HISTOPATHOLOGY

RECTUM :
>TISSUE MISSING

ADRENAL :
-CORTICAL X-ZONE ATROPHY,-MODERATE
>NOTE:>CHARACTERISED BY A DECREASE IN THE SIZE AND NUMBER OF CELLS AND IN THE OVERALL WIDTH OF THE X-ZONE NORMALLY PRESENT IN FEMALE MICE OF THIS AGE.

KIDNEY :
-CORTICAL TUBULAR NEPHROPATHY,-MODERATE

OVARY :
-ATROPHY,-MODERATE
>NOTE:>CHARACTERISED BY A DECREASED NUMBER OF VIABLE FOLLICLES, AN INCREASE IN ATRETIC FOLLICLES AND ABSENCE OF CORPORA LUTEA.

UTERUS :
-ATROPHY,-MODERATE
-ACYCLIC,-PRESENT
>NOTE:>ATROPHY WAS CHARACTERISED BY A DECREASE IN SIZE AND NUMBER OF ENDOMETRIAL GLANDS AND RESULTING IN A DECREASE IN THE OVERALL SIZE OF THE UTERUS.

VAGINA :
-ATROPHY,-MODERATE
>NOTE:>CHARACTERISED BY A DECREASE IN EPITHELIUM AND CONNECTIVE TISSUE.

Appendix 10

Individual animal pathology data

Test article	Control			[	]	.
Group	1	2	3	4	5	.
Level (ppm)	0	500	1000	5000	10000/7500	.

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DRAFT

STUDY NUMBER: 0535103

ANIMAL NUMBER: 000109 SEX: FEMALE DOSE GROUP: 5 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/09/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 16.1 GRAMS

O B S E R V A T I O N S (CONTINUED)

NECROPSY	HISTOPATHOLOGY
	SALIVARY GLAND : -DEGRANULATION/ATROPHY,-SLIGHT
	THYMUS : -ATROPHY,-MINIMAL
	PARATHYROID : >UNREMARKABLE >NOTE:>ONE SAMPLE.
	ADIPOSE TISSUE : -ATROPHY,-SLIGHT

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
EYE, OPTIC NERVE, FEMUR + MARROW, STERNUM + MARROW, SCIATIC NERVE, PANCREAS, STOMACH, DUODENUM, JEJUNUM, ILEUM, CAECUM, COLON, GALL BLADDER, URINARY BLADDER, MANDIBULAR LN, LUNG, HEART, AORTA, TRACHEA, OESOPHAGUS, THYROID, PITUITARY, BRAIN, SPINAL CORD

Appendix 10

Individual animal pathology data

Test article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

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STUDY NUMBER: 0535103

ANIMAL NUMBER: 000110 SEX: FEMALE DOSE GROUP: 5 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/09/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 14.3 GRAMS

O B S E R V A T I O N S

NECROPSY

LIVER :
-MOTTLED, SLIGHT; ALL LOBES

HISTOPATHOLOGY

SKIN + SUBCUTIS :
-ADNEXAL ATROPHY,-MINIMAL

MAMMARY GLAND :
-ATROPHY,-MINIMAL

MUSCLE :
-ATROPHY,-MINIMAL

FEMUR + MARROW :
-MARROW ATROPHY,-MINIMAL
>NOTE:>MARROW ATROPHY WAS CHARACTERISED BY A DECREASE IN CELLULARITY AND A RELATIVE INCREASE IN ADIPOSE CELLS.

LIVER :
-GLYCOGEN VACUOLATION,-MINIMAL
-SINGLE CELL NECROSIS/APOPTOSIS,-MINIMAL
-CENTRILOBULAR HYPERTROPHY/VACUOLATION,-MODERATELY SEVERE
-OVAL CELL HYPERPLASIA,-SLIGHT

SPLEEN :
-ATROPHY,-SLIGHT
-HAEMOPOIESIS,-MINIMAL

MESENTERIC LN :
-ATROPHY,-MINIMAL

ADRENAL :
-CORTICAL X-ZONE ATROPHY,-SLIGHT
-SUBCAPSULAR CELL HYPERPLASIA,-MINIMAL

Appendix 10

Individual animal pathology data

Test article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

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DRAFT

STUDY NUMBER: 0535103

ANIMAL NUMBER: 000110 SEX: FEMALE DOSE GROUP: 5 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/09/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 14.3 GRAMS

O B S E R V A T I O N S (CONTINUED)

NECROPSY	HISTOPATHOLOGY
	KIDNEY : -CORTICAL TUBULAR NEPHROPATHY,-MODERATE
	OVARY : -ATROPHY,-MODERATE
	UTERUS : -ATROPHY,-MODERATE -ACYCLIC,-PRESENT
	VAGINA : -ATROPHY,-MODERATE
	SALIVARY GLAND : -DEGRANULATION/ATROPHY,-SLIGHT
	MANDIBULAR LN : -ATROPHY,-SLIGHT
	THYMUS : -ATROPHY,-SLIGHT
	PARATHYROID : >UNREMARKABLE >NOTE:>ONE SAMPLE.
	ADIPOSE TISSUE : -ATROPHY,-SLIGHT

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Appendix 10

Individual animal pathology data

Test article	Control			[	]	.
Group	1	2	3	4	5	.
Level (ppm)	0	500	1000	5000	10000/7500	.

