QT-0203

FINAL REPORT

Contents:	Volume 1 of 4 Text, Figures, Summary Tables, and Appendices A-E
Study Title:	An Oral (Gavage) Acute Neurotoxicity Study of Tolclofos-Methyl in Rats
Study Number:	WIL-118043
Study Director:	Melissa J. Beck, PhD
Data Requirements:	OECD Guideline 424 EPA OPPTS Guideline 870.6200 JMAFF Notification No. 12 NohSan No. 8147
Study Initiation Date:	16 November 2009
Study Completion Date:	21 April 2010
Performing Laboratory:	WIL Research Laboratories, LLC 1407 George Road Ashland, OH 44805-8946
Sponsor:	Sumitomo Chemical Company, Ltd. 27-1, Shinkawa 2-chome Chuo-ku, Tokyo 104-8260, Japan

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STATEMENT OF NO DATA CONFIDENTIALITY CLAIMS

No claim of confidentiality is made for any information contained in this study on the basis of its falling within the scope of FIFRA 10(d) 1(A), (B), or (C).

Sponsor: Sumitomo Chemical Company, Ltd.
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Sponsor's Agent: _____ _____
Signature Date

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COMPLIANCE STATEMENT

This study, designated WIL-118043, was conducted in compliance with the United States EPA FIFRA GLP Regulations (40 CFR Part 160), 16 October 1989; the United States EPA TSCA GLP Regulations (40 CFR Part 792), 18 September 1989; the OECD Principles of GLP [C(97) 186/Final], 26 November 1997; the Japanese MAFF Good Laboratory Practice for Agricultural Chemicals (11 NohSan No. 6283), 1 October 1999; the WIL SOPs; and the protocol as approved by the Sponsor.

The study was executed in accordance with the United States EPA Health Effects Guidelines OPPTS 870.6200, Neurotoxicity Screening Battery, August 1998; the Organisation for Economic Cooperation and Development Guidelines for Testing of Chemicals Guideline 424, Neurotoxicity Study in Rodents, 21 July 1997; and the Japanese Ministry of Agriculture, Forestry and Fisheries Guideline 12 NohSan No. 8147, 24 November 2000.

Melissa J Beck — 21 Apr 2010
Melissa J. Beck, PhD — Date
Assistant Director, Neurosciences
Study Director

K. Nizkota — 27 April 2010
Sponsor Representative — Date

Applicant/Submitter — Date

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FLAGGING STATEMENT

I have applied the criteria of 40 CFR 158.34 for flagging studies for potential adverse effects to the results of the attached study. This study neither meets nor exceeds any of the applicable criteria.

_____ _____
Sponsor Representative Date

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1. SUMMARY

1.1. OBJECTIVE

The objective of the study was to evaluate the acute neurotoxic potential of the test substance when administered orally by gavage to rats as a single dose. The neurotoxic potential of the test substance was evaluated using a neurotoxic screening battery consisting of functional observational battery, locomotor activity, and neuropathological assessments.

1.2. STUDY DESIGN

Tolclofos-methyl in the vehicle, corn oil, was administered orally by gavage as a single dose to 3 groups (Groups 2-4) of Crl:CD(SD) rats. Dose levels were 200, 700, and 2000 mg/kg. A concurrent control group (Group 1) received the vehicle on a comparable regimen. Animals were approximately 6 weeks old at the initiation of dose administration. Each group consisted of 12 rats/sex. The dose volume was 5 mL/kg for all groups.

All animals were observed twice daily for mortality and moribundity. Clinical examinations were performed daily. Individual body weights were recorded weekly. FOB and locomotor activity data were recorded for all animals prior to the initiation of dose administration, at the time of peak effect (approximately 4 hours following dose administration) on study day 0, and on study days 7 and 14. All animals were anesthetized on study day 15 and perfused in situ; brain weights and brain dimensions (excluding olfactory bulbs) were recorded. In addition, a neuropathological evaluation of selected tissues from the central and peripheral nervous systems was performed on 6 animals/sex in the control and 2000 mg/kg groups.

1.3. RESULTS

All animals survived to the scheduled euthanasia (study day 15). There were no test substance-related clinical findings during the daily observations. Mean body weights and body weight gains were unaffected by tolclofos-methyl administration.

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No test substance-related effects were apparent when FOB evaluations were performed at the time of peak effect (4 hours post-dosing) on study day 0 and on study days 7 and 14. The FOB evaluations collectively involved home cage, handling, open field, sensorimotor, neuromuscular, and physiological parameters.

Mean overall locomotor activity (total and ambulatory counts) was decreased for males and females in the 700 and 2000 mg/kg groups at the time of peak effect on study day 0, but was similar to the control group on study days 7 and 14. Locomotor activity was unaffected by test substance administration at a dose level of 200 mg/kg. No remarkable shifts in the pattern of habituation occurred in any of the test substance-treated groups when the animals were evaluated on study days 0, 7, and 14.

No tolclofos-methyl-related effects were apparent in brain weights or brain dimensions for perfused animals. No test substance-related neuropathological lesions were observed upon microscopic examination of 6 animals/sex in the 2000 mg/kg group.

1.4. CONCLUSIONS

Decreased locomotor activity (total and ambulatory counts) was noted for males and females in the 700 and 2000 mg/kg groups at the time of peak effect on study day 0. However, none of the functional domains described by Moser (1991) were affected by a single dose of tolclofos-methyl at 200, 700, or 2000 mg/kg. Based on the results of this study, both the no-observed-effect level (NOEL) and no-observed-adverse-effect level (NOAEL) for neurotoxicity of a single oral dose of tolclofos-methyl to rats were 200 mg/kg.

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2. INTRODUCTION

2.1. GENERAL STUDY INFORMATION

This report presents the data from "An Oral (Gavage) Acute Neurotoxicity Study of Tolclofos-Methyl in Rats." Due to software spacing constraints, the study title appears as "An Oral Acute Neurotoxicity Study of Tolclofos-Methyl in Rats" on the report tables. The study protocol is presented in Appendix A.

A list of abbreviations potentially used in this report is presented in Section 13. (Abbreviations).

For the data collection process, each phase of the study was separated into what were termed WIL computer protocols. The computer protocol reference numbers and types of data collected were identified as follows:

Computer Protocol	Type of Data Collected
WIL-118043	Main study data

2.2. KEY STUDY DATES[1]

Date(s)	Event(s)
17 November 2009	Experimental starting date (animal receipt)
20 November 2009	Assignment to study groups/replicates
22-25 November 2009	Pretest FOB/locomotor activity evaluations
30 November 2009	Experimental start date (initiation of dose administration to first replicate)
30 November - 3 December 2009	Study day 0 (peak effect) FOB/locomotor activity evaluations
7-10 December 2009	Study day 7 FOB/locomotor activity evaluations
14-17 December 2009	Study day 14 FOB/locomotor activity evaluations
18 December 2009	Last scheduled euthanasia (study day 15)
12 February 2010	Experimental termination (completion) date (last histopathological examination)

[1] Date ranges represent the first and last dates of evaluation.

2.3. CONTRIBUTING SCIENTIST

Pathology	John Boyce, DVM, PhD, DACVP, DACLAM WIL Research Laboratories, LLC Ashland, OH

2.4. PRINCIPAL INVESTIGATOR AND TEST SITE

Principal Investigator, Statistical Analysis	Les Freshwater, MS BioSTAT Consultants, Inc. Portage, MI

2.5. WIL KEY STUDY PERSONNEL

Sally A. Keets, AS	Senior Operations Manager, Vivarium
Carol A. Kopp, BS, LAT	Manager, Gross Pathology and Developmental Toxicology Laboratory
Theresa M. Rafeld, CPhT	Group Manager, Formulations Laboratory
Michael A. Safron, AS, HT (ASCP)^{CM}	Manager, Histology
Daniel W. Sved, PhD	Director, Metabolism and Analytical Chemistry
Bennett J. Varsho, MPH, DABT	Operations Manager, Developmental and Reproductive Toxicology and the Formulations Laboratory
Robert A. Wally, BS, RAC	Manager, Reporting and Regulatory Technical Services

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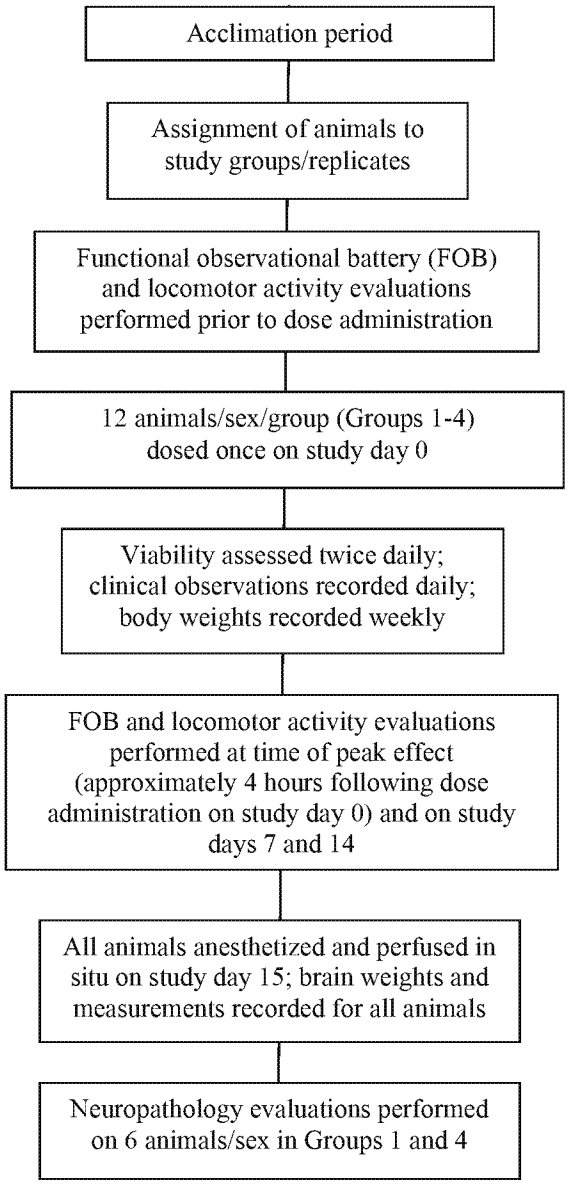
3. STUDY DESIGN



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4. EXPERIMENTAL PROCEDURES - MATERIALS AND METHODS

4.1. TEST SUBSTANCE AND VEHICLE

4.1.1. TEST SUBSTANCE

The test substance, tolclofos-methyl, was received from Sumitomo Chemical Co., Ltd., Osaka, Japan, on 30 July 2009, as follows:

Identification	Physical Description (Study Protocol)
Tolclofos-Methyl T.G. Lot no. 080712G Exp. date: 8 July 2012 [WIL log no. 0900BE]	White, crystalline solid

Documentation regarding the purity and stability of the test substance is on file with the Sponsor and WIL. A Certificate of Analysis for the test substance was provided by the Sponsor and is presented in Appendix B. The purity of the test substance was 97.5%. The test substance was stored refrigerated, protected from light, and was considered stable under these conditions. A reserve sample of the test substance was collected and stored in the WIL Archives.

4.1.2. VEHICLE

The vehicle used in preparation of the test substance formulations and for administration to the control group was corn oil (lot no. 049K0043, exp. date: 7 October 2010, manufactured by Sigma Aldrich, Milwaukee, WI).

4.1.3. PREPARATION

For the control group (Group 1), a sufficient volume of the corn oil was transferred to a glass container. Aliquots of the vehicle were prepared for dispensation and stored refrigerated, protected from light. The vehicle was mixed throughout the sampling and dose administration procedures.

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Dosing formulations were prepared at the test substance concentrations indicated in the following table:

Group Number	Treatment	Dose Level (mg/kg)	Test Substance Concentration[a] (mg/mL)
1	Vehicle control	0	0
2	Tolclofos-methyl	200	40
3	Tolclofos-methyl	700	140
4	Tolclofol-methyl	2000	400

[a] = The dosing formulations were not adjusted for purity.

The test substance formulations used for dose administration were prepared once as single formulations for each sex at each dose level, divided into aliquots for dispensation, and stored refrigerated, protected from light. The test substance formulations were stirred continuously throughout the preparation, sampling, and dose administration procedures.

The dosing formulations were visually inspected by the Study Director and were found to be visibly homogeneous and acceptable for administration.

4.1.4. SAMPLING AND ANALYSES

Analyses to demonstrate the stability and homogeneity of the test substance formulations for a period of 8 hours at room temperature and 8 days under refrigeration (approximately 4°C) at concentrations of 20 mg/mL to 500 mg/mL were conducted in a previous study (Beck, 2010, WIL-118042). Therefore, stability and homogeneity analyses were not conducted as part of this study.

Prior to the initiation of dose administration, samples for concentration analysis were collected from the middle stratum of each dosing formulation (including the control group). All analyses were conducted by the WIL Analytical Chemistry Department using a validated gas chromatographic method using flame ionization detection. Details about the methodology and results of these analyses are presented in Appendix C, and the results are summarized in Section 6.1.

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4.2. TEST SYSTEM, ANIMAL RECEIPT, AND ACCLIMATION PERIOD

Crl:CD(SD) rats were used as the test system on this study. This species and strain of animal is recognized as appropriate for neurotoxicity studies and has been proven to be susceptible to the effects of neurotoxicants. In addition, WIL has neurotoxicity historical control data in the Crl:CD(SD) rat. The number of animals selected for this study (see Section 4.7.) was the minimum required to meet the objectives of the study.

Crl:CD(SD) rats (53 rats/sex) were received in good health on 17 November 2009, from Charles River Laboratories, Inc., Raleigh, NC. The animals were approximately 4 weeks old at receipt. The day following receipt, all animals were weighed and clinical observations were recorded. Each animal was uniquely identified by a Monel® metal ear tag displaying the permanent identification number. All animals were housed for a minimum 13-day acclimation period. During this period, each animal was observed twice daily for mortality and changes in general appearance or behavior.

4.3. ANIMAL HOUSING

Upon arrival, all animals were housed 2-3 per cage by sex for approximately 3 days. Thereafter, all animals were housed individually in clean, stainless steel, wire-mesh cages suspended above cage-board. The cage-board was changed at least 3 times per week. Animals were maintained in accordance with the *Guide for the Care and Use of Laboratory Animals* (National Research Council, 1996). The animal facilities at WIL are accredited by AAALAC International.

4.4. DIET, DRINKING WATER, AND MAINTENANCE

The basal diet used in this study, PMI Nutrition International, LLC Certified Rodent LabDiet® 5002, is a certified feed with appropriate analyses performed by the manufacturer and provided to WIL. Feed lots used during the study are documented in the study records. The feeders were changed and sanitized once per week. Reverse osmosis-treated (on-site) drinking water, delivered by an automatic watering system, and the basal diet were provided ad libitum throughout the study. Municipal water supplying

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the facility is sampled for contaminants according to SOP. The results of the diet and water analyses are maintained at WIL and are presented in Appendix D. No contaminants were present in animal feed or water at concentrations sufficient to interfere with the objectives of this study.

4.5. ENVIRONMENTAL CONDITIONS

All animals were housed throughout the acclimation period and during the study in an environmentally controlled room. The room temperature and humidity controls were set to maintain environmental conditions of 71°F ± 5°F (22°C ± 3°C) and 50% ± 20% relative humidity. Room temperature and relative humidity data were recorded approximately hourly and are summarized in Appendix E. Actual mean daily temperature ranged from 69.9°F to 71.1°F (21.1°C to 21.7°C) and mean daily relative humidity ranged from 41.6% to 49.8% during the study. Fluorescent lighting provided illumination for a 12-hour light (0600 hours to 1800 hours)/12-hour dark photoperiod. Air handling units were set to provide a minimum of 10 fresh air changes per hour.

4.6. ASSIGNMENT OF ANIMALS TO TREATMENT GROUPS

On 20 November 2009 (10 days prior to the initiation of dose administration), all available rats were weighed and examined in detail for physical abnormalities. These data were collected using WTDMS™ and reviewed by the Study Director. The animals judged suitable for assignment to the study were selected for use in a computerized randomization procedure. A printout containing the animal numbers, corresponding body weights and individual group assignments was generated based on body weight stratification in a block design. The animals were then arranged into groups according to the printout. Individual body weights at randomization were within ± 20% of the mean for each sex. Each group (Groups 1-4) consisted of 12 males and 12 females. These animals were then randomized into 4 study replicates to allow for the reasonable conduct of the functional observational battery and locomotor activity assessments. Each dose group and sex was equally represented within each study replicate. Animals not assigned to study were transferred to the WIL stock colony or euthanized by carbon dioxide

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inhalation and discarded. The selected animals were approximately 6 weeks old at the initiation of dose administration; individual body weights ranged from 159 g to 227 g for males and from 127 g to 184 g for females.

4.7. ORGANIZATION OF TEST GROUPS, DOSE LEVELS, AND TREATMENT REGIMEN

The vehicle and test substance formulations were administered as a single oral (gavage) dose via an appropriately sized flexible Teflon®-shafted, stainless steel ball-tipped dosing cannula (Natume, Japan). The dose volume for all groups was 5 mL/kg. Individual doses were based on the body weights recorded prior to dosing on study day 0. Animals were not fasted prior to dose administration to avoid potential confounding effects of inanition on behavior.

The following table presents the study group assignment:

Group Number	Treatment	Dose Level (mg/kg)	Dose Volume (mL/kg)	Number of Animals Males	Number of Animals Females
1	Vehicle control	0	5	12	12
2	Tolclofos-methyl	200	5	12	12
3	Tolclofos-methyl	700	5	12	12
4	Tolclofos-methyl	2000	5	12	12

Dose levels were selected based on the results of a previous dose range-finding acute neurotoxicity study of tolclofos-methyl in which dose levels of 0, 1000, and 2000 mg/kg were evaluated (Beck, 2010, WIL-118042). In that study, no remarkable findings were noted during the detailed clinical observations, with the exception of a single incidence of walking on tiptoes at approximately 4 hours after dosing for the 2000 mg/kg group females. Based on these results, 2000 mg/kg, the upper limit dose level for the testing guidelines, was selected as the highest dose level in the current study. Dose levels of 700 and 200 mg/kg were also selected as intermediate- and low-dose levels, respectively (approximately 3-fold intervals).

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The selected route of administration for this study was oral (gavage) because this is a possible route of human exposure.

Plasma, red blood cell, and brain cholinesterase activity were not measured in this study because there was no evidence of inhibition at 1, 2, 4, and 8 hours post-dose at a dose level of 2000 mg/kg in a previous time to peak effect study of tolclofos-methyl on cholinesterase in rats (Beck, 2010, WIL-118044).

5. PARAMETERS EVALUATED

5.1. CLINICAL OBSERVATIONS AND SURVIVAL

All animals were observed twice daily, once in the morning and once in the afternoon, for mortality and moribundity.

Clinical examinations were performed once daily on all animals. The absence or presence of findings was recorded for individual animals. On the days that the functional observational battery was conducted, no additional clinical findings were recorded.

Male no. 59916 in the 700 mg/kg group was identified by a clinical veterinarian as having dermatitis. Following approval from the Sponsor, this male was treated with Nolvasan® scrub, an antimicrobial wash that is commonly used by WIL for the treatment of dermatitis.

5.2. BODY WEIGHTS

Individual body weights were recorded at least weekly, beginning approximately 1 week prior to test substance administration (study day -7). Mean body weights and body weight changes were calculated for the corresponding intervals.

5.3. FOB ASSESSMENTS

FOB findings were recorded for all animals prior to the initiation of dose administration (study day -8), at the time of peak effect on study day 0 (considered to be approximately 4 hours after dose administration), and on study days 7 and 14. The time of peak effect was considered to be approximately 4 hours post-dosing based on a single occurrence of walking on tiptoes observed at that time point in a previous range-finding acute neurotoxicity study (Beck, 2010, WIL-118042); furthermore, previous data demonstrate that the time of peak blood concentration is ≥2 hours following dose administration (Esumi, 1989). The FOB used at WIL is based on previously developed protocols (Gad, 1982; Haggerty, 1989; Irwin, 1968; Moser et al., 1988; Moser et al., 1991 and O'Donoghue, 1989). Testing was performed by the same technicians, whenever possible, without knowledge of the animal's group assignment. All animals were observed for the following parameters as

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described below (refer to Appendix F for additional details on the FOB methodology and validation, and to Appendix G for a detailed description of the scoring criteria used for each observation):

5.3.1. HOME CAGE OBSERVATIONS

Posture
Convulsions/tremors
Feces consistency
Biting
Palpebral (eyelid) closure

5.3.2. HANDLING OBSERVATIONS

Ease of removal from cage
Lacrimation/chromodacryorrhea
Piloerection
Palpebral closure
Eye prominence
Red/crusty deposits
Ease of handling animal in hand
Salivation
Fur appearance
Respiratory rate/character
Mucous membranes/eye/skin color
Muscle tone

5.3.3. OPEN FIELD OBSERVATIONS

Mobility
Rearing
Convulsions/tremors
Grooming
Bizarre/stereotypic behavior
Time to first step (seconds)
Gait
Arousal
Urination/defecation
Gait score
Backing

Note: Open field observations were evaluated over a 2-minute observation period.

5.3.4. SENSORY OBSERVATIONS

Approach response
Startle response
Pupil response
Forelimb extension
Air righting reflex
Touch response
Tail pinch response
Eyeblink response
Hindlimb extension
Olfactory orientation

5.3.5. NEUROMUSCULAR OBSERVATIONS

Hindlimb extensor strength
Hindlimb foot splay
Grip strength-hind and forelimb
Rotarod performance

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5.3.6. PHYSIOLOGICAL OBSERVATIONS

Catalepsy
Body temperature
Body weight

5.4. LOCOMOTOR ACTIVITY

Locomotor activity was assessed for all animals prior to the initiation of dose administration (study day -8), at the time of peak effect (4 hours post-dosing) on study day 0, and on study days 7 and 14. Locomotor activity, recorded after completion of the FOB, was measured automatically using a personal computer-controlled system that utilizes a series of infrared photobeams surrounding an amber plastic, rectangular cage to quantify the motor activity of each animal. Four-sided black plastic enclosures were used to surround the transparent plastic boxes and decrease the potential for distraction from extraneous environmental stimuli or activity by technicians or adjacent animals. The black enclosures rested on top of the photobeam frame and did not interfere with the path of the beams. The locomotor activity assessment was performed in a sound-attenuated room equipped with a white-noise generator set to operate at 70 ± 10 dB. The testing of treatment groups was conducted according to replicate sequence. Each animal was tested separately. Data were collected in 5-minute epochs, and the test session duration was 60 minutes. These data were compiled as six 10-minute subintervals for tabulation.

Data for ambulatory and total motor activity were tabulated. Total motor activity was defined as a combination of fine motor skills (i.e., grooming, interruption of 1 photobeam) and ambulatory motor activity (interruption of 2 or more consecutive photobeams). Refer to Appendix F for additional details on the motor activity methodology and validation.

5.5. PATHOLOGY

5.5.1. NEUROPATHOLOGY - MACROSCOPIC EXAMINATION

On study day 15, all animals were anesthetized by an intraperitoneal injection of sodium pentobarbital and then perfused in situ with a buffered 4.0% paraformaldehyde/1.4% glutaraldehyde solution. The central and peripheral nervous

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system tissues were dissected and preserved. Fixed brain weight and brain dimensions (length [excluding olfactory bulbs] and width) were recorded. Any observable gross changes and abnormal coloration or lesions of the brain and spinal cord were recorded.

5.5.2. NEUROPATHOLOGY - MICROSCOPIC EXAMINATION

The following nerve tissues were prepared for a microscopic neuropathologic examination from 6 randomly selected animals/sex in the control and 2000 mg/kg groups:

Brain - olfactory bulbs, cerebral cortex (2 levels), hippocampus/dentate gyrus, basal ganglia, thalamus, hypothalamus, midbrain, cerebellum, pons, and medulla oblongata
Spinal cord - at cervical swellings C_3-C_7 and at lumbar swellings T_{13}-L_4
Trigeminal ganglia/nerves[a]
Lumbar dorsal root ganglia at T_{13}-L_4[b]
Lumbar dorsal root fibers at T_{13}-L_4[b]
Lumbar ventral root fibers at T_{13}-L_4[b]
Cervical dorsal root ganglia at C_3-C_7[b]
Cervical dorsal root fibers at C_3-C_7[b]
Cervical ventral root fibers at C_3-C_7[b]
Cervical spinal nerve
Lumbar spinal nerve
Sciatic nerves (mid-thigh region)(2)[c]
Sciatic nerves (at sciatic notch)(2)[c]
Sural nerves (2)[c]
Tibial nerves (2)[c]
Peroneal nerves (2)[c]
Optic nerves[a]
Eyes[a]
Skeletal muscle (gastrocnemius)
Other sites (if deemed necessary)

[a] - Both processed and evaluated microscopically
[b] - Four to 6 tissues were collected at necropsy; 2 were evaluated microscopically.
[c] - One processed for microscopic examination
(2) - Two sections (1 transverse and 1 longitudinal) of the tissue were evaluated from the right hind leg. The tissues from the left hind leg were collected and preserved for possible future evaluation.

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The tissues listed above were prepared for a qualitative histopathological examination by embedding in paraffin (central nervous system tissues) or plastic (peripheral nervous system tissues), sectioning, and staining with hematoxylin and eosin. The pathology report is present in Appendix H.

5.6. DATA ACQUISITION AND ANALYSIS

5.6.1. ACQUISITION AND REPORTING

Program/System	Description
WIL Toxicology Data Management System™ (WTDMS™)	In-house developed system used for collection and reporting of in-life and postmortem data.
Formulations Dose Dispensing Management System (FDDMS)	In-house developed system used to assign unique barcodes to formulation containers and individual containers used for dispensing dosing formulations.
WIL Formulations Dispense System (WFDS)	In-house developed system for use in conjunction with Provantis Dispense™ to ensure proper storage and use of formulations.
Provantis Dispense™	Comprehensive system (Instem LSS Limited) to manage test materials, including receipt, formulation instructions, and accountability.
Metasys DDC Electronic Environmental Control System	Controls and monitors animal room environmental conditions.
WIL Metasys	In-house developed system used to record and report animal room environmental conditions.
Master Schedule	Maintains the master schedule for the company.
Archive Management System (AMS)	In-house developed application for storage, maintenance, and retrieval information for archived materials (e.g., lab books, study data, wet tissues, slides, etc.)
WIL Motor Activity System (WMAS) and Kinder Scientific MotorMonitor System	WMAS is an in-house developed, computer-based system utilized to minimize error and allow for quality control during the collection of locomotor activity data using the Kinder Scientific MotorMonitor System (Kinder Scientific Company, LLC) and transfer of these data to WTDMS™ for reporting.
SAS®	Statistical (non-WTDMS™)Analyses

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Program/System	Description
Microsoft® Office 2002 and 2007; GraphPad Prism® 2008	Used in conjunction with the publishing software to generate study reports.
InSight® Publisher	Electronic publishing system (output is Adobe Acrobat, PDF)

Note: Version numbers of WTDMS™ programs used for the study are presented on the report data tables (reporting programs); version numbers and release dates are otherwise maintained in the study records and/or facility records.

5.6.2. STATISTICAL ANALYSIS

Each mean was presented with the standard deviation (S.D.) and the number of animals (N) used to calculate the mean. In addition, standard error (S.E.) was presented for body weight, brain measurements, and locomotor activity. Due to the use of significant figures and the different rounding conventions inherent in the types of software used, the means, standard deviations, and/or standard errors on the summary and individual tables may differ slightly.

5.6.2.1. STATISTICS CONDUCTED BY WIL RESEARCH

All statistical tests were performed using WTDMS™ unless otherwise noted. Analyses were conducted using two-tailed tests (except as noted otherwise) for minimum significance levels of 1% and 5%, comparing each test substance-treated group to the control group by sex.

Body weight, body weight change, pretest and post-dosing continuous FOB, and brain measurement data were subjected to a parametric one-way ANOVA (Snedecor and Cochran, 1980) to determine intergroup differences. If the ANOVA revealed significant ($p<0.05$) intergroup variance, Dunnett's test (Dunnett, 1964) was used to compare the test substance-treated groups to the control group. FOB parameters that yielded scalar or descriptive data, necropsy findings, and non-graded histopathologic findings were analyzed using Fisher's Exact Test (Steel and Torrie, 1980).

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5.6.2.2. STATISTICS CONDUCTED BY BIOSTAT CONSULTANTS, INC.

All statistical analyses were conducted using SAS version 9.1 (SAS Institute, Inc., 2002-2003). The statistical summary report is presented in Appendix I.

Graded histopathologic findings with multiple severities (i.e., those findings with more than 2 distinct severities, including none/not remarkable) were compared to the control group using the Mann-Whitney U-Test (Kruskal and Wallis, 1952).

All repeated measures analysis of variance (RANOVA) statistical analyses for total and ambulatory locomotor activity counts recorded during pretest and after dosing were conducted as follows. Each analysis endpoint was analyzed, by sex and session, with a RANOVA. Factors in the model included treatment group (TRT), time interval (TIME), and the interaction of time interval and treatment group (TRT*TIME). The SAS® procedure PROC MIXED was used for analysis with the random effect of animal included as the repeated measurement. The covariance structure across time was selected by comparing Akaike's Information Criterion (AIC).

The monotonic dose-response relationship was evaluated using sequential linear trend tests based on ordinal spacing of dose levels. The linear dose by time interaction (LinTrt*Time) was evaluated and, if significant at the 0.05 level, trend tests on treatment means were performed at the 0.05 level for each time interval. If the linear dose by time interaction was not significant, the trend test was conducted across the pooled time intervals for the entire session only.

Nonmonotonic dose responses were evaluated whenever no significant linear trends were detected but TRT and/or TRT*TIME interaction was significant at the 0.01 level. Within the framework of the RANOVA, pairwise comparisons were made for each individual test substance-treated group with the control group through linear contrasts. If TRT*TIME was significant, the comparisons were conducted for each time interval. If only the TRT effect was significant, the comparisons were conducted across the pooled

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time intervals for the entire session. These nonmonotonic dose-response comparisons were conducted at the 0.01 significance level.

6. RESULTS AND DISCUSSION

6.1. ANALYTICAL CHEMISTRY

Analytical Chemistry Report: Appendix C

The analyzed dosing formulations were within the WIL SOP range for suspensions (85% to 115% of target). Based on these results, the protocol-specified doses of test substance were administered to the animals. The test substance was not detected in the vehicle formulation that was administered to the control group (Group 1).

Results of the analyses of dosing formulations are summarized below.

Text Table 1. Results of Concentration Analyses

	Mean Concentration, mg/mL (% of Target)		
Date of Preparation	Group 2 (40 mg/mL)	Group 3 (140 mg/mL)	Group 4 (400 mg/mL)
27 November 2009			
Males	39.4 (98.6)	135 (96.6)	394 (98.6)
Females	40.9 (102)	138 (98.3)	399 (99.8)

6.2. CLINICAL OBSERVATIONS AND SURVIVAL

Summary Data: Table S1

Individual Data: Table I1

All animals survived to the scheduled euthanasia (study day 15). There were no test substance-related clinical findings noted during the daily examinations. All findings were noted with similar incidence in the control group, were limited to single animals, and/or occurred in a non-dose-related manner.

Male no. 59916 in the 700 mg/kg group was noted with hair loss and scabbing on the ventral neck area beginning on study day 3. By study day 6, red material was also observed on this area. Collectively, these findings were identified by a clinical veterinarian as dermatitis. Therefore, following approval by the Sponsor, this male was

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subsequently treated with Nolvasan® scrub, an antimicrobial wash that is commonly used by WIL for the treatment of dermatitis.

6.3. BODY WEIGHTS

Summary Data: Table S2, Table S3, Figure 1, Figure 2
Individual Data: Table I2, Table I3

Body weights were unaffected by test substance administration. There were no statistically significant differences when the control and test substance-treated groups were compared.

6.4. FOB ASSESSMENTS

6.4.1. HOME CAGE OBSERVATIONS

Summary Data: Table S4, Table S5, Table S6, Table S7
Individual Data: Table I4, Table I5, Table I6, Table I7
Historical Control Data: Appendix J

Home cage parameters were unaffected by test substance administration. A significant ($p<0.05$) decrease in the number of males that were sitting or standing normally in the home cage was noted when the 200 mg/kg group males were compared with the control group on study day 0. However, this difference was due to 10 of 12 males in the 200 mg/kg group that were asleep (lying on their sides or curled up), which is a normal behavior for animals in the home cage. Furthermore, both of the aforementioned behaviors are consistent with what has been observed historically in approximately age-matched males (see Appendix J). On study day 14, a single female in the 700 mg/kg group was observed biting the cage. Because this behavior was not observed at 2000 mg/kg, it was not considered to be test substance-related.

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6.4.2. HANDLING OBSERVATIONS

Summary Data: Table S8, Table S9, Table S10, Table S11
Individual Data: Table I8, Table I9, Table I10, Table I11
Historical Control Data: Appendix J

Handling parameters were unaffected by test substance administration. There were no statistically significant differences for the test substance-treated males and females when compared to the control group at the time of peak effect on study day 0, and on study days 7 and 14. On study day 14, a single female in the 2000 mg/kg group was noted as being difficult to remove from the home cage. However, this behavior was isolated to a single female and this female did not have any other abnormal CNS excitability-related findings. Therefore, this behavior was not considered to be test substance-related.

6.4.3. OPEN FIELD OBSERVATIONS

Summary Data: Table S12, Table S13, Table S14, Table S15
Individual Data: Table I12, Table I13, Table I14, Table I15
Historical Control Data: Appendix J

Open field parameters were unaffected by test substance administration.

On study day 7, increased defecation was noted for the 700 mg/kg group males when compared with the control group. Although this difference was significant ($p<0.05$), it was not observed in a dose-responsive manner and there were no correlating excreta-related findings noted during the FOB or daily examinations. Therefore, increased defecation was not considered to be test substance-related.

On study day 14, considerably impaired gait (without falling) was observed for 1 male in the 700 mg/kg group and 1 female in the 2000 mg/kg group. However, there was no evidence of gait abnormality for these animals at any other time point during the study, including at the time of peak effect on study day 0. Furthermore, occurrences of this finding were noted in the WIL acute FOB historical control data (1 of 329 males on study

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day 0) and in the WIL subchronic FOB historical control data (1 of 222 males during pretest and 1 of 10 females during week 6). Taken together, along with the lack of a dose-response for the males, this finding was not considered test substance-related.

6.4.4. SENSORY OBSERVATIONS

Summary Data: Table S16, Table S17, Table S18, Table S19
Individual Data: Table I16, Table I17, Table I18, Table I19
Historical Control Data: Appendix J

Sensory parameters were unaffected by test substance administration. There were no statistically significant differences for the test substance-treated males and females when compared to the control group at the time of peak effect on study day 0, and on study days 7 and 14.

6.4.5. NEUROMUSCULAR OBSERVATIONS

Summary Data: Table S20, Table S21, Table S22, Table S23
Individual Data: Table I20, Table I21, Table I22, Table I23
Historical Control Data: Appendix J

Neuromuscular parameters were unaffected by test substance administration. Mean forelimb grip strength for the 700 mg/kg group females was lower than that in the control group on study day 0. Although the difference was significant ($p<0.01$), it was not observed in a dose-responsive manner and the magnitude of difference from the control group on study day 0 was similar to that during pretest. Therefore, this finding was not considered to be test substance-related. Other differences from the control group were not statistically significant and/or were not observed in a dose-responsive manner, and were therefore not considered test substance-related.

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6.4.6. PHYSIOLOGICAL OBSERVATIONS

Summary Data: Table S24, Table S25, Table S26, Table S27

Individual Data: Table I24, Table I25, Table I26, Table I27

Historical Control Data: Appendix J

Physiological parameters were unaffected by test substance administration. Higher mean body temperature was noted for the 2000 mg/kg group males when compared with the control group on study day 0. Although the difference was significant ($p<0.05$), the mean value was within the range of values in the WIL acute FOB historical control data, and the magnitude of change from the concurrent control group was small (0.5°C). Therefore, higher mean body temperature was not considered to be test substance-related.

6.5. LOCOMOTOR ACTIVITY

Summary Data: Table S28; Figure 3, Figure 4, Figure 5, Figure 6, Figure 7, Figure 8, Figure 9, Figure 10, Figure 11, Figure 12, Figure 13, Figure 14, Figure 15, Figure 16, Figure 17, Figure 18, Figure 19, Figure 20, Figure 21, Figure 22

Individual Data: Table I28

Historical Control Data: Appendix K

Statistical Analysis Report: Appendix I

Within-session repeated measures analyses of variance were conducted across the subintervals of each test session for total and ambulatory counts and for the overall interval means (representing the entire 60-minute session activity) during each test session. During the study day 0 evaluation, test substance-related, lower total and ambulatory locomotor activity counts were noted for the 700 and 2000 mg/kg group males and females during the first few subintervals (0-10, 11-20, and/or 21-30 minutes) of the test session. The differences for the 700 and 2000 mg/kg group males were significant ($p\leq0.027$). However, for the 700 and 2000 mg/kg group females, because the monotonic dose response relationship evaluated by the linear dose by time interaction was not statistically significant, the individual subintervals were not statistically

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analyzed. As a result of the lower activity levels during the first few subintervals, overall locomotor activity counts for the respective groups were up to 32.4% and 40.0% (total) and 45.5% and 39.7% (ambulatory) lower than the control group on study day 0. All differences from the control group were significant ($p \leq 0.007$), with the exception of the overall ambulatory activity count for the 700 mg/kg group females. There were no statistically significant differences for the 700 and 2000 mg/kg group males and females when compared to the control group on study days 7 and 14.

Locomotor activity patterns (mean ambulatory and total motor activity counts) were unaffected by test substance administration at a dose level of 200 mg/kg. During the second subinterval (11-20 minutes) on study day 14, the total locomotor activity count for males in the 200 mg/kg group was significantly ($p=0.008$) lower than the control group, reflecting faster habituation.

There were no remarkable shifts in the pattern of habituation for any of the test substance-treated groups when the animals were evaluated on study days 0, 7, and 14.

6.6. PATHOLOGY

6.6.1. MACROSCOPIC EXAMINATION

Summary Data: Table S29
Individual Data: Table I29
Pathology Report: Appendix H

There were no test substance-related macroscopic changes observed. The only macroscopic findings were noted in the 2000 mg/kg group and consisted of dark red material on the brain for 1 male and a misshapen cerebellum (the right paraflocculus was smaller than normal) for 1 female. These macroscopic findings had no correlating microscopic findings (for the animal that was examined microscopically) and were considered spontaneous, incidental findings.

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6.6.2. BRAIN WEIGHTS AND MEASUREMENTS

Summary Data: Table S30

Individual Data: Table I30

Pathology Report: Appendix H

Brain weights and measurements were unaffected by administration of tolclofos-methyl at 200, 700, and 2000 mg/kg. There were no statistically significant differences between the control and test substance-treated groups.

6.6.3. MICROSCOPIC EXAMINATION

Summary Data: Table S31, Table S32

Individual Data: Table I29

Pathology Report: Appendix H

Statistical Analysis Summary: Appendix I

No test substance-related microscopic lesions were observed in any of the central or peripheral nervous system tissues examined from 6 animals/sex in the 2000 mg/kg group. All findings observed were consistent with normal background lesions in clinically normal rats of the age and strain used in this study and were considered spontaneous or incidental in nature and unrelated to test substance administration.

7. DISCUSSION

The objective of the study was to evaluate the acute neurotoxic potential of the test substance when administered orally by gavage to rats as a single dose. The neurotoxic potential of the test substance was evaluated using a neurotoxic screening battery consisting of functional observational battery, locomotor activity, and neuropathological assessments.

Effects following a single dose of tolclofos-methyl were limited to decreased locomotor activity (ambulatory and total activity counts) at dose levels of 700 and 2000 mg/kg at the time of peak effect on study day 0. Locomotor activity for males and females in these groups was 28.1% to 40.0% (total) and 25.8% to 45.5% (ambulatory) lower than the control group and the differences from the control group during the overall session were generally statistically significant. There were no effects on the pattern of habituation at any dose level when evaluated on study days 0, 7, and 14. In addition, none of the functional domains described by Moser (1991) were affected by test substance administration.

No tolclofos-methyl-related effects were apparent in brain weights or brain dimensions for perfused animals. In addition, no test substance-related neuropathological lesions were observed upon microscopic examination of central and peripheral nervous system tissues from 6 animals/sex in the 2000 mg/kg group.

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8. CONCLUSIONS

Decreased locomotor activity (total and ambulatory counts) was noted for males and females in the 700 and 2000 mg/kg groups at the time of peak effect on study day 0. However, none of the functional domains described by Moser (1991) were affected by a single dose of tolclofos-methyl at 200, 700, or 2000 mg/kg. Based on the results of this study, both the no-observed-effect level (NOEL) and no-observed-adverse-effect level (NOAEL) for neurotoxicity of a single oral dose of tolclofos-methyl to rats were 200 mg/kg.

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9. REPORT REVIEW AND APPROVAL

Report Approved By:

Melissa J Beck

Melissa J. Beck, PhD
Assistant Director, Neurosciences
Study Director

21 Apr 2010
Date

Report Prepared By:

for Kristin M. Roll, MS
Study Analyst

21 Apr 2010
Date

Report Reviewed By:

Michelle L. Pershing, MS
Group Supervisor, Study Analysis and Reports

21 Apr 2010
Date

for: Donald G. Stump, PhD, DABT
Director, Developmental and
Reproductive Toxicology

21 Apr. 2010
Date

10. QUALITY ASSURANCE UNIT STATEMENT

10.1. PHASES INSPECTED

Date(s) of Inspection(s)	Phase Inspected	Date(s) Findings Reported to Study Director	Date(s) Findings Reported to Management	Auditor(s)
07-Dec-2009	Functional Observational Battery	07-Dec-2009	25-Jan-2010	R.Siburt J.James
14-Jan-2010, 15-Jan-2010	Study Records (I-1)	15-Jan-2010	22-Feb-2010	C.Heifner
15-Jan-2010	Study Records (N-1)	15-Jan-2010	22-Feb-2010	C.Heifner
15-Jan-2010	Study Records (I-2, I-3, I-4, I-5)	15-Jan-2010	22-Feb-2010	C.Heifner
15-Jan-2010	Study Records (Rx-1)	15-Jan-2010	22-Feb-2010	C.Heifner
15-Jan-2010, 18-Jan-2010	Study Records (I-1, I-2, I-3, I-4, I-5 Motor Activity Only)	18-Jan-2010	22-Feb-2010	C.Heifner
22-Jan-2010, 25-Jan-2010, 26-Jan-2010	Study Records (A-1, A-2)	26-Jan-2010	22-Feb-2010	C.Heifner
15-Feb-2010	Study Records (H-1)	15-Feb-2010	22-Mar-2010	C.Heifner
25-Feb-2010	Draft Report (Analytical Chemistry)	25-Feb-2010	22-Mar-2010	C.Heifner
25-Feb-2010	Draft Report (without Analytical, Statistical and Pathology Appendices)	25-Feb-2010	22-Mar-2010	C.Heifner
25-Feb-2010	Draft Report (Statistical Analysis Appendix only)	25-Feb-2010	22-Mar-2010	C.Heifner
04-Mar-2010	Study Records (P-1)	04-Mar-2010	20-Apr-2010	C.Heifner
04-Mar-2010	Draft Report (Pathology Appendix Only)	04-Mar-2010	20-Apr-2010	C.Heifner

This study was inspected in accordance with the United States EPA GLP Regulations (40 CFR Parts 160 and 792), the OECD Principles of GLP, the Japanese MAFF GLP Standards, the WIL SOPs, and the Sponsor's protocol with the following exceptions. The data located in Appendix B (Certificate of Analysis) were the responsibility of the

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Sponsor. Quality Assurance findings, derived from the inspections during the conduct of the study and from the inspections of the raw data and draft report, are documented and have been reported to the Study Director. Review of the protocol as well as a yearly internal facility inspection are conducted by the WIL Quality Assurance Unit. A status report is submitted to management monthly.

This report accurately reflects the data generated during the study. The methods and procedures used in the study were those specified in the protocol and the WIL SOPs.