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STUDY NUMBER: 0535103

ANIMAL NUMBER: 000110 SEX: FEMALE DOSE GROUP: 5 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/09/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 14.3 GRAMS

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
EYE, OPTIC NERVE, HARDERIAN GLAND, STERNUM + MARROW, SCIATIC NERVE, PANCREAS, STOMACH, DUODENUM, JEJUNUM, ILEUM, CAECUM, COLON, RECTUM, GALL BLADDER, URINARY BLADDER, LUNG, HEART, AORTA, TRACHEA, OESOPHAGUS, THYROID, PITUITARY, BRAIN, SPINAL CORD

Appendix 10

Individual animal pathology data

Test article	Control				[ ]	.
Group	1	2	3	4	5	.
Level (ppm)	0	500	1000	5000	10000/7500	.

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STUDY NUMBER: 0535103

ANIMAL NUMBER: 000111 SEX: FEMALE DOSE GROUP: 5 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/09/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 14.3 GRAMS

O B S E R V A T I O N S

NECROPSY

LIVER :
-LARGE, MODERATE; ALL LOBES
-MOTTLED, MODERATE; ALL LOBES

HISTOPATHOLOGY

HARDERIAN GLAND :
-ATROPHY,-MINIMAL

SKIN + SUBCUTIS :
-ADNEXAL ATROPHY,-MINIMAL

MAMMARY GLAND :
-ATROPHY,-SLIGHT

MUSCLE :
-ATROPHY,-SLIGHT

FEMUR + MARROW :
-MARROW ATROPHY,-MINIMAL
-OSTEOCHONDRAL ATROPHY,-SLIGHT

LIVER :
-PIGMENT,-MINIMAL
-GLYCOGEN VACUOLATION,-SLIGHT
-SINGLE CELL NECROSIS/APOPTOSIS,-MINIMAL
-CENTRILOBULAR HYPERTROPHY/VACUOLATION,-MODERATELY SEVERE
-OVAL CELL HYPERPLASIA,-SLIGHT

SPLEEN :
-ATROPHY,-MODERATE
-HAEMOPOIESIS,-MINIMAL

MESENTERIC LN :
-ATROPHY,-MINIMAL

Appendix 10

Individual animal pathology data

Test article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

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DRAFT

STUDY NUMBER: 0535103

ANIMAL NUMBER: 000111 SEX: FEMALE DOSE GROUP: 5 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/09/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 14.3 GRAMS

O B S E R V A T I O N S (CONTINUED)

NECROPSY	HISTOPATHOLOGY
	STOMACH : -CYST,-PRESENT -HYPERKERATOSIS,-MINIMAL CAECUM : -BARBITURATE LYSIS,-PRESENT ADRENAL : -CORTICAL X-ZONE ATROPHY,-MODERATE -SUBCAPSULAR CELL HYPERPLASIA,-MINIMAL KIDNEY : -CORTICAL TUBULAR NEPHROPATHY,-MODERATE -PAPILLARY MINERALISATION,-MINIMAL OVARY : -ATROPHY,-MODERATE -PIGMENT,-SLIGHT UTERUS : -ATROPHY,-MODERATE -ACYCLIC,-PRESENT VAGINA : -ATROPHY,-MODERATE SALIVARY GLAND : -DEGRANULATION/ATROPHY,-SLIGHT

Appendix 10

Individual animal pathology data

Test article	Control			[	]	.
Group	1	2	3	4	5	.
Level (ppm)	0	500	1000	5000	10000/7500	.

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DRAFT

STUDY NUMBER: 0535103

ANIMAL NUMBER: 000111 SEX: FEMALE DOSE GROUP: 5 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/09/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 14.3 GRAMS

OBSERVATIONS (CONTINUED)

NECROPSY	HISTOPATHOLOGY
	MANDIBULAR LN : -ATROPHY,-SLIGHT
	THYMUS : -ATROPHY,-SLIGHT
	LUNG : -FOAMY HISTIOCYTES,-MINIMAL
	ADIPOSE TISSUE : -ATROPHY,-MINIMAL

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
EYE, OPTIC NERVE, STERNUM + MARROW, SCIATIC NERVE, PANCREAS, DUODENUM, JEJUNUM, ILEUM, COLON, RECTUM, GALL BLADDER, URINARY BLADDER, HEART, AORTA, TRACHEA, OESOPHAGUS, THYROID, PARATHYROID, PITUITARY, BRAIN, SPINAL CORD

Appendix 10

Individual animal pathology data

Test article	Control				[ ]	.
Group	1	2	3	4	5	.
Level (ppm)	0	500	1000	5000	10000/7500	.

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STUDY NUMBER: 0535103

ANIMAL NUMBER: 000112 SEX: FEMALE DOSE GROUP: 5 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/09/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 13.5 GRAMS

O B S E R V A T I O N S

NECROPSY

LIVER :
-LARGE, SLIGHT; ALL LOBES
-MOTTLED, SLIGHT; ALL LOBES

OVARY :
-SMALL, SLIGHT; BILATERAL

URINARY BLADDER :
-DISTENSION, MODERATE

UTERUS :
-THIN, MODERATE; BILATERAL

HISTOPATHOLOGY

SKIN + SUBCUTIS :
-ADNEXAL ATROPHY,-SLIGHT

MAMMARY GLAND :
-ATROPHY,-SLIGHT

MUSCLE :
-ATROPHY,-SLIGHT

FEMUR + MARROW :
-MARROW ATROPHY,-MINIMAL

LIVER :
-PIGMENT,-MINIMAL
-GLYCOGEN VACUOLATION,-MINIMAL
-SINGLE CELL NECROSIS/APOPTOSIS,-MINIMAL
-CENTRILOBULAR HYPERTROPHY/VACUOLATION,-MODERATELY SEVERE
-OVAL CELL HYPERPLASIA,-SLIGHT

SPLEEN :
-ATROPHY,-MODERATE
-HAEMOPOIESIS,-MINIMAL

MESENTERIC LN :
-ATROPHY,-SLIGHT

DUODENUM :
-BARBITURATE LYSIS,-PRESENT

Appendix 10

Individual animal pathology data

Test article	Control				[	]	.
Group	1	2	3	4	5		.
Level (ppm)	0	500	1000	5000	10000/7500		.

ANIMAL NUMBER: 000112 SEX: FEMALE DOSE GROUP: 5 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/09/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 13.5 GRAMS

O B S E R V A T I O N S (CONTINUED)

NECROPSY	HISTOPATHOLOGY
	ADRENAL : -CORTICAL X-ZONE ATROPHY,-SLIGHT -SUBCAPSULAR CELL HYPERPLASIA,-MINIMAL
	KIDNEY : -CORTICAL TUBULAR NEPHROPATHY,-SLIGHT
	OVARY : >TISSUE MISSING
	URINARY BLADDER : -BARBITURATE LYSIS,-PRESENT
	UTERUS : -ATROPHY,-MODERATELY SEVERE -ACYCLIC,-PRESENT
	VAGINA : -ATROPHY,-MODERATE
	SALIVARY GLAND : -DEGRANULATION/ATROPHY,-SLIGHT
	MANDIBULAR LN : -ATROPHY,-SLIGHT
	THYMUS : -ATROPHY,-MODERATE

Appendix 10

Individual animal pathology data

Test article	Control		[		]	.
Group	1	2	3	4	5	.
Level (ppm)	0	500	1000	5000	10000/7500	.

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DRAFT

STUDY NUMBER: 0535103

ANIMAL NUMBER: 000112 SEX: FEMALE DOSE GROUP: 5 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/09/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 13.5 GRAMS

OBSERVATIONS (CONTINUED)

NECROPSY	HISTOPATHOLOGY
	PARATHYROID : >UNREMARKABLE >NOTE:>ONE SAMPLE. ADIPOSE TISSUE : -ATROPHY,-SLIGHT

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
EYE, OPTIC NERVE, HARDERIAN GLAND, STERNUM + MARROW, SCIATIC NERVE, PANCREAS, STOMACH, JEJUNUM, ILEUM, CAECUM, COLON, RECTUM, GALL BLADDER, LUNG, HEART, AORTA, TRACHEA, OESOPHAGUS, THYROID, PITUITARY, BRAIN, SPINAL CORD

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Individual animal pathology data

Test article	Control				[ ]
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

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STUDY NUMBER: 0535103

ANIMAL NUMBER: 000113 SEX: FEMALE DOSE GROUP: 5 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/09/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 13.5 GRAMS

OBSERVATIONS

NECROPSY

LIVER :
-MOTTLED, SLIGHT; ALL LOBES
-PALE, SLIGHT; ALL LOBES

SPLEEN :
-SMALL, SLIGHT

OVARY :
-SMALL, SLIGHT; BILATERAL

UTERUS :
-THIN, SLIGHT; BILATERAL

ANIMAL :
-THIN

HISTOPATHOLOGY

SKIN + SUBCUTIS :
-ADNEXAL ATROPHY,-MINIMAL

MAMMARY GLAND :
-ATROPHY,-SLIGHT

MUSCLE :
-ATROPHY,-SLIGHT

FEMUR + MARROW :
-OSTEOCHONDRAL ATROPHY,-MINIMAL

LIVER :
-PIGMENT,-MINIMAL
-GLYCOGEN VACUOLATION,-MINIMAL
-SINGLE CELL NECROSIS/APOPTOSIS,-MINIMAL
-CENTRILOBULAR HYPERTROPHY/VACUOLATION,-MODERATELY SEVERE

SPLEEN :
-ATROPHY,-MODERATE
-HAEMOPOIESIS,-MINIMAL

MESENTERIC LN :
-ATROPHY,-MINIMAL

STOMACH :
-HYPERKERATOSIS,-SLIGHT

RECTUM :
-PROCTITIS,-MINIMAL

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Individual animal pathology data

Test article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

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STUDY NUMBER: 0535103

ANIMAL NUMBER: 000113 SEX: FEMALE DOSE GROUP: 5 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/09/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 13.5 GRAMS

O B S E R V A T I O N S (CONTINUED)

NECROPSY

HISTOPATHOLOGY

ADRENAL :
-CORTICAL X-ZONE ATROPHY,-MODERATE
-SUBCAPSULAR CELL HYPERPLASIA,-MINIMAL

KIDNEY :
-CORTICAL TUBULAR NEPHROPATHY,-MODERATE

OVARY :
-ATROPHY,-MODERATE

UTERUS :
-ATROPHY,-MODERATE
-ACYCLIC,-PRESENT

VAGINA :
-ATROPHY,-MODERATE

SALIVARY GLAND :
-DEGRANULATION/ATROPHY,-SLIGHT

MANDIBULAR LN :
-ATROPHY,-SLIGHT

THYMUS :
-ATROPHY,-SLIGHT

PARATHYROID :
>UNREMARKABLE
>NOTE:>ONE SAMPLE.