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10.2. APPROVAL

This study was inspected according to the criteria discussed in Section 10.1.

Report Audited By:

Carrie A. Heifner, BA
Associate Compliance Specialist

21 Apr. 2010
Date

Report Released By:

for: Heather L. Johnson, BS, RQAP-GLP
Manager, Quality Assurance

21 Apr. 2010
Date

11. REFERENCES

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12. DATA RETENTION

The Sponsor has title to all documentation records, raw data, specimens, or other work product generated during the performance of the study. Any remaining dosing formulation will be discarded upon issuance of the final report; all remaining work product generated by WIL, including raw paper data and specimens, are retained in the WIL Archives as specified in the study protocol. Appropriate supporting documentation for statistical analyses conducted and reported by BioSTAT Consultants, Inc., is maintained in the WIL Archives.

Reserve samples of the test substance, pertinent electronic storage media, and the original final report are retained in the WIL Archives in compliance with regulatory requirements.

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13. ABBREVIATIONS

The following abbreviations may apply to this report:

µ	-	micro
AAALAC	-	Association for Assessment and Accreditation of Laboratory Animal Care
ANOVA	-	analysis of variance
AUC	-	area under the curve
cm	-	centimeter
C_{max}	-	maximum measured concentration of the analyte in plasma
dB	-	decibels
dL	-	deciliter
EPA	-	Environmental Protection Agency
FIFRA	-	Federal Insecticide, Fungicide and Rodenticide Act
FOB	-	functional observational battery
g	-	gram
GLP	-	Good Laboratory Practices
hr	-	hour(s)
kg	-	kilogram
L	-	liter
M	-	molar
MAFF	-	Ministry of Agriculture, Forestry and Fisheries
mg	-	milligram
mL	-	milliliter
mm	-	millimeter
ms	-	milliseconds
mM	-	millimolar
NA	-	not applicable
OECD	-	Organisation for Economic Cooperation and Development
OPPTS	-	Office of Prevention, Pesticides and Toxic Substances
ppm	-	parts per million
RANOVA	-	repeated measure analysis of variance
RSD	-	Relative standard deviation
SOP	-	standard operating procedure
T_{max}	-	Sampling time at which C_{max} was achieved
TSCA	-	Toxic Substances Control Act
WIL	-	WIL Research Laboratories, LLC
WTDMS™	-	WIL Toxicology Data Management System

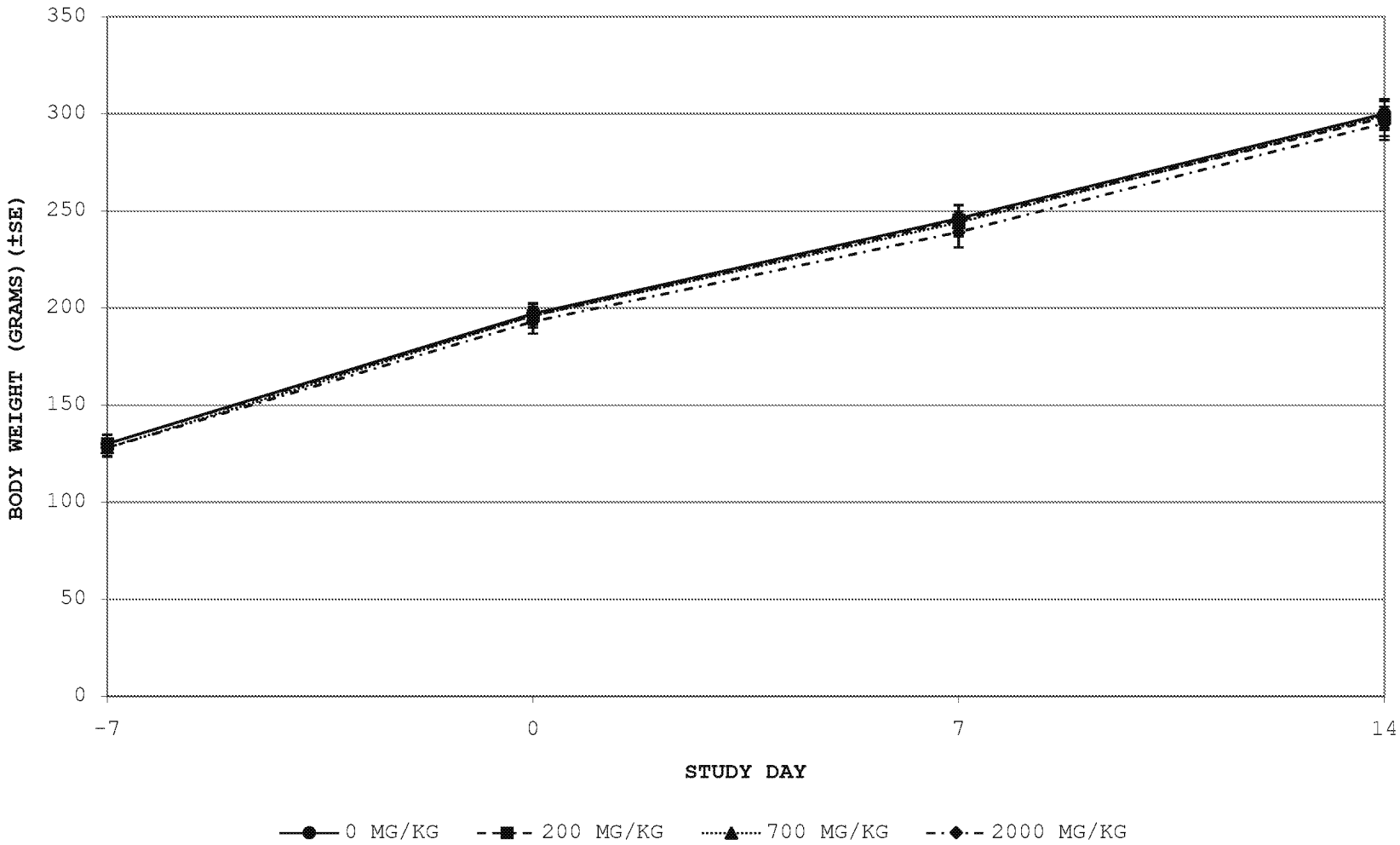
ED_005427A_00022422-00051

FIGURES 1 - 22

ED_005427A_00022422-00052

PROJECT NO.:WIL-118043
SPONSOR:SUMITOMO CHEMICAL

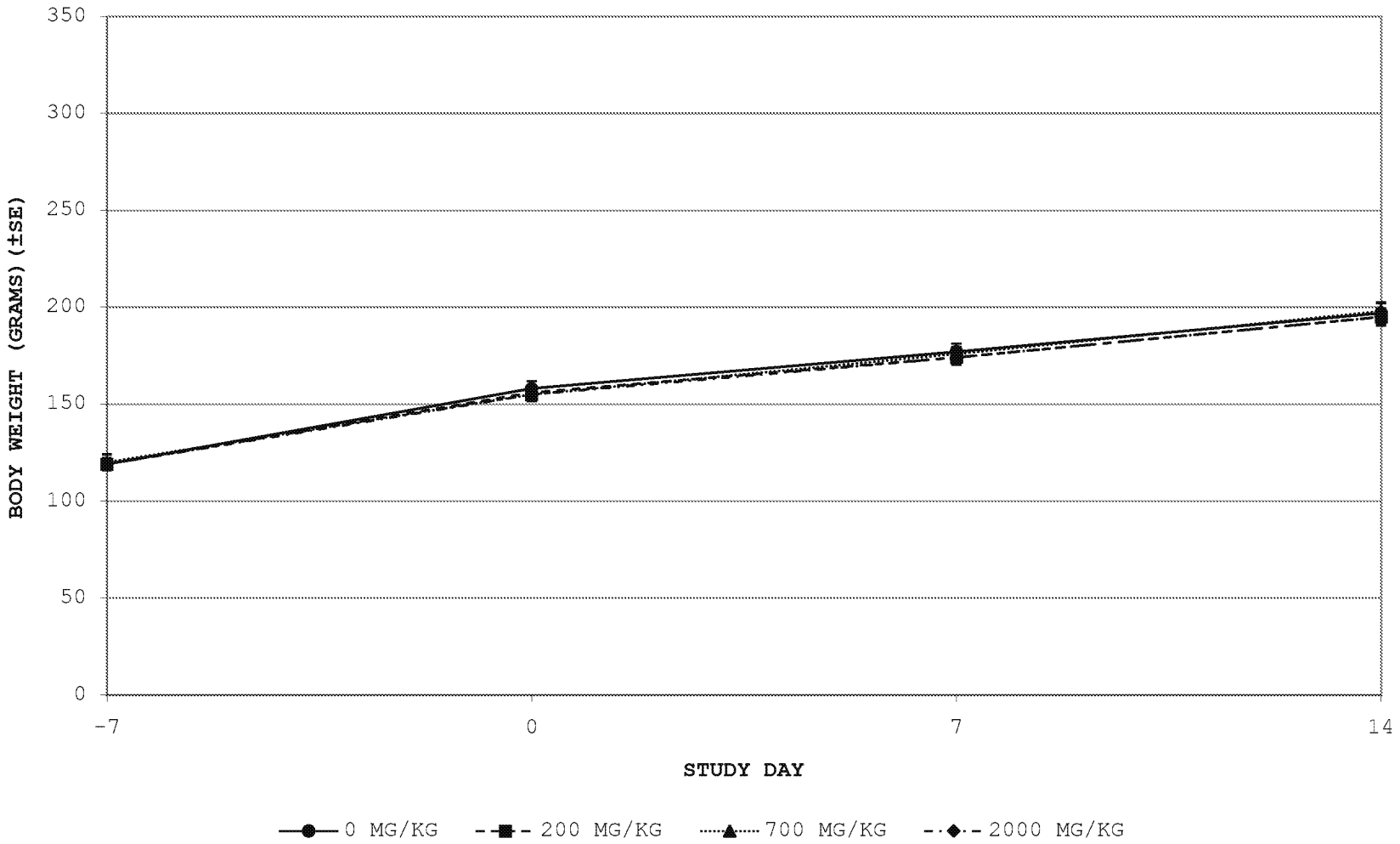
FIGURE 1 (MALES)
SUMMARY OF BODY WEIGHTS [G]



BW v1.00 01/13/2010

PROJECT NO.:WIL-118043
SPONSOR:SUMITOMO CHEMICAL

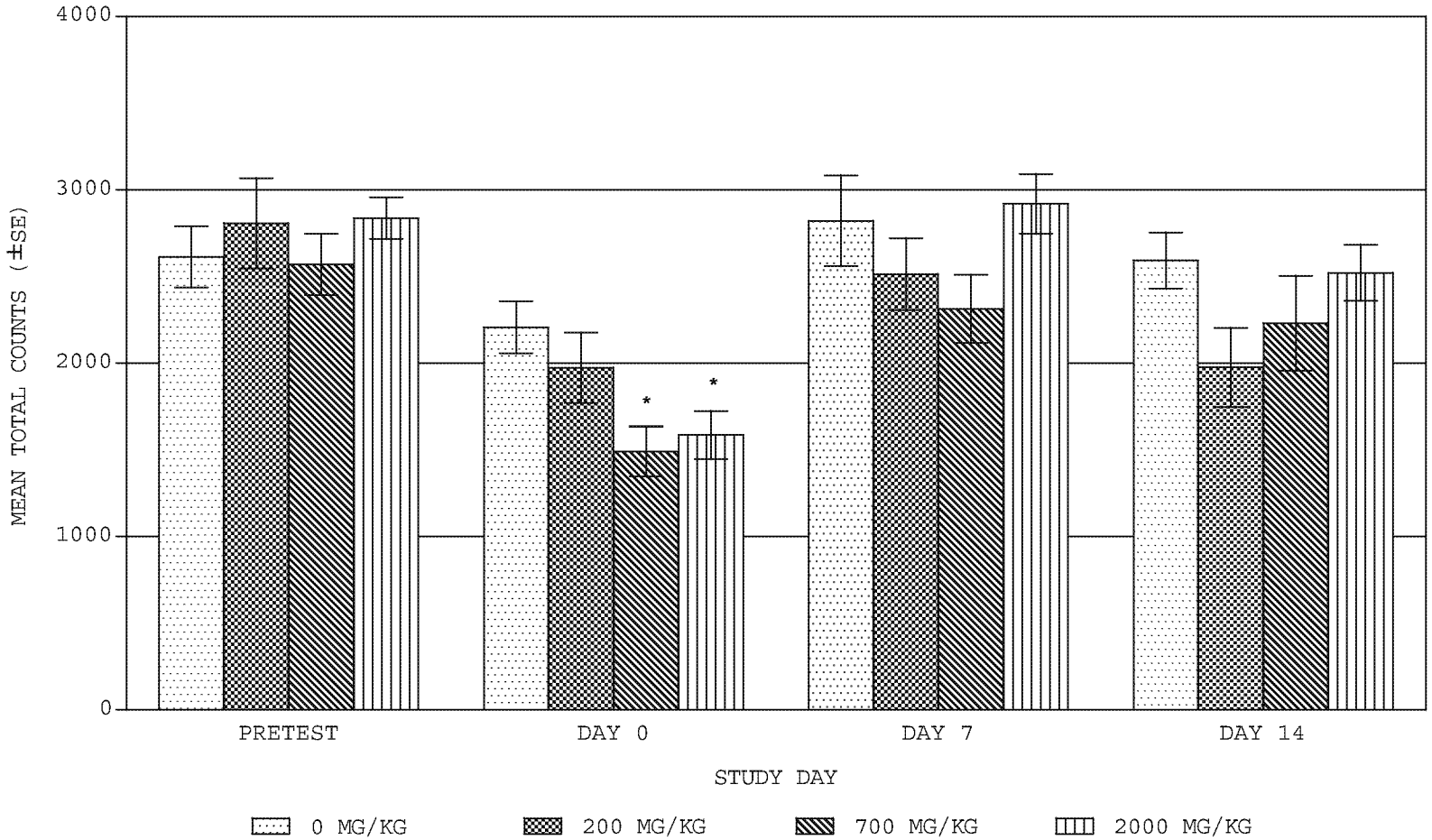
FIGURE 2 (FEMALES)
SUMMARY OF BODY WEIGHTS [G]



BW v1.00 01/13/2010

PROJECT NO.:WIL-118043
SPONSOR:SUMITOMO CHEMICAL

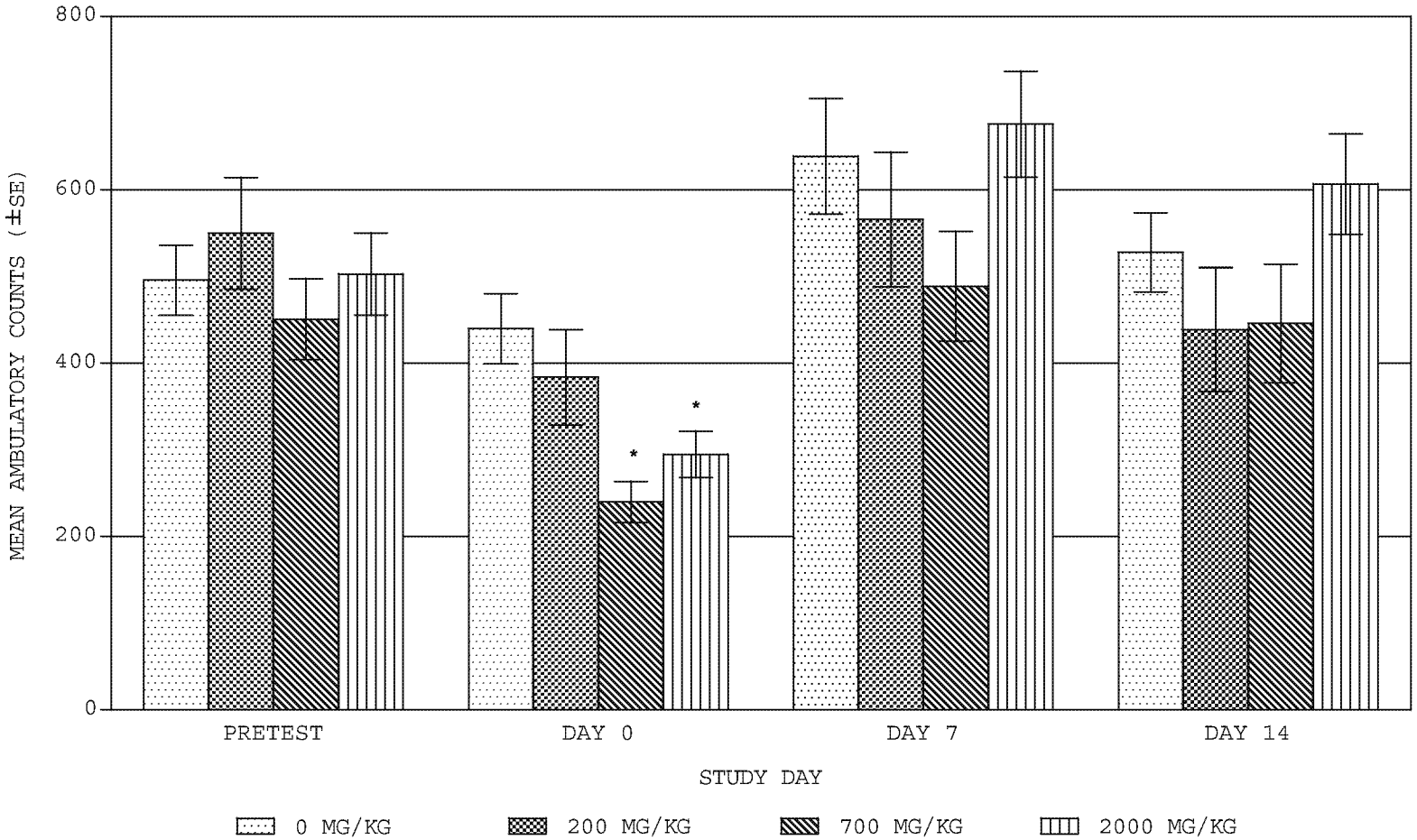
FIGURE 3 (MALES)
SUMMARY OF MOTOR ACTIVITY TOTAL COUNTS BY SESSION



* = Significantly different from the control group (p≤0.001) following repeated measures analysis

PROJECT NO.:WIL-118043
SPONSOR:SUMITOMO CHEMICAL

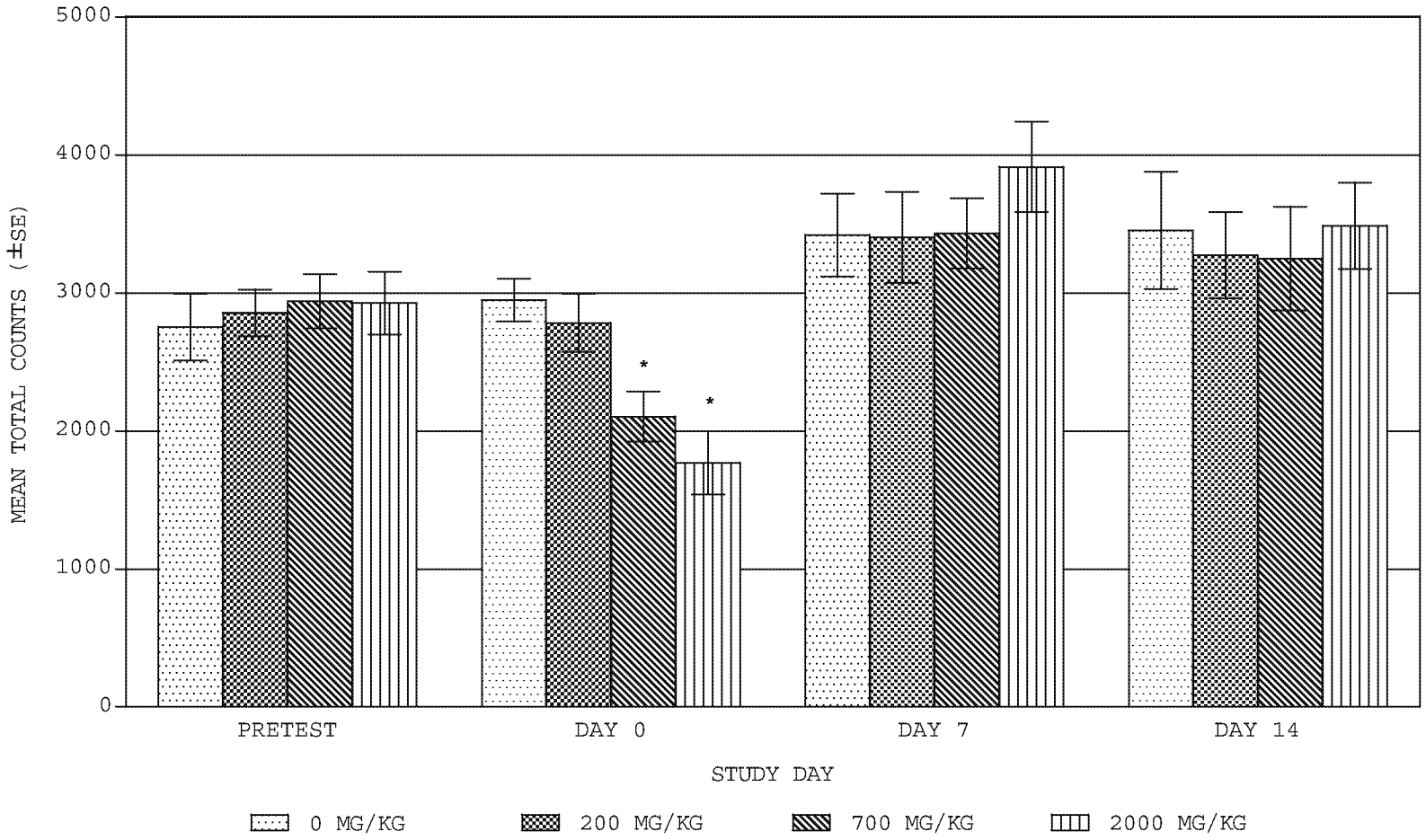
FIGURE 4 (MALES)
SUMMARY OF MOTOR ACTIVITY AMBULATORY COUNTS BY SESSION



* = Significantly different from the control group (p<0.001) following repeated measures analysis

PROJECT NO.:WIL-118043
SPONSOR:SUMITOMO CHEMICAL

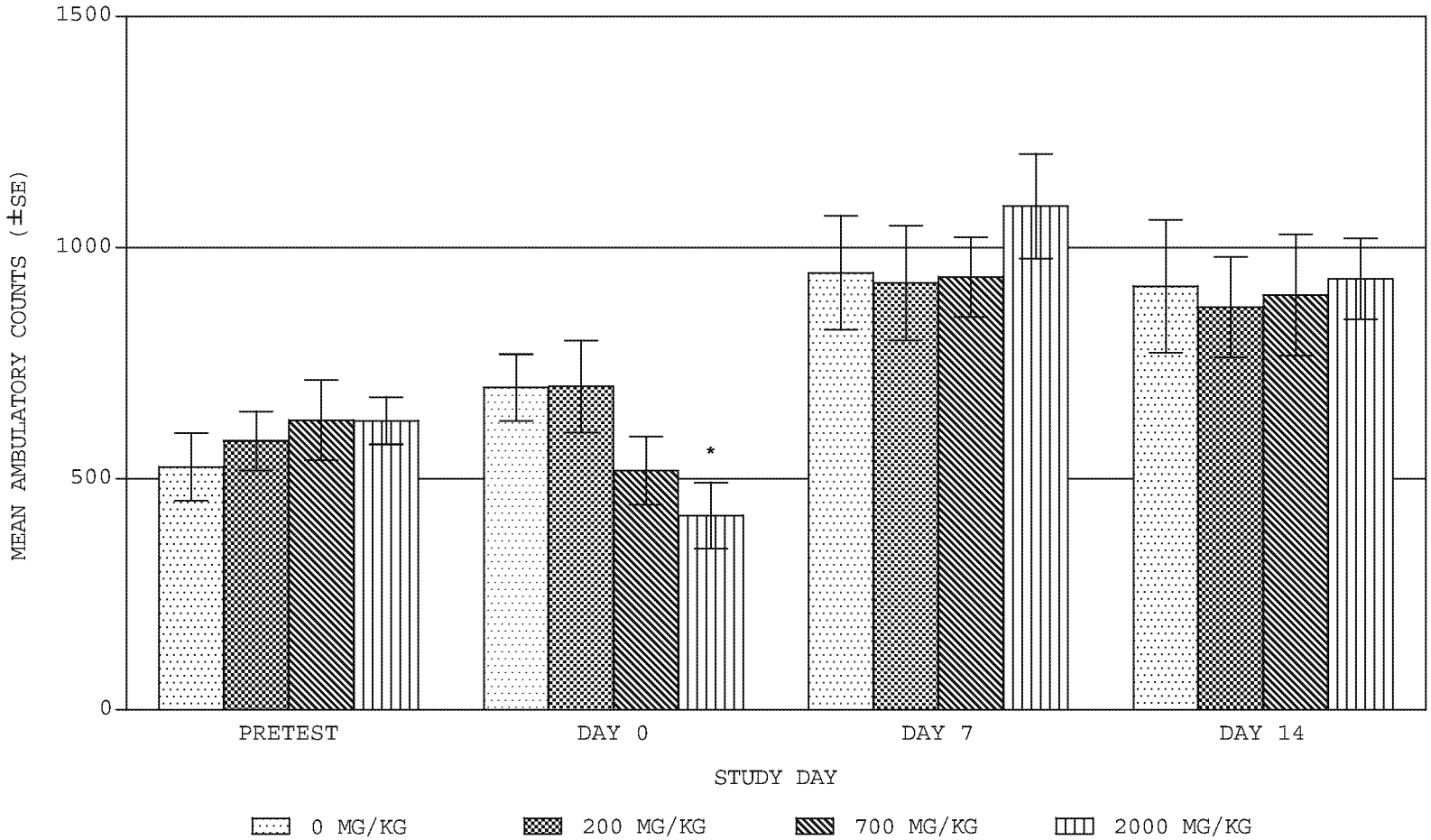
FIGURE 5 (FEMALES)
SUMMARY OF MOTOR ACTIVITY TOTAL COUNTS BY SESSION



* = Significantly different from the control group (p≤0.007) following repeated measures analysis

PROJECT NO.:WIL-118043
SPONSOR:SUMITOMO CHEMICAL

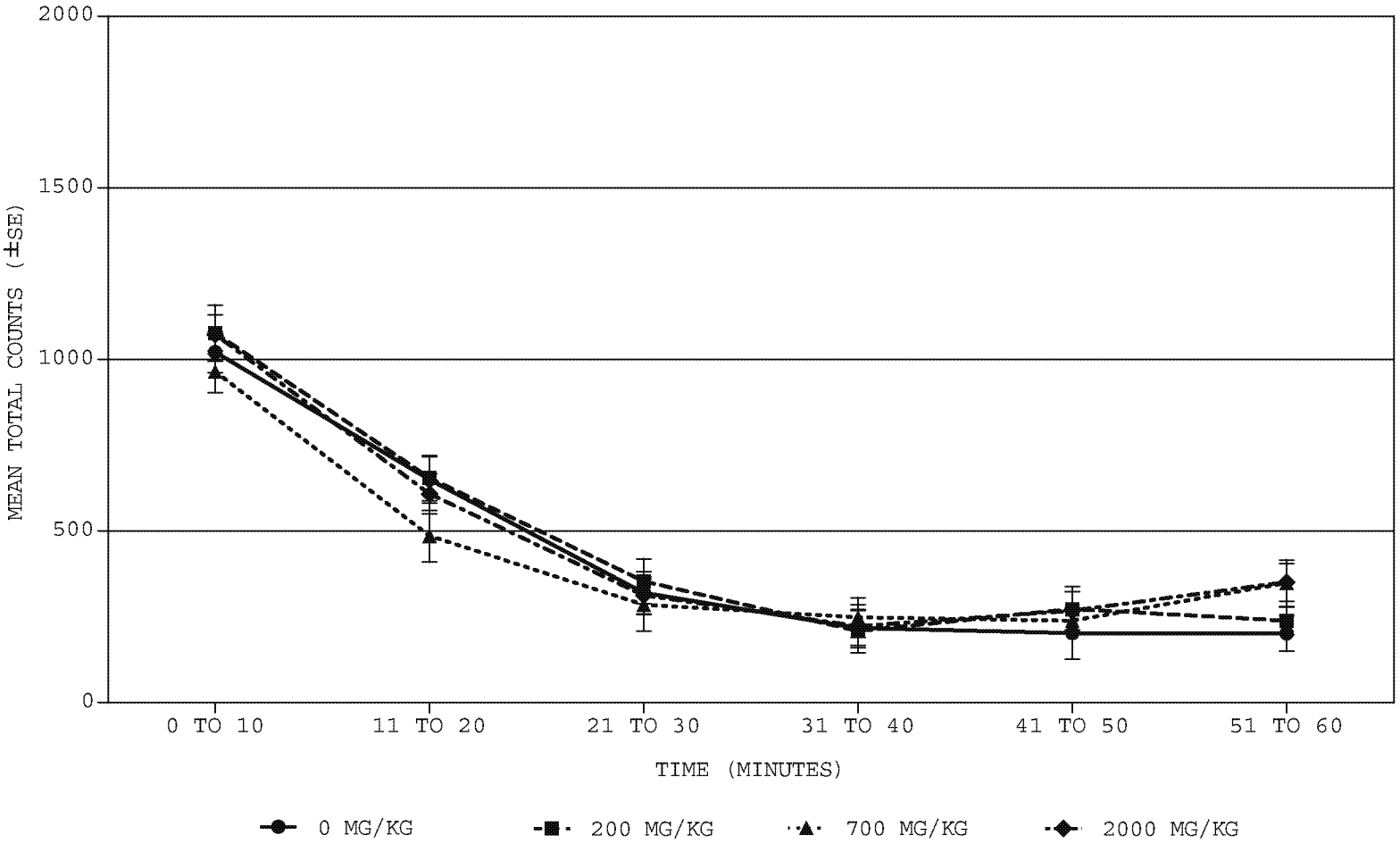
FIGURE 6 (FEMALES)
SUMMARY OF MOTOR ACTIVITY AMBULATORY COUNTS BY SESSION



* = Significantly different from the control group (p=0.002) following repeated measures analysis

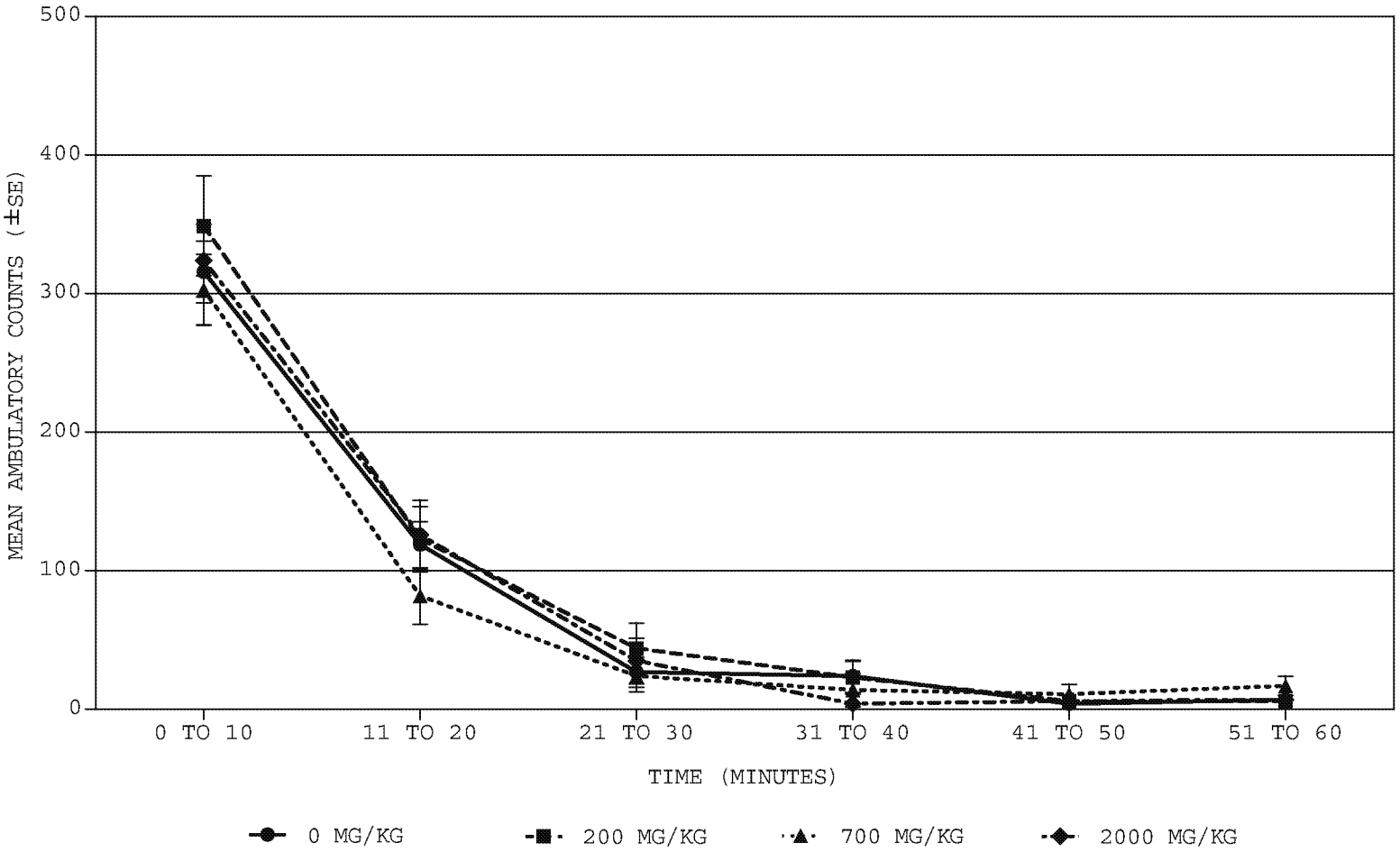
PROJECT NO.:WIL-118043
SPONSOR:SUMITOMO CHEMICAL

FIGURE 7 (MALES - PRETEST)
SUMMARY OF MOTOR ACTIVITY TOTAL COUNTS



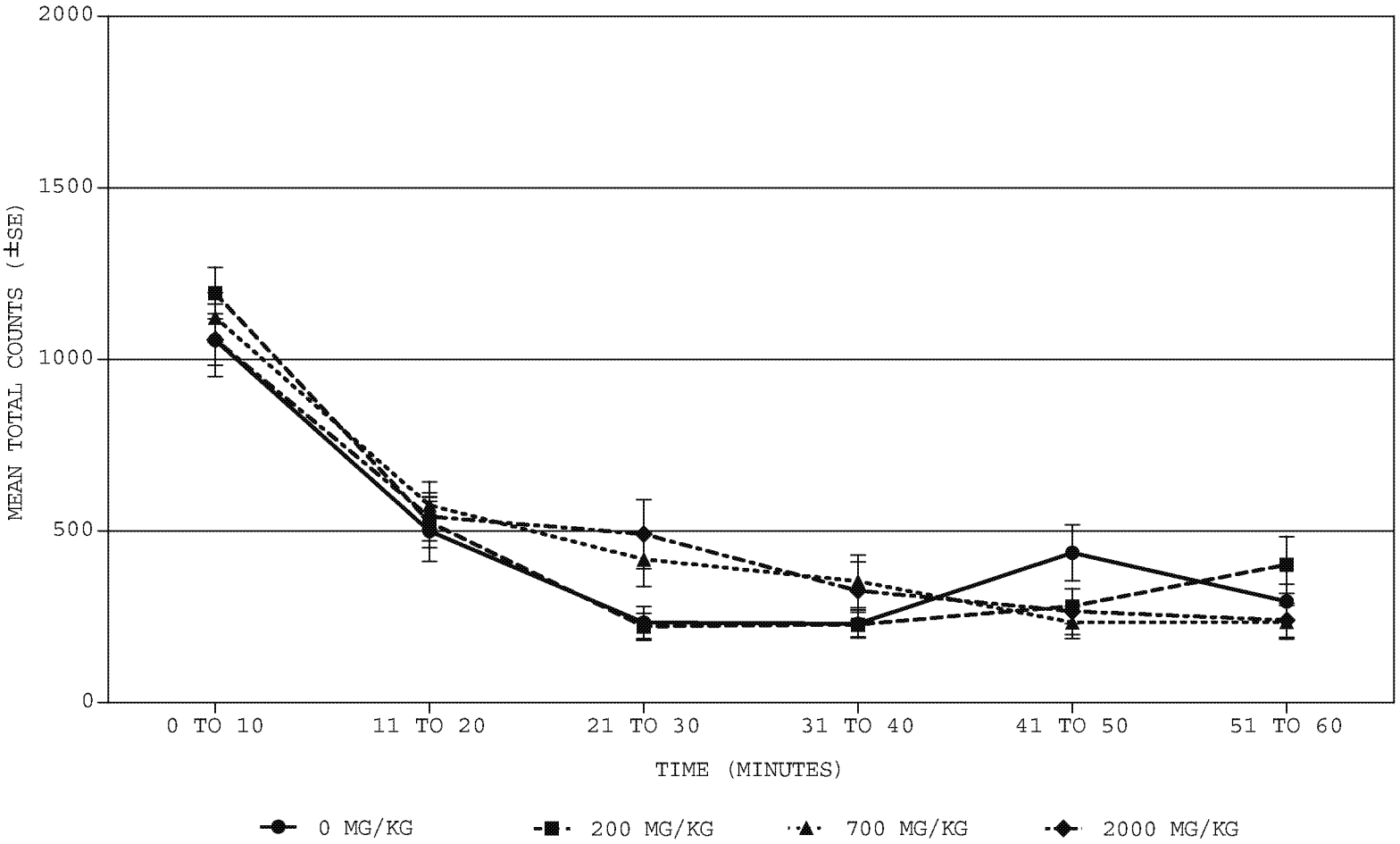
PROJECT NO.:WIL-118043
SPONSOR:SUMITOMO CHEMICAL

FIGURE 8 (MALES - PRETEST)
SUMMARY OF MOTOR ACTIVITY AMBULATORY COUNTS



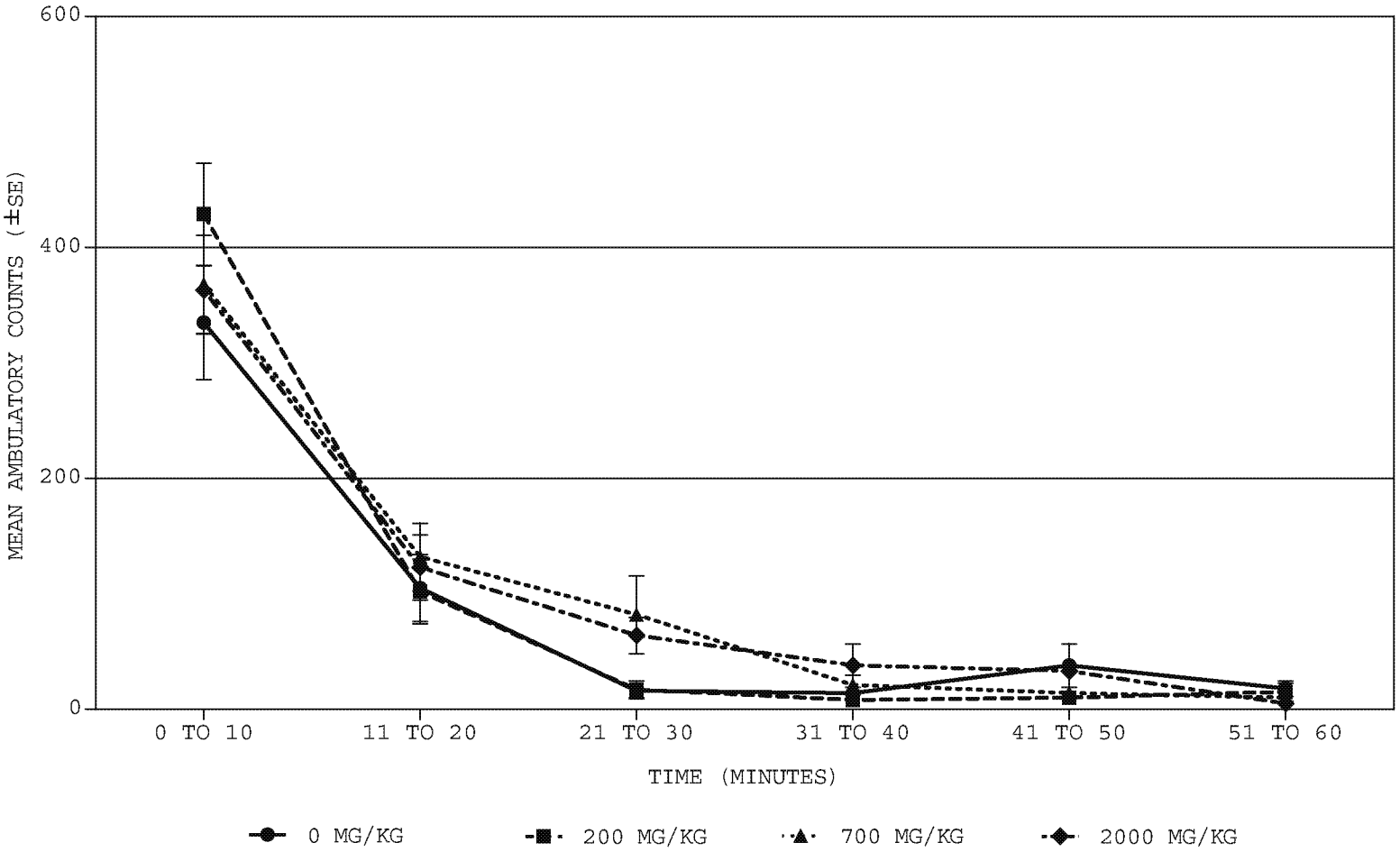
PROJECT NO.:WIL-118043
SPONSOR:SUMITOMO CHEMICAL

FIGURE 9 (FEMALES - PRETEST)
SUMMARY OF MOTOR ACTIVITY TOTAL COUNTS



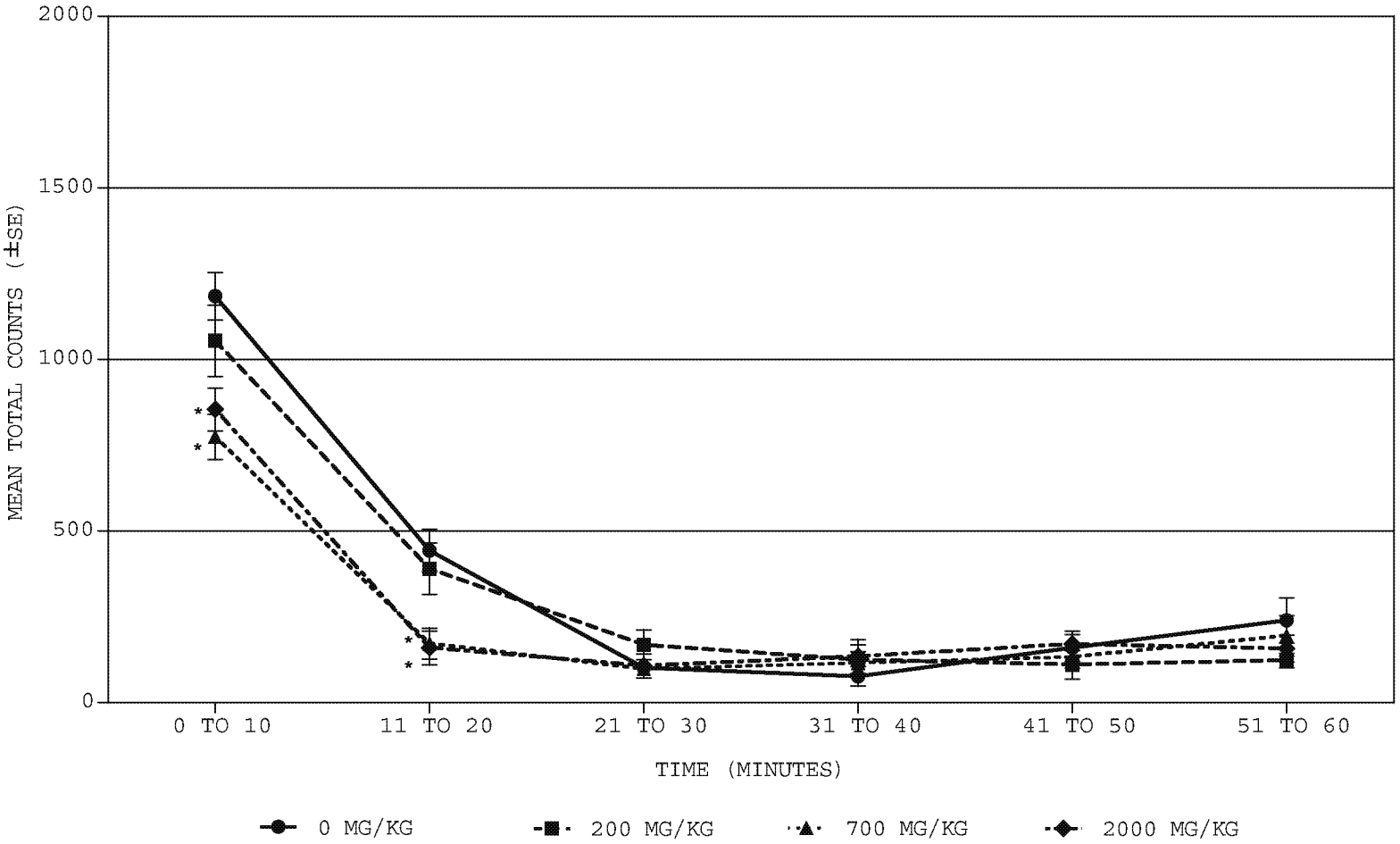
PROJECT NO.:WIL-118043
SPONSOR:SUMITOMO CHEMICAL

FIGURE 10 (FEMALES - PRETEST)
SUMMARY OF MOTOR ACTIVITY AMBULATORY COUNTS



PROJECT NO.:WIL-118043
SPONSOR:SUMITOMO CHEMICAL

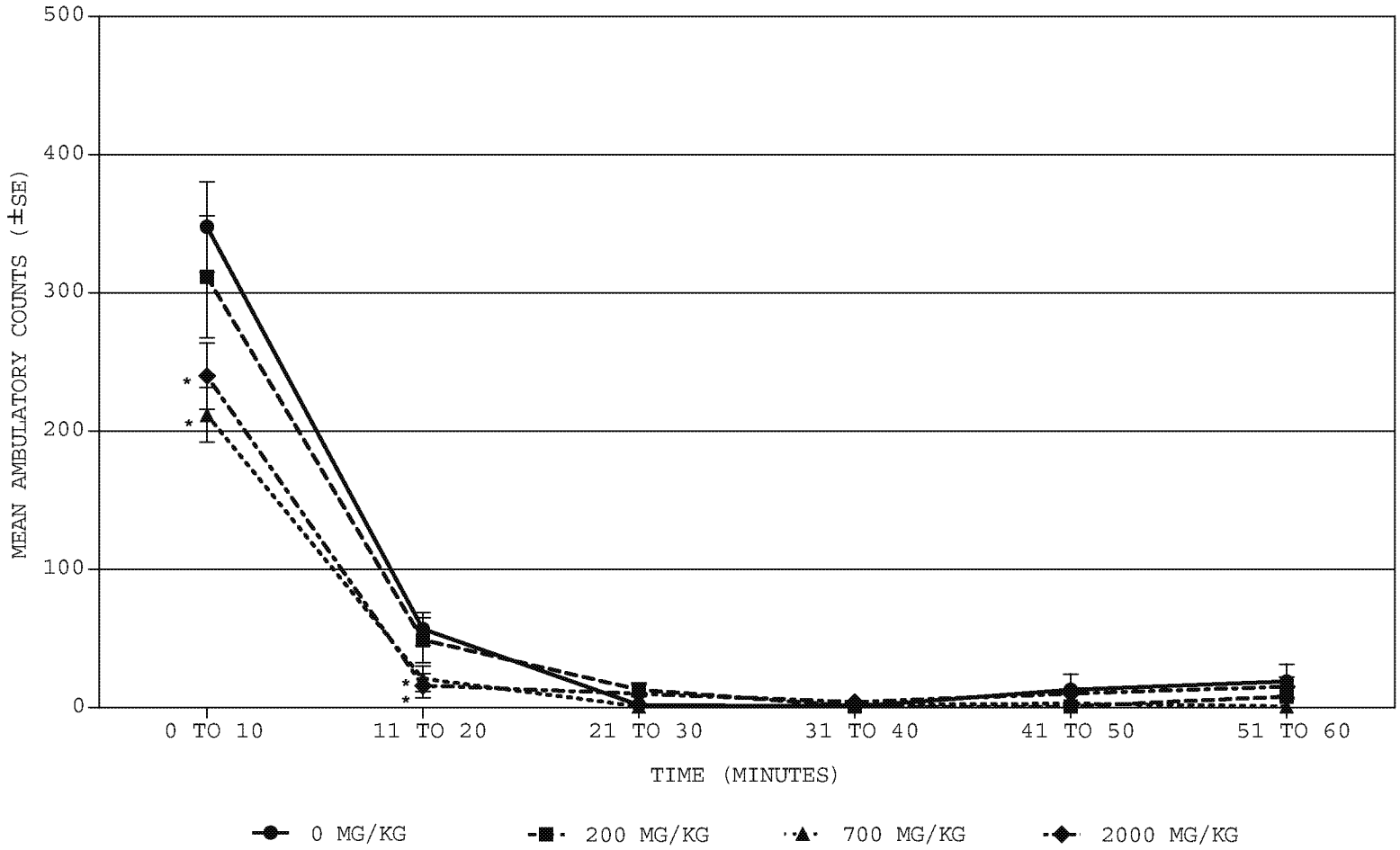
FIGURE 11 (MALES - DAY 0)
SUMMARY OF MOTOR ACTIVITY TOTAL COUNTS



* = Significantly different from the control group (p<0.001) following repeated measures analysis

PROJECT NO.:WIL-118043
SPONSOR:SUMITOMO CHEMICAL

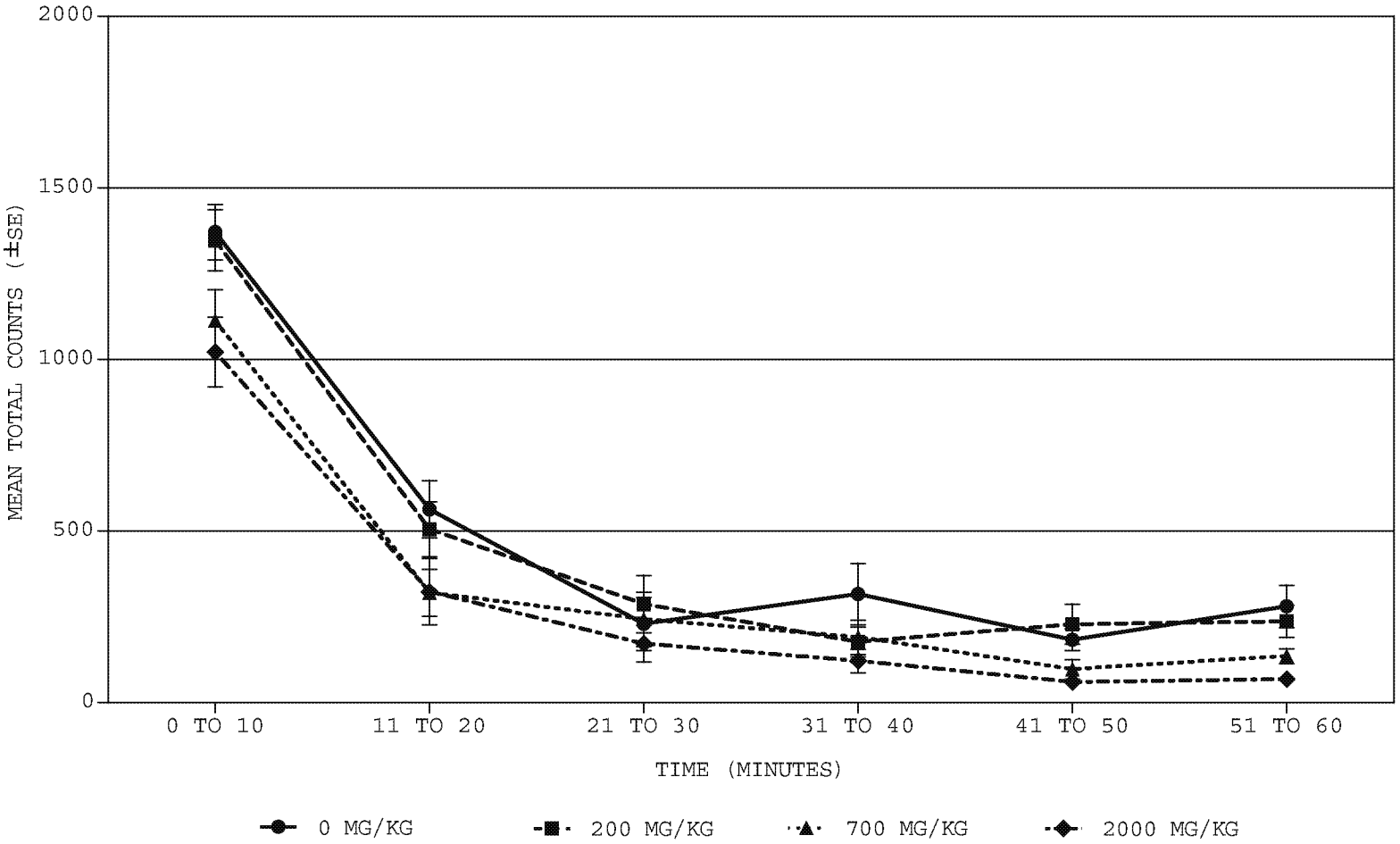
FIGURE 12 (MALES - DAY 0)
SUMMARY OF MOTOR ACTIVITY AMBULATORY COUNTS



* = Significantly different from the control group (p≤0.027) following repeated measures analysis

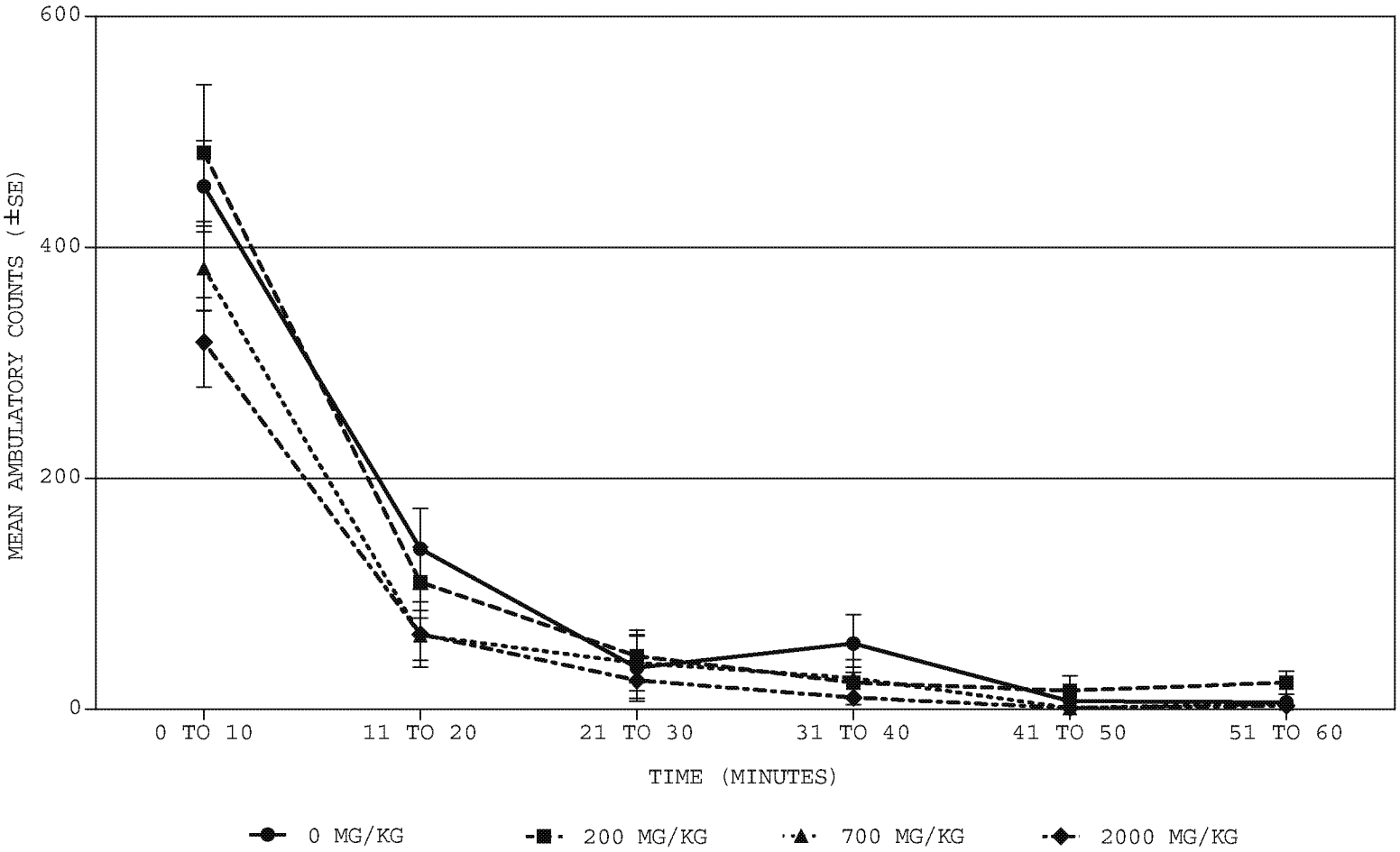
PROJECT NO.:WIL-118043
SPONSOR:SUMITOMO CHEMICAL

FIGURE 13 (FEMALES - DAY 0)
SUMMARY OF MOTOR ACTIVITY TOTAL COUNTS



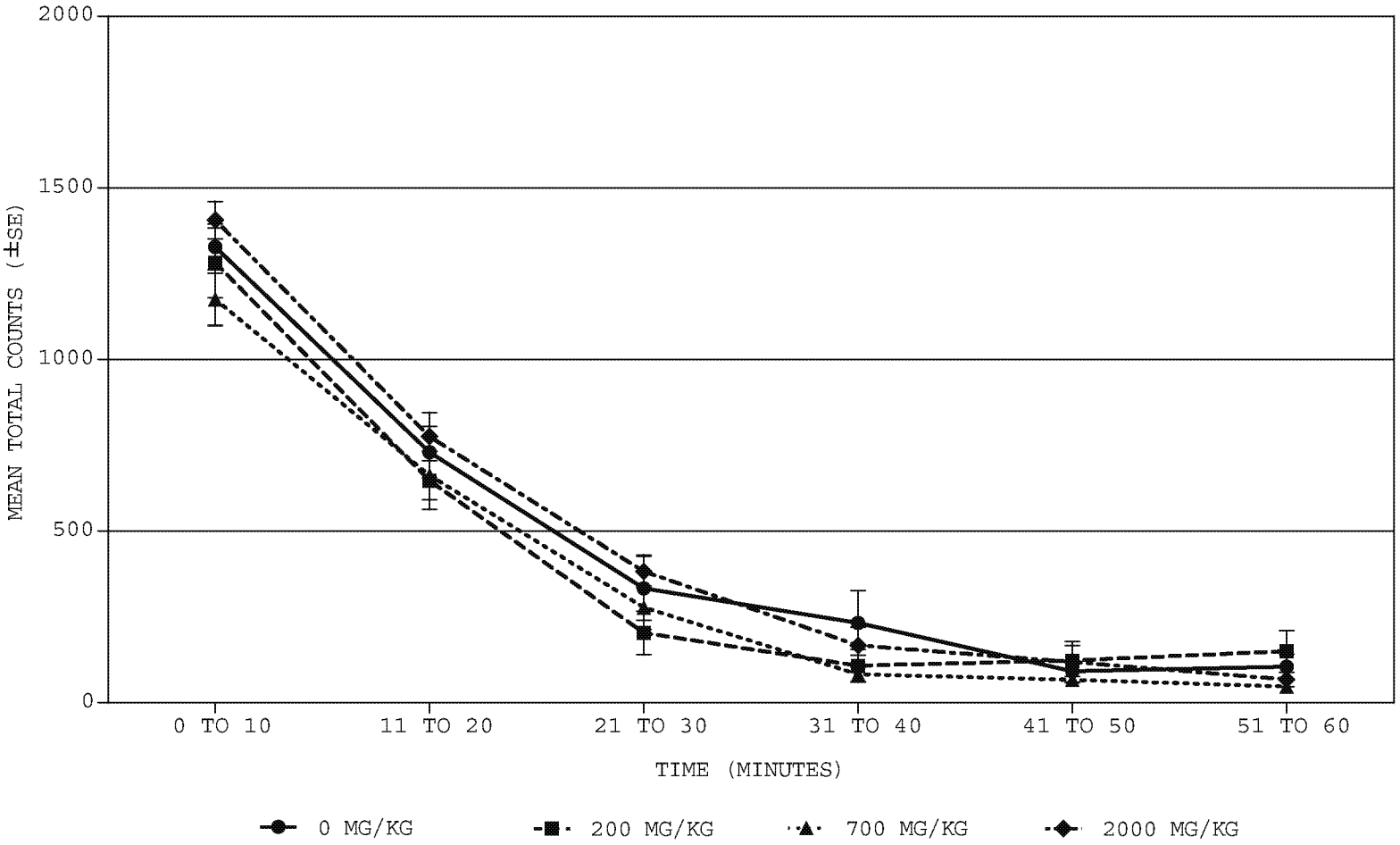
PROJECT NO.:WIL-118043
SPONSOR:SUMITOMO CHEMICAL

FIGURE 14 (FEMALES - DAY 0)
SUMMARY OF MOTOR ACTIVITY AMBULATORY COUNTS



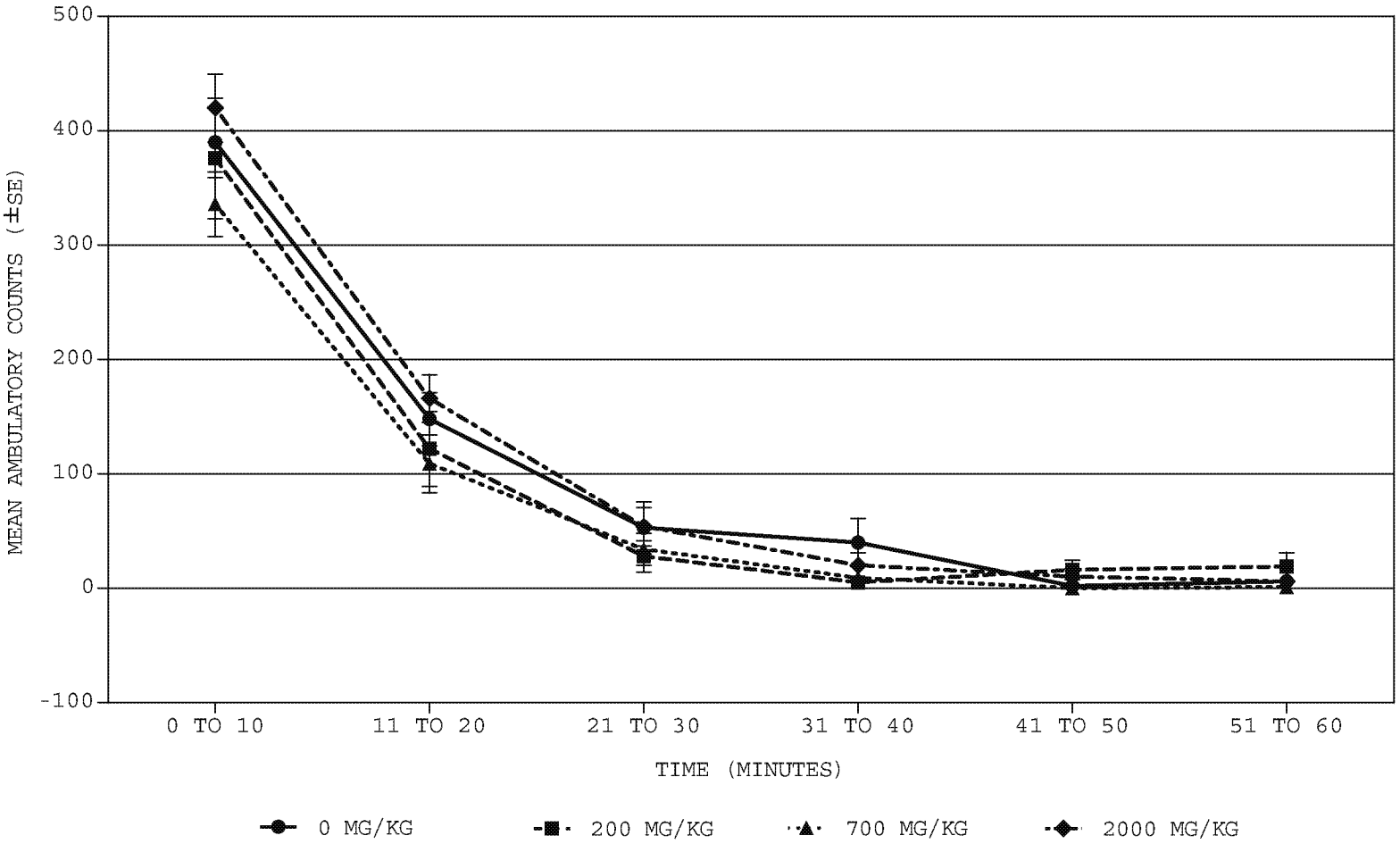
PROJECT NO.:WIL-118043
SPONSOR:SUMITOMO CHEMICAL

FIGURE 15 (MALES - DAY 7)
SUMMARY OF MOTOR ACTIVITY TOTAL COUNTS



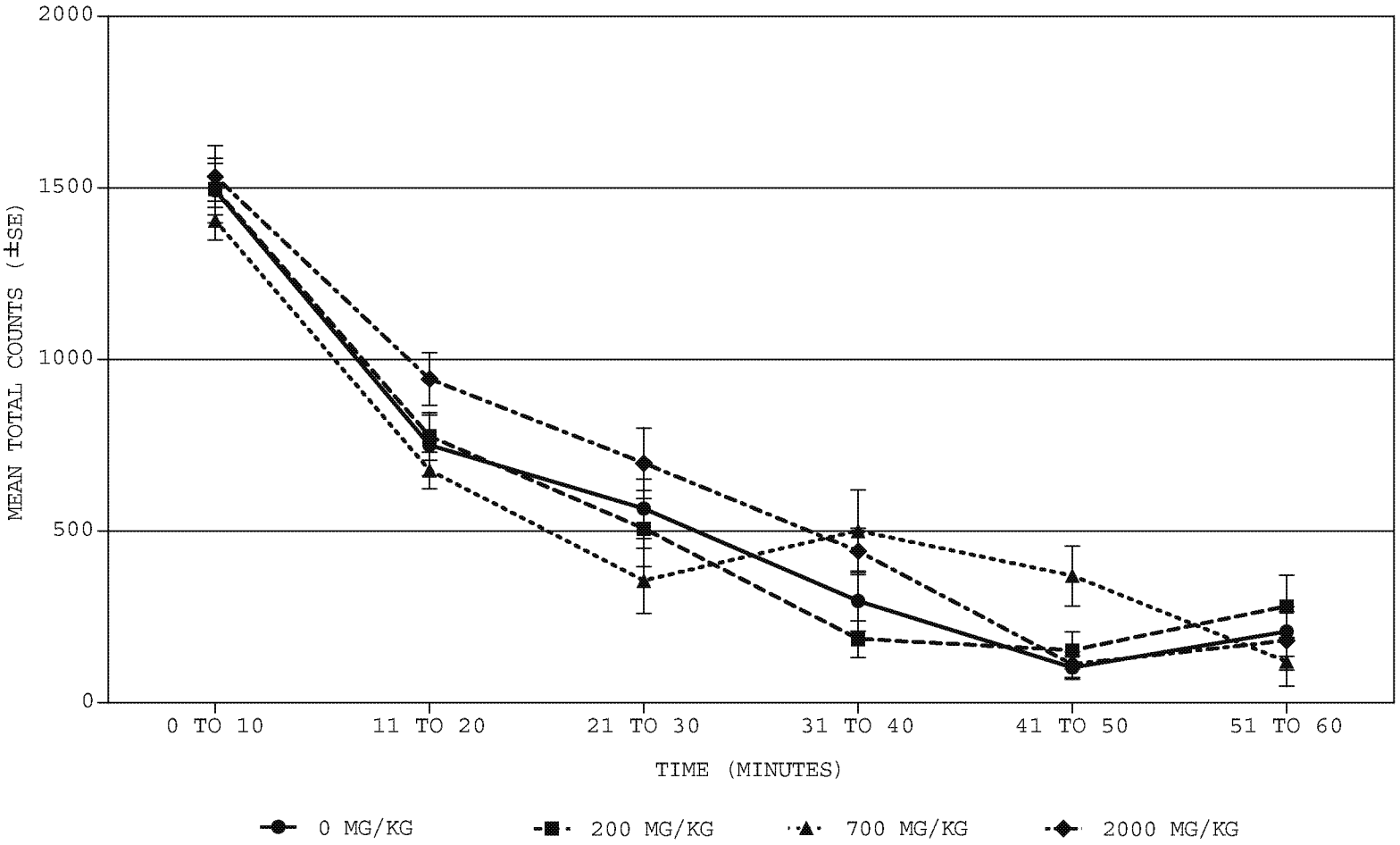
PROJECT NO.:WIL-118043
SPONSOR:SUMITOMO CHEMICAL

FIGURE 16 (MALES - DAY 7)
SUMMARY OF MOTOR ACTIVITY AMBULATORY COUNTS



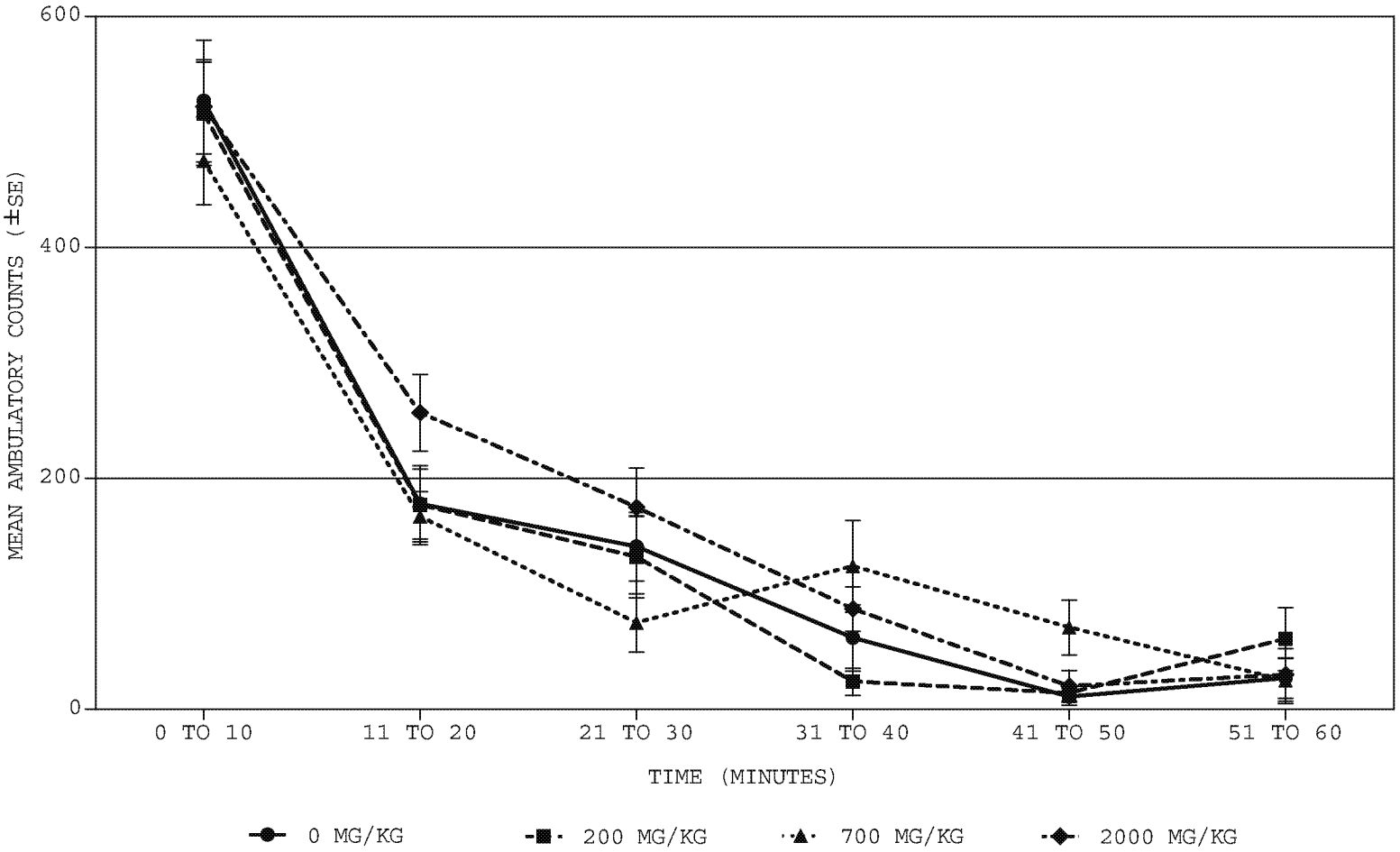
PROJECT NO.:WIL-118043
SPONSOR:SUMITOMO CHEMICAL

FIGURE 17 (FEMALES - DAY 7)
SUMMARY OF MOTOR ACTIVITY TOTAL COUNTS



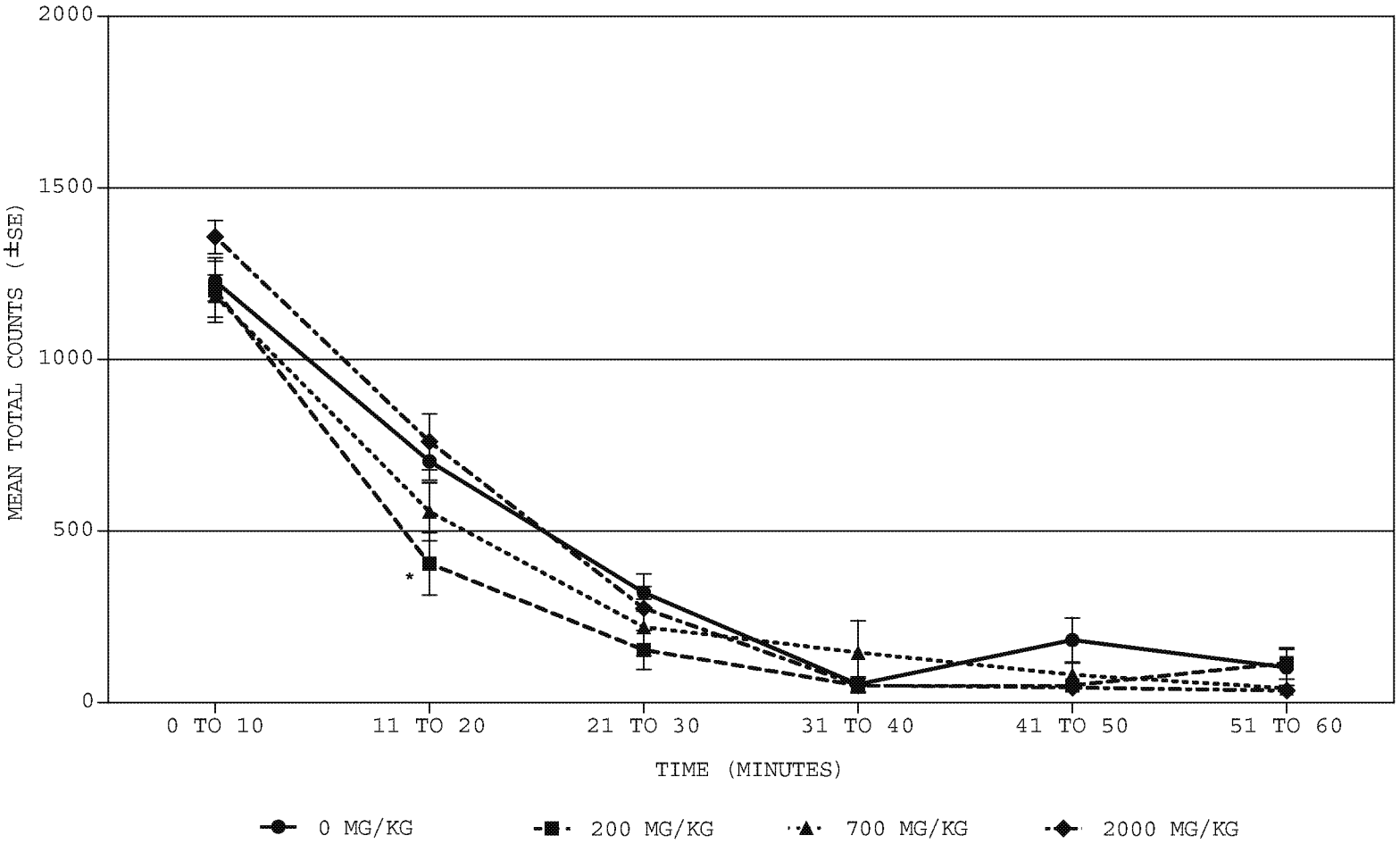
PROJECT NO.:WIL-118043
SPONSOR:SUMITOMO CHEMICAL

FIGURE 18 (FEMALES - DAY 7)
SUMMARY OF MOTOR ACTIVITY AMBULATORY COUNTS



PROJECT NO.:WIL-118043
SPONSOR:SUMITOMO CHEMICAL

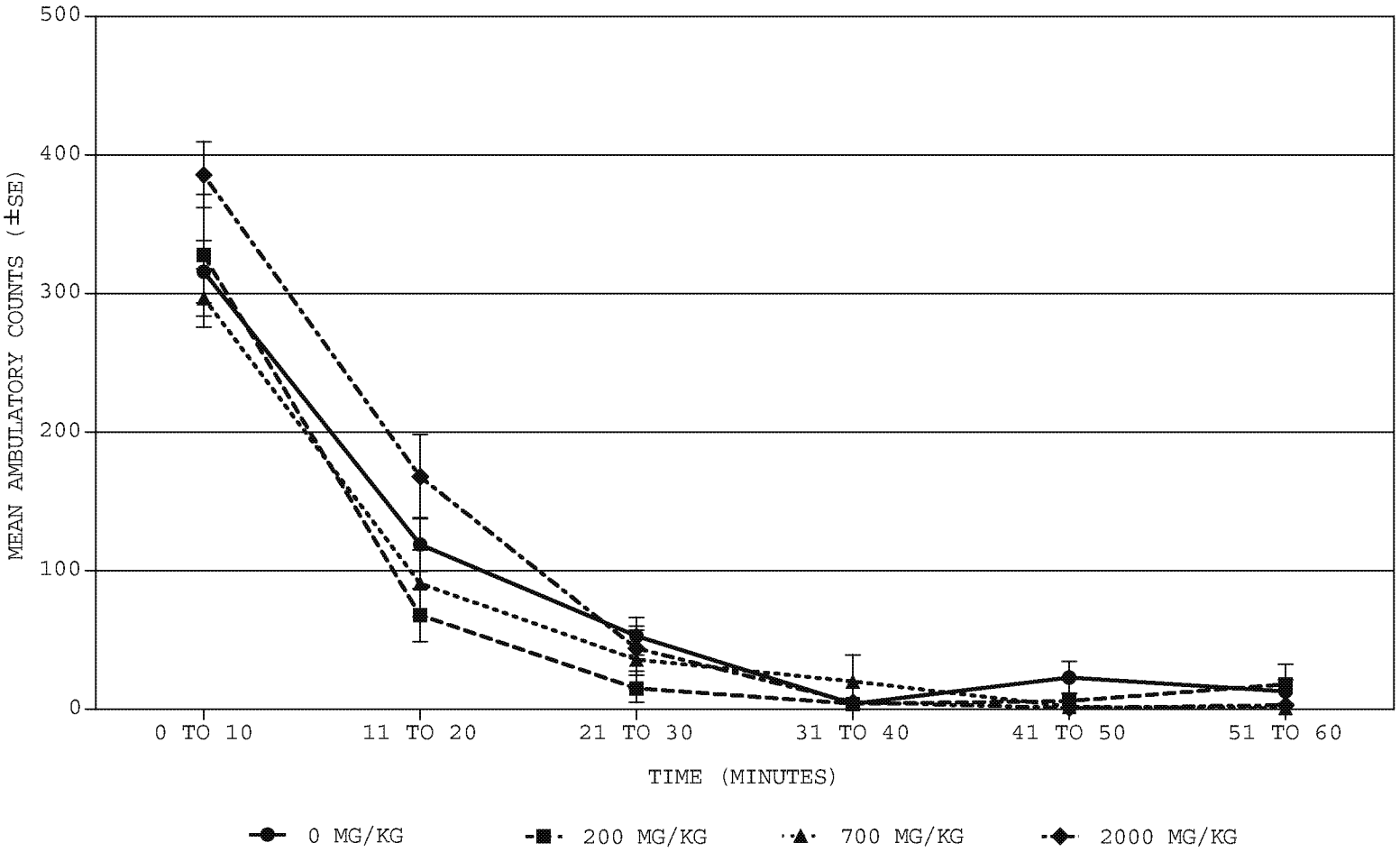
FIGURE 19 (MALES - DAY 14)
SUMMARY OF MOTOR ACTIVITY TOTAL COUNTS



* = Significantly different from the control group (p=0.008) following repeated measures analysis

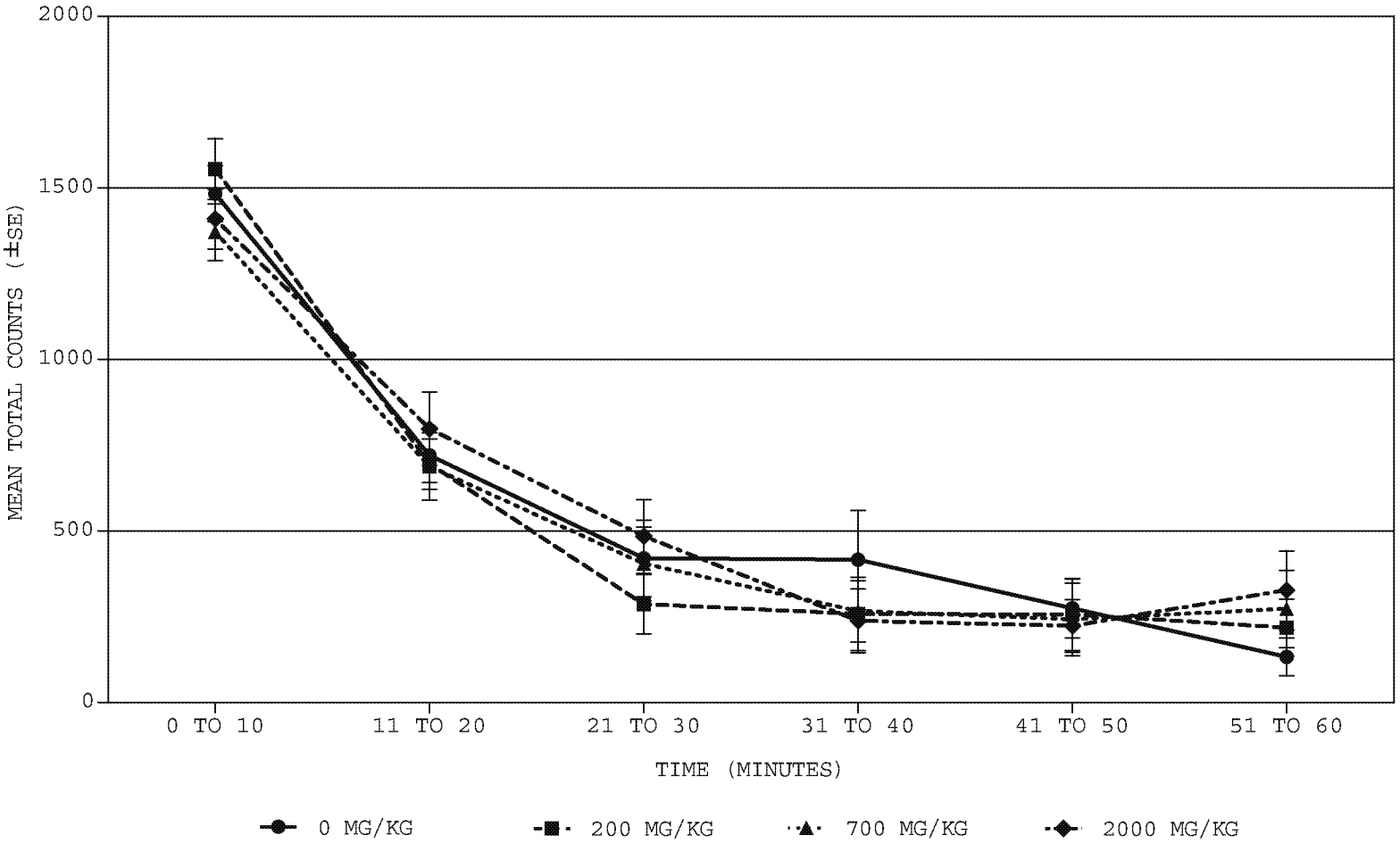
PROJECT NO.:WIL-118043
SPONSOR:SUMITOMO CHEMICAL

FIGURE 20 (MALES - DAY 14)
SUMMARY OF MOTOR ACTIVITY AMBULATORY COUNTS



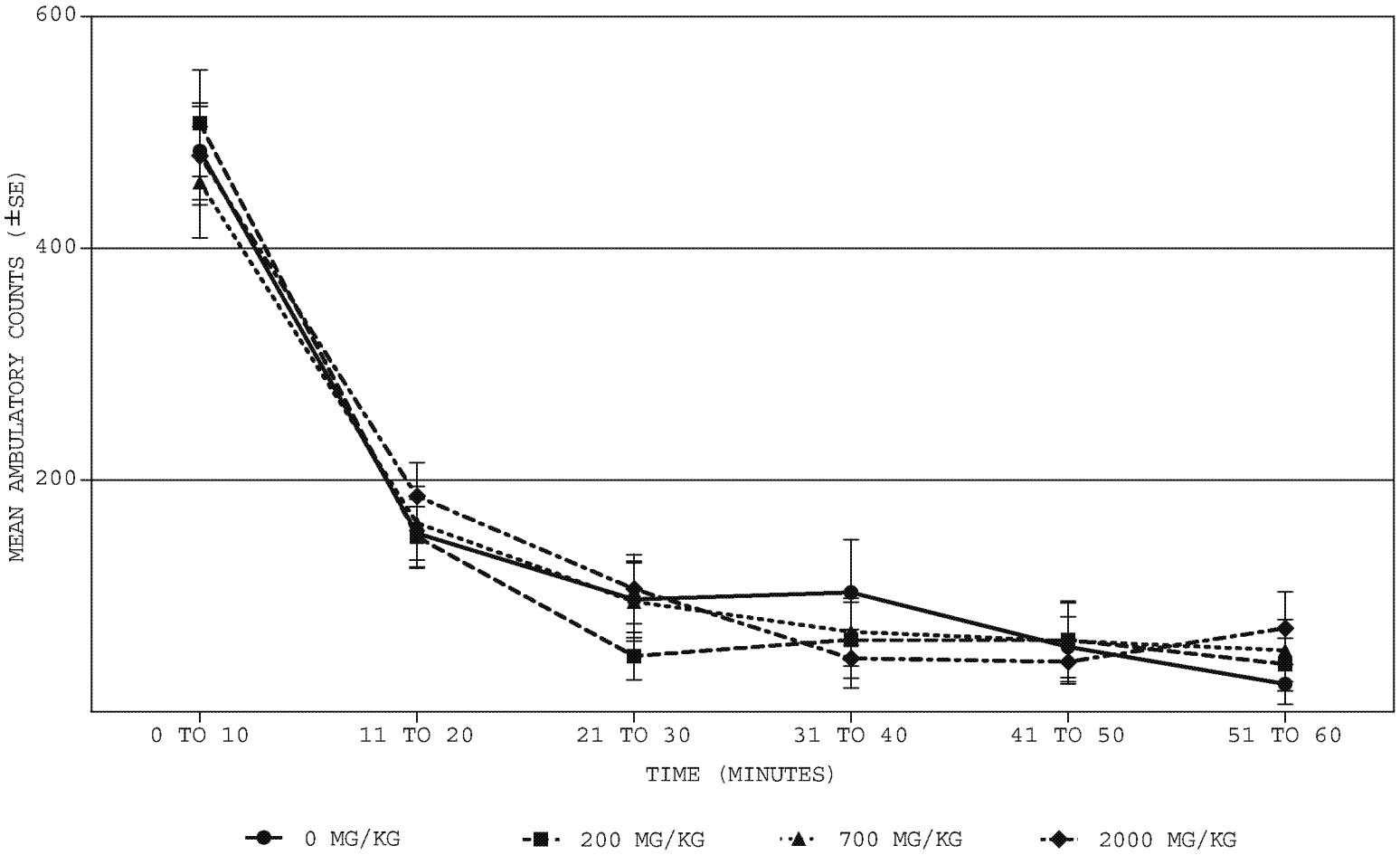
PROJECT NO.:WIL-118043
SPONSOR:SUMITOMO CHEMICAL