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Individual animal pathology data

Test article	Control		[		]	.
Group	1	2	3	4	5	.
Level (ppm)	0	500	1000	5000	10000/7500	.

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STUDY NUMBER: 0535103

ANIMAL NUMBER: 000113 SEX: FEMALE DOSE GROUP: 5 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/09/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 13.5 GRAMS

O B S E R V A T I O N S (CONTINUED)

NECROPSY	HISTOPATHOLOGY
	ADIPOSE TISSUE : -ATROPHY,-MINIMAL

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
EYE, OPTIC NERVE, HARDERIAN GLAND, STERNUM + MARROW, SCIATIC NERVE, PANCREAS, DUODENUM, JEJUNUM, ILEUM, CAECUM, COLON, GALL BLADDER, URINARY BLADDER, LUNG, HEART, AORTA, TRACHEA, OESOPHAGUS, THYROID, PITUITARY, BRAIN, SPINAL CORD

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Individual animal pathology data

Test article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

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STUDY NUMBER: 0535103

ANIMAL NUMBER: 000114 SEX: FEMALE DOSE GROUP: 5 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/09/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 14.1 GRAMS

OBSERVATIONS

NECROPSY

ANIMAL :
-NOT REMARKABLE

HISTOPATHOLOGY

HARDERIAN GLAND :
-ATROPHY,-MINIMAL

MAMMARY GLAND :
>SECTION EXAMINED; TISSUE NOT PRESENT

FEMUR + MARROW :
-OSTEOCHONDRAL ATROPHY,-SLIGHT

LIVER :
-PIGMENT,-MINIMAL
-GLYCOGEN VACUOLATION,-SLIGHT
-CENTRILOBULAR HYPERTROPHY/VACUOLATION,-MODERATELY SEVERE

SPLEEN :
-ATROPHY,-SLIGHT
-HAEMOPOIESIS,-SLIGHT

PANCREAS :
-INFLAMMATORY CELL FOCI,-MINIMAL

MESENTERIC LN :
-ATROPHY,-MINIMAL

ADRENAL :
-CORTICAL X-ZONE ATROPHY,-MODERATE
-SUBCAPSULAR CELL HYPERPLASIA,-MINIMAL

KIDNEY :
-CORTICAL TUBULAR NEPHROPATHY,-MODERATE

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Individual animal pathology data

Test article	Control			[	]
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

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STUDY NUMBER: 0535103

ANIMAL NUMBER: 000114 SEX: FEMALE DOSE GROUP: 5 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/09/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 14.1 GRAMS

OBSERVATIONS (CONTINUED)

NECROPSY	HISTOPATHOLOGY
	OVARY : -ATROPHY,-MODERATE
	UTERUS : -ATROPHY,-MODERATELY SEVERE -ACYCLIC,-PRESENT
	VAGINA : -ATROPHY,-MODERATELY SEVERE
	SALIVARY GLAND : -DEGRANULATION/ATROPHY,-SLIGHT
	MANDIBULAR LN : -ATROPHY,-SLIGHT
	THYMUS : -ATROPHY,-MINIMAL
	HEART : -MYOCARDIAL DEGENERATION/FIBROSIS,-SLIGHT
	PARATHYROID : >UNREMARKABLE >NOTE:>ONE SAMPLE.
	ADIPOSE TISSUE : -ATROPHY,-SLIGHT

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Individual animal pathology data

Test article	Control				[ ]
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

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STUDY NUMBER: 0535103

ANIMAL NUMBER: 000114 SEX: FEMALE DOSE GROUP: 5 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/09/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 14.1 GRAMS

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
EYE, OPTIC NERVE, SKIN + SUBCUTIS, MUSCLE, STERNUM + MARROW, SCIATIC NERVE, STOMACH, DUODENUM, JEJUNUM, ILEUM, CAECUM, COLON, RECTUM, GALL BLADDER, URINARY BLADDER, LUNG, AORTA, TRACHEA, OESOPHAGUS, THYROID, PITUITARY, BRAIN, SPINAL CORD

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Individual animal pathology data

Test article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

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STUDY NUMBER: 0535103

ANIMAL NUMBER: 000115 SEX: FEMALE DOSE GROUP: 5 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/09/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 11.9 GRAMS

OBSERVATIONS

NECROPSY

UTERUS :
-THIN, MODERATELY SEVERE; BILATERAL

ANIMAL :
-THIN

HISTOPATHOLOGY

HARDERIAN GLAND :
-ATROPHY,-MINIMAL

MAMMARY GLAND :
>SECTION EXAMINED; TISSUE NOT PRESENT

FEMUR + MARROW :
-OSTEOCHONDRAL ATROPHY,-MINIMAL

LIVER :
-PIGMENT,-MINIMAL
-GLYCOGEN VACUOLATION,-SLIGHT
-SINGLE CELL NECROSIS/APOPTOSIS,-MINIMAL
-CENTRILOBULAR HYPERTROPHY/VACUOLATION,-MODERATELY SEVERE

SPLEEN :
-ATROPHY,-MODERATE
-HAEMOPOIESIS,-MINIMAL

MESENTERIC LN :
-ATROPHY,-SLIGHT

ADRENAL :
-CORTICAL X-ZONE ATROPHY,-SLIGHT
-SUBCAPSULAR CELL HYPERPLASIA,-MINIMAL

KIDNEY :
-CORTICAL TUBULAR NEPHROPATHY,-MODERATE

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Individual animal pathology data

Test article	Control		[		]	.
Group	1	2	3	4	5	.
Level (ppm)	0	500	1000	5000	10000/7500	.

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DRAFT

STUDY NUMBER: 0535103

ANIMAL NUMBER: 000115 SEX: FEMALE DOSE GROUP: 5 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/09/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 11.9 GRAMS

O B S E R V A T I O N S (CONTINUED)

NECROPSY

HISTOPATHOLOGY

OVARY :
>TISSUE MISSING

UTERUS :
-ATROPHY,-MODERATELY SEVERE
-ACYCLIC,-PRESENT

VAGINA :
-ATROPHY,-MODERATE

SALIVARY GLAND :
-DEGRANULATION/ATROPHY,-SLIGHT

MANDIBULAR LN :
-ATROPHY,-SLIGHT

THYMUS :
-ATROPHY,-MODERATELY SEVERE

LUNG :
-FOAMY HISTIOCYTES,-MINIMAL
-INFLAMMATORY CELL FOCI,-MINIMAL

PARATHYROID :
>UNREMARKABLE
>NOTE:>ONE SAMPLE.

PITUITARY :
>TISSUE MISSING

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Individual animal pathology data

Test article	Control			[	]	.
Group	1	2	3	4	5	.
Level (ppm)	0	500	1000	5000	10000/7500	.

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STUDY NUMBER: 0535103

ANIMAL NUMBER: 000115 SEX: FEMALE DOSE GROUP: 5 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/09/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 11.9 GRAMS

O B S E R V A T I O N S (CONTINUED)

NECROPSY	HISTOPATHOLOGY
	ADIPOSE TISSUE : -ATROPHY,-SLIGHT

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
EYE, OPTIC NERVE, SKIN + SUBCUTIS, MUSCLE, STERNUM + MARROW, SCIATIC NERVE, PANCREAS, STOMACH, DUODENUM, JEJUNUM, ILEUM, CAECUM, COLON, RECTUM, GALL BLADDER, URINARY BLADDER, HEART, AORTA, TRACHEA, OESOPHAGUS, THYROID, BRAIN, SPINAL CORD

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Individual animal pathology data

Test article	Control					
Group	1	2	3	4	5	.
Level (ppm)	0	500	1000	5000	10000/7500	.

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STUDY NUMBER: 0535103

ANIMAL NUMBER: 000116 SEX: FEMALE DOSE GROUP: 5 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/09/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 12.8 GRAMS

OBSERVATIONS

NECROPSY

LIVER :
-LARGE, SLIGHT; ALL LOBES

URINARY BLADDER :
-DISTENSION, MODERATE

UTERUS :
-THIN, MODERATE; BILATERAL

HISTOPATHOLOGY

OPTIC NERVE :
>TISSUE MISSING

HARDERIAN GLAND :
-ATROPHY,-MINIMAL

SKIN + SUBCUTIS :
-ADNEXAL ATROPHY,-SLIGHT

MAMMARY GLAND :
-ATROPHY,-MINIMAL

MUSCLE :
-ATROPHY,-SLIGHT
-MYOPATHY,-MINIMAL

FEMUR + MARROW :
-OSTEOCHONDRAL ATROPHY,-SLIGHT

LIVER :
-CENTRILOBULAR HYPERTROPHY/VACUOLATION,-MODERATELY SEVERE

SPLEEN :
-ATROPHY,-MODERATE
-HAEMOPOIESIS,-MINIMAL

MESENTERIC LN :
-ATROPHY,-MINIMAL

Appendix 10

Individual animal pathology data

Test article	Control		[		]	.
Group	1	2	3	4	5	.
Level (ppm)	0	500	1000	5000	10000/7500	.

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DRAFT

STUDY NUMBER: 0535103

ANIMAL NUMBER: 000116 SEX: FEMALE DOSE GROUP: 5 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/09/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 12.8 GRAMS

O B S E R V A T I O N S (CONTINUED)

NECROPSY

HISTOPATHOLOGY

STOMACH :
-HYPERKERATOSIS,-MINIMAL

CAECUM :
-BARBITURATE LYSIS,-PRESENT

ADRENAL :
-CORTICAL X-ZONE ATROPHY,-MODERATE
-SUBCAPSULAR CELL HYPERPLASIA,-MINIMAL

KIDNEY :
-CORTICAL TUBULAR NEPHROPATHY,-MODERATE

OVARY :
-ATROPHY,-MODERATELY SEVERE

URINARY BLADDER :
-BARBITURATE LYSIS,-PRESENT

UTERUS :
-ATROPHY,-MODERATELY SEVERE
-ACYCLIC,-PRESENT

VAGINA :
-ATROPHY,-MODERATE

SALIVARY GLAND :
-DEGRANULATION/ATROPHY,-SLIGHT

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Appendix 10

Individual animal pathology data

Test article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

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STUDY NUMBER: 0535103

ANIMAL NUMBER: 000116 SEX: FEMALE DOSE GROUP: 5 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/09/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 12.8 GRAMS

OBSERVATIONS (CONTINUED)