FIGURE 21 (FEMALES - DAY 14)
SUMMARY OF MOTOR ACTIVITY TOTAL COUNTS



PROJECT NO.:WIL-118043
SPONSOR:SUMITOMO CHEMICAL

FIGURE 22 (FEMALES - DAY 14)
SUMMARY OF MOTOR ACTIVITY AMBULATORY COUNTS



TABLES S1 - S32

ED_005427A_00022422-00075

TABLE S1 (DAILY EXAMINATIONS)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL SUMMARY OF CLINICAL FINDINGS: TOTAL OCCURRENCE/NO. OF ANIMALS

----- M A L E -----

TABLE RANGE:	12-01-09 TO 12-18-09			
GROUP:	1	2	3	4
NORMAL				
-NO SIGNIFICANT CLINICAL OBSERVATIONS	146/12	151/12	134/11	156/12
DISPOSITION				
-SCHEDULED EUTHANASIA	12/12	12/12	12/12	12/12
BODY/INTEGUMENT				
-DRIED RED MATERIAL UROGENITAL AREA	0/ 0	1/ 1	0/ 0	0/ 0
-HAIR LOSS LEFT HINDLIMB	0/ 0	0/ 0	13/ 1	0/ 0
-HAIR LOSS VENTRAL NECK	0/ 0	0/ 0	8/ 1	0/ 0
-SCABBING VENTRAL NECK	0/ 0	0/ 0	7/ 1	0/ 0
-HAIR LOSS RIGHT FORELIMB	5/ 1	0/ 0	0/ 0	0/ 0
-HAIR LOSS LEFT FORELIMB	2/ 1	0/ 0	0/ 0	0/ 0
-WET RED MATERIAL VENTRAL NECK	0/ 0	0/ 0	2/ 1	0/ 0
EYES/EARS/NOSE				
-DRIED RED MATERIAL AROUND NOSE	1/ 1	4/ 2	0/ 0	0/ 0
-WET RED MATERIAL AROUND NOSE	1/ 1	0/ 0	0/ 0	0/ 0
-DRIED RED MATERIAL AROUND RIGHT EYE	4/ 1	0/ 0	0/ 0	0/ 0
ORAL/DENTAL				
-UPPER INCISORS MALALIGNED	5/ 1	0/ 0	0/ 0	0/ 0

1- 0 MG/KG 2- 200 MG/KG 3- 700 MG/KG 4- 2000 MG/KG

TABLE S1 (DAILY EXAMINATIONS)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL SUMMARY OF CLINICAL FINDINGS: TOTAL OCCURRENCE/NO. OF ANIMALS

----- F E M A L E -----

TABLE RANGE:	12-01-09 TO 12-18-09			
GROUP:	1	2	3	4
NORMAL				
-NO SIGNIFICANT CLINICAL OBSERVATIONS	156/12	138/12	140/12	143/11
DISPOSITION				
-SCHEDULED EUTHANASIA	12/12	12/12	12/12	12/12
BODY/INTEGUMENT				
-HAIR LOSS VENTRAL NECK	0/ 0	0/ 0	4/ 1	0/ 0
-SCABBING VENTRAL NECK	0/ 0	0/ 0	1/ 1	0/ 0
-HAIR LOSS RIGHT FORELIMB	0/ 0	10/ 2	7/ 1	0/ 0
-HAIR LOSS LEFT FORELIMB	0/ 0	11/ 2	6/ 1	0/ 0
-HAIR LOSS DORSAL THORACIC AREA	0/ 0	0/ 0	7/ 1	0/ 0
-SCABBING DORSAL THORACIC AREA	0/ 0	0/ 0	4/ 1	0/ 0
-WET RED MATERIAL DORSAL THORACIC AREA	0/ 0	0/ 0	2/ 1	0/ 0
-HAIR LOSS VENTRAL ABDOMINAL AREA	0/ 0	6/ 1	0/ 0	0/ 0
-HAIR LOSS DORSAL HEAD	0/ 0	0/ 0	2/ 1	0/ 0
EYES/EARS/NOSE				
-DRIED RED MATERIAL AROUND NOSE	0/ 0	1/ 1	0/ 0	0/ 0
-ENOPHTHALMUS RIGHT EYE	0/ 0	0/ 0	0/ 0	13/ 1

1- 0 MG/KG 2- 200 MG/KG 3- 700 MG/KG 4- 2000 MG/KG

PCSUv4.07
01/13/2010

TABLE S2

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL SUMMARY OF BODY WEIGHTS [G]

MALES

GROUP:	0 MG/KG	200 MG/KG	700 MG/KG	2000 MG/KG
DAY -7				
MEAN	130.	130.	128.	128.
% DIFFERENCE		0.0	-1.5	-1.5
S.D.	16.1	16.5	14.2	15.9
S.E.	4.6	4.7	4.1	4.6
N	12	12	12	12
DAY 0				
MEAN	197.	196.	196.	193.
% DIFFERENCE		-0.5	-0.5	-2.0
S.D.	19.1	21.1	15.9	21.3
S.E.	5.5	6.1	4.6	6.2
N	12	12	12	12
DAY 7				
MEAN	246.	245.	244.	239.
% DIFFERENCE		-0.4	-0.8	-2.8
S.D.	23.5	27.9	19.4	27.0
S.E.	6.8	8.1	5.6	7.8
N	12	12	12	12
DAY 14				
MEAN	300.	298.	299.	295.
% DIFFERENCE		-0.7	-0.3	-1.7
S.D.	25.9	33.1	25.5	29.9
S.E.	7.5	9.6	7.4	8.6
N	12	12	12	12

None significantly different from control group

TABLE S2

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL SUMMARY OF BODY WEIGHTS [G]

	FEMALES			
GROUP:	0 MG/KG	200 MG/KG	700 MG/KG	2000 MG/KG
DAY -7				
MEAN	119.	119.	120.	119.
% DIFFERENCE		0.0	0.8	0.0
S.D.	11.1	8.1	14.1	11.0
S.E.	3.2	2.3	4.1	3.2
N	12	12	12	12
DAY 0				
MEAN	158.	156.	155.	155.
% DIFFERENCE		-1.3	-1.9	-1.9
S.D.	13.0	9.1	10.9	11.9
S.E.	3.8	2.6	3.1	3.4
N	12	12	12	12
DAY 7				
MEAN	177.	174.	176.	174.
% DIFFERENCE		-1.7	-0.6	-1.7
S.D.	14.6	11.3	11.9	12.8
S.E.	4.2	3.3	3.4	3.7
N	12	12	12	12
DAY 14				
MEAN	197.	195.	198.	195.
% DIFFERENCE		-1.0	0.5	-1.0
S.D.	17.2	14.6	15.6	15.7
S.E.	5.0	4.2	4.5	4.5
N	12	12	12	12

None significantly different from control group

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01/13/2010

TABLE S3

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL SUMMARY OF BODY WEIGHT CHANGES [G]

MALES

GROUP:	0 MG/KG	200 MG/KG	700 MG/KG	2000 MG/KG
DAY -7- 0				
MEAN	67.	67.	68.	65.
S.D.	6.8	6.9	7.5	7.4
S.E.	2.0	2.0	2.2	2.2
N	12	12	12	12
DAY 0- 7				
MEAN	49.	48.	48.	45.
S.D.	6.0	8.3	7.1	7.3
S.E.	1.7	2.4	2.0	2.1
N	12	12	12	12
DAY 7- 14				
MEAN	54.	53.	55.	56.
S.D.	9.3	9.5	9.4	6.6
S.E.	2.7	2.7	2.7	1.9
N	12	12	12	12
DAY 0- 14				
MEAN	103.	102.	103.	101.
S.D.	12.8	15.9	15.4	12.2
S.E.	3.7	4.6	4.4	3.5
N	12	12	12	12

None significantly different from control group

MEAN DIFFERENCES CALCULATED FROM INDIVIDUAL DIFFERENCES

TABLE S3

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL SUMMARY OF BODY WEIGHT CHANGES [G]

FEMALES

GROUP:	0 MG/KG	200 MG/KG	700 MG/KG	2000 MG/KG
DAY -7- 0				
MEAN	38.	37.	35.	36.
S.D.	8.8	4.6	9.1	5.9
S.E.	2.5	1.3	2.6	1.7
N	12	12	12	12
DAY 0- 7				
MEAN	19.	18.	20.	19.
S.D.	4.8	5.9	4.8	4.8
S.E.	1.4	1.7	1.4	1.4
N	12	12	12	12
DAY 7- 14				
MEAN	20.	21.	23.	20.
S.D.	6.1	7.3	7.3	6.0
S.E.	1.8	2.1	2.1	1.7
N	12	12	12	12
DAY 0- 14				
MEAN	40.	39.	43.	40.
S.D.	8.7	8.5	9.1	9.2
S.E.	2.5	2.5	2.6	2.7
N	12	12	12	12

None significantly different from control group

MEAN DIFFERENCES CALCULATED FROM INDIVIDUAL DIFFERENCES

PJTBWSUv5.16
01/13/2010

TABLE S4 (HOME CAGE OBSERVATIONS - PRETEST)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL SUMMARY OF FUNCTIONAL OBSERVATIONAL BATTERY DATA PRETEST

HOME CAGE OBSERVATIONS
MALES
NUMBER OF ANIMALS SHOWING EACH OBSERVATION

GROUP:	1	2	3	4
NUMBER TESTED:	12	12	12	12
POSTURE				
SITTING OR STANDING NORMALLY	6	7	5	2
ASLEEP, LYING ON SIDE OR CURLED UP	5	5	5	9
SITTING, HEAD HELD LOW	1	0	2	1
CONVULSIONS - CLONIC				
ABSENT	12	12	12	12
CONVULSIONS - TONIC				
ABSENT	12	12	12	12
TREMORS				
NONE	12	12	12	12
BITING				
NONE	12	12	12	12
PALPEBRAL CLOSURE				
EYELIDS WIDE OPEN	6	7	5	2
EYELIDS SLIGHTLY DROOPING	1	0	1	1
DROOPING EYELIDS (HALF-CLOSED)	2	1	2	3
EYELIDS COMPLETELY SHUT	3	4	4	6
FECES CONSISTENCY				
PELLETS	5	8	7	7
PELLETS, PARTIALLY FORMED	1	0	0	0
UNFORMED, DIARRHEA	1	0	0	0
PELLETS ABSENT	5	4	5	5

1- 0 MG/KG 2- 200 MG/KG 3- 700 MG/KG 4- 2000 MG/KG

NONE SIGNIFICANTLY DIFFERENT FROM THE CONTROLS AT THE 0.05 LEVEL USING FISHER'S EXACT TEST

TABLE S4 (HOME CAGE OBSERVATIONS - PRETEST)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL SUMMARY OF FUNCTIONAL OBSERVATIONAL BATTERY DATA PRETEST

HOME CAGE OBSERVATIONS
FEMALES
NUMBER OF ANIMALS SHOWING EACH OBSERVATION

GROUP:	1	2	3	4
NUMBER TESTED:	12	12	12	12
POSTURE				
SITTING OR STANDING NORMALLY	5	7	6	4
ASLEEP, LYING ON SIDE OR CURLED UP	6	2	6	7
ALERT, ORIENTED TOWARD OBSERVER	0	0	0	1
SITTING, HEAD HELD LOW	1	3	0	0
REARING	0	0	0	1
CONVULSIONS - CLONIC				
ABSENT	12	12	12	12
CONVULSIONS - TONIC				
ABSENT	12	12	12	12
TREMORS				
NONE	12	12	12	12
BITING				
NONE	12	12	12	12
PALPEBRAL CLOSURE				
EYELIDS WIDE OPEN	5	7	6	5
EYELIDS SLIGHTLY DROOPING	0	2	1	1
DROOPING EYELIDS (HALF-CLOSED)	2	1	2	1
EYELIDS COMPLETELY SHUT	5	2	3	5
FECES CONSISTENCY				
PELLETS	7	10	7	7
PELLETS ABSENT	5	2	5	5

1- 0 MG/KG 2- 200 MG/KG 3- 700 MG/KG 4- 2000 MG/KG

NONE SIGNIFICANTLY DIFFERENT FROM THE CONTROLS AT THE 0.05 LEVEL USING FISHER'S EXACT TEST

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TABLE S5 (HOME CAGE OBSERVATIONS - DAY 0)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS PAGE 1

SPONSOR:SUMITOMO CHEMICAL SUMMARY OF FUNCTIONAL OBSERVATIONAL BATTERY DATA DAY 0

HOME CAGE OBSERVATIONS
MALES
NUMBER OF ANIMALS SHOWING EACH OBSERVATION

GROUP:	1	2	3	4
NUMBER TESTED:	12	12	12	12
POSTURE				
SITTING OR STANDING NORMALLY	7	1*	4	3
ASLEEP, LYING ON SIDE OR CURLED UP	5	10	8	9
REARING	0	1	0	0
CONVULSIONS - CLONIC				
ABSENT	12	12	12	12
CONVULSIONS - TONIC				
ABSENT	12	12	12	12
TREMORS				
NONE	12	12	12	12
BITING				
NONE	12	12	12	12
PALPEBRAL CLOSURE				
EYELIDS WIDE OPEN	7	2	4	3
EYELIDS SLIGHTLY DROOPING	0	1	0	1
DROOPING EYELIDS (HALF-CLOSED)	1	2	5	2
EYELIDS COMPLETELY SHUT	4	7	3	6
FECES CONSISTENCY				
PELLETS	4	2	5	3
PELLETS ABSENT	8	10	7	9

1- 0 MG/KG 2- 200 MG/KG 3- 700 MG/KG 4- 2000 MG/KG

* = SIGNIFICANTLY DIFFERENT FROM THE CONTROLS AT THE 0.05 LEVEL USING FISHER'S EXACT TEST

TABLE S5 (HOME CAGE OBSERVATIONS - DAY 0)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL SUMMARY OF FUNCTIONAL OBSERVATIONAL BATTERY DATA DAY 0

HOME CAGE OBSERVATIONS
FEMALES
NUMBER OF ANIMALS SHOWING EACH OBSERVATION

GROUP:	1	2	3	4
NUMBER TESTED:	12	12	12	12
POSTURE				
SITTING OR STANDING NORMALLY	5	5	4	2
ASLEEP, LYING ON SIDE OR CURLED UP	6	7	8	9
ALERT, ORIENTED TOWARD OBSERVER	0	0	0	1
REARING	1	0	0	0
CONVULSIONS - CLONIC				
ABSENT	12	12	12	12
CONVULSIONS - TONIC				
ABSENT	12	12	12	12
TREMORS				
NONE	12	12	12	12
BITING				
NONE	12	12	12	12
PALPEBRAL CLOSURE				
EYELIDS WIDE OPEN	6	5	4	3
DROOPING EYELIDS (HALF-CLOSED)	3	1	1	2
EYELIDS COMPLETELY SHUT	3	6	7	7
FECES CONSISTENCY				
PELLETS	3	4	2	4
PELLETS ABSENT	9	8	10	8

1- 0 MG/KG 2- 200 MG/KG 3- 700 MG/KG 4- 2000 MG/KG

NONE SIGNIFICANTLY DIFFERENT FROM THE CONTROLS AT THE 0.05 LEVEL USING FISHER'S EXACT TEST

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TABLE S6 (HOME CAGE OBSERVATIONS - DAY 7)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS PAGE 1

SPONSOR:SUMITOMO CHEMICAL SUMMARY OF FUNCTIONAL OBSERVATIONAL BATTERY DATA DAY 7

HOME CAGE OBSERVATIONS
MALES
NUMBER OF ANIMALS SHOWING EACH OBSERVATION

GROUP:	1	2	3	4
NUMBER TESTED:	12	12	12	12
POSTURE				
SITTING OR STANDING NORMALLY	4	6	3	4
ASLEEP, LYING ON SIDE OR CURLED UP	8	6	8	8
REARING	0	0	1	0
CONVULSIONS - CLONIC				
ABSENT	12	12	12	12
CONVULSIONS - TONIC				
ABSENT	12	12	12	12
TREMORS				
NONE	12	12	12	12
BITING				
NONE	12	12	12	12
PALPEBRAL CLOSURE				
EYELIDS WIDE OPEN	4	6	4	5
DROOPING EYELIDS (HALF-CLOSED)	2	1	0	2
EYELIDS COMPLETELY SHUT	6	5	8	5
FECES CONSISTENCY				
PELLETS	3	0	3	0
PELLETS ABSENT	9	12	9	12

1- 0 MG/KG 2- 200 MG/KG 3- 700 MG/KG 4- 2000 MG/KG

NONE SIGNIFICANTLY DIFFERENT FROM THE CONTROLS AT THE 0.05 LEVEL USING FISHER'S EXACT TEST

TABLE S6 (HOME CAGE OBSERVATIONS - DAY 7)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL SUMMARY OF FUNCTIONAL OBSERVATIONAL BATTERY DATA DAY 7

HOME CAGE OBSERVATIONS
FEMALES
NUMBER OF ANIMALS SHOWING EACH OBSERVATION

GROUP:	1	2	3	4
NUMBER TESTED:	12	12	12	12
POSTURE				
SITTING OR STANDING NORMALLY	7	4	3	5
ASLEEP, LYING ON SIDE OR CURLED UP	4	8	9	7
REARING	1	0	0	0
CONVULSIONS - CLONIC				
ABSENT	12	12	12	12
CONVULSIONS - TONIC				
ABSENT	12	12	12	12
TREMORS				
NONE	12	12	12	12
BITING				
NONE	12	12	12	12
PALPEBRAL CLOSURE				
EYELIDS WIDE OPEN	9	4	4	5
EYELIDS SLIGHTLY DROOPING	1	1	1	0
DROOPING EYELIDS (HALF-CLOSED)	0	1	2	1
EYELIDS COMPLETELY SHUT	2	6	5	6
FECES CONSISTENCY				
PELLETS	3	1	1	5
PELLETS ABSENT	9	11	11	7

1- 0 MG/KG 2- 200 MG/KG 3- 700 MG/KG 4- 2000 MG/KG

NONE SIGNIFICANTLY DIFFERENT FROM THE CONTROLS AT THE 0.05 LEVEL USING FISHER'S EXACT TEST

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TABLE S7 (HOME CAGE OBSERVATIONS - DAY 14)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS PAGE 1

SPONSOR:SUMITOMO CHEMICAL SUMMARY OF FUNCTIONAL OBSERVATIONAL BATTERY DATA DAY 14

HOME CAGE OBSERVATIONS
MALES
NUMBER OF ANIMALS SHOWING EACH OBSERVATION

GROUP:	1	2	3	4
NUMBER TESTED:	12	12	12	12
POSTURE				
SITTING OR STANDING NORMALLY	3	7	4	6
ASLEEP, LYING ON SIDE OR CURLED UP	8	4	8	6
ALERT, ORIENTED TOWARD OBSERVER	1	1	0	0
CONVULSIONS - CLONIC				
ABSENT	12	12	12	12
CONVULSIONS - TONIC				
ABSENT	12	12	12	12
TREMORS				
NONE	12	12	12	12
BITING				
NONE	12	12	12	12
PALPEBRAL CLOSURE				
EYELIDS WIDE OPEN	4	7	4	5
EYELIDS SLIGHTLY DROOPING	2	0	0	1
DROOPING EYELIDS (HALF-CLOSED)	0	3	1	1
EYELIDS COMPLETELY SHUT	6	2	7	5
FECES CONSISTENCY				
PELLETS	8	3	4	3
PELLETS ABSENT	4	9	8	9

1- 0 MG/KG 2- 200 MG/KG 3- 700 MG/KG 4- 2000 MG/KG

NONE SIGNIFICANTLY DIFFERENT FROM THE CONTROLS AT THE 0.05 LEVEL USING FISHER'S EXACT TEST

TABLE S7 (HOME CAGE OBSERVATIONS - DAY 14)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL SUMMARY OF FUNCTIONAL OBSERVATIONAL BATTERY DATA DAY 14

HOME CAGE OBSERVATIONS
FEMALES
NUMBER OF ANIMALS SHOWING EACH OBSERVATION

GROUP:	1	2	3	4
NUMBER TESTED:	12	12	12	12
POSTURE				
SITTING OR STANDING NORMALLY	5	6	8	8
ASLEEP, LYING ON SIDE OR CURLED UP	6	5	1	1
ALERT, ORIENTED TOWARD OBSERVER	1	1	3	3
CONVULSIONS - CLONIC				
ABSENT	12	12	12	12
CONVULSIONS - TONIC				
ABSENT	12	12	12	12
TREMORS				
NONE	12	12	12	12
BITING				
NONE	12	12	11	12
BITING OF CAGE	0	0	1	0
PALPEBRAL CLOSURE				
EYELIDS WIDE OPEN	6	6	9	11
EYELIDS SLIGHTLY DROOPING	0	0	1	0
EYELIDS COMPLETELY SHUT	6	6	2	1
FECES CONSISTENCY				
PELLETS	5	3	3	3
PELLETS ABSENT	7	9	9	9

1- 0 MG/KG 2- 200 MG/KG 3- 700 MG/KG 4- 2000 MG/KG

NONE SIGNIFICANTLY DIFFERENT FROM THE CONTROLS AT THE 0.05 LEVEL USING FISHER'S EXACT TEST

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TABLE S8 (HANDLING OBSERVATIONS - PRETEST)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL SUMMARY OF FUNCTIONAL OBSERVATIONAL BATTERY DATA PRETEST

HANDLING OBSERVATIONS
MALES
NUMBER OF ANIMALS SHOWING EACH OBSERVATION

GROUP:	1	2	3	4
NUMBER TESTED:	12	12	12	12
EASE OF REMOVAL				
VERY EASY: ANIMAL SITS QUIETLY, ALLOWS INVESTIGATOR TO PICK IT UP	12	10	8	11
EASY: WITH/WITHOUT VOCALIZATION, WITHOUT RESISTANCE OR SLIGHT RESISTANCE	0	2	4	1
EASE OF HANDLING IN HAND				
NO RESISTANCE, ANIMAL IS EASY TO HANDLE	12	12	11	12
SLIGHT RESISTANCE TO BEING HANDLED, WITH/WITHOUT VOCALIZATION	0	0	1	0
LACRIMATION				
NONE	12	12	12	12
CHROMODACRYORRHEA				
ABSENT	12	12	12	12
SALIVATION				
NONE	12	12	12	12
PILOERECTION				
NONE	12	12	12	12
FUR APPEARANCE				
NORMAL: CLEAN AND GROOMED	12	12	12	12
PALPEBRAL CLOSURE				
EYELIDS WIDE OPEN	12	12	12	12
RESPIRATORY RATE				
NORMAL: BY OBSERVATION (80-110/MIN.)	12	12	12	12

1- 0 MG/KG 2- 200 MG/KG 3- 700 MG/KG 4- 2000 MG/KG

NONE SIGNIFICANTLY DIFFERENT FROM THE CONTROLS AT THE 0.05 LEVEL USING FISHER'S EXACT TEST

TABLE S8 (HANDLING OBSERVATIONS - PRETEST)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL SUMMARY OF FUNCTIONAL OBSERVATIONAL BATTERY DATA PRETEST

HANDLING OBSERVATIONS
MALES
NUMBER OF ANIMALS SHOWING EACH OBSERVATION

GROUP:	1	2	3	4
NUMBER TESTED:	12	12	12	12
RESPIRATORY CHARACTER				
NORMAL	12	12	12	12
RED DEPOSITS - eyes				
ABSENT	12	12	12	12
RED DEPOSITS - nose				
ABSENT	12	12	12	12
RED DEPOSITS - mouth				
ABSENT	12	12	12	12
CRUSTY DEPOSITS - eyes				
ABSENT	12	12	12	12
CRUSTY DEPOSITS - nose				
ABSENT	12	12	12	12
CRUSTY DEPOSITS - mouth				
ABSENT	12	12	12	12
MUCOUS MEMBRANES - color				
PINK	12	12	12	12
EYES - color				
PINK	12	12	12	12

1- 0 MG/KG 2- 200 MG/KG 3- 700 MG/KG 4- 2000 MG/KG

NONE SIGNIFICANTLY DIFFERENT FROM THE CONTROLS AT THE 0.05 LEVEL USING FISHER'S EXACT TEST

TABLE S8 (HANDLING OBSERVATIONS - PRETEST)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL SUMMARY OF FUNCTIONAL OBSERVATIONAL BATTERY DATA PRETEST

HANDLING OBSERVATIONS
MALES
NUMBER OF ANIMALS SHOWING EACH OBSERVATION

GROUP:	1	2	3	4
NUMBER TESTED:	12	12	12	12
SKIN - color				
PINK	12	12	12	12
EYE PROMINENCE				
NORMAL	12	12	12	12
MUSCLE TONE				
MUSCLE IS FIRM BUT NOT HARD (NORMAL)	12	12	12	12

1- 0 MG/KG 2- 200 MG/KG 3- 700 MG/KG 4- 2000 MG/KG

NONE SIGNIFICANTLY DIFFERENT FROM THE CONTROLS AT THE 0.05 LEVEL USING FISHER'S EXACT TEST

TABLE S8 (HANDLING OBSERVATIONS - PRETEST)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS PAGE 4

SPONSOR:SUMITOMO CHEMICAL SUMMARY OF FUNCTIONAL OBSERVATIONAL BATTERY DATA PRETEST

HANDLING OBSERVATIONS
FEMALES
NUMBER OF ANIMALS SHOWING EACH OBSERVATION

GROUP:	1	2	3	4
NUMBER TESTED:	12	12	12	12
EASE OF REMOVAL				
VERY EASY: ANIMAL SITS QUIETLY, ALLOWS INVESTIGATOR TO PICK IT UP	10	9	11	11
EASY: WITH/WITHOUT VOCALIZATION, WITHOUT RESISTANCE OR SLIGHT RESISTANCE	2	3	1	1
EASE OF HANDLING IN HAND				
NO RESISTANCE, ANIMAL IS EASY TO HANDLE	12	11	12	12
SLIGHT RESISTANCE TO BEING HANDLED, WITH/WITHOUT VOCALIZATION	0	1	0	0
LACRIMATION				
NONE	12	12	12	12
CHROMODACRYORRHEA				
ABSENT	12	12	12	12
SALIVATION				
NONE	12	12	12	12
PILOERECTION				
NONE	12	12	12	12
FUR APPEARANCE				
NORMAL: CLEAN AND GROOMED	12	12	12	12
PALPEBRAL CLOSURE				
EYELIDS WIDE OPEN	12	12	12	11
EYELIDS SLIGHTLY DROOPING	0	0	0	1

1- 0 MG/KG 2- 200 MG/KG 3- 700 MG/KG 4- 2000 MG/KG

NONE SIGNIFICANTLY DIFFERENT FROM THE CONTROLS AT THE 0.05 LEVEL USING FISHER'S EXACT TEST

TABLE S8 (HANDLING OBSERVATIONS - PRETEST)
AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS
SUMMARY OF FUNCTIONAL OBSERVATIONAL BATTERY DATA

HANDLING OBSERVATIONS
FEMALES
NUMBER OF ANIMALS SHOWING EACH OBSERVATION

GROUP:	1	2	3	4
NUMBER TESTED:	12	12	12	12
RESPIRATORY RATE				
NORMAL: BY OBSERVATION (80-110/MIN.)	12	12	12	12
RESPIRATORY CHARACTER				
NORMAL	12	12	12	12
RED DEPOSITS - eyes				
ABSENT	12	12	12	12
RED DEPOSITS - nose				
ABSENT	12	12	12	12
RED DEPOSITS - mouth				
ABSENT	12	12	12	12
CRUSTY DEPOSITS - eyes				
ABSENT	12	12	12	12
CRUSTY DEPOSITS - nose				
ABSENT	12	12	12	12
CRUSTY DEPOSITS - mouth				
ABSENT	12	12	12	12
MUCOUS MEMBRANES - color				
PINK	12	12	12	12

1- 0 MG/KG 2- 200 MG/KG 3- 700 MG/KG 4- 2000 MG/KG
NONE SIGNIFICANTLY DIFFERENT FROM THE CONTROLS AT THE 0.05 LEVEL USING FISHER'S EXACT TEST

TABLE S8 (HANDLING OBSERVATIONS - PRETEST)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL SUMMARY OF FUNCTIONAL OBSERVATIONAL BATTERY DATA PRETEST

HANDLING OBSERVATIONS
FEMALES
NUMBER OF ANIMALS SHOWING EACH OBSERVATION

GROUP:	1	2	3	4
NUMBER TESTED:	12	12	12	12
EYES - color				
PINK	12	12	12	12
SKIN - color				
PINK	12	12	12	12
EYE PROMINENCE				
NORMAL	12	12	12	12
MUSCLE TONE				
MUSCLE IS FIRM BUT NOT HARD (NORMAL)	12	12	12	12

1- 0 MG/KG 2- 200 MG/KG 3- 700 MG/KG 4- 2000 MG/KG

NONE SIGNIFICANTLY DIFFERENT FROM THE CONTROLS AT THE 0.05 LEVEL USING FISHER'S EXACT TEST

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TABLE S9 (HANDLING OBSERVATIONS - DAY 0)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS PAGE 1

SPONSOR:SUMITOMO CHEMICAL SUMMARY OF FUNCTIONAL OBSERVATIONAL BATTERY DATA DAY 0

HANDLING OBSERVATIONS
MALES
NUMBER OF ANIMALS SHOWING EACH OBSERVATION

GROUP:	1	2	3	4
NUMBER TESTED:	12	12	12	12
EASE OF REMOVAL				
VERY EASY: ANIMAL SITS QUIETLY, ALLOWS INVESTIGATOR TO PICK IT UP	12	11	12	11
EASY: WITH/WITHOUT VOCALIZATION, WITHOUT RESISTANCE OR SLIGHT RESISTANCE	0	1	0	1
EASE OF HANDLING IN HAND				
NO RESISTANCE, ANIMAL IS EASY TO HANDLE	12	12	12	12
LACRIMATION				
NONE	12	12	12	12
CHROMODACRYORRHEA				
ABSENT	12	12	12	12
SALIVATION				
NONE	12	12	12	12
PILOERECTION				
NONE	12	12	12	12
FUR APPEARANCE				
NORMAL: CLEAN AND GROOMED	12	12	12	12
PALPEBRAL CLOSURE				
EYELIDS WIDE OPEN	12	12	12	12
RESPIRATORY RATE				
NORMAL: BY OBSERVATION (80-110/MIN.)	12	12	12	12

1- 0 MG/KG 2- 200 MG/KG 3- 700 MG/KG 4- 2000 MG/KG

NONE SIGNIFICANTLY DIFFERENT FROM THE CONTROLS AT THE 0.05 LEVEL USING FISHER'S EXACT TEST

TABLE S9 (HANDLING OBSERVATIONS - DAY 0)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS PAGE 2

SPONSOR:SUMITOMO CHEMICAL SUMMARY OF FUNCTIONAL OBSERVATIONAL BATTERY DATA DAY 0

HANDLING OBSERVATIONS
MALES
NUMBER OF ANIMALS SHOWING EACH OBSERVATION

GROUP:	1	2	3	4
NUMBER TESTED:	12	12	12	12
RESPIRATORY CHARACTER				
NORMAL	12	12	12	12
RED DEPOSITS - eyes				
PRESENT	1	0	0	0
ABSENT	11	12	12	12
RED DEPOSITS - nose				
ABSENT	12	12	12	12
RED DEPOSITS - mouth				
ABSENT	12	12	12	12
CRUSTY DEPOSITS - eyes				
PRESENT	1	0	0	0
ABSENT	11	12	12	12
CRUSTY DEPOSITS - nose				
ABSENT	12	12	12	12
CRUSTY DEPOSITS - mouth				
ABSENT	12	12	12	12
MUCOUS MEMBRANES - color				
PINK	12	12	12	12
EYES - color				
PINK	12	12	12	12

1- 0 MG/KG 2- 200 MG/KG 3- 700 MG/KG 4- 2000 MG/KG

NONE SIGNIFICANTLY DIFFERENT FROM THE CONTROLS AT THE 0.05 LEVEL USING FISHER'S EXACT TEST

TABLE S9 (HANDLING OBSERVATIONS - DAY 0)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS PAGE 3

SPONSOR:SUMITOMO CHEMICAL SUMMARY OF FUNCTIONAL OBSERVATIONAL BATTERY DATA DAY 0

HANDLING OBSERVATIONS
MALES
NUMBER OF ANIMALS SHOWING EACH OBSERVATION

GROUP:	1	2	3	4
NUMBER TESTED:	12	12	12	12
SKIN - color				
PINK	12	12	12	12
EYE PROMINENCE				
NORMAL	12	12	12	12
MUSCLE TONE				
MUSCLE IS FIRM BUT NOT HARD (NORMAL)	12	12	12	12

1- 0 MG/KG 2- 200 MG/KG 3- 700 MG/KG 4- 2000 MG/KG

NONE SIGNIFICANTLY DIFFERENT FROM THE CONTROLS AT THE 0.05 LEVEL USING FISHER'S EXACT TEST

TABLE S9 (HANDLING OBSERVATIONS - DAY 0)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS PAGE 4

SPONSOR:SUMITOMO CHEMICAL SUMMARY OF FUNCTIONAL OBSERVATIONAL BATTERY DATA DAY 0

HANDLING OBSERVATIONS
FEMALES
NUMBER OF ANIMALS SHOWING EACH OBSERVATION

GROUP:	1	2	3	4
NUMBER TESTED:	12	12	12	12
EASE OF REMOVAL				
VERY EASY: ANIMAL SITS QUIETLY, ALLOWS INVESTIGATOR TO PICK IT UP	11	11	10	12
EASY: WITH/WITHOUT VOCALIZATION, WITHOUT RESISTANCE OR SLIGHT RESISTANCE	1	1	2	0
EASE OF HANDLING IN HAND				
NO RESISTANCE, ANIMAL IS EASY TO HANDLE	12	12	12	12
LACRIMATION				
NONE	12	12	12	12
CHROMODACRYORRHEA				
ABSENT	12	12	12	12
SALIVATION				
NONE	12	12	12	12
PILOERECTION				
NONE	12	12	12	12
FUR APPEARANCE				
NORMAL: CLEAN AND GROOMED	12	12	12	12
PALPEBRAL CLOSURE				
EYELIDS WIDE OPEN	12	12	12	12
RESPIRATORY RATE				
NORMAL: BY OBSERVATION (80-110/MIN.)	12	12	12	12

1- 0 MG/KG 2- 200 MG/KG 3- 700 MG/KG 4- 2000 MG/KG

NONE SIGNIFICANTLY DIFFERENT FROM THE CONTROLS AT THE 0.05 LEVEL USING FISHER'S EXACT TEST

TABLE S9 (HANDLING OBSERVATIONS - DAY 0)
AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS
SUMMARY OF FUNCTIONAL OBSERVATIONAL BATTERY DATA

HANDLING OBSERVATIONS
FEMALES
NUMBER OF ANIMALS SHOWING EACH OBSERVATION

GROUP:	1	2	3	4
NUMBER TESTED:	12	12	12	12
RESPIRATORY CHARACTER				
NORMAL	12	12	12	12
RED DEPOSITS - eyes				
ABSENT	12	12	12	12
RED DEPOSITS - nose				
ABSENT	12	12	12	12
RED DEPOSITS - mouth				
ABSENT	12	12	12	12
CRUSTY DEPOSITS - eyes				
ABSENT	12	12	12	12
CRUSTY DEPOSITS - nose				
ABSENT	12	12	12	12
CRUSTY DEPOSITS - mouth				
ABSENT	12	12	12	12
MUCOUS MEMBRANES - color				
PINK	12	12	12	12
EYES - color				
PINK	12	12	12	12

1- 0 MG/KG 2- 200 MG/KG 3- 700 MG/KG 4- 2000 MG/KG
NONE SIGNIFICANTLY DIFFERENT FROM THE CONTROLS AT THE 0.05 LEVEL USING FISHER'S EXACT TEST

TABLE S9 (HANDLING OBSERVATIONS - DAY 0)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS PAGE 6

SPONSOR:SUMITOMO CHEMICAL SUMMARY OF FUNCTIONAL OBSERVATIONAL BATTERY DATA DAY 0

HANDLING OBSERVATIONS
FEMALES
NUMBER OF ANIMALS SHOWING EACH OBSERVATION

GROUP:	1	2	3	4
NUMBER TESTED:	12	12	12	12
SKIN - color				
PINK	12	12	12	12
EYE PROMINENCE				
NORMAL	12	12	12	12
MUSCLE TONE				
MUSCLE IS FIRM BUT NOT HARD (NORMAL)	12	12	12	12

1- 0 MG/KG 2- 200 MG/KG 3- 700 MG/KG 4- 2000 MG/KG

NONE SIGNIFICANTLY DIFFERENT FROM THE CONTROLS AT THE 0.05 LEVEL USING FISHER'S EXACT TEST

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TABLE S10 (HANDLING OBSERVATIONS - DAY 7)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS PAGE 1

SPONSOR:SUMITOMO CHEMICAL SUMMARY OF FUNCTIONAL OBSERVATIONAL BATTERY DATA DAY 7

HANDLING OBSERVATIONS
MALES
NUMBER OF ANIMALS SHOWING EACH OBSERVATION

GROUP:	1	2	3	4
NUMBER TESTED:	12	12	12	12
EASE OF REMOVAL				
VERY EASY: ANIMAL SITS QUIETLY, ALLOWS INVESTIGATOR TO PICK IT UP	12	11	12	12
EASY: WITH/WITHOUT VOCALIZATION, WITHOUT RESISTANCE OR SLIGHT RESISTANCE	0	1	0	0
EASE OF HANDLING IN HAND				
NO RESISTANCE, ANIMAL IS EASY TO HANDLE	11	10	11	12
SLIGHT RESISTANCE TO BEING HANDLED, WITH/WITHOUT VOCALIZATION	1	2	1	0
LACRIMATION				
NONE	12	12	12	12
CHROMODACRYORRHEA				
ABSENT	12	12	12	12
SALIVATION				
NONE	12	12	12	12
PILOERECTION				
NONE	12	12	12	12
FUR APPEARANCE				
NORMAL: CLEAN AND GROOMED	12	12	12	12
PALPEBRAL CLOSURE				
EYELIDS WIDE OPEN	12	12	12	12
RESPIRATORY RATE				
NORMAL: BY OBSERVATION (80-110/MIN.)	12	12	12	12

1- 0 MG/KG 2- 200 MG/KG 3- 700 MG/KG 4- 2000 MG/KG

NONE SIGNIFICANTLY DIFFERENT FROM THE CONTROLS AT THE 0.05 LEVEL USING FISHER'S EXACT TEST

TABLE S10 (HANDLING OBSERVATIONS - DAY 7)
AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS
SUMMARY OF FUNCTIONAL OBSERVATIONAL BATTERY DATA

HANDLING OBSERVATIONS
MALES
NUMBER OF ANIMALS SHOWING EACH OBSERVATION

GROUP:	1	2	3	4
NUMBER TESTED:	12	12	12	12
RESPIRATORY CHARACTER				
NORMAL	12	12	12	12
RED DEPOSITS - eyes				
ABSENT	12	12	12	12
RED DEPOSITS - nose				
ABSENT	12	12	12	12
RED DEPOSITS - mouth				
ABSENT	12	12	12	12
CRUSTY DEPOSITS - eyes				
ABSENT	12	12	12	12
CRUSTY DEPOSITS - nose				
ABSENT	12	12	12	12
CRUSTY DEPOSITS - mouth				
ABSENT	12	12	12	12
MUCOUS MEMBRANES - color				
PINK	12	12	12	12
EYES - color				
PINK	12	12	12	12

1- 0 MG/KG 2- 200 MG/KG 3- 700 MG/KG 4- 2000 MG/KG
NONE SIGNIFICANTLY DIFFERENT FROM THE CONTROLS AT THE 0.05 LEVEL USING FISHER'S EXACT TEST

TABLE S10 (HANDLING OBSERVATIONS - DAY 7)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS PAGE 3

SPONSOR:SUMITOMO CHEMICAL SUMMARY OF FUNCTIONAL OBSERVATIONAL BATTERY DATA DAY 7

HANDLING OBSERVATIONS
MALES
NUMBER OF ANIMALS SHOWING EACH OBSERVATION

GROUP:	1	2	3	4
NUMBER TESTED:	12	12	12	12
SKIN - color				
PINK	12	12	12	12
EYE PROMINENCE				
NORMAL	12	12	12	12
MUSCLE TONE				
MUSCLE IS FIRM BUT NOT HARD (NORMAL)	12	12	12	12

1- 0 MG/KG 2- 200 MG/KG 3- 700 MG/KG 4- 2000 MG/KG

NONE SIGNIFICANTLY DIFFERENT FROM THE CONTROLS AT THE 0.05 LEVEL USING FISHER'S EXACT TEST

TABLE S10 (HANDLING OBSERVATIONS - DAY 7)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS PAGE 4

SPONSOR:SUMITOMO CHEMICAL SUMMARY OF FUNCTIONAL OBSERVATIONAL BATTERY DATA DAY 7

HANDLING OBSERVATIONS
FEMALES
NUMBER OF ANIMALS SHOWING EACH OBSERVATION

GROUP:	1	2	3	4
NUMBER TESTED:	12	12	12	12
EASE OF REMOVAL				
VERY EASY: ANIMAL SITS QUIETLY, ALLOWS INVESTIGATOR TO PICK IT UP	11	11	11	11
EASY: WITH/WITHOUT VOCALIZATION, WITHOUT RESISTANCE OR SLIGHT RESISTANCE	1	1	1	1
EASE OF HANDLING IN HAND				
NO RESISTANCE, ANIMAL IS EASY TO HANDLE	10	11	8	10
SLIGHT RESISTANCE TO BEING HANDLED, WITH/WITHOUT VOCALIZATION	2	1	4	2
LACRIMATION				
NONE	12	12	12	12
CHROMODACRYORRHEA				
ABSENT	12	12	12	12
SALIVATION				
NONE	12	12	12	12
PILOERECTION				
NONE	12	12	12	12
FUR APPEARANCE				
NORMAL: CLEAN AND GROOMED	12	12	12	12
PALPEBRAL CLOSURE				
EYELIDS WIDE OPEN	12	12	12	12
RESPIRATORY RATE				
NORMAL: BY OBSERVATION (80-110/MIN.)	12	12	12	12

1- 0 MG/KG 2- 200 MG/KG 3- 700 MG/KG 4- 2000 MG/KG

NONE SIGNIFICANTLY DIFFERENT FROM THE CONTROLS AT THE 0.05 LEVEL USING FISHER'S EXACT TEST

TABLE S10 (HANDLING OBSERVATIONS - DAY 7)
AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS
SUMMARY OF FUNCTIONAL OBSERVATIONAL BATTERY DATA