NECROPSY

HISTOPATHOLOGY

MANDIBULAR LN :
-ATROPHY,-SLIGHT

THYMUS :
>SECTION EXAMINED; TISSUE NOT PRESENT

PARATHYROID :
>SECTION EXAMINED; TISSUE NOT PRESENT

ADIPOSE TISSUE :
-ATROPHY,-SLIGHT

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
EYE, STERNUM + MARROW, SCIATIC NERVE, PANCREAS, DUODENUM, JEJUNUM, ILEUM, COLON, RECTUM, GALL BLADDER, LUNG, HEART, AORTA, TRACHEA, OESOPHAGUS, THYROID, PITUITARY, BRAIN, SPINAL CORD

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Appendix 10

Individual animal pathology data

Test article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

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STUDY NUMBER: 0535103

ANIMAL NUMBER: 000117 SEX: FEMALE DOSE GROUP: 5 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/09/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 12.9 GRAMS

OBSERVATIONS

NECROPSY

SPLEEN :
-SMALL, SLIGHT

PANCREAS :
-PALE, SLIGHT

OVARY :
-SMALL, MODERATE; BILATERAL

UTERUS :
-THIN, MODERATELY SEVERE; BILATERAL

HISTOPATHOLOGY

SKIN + SUBCUTIS :
-ADNEXAL ATROPHY,-MINIMAL

MAMMARY GLAND :
-ATROPHY,-SLIGHT

MUSCLE :
-ATROPHY,-SLIGHT

FEMUR + MARROW :
-MARROW ATROPHY,-MINIMAL

LIVER :
-PIGMENT,-MINIMAL
-GLYCOGEN VACUOLATION,-MINIMAL
-SINGLE CELL NECROSIS/APOPTOSIS,-MINIMAL
-CENTRILOBULAR HYPERTROPHY/VACUOLATION,-MODERATELY SEVERE
-OVAL CELL HYPERPLASIA,-SLIGHT

SPLEEN :
-ATROPHY,-SLIGHT
-HAEMOPOIESIS,-MINIMAL

PANCREAS :
>UNREMARKABLE
>NOTE:>NO MICROSCOPIC CORRELATION WITH NECROPSY.

MESENTERIC LN :
-ATROPHY,-SLIGHT

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Appendix 10

Individual animal pathology data

Test article	Control		[		]	.
Group	1	2	3	4	5	.
Level (ppm)	0	500	1000	5000	10000/7500	.

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DRAFT

STUDY NUMBER: 0535103

ANIMAL NUMBER: 000117 SEX: FEMALE DOSE GROUP: 5 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/09/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 12.9 GRAMS

OBSERVATIONS (CONTINUED)

NECROPSY	HISTOPATHOLOGY
	ADRENAL : -CORTICAL X-ZONE ATROPHY,-MINIMAL -SUBCAPSULAR CELL HYPERPLASIA,-MINIMAL KIDNEY : -CORTICAL TUBULAR NEPHROPATHY,-MODERATE -PAPILLARY MINERALISATION,-MINIMAL OVARY : -ATROPHY,-MODERATE UTERUS : -ATROPHY,-MODERATE -ACYCLIC,-PRESENT VAGINA : -ATROPHY,-MODERATE SALIVARY GLAND : -DEGRANULATION/ATROPHY,-SLIGHT MANDIBULAR LN : -ATROPHY,-SLIGHT THYMUS : -ATROPHY,-SLIGHT ADIPOSE TISSUE : -ATROPHY,-SLIGHT

Appendix 10

Individual animal pathology data

Test article	Control		[		]	.
Group	1	2	3	4	5	.
Level (ppm)	0	500	1000	5000	10000/7500	.

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DRAFT

STUDY NUMBER: 0535103

ANIMAL NUMBER: 000117 SEX: FEMALE DOSE GROUP: 5 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/09/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 12.9 GRAMS

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
EYE, OPTIC NERVE, HARDERIAN GLAND, STERNUM + MARROW, SCIATIC NERVE, STOMACH, DUODENUM, JEJUNUM, ILEUM, CAECUM, COLON, RECTUM, GALL BLADDER, URINARY BLADDER, LUNG, HEART, AORTA, TRACHEA, OESOPHAGUS, THYROID, PARATHYROID, PITUITARY, BRAIN, SPINAL CORD

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Appendix 10

Individual animal pathology data

	Test article	Control		[		]
	Group	1	2	3	4	5
	Level (ppm)	0	500	1000	5000	10000/7500

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HARROGATE, ENGLAND

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DRAFT

STUDY NUMBER: 0535103

ANIMAL NUMBER: 000118 SEX: FEMALE DOSE GROUP: 5 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/09/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 13.8 GRAMS

OBSERVATIONS

NECROPSY	HISTOPATHOLOGY
ANIMAL : -NOT REMARKABLE	HARDERIAN GLAND : -ATROPHY,-SLIGHT SKIN + SUBCUTIS : -ADNEXAL ATROPHY,-SLIGHT MAMMARY GLAND : -ATROPHY,-SLIGHT MUSCLE : -ATROPHY,-SLIGHT FEMUR + MARROW : -MARROW ATROPHY,-MINIMAL -OSTEOCHONDRAL ATROPHY,-SLIGHT LIVER : -PIGMENT,-MINIMAL -CENTRILOBULAR HYPERTROPHY/VACUOLATION,-MODERATELY SEVERE -OVAL CELL HYPERPLASIA,-MINIMAL SPLEEN : -ATROPHY,-MODERATE MESENTERIC LN : -ATROPHY,-SLIGHT STOMACH : -HYPERKERATOSIS,-SLIGHT