HANDLING OBSERVATIONS
FEMALES
NUMBER OF ANIMALS SHOWING EACH OBSERVATION

GROUP:	1	2	3	4
NUMBER TESTED:	12	12	12	12
RESPIRATORY CHARACTER				
NORMAL	12	12	12	12
RED DEPOSITS - eyes				
ABSENT	12	12	12	12
RED DEPOSITS - nose				
ABSENT	12	12	12	12
RED DEPOSITS - mouth				
ABSENT	12	12	12	12
CRUSTY DEPOSITS - eyes				
ABSENT	12	12	12	12
CRUSTY DEPOSITS - nose				
ABSENT	12	12	12	12
CRUSTY DEPOSITS - mouth				
ABSENT	12	12	12	12
MUCOUS MEMBRANES - color				
PINK	12	12	12	12
EYES - color				
PINK	12	12	12	12

1- 0 MG/KG 2- 200 MG/KG 3- 700 MG/KG 4- 2000 MG/KG
NONE SIGNIFICANTLY DIFFERENT FROM THE CONTROLS AT THE 0.05 LEVEL USING FISHER'S EXACT TEST

TABLE S10 (HANDLING OBSERVATIONS - DAY 7)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS PAGE 6

SPONSOR:SUMITOMO CHEMICAL SUMMARY OF FUNCTIONAL OBSERVATIONAL BATTERY DATA DAY 7

HANDLING OBSERVATIONS
FEMALES
NUMBER OF ANIMALS SHOWING EACH OBSERVATION

GROUP:	1	2	3	4
NUMBER TESTED:	12	12	12	12
SKIN - color				
PINK	12	12	12	12
EYE PROMINENCE				
NORMAL	12	12	12	12
MUSCLE TONE				
MUSCLE IS FIRM BUT NOT HARD (NORMAL)	12	12	12	12

1- 0 MG/KG 2- 200 MG/KG 3- 700 MG/KG 4- 2000 MG/KG

NONE SIGNIFICANTLY DIFFERENT FROM THE CONTROLS AT THE 0.05 LEVEL USING FISHER'S EXACT TEST

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TABLE S11 (HANDLING OBSERVATIONS - DAY 14)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS PAGE 1

SPONSOR:SUMITOMO CHEMICAL SUMMARY OF FUNCTIONAL OBSERVATIONAL BATTERY DATA DAY 14

HANDLING OBSERVATIONS
MALES
NUMBER OF ANIMALS SHOWING EACH OBSERVATION

GROUP:	1	2	3	4
NUMBER TESTED:	12	12	12	12
EASE OF REMOVAL				
VERY EASY: ANIMAL SITS QUIETLY, ALLOWS INVESTIGATOR TO PICK IT UP	11	11	10	12
EASY: WITH/WITHOUT VOCALIZATION, WITHOUT RESISTANCE OR SLIGHT RESISTANCE	1	1	2	0
EASE OF HANDLING IN HAND				
NO RESISTANCE, ANIMAL IS EASY TO HANDLE	8	11	10	12
SLIGHT RESISTANCE TO BEING HANDLED, WITH/WITHOUT VOCALIZATION	4	1	2	0
LACRIMATION				
NONE	12	12	12	12
CHROMODACRYORRHEA				
ABSENT	12	12	12	12
SALIVATION				
NONE	12	12	12	12
PILOERECTION				
NONE	12	12	12	12
FUR APPEARANCE				
NORMAL: CLEAN AND GROOMED	12	12	12	12
PALPEBRAL CLOSURE				
EYELIDS WIDE OPEN	12	12	12	12
RESPIRATORY RATE				
NORMAL: BY OBSERVATION (80-110/MIN.)	12	12	12	12

1- 0 MG/KG 2- 200 MG/KG 3- 700 MG/KG 4- 2000 MG/KG

NONE SIGNIFICANTLY DIFFERENT FROM THE CONTROLS AT THE 0.05 LEVEL USING FISHER'S EXACT TEST

TABLE S11 (HANDLING OBSERVATIONS - DAY 14)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS PAGE 2

SPONSOR:SUMITOMO CHEMICAL SUMMARY OF FUNCTIONAL OBSERVATIONAL BATTERY DATA DAY 14

HANDLING OBSERVATIONS
MALES
NUMBER OF ANIMALS SHOWING EACH OBSERVATION

GROUP:	1	2	3	4
NUMBER TESTED:	12	12	12	12
RESPIRATORY CHARACTER				
NORMAL	12	12	12	12
RED DEPOSITS - eyes				
PRESENT	2	0	0	1
ABSENT	10	12	12	11
RED DEPOSITS - nose				
ABSENT	12	12	12	12
RED DEPOSITS - mouth				
ABSENT	12	12	12	12
CRUSTY DEPOSITS - eyes				
PRESENT	2	0	0	0
ABSENT	10	12	12	12
CRUSTY DEPOSITS - nose				
ABSENT	12	12	12	12
CRUSTY DEPOSITS - mouth				
ABSENT	12	12	12	12
MUCOUS MEMBRANES - color				
PINK	12	12	12	12
EYES - color				
PINK	12	12	12	12

1- 0 MG/KG 2- 200 MG/KG 3- 700 MG/KG 4- 2000 MG/KG

NONE SIGNIFICANTLY DIFFERENT FROM THE CONTROLS AT THE 0.05 LEVEL USING FISHER'S EXACT TEST

TABLE S11 (HANDLING OBSERVATIONS - DAY 14)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS PAGE 3

SPONSOR:SUMITOMO CHEMICAL SUMMARY OF FUNCTIONAL OBSERVATIONAL BATTERY DATA DAY 14

HANDLING OBSERVATIONS
MALES
NUMBER OF ANIMALS SHOWING EACH OBSERVATION

GROUP:	1	2	3	4
NUMBER TESTED:	12	12	12	12
SKIN - color				
PINK	12	12	12	12
EYE PROMINENCE				
NORMAL	12	12	12	12
MUSCLE TONE				
MUSCLE IS FIRM BUT NOT HARD (NORMAL)	12	12	12	12

1- 0 MG/KG 2- 200 MG/KG 3- 700 MG/KG 4- 2000 MG/KG

NONE SIGNIFICANTLY DIFFERENT FROM THE CONTROLS AT THE 0.05 LEVEL USING FISHER'S EXACT TEST

TABLE S11 (HANDLING OBSERVATIONS - DAY 14)
AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS
SUMMARY OF FUNCTIONAL OBSERVATIONAL BATTERY DATA

HANDLING OBSERVATIONS
FEMALES
NUMBER OF ANIMALS SHOWING EACH OBSERVATION

GROUP:	1	2	3	4
NUMBER TESTED:	12	12	12	12
EASE OF REMOVAL				
VERY EASY: ANIMAL SITS QUIETLY, ALLOWS INVESTIGATOR TO PICK IT UP	11	11	10	10
EASY: WITH/WITHOUT VOCALIZATION, WITHOUT RESISTANCE OR SLIGHT RESISTANCE	1	1	2	1
DIFFICULT: RUNS AROUND CAGE, IS HARD TO GRAB, WITH/WITHOUT VOCALIZATION	0	0	0	1
EASE OF HANDLING IN HAND				
NO RESISTANCE, ANIMAL IS EASY TO HANDLE	8	9	10	8
SLIGHT RESISTANCE TO BEING HANDLED, WITH/WITHOUT VOCALIZATION	4	3	2	4
LACRIMATION				
NONE	12	12	12	12
CHROMODACRYORRHEA				
ABSENT	12	12	12	12
SALIVATION				
NONE	12	12	12	12
PILOERECTION				
NONE	12	12	12	12
FUR APPEARANCE				
NORMAL: CLEAN AND GROOMED	12	12	12	12
PALPEBRAL CLOSURE				
EYELIDS WIDE OPEN	12	12	12	12

1- 0 MG/KG 2- 200 MG/KG 3- 700 MG/KG 4- 2000 MG/KG
NONE SIGNIFICANTLY DIFFERENT FROM THE CONTROLS AT THE 0.05 LEVEL USING FISHER'S EXACT TEST

TABLE S11 (HANDLING OBSERVATIONS - DAY 14)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS PAGE 5

SPONSOR:SUMITOMO CHEMICAL SUMMARY OF FUNCTIONAL OBSERVATIONAL BATTERY DATA DAY 14

HANDLING OBSERVATIONS
FEMALES
NUMBER OF ANIMALS SHOWING EACH OBSERVATION

GROUP:	1	2	3	4
NUMBER TESTED:	12	12	12	12
RESPIRATORY RATE				
NORMAL: BY OBSERVATION (80-110/MIN.)	12	12	12	12
RESPIRATORY CHARACTER				
NORMAL	12	12	12	12
RED DEPOSITS - eyes				
ABSENT	12	12	12	12
RED DEPOSITS - nose				
ABSENT	12	12	12	12
RED DEPOSITS - mouth				
ABSENT	12	12	12	12
CRUSTY DEPOSITS - eyes				
ABSENT	12	12	12	12
CRUSTY DEPOSITS - nose				
ABSENT	12	12	12	12
CRUSTY DEPOSITS - mouth				
ABSENT	12	12	12	12
MUCOUS MEMBRANES - color				
PINK	12	12	12	12

1- 0 MG/KG 2- 200 MG/KG 3- 700 MG/KG 4- 2000 MG/KG

NONE SIGNIFICANTLY DIFFERENT FROM THE CONTROLS AT THE 0.05 LEVEL USING FISHER'S EXACT TEST

TABLE S11 (HANDLING OBSERVATIONS - DAY 14)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS PAGE 6

SPONSOR:SUMITOMO CHEMICAL SUMMARY OF FUNCTIONAL OBSERVATIONAL BATTERY DATA DAY 14

HANDLING OBSERVATIONS
FEMALES
NUMBER OF ANIMALS SHOWING EACH OBSERVATION

GROUP:	1	2	3	4
NUMBER TESTED:	12	12	12	12
EYES - color				
PINK	12	12	12	12
SKIN - color				
PINK	12	12	12	12
EYE PROMINENCE				
NORMAL	12	12	12	12
MUSCLE TONE				
MUSCLE IS FIRM BUT NOT HARD (NORMAL)	12	12	12	12

1- 0 MG/KG 2- 200 MG/KG 3- 700 MG/KG 4- 2000 MG/KG

NONE SIGNIFICANTLY DIFFERENT FROM THE CONTROLS AT THE 0.05 LEVEL USING FISHER'S EXACT TEST

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TABLE S12 (OPEN FIELD OBSERVATIONS - PRETEST)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL SUMMARY OF FUNCTIONAL OBSERVATIONAL BATTERY DATA PRETEST

OPEN FIELD OBSERVATIONS
MALES
NUMBER OF ANIMALS SHOWING EACH OBSERVATION

GROUP:	1	2	3	4
NUMBER TESTED:	12	12	12	12
TIME TO FIRST STEP (seconds) : MEAN	0.3	0.4	0.3	0.4
S.D.	0.05	0.07	0.07	0.07
MOBILITY				
NORMAL	12	12	12	12
GAIT				
NORMAL	12	12	12	12
CONVULSIONS - CLONIC				
ABSENT	12	12	12	12
CONVULSIONS - TONIC				
ABSENT	12	12	12	12
TREMORS				
NONE	12	12	12	12
GAIT SCORE				
NORMAL	12	12	12	12
AROUSAL				
NORMAL: ALERT, EXPLORATORY MOVEMENTS	12	12	12	12
BIZARRE/STEREOTYPIC BEHAVIOR				
NONE	12	12	12	12

1- 0 MG/KG 2- 200 MG/KG 3- 700 MG/KG 4- 2000 MG/KG
NONE SIGNIFICANTLY DIFFERENT FROM THE CONTROLS AT THE 0.05 LEVEL USING FISHER'S EXACT TEST
NONE SIGNIFICANTLY DIFFERENT FROM THE CONTROLS USING DUNNETT'S TEST

TABLE S12 (OPEN FIELD OBSERVATIONS - PRETEST)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL SUMMARY OF FUNCTIONAL OBSERVATIONAL BATTERY DATA PRETEST

OPEN FIELD OBSERVATIONS
MALES
NUMBER OF ANIMALS SHOWING EACH OBSERVATION

GROUP:		1	2	3	4
NUMBER TESTED:		12	12	12	12
REARING	: MEAN	5.3	4.8	5.4	6.3
	S.D.	2.71	2.42	1.44	2.15
BACKING	: MEAN	0.0	0.0	0.0	0.0
	S.D.	0.00	0.00	0.00	0.00
GROOMING	: MEAN	0.5	0.4	0.3	0.1
	S.D.	0.80	0.67	0.62	0.29
URINATION	: MEAN	1.1	0.9	1.0	0.9
	S.D.	1.08	1.16	0.95	1.00
DEFECATION	: MEAN	1.3	1.2	0.9	1.4
	S.D.	1.06	1.59	1.24	1.93

1- 0 MG/KG 2- 200 MG/KG 3- 700 MG/KG 4- 2000 MG/KG
NONE SIGNIFICANTLY DIFFERENT FROM THE CONTROLS USING DUNNETT'S TEST

TABLE S12 (OPEN FIELD OBSERVATIONS - PRETEST)
AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS
SUMMARY OF FUNCTIONAL OBSERVATIONAL BATTERY DATA

OPEN FIELD OBSERVATIONS
FEMALES
NUMBER OF ANIMALS SHOWING EACH OBSERVATION

GROUP:	1	2	3	4
NUMBER TESTED:	12	12	12	12
TIME TO FIRST STEP (seconds) : MEAN	0.3	0.3	0.3	0.3
S.D.	0.08	0.05	0.05	0.06
MOBILITY				
NORMAL	12	12	12	12
GAIT				
NORMAL	12	12	12	12
CONVULSIONS - CLONIC				
ABSENT	12	12	12	12
CONVULSIONS - TONIC				
ABSENT	12	12	12	12
TREMORS				
NONE	12	12	12	12
GAIT SCORE				
NORMAL	12	12	12	12
AROUSAL				
NORMAL: ALERT, EXPLORATORY MOVEMENTS	12	12	12	12
BIZARRE/STEREOTYPIC BEHAVIOR				
NONE	12	12	12	12

1- 0 MG/KG 2- 200 MG/KG 3- 700 MG/KG 4- 2000 MG/KG
NONE SIGNIFICANTLY DIFFERENT FROM THE CONTROLS AT THE 0.05 LEVEL USING FISHER'S EXACT TEST
NONE SIGNIFICANTLY DIFFERENT FROM THE CONTROLS USING DUNNETT'S TEST

TABLE S12 (OPEN FIELD OBSERVATIONS - PRETEST)
AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS
SUMMARY OF FUNCTIONAL OBSERVATIONAL BATTERY DATA

OPEN FIELD OBSERVATIONS
FEMALES
NUMBER OF ANIMALS SHOWING EACH OBSERVATION

GROUP:		1	2	3	4
NUMBER TESTED:		12	12	12	12
REARING	: MEAN	5.9	6.5	5.7	5.6
	S.D.	2.39	2.32	3.65	3.73
BACKING	: MEAN	0.0	0.0	0.0	0.0
	S.D.	0.00	0.00	0.00	0.00
GROOMING	: MEAN	0.3	0.7	0.3	0.1
	S.D.	0.49	0.89	0.49	0.29
URINATION	: MEAN	1.1	0.8	0.8	0.8
	S.D.	1.24	0.83	1.06	1.06
DEFECATION	: MEAN	0.5	0.7	0.6	0.4
	S.D.	1.24	1.23	1.00	0.67

1- 0 MG/KG 2- 200 MG/KG 3- 700 MG/KG 4- 2000 MG/KG
NONE SIGNIFICANTLY DIFFERENT FROM THE CONTROLS USING DUNNETT'S TEST

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TABLE S13 (OPEN FIELD OBSERVATIONS - DAY 0)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS PAGE 1

SPONSOR:SUMITOMO CHEMICAL SUMMARY OF FUNCTIONAL OBSERVATIONAL BATTERY DATA DAY 0

OPEN FIELD OBSERVATIONS
MALES
NUMBER OF ANIMALS SHOWING EACH OBSERVATION

GROUP:	1	2	3	4
NUMBER TESTED:	12	12	12	12
TIME TO FIRST STEP (seconds) : MEAN	0.3	0.3	0.3	0.3
S.D.	0.06	0.06	0.09	0.08
MOBILITY				
NORMAL	12	12	12	12
GAIT				
NORMAL	12	12	12	12
CONVULSIONS - CLONIC				
ABSENT	12	12	12	12
CONVULSIONS - TONIC				
ABSENT	12	12	12	12
TREMORS				
NONE	12	12	12	12
GAIT SCORE				
NORMAL	12	12	12	12
AROUSAL				
NORMAL: ALERT, EXPLORATORY MOVEMENTS	12	12	12	12
BIZARRE/STEREOTYPIC BEHAVIOR				
NONE	12	12	12	12

1- 0 MG/KG 2- 200 MG/KG 3- 700 MG/KG 4- 2000 MG/KG

NONE SIGNIFICANTLY DIFFERENT FROM THE CONTROLS AT THE 0.05 LEVEL USING FISHER'S EXACT TEST

NONE SIGNIFICANTLY DIFFERENT FROM THE CONTROLS USING DUNNETT'S TEST

TABLE S13 (OPEN FIELD OBSERVATIONS - DAY 0)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS PAGE 2

SPONSOR:SUMITOMO CHEMICAL SUMMARY OF FUNCTIONAL OBSERVATIONAL BATTERY DATA DAY 0

OPEN FIELD OBSERVATIONS
MALES
NUMBER OF ANIMALS SHOWING EACH OBSERVATION

GROUP:		1	2	3	4
NUMBER TESTED:		12	12	12	12
REARING	: MEAN	3.3	2.0	2.8	3.0
	S.D.	2.35	2.00	1.96	1.65
BACKING	: MEAN	0.0	0.0	0.0	0.0
	S.D.	0.00	0.00	0.00	0.00
GROOMING	: MEAN	0.1	0.0	0.0	0.1
	S.D.	0.29	0.00	0.00	0.29
URINATION	: MEAN	1.1	0.8	1.3	1.7
	S.D.	1.08	0.83	1.44	1.07
DEFECATION	: MEAN	1.9	0.3	1.5	1.6
	S.D.	1.56	0.65	1.62	2.02

1- 0 MG/KG 2- 200 MG/KG 3- 700 MG/KG 4- 2000 MG/KG

NONE SIGNIFICANTLY DIFFERENT FROM THE CONTROLS USING DUNNETT'S TEST

TABLE S13 (OPEN FIELD OBSERVATIONS - DAY 0)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS PAGE 3

SPONSOR:SUMITOMO CHEMICAL SUMMARY OF FUNCTIONAL OBSERVATIONAL BATTERY DATA DAY 0

OPEN FIELD OBSERVATIONS
FEMALES
NUMBER OF ANIMALS SHOWING EACH OBSERVATION

GROUP:	1	2	3	4
NUMBER TESTED:	12	12	12	12
TIME TO FIRST STEP (seconds) : MEAN	0.3	0.3	0.3	0.3
S.D.	0.09	0.05	0.06	0.07
MOBILITY				
NORMAL	12	12	12	12
GAIT				
NORMAL	12	12	12	12
CONVULSIONS - CLONIC				
ABSENT	12	12	12	12
CONVULSIONS - TONIC				
ABSENT	12	12	12	12
TREMORS				
NONE	12	12	12	12
GAIT SCORE				
NORMAL	12	12	12	12
AROUSAL				
NORMAL: ALERT, EXPLORATORY MOVEMENTS	12	12	12	12
BIZARRE/STEREOTYPIC BEHAVIOR				
NONE	12	12	12	12

1- 0 MG/KG 2- 200 MG/KG 3- 700 MG/KG 4- 2000 MG/KG

NONE SIGNIFICANTLY DIFFERENT FROM THE CONTROLS AT THE 0.05 LEVEL USING FISHER'S EXACT TEST

NONE SIGNIFICANTLY DIFFERENT FROM THE CONTROLS USING DUNNETT'S TEST

TABLE S13 (OPEN FIELD OBSERVATIONS - DAY 0)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS PAGE 4

SPONSOR:SUMITOMO CHEMICAL SUMMARY OF FUNCTIONAL OBSERVATIONAL BATTERY DATA DAY 0

OPEN FIELD OBSERVATIONS
FEMALES
NUMBER OF ANIMALS SHOWING EACH OBSERVATION

GROUP:		1	2	3	4
NUMBER TESTED:		12	12	12	12
REARING	: MEAN	4.0	5.0	4.3	2.4
	S.D.	2.56	2.41	2.39	1.93
BACKING	: MEAN	0.0	0.0	0.0	0.0
	S.D.	0.00	0.00	0.00	0.00
GROOMING	: MEAN	0.0	0.1	0.3	0.0
	S.D.	0.00	0.29	0.62	0.00
URINATION	: MEAN	0.8	0.5	0.3	0.8
	S.D.	0.87	0.80	0.65	1.22
DEFECATION	: MEAN	0.9	0.8	0.4	0.8
	S.D.	1.16	1.42	1.44	1.99

1- 0 MG/KG 2- 200 MG/KG 3- 700 MG/KG 4- 2000 MG/KG

NONE SIGNIFICANTLY DIFFERENT FROM THE CONTROLS USING DUNNETT'S TEST

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TABLE S14 (OPEN FIELD OBSERVATIONS - DAY 7)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS PAGE 1

SPONSOR:SUMITOMO CHEMICAL SUMMARY OF FUNCTIONAL OBSERVATIONAL BATTERY DATA DAY 7

OPEN FIELD OBSERVATIONS
MALES
NUMBER OF ANIMALS SHOWING EACH OBSERVATION

GROUP:	1	2	3	4
NUMBER TESTED:	12	12	12	12
TIME TO FIRST STEP (seconds) : MEAN	0.4	0.6	0.5	0.5
S.D.	0.08	0.47	0.14	0.11
MOBILITY				
NORMAL	12	12	12	12
GAIT				
NORMAL	12	12	12	12
CONVULSIONS - CLONIC				
ABSENT	12	12	12	12
CONVULSIONS - TONIC				
ABSENT	12	12	12	12
TREMORS				
NONE	12	12	12	12
GAIT SCORE				
NORMAL	12	12	12	12
AROUSAL				
NORMAL: ALERT, EXPLORATORY MOVEMENTS	12	12	12	12
BIZARRE/STEREOTYPIC BEHAVIOR				
NONE	12	12	12	12

1- 0 MG/KG 2- 200 MG/KG 3- 700 MG/KG 4- 2000 MG/KG

NONE SIGNIFICANTLY DIFFERENT FROM THE CONTROLS AT THE 0.05 LEVEL USING FISHER'S EXACT TEST

NONE SIGNIFICANTLY DIFFERENT FROM THE CONTROLS USING DUNNETT'S TEST

TABLE S14 (OPEN FIELD OBSERVATIONS - DAY 7)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS PAGE 2

SPONSOR:SUMITOMO CHEMICAL SUMMARY OF FUNCTIONAL OBSERVATIONAL BATTERY DATA DAY 7

OPEN FIELD OBSERVATIONS
MALES
NUMBER OF ANIMALS SHOWING EACH OBSERVATION

GROUP:		1	2	3	4
NUMBER TESTED:		12	12	12	12
REARING	: MEAN	3.2	2.8	2.6	3.0
	S.D.	3.01	3.31	2.61	2.09
BACKING	: MEAN	0.0	0.0	0.0	0.0
	S.D.	0.00	0.00	0.00	0.00
GROOMING	: MEAN	0.0	0.2	0.0	0.2
	S.D.	0.00	0.39	0.00	0.39
URINATION	: MEAN	0.5	0.5	0.3	0.6
	S.D.	0.52	0.67	0.45	0.67
DEFECATION	: MEAN	0.6	0.7	1.8+	1.6
	S.D.	0.67	0.78	1.64	1.51

1- 0 MG/KG 2- 200 MG/KG 3- 700 MG/KG 4- 2000 MG/KG

+ = SIGNIFICANTLY DIFFERENT FROM THE CONTROLS AT THE 0.05 LEVEL USING DUNNETT'S TEST

TABLE S14 (OPEN FIELD OBSERVATIONS - DAY 7)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL SUMMARY OF FUNCTIONAL OBSERVATIONAL BATTERY DATA DAY 7

OPEN FIELD OBSERVATIONS
FEMALES
NUMBER OF ANIMALS SHOWING EACH OBSERVATION

GROUP:	1	2	3	4
NUMBER TESTED:	12	12	12	12
TIME TO FIRST STEP (seconds) : MEAN	0.5	0.4	0.5	0.5
S.D.	0.12	0.08	0.14	0.29
MOBILITY				
NORMAL	12	12	12	12
GAIT				
NORMAL	12	12	12	12
CONVULSIONS - CLONIC				
ABSENT	12	12	12	12
CONVULSIONS - TONIC				
ABSENT	12	12	12	12
TREMORS				
NONE	12	12	12	12
GAIT SCORE				
NORMAL	12	12	12	12
AROUSAL				
NORMAL: ALERT, EXPLORATORY MOVEMENTS	12	12	12	12
BIZARRE/STEREOTYPIC BEHAVIOR				
NONE	12	12	12	12

1- 0 MG/KG 2- 200 MG/KG 3- 700 MG/KG 4- 2000 MG/KG
NONE SIGNIFICANTLY DIFFERENT FROM THE CONTROLS AT THE 0.05 LEVEL USING FISHER'S EXACT TEST
NONE SIGNIFICANTLY DIFFERENT FROM THE CONTROLS USING DUNNETT'S TEST

TABLE S14 (OPEN FIELD OBSERVATIONS - DAY 7)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS PAGE 4

SPONSOR:SUMITOMO CHEMICAL SUMMARY OF FUNCTIONAL OBSERVATIONAL BATTERY DATA DAY 7

OPEN FIELD OBSERVATIONS
FEMALES
NUMBER OF ANIMALS SHOWING EACH OBSERVATION

GROUP:		1	2	3	4
NUMBER TESTED:		12	12	12	12
REARING	: MEAN	5.9	4.2	5.6	4.2
	S.D.	4.83	3.33	3.23	4.09
BACKING	: MEAN	0.0	0.0	0.0	0.0
	S.D.	0.00	0.00	0.00	0.00
GROOMING	: MEAN	0.2	0.1	0.0	0.1
	S.D.	0.39	0.29	0.00	0.29
URINATION	: MEAN	0.5	0.1	0.2	0.4
	S.D.	0.52	0.29	0.39	0.90
DEFECATION	: MEAN	0.7	0.2	0.6	0.3
	S.D.	1.72	0.39	1.24	0.87

1- 0 MG/KG 2- 200 MG/KG 3- 700 MG/KG 4- 2000 MG/KG

NONE SIGNIFICANTLY DIFFERENT FROM THE CONTROLS USING DUNNETT'S TEST

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TABLE S15 (OPEN FIELD OBSERVATIONS - DAY 14)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL SUMMARY OF FUNCTIONAL OBSERVATIONAL BATTERY DATA DAY 14

OPEN FIELD OBSERVATIONS
MALES
NUMBER OF ANIMALS SHOWING EACH OBSERVATION

GROUP:	1	2	3	4
NUMBER TESTED:	12	12	12	12
TIME TO FIRST STEP (seconds) : MEAN	0.4	0.3	0.3	0.4
S.D.	0.07	0.07	0.07	0.14
MOBILITY				
NORMAL	12	12	12	12
GAIT				
NORMAL	12	12	12	12
CONVULSIONS - CLONIC				
ABSENT	12	12	12	12
CONVULSIONS - TONIC				
ABSENT	12	12	12	12
TREMORS				
NONE	12	12	12	12
GAIT SCORE				
NORMAL	12	12	11	12
CONSIDERABLE IMPAIRMENT, WITHOUT FALLING	0	0	1	0
AROUSAL				
NORMAL: ALERT, EXPLORATORY MOVEMENTS	12	12	12	12
BIZARRE/STEREOTYPIC BEHAVIOR				
NONE	12	12	12	12

1- 0 MG/KG 2- 200 MG/KG 3- 700 MG/KG 4- 2000 MG/KG
NONE SIGNIFICANTLY DIFFERENT FROM THE CONTROLS AT THE 0.05 LEVEL USING FISHER'S EXACT TEST
NONE SIGNIFICANTLY DIFFERENT FROM THE CONTROLS USING DUNNETT'S TEST

TABLE S15 (OPEN FIELD OBSERVATIONS - DAY 14)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL SUMMARY OF FUNCTIONAL OBSERVATIONAL BATTERY DATA DAY 14

OPEN FIELD OBSERVATIONS
MALES
NUMBER OF ANIMALS SHOWING EACH OBSERVATION

GROUP:		1	2	3	4
NUMBER TESTED:		12	12	12	12
REARING	: MEAN	4.5	4.5	3.2	4.3
	S.D.	3.40	3.99	2.48	2.38
BACKING	: MEAN	0.0	0.4	0.0	0.0
	S.D.	0.00	1.44	0.00	0.00
GROOMING	: MEAN	0.1	0.4	0.0	0.0
	S.D.	0.29	1.44	0.00	0.00
URINATION	: MEAN	0.3	0.7	0.6	0.4
	S.D.	0.62	0.78	0.67	0.51
DEFECATION	: MEAN	0.3	2.5	0.6	0.3
	S.D.	0.65	6.53	1.08	0.49

1- 0 MG/KG 2- 200 MG/KG 3- 700 MG/KG 4- 2000 MG/KG
NONE SIGNIFICANTLY DIFFERENT FROM THE CONTROLS USING DUNNETT'S TEST

TABLE S15 (OPEN FIELD OBSERVATIONS - DAY 14)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS PAGE 3

SPONSOR:SUMITOMO CHEMICAL SUMMARY OF FUNCTIONAL OBSERVATIONAL BATTERY DATA DAY 14

OPEN FIELD OBSERVATIONS
FEMALES
NUMBER OF ANIMALS SHOWING EACH OBSERVATION

GROUP:	1	2	3	4
NUMBER TESTED:	12	12	12	12
TIME TO FIRST STEP (seconds) : MEAN	0.3	0.3	0.4	0.3
S.D.	0.05	0.04	0.12	0.00
MOBILITY				
NORMAL	12	12	12	12
GAIT				
NORMAL	12	12	12	12
CONVULSIONS - CLONIC				
ABSENT	12	12	12	12
CONVULSIONS - TONIC				
ABSENT	12	12	12	12
TREMORS				
NONE	12	12	12	12
GAIT SCORE				
NORMAL	12	12	12	11
CONSIDERABLE IMPAIRMENT, WITHOUT FALLING	0	0	0	1
AROUSAL				
NORMAL: ALERT, EXPLORATORY MOVEMENTS	12	12	12	12
BIZARRE/STEREOTYPIC BEHAVIOR				
NONE	12	12	12	12

1- 0 MG/KG 2- 200 MG/KG 3- 700 MG/KG 4- 2000 MG/KG

NONE SIGNIFICANTLY DIFFERENT FROM THE CONTROLS AT THE 0.05 LEVEL USING FISHER'S EXACT TEST

NONE SIGNIFICANTLY DIFFERENT FROM THE CONTROLS USING DUNNETT'S TEST

TABLE S15 (OPEN FIELD OBSERVATIONS - DAY 14)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL SUMMARY OF FUNCTIONAL OBSERVATIONAL BATTERY DATA DAY 14

OPEN FIELD OBSERVATIONS
FEMALES
NUMBER OF ANIMALS SHOWING EACH OBSERVATION

GROUP:		1	2	3	4
NUMBER TESTED:		12	12	12	12
REARING	: MEAN	6.8	8.8	6.8	6.1
	S.D.	5.27	3.66	4.57	4.17
BACKING	: MEAN	0.0	0.0	0.0	0.0
	S.D.	0.00	0.00	0.00	0.00
GROOMING	: MEAN	0.0	0.3	0.2	0.0
	S.D.	0.00	0.45	0.39	0.00
URINATION	: MEAN	0.3	0.0	0.3	0.3
	S.D.	0.45	0.00	0.62	0.62
DEFECATION	: MEAN	0.1	0.0	0.1	0.4
	S.D.	0.29	0.00	0.29	1.00

1- 0 MG/KG 2- 200 MG/KG 3- 700 MG/KG 4- 2000 MG/KG
NONE SIGNIFICANTLY DIFFERENT FROM THE CONTROLS USING DUNNETT'S TEST

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TABLE S16 (SENSORY OBSERVATIONS - PRETEST)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL SUMMARY OF FUNCTIONAL OBSERVATIONAL BATTERY DATA PRETEST

SENSORY OBSERVATIONS
MALES
NUMBER OF ANIMALS SHOWING EACH OBSERVATION

GROUP:	1	2	3	4
NUMBER TESTED:	12	12	12	12
APPROACH RESPONSE				
SLOW APPROACH, SNIFFING OR TURNING AWAY	12	12	12	12
TOUCH RESPONSE				
ANIMAL MAY SLOWLY TURN, WALK AWAY	12	12	12	12
STARTLE RESPONSE				
SLIGHT REACTION, EAR FLICK OR SOME EVIDENCE THAT SNAP WAS HEARD	12	10	12	12
MORE ENERGETIC RESPONSE THAN (2), WITH/WITHOUT VOCALIZATION	0	2	0	0
TAIL PINCH RESPONSE				
ANIMAL MAY SLOWLY TURN, WALK AWAY	12	12	11	12
MORE ENERGETIC RESPONSE THAN (2), WITH/WITHOUT VOCALIZATION	0	0	1	0
OLFACTORY ORIENTATION				
REACTION PRESENT: ANIMAL APPROACHES SWAB MAKING SNIFFING MOVEMENTS WITH NOSE	12	12	12	12
PUPIL RESPONSE				
PUPIL RESPONSE PRESENT	12	12	12	12
EYEBLINK RESPONSE				
EYEBLINK RESPONSE PRESENT	12	12	12	12
FORELIMB EXTENSION				
FORELIMB EXTENSION PRESENT	12	12	12	12
HINDLIMB EXTENSION				
NO HINDLIMB EXTENSION	0	1	0	0

1- 0 MG/KG 2- 200 MG/KG 3- 700 MG/KG 4- 2000 MG/KG
COMPLETE SCORING CRITERIA PRESENTED AS AN APPENDIX
NONE SIGNIFICANTLY DIFFERENT FROM THE CONTROLS AT THE 0.05 LEVEL USING FISHER'S EXACT TEST

TABLE S16 (SENSORY OBSERVATIONS - PRETEST)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS PAGE 2

SPONSOR:SUMITOMO CHEMICAL SUMMARY OF FUNCTIONAL OBSERVATIONAL BATTERY DATA PRETEST

SENSORY OBSERVATIONS
MALES
NUMBER OF ANIMALS SHOWING EACH OBSERVATION

GROUP:	1	2	3	4
NUMBER TESTED:	12	12	12	12
HINDLIMB EXTENSION (CONTINUED)				
HINDLIMB EXTENSION PRESENT	12	11	12	12
AIR RIGHTING REFLEX				
NORMAL	12	12	12	12

1- 0 MG/KG 2- 200 MG/KG 3- 700 MG/KG 4- 2000 MG/KG

COMPLETE SCORING CRITERIA PRESENTED AS AN APPENDIX

NONE SIGNIFICANTLY DIFFERENT FROM THE CONTROLS AT THE 0.05 LEVEL USING FISHER'S EXACT TEST

TABLE S16 (SENSORY OBSERVATIONS - PRETEST)
AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS
SUMMARY OF FUNCTIONAL OBSERVATIONAL BATTERY DATA

SENSORY OBSERVATIONS
FEMALES
NUMBER OF ANIMALS SHOWING EACH OBSERVATION

GROUP:	1	2	3	4
NUMBER TESTED:	12	12	12	12
APPROACH RESPONSE				
SLOW APPROACH, SNIFFING OR TURNING AWAY	12	11	12	12
MORE ENERGETIC RESPONSE THAN (2), WITH/WITHOUT VOCALIZATION	0	1	0	0
TOUCH RESPONSE				
ANIMAL MAY SLOWLY TURN, WALK AWAY	12	11	12	12
MORE ENERGETIC RESPONSE THAN (2), WITH/WITHOUT VOCALIZATION	0	1	0	0
STARTLE RESPONSE				
SLIGHT REACTION, EAR FLICK OR SOME EVIDENCE THAT SNAP WAS HEARD	12	12	11	11
MORE ENERGETIC RESPONSE THAN (2), WITH/WITHOUT VOCALIZATION	0	0	1	1
TAIL PINCH RESPONSE				
ANIMAL MAY SLOWLY TURN, WALK AWAY	10	10	11	11
MORE ENERGETIC RESPONSE THAN (2), WITH/WITHOUT VOCALIZATION	2	2	1	1
OLFACTORY ORIENTATION				
REACTION PRESENT: ANIMAL APPROACHES SWAB MAKING SNIFFING MOVEMENTS WITH NOSE	12	12	12	12
PUPIL RESPONSE				
PUPIL RESPONSE PRESENT	12	12	12	12
EYEBLINK RESPONSE				
EYEBLINK RESPONSE PRESENT	12	12	12	12
FORELIMB EXTENSION				
FORELIMB EXTENSION PRESENT	12	12	12	12

1- 0 MG/KG 2- 200 MG/KG 3- 700 MG/KG 4- 2000 MG/KG
COMPLETE SCORING CRITERIA PRESENTED AS AN APPENDIX
NONE SIGNIFICANTLY DIFFERENT FROM THE CONTROLS AT THE 0.05 LEVEL USING FISHER'S EXACT TEST

TABLE S16 (SENSORY OBSERVATIONS - PRETEST)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS PAGE 4

SPONSOR:SUMITOMO CHEMICAL SUMMARY OF FUNCTIONAL OBSERVATIONAL BATTERY DATA PRETEST

SENSORY OBSERVATIONS
FEMALES
NUMBER OF ANIMALS SHOWING EACH OBSERVATION

GROUP:	1	2	3	4
NUMBER TESTED:	12	12	12	12
HINDLIMB EXTENSION				
NO HINDLIMB EXTENSION	0	1	0	0
HINDLIMB EXTENSION PRESENT	12	11	12	12
AIR RIGHTING REFLEX				
NORMAL	12	12	12	12

1- 0 MG/KG 2- 200 MG/KG 3- 700 MG/KG 4- 2000 MG/KG

COMPLETE SCORING CRITERIA PRESENTED AS AN APPENDIX

NONE SIGNIFICANTLY DIFFERENT FROM THE CONTROLS AT THE 0.05 LEVEL USING FISHER'S EXACT TEST

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TABLE S17 (SENSORY OBSERVATIONS - DAY 0)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS PAGE 1

SPONSOR:SUMITOMO CHEMICAL SUMMARY OF FUNCTIONAL OBSERVATIONAL BATTERY DATA DAY 0

SENSORY OBSERVATIONS
MALES
NUMBER OF ANIMALS SHOWING EACH OBSERVATION

GROUP:	1	2	3	4
NUMBER TESTED:	12	12	12	12
APPROACH RESPONSE				
SLOW APPROACH, SNIFFING OR TURNING AWAY	12	12	12	12
TOUCH RESPONSE				
ANIMAL MAY SLOWLY TURN, WALK AWAY	12	12	12	12
STARTLE RESPONSE				
SLIGHT REACTION, EAR FLICK OR SOME EVIDENCE THAT SNAP WAS HEARD	12	12	12	12
TAIL PINCH RESPONSE				
ANIMAL MAY SLOWLY TURN, WALK AWAY	12	11	12	11
MORE ENERGETIC RESPONSE THAN (2), WITH/WITHOUT VOCALIZATION	0	1	0	1
OLFACTORY ORIENTATION				
REACTION PRESENT: ANIMAL APPROACHES SWAB MAKING SNIFFING MOVEMENTS WITH NOSE	12	12	12	12
PUPIL RESPONSE				
PUPIL RESPONSE PRESENT	12	12	12	12
EYEBLINK RESPONSE				
EYEBLINK RESPONSE PRESENT	12	12	12	12
FORELIMB EXTENSION				
FORELIMB EXTENSION PRESENT	12	12	12	12
HINDLIMB EXTENSION				
HINDLIMB EXTENSION PRESENT	12	12	12	12

1- 0 MG/KG 2- 200 MG/KG 3- 700 MG/KG 4- 2000 MG/KG

COMPLETE SCORING CRITERIA PRESENTED AS AN APPENDIX

NONE SIGNIFICANTLY DIFFERENT FROM THE CONTROLS AT THE 0.05 LEVEL USING FISHER'S EXACT TEST

TABLE S17 (SENSORY OBSERVATIONS - DAY 0)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS PAGE 2

SPONSOR:SUMITOMO CHEMICAL SUMMARY OF FUNCTIONAL OBSERVATIONAL BATTERY DATA DAY 0

SENSORY OBSERVATIONS
MALES
NUMBER OF ANIMALS SHOWING EACH OBSERVATION

GROUP:	1	2	3	4
NUMBER TESTED:	12	12	12	12
AIR RIGHTING REFLEX				
NORMAL	12	12	12	12

1- 0 MG/KG 2- 200 MG/KG 3- 700 MG/KG 4- 2000 MG/KG

COMPLETE SCORING CRITERIA PRESENTED AS AN APPENDIX

NONE SIGNIFICANTLY DIFFERENT FROM THE CONTROLS AT THE 0.05 LEVEL USING FISHER'S EXACT TEST

TABLE S17 (SENSORY OBSERVATIONS - DAY 0)
AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS
SUMMARY OF FUNCTIONAL OBSERVATIONAL BATTERY DATA

SENSORY OBSERVATIONS
FEMALES
NUMBER OF ANIMALS SHOWING EACH OBSERVATION

GROUP:	1	2	3	4
NUMBER TESTED:	12	12	12	12
APPROACH RESPONSE				
SLOW APPROACH, SNIFFING OR TURNING AWAY	12	12	12	12
TOUCH RESPONSE				
ANIMAL MAY SLOWLY TURN, WALK AWAY	12	12	12	12
STARTLE RESPONSE				
SLIGHT REACTION, EAR FLICK OR SOME EVIDENCE THAT SNAP WAS HEARD	12	12	12	12
TAIL PINCH RESPONSE				
ANIMAL MAY SLOWLY TURN, WALK AWAY	10	11	10	11
MORE ENERGETIC RESPONSE THAN (2), WITH/WITHOUT VOCALIZATION	2	1	2	1
OLFACTORY ORIENTATION				
REACTION PRESENT: ANIMAL APPROACHES SWAB MAKING SNIFFING MOVEMENTS WITH NOSE	12	12	12	12
PUPIL RESPONSE				
PUPIL RESPONSE PRESENT	12	12	12	12
EYEBLINK RESPONSE				
EYEBLINK RESPONSE PRESENT	12	12	12	12
FORELIMB EXTENSION				
FORELIMB EXTENSION PRESENT	12	12	12	12
HINDLIMB EXTENSION				
HINDLIMB EXTENSION PRESENT	12	12	12	12

1- 0 MG/KG 2- 200 MG/KG 3- 700 MG/KG 4- 2000 MG/KG
COMPLETE SCORING CRITERIA PRESENTED AS AN APPENDIX
NONE SIGNIFICANTLY DIFFERENT FROM THE CONTROLS AT THE 0.05 LEVEL USING FISHER'S EXACT TEST

TABLE S17 (SENSORY OBSERVATIONS - DAY 0)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL SUMMARY OF FUNCTIONAL OBSERVATIONAL BATTERY DATA DAY 0

SENSORY OBSERVATIONS
FEMALES
NUMBER OF ANIMALS SHOWING EACH OBSERVATION

GROUP:	1	2	3	4
NUMBER TESTED:	12	12	12	12
AIR RIGHTING REFLEX				
NORMAL	12	12	12	12

1- 0 MG/KG 2- 200 MG/KG 3- 700 MG/KG 4- 2000 MG/KG

COMPLETE SCORING CRITERIA PRESENTED AS AN APPENDIX

NONE SIGNIFICANTLY DIFFERENT FROM THE CONTROLS AT THE 0.05 LEVEL USING FISHER'S EXACT TEST

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TABLE S18 (SENSORY OBSERVATIONS - DAY 7)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL SUMMARY OF FUNCTIONAL OBSERVATIONAL BATTERY DATA DAY 7