Appendix 10

Individual animal pathology data

Test article	Control				[ ]
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

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DRAFT

STUDY NUMBER: 0535103

ANIMAL NUMBER: 000118 SEX: FEMALE DOSE GROUP: 5 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/09/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 13.8 GRAMS

OBSERVATIONS (CONTINUED)

NECROPSY

HISTOPATHOLOGY

RECTUM :
>TISSUE MISSING

ADRENAL :
-CORTICAL X-ZONE ATROPHY,-SLIGHT

KIDNEY :
-CORTICAL TUBULAR NEPHROPATHY,-MODERATE

OVARY :
-ATROPHY,-MODERATE

UTERUS :
-ATROPHY,-MODERATE
-ACYCLIC,-PRESENT

VAGINA :
-ATROPHY,-MODERATE

SALIVARY GLAND :
-DEGRANULATION/ATROPHY,-SLIGHT

MANDIBULAR LN :
>SECTION EXAMINED; TISSUE NOT PRESENT

THYMUS :
-ATROPHY,-SLIGHT

LUNG :
-FOAMY HISTIOCYTES,-SLIGHT

Appendix 10

Individual animal pathology data

Test article	Control		[		]	.
Group	1	2	3	4	5	.
Level (ppm)	0	500	1000	5000	10000/7500	.

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DRAFT

STUDY NUMBER: 0535103

ANIMAL NUMBER: 000118 SEX: FEMALE DOSE GROUP: 5 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/09/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 13.8 GRAMS

O B S E R V A T I O N S (CONTINUED)

NECROPSY	HISTOPATHOLOGY
	LUNG : -INFLAMMATORY CELL FOCI,-MINIMAL ADIPOSE TISSUE : -ATROPHY,-MINIMAL

GENERAL INFORMATION :
>COMMENT:>POST FIX OBS: LUNG - PALE FOCUS: RIGHT POSTERIOR LOBE

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
EYE, OPTIC NERVE, STERNUM + MARROW, SCIATIC NERVE, PANCREAS, DUODENUM, JEJUNUM, ILEUM, CAECUM, COLON, GALL BLADDER, URINARY BLADDER, HEART, AORTA, TRACHEA, OESOPHAGUS, THYROID, PARATHYROID, PITUITARY, BRAIN, SPINAL CORD

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Appendix 10

Individual animal pathology data

Test article	Control				[	]
Group	1	2	3	4	5	
Level (ppm)	0	500	1000	5000	10000/7500	

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STUDY NUMBER: 0535103

ANIMAL NUMBER: 000119 SEX: FEMALE DOSE GROUP: 5 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/09/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 13.2 GRAMS

O B S E R V A T I O N S

NECROPSY

THYMUS :
-SMALL, SLIGHT; BILATERAL

HISTOPATHOLOGY

OPTIC NERVE :
>UNREMARKABLE
>NOTE:>ONE SAMPLE.

HARDERIAN GLAND :
-ATROPHY,-MINIMAL

SKIN + SUBCUTIS :
-ADNEXAL ATROPHY,-MINIMAL

MAMMARY GLAND :
-ATROPHY,-MINIMAL

MUSCLE :
-ATROPHY,-MINIMAL

FEMUR + MARROW :
-MARROW ATROPHY,-MINIMAL
-OSTEOCHONDRAL ATROPHY,-SLIGHT

LIVER :
-PIGMENT,-MINIMAL
-CENTRILOBULAR HYPERTROPHY/VACUOLATION,-MODERATELY SEVERE
-OVAL CELL HYPERPLASIA,-SLIGHT

SPLEEN :
-ATROPHY,-MODERATE
-HAEMOPOIESIS,-MINIMAL

Appendix 10

Individual animal pathology data

Test article	Control		[		]	.
Group	1	2	3	4	5	.
Level (ppm)	0	500	1000	5000	10000/7500	.

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DRAFT

STUDY NUMBER: 0535103

ANIMAL NUMBER: 000119 SEX: FEMALE DOSE GROUP: 5 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/09/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 13.2 GRAMS

OBSERVATIONS (CONTINUED)

NECROPSY	HISTOPATHOLOGY
	MESENTERIC LN : -ATROPHY,-SLIGHT CAECUM : -BARBITURATE LYSIS,-PRESENT ADRENAL : -CORTICAL X-ZONE ATROPHY,-MINIMAL KIDNEY : -CORTICAL TUBULAR NEPHROPATHY,-MODERATE -PAPILLARY MINERALISATION,-MINIMAL OVARY : -ATROPHY,-MODERATE UTERUS : -ATROPHY,-MODERATELY SEVERE -ACYCLIC,-PRESENT VAGINA : -ATROPHY,-MODERATE SALIVARY GLAND : -DEGRANULATION/ATROPHY,-SLIGHT MANDIBULAR LN : >SECTION EXAMINED; TISSUE NOT PRESENT

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Appendix 10

Individual animal pathology data

Test article	Control			[	]	.
Group	1	2	3	4	5	.
Level (ppm)	0	500	1000	5000	10000/7500	.