SENSORY OBSERVATIONS
MALES
NUMBER OF ANIMALS SHOWING EACH OBSERVATION

GROUP:	1	2	3	4
NUMBER TESTED:	12	12	12	12
APPROACH RESPONSE				
SLOW APPROACH, SNIFFING OR TURNING AWAY	12	12	12	12
TOUCH RESPONSE				
ANIMAL MAY SLOWLY TURN, WALK AWAY	12	12	12	12
STARTLE RESPONSE				
SLIGHT REACTION, EAR FLICK OR SOME EVIDENCE THAT SNAP WAS HEARD	12	12	12	12
TAIL PINCH RESPONSE				
ANIMAL MAY SLOWLY TURN, WALK AWAY	8	8	9	9
MORE ENERGETIC RESPONSE THAN (2), WITH/WITHOUT VOCALIZATION	4	4	3	3
OLFACTORY ORIENTATION				
REACTION PRESENT: ANIMAL APPROACHES SWAB MAKING SNIFFING MOVEMENTS WITH NOSE	12	12	12	12
PUPIL RESPONSE				
PUPIL RESPONSE PRESENT	12	12	12	12
EYEBLINK RESPONSE				
EYEBLINK RESPONSE PRESENT	12	12	12	12
FORELIMB EXTENSION				
FORELIMB EXTENSION PRESENT	12	12	12	12
HINDLIMB EXTENSION				
HINDLIMB EXTENSION PRESENT	12	12	12	12

1- 0 MG/KG 2- 200 MG/KG 3- 700 MG/KG 4- 2000 MG/KG
COMPLETE SCORING CRITERIA PRESENTED AS AN APPENDIX
NONE SIGNIFICANTLY DIFFERENT FROM THE CONTROLS AT THE 0.05 LEVEL USING FISHER'S EXACT TEST

TABLE S18 (SENSORY OBSERVATIONS - DAY 7)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS PAGE 2

SPONSOR:SUMITOMO CHEMICAL SUMMARY OF FUNCTIONAL OBSERVATIONAL BATTERY DATA DAY 7

SENSORY OBSERVATIONS
MALES
NUMBER OF ANIMALS SHOWING EACH OBSERVATION

GROUP:	1	2	3	4
NUMBER TESTED:	12	12	12	12
AIR RIGHTING REFLEX				
NORMAL	12	12	11	12
SLIGHTLY UNCOORDINATED	0	0	1	0

1- 0 MG/KG 2- 200 MG/KG 3- 700 MG/KG 4- 2000 MG/KG

COMPLETE SCORING CRITERIA PRESENTED AS AN APPENDIX

NONE SIGNIFICANTLY DIFFERENT FROM THE CONTROLS AT THE 0.05 LEVEL USING FISHER'S EXACT TEST

TABLE S18 (SENSORY OBSERVATIONS - DAY 7)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS PAGE 3

SPONSOR:SUMITOMO CHEMICAL SUMMARY OF FUNCTIONAL OBSERVATIONAL BATTERY DATA DAY 7

SENSORY OBSERVATIONS
FEMALES
NUMBER OF ANIMALS SHOWING EACH OBSERVATION

GROUP:	1	2	3	4
NUMBER TESTED:	12	12	12	12
APPROACH RESPONSE				
SLOW APPROACH, SNIFFING OR TURNING AWAY	12	12	12	12
TOUCH RESPONSE				
ANIMAL MAY SLOWLY TURN, WALK AWAY	12	12	11	12
MORE ENERGETIC RESPONSE THAN (2), WITH/WITHOUT VOCALIZATION	0	0	1	0
STARTLE RESPONSE				
SLIGHT REACTION, EAR FLICK OR SOME EVIDENCE THAT SNAP WAS HEARD	12	12	12	11
MORE ENERGETIC RESPONSE THAN (2), WITH/WITHOUT VOCALIZATION	0	0	0	1
TAIL PINCH RESPONSE				
ANIMAL MAY SLOWLY TURN, WALK AWAY	7	6	5	7
MORE ENERGETIC RESPONSE THAN (2), WITH/WITHOUT VOCALIZATION	5	6	7	5
OLFACTORY ORIENTATION				
REACTION PRESENT: ANIMAL APPROACHES SWAB MAKING SNIFFING MOVEMENTS WITH NOSE	12	12	12	12
PUPIL RESPONSE				
NO PUPIL RESPONSE	0	1	0	0
PUPIL RESPONSE PRESENT	12	11	12	12
EYEBLINK RESPONSE				
EYEBLINK RESPONSE PRESENT	12	12	12	12
FORELIMB EXTENSION				
FORELIMB EXTENSION PRESENT	12	12	12	12

1- 0 MG/KG 2- 200 MG/KG 3- 700 MG/KG 4- 2000 MG/KG

COMPLETE SCORING CRITERIA PRESENTED AS AN APPENDIX

NONE SIGNIFICANTLY DIFFERENT FROM THE CONTROLS AT THE 0.05 LEVEL USING FISHER'S EXACT TEST

TABLE S18 (SENSORY OBSERVATIONS - DAY 7)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL SUMMARY OF FUNCTIONAL OBSERVATIONAL BATTERY DATA DAY 7

SENSORY OBSERVATIONS
FEMALES
NUMBER OF ANIMALS SHOWING EACH OBSERVATION

GROUP:	1	2	3	4
NUMBER TESTED:	12	12	12	12
HINDLIMB EXTENSION				
HINDLIMB EXTENSION PRESENT	12	12	12	12
AIR RIGHTING REFLEX				
NORMAL	12	12	12	12

1- 0 MG/KG 2- 200 MG/KG 3- 700 MG/KG 4- 2000 MG/KG

COMPLETE SCORING CRITERIA PRESENTED AS AN APPENDIX

NONE SIGNIFICANTLY DIFFERENT FROM THE CONTROLS AT THE 0.05 LEVEL USING FISHER'S EXACT TEST

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TABLE S19 (SENSORY OBSERVATIONS - DAY 14)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS PAGE 1

SPONSOR:SUMITOMO CHEMICAL SUMMARY OF FUNCTIONAL OBSERVATIONAL BATTERY DATA DAY 14

SENSORY OBSERVATIONS
MALES
NUMBER OF ANIMALS SHOWING EACH OBSERVATION

GROUP:	1	2	3	4
NUMBER TESTED:	12	12	12	12
APPROACH RESPONSE				
NO REACTION	1	0	0	0
SLOW APPROACH, SNIFFING OR TURNING AWAY	11	12	12	12
TOUCH RESPONSE				
NO REACTION	1	0	1	0
ANIMAL MAY SLOWLY TURN, WALK AWAY	11	12	11	12
STARTLE RESPONSE				
SLIGHT REACTION, EAR FLICK OR SOME EVIDENCE THAT SNAP WAS HEARD	12	12	11	12
MORE ENERGETIC RESPONSE THAN (2), WITH/WITHOUT VOCALIZATION	0	0	1	0
TAIL PINCH RESPONSE				
NO REACTION	1	0	0	0
ANIMAL MAY SLOWLY TURN, WALK AWAY	11	11	12	11
MORE ENERGETIC RESPONSE THAN (2), WITH/WITHOUT VOCALIZATION	0	1	0	1
OLFACTORY ORIENTATION				
REACTION PRESENT: ANIMAL APPROACHES SWAB MAKING SNIFFING MOVEMENTS WITH NOSE	12	12	12	12
PUPIL RESPONSE				
PUPIL RESPONSE PRESENT	12	12	12	12
EYEBLINK RESPONSE				
EYEBLINK RESPONSE PRESENT	12	12	12	12
FORELIMB EXTENSION				
NO FORELIMB EXTENSION	1	0	0	0

1- 0 MG/KG 2- 200 MG/KG 3- 700 MG/KG 4- 2000 MG/KG

COMPLETE SCORING CRITERIA PRESENTED AS AN APPENDIX

NONE SIGNIFICANTLY DIFFERENT FROM THE CONTROLS AT THE 0.05 LEVEL USING FISHER'S EXACT TEST

TABLE S19 (SENSORY OBSERVATIONS - DAY 14)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS PAGE 2

SPONSOR:SUMITOMO CHEMICAL SUMMARY OF FUNCTIONAL OBSERVATIONAL BATTERY DATA DAY 14

SENSORY OBSERVATIONS
MALES
NUMBER OF ANIMALS SHOWING EACH OBSERVATION

GROUP:	1	2	3	4
NUMBER TESTED:	12	12	12	12
FORELIMB EXTENSION (CONTINUED)				
FORELIMB EXTENSION PRESENT	11	12	12	12
HINDLIMB EXTENSION				
NO HINDLIMB EXTENSION	1	0	0	0
HINDLIMB EXTENSION PRESENT	11	12	12	12
AIR RIGHTING REFLEX				
NORMAL	12	12	12	12

1- 0 MG/KG 2- 200 MG/KG 3- 700 MG/KG 4- 2000 MG/KG
COMPLETE SCORING CRITERIA PRESENTED AS AN APPENDIX
NONE SIGNIFICANTLY DIFFERENT FROM THE CONTROLS AT THE 0.05 LEVEL USING FISHER'S EXACT TEST

TABLE S19 (SENSORY OBSERVATIONS - DAY 14)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS PAGE 3

SPONSOR:SUMITOMO CHEMICAL SUMMARY OF FUNCTIONAL OBSERVATIONAL BATTERY DATA DAY 14

SENSORY OBSERVATIONS
FEMALES
NUMBER OF ANIMALS SHOWING EACH OBSERVATION

GROUP:	1	2	3	4
NUMBER TESTED:	12	12	12	12
APPROACH RESPONSE				
SLOW APPROACH, SNIFFING OR TURNING AWAY	12	11	12	12
MORE ENERGETIC RESPONSE THAN (2), WITH/WITHOUT VOCALIZATION	0	1	0	0
TOUCH RESPONSE				
ANIMAL MAY SLOWLY TURN, WALK AWAY	12	11	12	12
MORE ENERGETIC RESPONSE THAN (2), WITH/WITHOUT VOCALIZATION	0	1	0	0
STARTLE RESPONSE				
SLIGHT REACTION, EAR FLICK OR SOME EVIDENCE THAT SNAP WAS HEARD	11	11	12	12
MORE ENERGETIC RESPONSE THAN (2), WITH/WITHOUT VOCALIZATION	1	1	0	0
TAIL PINCH RESPONSE				
NO REACTION	1	0	0	0
ANIMAL MAY SLOWLY TURN, WALK AWAY	10	8	10	9
MORE ENERGETIC RESPONSE THAN (2), WITH/WITHOUT VOCALIZATION	1	4	2	3
OLFACTORY ORIENTATION				
REACTION PRESENT: ANIMAL APPROACHES SWAB MAKING SNIFFING MOVEMENTS WITH NOSE	12	12	12	12
PUPIL RESPONSE				
PUPIL RESPONSE PRESENT	12	12	12	12
EYEBLINK RESPONSE				
EYEBLINK RESPONSE PRESENT	12	12	12	12
FORELIMB EXTENSION				
NO FORELIMB EXTENSION	1	0	0	0

1- 0 MG/KG 2- 200 MG/KG 3- 700 MG/KG 4- 2000 MG/KG

COMPLETE SCORING CRITERIA PRESENTED AS AN APPENDIX

NONE SIGNIFICANTLY DIFFERENT FROM THE CONTROLS AT THE 0.05 LEVEL USING FISHER'S EXACT TEST

TABLE S19 (SENSORY OBSERVATIONS - DAY 14)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS PAGE 4

SPONSOR:SUMITOMO CHEMICAL SUMMARY OF FUNCTIONAL OBSERVATIONAL BATTERY DATA DAY 14

SENSORY OBSERVATIONS
FEMALES
NUMBER OF ANIMALS SHOWING EACH OBSERVATION

GROUP:	1	2	3	4
NUMBER TESTED:	12	12	12	12
FORELIMB EXTENSION (CONTINUED)				
FORELIMB EXTENSION PRESENT	11	12	12	12
HINDLIMB EXTENSION				
NO HINDLIMB EXTENSION	0	1	0	1
HINDLIMB EXTENSION PRESENT	12	11	12	11
AIR RIGHTING REFLEX				
NORMAL	12	12	12	12

1- 0 MG/KG 2- 200 MG/KG 3- 700 MG/KG 4- 2000 MG/KG
COMPLETE SCORING CRITERIA PRESENTED AS AN APPENDIX
NONE SIGNIFICANTLY DIFFERENT FROM THE CONTROLS AT THE 0.05 LEVEL USING FISHER'S EXACT TEST

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TABLE S20 (NEUROMUSCULAR OBSERVATIONS - PRETEST)

PROJECT NO.:WIL-118043 — AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS — PAGE 1

SPONSOR:SUMITOMO CHEMICAL — SUMMARY OF FUNCTIONAL OBSERVATIONAL BATTERY DATA — PRETEST

NEUROMUSCULAR OBSERVATIONS
MALES
NUMBER OF ANIMALS SHOWING EACH OBSERVATION

GROUP:		1	2	3	4
NUMBER TESTED:		12	12	12	12
HINDLIMB EXTENSOR STRENGTH					
REDUCED HINDLIMB RESISTANCE, ANIMAL SHOWS SOME WEAKNESS		0	3	2	3
HINDLIMB RESISTANCE PRESENT		12	9	10	9
GRIP STRENGTH (g) - FORE/HINDLIMB	FORE: MEAN	331.1	328.9	323.9	326.4
	S.D.	63.61	57.43	65.46	85.12
	HIND: MEAN	101.4	100.6	103.4	94.5
	S.D.	25.29	29.25	46.52	31.92
ROTAROD PERFORMANCE (seconds)	: MEAN	57.0	76.8	72.9	54.9
	S.D.	42.20	52.93	53.89	50.53
HINDLIMB FOOTSPLAY (mm)	: MEAN	32.3	37.8	36.2	30.1
	S.D.	18.40	16.63	23.28	16.48

1- 0 MG/KG 2- 200 MG/KG 3- 700 MG/KG 4- 2000 MG/KG

NONE SIGNIFICANTLY DIFFERENT FROM THE CONTROLS AT THE 0.05 LEVEL USING FISHER'S EXACT TEST

NONE SIGNIFICANTLY DIFFERENT FROM THE CONTROLS USING DUNNETT'S TEST

TABLE S20 (NEUROMUSCULAR OBSERVATIONS - PRETEST)

PROJECT NO.:WIL-118043 — AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS — PAGE 2

SPONSOR:SUMITOMO CHEMICAL — SUMMARY OF FUNCTIONAL OBSERVATIONAL BATTERY DATA — PRETEST

NEUROMUSCULAR OBSERVATIONS
FEMALES
NUMBER OF ANIMALS SHOWING EACH OBSERVATION

GROUP:		1	2	3	4
NUMBER TESTED:		12	12	12	12
HINDLIMB EXTENSOR STRENGTH					
HINDLIMB RESISTANCE ABSENT		0	1	0	0
HINDLIMB RESISTANCE PRESENT		12	11	12	12
GRIP STRENGTH (g) - FORE/HINDLIMB	FORE: MEAN	392.0	331.8	308.8	341.9
	S.D.	75.59	52.93	85.95	78.03
	HIND: MEAN	112.6	97.1	120.6	122.3
	S.D.	38.66	34.20	28.99	34.85
ROTAROD PERFORMANCE (seconds)	: MEAN	52.4	50.3	51.2	68.3
	S.D.	48.39	52.66	50.86	54.26
HINDLIMB FOOTSPLAY (mm)	: MEAN	36.7	23.8	30.0	39.1
	S.D.	12.49	12.94	12.48	14.52

1- 0 MG/KG 2- 200 MG/KG 3- 700 MG/KG 4- 2000 MG/KG

NONE SIGNIFICANTLY DIFFERENT FROM THE CONTROLS AT THE 0.05 LEVEL USING FISHER'S EXACT TEST

NONE SIGNIFICANTLY DIFFERENT FROM THE CONTROLS USING DUNNETT'S TEST

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TABLE S21 (NEUROMUSCULAR OBSERVATIONS - DAY 0)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL SUMMARY OF FUNCTIONAL OBSERVATIONAL BATTERY DATA DAY 0

NEUROMUSCULAR OBSERVATIONS
MALES
NUMBER OF ANIMALS SHOWING EACH OBSERVATION

GROUP:		1	2	3	4
NUMBER TESTED:		12	12	12	12
HINDLIMB EXTENSOR STRENGTH					
REDUCED HINDLIMB RESISTANCE, ANIMAL SHOWS SOME WEAKNESS		0	0	3	1
HINDLIMB RESISTANCE PRESENT		12	12	9	11
GRIP STRENGTH (g) - FORE/HINDLIMB	FORE: MEAN	412.3	408.7	370.2	369.4
	S.D.	95.59	69.58	68.10	77.90
	HIND: MEAN	118.5	135.2	129.3	141.3
	S.D.	23.13	23.90	25.91	27.47
ROTAROD PERFORMANCE (seconds)	: MEAN	93.7	105.3	79.7	95.3
	S.D.	47.91	32.49	48.92	45.18
HINDLIMB FOOTSPLAY (mm)	: MEAN	27.6	35.2	31.0	27.0
	S.D.	15.75	17.97	20.88	14.80

1- 0 MG/KG 2- 200 MG/KG 3- 700 MG/KG 4- 2000 MG/KG
NONE SIGNIFICANTLY DIFFERENT FROM THE CONTROLS AT THE 0.05 LEVEL USING FISHER'S EXACT TEST
NONE SIGNIFICANTLY DIFFERENT FROM THE CONTROLS USING DUNNETT'S TEST

TABLE S21 (NEUROMUSCULAR OBSERVATIONS - DAY 0)

PROJECT NO.:WIL-118043 — AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS — PAGE 2

SPONSOR:SUMITOMO CHEMICAL — SUMMARY OF FUNCTIONAL OBSERVATIONAL BATTERY DATA — DAY 0

NEUROMUSCULAR OBSERVATIONS
FEMALES
NUMBER OF ANIMALS SHOWING EACH OBSERVATION

GROUP:		1	2	3	4
NUMBER TESTED:		12	12	12	12
HINDLIMB EXTENSOR STRENGTH					
REDUCED HINDLIMB RESISTANCE, ANIMAL SHOWS SOME WEAKNESS		0	1	1	0
HINDLIMB RESISTANCE PRESENT		12	11	11	12
GRIP STRENGTH (g) - FORE/HINDLIMB	FORE: MEAN	438.1	381.4	327.3++	395.4
	S.D.	65.84	78.74	102.98	71.70
	HIND: MEAN	125.9	127.2	127.8	139.3
	S.D.	27.75	20.95	22.95	28.27
ROTAROD PERFORMANCE (seconds)	: MEAN	85.9	36.0	79.8	77.1
	S.D.	50.43	41.75	50.20	53.29
HINDLIMB FOOTSPLAY (mm)	: MEAN	39.3	23.3	27.4	29.9
	S.D.	15.58	13.10	17.15	14.32

1- 0 MG/KG 2- 200 MG/KG 3- 700 MG/KG 4- 2000 MG/KG

++ = SIGNIFICANTLY DIFFERENT FROM THE CONTROLS AT THE 0.01 LEVEL USING DUNNETT'S TEST

NONE SIGNIFICANTLY DIFFERENT FROM THE CONTROLS AT THE 0.05 LEVEL USING FISHER'S EXACT TEST

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TABLE S22 (NEUROMUSCULAR OBSERVATIONS - DAY 7)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS PAGE 1

SPONSOR:SUMITOMO CHEMICAL SUMMARY OF FUNCTIONAL OBSERVATIONAL BATTERY DATA DAY 7

NEUROMUSCULAR OBSERVATIONS
MALES
NUMBER OF ANIMALS SHOWING EACH OBSERVATION

GROUP:		1	2	3	4
NUMBER TESTED:		12	12	12	12
HINDLIMB EXTENSOR STRENGTH					
HINDLIMB RESISTANCE PRESENT		12	12	12	12
GRIP STRENGTH (g) - FORE/HINDLIMB	FORE: MEAN	440.0	434.5	410.5	441.9
	S.D.	123.35	125.54	99.55	142.65
	HIND: MEAN	151.8	155.8	150.4	160.2
	S.D.	35.52	24.80	50.41	43.42
ROTAROD PERFORMANCE (seconds)	: MEAN	102.4	115.3	110.4	120.0
	S.D.	41.41	12.04	23.13	0.00
HINDLIMB FOOTSPLAY (mm)	: MEAN	35.7	46.3	49.8	42.8
	S.D.	16.60	15.28	16.35	12.47

1- 0 MG/KG 2- 200 MG/KG 3- 700 MG/KG 4- 2000 MG/KG

NONE SIGNIFICANTLY DIFFERENT FROM THE CONTROLS AT THE 0.05 LEVEL USING FISHER'S EXACT TEST

NONE SIGNIFICANTLY DIFFERENT FROM THE CONTROLS USING DUNNETT'S TEST

TABLE S22 (NEUROMUSCULAR OBSERVATIONS - DAY 7)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS PAGE 2

SPONSOR:SUMITOMO CHEMICAL SUMMARY OF FUNCTIONAL OBSERVATIONAL BATTERY DATA DAY 7

NEUROMUSCULAR OBSERVATIONS
FEMALES
NUMBER OF ANIMALS SHOWING EACH OBSERVATION

GROUP:		1	2	3	4
NUMBER TESTED:		12	12	12	12
HINDLIMB EXTENSOR STRENGTH					
HINDLIMB RESISTANCE PRESENT		12	12	12	12
GRIP STRENGTH (g) - FORE/HINDLIMB	FORE: MEAN	426.2	379.9	375.6	383.0
	S.D.	122.70	76.82	106.97	77.84
	HIND: MEAN	149.8	158.6	155.4	151.4
	S.D.	52.19	36.60	29.27	27.97
ROTAROD PERFORMANCE (seconds)	: MEAN	89.7	87.3	63.3	76.7
	S.D.	48.62	41.34	43.67	49.92
HINDLIMB FOOTSPLAY (mm)	: MEAN	40.9	28.5	28.2	33.8
	S.D.	11.81	12.80	13.62	11.52

1- 0 MG/KG 2- 200 MG/KG 3- 700 MG/KG 4- 2000 MG/KG

NONE SIGNIFICANTLY DIFFERENT FROM THE CONTROLS AT THE 0.05 LEVEL USING FISHER'S EXACT TEST

NONE SIGNIFICANTLY DIFFERENT FROM THE CONTROLS USING DUNNETT'S TEST

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TABLE S23 (NEUROMUSCULAR OBSERVATIONS - DAY 14)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL SUMMARY OF FUNCTIONAL OBSERVATIONAL BATTERY DATA DAY 14

NEUROMUSCULAR OBSERVATIONS
MALES
NUMBER OF ANIMALS SHOWING EACH OBSERVATION

GROUP:		1	2	3	4
NUMBER TESTED:		12	12	12	12
HINDLIMB EXTENSOR STRENGTH					
HINDLIMB RESISTANCE PRESENT		12	12	12	12
GRIP STRENGTH (g) - FORE/HINDLIMB	FORE: MEAN	547.6	495.8	450.8	496.8
	S.D.	163.12	97.15	94.62	62.90
	HIND: MEAN	209.1	212.8	181.2	212.0
	S.D.	43.36	39.67	39.58	54.64
ROTAROD PERFORMANCE (seconds)	: MEAN	73.6	108.4	98.3	100.9
	S.D.	49.54	22.99	31.73	37.65
HINDLIMB FOOTSPLAY (mm)	: MEAN	41.5	44.2	47.5	44.6
	S.D.	16.33	12.97	21.69	18.87

1- 0 MG/KG 2- 200 MG/KG 3- 700 MG/KG 4- 2000 MG/KG

NONE SIGNIFICANTLY DIFFERENT FROM THE CONTROLS AT THE 0.05 LEVEL USING FISHER'S EXACT TEST

NONE SIGNIFICANTLY DIFFERENT FROM THE CONTROLS USING DUNNETT'S TEST

TABLE S23 (NEUROMUSCULAR OBSERVATIONS - DAY 14)

PROJECT NO.:WIL-118043 — AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS — PAGE 2

SPONSOR:SUMITOMO CHEMICAL — SUMMARY OF FUNCTIONAL OBSERVATIONAL BATTERY DATA — DAY 14

NEUROMUSCULAR OBSERVATIONS
FEMALES
NUMBER OF ANIMALS SHOWING EACH OBSERVATION

GROUP:		1	2	3	4
NUMBER TESTED:		12	12	12	12
HINDLIMB EXTENSOR STRENGTH					
HINDLIMB RESISTANCE PRESENT		12	12	12	12
GRIP STRENGTH (g) - FORE/HINDLIMB	FORE: MEAN	484.0	389.5	422.0	384.3
	S.D.	137.47	94.38	100.55	99.65
	HIND: MEAN	182.4	183.1	181.1	158.5
	S.D.	35.78	32.13	35.43	20.43
ROTAROD PERFORMANCE (seconds)	: MEAN	76.3	101.8	79.8	85.3
	S.D.	50.53	42.78	43.92	52.00
HINDLIMB FOOTSPLAY (mm)	: MEAN	42.1	36.4	39.7	39.0
	S.D.	10.54	16.94	17.28	11.23

1- 0 MG/KG 2- 200 MG/KG 3- 700 MG/KG 4- 2000 MG/KG

NONE SIGNIFICANTLY DIFFERENT FROM THE CONTROLS AT THE 0.05 LEVEL USING FISHER'S EXACT TEST

NONE SIGNIFICANTLY DIFFERENT FROM THE CONTROLS USING DUNNETT'S TEST

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TABLE S24 (PHYSIOLOGICAL OBSERVATIONS - PRETEST)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL SUMMARY OF FUNCTIONAL OBSERVATIONAL BATTERY DATA PRETEST

PHYSIOLOGICAL OBSERVATIONS

MALES

GROUP:		1	2	3	4
NUMBER TESTED:		12	12	12	12
CATALEPSY (seconds)	: MEAN	0.3	0.3	0.4	0.4
	S.D.	0.05	0.08	0.11	0.07
	N	12	12	12	12
BODY TEMPERATURE (degrees C)	: MEAN	37.8	37.5	37.6	37.6
	S.D.	0.54	0.47	0.42	0.48
	N	12	12	12	12
BODY WEIGHT (g)	: MEAN	118.6	118.4	117.6	117.7
	S.D.	15.77	15.75	14.47	15.21
	N	12	12	12	12

1- 0 MG/KG 2- 200 MG/KG 3- 700 MG/KG 4- 2000 MG/KG

NONE SIGNIFICANTLY DIFFERENT FROM THE CONTROLS USING DUNNETT'S TEST

TABLE S24 (PHYSIOLOGICAL OBSERVATIONS - PRETEST)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS PAGE 2

SPONSOR:SUMITOMO CHEMICAL SUMMARY OF FUNCTIONAL OBSERVATIONAL BATTERY DATA PRETEST

PHYSIOLOGICAL OBSERVATIONS
FEMALES

GROUP:		1	2	3	4
NUMBER TESTED:		12	12	12	12
CATALEPSY (seconds)	: MEAN	0.4	0.3	0.4	0.3
	S.D.	0.16	0.05	0.10	0.07
	N	12	12	12	12
BODY TEMPERATURE (degrees C)	: MEAN	37.8	37.7	37.8	37.7
	S.D.	0.37	0.44	0.54	0.41
	N	12	12	12	12
BODY WEIGHT (g)	: MEAN	111.4	110.7	111.8	111.9
	S.D.	10.06	8.32	14.12	11.20
	N	12	12	12	12

1- 0 MG/KG 2- 200 MG/KG 3- 700 MG/KG 4- 2000 MG/KG

NONE SIGNIFICANTLY DIFFERENT FROM THE CONTROLS USING DUNNETT'S TEST

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TABLE S25 (PHYSIOLOGICAL OBSERVATIONS - DAY 0)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL SUMMARY OF FUNCTIONAL OBSERVATIONAL BATTERY DATA DAY 0

PHYSIOLOGICAL OBSERVATIONS

MALES

GROUP:		1	2	3	4
NUMBER TESTED:		12	12	12	12
CATALEPSY (seconds)	: MEAN	0.4	0.5	0.5	0.5
	S.D.	0.20	0.23	0.23	0.36
	N	12	12	12	12
BODY TEMPERATURE (degrees C)	: MEAN	38.3	38.2	38.7	38.8+
	S.D.	0.47	0.33	0.49	0.52
	N	12	12	12	12
BODY WEIGHT (g)	: MEAN	188.3	187.7	187.8	186.2
	S.D.	19.62	21.51	15.60	20.36
	N	12	12	12	12

1- 0 MG/KG 2- 200 MG/KG 3- 700 MG/KG 4- 2000 MG/KG

+ = SIGNIFICANTLY DIFFERENT FROM THE CONTROLS AT THE 0.05 LEVEL USING DUNNETT'S TEST

TABLE S25 (PHYSIOLOGICAL OBSERVATIONS - DAY 0)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL SUMMARY OF FUNCTIONAL OBSERVATIONAL BATTERY DATA DAY 0

PHYSIOLOGICAL OBSERVATIONS
FEMALES

GROUP:		1	2	3	4
NUMBER TESTED:		12	12	12	12
CATALEPSY (seconds)	: MEAN	0.4	0.4	0.4	0.3
	S.D.	0.12	0.40	0.08	0.08
	N	12	12	12	12
BODY TEMPERATURE (degrees C)	: MEAN	38.5	38.3	38.9	38.6
	S.D.	0.34	0.31	0.57	0.70
	N	12	12	12	12
BODY WEIGHT (g)	: MEAN	151.5	150.7	153.0	153.0
	S.D.	12.91	9.74	12.02	12.79
	N	12	12	12	12

1- 0 MG/KG 2- 200 MG/KG 3- 700 MG/KG 4- 2000 MG/KG

NONE SIGNIFICANTLY DIFFERENT FROM THE CONTROLS USING DUNNETT'S TEST

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TABLE S26 (PHYSIOLOGICAL OBSERVATIONS - DAY 7)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS PAGE 1

SPONSOR:SUMITOMO CHEMICAL SUMMARY OF FUNCTIONAL OBSERVATIONAL BATTERY DATA DAY 7

PHYSIOLOGICAL OBSERVATIONS

MALES

GROUP:		1	2	3	4
NUMBER TESTED:		12	12	12	12
CATALEPSY (seconds)	: MEAN	0.4	0.6	0.5	0.7
	S.D.	0.21	0.43	0.27	0.74
	N	12	12	12	12
BODY TEMPERATURE (degrees C)	: MEAN	38.1	38.1	38.1	38.2
	S.D.	0.27	0.49	0.29	0.23
	N	12	12	12	12
BODY WEIGHT (g)	: MEAN	240.2	239.8	239.0	234.1
	S.D.	23.63	27.72	18.78	26.43
	N	12	12	12	12

1- 0 MG/KG 2- 200 MG/KG 3- 700 MG/KG 4- 2000 MG/KG

NONE SIGNIFICANTLY DIFFERENT FROM THE CONTROLS USING DUNNETT'S TEST

TABLE S26 (PHYSIOLOGICAL OBSERVATIONS - DAY 7)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL SUMMARY OF FUNCTIONAL OBSERVATIONAL BATTERY DATA DAY 7

PHYSIOLOGICAL OBSERVATIONS
FEMALES

GROUP:		1	2	3	4
NUMBER TESTED:		12	12	12	12
CATALEPSY (seconds)	: MEAN	0.4	0.3	0.3	0.3
	S.D.	0.11	0.08	0.05	0.03
	N	12	12	12	12
BODY TEMPERATURE (degrees C)	: MEAN	38.3	38.3	38.3	38.4
	S.D.	0.40	0.32	0.47	0.48
	N	12	12	12	12
BODY WEIGHT (g)	: MEAN	173.3	171.4	172.3	171.9
	S.D.	14.49	11.34	11.11	13.36
	N	12	12	12	12

1- 0 MG/KG 2- 200 MG/KG 3- 700 MG/KG 4- 2000 MG/KG

NONE SIGNIFICANTLY DIFFERENT FROM THE CONTROLS USING DUNNETT'S TEST

PFOBSUv4.33
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R:01/13/2010

TABLE S27 (PHYSIOLOGICAL OBSERVATIONS - DAY 14)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL SUMMARY OF FUNCTIONAL OBSERVATIONAL BATTERY DATA DAY 14

PHYSIOLOGICAL OBSERVATIONS

MALES

GROUP:		1	2	3	4
NUMBER TESTED:		12	12	12	12
CATALEPSY (seconds)	: MEAN	0.6	1.1	1.2	0.5
	S.D.	0.47	1.25	1.24	0.22
	N	12	12	12	12
BODY TEMPERATURE (degrees C)	: MEAN	38.2	38.4	38.3	38.3
	S.D.	0.22	0.30	0.35	0.30
	N	12	12	12	12
BODY WEIGHT (g)	: MEAN	291.8	291.1	290.3	286.2
	S.D.	24.22	32.71	23.42	29.73
	N	12	12	12	12

1- 0 MG/KG 2- 200 MG/KG 3- 700 MG/KG 4- 2000 MG/KG

NONE SIGNIFICANTLY DIFFERENT FROM THE CONTROLS USING DUNNETT'S TEST

TABLE S27 (PHYSIOLOGICAL OBSERVATIONS - DAY 14)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL SUMMARY OF FUNCTIONAL OBSERVATIONAL BATTERY DATA DAY 14

PHYSIOLOGICAL OBSERVATIONS
FEMALES

GROUP:		1	2	3	4
NUMBER TESTED:		12	12	12	12
CATALEPSY (seconds)	: MEAN	0.5	0.4	0.5	0.4
	S.D.	0.31	0.13	0.43	0.13
	N	12	12	12	12
BODY TEMPERATURE (degrees C)	: MEAN	38.6	38.6	38.7	38.7
	S.D.	0.55	0.50	0.36	0.30
	N	12	12	12	12
BODY WEIGHT (g)	: MEAN	192.1	191.7	194.8	190.0
	S.D.	18.25	14.63	13.93	15.38
	N	12	12	12	12

1- 0 MG/KG 2- 200 MG/KG 3- 700 MG/KG 4- 2000 MG/KG

NONE SIGNIFICANTLY DIFFERENT FROM THE CONTROLS USING DUNNETT'S TEST

PFOBSUv4.33
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R:01/13/2010

TABLE S28
AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOL-METHYL IN RATS
SUMMARY OF MOTOR ACTIVITY COUNTS

Period	Sex	Variable	Minutes	Statistic	Dosage Level (mg/kg) 0	200	700	2000	Statistical Model
PRETEST	M	TOTAL	0-10	Mean	1022	1078	965	1074	
				% Difference Control	NA	5.5	-5.6	5.1	
				S.D.	204.4	282.3	209.6	198.1	
				S.E.	59.0	81.5	60.5	57.2	
				N	12	12	12	12	
				Linear Trend p-value#		NT	NT	NT	
			11-20	Mean	650	655	486	609	
				% Difference Control	NA	0.8	-25.2	-6.3	
				S.D.	233.6	225.8	262.0	201.1	
				S.E.	67.4	65.2	75.6	58.1	
				N	12	12	12	12	
				Linear Trend p-value#		NT	NT	NT	
			21-30	Mean	320	354	285	313	
				% Difference Control	NA	10.6	-10.9	-2.2	
				S.D.	214.3	226.7	260.8	187.9	
				S.E.	61.9	65.5	75.3	54.2	
				N	12	12	12	12	
				Linear Trend p-value#		NT	NT	NT	
			31-40	Mean	218	209	249	223	
				S.D.	177.8	217.1	199.2	217.2	
				S.E.	51.3	62.7	57.5	62.7	
				N	12	12	12	12	
				Linear Trend p-value#		NT	NT	NT	

: Level of Significance tested = .05.
* : Statistically Significant.
++ : Level of Significance tested = .01.
NT : Not tested. NA : Not applicable.

TABLE S28
AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOL-METHYL IN RATS
SUMMARY OF MOTOR ACTIVITY COUNTS

Period	Sex	Variable	Minutes	Statistic	Dosage Level (mg/kg) 0	200	700	2000	Statistical Model
PRETEST	M	TOTAL	41-50	Mean	203	273	239	268	
				S.D.	259.4	227.6	112.1	195.1	
				S.E.	74.9	65.7	32.3	56.3	
				N	12	12	12	12	
				Linear Trend p-value#		NT	NT	NT	
			51-60	Mean	202	239	349	351	
				S.D.	178.0	138.1	234.2	191.0	
				S.E.	51.4	39.9	67.6	55.1	
				N	12	12	12	12	
				Linear Trend p-value#		NT	NT	NT	
			Cumulative	Mean	2614	2809	2571	2838	
				% Difference Control	NA	7.5	-1.6	8.6	
				S.D.	610.3	899.5	609.6	415.7	
				S.E.	176.2	259.7	176.0	120.0	
				N	12	12	12	12	
			Overall	Linear Trend p-value#		NT	NT	0.605	
				Trt F-test p-value++					0.673
				Trt*Time p-value++					0.772
				LinTrt*Time p-value#					0.417
				Covariance Structure					AR1

: Level of Significance tested = .05.
* : Statistically Significant.
++ : Level of Significance tested = .01.
NT : Not tested. NA : Not applicable.

TABLE S28
AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOL-METHYL IN RATS
SUMMARY OF MOTOR ACTIVITY COUNTS

Period	Sex	Variable	Minutes	Statistic	Dosage Level (mg/kg) 0	200	700	2000	Statistical Model
PRETEST	M	AMBULATORY	0-10	Mean	316	349	303	324	
				% Difference Control	NA	10.4	-4.1	2.5	
				S.D.	77.1	124.8	88.7	91.5	
				S.E.	22.3	36.0	25.6	26.4	
				N	12	12	12	12	
				Linear Trend p-value#		NT	NT	NT	
			11-20	Mean	119	123	82	126	
				% Difference Control	NA	3.4	-31.1	5.9	
				S.D.	58.3	81.8	70.6	87.0	
				S.E.	16.8	23.6	20.4	25.1	
				N	12	12	12	12	
				Linear Trend p-value#		NT	NT	NT	
			21-30	Mean	27	44	24	35	
				% Difference Control	NA	63.0	-11.1	29.6	
				S.D.	37.7	63.5	38.4	56.3	
				S.E.	10.9	18.3	11.1	16.3	
				N	12	12	12	12	
				Linear Trend p-value#		NT	NT	NT	
			31-40	Mean	24	23	14	4	
				S.D.	40.6	40.7	41.9	7.3	
				S.E.	11.7	11.8	12.1	2.1	
				N	12	12	12	12	
				Linear Trend p-value#		NT	NT	NT	

: Level of Significance tested = .05.
* : Statistically Significant.
++ : Level of Significance tested = .01.
NT : Not tested. NA : Not applicable.

TABLE S28
AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOL-METHYL IN RATS
SUMMARY OF MOTOR ACTIVITY COUNTS

Period	Sex	Variable	Minutes	Statistic	Dosage Level (mg/kg) 0	200	700	2000	Statistical Model
PRETEST	M	AMBULATORY	41-50	Mean	4	6	11	6	
				S.D.	7.9	8.3	24.8	9.4	
				S.E.	2.3	2.4	7.2	2.7	
				N	12	12	12	12	
				Linear Trend p-value#		NT	NT	NT	
			51-60	Mean	7	6	17	7	
				S.D.	7.8	6.9	24.1	9.9	
				S.E.	2.3	2.0	7.0	2.9	
				N	12	12	12	12	
				Linear Trend p-value#		NT	NT	NT	
			Cumulative	Mean	496	550	451	503	
				% Difference Control	NA	10.9	-9.1	1.4	
				S.D.	139.5	223.8	162.3	164.8	
				S.E.	40.3	64.6	46.9	47.6	
				N	12	12	12	12	
			Overall	Linear Trend p-value#		NT	NT	0.751	
				Trt F-test p-value++					0.651
				Trt*Time p-value++					0.685
				LinTrt*Time p-value#					0.729
				Covariance Structure					ARH1

: Level of Significance tested = .05.
* : Statistically Significant.
++ : Level of Significance tested = .01.
NT : Not tested. NA : Not applicable.

TABLE S28
AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOL-METHYL IN RATS
SUMMARY OF MOTOR ACTIVITY COUNTS

Period	Sex	Variable	Minutes	Statistic	Dosage Level (mg/kg) 0	200	700	2000	Statistical Model
PRETEST	F	TOTAL	0-10	Mean	1057	1194	1123	1059	
				% Difference Control	NA	13.0	6.2	0.2	
				S.D.	366.7	260.8	252.3	261.1	
				S.E.	105.8	75.3	72.8	75.4	
				N	12	12	12	12	
				Linear Trend p-value#		NT	NT	0.840	
			11-20	Mean	500	526	575	542	
				% Difference Control	NA	5.2	15.0	8.4	
				S.D.	302.4	254.5	239.6	243.5	
				S.E.	87.3	73.5	69.2	70.3	
				N	12	12	12	12	
				Linear Trend p-value#		NT	NT	0.575	
			21-30	Mean	234	222	418	491	
				% Difference Control	NA	-5.1	78.6	109.8	
				S.D.	160.3	136.5	274.2	349.4	
				S.E.	46.3	39.4	79.1	100.9	
				N	12	12	12	12	
				Linear Trend p-value#		NT	0.065	0.002*	
			31-40	Mean	230	228	354	326	
				S.D.	142.7	124.9	264.7	295.6	
				S.E.	41.2	36.1	76.4	85.3	
				N	12	12	12	12	
				Linear Trend p-value#		NT	NT	0.189	

: Level of Significance tested = .05.
* : Statistically Significant.
++ : Level of Significance tested = .01.
NT : Not tested. NA : Not applicable.

TABLE S28
AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOL-METHYL IN RATS
SUMMARY OF MOTOR ACTIVITY COUNTS

Period	Sex	Variable	Minutes	Statistic	Dosage Level (mg/kg) 0	200	700	2000	Statistical Model
PRETEST	F	TOTAL	41-50	Mean	437	281	234	266	
				S.D.	282.6	176.6	160.5	230.7	
				S.E.	81.6	51.0	46.3	66.6	
				N	12	12	12	12	
				Linear Trend p-value#		NT	NT	0.075	
			51-60	Mean	295	402	235	240	
				S.D.	176.6	286.6	172.6	173.3	
				S.E.	51.0	82.7	49.8	50.0	
				N	12	12	12	12	
				Linear Trend p-value#		NT	NT	0.291	
			Cumulative	Mean	2753	2854	2939	2925	
				% Difference Control	NA	3.7	6.8	6.2	
				S.D.	835.4	586.5	676.4	780.3	
				S.E.	241.2	169.3	195.3	225.3	
				N	12	12	12	12	
			Overall	Linear Trend p-value#		NT	NT	0.555	
				Trt F-test p-value++					0.936
				Trt*Time p-value++					0.038
				LinTrt*Time p-value#					0.009*
				Covariance Structure					AR1

: Level of Significance tested = .05.
* : Statistically Significant.
++ : Level of Significance tested = .01.
NT : Not tested. NA : Not applicable.

TABLE S28
AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOL-METHYL IN RATS
SUMMARY OF MOTOR ACTIVITY COUNTS

Period	Sex	Variable	Minutes	Statistic	Dosage Level (mg/kg) 0	200	700	2000	Statistical Model
PRETEST	F	AMBULATORY	0-10	Mean	335	429	368	363	
				% Difference Control	NA	28.1	9.9	8.4	
				S.D.	170.7	153.1	148.6	129.4	
				S.E.	49.3	44.2	42.9	37.4	
				N	12	12	12	12	
				Linear Trend p-value#		NT	NT	NT	
			11-20	Mean	105	102	132	123	
				% Difference Control	NA	-2.9	25.7	17.1	
				S.D.	100.6	97.1	101.4	98.2	
				S.E.	29.0	28.0	29.3	28.3	
				N	12	12	12	12	
				Linear Trend p-value#		NT	NT	NT	
			21-30	Mean	16	17	82	64	
				% Difference Control	NA	6.3	412.5	300.0	
				S.D.	20.3	26.6	116.4	54.0	
				S.E.	5.9	7.7	33.6	15.6	
				N	12	12	12	12	
				Linear Trend p-value#		NT	NT	NT	
			31-40	Mean	14	8	21	38	
				S.D.	17.4	15.2	29.6	64.3	
				S.E.	5.0	4.4	8.5	18.6	
				N	12	12	12	12	
				Linear Trend p-value#		NT	NT	NT	

: Level of Significance tested = .05.
* : Statistically Significant.
++ : Level of Significance tested = .01.
NT : Not tested. NA : Not applicable.