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DRAFT

STUDY NUMBER: 0535103

ANIMAL NUMBER: 000119 SEX: FEMALE DOSE GROUP: 5 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
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O B S E R V A T I O N S (CONTINUED)

NECROPSY	HISTOPATHOLOGY
	THYMUS : -ATROPHY,-MODERATE
	HEART : -MYOCARDIAL DEGENERATION/FIBROSIS,-SLIGHT
	PARATHYROID : >SECTION EXAMINED; TISSUE NOT PRESENT
	ADIPOSE TISSUE : -ATROPHY,-SLIGHT

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
EYE, STERNUM + MARROW, SCIATIC NERVE, PANCREAS, STOMACH, DUODENUM, JEJUNUM, ILEUM, COLON, RECTUM, GALL BLADDER, URINARY BLADDER, LUNG, AORTA, TRACHEA, OESOPHAGUS, THYROID, PITUITARY, BRAIN, SPINAL CORD

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Appendix 10

Individual animal pathology data

Test article	Control		[		]
Group	1	2	3	4	5
Level (ppm)	0	500	1000	5000	10000/7500

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STUDY NUMBER: 0535103

ANIMAL NUMBER: 000120 SEX: FEMALE DOSE GROUP: 5 SACRIFICE STATUS: SCHEDULED, TERMINAL SACRIFICE
DATE OF DEATH: 09/09/03 STUDY DAY OF DEATH: 96 STUDY WEEK OF DEATH: 14 TERMINAL BODY WEIGHT: 13.5 GRAMS

OBSERVATIONS

NECROPSY

SKIN + SUBCUTIS :
-VIBRISSAE MISSING

LIVER :
-MOTTLED, SLIGHT; ALL LOBES
-PALE, SLIGHT; ALL LOBES

OVARY :
-SMALL, MINIMAL; BILATERAL

UTERUS :
-THIN, SLIGHT; BILATERAL

HISTOPATHOLOGY

HARDERIAN GLAND :
-ATROPHY,-MINIMAL

SKIN + SUBCUTIS :
-ADNEXAL ATROPHY,-SLIGHT
>NOTE:>NO EQUIVALENT SAMPLE FOR CORRELATION WITH NECROPSY.

MAMMARY GLAND :
-ATROPHY,-SLIGHT

MUSCLE :
-ATROPHY,-MINIMAL

FEMUR + MARROW :
-OSTEOCHONDRAL ATROPHY,-MINIMAL

LIVER :
-PIGMENT,-MINIMAL
-CENTRILOBULAR HYPERTROPHY/VACUOLATION,-MODERATELY SEVERE
-OVAL CELL HYPERPLASIA,-MINIMAL

SPLEEN :
-ATROPHY,-SLIGHT
-HAEMOPOIESIS,-SLIGHT

MESENTERIC LN :
-ATROPHY,-SLIGHT

STOMACH :
-HYPERKERATOSIS,-MINIMAL

Appendix 10

Individual animal pathology data

Test article	Control		[		]	.
Group	1	2	3	4	5	.
Level (ppm)	0	500	1000	5000	10000/7500	.

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STUDY NUMBER: 0535103

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O B S E R V A T I O N S (CONTINUED)

NECROPSY

HISTOPATHOLOGY

ADRENAL :
-CORTICAL X-ZONE ATROPHY,-SLIGHT
-SUBCAPSULAR CELL HYPERPLASIA,-MINIMAL

KIDNEY :
-CORTICAL TUBULAR NEPHROPATHY,-MODERATE

OVARY :
-ATROPHY,-MODERATE

UTERUS :
-ATROPHY,-MODERATELY SEVERE
-ACYCLIC,-PRESENT

VAGINA :
-ATROPHY,-MODERATE

SALIVARY GLAND :
-DEGRANULATION/ATROPHY,-SLIGHT

MANDIBULAR LN :
-ATROPHY,-SLIGHT

THYMUS :
-ATROPHY,-MODERATE

PARATHYROID :
>UNREMARKABLE
>NOTE:>ONE SAMPLE.

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Appendix 10

Individual animal pathology data

Test article	Control		[		]	.
Group	1	2	3	4	5	.
Level (ppm)	0	500	1000	5000	10000/7500	.

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O B S E R V A T I O N S (CONTINUED)

NECROPSY	HISTOPATHOLOGY
	ADIPOSE TISSUE : -ATROPHY,-SLIGHT

THE FOLLOWING TISSUES WERE UNREMARKABLE AT MICROSCOPIC EXAMINATION:
EYE, OPTIC NERVE, STERNUM + MARROW, SCIATIC NERVE, PANCREAS, DUODENUM, JEJUNUM, ILEUM, CAECUM, COLON, RECTUM, GALL BLADDER, URINARY BLADDER, LUNG, HEART, AORTA, TRACHEA, OESOPHAGUS, THYROID, PITUITARY, BRAIN, SPINAL CORD

Appendix 11
Sponsor's certificate of test article analysis

Certificate of Analysis

Code Name :	[ ]
Chemical Name :	[ ]
CAS Number :	[ ]
Lot No. :	RCT301
Purity :	99.1 %
Color :	White powder
Method for Analysis :	HPLC external standard method
Date of Analysis :	February 21, 2003
Date of Synthesis :	January 22, 2003
Storage Condition :	10℃ to 30℃
Expiry Date :	February 20, 2004

This compound was synthesized and analyzed by [ ]

Date March 17, 2003

Signature [ ]

[ ]

[ ]