TABLE S28
AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOL-METHYL IN RATS
SUMMARY OF MOTOR ACTIVITY COUNTS

Period	Sex	Variable	Minutes	Statistic	Dosage Level (mg/kg) 0	200	700	2000	Statistical Model
PRETEST	F	AMBULATORY	41-50	Mean	38	10	14	33	
				S.D.	65.0	11.7	18.3	82.8	
				S.E.	18.8	3.4	5.3	23.9	
				N	12	12	12	12	
				Linear Trend p-value#		NT	NT	NT	
			51-60	Mean	18	15	10	5	
				S.D.	23.2	27.0	13.5	7.3	
				S.E.	6.7	7.8	3.9	2.1	
				N	12	12	12	12	
				Linear Trend p-value#		NT	NT	NT	
			Cumulative	Mean	526	582	627	626	
				% Difference Control	NA	10.6	19.2	19.0	
				S.D.	252.3	221.2	301.5	177.2	
				S.E.	72.8	63.8	87.0	51.1	
				N	12	12	12	12	
			Overall	Linear Trend p-value#		NT	NT	0.275	
				Trt F-test p-value++					0.711
				Trt*Time p-value++					0.191
				LinTrt*Time p-value#					0.089
				Covariance Structure					ARH1

: Level of Significance tested = .05.
* : Statistically Significant.
++ : Level of Significance tested = .01.
NT : Not tested. NA : Not applicable.

TABLE S28
AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOL-METHYL IN RATS
SUMMARY OF MOTOR ACTIVITY COUNTS

Period	Sex	Variable	Minutes	Statistic	Dosage Level (mg/kg) 0	200	700	2000	Statistical Model
DAY_000	M	TOTAL	0-10	Mean	1185	1055	775	855	
				% Difference Control	NA	-11.0	-34.6	-27.8	
				S.D.	238.9	359.6	229.7	215.6	
				S.E.	69.0	103.8	66.3	62.2	
				N	12	12	12	12	
				Linear Trend p-value#		0.218	<.001*	<.001*	
			11-20	Mean	444	391	173	160	
				% Difference Control	NA	-11.9	-61.0	-64.0	
				S.D.	213.2	261.6	155.4	171.7	
				S.E.	61.5	75.5	44.9	49.6	
				N	12	12	12	12	
				Linear Trend p-value#		0.518	<.001*	<.001*	
			21-30	Mean	102	169	99	108	
				% Difference Control	NA	65.7	-2.9	5.9	
				S.D.	52.4	152.5	56.4	121.9	
				S.E.	15.1	44.0	16.3	35.2	
				N	12	12	12	12	
				Linear Trend p-value#		NT	NT	0.710	
			31-40	Mean	77	125	116	135	
				S.D.	97.5	154.6	115.3	170.5	
				S.E.	28.1	44.6	33.3	49.2	
				N	12	12	12	12	
				Linear Trend p-value#		NT	NT	0.361	

: Level of Significance tested = .05.
* : Statistically Significant.
++ : Level of Significance tested = .01.
NT : Not tested. NA : Not applicable.

TABLE S28
AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOL-METHYL IN RATS
SUMMARY OF MOTOR ACTIVITY COUNTS

Period	Sex	Variable	Minutes	Statistic	Dosage Level (mg/kg) 0	200	700	2000	Statistical Model
DAY_000	M	TOTAL	41-50	Mean	160	111	134	171	
				S.D.	134.2	142.2	117.5	131.9	
				S.E.	38.7	41.1	33.9	38.1	
				N	12	12	12	12	
				Linear Trend p-value#		NT	NT	0.736	
			51-60	Mean	240	124	195	158	
				S.D.	228.0	72.1	203.6	136.8	
				S.E.	65.8	20.8	58.8	39.5	
				N	12	12	12	12	
				Linear Trend p-value#		NT	NT	0.446	
			Cumulative	Mean	2207	1975	1491	1587	
				% Difference Control	NA	-10.5	-32.4	-28.1	
				S.D.	519.8	699.1	499.8	483.6	
				S.E.	150.1	201.8	144.3	139.6	
				N	12	12	12	12	
			Overall	Linear Trend p-value#		0.287	0.001*	<.001*	
				Trt F-test p-value++					0.003*
				Trt*Time p-value++					0.003*
				LinTrt*Time p-value#					<0.001*
				Covariance Structure					ARH1

: Level of Significance tested = .05.
* : Statistically Significant.
++ : Level of Significance tested = .01.
NT : Not tested. NA : Not applicable.

TABLE S28
AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOL-METHYL IN RATS
SUMMARY OF MOTOR ACTIVITY COUNTS

Period	Sex	Variable	Minutes	Statistic	Dosage Level (mg/kg) 0	200	700	2000	Statistical Model
DAY_000	M	AMBULATORY	0-10	Mean	348	312	212	240	
				% Difference Control	NA	-10.3	-39.1	-31.0	
				S.D.	112.8	153.2	68.2	83.5	
				S.E.	32.6	44.2	19.7	24.1	
				N	12	12	12	12	
				Linear Trend p-value#		0.417	0.002*	0.003*	
			11-20	Mean	57	49	21	16	
				% Difference Control	NA	-14.0	-63.2	-71.9	
				S.D.	40.8	56.8	32.4	30.2	
				S.E.	11.8	16.4	9.3	8.7	
				N	12	12	12	12	
				Linear Trend p-value#		0.588	0.027*	0.004*	
			21-30	Mean	2	13	1	10	
				% Difference Control	NA	550.0	-50.0	400.0	
				S.D.	3.9	17.4	2.0	24.1	
				S.E.	1.1	5.0	0.6	6.9	
				N	12	12	12	12	
				Linear Trend p-value#		NT	NT	0.550	
			31-40	Mean	1	1	2	4	
				S.D.	1.5	3.3	3.6	9.3	
				S.E.	0.4	1.0	1.0	2.7	
				N	12	12	12	12	
				Linear Trend p-value#		NT	NT	0.174	

: Level of Significance tested = .05.
* : Statistically Significant.
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NT : Not tested. NA : Not applicable.

TABLE S28
AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOL-METHYL IN RATS
SUMMARY OF MOTOR ACTIVITY COUNTS

Period	Sex	Variable	Minutes	Statistic	Dosage Level (mg/kg) 0	200	700	2000	Statistical Model
DAY_000	M	AMBULATORY	41-50	Mean	13	1	3	10	
				S.D.	39.9	3.0	3.3	14.3	
				S.E.	11.5	0.9	0.9	4.1	
				N	12	12	12	12	
				Linear Trend p-value#		NT	NT	0.760	
			51-60	Mean	19	8	1	15	
				S.D.	43.2	13.3	1.8	24.5	
				S.E.	12.5	3.8	0.5	7.1	
				N	12	12	12	12	
				Linear Trend p-value#		NT	NT	0.607	
			Cumulative	Mean	440	384	240	295	
				% Difference Control	NA	-12.7	-45.5	-33.0	
				S.D.	139.7	189.9	83.0	93.2	
				S.E.	40.3	54.8	23.9	26.9	
				N	12	12	12	12	
			Overall	Linear Trend p-value#		0.275	<.001*	<.001*	
				Trt F-test p-value++					<0.001*
				Trt*Time p-value++					0.015
				LinTrt*Time p-value#					0.004*
				Covariance Structure					ARH1

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TABLE S28
AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOL-METHYL IN RATS
SUMMARY OF MOTOR ACTIVITY COUNTS

Period	Sex	Variable	Minutes	Statistic	Dosage Level (mg/kg) 0	200	700	2000	Statistical Model
DAY_000	F	TOTAL	0-10	Mean	1372	1348	1114	1022	
				% Difference Control	NA	-1.7	-18.8	-25.5	
				S.D.	278.4	308.0	312.1	351.6	
				S.E.	80.4	88.9	90.1	101.5	
				N	12	12	12	12	
				Linear Trend p-value#		NT	NT	NT	
			11-20	Mean	564	506	321	324	
				% Difference Control	NA	-10.3	-43.1	-42.6	
				S.D.	290.8	275.0	238.8	333.1	
				S.E.	83.9	79.4	68.9	96.2	
				N	12	12	12	12	
				Linear Trend p-value#		NT	NT	NT	
			21-30	Mean	230	288	244	172	
				% Difference Control	NA	25.2	6.1	-25.2	
				S.D.	270.3	288.2	274.3	184.9	
				S.E.	78.0	83.2	79.2	53.4	
				N	12	12	12	12	
				Linear Trend p-value#		NT	NT	NT	
			31-40	Mean	317	177	191	122	
				S.D.	308.9	149.7	174.4	119.4	
				S.E.	89.2	43.2	50.3	34.5	
				N	12	12	12	12	
				Linear Trend p-value#		NT	NT	NT	

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NT : Not tested. NA : Not applicable.

TABLE S28
AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOL-METHYL IN RATS
SUMMARY OF MOTOR ACTIVITY COUNTS

Period	Sex	Variable	Minutes	Statistic	Dosage Level (mg/kg) 0	200	700	2000	Statistical Model
DAY_000	F	TOTAL	41-50	Mean	184	229	98	60	
				S.D.	107.6	204.3	99.0	63.0	
				S.E.	31.1	59.0	28.6	18.2	
				N	12	12	12	12	
				Linear Trend p-value#		NT	NT	NT	
			51-60	Mean	281	237	136	69	
				S.D.	213.7	163.0	75.2	66.6	
				S.E.	61.7	47.0	21.7	19.2	
				N	12	12	12	12	
				Linear Trend p-value#		NT	NT	NT	
			Cumulative	Mean	2947	2783	2103	1769	
				% Difference Control	NA	-5.6	-28.6	-40.0	
				S.D.	535.1	726.1	628.1	792.5	
				S.E.	154.5	209.6	181.3	228.8	
				N	12	12	12	12	
			Overall	Linear Trend p-value#		0.596	0.007*	<.001*	
				Trt F-test p-value++					<0.001*
				Trt*Time p-value++					0.427
				LinTrt*Time p-value#					0.245
				Covariance Structure					ARH1

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TABLE S28
AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOL-METHYL IN RATS
SUMMARY OF MOTOR ACTIVITY COUNTS

Period	Sex	Variable	Minutes	Statistic	Dosage Level (mg/kg) 0	200	700	2000	Statistical Model
DAY_000	F	AMBULATORY	0-10	Mean	453	482	382	318	
				% Difference Control	NA	6.4	-15.7	-29.8	
				S.D.	136.8	205.0	126.9	133.9	
				S.E.	39.5	59.2	36.6	38.7	
				N	12	12	12	12	
				Linear Trend p-value#		NT	NT	NT	
			11-20	Mean	139	110	64	65	
				% Difference Control	NA	-20.9	-54.0	-53.2	
				S.D.	121.4	107.0	74.3	97.6	
				S.E.	35.0	30.9	21.5	28.2	
				N	12	12	12	12	
				Linear Trend p-value#		NT	NT	NT	
			21-30	Mean	36	46	40	25	
				% Difference Control	NA	27.8	11.1	-30.6	
				S.D.	99.4	78.9	82.2	52.9	
				S.E.	28.7	22.8	23.7	15.3	
				N	12	12	12	12	
				Linear Trend p-value#		NT	NT	NT	
			31-40	Mean	57	23	27	10	
				S.D.	86.7	46.6	56.3	20.1	
				S.E.	25.0	13.5	16.2	5.8	
				N	12	12	12	12	
				Linear Trend p-value#		NT	NT	NT	

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NT : Not tested. NA : Not applicable.

TABLE S28
AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOL-METHYL IN RATS
SUMMARY OF MOTOR ACTIVITY COUNTS

Period	Sex	Variable	Minutes	Statistic	Dosage Level (mg/kg) 0	200	700	2000	Statistical Model
DAY_000	F	AMBULATORY	41-50	Mean	7	16	1	1	
				S.D.	14.8	45.3	1.7	2.0	
				S.E.	4.3	13.1	0.5	0.6	
				N	12	12	12	12	
				Linear Trend p-value#		NT	NT	NT	
			51-60	Mean	6	23	5	3	
				S.D.	16.6	34.7	13.3	4.1	
				S.E.	4.8	10.0	3.8	1.2	
				N	12	12	12	12	
				Linear Trend p-value#		NT	NT	NT	
			Cumulative	Mean	698	700	518	421	
				% Difference Control	NA	0.3	-25.8	-39.7	
				S.D.	249.1	345.5	254.9	247.4	
				S.E.	71.9	99.7	73.6	71.4	
				N	12	12	12	12	
			Overall	Linear Trend p-value#		NT	0.074	0.002*	
				Trt F-test p-value++					0.011
				Trt*Time p-value++					0.369
				LinTrt*Time p-value#					0.077
				Covariance Structure					ARH1

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TABLE S28
AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOL-METHYL IN RATS
SUMMARY OF MOTOR ACTIVITY COUNTS

Period	Sex	Variable	Minutes	Statistic	Dosage Level (mg/kg) 0	200	700	2000	Statistical Model
DAY_007	M	TOTAL	0-10	Mean	1329	1283	1176	1407	
				% Difference Control	NA	-3.5	-11.5	5.9	
				S.D.	229.4	351.7	264.0	186.7	
				S.E.	66.2	101.5	76.2	53.9	
				N	12	12	12	12	
				Linear Trend p-value#		NT	NT	NT	
			11-20	Mean	730	648	663	776	
				% Difference Control	NA	-11.2	-9.2	6.3	
				S.D.	259.8	290.9	245.0	242.2	
				S.E.	75.0	84.0	70.7	69.9	
				N	12	12	12	12	
				Linear Trend p-value#		NT	NT	NT	
			21-30	Mean	334	204	278	383	
				% Difference Control	NA	-38.9	-16.8	14.7	
				S.D.	323.9	219.8	220.2	166.0	
				S.E.	93.5	63.5	63.6	47.9	
				N	12	12	12	12	
				Linear Trend p-value#		NT	NT	NT	
			31-40	Mean	233	108	83	167	
				S.D.	326.3	163.6	71.6	187.0	
				S.E.	94.2	47.2	20.7	54.0	
				N	12	12	12	12	
				Linear Trend p-value#		NT	NT	NT	

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TABLE S28
AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOL-METHYL IN RATS
SUMMARY OF MOTOR ACTIVITY COUNTS

Period	Sex	Variable	Minutes	Statistic	Dosage Level (mg/kg) 0	200	700	2000	Statistical Model
DAY_007	M	TOTAL	41-50	Mean	92	123	67	119	
				S.D.	107.5	155.8	66.2	206.2	
				S.E.	31.0	45.0	19.1	59.5	
				N	12	12	12	12	
				Linear Trend p-value#		NT	NT	NT	
			51-60	Mean	105	150	47	68	
				S.D.	130.7	208.9	42.8	70.7	
				S.E.	37.7	60.3	12.3	20.4	
				N	12	12	12	12	
				Linear Trend p-value#		NT	NT	NT	
			Cumulative	Mean	2823	2516	2314	2920	
				% Difference Control	NA	-10.9	-18.0	3.4	
				S.D.	909.7	717.1	681.5	597.0	
				S.E.	262.6	207.0	196.7	172.3	
				N	12	12	12	12	
			Overall	Linear Trend p-value#		NT	NT	0.929	
				Trt F-test p-value++					0.174
				Trt*Time p-value++					0.597
				LinTrt*Time p-value#					0.506
				Covariance Structure					ARH1

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NT : Not tested. NA : Not applicable.

TABLE S28
AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOL-METHYL IN RATS
SUMMARY OF MOTOR ACTIVITY COUNTS

Period	Sex	Variable	Minutes	Statistic	Dosage Level (mg/kg) 0	200	700	2000	Statistical Model
DAY_007	M	AMBULATORY	0-10	Mean	390	376	336	420	
				% Difference Control	NA	-3.6	-13.8	7.7	
				S.D.	107.3	182.2	97.9	103.0	
				S.E.	31.0	52.6	28.3	29.7	
				N	12	12	12	12	
				Linear Trend p-value#		NT	NT	NT	
			11-20	Mean	148	122	109	166	
				% Difference Control	NA	-17.6	-26.4	12.2	
				S.D.	79.9	112.9	88.2	72.3	
				S.E.	23.1	32.6	25.4	20.9	
				N	12	12	12	12	
				Linear Trend p-value#		NT	NT	NT	
			21-30	Mean	53	28	34	54	
				% Difference Control	NA	-47.2	-35.8	1.9	
				S.D.	78.4	47.4	48.5	58.1	
				S.E.	22.6	13.7	14.0	16.8	
				N	12	12	12	12	
				Linear Trend p-value#		NT	NT	NT	
			31-40	Mean	40	5	9	20	
				S.D.	72.6	15.2	19.4	39.1	
				S.E.	21.0	4.4	5.6	11.3	
				N	12	12	12	12	
				Linear Trend p-value#		NT	NT	NT	

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TABLE S28
AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOL-METHYL IN RATS
SUMMARY OF MOTOR ACTIVITY COUNTS

Period	Sex	Variable	Minutes	Statistic	Dosage Level (mg/kg) 0	200	700	2000	Statistical Model
DAY_007	M	AMBULATORY	41-50	Mean	2	16	0	10	
				S.D.	3.2	29.5	1.2	25.8	
				S.E.	0.9	8.5	0.3	7.4	
				N	12	12	12	12	
				Linear Trend p-value#		NT	NT	NT	
			51-60	Mean	6	19	1	6	
				S.D.	15.0	42.7	2.5	16.5	
				S.E.	4.3	12.3	0.7	4.8	
				N	12	12	12	12	
				Linear Trend p-value#		NT	NT	NT	
			Cumulative	Mean	639	566	489	676	
				% Difference Control	NA	-11.4	-23.5	5.8	
				S.D.	231.9	269.1	220.2	211.7	
				S.E.	66.9	77.7	63.6	61.1	
				N	12	12	12	12	
			Overall	Linear Trend p-value#		NT	NT	0.910	
				Trt F-test p-value++					0.206
				Trt*Time p-value++					0.535
				LinTrt*Time p-value#					0.715
				Covariance Structure					ARH1

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TABLE S28
AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOL-METHYL IN RATS
SUMMARY OF MOTOR ACTIVITY COUNTS

Period	Sex	Variable	Minutes	Statistic	Dosage Level (mg/kg) 0	200	700	2000	Statistical Model
DAY_007	F	TOTAL	0-10	Mean	1494	1498	1406	1534	
				% Difference Control	NA	0.3	-5.9	2.7	
				S.D.	326.3	260.0	195.9	311.5	
				S.E.	94.2	75.0	56.6	89.9	
				N	12	12	12	12	
				Pairwise p-value++		0.974	0.440	0.730	
				Linear Trend p-value#		NT	NT	NT	
			11-20	Mean	751	777	678	944	
				% Difference Control	NA	3.5	-9.7	25.7	
				S.D.	306.8	239.0	184.1	265.6	
				S.E.	88.6	69.0	53.1	76.7	
				N	12	12	12	12	
				Pairwise p-value++		0.817	0.523	0.091	
				Linear Trend p-value#		NT	NT	NT	
			21-30	Mean	566	508	356	699	
				% Difference Control	NA	-10.2	-37.1	23.5	
				S.D.	299.4	384.8	327.3	355.1	
				S.E.	86.4	111.1	94.5	102.5	
				N	12	12	12	12	
				Pairwise p-value++		0.611	0.066	0.243	
				Linear Trend p-value#		NT	NT	NT	
			31-40	Mean	297	186	501	442	
				S.D.	303.1	184.1	414.9	234.5	
				S.E.	87.5	53.1	119.8	67.7	
				N	12	12	12	12	
				Pairwise p-value++		0.329	0.075	0.204	
				Linear Trend p-value#		NT	NT	NT	

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TABLE S28
AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOL-METHYL IN RATS
SUMMARY OF MOTOR ACTIVITY COUNTS

Period	Sex	Variable	Minutes	Statistic	Dosage Level (mg/kg) 0	200	700	2000	Statistical Model
DAY_007	F	TOTAL	41-50	Mean	103	153	370	112	
				S.D.	117.7	186.3	302.1	130.5	
				S.E.	34.0	53.8	87.2	37.7	
				N	12	12	12	12	
				Pairwise p-value++		0.660	0.020	0.937	
				Linear Trend p-value#		NT	NT	NT	
			51-60	Mean	208	281	120	181	
				S.D.	251.3	316.6	246.5	292.6	
				S.E.	72.5	91.4	71.2	84.5	
				N	12	12	12	12	
				Pairwise p-value++		0.522	0.440	0.817	
				Linear Trend p-value#		NT	NT	NT	
			Cumulative	Mean	3419	3402	3431	3912	
				% Difference Control	NA	-0.5	0.4	14.4	
				S.D.	1035.6	1140.2	879.3	1130.0	
				S.E.	299.0	329.2	253.8	326.2	
				N	12	12	12	12	
			Overall	Pairwise p-value++		0.971	0.976	0.258	
				Linear Trend p-value#		NT	NT	0.274	
				Trt F-test p-value++					0.585
				Trt*Time p-value++					<0.001*
				LinTrt*Time p-value#					0.255
				Covariance Structure					AR1

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TABLE S28
AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOL-METHYL IN RATS
SUMMARY OF MOTOR ACTIVITY COUNTS

Period	Sex	Variable	Minutes	Statistic	Dosage Level (mg/kg) 0	200	700	2000	Statistical Model
DAY_007	F	AMBULATORY	0-10	Mean	527	516	475	522	
				% Difference Control	NA	-2.1	-9.9	-0.9	
				S.D.	182.3	154.4	131.5	141.3	
				S.E.	52.6	44.6	38.0	40.8	
				N	12	12	12	12	
				Linear Trend p-value#		NT	NT	NT	
			11-20	Mean	178	177	167	257	
				% Difference Control	NA	-0.6	-6.2	44.4	
				S.D.	104.7	118.0	75.3	115.2	
				S.E.	30.2	34.1	21.7	33.2	
				N	12	12	12	12	
				Linear Trend p-value#		NT	NT	NT	
			21-30	Mean	141	132	75	175	
				% Difference Control	NA	-6.4	-46.8	24.1	
				S.D.	103.4	122.5	87.6	117.7	
				S.E.	29.9	35.4	25.3	34.0	
				N	12	12	12	12	
				Linear Trend p-value#		NT	NT	NT	
			31-40	Mean	62	24	124	87	
				S.D.	99.3	40.8	137.1	66.7	
				S.E.	28.7	11.8	39.6	19.3	
				N	12	12	12	12	
				Linear Trend p-value#		NT	NT	NT	

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++ : Level of Significance tested = .01.
NT : Not tested. NA : Not applicable.

TABLE S28
AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOL-METHYL IN RATS
SUMMARY OF MOTOR ACTIVITY COUNTS

Period	Sex	Variable	Minutes	Statistic	Dosage Level (mg/kg) 0	200	700	2000	Statistical Model
DAY_007	F	AMBULATORY	41-50	Mean	11	14	71	20	
				S.D.	25.0	24.4	82.5	47.9	
				S.E.	7.2	7.0	23.8	13.8	
				N	12	12	12	12	
				Linear Trend p-value#		NT	NT	NT	
			51-60	Mean	27	61	25	30	
				S.D.	59.7	93.8	68.0	78.7	
				S.E.	17.2	27.1	19.6	22.7	
				N	12	12	12	12	
				Linear Trend p-value#		NT	NT	NT	
			Cumulative	Mean	946	924	937	1090	
				% Difference Control	NA	-2.3	-1.0	15.2	
				S.D.	427.3	429.8	298.1	392.6	
				S.E.	123.4	124.1	86.1	113.3	
				N	12	12	12	12	
			Overall	Linear Trend p-value#		NT	NT	0.297	
				Trt F-test p-value++					0.575
				Trt*Time p-value++					0.013
				LinTrt*Time p-value#					0.343
				Covariance Structure					ARH1

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TABLE S28
AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOL-METHYL IN RATS
SUMMARY OF MOTOR ACTIVITY COUNTS

Period	Sex	Variable	Minutes	Statistic	Dosage Level (mg/kg) 0	200	700	2000	Statistical Model
DAY_014	M	TOTAL	0-10	Mean	1229	1203	1186	1358	
				% Difference Control	NA	-2.1	-3.5	10.5	
				S.D.	203.5	326.9	212.9	166.5	
				S.E.	58.7	94.4	61.5	48.1	
				N	12	12	12	12	
				Pairwise p-value++		0.774	0.640	0.170	
				Linear Trend p-value#		NT	NT	NT	
			11-20	Mean	704	405	557	761	
				% Difference Control	NA	-42.5	-20.9	8.1	
				S.D.	189.1	315.3	291.3	280.9	
				S.E.	54.6	91.0	84.1	81.1	
				N	12	12	12	12	
				Pairwise p-value++		0.008*	0.191	0.608	
				Linear Trend p-value#		NT	NT	NT	
			21-30	Mean	321	154	220	275	
				% Difference Control	NA	-52.0	-31.5	-14.3	
				S.D.	187.0	198.0	288.2	222.6	
				S.E.	54.0	57.2	83.2	64.3	
				N	12	12	12	12	
				Pairwise p-value++		0.081	0.291	0.630	
				Linear Trend p-value#		NT	NT	NT	
			31-40	Mean	54	50	146	50	
				S.D.	73.2	72.0	325.3	71.1	
				S.E.	21.1	20.8	93.9	20.5	
				N	12	12	12	12	
				Pairwise p-value++		0.950	0.223	0.953	
				Linear Trend p-value#		NT	NT	NT	

: Level of Significance tested = .05.
* : Statistically Significant.
++ : Level of Significance tested = .01.
NT : Not tested. NA : Not applicable.

TABLE S28
AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOL-METHYL IN RATS
SUMMARY OF MOTOR ACTIVITY COUNTS

Period	Sex	Variable	Minutes	Statistic	Dosage Level (mg/kg) 0	200	700	2000	Statistical Model
DAY_014	M	TOTAL	41-50	Mean	183	50	81	44	
				S.D.	223.6	63.9	120.4	62.1	
				S.E.	64.6	18.5	34.8	17.9	
				N	12	12	12	12	
				Pairwise p-value++		0.019	0.071	0.014	
				Linear Trend p-value#		NT	NT	NT	
			51-60	Mean	103	115	42	35	
				S.D.	180.1	157.0	30.7	51.6	
				S.E.	52.0	45.3	8.9	14.9	
				N	12	12	12	12	
				Pairwise p-value++		0.809	0.230	0.180	
				Linear Trend p-value#		NT	NT	NT	
			Cumulative	Mean	2594	1977	2232	2523	
				% Difference Control	NA	-23.8	-14.0	-2.7	
				S.D.	563.4	790.2	947.3	563.7	
				S.E.	162.6	228.1	273.5	162.7	
				N	12	12	12	12	
			Overall	Pairwise p-value++		0.056	0.262	0.827	
				Linear Trend p-value#		NT	NT	0.965	
				Trt F-test p-value++					0.201
				Trt*Time p-value++					0.002*
				LinTrt*Time p-value#					0.089
				Covariance Structure					ARH1

: Level of Significance tested = .05.
* : Statistically Significant.
++ : Level of Significance tested = .01.
NT : Not tested. NA : Not applicable.

TABLE S28
AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOL-METHYL IN RATS
SUMMARY OF MOTOR ACTIVITY COUNTS

Period	Sex	Variable	Minutes	Statistic	Dosage Level (mg/kg) 0	200	700	2000	Statistical Model
DAY_014	M	AMBULATORY	0-10	Mean	316	328	297	386	
				% Difference Control	NA	3.8	-6.0	22.2	
				S.D.	78.2	151.9	73.3	82.6	
				S.E.	22.6	43.9	21.1	23.9	
				N	12	12	12	12	
				Linear Trend p-value#		NT	NT	NT	
			11-20	Mean	119	68	91	168	
				% Difference Control	NA	-42.9	-23.5	41.2	
				S.D.	67.3	66.0	83.2	105.2	
				S.E.	19.4	19.1	24.0	30.4	
				N	12	12	12	12	
				Linear Trend p-value#		NT	NT	NT	
			21-30	Mean	53	15	36	44	
				% Difference Control	NA	-71.7	-32.1	-17.0	
				S.D.	47.0	34.4	73.4	56.5	
				S.E.	13.6	9.9	21.2	16.3	
				N	12	12	12	12	
				Linear Trend p-value#		NT	NT	NT	
			31-40	Mean	4	4	20	5	
				S.D.	11.5	12.6	67.7	11.0	
				S.E.	3.3	3.6	19.5	3.2	
				N	12	12	12	12	
				Linear Trend p-value#		NT	NT	NT	

: Level of Significance tested = .05.
* : Statistically Significant.
++ : Level of Significance tested = .01.
NT : Not tested. NA : Not applicable.

TABLE S28
AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOL-METHYL IN RATS
SUMMARY OF MOTOR ACTIVITY COUNTS

Period	Sex	Variable	Minutes	Statistic	Dosage Level (mg/kg) 0	200	700	2000	Statistical Model
DAY_014	M	AMBULATORY	41-50	Mean	23	6	2	1	
				S.D.	40.7	20.7	3.7	1.4	
				S.E.	11.7	6.0	1.1	0.4	
				N	12	12	12	12	
				Linear Trend p-value#		NT	NT	NT	
			51-60	Mean	13	18	1	3	
				S.D.	29.4	50.9	1.5	9.2	
				S.E.	8.5	14.7	0.4	2.7	
				N	12	12	12	12	
				Linear Trend p-value#		NT	NT	NT	
			Cumulative	Mean	528	439	446	607	
				% Difference Control	NA	-16.9	-15.5	15.0	
				S.D.	157.3	248.1	236.6	200.9	
				S.E.	45.4	71.6	68.3	58.0	
				N	12	12	12	12	
			Overall	Linear Trend p-value#		NT	NT	0.392	
				Trt F-test p-value++					0.201
				Trt*Time p-value++					0.020
				LinTrt*Time p-value#					0.074
				Covariance Structure					ARH1

: Level of Significance tested = .05.
* : Statistically Significant.
++ : Level of Significance tested = .01.
NT : Not tested. NA : Not applicable.

TABLE S28
AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOL-METHYL IN RATS
SUMMARY OF MOTOR ACTIVITY COUNTS

Period	Sex	Variable	Minutes	Statistic	Dosage Level (mg/kg) 0	200	700	2000	Statistical Model
DAY_014	F	TOTAL	0-10	Mean	1484	1556	1372	1410	
				% Difference Control	NA	4.9	-7.5	-5.0	
				S.D.	281.0	307.1	287.2	300.6	
				S.E.	81.1	88.7	82.9	86.8	
				N	12	12	12	12	
				Linear Trend p-value#		NT	NT	NT	
			11-20	Mean	721	696	689	799	
				% Difference Control	NA	-3.5	-4.4	10.8	
				S.D.	270.8	253.7	339.3	369.7	
				S.E.	78.2	73.2	97.9	106.7	
				N	12	12	12	12	
				Linear Trend p-value#		NT	NT	NT	
			21-30	Mean	421	287	405	485	
				% Difference Control	NA	-31.8	-3.8	15.2	
				S.D.	388.2	299.3	372.4	371.6	
				S.E.	112.1	86.4	107.5	107.3	
				N	12	12	12	12	
				Linear Trend p-value#		NT	NT	NT	
			31-40	Mean	417	259	267	239	
				S.D.	500.7	367.8	308.5	323.6	
				S.E.	144.5	106.2	89.0	93.4	
				N	12	12	12	12	
				Linear Trend p-value#		NT	NT	NT	

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* : Statistically Significant.
++ : Level of Significance tested = .01.
NT : Not tested. NA : Not applicable.

TABLE S28
AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOL-METHYL IN RATS
SUMMARY OF MOTOR ACTIVITY COUNTS

Period	Sex	Variable	Minutes	Statistic	Dosage Level (mg/kg) 0	200	700	2000	Statistical Model
DAY_014	F	TOTAL	41-50	Mean	275	257	243	224	
				S.D.	299.1	363.2	367.1	265.3	
				S.E.	86.4	104.9	106.0	76.6	
				N	12	12	12	12	
				Linear Trend p-value#		NT	NT	NT	
			51-60	Mean	134	219	274	328	
				S.D.	190.4	289.6	389.9	397.7	
				S.E.	55.0	83.6	112.6	114.8	
				N	12	12	12	12	
				Linear Trend p-value#		NT	NT	NT	
			Cumulative	Mean	3452	3272	3249	3486	
				% Difference Control	NA	-5.2	-5.9	1.0	
				S.D.	1466.7	1081.4	1302.0	1085.4	
				S.E.	423.4	312.2	375.9	313.3	
				N	12	12	12	12	
			Overall	Linear Trend p-value#		NT	NT	0.961	
				Trt F-test p-value++					0.950
				Trt*Time p-value++					0.595
				LinTrt*Time p-value#					0.104
				Covariance Structure					AR1

: Level of Significance tested = .05.
* : Statistically Significant.
++ : Level of Significance tested = .01.
NT : Not tested. NA : Not applicable.

TABLE S28
AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOL-METHYL IN RATS
SUMMARY OF MOTOR ACTIVITY COUNTS

Period	Sex	Variable	Minutes	Statistic	Dosage Level (mg/kg) 0	200	700	2000	Statistical Model
DAY_014	F	AMBULATORY	0-10	Mean	484	508	457	480	
				% Difference Control	NA	5.0	-5.6	-0.8	
				S.D.	145.0	159.4	166.2	147.1	
				S.E.	41.9	46.0	48.0	42.5	
				N	12	12	12	12	
				Linear Trend p-value#		NT	NT	NT	
			11-20	Mean	154	151	163	186	
				% Difference Control	NA	-1.9	5.8	20.8	
				S.D.	103.5	90.0	109.5	101.1	
				S.E.	29.9	26.0	31.6	29.2	
				N	12	12	12	12	
				Linear Trend p-value#		NT	NT	NT	
			21-30	Mean	97	48	95	106	
				% Difference Control	NA	-50.5	-2.1	9.3	
				S.D.	114.0	71.0	116.9	103.4	
				S.E.	32.9	20.5	33.8	29.8	
				N	12	12	12	12	
				Linear Trend p-value#		NT	NT	NT	
			31-40	Mean	103	62	69	46	
				S.D.	157.5	113.8	100.7	87.5	
				S.E.	45.5	32.8	29.1	25.3	
				N	12	12	12	12	
				Linear Trend p-value#		NT	NT	NT	

: Level of Significance tested = .05.
* : Statistically Significant.
++ : Level of Significance tested = .01.
NT : Not tested. NA : Not applicable.

TABLE S28
AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOL-METHYL IN RATS
SUMMARY OF MOTOR ACTIVITY COUNTS

Period	Sex	Variable	Minutes	Statistic	Dosage Level (mg/kg) 0	200	700	2000	Statistical Model
DAY_014	F	AMBULATORY	41-50	Mean	56	62	61	43	
				S.D.	91.0	112.0	119.9	65.5	
				S.E.	26.3	32.3	34.6	18.9	
				N	12	12	12	12	
				Linear Trend p-value#		NT	NT	NT	
			51-60	Mean	24	41	53	72	
				S.D.	59.6	79.1	93.2	109.2	
				S.E.	17.2	22.8	26.9	31.5	
				N	12	12	12	12	
				Linear Trend p-value#		NT	NT	NT	
			Cumulative	Mean	917	872	898	933	
				% Difference Control	NA	-4.9	-2.1	1.7	
				S.D.	497.3	375.0	453.2	302.4	
				S.E.	143.6	108.3	130.8	87.3	
				N	12	12	12	12	
			Overall	Linear Trend p-value#		NT	NT	0.889	
				Trt F-test p-value++					0.984
				Trt*Time p-value++					0.889
				LinTrt*Time p-value#					0.392
				Covariance Structure					ARH1

: Level of Significance tested = .05.
* : Statistically Significant.
++ : Level of Significance tested = .01.
NT : Not tested. NA : Not applicable.

TABLE S29

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS PAGE 1

SPONSOR:SUMITOMO CHEMICAL SUMMARY OF MACROSCOPIC FINDINGS

SCHEDULED NECROPSY

	----- M A L E -----			
GROUP:	1	2	3	4
NUMBER OF ANIMALS IN DOSE GROUP	12	12	12	12
NUMBER OF ANIMALS TERMINALLY EUTHANIZED	12	12	12	12
BRAIN				
-MATERIAL, DARK RED	0	0	0	1
NO SIGNIFICANT CHANGES OBSERVED - ALL EXAMINED TISSUES	12	12	12	11

1- 0 MG/KG 2- 200 MG/KG 3- 700 MG/KG 4- 2000 MG/KG

NONE SIGNIFICANTLY DIFFERENT FROM THE CONTROL GROUP USING FISHER'S EXACT TEST

TABLE S29

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL SUMMARY OF MACROSCOPIC FINDINGS

SCHEDULED NECROPSY

	----- F E M A L E -----			
GROUP:	1	2	3	4
NUMBER OF ANIMALS IN DOSE GROUP	12	12	12	12
NUMBER OF ANIMALS TERMINALLY EUTHANIZED	12	12	12	12
BRAIN				
-MISSHAPEN	0	0	0	1
NO SIGNIFICANT CHANGES OBSERVED - ALL EXAMINED TISSUES	12	12	12	11

1- 0 MG/KG 2- 200 MG/KG 3- 700 MG/KG 4- 2000 MG/KG

NONE SIGNIFICANTLY DIFFERENT FROM THE CONTROL GROUP USING FISHER'S EXACT TEST

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01/13/2010
R:02/08/2010

TABLE S30

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL SUMMARY OF BRAIN WEIGHTS AND BRAIN MEASUREMENTS

	MALES			
GROUP:	0 MG/KG	200 MG/KG	700 MG/KG	2000 MG/KG
BRAIN (G)				
MEAN	2.12	2.07	2.06	2.08
% DIFFERENCE		-2.4	-2.8	-1.9
S.D.	0.077	0.062	0.087	0.063
S.E.	0.022	0.018	0.025	0.018
N	12	12	12	12
BRAIN LENGTH (MM)				
MEAN	20.4	20.2	20.3	20.2
S.D.	0.48	0.28	0.44	0.41
S.E.	0.14	0.08	0.13	0.12
N	12	12	12	12
BRAIN WIDTH (MM)				
MEAN	15.1	15.0	14.9	15.0
S.D.	0.36	0.35	0.40	0.32
S.E.	0.10	0.10	0.11	0.09
N	12	12	12	12

None significantly different from control group

TABLE S30

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL SUMMARY OF BRAIN WEIGHTS AND BRAIN MEASUREMENTS

	FEMALES			
GROUP:	0 MG/KG	200 MG/KG	700 MG/KG	2000 MG/KG
BRAIN (G)				
MEAN	1.90	1.91	1.95	1.93
% DIFFERENCE		0.5	2.6	1.6
S.D.	0.075	0.083	0.088	0.072
S.E.	0.022	0.024	0.025	0.021
N	12	12	12	12
BRAIN LENGTH (MM)				
MEAN	19.7	19.5	19.8	19.7
S.D.	0.35	0.38	0.59	0.44
S.E.	0.10	0.11	0.17	0.13
N	12	12	12	12
BRAIN WIDTH (MM)				
MEAN	14.6	14.6	14.6	14.7
S.D.	0.31	0.37	0.40	0.29
S.E.	0.09	0.11	0.12	0.08
N	12	12	12	12

None significantly different from control group

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01/13/2010
R:01/13/2010

TABLE S31

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL SUMMARY OF MICROSCOPIC FINDINGS

----- MALE -----

GROUP:	1	2	3	4
NUMBER OF ANIMALS IN DOSE GROUP	12	12	12	12
NUMBER OF ANIMALS EXAMINED	6	0	0	6
BASAL GANGLIA				
TOTAL NUMBER EXAMINED	6	NA	NA	6
EXAMINED, UNREMARKABLE	6	NA	NA	6
CEREBELLUM				
TOTAL NUMBER EXAMINED	6	NA	NA	6
EXAMINED, UNREMARKABLE	6	NA	NA	6
CEREBRAL CORTEX				
TOTAL NUMBER EXAMINED	6	NA	NA	6
EXAMINED, UNREMARKABLE	6	NA	NA	6
CERV SPIN NERVE				
TOTAL NUMBER EXAMINED	6	NA	NA	6
EXAMINED, UNREMARKABLE	6	NA	NA	6
CERV. DOR. FIB.				
TOTAL NUMBER EXAMINED	6	NA	NA	6
EXAMINED, UNREMARKABLE	6	NA	NA	6
CERV. DOR. GANG.				
TOTAL NUMBER EXAMINED	6	NA	NA	6
EXAMINED, UNREMARKABLE	6	NA	NA	6

1- 0 MG/KG 2- 200 MG/KG 3- 700 MG/KG 4- 2000 MG/KG

NONE SIGNIFICANTLY DIFFERENT FROM THE CONTROL GROUP USING 2-TAILED FISHER'S EXACT TEST.

NA = NOT APPLICABLE

TABLE S31

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL SUMMARY OF MICROSCOPIC FINDINGS

----- MALE -----

GROUP:	1	2	3	4
NUMBER OF ANIMALS IN DOSE GROUP	12	12	12	12
NUMBER OF ANIMALS EXAMINED	6	0	0	6
CERV. VENT. FIB.				
TOTAL NUMBER EXAMINED	6	NA	NA	6
EXAMINED, UNREMARKABLE	6	NA	NA	6
EYES				
TOTAL NUMBER EXAMINED	6	NA	NA	6
EXAMINED, UNREMARKABLE	6	NA	NA	4
-DYSPLASIA, RETINAL	0	NA	NA	2
MINIMAL	NONE	NA	NA	1
MODERATE	NONE	NA	NA	1
GASTROC. MUSCLE				
TOTAL NUMBER EXAMINED	6	NA	NA	6
EXAMINED, UNREMARKABLE	6	NA	NA	6
HIPPOCAMPUS				
TOTAL NUMBER EXAMINED	6	NA	NA	6
EXAMINED, UNREMARKABLE	6	NA	NA	6
HYPOTHALAMUS				
TOTAL NUMBER EXAMINED	6	NA	NA	6
EXAMINED, UNREMARKABLE	6	NA	NA	6

1- 0 MG/KG 2- 200 MG/KG 3- 700 MG/KG 4- 2000 MG/KG

NONE SIGNIFICANTLY DIFFERENT FROM THE CONTROL GROUP USING 2-TAILED FISHER'S EXACT TEST.

NA = NOT APPLICABLE

TABLE S31

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL SUMMARY OF MICROSCOPIC FINDINGS

----- MALE -----

GROUP:	1	2	3	4
NUMBER OF ANIMALS IN DOSE GROUP	12	12	12	12
NUMBER OF ANIMALS EXAMINED	6	0	0	6
LUM SPIN NERVE				
TOTAL NUMBER EXAMINED	6	NA	NA	6
EXAMINED, UNREMARKABLE	5	NA	NA	6
-DEGENERATION, NERVE FIBER	1	NA	NA	0
MINIMAL	1	NA	NA	NONE
LUMBAR DOR. FIB.				
TOTAL NUMBER EXAMINED	6	NA	NA	6
EXAMINED, UNREMARKABLE	5	NA	NA	6
-DEGENERATION, NERVE FIBER	1	NA	NA	0
MINIMAL	1	NA	NA	NONE
LUMBAR DOR. GANG				
TOTAL NUMBER EXAMINED	6	NA	NA	6
EXAMINED, UNREMARKABLE	5	NA	NA	6
-CHROMATOLYSIS	1	NA	NA	0
MINIMAL	1	NA	NA	NONE
LUMBAR VENT. FIB				
TOTAL NUMBER EXAMINED	6	NA	NA	6
EXAMINED, UNREMARKABLE	5	NA	NA	6
-DEGENERATION, NERVE FIBER	1	NA	NA	0
MINIMAL	1	NA	NA	NONE

1- 0 MG/KG 2- 200 MG/KG 3- 700 MG/KG 4- 2000 MG/KG

NONE SIGNIFICANTLY DIFFERENT FROM THE CONTROL GROUP USING 2-TAILED FISHER'S EXACT TEST.

NA = NOT APPLICABLE

TABLE S31

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL SUMMARY OF MICROSCOPIC FINDINGS

----- MALE -----

GROUP:	1	2	3	4
NUMBER OF ANIMALS IN DOSE GROUP	12	12	12	12
NUMBER OF ANIMALS EXAMINED	6	0	0	6
MEDULLA OBLONG.				
TOTAL NUMBER EXAMINED	6	NA	NA	6
EXAMINED, UNREMARKABLE	6	NA	NA	6
MIDBRAIN				
TOTAL NUMBER EXAMINED	6	NA	NA	6
EXAMINED, UNREMARKABLE	6	NA	NA	6
OLFACTORY BULBS				
TOTAL NUMBER EXAMINED	6	NA	NA	6
EXAMINED, UNREMARKABLE	6	NA	NA	6
OPTIC NERVE				
TOTAL NUMBER EXAMINED	6	NA	NA	6
EXAMINED, UNREMARKABLE	6	NA	NA	6
PERONEAL NERVE				
TOTAL NUMBER EXAMINED	6	NA	NA	6
EXAMINED, UNREMARKABLE	6	NA	NA	6
PONS				
TOTAL NUMBER EXAMINED	6	NA	NA	6
EXAMINED, UNREMARKABLE	6	NA	NA	6

1- 0 MG/KG 2- 200 MG/KG 3- 700 MG/KG 4- 2000 MG/KG

NONE SIGNIFICANTLY DIFFERENT FROM THE CONTROL GROUP USING 2-TAILED FISHER'S EXACT TEST.

NA = NOT APPLICABLE

TABLE S31

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL SUMMARY OF MICROSCOPIC FINDINGS

----- MALE -----

GROUP:	1	2	3	4
NUMBER OF ANIMALS IN DOSE GROUP	12	12	12	12
NUMBER OF ANIMALS EXAMINED	6	0	0	6
SCIATIC NERVE				
TOTAL NUMBER EXAMINED	6	NA	NA	6
EXAMINED, UNREMARKABLE	6	NA	NA	6
SPINAL C.-CERV.				
TOTAL NUMBER EXAMINED	6	NA	NA	6
EXAMINED, UNREMARKABLE	6	NA	NA	6
SPINAL C.-LUMB.				
TOTAL NUMBER EXAMINED	6	NA	NA	6
EXAMINED, UNREMARKABLE	6	NA	NA	6
SURAL NERVE				
TOTAL NUMBER EXAMINED	6	NA	NA	6
EXAMINED, UNREMARKABLE	5	NA	NA	6
-DEGENERATION, NERVE FIBER	1	NA	NA	0
MINIMAL	1	NA	NA	NONE
THALAMUS				
TOTAL NUMBER EXAMINED	6	NA	NA	6
EXAMINED, UNREMARKABLE	6	NA	NA	6

1- 0 MG/KG 2- 200 MG/KG 3- 700 MG/KG 4- 2000 MG/KG

NONE SIGNIFICANTLY DIFFERENT FROM THE CONTROL GROUP USING 2-TAILED FISHER'S EXACT TEST.

NA = NOT APPLICABLE

TABLE S31

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS PAGE 6

SPONSOR:SUMITOMO CHEMICAL SUMMARY OF MICROSCOPIC FINDINGS

----- MALE -----

GROUP:	1	2	3	4
NUMBER OF ANIMALS IN DOSE GROUP	12	12	12	12
NUMBER OF ANIMALS EXAMINED	6	0	0	6
TIBIAL NERVE				
TOTAL NUMBER EXAMINED	6	NA	NA	6
EXAMINED, UNREMARKABLE	6	NA	NA	6
TRIG. GANGLION				
TOTAL NUMBER EXAMINED	6	NA	NA	6
EXAMINED, UNREMARKABLE	6	NA	NA	6
TRIGEMINAL NERVE				
TOTAL NUMBER EXAMINED	6	NA	NA	6
EXAMINED, UNREMARKABLE	6	NA	NA	6

1- 0 MG/KG 2- 200 MG/KG 3- 700 MG/KG 4- 2000 MG/KG

NONE SIGNIFICANTLY DIFFERENT FROM THE CONTROL GROUP USING 2-TAILED FISHER'S EXACT TEST.

NA = NOT APPLICABLE

TABLE S31

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS PAGE 7

SPONSOR:SUMITOMO CHEMICAL SUMMARY OF MICROSCOPIC FINDINGS

----- FEMALE -----

GROUP:	1	2	3	4
NUMBER OF ANIMALS IN DOSE GROUP	12	12	12	12
NUMBER OF ANIMALS EXAMINED	6	0	0	6
BASAL GANGLIA				
TOTAL NUMBER EXAMINED	6	NA	NA	6
EXAMINED, UNREMARKABLE	6	NA	NA	6
CEREBELLUM				
TOTAL NUMBER EXAMINED	6	NA	NA	6
EXAMINED, UNREMARKABLE	6	NA	NA	6
CEREBRAL CORTEX				
TOTAL NUMBER EXAMINED	6	NA	NA	6
EXAMINED, UNREMARKABLE	6	NA	NA	6
CERV SPIN NERVE				
TOTAL NUMBER EXAMINED	6	NA	NA	6
EXAMINED, UNREMARKABLE	6	NA	NA	6
CERV. DOR. FIB.				
TOTAL NUMBER EXAMINED	6	NA	NA	6
EXAMINED, UNREMARKABLE	6	NA	NA	6
CERV. DOR. GANG.				
TOTAL NUMBER EXAMINED	6	NA	NA	6
EXAMINED, UNREMARKABLE	6	NA	NA	6

1- 0 MG/KG 2- 200 MG/KG 3- 700 MG/KG 4- 2000 MG/KG

NONE SIGNIFICANTLY DIFFERENT FROM THE CONTROL GROUP USING 2-TAILED FISHER'S EXACT TEST.

NA = NOT APPLICABLE

TABLE S31

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL SUMMARY OF MICROSCOPIC FINDINGS

----- FEMALE -----

GROUP:	1	2	3	4
NUMBER OF ANIMALS IN DOSE GROUP	12	12	12	12
NUMBER OF ANIMALS EXAMINED	6	0	0	6
CERV. VENT. FIB.				
TOTAL NUMBER EXAMINED	6	NA	NA	6
EXAMINED, UNREMARKABLE	6	NA	NA	6
EYES				
TOTAL NUMBER EXAMINED	6	NA	NA	6
EXAMINED, UNREMARKABLE	5	NA	NA	5
-DYSPLASIA, RETINAL	1	NA	NA	1
MINIMAL	1	NA	NA	NONE
MILD	NONE	NA	NA	1
GASTROC. MUSCLE				
TOTAL NUMBER EXAMINED	6	NA	NA	6
EXAMINED, UNREMARKABLE	6	NA	NA	6
HIPPOCAMPUS				
TOTAL NUMBER EXAMINED	6	NA	NA	6
EXAMINED, UNREMARKABLE	6	NA	NA	6
HYPOTHALAMUS				
TOTAL NUMBER EXAMINED	6	NA	NA	6
EXAMINED, UNREMARKABLE	6	NA	NA	6

1- 0 MG/KG 2- 200 MG/KG 3- 700 MG/KG 4- 2000 MG/KG

NONE SIGNIFICANTLY DIFFERENT FROM THE CONTROL GROUP USING 2-TAILED FISHER'S EXACT TEST.

NA = NOT APPLICABLE

TABLE S31
SUMMARY OF MICROSCOPIC FINDINGS

----- FEMALE -----

GROUP:	1	2	3	4
NUMBER OF ANIMALS IN DOSE GROUP	12	12	12	12
NUMBER OF ANIMALS EXAMINED	6	0	0	6
LUM SPIN NERVE				
TOTAL NUMBER EXAMINED	6	NA	NA	6
EXAMINED, UNREMARKABLE	6	NA	NA	6
LUMBAR DOR. FIB.				
TOTAL NUMBER EXAMINED	6	NA	NA	6
EXAMINED, UNREMARKABLE	6	NA	NA	6
LUMBAR DOR. GANG				
TOTAL NUMBER EXAMINED	6	NA	NA	6
EXAMINED, UNREMARKABLE	6	NA	NA	6
LUMBAR VENT. FIB				
TOTAL NUMBER EXAMINED	6	NA	NA	6
EXAMINED, UNREMARKABLE	6	NA	NA	6
MEDULLA OBLONG.				
TOTAL NUMBER EXAMINED	6	NA	NA	6
EXAMINED, UNREMARKABLE	6	NA	NA	6
MIDBRAIN				
TOTAL NUMBER EXAMINED	6	NA	NA	6
EXAMINED, UNREMARKABLE	6	NA	NA	6

1- 0 MG/KG 2- 200 MG/KG 3- 700 MG/KG 4- 2000 MG/KG
NONE SIGNIFICANTLY DIFFERENT FROM THE CONTROL GROUP USING 2-TAILED FISHER'S EXACT TEST.
NA = NOT APPLICABLE

TABLE S31
SUMMARY OF MICROSCOPIC FINDINGS

----- FEMALE -----

GROUP:	1	2	3	4
NUMBER OF ANIMALS IN DOSE GROUP	12	12	12	12
NUMBER OF ANIMALS EXAMINED	6	0	0	6
OLFACTORY BULBS				
TOTAL NUMBER EXAMINED	6	NA	NA	6
EXAMINED, UNREMARKABLE	6	NA	NA	6
OPTIC NERVE				
TOTAL NUMBER EXAMINED	6	NA	NA	6
EXAMINED, UNREMARKABLE	6	NA	NA	6
PERONEAL NERVE				
TOTAL NUMBER EXAMINED	6	NA	NA	6
EXAMINED, UNREMARKABLE	6	NA	NA	6
PONS				
TOTAL NUMBER EXAMINED	6	NA	NA	6
EXAMINED, UNREMARKABLE	6	NA	NA	6
SCIATIC NERVE				
TOTAL NUMBER EXAMINED	6	NA	NA	6
EXAMINED, UNREMARKABLE	6	NA	NA	6
SPINAL C.-CERV.				
TOTAL NUMBER EXAMINED	6	NA	NA	6
EXAMINED, UNREMARKABLE	6	NA	NA	6

1- 0 MG/KG 2- 200 MG/KG 3- 700 MG/KG 4- 2000 MG/KG
NONE SIGNIFICANTLY DIFFERENT FROM THE CONTROL GROUP USING 2-TAILED FISHER'S EXACT TEST.
NA = NOT APPLICABLE

TABLE S31
SUMMARY OF MICROSCOPIC FINDINGS

----- FEMALE -----

GROUP:	1	2	3	4
NUMBER OF ANIMALS IN DOSE GROUP	12	12	12	12
NUMBER OF ANIMALS EXAMINED	6	0	0	6
SPINAL C.-LUMB.				
TOTAL NUMBER EXAMINED	6	NA	NA	6
EXAMINED, UNREMARKABLE	6	NA	NA	6
SURAL NERVE				
TOTAL NUMBER EXAMINED	6	NA	NA	6
EXAMINED, UNREMARKABLE	6	NA	NA	6
THALAMUS				
TOTAL NUMBER EXAMINED	6	NA	NA	6
EXAMINED, UNREMARKABLE	6	NA	NA	6
TIBIAL NERVE				
TOTAL NUMBER EXAMINED	6	NA	NA	6
EXAMINED, UNREMARKABLE	6	NA	NA	6
TRIG. GANGLION				
TOTAL NUMBER EXAMINED	6	NA	NA	6
EXAMINED, UNREMARKABLE	6	NA	NA	6
TRIGEMINAL NERVE				
TOTAL NUMBER EXAMINED	6	NA	NA	6
EXAMINED, UNREMARKABLE	6	NA	NA	6

1- 0 MG/KG 2- 200 MG/KG 3- 700 MG/KG 4- 2000 MG/KG
NONE SIGNIFICANTLY DIFFERENT FROM THE CONTROL GROUP USING 2-TAILED FISHER'S EXACT TEST.
NA = NOT APPLICABLE

TABLE S32

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOL-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL STATISTICAL ANALYSIS OF GRADED MICROSCOPIC FINDINGS

					Dosage Level (mg/kg)	
					0	2000
SEX	ORGAN	FINDING	GRADE			
M	EYES	TOTAL EXAMINED		(N)	6	6
		DYSPLASIA, RETINAL	MINIMAL	(a)	0	1
			MODERATE	(a)	0	1
				(MW)		0.140

(N) NUMBER OF ANIMALS EXAMINED
(a) NUMBER OF ANIMALS WITH FINDING
(MW) MANN-WHITNEY P-VALUE FOR COMPARISON WITH CONTROL GROUP

TABLE S32

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOL-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL STATISTICAL ANALYSIS OF GRADED MICROSCOPIC FINDINGS

SEX	ORGAN	FINDING	GRADE		Dosage Level (mg/kg) 0	2000
F	EYES	TOTAL EXAMINED		(N)	6	6
		DYSPLASIA, RETINAL	MINIMAL	(a)	1	0
			MILD	(a)	0	1
				(MW)		0.902

(N) NUMBER OF ANIMALS EXAMINED
(a) NUMBER OF ANIMALS WITH FINDING
(MW) MANN-WHITNEY P-VALUE FOR COMPARISON WITH CONTROL GROUP

APPENDIX A

Study Protocol

PROTOCOL

AN ORAL (GAVAGE) ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

(U.S. EPA OPPTS 870.6200, OECD Guideline 424 and JMAFF Notification No. 12 NohSan No. 8147)

Submitted To:

Sumitomo Chemical Company, Ltd.
27-1, Shinkawa 2-chome
Chuo-ku, Tokyo 104-8260, Japan

WIL Research Laboratories, LLC
1407 George Road
Ashland, OH 44805-8946

1 OBJECTIVE:

The objective of this study is to evaluate the acute neurotoxic potential of the test substance when administered as a single oral dose to rats. The neurotoxic potential of the test substance will be evaluated using a neurotoxicity screening battery (consisting of functional observational battery (FOB), locomotor activity and neuropathological assessments).

This study will be executed in accordance with the United States Environmental Protection Agency (EPA) Health Effects Guidelines OPPTS 870.6200, Neurotoxicity Screening Battery, August 1998, the Organisation for Economic Cooperation and Development (OECD) Guidelines for Testing of Chemicals Guideline 424, Neurotoxicity Study in Rodents, 21 July 1997 and the Japanese Ministry of Agriculture, Forestry and Fisheries (JMAFF) Guideline 12 NohSan No. 8147, 24 November 2000.

The study will be conducted in compliance with the following Good Laboratory Practice Regulations: U.S. Environmental Protection Agency (EPA) - FIFRA: 40 CFR Part 160, U.S. EPA TSCA: 40 CFR Part 792, Organisation for Economic Cooperation and Development (OECD): C(97)186/Final and the Japanese MAFF Good Laboratory Practice for Agricultural Chemicals (11 NohSan No. 6283), 1 October 1999; the standard operating procedures of WIL Research Laboratories, LLC, and the protocol as approved by the sponsor.

2 PERSONNEL INVOLVED IN THE STUDY:

2.1 Sponsor Representative:

Toshihiko Yano, PhD
E-mail: yanot2@sc.sumitomo-chem.co.jp

2.2 WIL Study Director:

Melissa J. Beck, PhD
Assistant Director, Neurosciences
Tel: (419) 289-8700
Fax: (419) 289-3650
Email: mbeck@wilresearch.com

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2.3 WIL Departmental Responsibilities:

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Donald G. Stump, PhD, DABT
Director, Developmental and
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George A. Parker, DVM, PhD, DAVCP, DABT
Director, Pathology

Daniel W. Sved, PhD
Director, Metabolism and Analytical Chemistry

Walter R. Miller, Jr., DVM
Clinical Veterinarian,
Head of Surgery and Experimental Medicine

Ronald E. Wilson, BS
Director, Informational Systems

Carol A. Kopp, BS, LAT
Manager, Gross Pathology and
Developmental Toxicology Laboratory

Heather L. Johnson, BS, RQAP-GLP
Manager, Quality Assurance

Bennett J. Varsho, MPH, DABT
Operations Manager, Developmental and
Reproductive Toxicology and the Formulations Laboratory

Robert A. Wally, BS, RAC
Manager, Reporting and Regulatory
Technical Services

2.4 Principal Investigator, Statistical Analysis:

Les Freshwater, MS
BioSTAT Consultants, Inc.

3 STUDY SCHEDULE:

Proposed Animal Receipt Date (Experimental Starting Date):	November 17, 2009
Proposed Experimental Start Date:	November 22, 2009
Proposed Experimental Termination/Completion Date:	To be provided
Proposed Audited Report Date:	March 5, 2009

4 TEST SUBSTANCE DATA:

4.1 Test Substance Shipment:

Test substance and applicable documentation, including a Certificate of Analysis, was shipped under Sponsor's responsibility to:

Formulations Laboratory
Attn. Larry Blessing
WIL Research Laboratories, LLC
1407 George Road
Ashland, Ohio 44805-8946

4.2 Identification:

Tolclofos-methyl T.G.

4.3 Lot Number:

080712G

4.4 Expiration/Retest Date:

July 8, 2012

4.5 Purity:

97.5%; formulations will not be adjusted for purity

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4.6 Stability:

The test substance is considered to be stable under the storage conditions provided by the Sponsor.

4.7 Physical Description:

White crystalline solid

4.8 Storage Conditions:

Store in a refrigerator at approximately 4°C where there is no direct sunlight. Keep the container in a well ventilated place.

4.9 Reserve Samples:

A reserve sample of the test substance will be taken in accordance with WIL standard operating procedures and stored in the Archives at WIL Research Laboratories, LLC indefinitely, unless otherwise specified.

4.10 Personnel Safety Data:

It is the responsibility of the Sponsor to notify the testing facility of any special handling requirements for the test substance. A Material Safety Data Sheet (MSDS) accompanied the test substance upon arrival at the laboratory.

4.11 Test Substance Disposition:

With the exception of the reserve sample for each batch of test substance, all neat test substance remaining at study completion will be returned to the Sponsor (storage conditions, contact, address, fax number and telephone number to be provided). Alternatively, the test substance can be retained for subsequent studies.

5 TEST SYSTEM:

5.1 Species:

Rat

5.2 Strain:

Crl:CD(SD)

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5.3 Source:

Charles River Laboratories, Inc.
(Facility to be determined).

5.4 Number of Animals:

48 males and 48 females (nulliparous and non-pregnant). A maximum of 53 males and 53 females will be purchased. Animals not placed on study will be transferred to the WIL stock animal colony or euthanized by carbon dioxide inhalation and discarded.

5.5 Body Weight Range:

At initiation of dosing: Males 130-300 g
Females 115-250 g

5.6 Approximate Age:

Animals will be 3 to 5 weeks of age when received and a minimum of 42 days of age at the start of the in-life phase.

5.7 Identification System:

Each animal will be uniquely identified by a metal ear tag displaying the animal number. Individual cage cards will be affixed to each cage and will display the animal number, group number, study number, dosage level and sex of the animal.

5.8 Justification for Selection and Number of Animals:

This species and strain of animal is recognized as appropriate for neurotoxicity studies. WIL Research Laboratories, LLC has neurotoxicity historical control data in the Crl:CD(SD) rat. This animal model has been proven to be susceptible to the effects of neurotoxicants. The number of animals selected is the minimum required to meet the objectives of the study.

6 SPECIFIC MAINTENANCE SCHEDULE:

6.1 Animal Housing:

Weanling animals (less than approximately 35 days of age) will be housed 2-3 per cage by sex in an environmentally controlled room in suspended wire-mesh cages for a minimum of 3 days following receipt. Thereafter, all animals will be housed individually. The cages will be elevated above cage-board or other suitable material, which will be changed at least three times each week.

The cages will be subjected to routine cleaning at a frequency consistent with maintaining good health and WIL Standard Operating Procedures. The facilities at WIL Research Laboratories, LLC are fully accredited by the Association for Assessment and Accreditation of Laboratory Animal Care International (AAALAC International).

6.2 Environmental Conditions:

Controls will be set to maintain temperature at 71° ± 5°F (22° ± 3°C) and relative humidity at 50% ± 20%. Temperature and relative humidity will be monitored continuously. Data for these two parameters will be scheduled for automatic collection on an hourly basis. Fluorescent lighting, controlled by timers, will provide illumination for a 12-hour light/dark photoperiod. The ventilation rate will be set at a minimum of 10 room air changes per hour, 100% fresh air.

6.3 Drinking Water:

Reverse osmosis-purified water will be available *ad libitum*. Filters servicing the automatic watering system are changed regularly according to WIL Standard Operating Procedures. The municipal water supplying the laboratory is analyzed on a routine basis according to WIL Standard Operating Procedures to assure that contaminants are not present in concentrations that would be expected to affect the outcome of the study. Results of the analyses are provided to WIL Research Laboratories, LLC and will be included as an appendix to the final report.

6.4 Basal Diet:

PMI Nutrition International, LLC Certified Rodent LabDiet® 5002 will be offered *ad libitum* during the study. Periodic analyses of the certified feed are performed by the manufacturer to ensure that heavy metals and pesticides are not present at concentrations that would be expected to affect the outcome of the study. Results of the analyses are provided to WIL Research Laboratories, LLC by the manufacturer and will be included as an appendix to the final report. Feeders will be changed and sanitized once per week.

7 EXPERIMENTAL DESIGN:

7.1 Animal Receipt and Quarantine:

Each animal will be inspected by a qualified technician upon receipt. Animals judged to be in good health and suitable as test animals will be immediately placed in quarantine for a minimum of 10 days. All animals will be sexed, weighed and assigned a permanent animal number. During the quarantine period, each animal will be observed twice daily for changes in general

appearance and behavior. All animals will receive a physical examination on the day following receipt and at the time of animal selection for randomization.

7.2 Randomization:

Before treatment commences, all rats will be weighed and assigned to 4 treatment groups using a computer program which ensures homogeneity of group means and variances for body weight. Weight variation of animals will not exceed ±20% of the group mean for each sex. Rats in poor health or at the extremes of the body weight range will not be assigned to study groups. Twelve male and 12 female rats will be randomized into each study group.

Following the group randomization procedure, the 12 rats/sex/group assigned to functional observational battery (FOB) and locomotor activity assessments will be randomized into 4 study replicates using an appropriate computer program. The time required to perform the FOB assessments for all animals placed on study precludes the complete conduct of these components of the neurotoxicity screening battery in 1 day. The study animals are therefore divided into 4 study replicates to allow for the reasonable conduct of these and other necessary study functions. Study replicates are performed over 4 consecutive days for each time point specified in the protocol (see Section 8.4). Each dose group and sex will be approximately equally represented in each study replicate to avoid the introduction of bias into the recorded observations related to these variables.

Because of unanticipated events, such as weight loss, poor health or mortality, it may be necessary to replace an animal either prior to or shortly after the initiation of dosing. The replacement animal may be selected by identifying a suitable animal with a body weight that will have minimal impact on the group mean body weight generated during the randomization procedure.

7.3 Route and Rationale of Test Substance Administration:

The route of administration will be oral (by gavage), because this is a possible route of human exposure.

7.4 Organization of Test Groups, Dosage Levels and Treatment Regimen:

7.4.1 Organization of Test Groups:

The dosage levels were selected based on the results of a previous dose range-finding study (WIL-118042; Beck, Draft) in which dosage levels of 0, 1000 and 2000 mg/kg were evaluated. No clinical signs were observed except a single incidence of walking on tiptoes at approximately 4 hours after dosing in the 2000 mg/kg female group. Based on the results, 2000 mg/kg, the upper limit dose level for the testing guidelines, was selected as the highest dosage level. Dosage

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levels of 700 and 200 mg/kg were also selected as respectively intermediate and low dose levels (approximately 3-fold intervals).

The following diagram presents the study group arrangement.

Group Number	Test Substance	Dosage Level (mg/kg)	Dosage Concentration (mg/mL)	Dosage Volume (mL/kg)	Number of Animals	
					Males	Females
1	Vehicle control	0	0	5	12	12
2	Tolclofos-methyl	200	40	5	12	12
3	Tolclofos-methyl	700	140	5	12	12
4	Tolclofos-methyl	2000	400	5	12	12

7.4.2 Control Substance:

Corn oil

7.4.3 Treatment Regimen:

The test and control substances will be administered as a single dose. Individual doses will be calculated based upon the animal's body weight on the day of test or control substance administration. Animals in the control group will receive the vehicle alone at the same dose volume (mL/kg) as the test substance-treated animals. Animals will not be fasted prior to treatment to avoid any potential confounding effects of inanition on the behavior of the test subjects.

7.5 Preparation and Analysis of Test Substance Formulations:

7.5.1 Method and Frequency of Preparation:

Based on the physical characteristics of the test substance, appropriate methods will be used to ensure the best possible formulations of the test substance in the vehicle. Dosing formulations will be stored in a refrigerator at approximately 4°C for a period not to exceed established stability. The Study Director or designee will visually inspect the formulations prior to the first dose administration. This visual inspection will be performed to ensure that the formulations are visibly homogeneous and acceptable for dosing. Any special procedures required for formulation will be documented according to Good Laboratory Practices and presented in the final report of this study. Test substance formulations will normally be prepared approximately weekly and divided into aliquots for daily dispensation. The test substance and vehicle formulations will be stirred continuously during dosing. Frequency of formulation may be adjusted based on stability results.

7.5.2 Homogeneity and Stability of Test Substance Formulations:

Analyses to demonstrate the stability and homogeneity of the test substance formulations for a period of 8 hours at room temperature and 8 days under refrigeration (approximately 4°C) at concentrations of 20-500 mg/mL were conducted in a previous study (WIL-118042; Beck, DRAFT) and will not be assessed in this study.

7.5.3 Concentration Analysis:

Samples will be taken from the middle of each dosing formulation prepared during the in-life phase of the study. These samples will be analyzed to verify the concentration of the test substance in the dosing formulations. Any back-up samples kept at WIL Research Laboratories, LLC will be discarded after issuance of the Final Report.

8 EXPERIMENTAL OBSERVATIONS

8.1 Viability Observations:

All animals will be observed for mortality/moribundity twice daily, once in the morning and once in the afternoon from the day of animal receipt until the day of euthanasia. Moribund animals will be euthanized to ensure that tissues will not be lost due to autolysis.

8.2 Clinical Observations:

Clinical observations regarding general appearance, behavior and all signs of overt toxicity will be performed daily on all animals beginning on the day of dose administration and will be recorded on the day observed. The observations will include, but are not limited to, evaluations for changes in the appearance of skin and fur, eyes and mucous membranes, respiratory, circulatory, autonomic and central nervous system function, somatomotor activity and behavior patterns. Clinical observations will not be performed for animals assigned to FOB assessment for the days on which the FOB is performed.

8.3 Individual Body Weights:

Individual body weights for all animals will be recorded weekly, beginning one week prior to the day of dose administration and continuing until the day of scheduled euthanasia.

8.4 Functional Observational Battery (FOB):

The functional observational battery (FOB) utilized at WIL Research Laboratories, LLC, is based on previously developed protocols (Moser *et al.*,

1991; Irwin, 1968; Gad, 1982; Moser *et al.*, 1988; Haggerty, 1989; O'Donoghue, 1989). Observations will be performed on 12 animals/sex/group at pretest and at approximately the time of "peak effect" (approximately 4 hours post-dosing; WIL-118042, Beck, DRAFT; AE-1152, Esumi, 1989) on the day of test substance administration and on study days 7 and 14. Testing will be performed in a sound-attenuated room equipped with a white noise generation system set to operate at 70 ±10 db. Testing will be performed by the same technicians, whenever possible, who will not know the animal's group assignment. Animals will be observed for the following as described below (see WIL standard operating procedure No. T1-112, as revised, for a description of scoring criteria):

8.4.1 Home Cage Observations:

Posture	Biting
Convulsions/tremors	Palpebral (eyelid) closure
Feces consistency	

8.4.2 Handling Observations:

Ease of removal from cage	Ease of handling animal in hand
Lacrimation/chromodacryorrhea	Salivation
Piloerection	Fur appearance
Palpebral closure	Respiratory rate/character
Red/crusty deposits	Mucous membranes/eye/skin color
Eye prominence	Muscle tone

8.4.3 Open Field Observations:

Evaluated over a 2-minute observation period

Mobility	Gait
Rearing	Arousal
Convulsions/tremors	Urination/defecation
Grooming	Gait score
Bizarre/stereotypic behavior	Backing
Time to first step (seconds)	

8.4.4 Sensory Observations:

Approach response	Touch response
Startle response	Tail pinch response
Pupil response	Eyeblink response
Forelimb response	Hindlimb extension
Air righting reflex	Olfactory orientation

8.4.5 Neuromuscular Observations:

Hindlimb extensor strength	Grip strength - hind and forelimb
Hindlimb foot splay	Rotarod performance

8.4.6 Physiological Observations:

Catalepsy	Body weight
Body temperature	

8.5 Locomotor Activity:

Locomotor Activity will be monitored on 12 animals/sex/group at pretest and at approximately the time of "peak effect" (approximately 4 hours post-dosing) on the day of test substance administration and on study days 7 and 14. The same animals will be monitored at each interval. Locomotor Activity will be measured using the Kinder Scientific MotorMonitor System (Kinder Scientific, Poway, CA) as described in WIL Standard Operating Procedures. Locomotor Activity sessions will be performed in a sound-attenuated room equipped with a white noise generation system set to operate at 70 ±10 db and will be initiated immediately following completion of the FOB described in Section 8.4. The test session will be 60 minutes in duration and will consist of twelve 5-minute intervals. Locomotor Activity measures evaluated are ambulatory and total activity counts obtained for the 60-minute test session.

9 PATHOLOGY:

9.1 Deaths and Animals Euthanized *in Extremis* (Moribund):

All animals found dead or euthanized *in extremis* (via carbon dioxide inhalation) during the study will be subjected to a gross necropsy. The necropsy will include examination of the external surface, all orifices and the cranial, thoracic, abdominal and pelvic cavities, including viscera. Gross lesions will be preserved in 10% neutral-buffered formalin for possible future histopathological examination.

9.2 Scheduled Euthanasia:

9.2.1 Neuropathology - Macroscopic Examination:

At the termination of the study (study day 15), rats will be deeply anesthetized by an intraperitoneal injection of sodium pentobarbital and perfused *in situ* (buffered 4.0% paraformaldehyde/1.4% glutaraldehyde solution) as described in WIL Standard Operating Procedure

No. T3-034, as revised. Brain weight (including olfactory bulbs) and size (length [excluding olfactory bulbs] and width) of the perfused brains will be recorded. Any abnormal coloration or lesions of the brain and spinal cord will be recorded.

9.2.2 Neuropathology - Microscopic Examination:

Of the 12 rats/sex/group perfused *in situ*, 6 rats/sex/group (high–dose and control groups only) will be randomly selected for microscopic neuropathological evaluation. The following tissues will be collected:

Brain – olfactory bulbs, cerebral cortex (2 levels), hippocampus/dentate gyrus, basal ganglia, thalamus, hypothalamus, midbrain, cerebellum, pons and medulla oblongata
Spinal cord - at cervical swellings C_3-C_7 and at lumbar swellings T_{13}-L_4
Trigeminal ganglia/nerves[a]
Lumbar dorsal root ganglia at T_{13}-L_4*
Lumbar dorsal root fibers at T_{13}-L_4*
Lumbar ventral root fibers at T_{13}-L_4*
Cervical dorsal root ganglia at C_3-C_7*
Cervical dorsal root fibers at C_3-C_7*
Cervical ventral root fibers at C_3-C_7*
Cervical spinal nerve
Lumbar spinal nerve
Sciatic nerves (mid-thigh region)(2)+
Sciatic nerves (sciatic notch)(2)+
Sural nerves(2)+
Tibial nerves(2)+
Peroneal nerves(2)+
Optic nerves[a]
Eyes[a]
Skeletal muscle - gastrocnemius
Other sites - if deemed necessary

[a] Both processed and evaluated microscopically
* 4-6 tissues will be collected at necropsy; 2 will be evaluated microscopically.
\+ One processed for microscopic examination
2 Indicates that 2 sections (1 transverse and 1 longitudinal) of the tissue will be evaluated from the right hind leg. The tissues from the left hind leg will be collected and preserved for possible future evaluation.

The central nervous system tissues listed above will be prepared for a qualitative histopathological examination by embedding in paraffin, sectioning and staining with hematoxylin and eosin. The peripheral nervous system tissues listed above will be prepared for a qualitative histopathological examination by embedding in plastic, sectioning and staining with hematoxylin and eosin.

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Based on the results of the qualitative examination and the professional judgment of the pathologist, selected sites and cellular components may be further evaluated by the use of additional methods (at additional cost). If no neuropathological alterations are observed, subsequent analysis will not be performed.

If any evidence of neuropathological alterations is found in the qualitative examinations then a subjective diagnosis will be performed for the purpose of evaluating possible dose response relationships. All regions of the nervous system exhibiting any evidence of neuropathological changes shall be included in this evaluation. Sections from all dose groups from each region will be examined in random order, without knowledge of the group assignment. The type and severity (minimal, mild, moderate or severe) of each lesion will be recorded. Each type of dose-related lesion (if present) and normal areas for comparison will be photographed.

10 STATISTICAL METHODS:

All statistical tests for experimental data will be performed using appropriate computing devices or programs as referenced below. All analyses will be two-tailed for significance levels of 5% and 1%. Mean values will be presented with standard deviations and/or standard errors.

10.1 Analyses Performed by WIL Research Laboratories, LLC:

10.1.1 In-Life Data:

Continuous data variables (mean body weights and body weight gains) will be analyzed by a parametric one-way analysis of variance (ANOVA) (Snedecor and Cochran, 1980) to determine intergroup differences. If the results of the ANOVA are significant ($p<0.05$), Dunnett's test (Dunnett, 1964) will be applied to the data to compare the test substance-treated groups to the control group.

10.1.2 Functional Observational Battery Data:

Functional observational battery (FOB) data will be subjected to a parametric one-way analysis of variance (ANOVA) (Snedecor and Cochran, 1980) to determine intergroup differences. If the results of the ANOVA are significant ($p<0.05$), Dunnett's test (Dunnett, 1964) will be used to compare the control and treated groups. FOB parameters that yield scalar or descriptive data will be analyzed by Fisher's Exact Test (Steel and Torrie, 1980).

10.1.3 Brain Weights and Measurements:

Absolute brain weights will be analyzed by a parametric one-way analysis of variance (ANOVA) (Snedecor and Cochran, 1980) to determine intergroup differences; brain lengths and widths will be also be analyzed using a parametric one-way ANOVA. If the results of the ANOVA are significant ($p<0.05$), Dunnett's test (Dunnett, 1964) will be applied to the data to compare the test substance-treated groups to the control group.

10.1.4 Necropsy and Pathology Data:

Necropsy and non-graded histopathologic findings of each treated group will be compared to those of the control group using the Fisher's Exact Test (Steel, 1980).

10.2 Analyses Performed by BioSTAT Consultants, Inc.:

10.2.1 Locomotor Activity Data:

Each analysis endpoint (total and ambulatory counts) will be analyzed, by sex and session, with a repeated measures analysis of variance (RANOVA). Factors in the model will include treatment group (TRT), time interval (TIME) and the interaction of time interval and treatment group (TRT*TIME). The SAS® procedure PROC MIXED will be used for analysis with the random effect of animal included as the repeated measurement. The covariance structure across time will be selected by comparing Akaike's Information Criterion (AIC).

The monotonic dose-response relationship will be evaluated using sequential linear trend tests based on ordinal spacing of dose levels. The linear dose by time interaction (LinTrt*Time) will be evaluated and, if significant at the 0.05 level, trend tests on treatment means will be performed at the 0.05 level for each time interval. If the linear dose by time interaction is not significant, the trend test will be conducted across the pooled time intervals of the entire session only.

Nonmonotonic dose responses will be evaluated whenever no significant linear trends are detected but TRT and/or TRT*TIME interaction is significant at the 0.01 level. Within the framework of the RANOVA, pairwise comparisons will be made for each individual test substance-treated group with the control group through linear contrasts. If TRT*TIME is significant, the comparisons will be conducted for each time interval. If only the TRT effect is significant, the comparisons will be conducted across the pooled time intervals of the entire session.

These nonmonotonic dose-response comparisons will be conducted at the 0.01 significance level.

All RANOVA statistical analyses will be conducted by BioSTAT Consultants, Inc., using SAS version 9.1 (SAS Institute, Inc., 2002-2003) software.

10.2.2 Pathology Data:

Graded histopathologic findings of each treated group will be compared to the control group utilizing the Mann-Whitney U-Test (Kruskal, 1952).

11 QUALITY ASSURANCE:

The study will be audited by the WIL Quality Assurance Unit while in progress to assure compliance with the study protocol, protocol amendments (if any), WIL Standard Operating Procedures and the appropriate provisions of the EPA TSCA and FIFRA Good Laboratory Practice Standards published in the Federal Register 40 CFR Part 792 and 40 CFR Part 160, respectively, and the OECD Principles of Good Laboratory Practice. The raw data and draft report will be audited by the WIL Quality Assurance Unit prior to submission to the Sponsor to assure that the final report accurately describes the conduct and findings of the study.

Data requiring repeated measures statistical analysis will be analyzed by BioSTAT Consultants, Inc., following the current procedural guidelines of BioSTAT Consultants, Inc. BioSTAT Consultants, Inc., will provide a statistical analysis report, which will be included as an appendix to the final report. Quality Assurance auditing of the statistical report (for internal consistency and consistency with the study report) will be conducted under the direction of the Quality Assurance Unit of WIL Research Laboratories, LLC.

This is a regulated study and will be included on the WIL master list of regulated studies.

12 RECORDS TO BE MAINTAINED:

All original raw data records, as defined by WIL SOPs and the applicable GLPs, will be stored as described in Section 13 in the Archives at WIL Research Laboratories, LLC.

13 WORK PRODUCT:

The Sponsor will have title to all documentation records, raw data, slides, specimens or other work product generated during the performance of the study. Any remaining dosing formulation samples will be discarded after issuance of the Final Report. All work product, including raw paper data, pertinent electronic storage media,

specimens and appropriate supporting documentation for statistical analyses conducted and reported by BioSTAT Consultants, Inc., will be retained in the Archives at WIL Research Laboratories, LLC for a period of 10 years following issuance of the final report. Thereafter, WIL Research Laboratories, LLC will charge a monthly archiving fee for retention of all work product. All work product will be stored in compliance with regulatory requirements.

Any work product, including documents, specimens and samples, that is required by this protocol, its amendments, or other written instructions of the Sponsor, to be shipped by WIL Research Laboratories, LLC to another location, will be appropriately packaged and labeled as defined by WIL's SOPs and delivered to a common carrier for shipment. WIL Research Laboratories, LLC will not be responsible for shipment following delivery to the common carrier.

14 REPORTS:

The final report will contain a summary, test substance data, methods and procedures, appropriate individual animal and summary data tables, a copy of the protocol and amendments (if any) and an interpretation and discussion of the study results. The report will contain all information necessary to conform to current EPA specifications. The final report will be comprehensive and will define level(s) inducing toxic effects as well as "no-effect" level(s) under the conditions of this investigation.

The following information will also be included in the final report.

A. Analytical Chemistry Report
B. Photomicrographs of tissue lesions (if present)
C. WIL Neurotoxicity Historical Control Data
D. WIL Neurotoxicity Positive Control Data
E. Graphic depiction of mean data for locomotor activity intervals for each session, by sex

WIL Research Laboratories, LLC will submit one copy of an audited draft report in a timely manner upon completion of the study prior to issuance of the final report. One revision will be permitted as part of the cost of the study, from which the Sponsor's reasonable revisions and suggestions will be incorporated into the final report, as appropriate. Additional changes or revisions may be made, at extra cost. It is expected that the Sponsor will review the draft report and provide comments to WIL within a two-month time frame following submission. WIL Research Laboratories, LLC will submit the final report within one month following receipt of comments. If the Sponsor's comments and/or authorization to finalize the report have not been received at WIL Research Laboratories, LLC within one year following submission of the draft report, WIL Research Laboratories, LLC may elect to finalize the report following appropriate written notification to the Sponsor. Two electronic copies

(e.g., PDF) of the final report (in .pdf format) on CD-R will be provided. Requests for additional electronic or paper copies of the final report may result in additional charges.

15 ANIMAL WELFARE ACT COMPLIANCE:

This study will comply with all applicable sections of the Final Rules of the Animal Welfare Act regulations (9 CFR Parts 1, 2 and 3). The Sponsor should make particular note of the following:

- The Sponsor Representative's signature on this protocol documents for the Study Director the Sponsor's assurance that the study described in this protocol does not unnecessarily duplicate previous experiments.
- Whenever possible, procedures used in this study have been designed to avoid or minimize discomfort, distress or pain to animals. All methods are described in this study protocol or in written laboratory Standard Operating Procedures.
- Animals that experience severe or chronic pain or distress that cannot be relieved will be painlessly euthanized as deemed appropriate by the veterinary staff and Study Director. The Sponsor will be advised by the Study Director of all circumstances that could lead to this action in as timely a manner as possible.
- Methods of euthanasia used during this study are in conformance with the above-referenced regulation.
- The Sponsor/Study Director has considered alternatives to procedures that may cause more than momentary or slight pain or distress to the animals and has provided a written narrative description (AWA covered species) of the methods and sources used to determine that alternatives are not available.

16 PROTOCOL MODIFICATION:

Modification of the protocol may be accomplished during the course of this investigation. However, no changes will be made in the study design without the verbal or written permission of the Sponsor. In the event that the Sponsor verbally requests or approves a change in the protocol, such changes will be made by appropriate documentation in the form of a protocol amendment. All alterations of the protocol and reasons for the modification(s) will be signed by the Study Director and the Sponsor Representative.

17 REFERENCES:

Beck, M.J., An Oral (Gavage) Dose Range-Finding Acute Neurotoxicity Study Of Tolclofos-Methyl In Rats (Study No. WIL-118042). WIL Research Laboratories, LLC, Ashland, OH, **DRAFT.**

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18 PROTOCOL APPROVAL:

Sponsor approval received via email on 11/16/2009
Date

Sumitomo Chemical Company, Ltd.

Toshihiko Yano, PhD
Sponsor Representative

20 Nov. 2009
Date

WIL Research Laboratories, LLC

Melissa J. Beck, PhD
Study Director

16 Nov 2009
Date

Donald G. Stump, PhD, DABT
Director, Developmental and
Reproductive Toxicology

16 Nov 2009
Date

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APPENDIX B

Certificate Of Analysis (Sponsor-Provided Data)

SUMITOMO CHEMICAL
http://www.sumitomo-chem.co.jp
27-1, Shinkawa 2-Chome, Chuo-ku, Tokyo 104-8260, Japan

Certificate of Analysis

We hereby declare that the content of active ingredient is effective until the following date.

1. Material : Tolclofos-methyl Technical Grade
2. Lot number : 080712G
3. Purity : 97.5%
4. Effective until : July 8,2012

July 23, 2009
Sumitomo Chemical Co., LTD.

Ken Otaka, Manager
Crop Protection Division International

APPENDIX C

Analysis Of Dosing Formulations (WIL Research Laboratories, LLC)

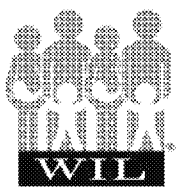
ED_005427A_00022422-00234

An Oral (Gavage) Acute Neurotoxicity Study of Tolclofos-Methyl in Rats

Analysis of Dosing Formulations

Analytical Chemistry Department

WIL Research Laboratories, LLC



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1. SUMMARY

A gas chromatography method using flame ionization detection for the determination of tolclofos-methyl concentration in formulations containing corn oil and test substance ranging in concentration from 20.0 to 500 mg/mL was validated in a previous study (Beck, 2010, WIL-118042). In the present study, formulations used for dose administration were analyzed to verify test substance concentration acceptability, and the results met the WIL standard operating procedure requirement for concentration acceptability for suspension formulations, i.e., the analyzed concentration was 85% to 115% of the target concentration. No test substance was detected in the analyzed vehicle administered to the control group.

2. INTRODUCTION

This report provides a detailed description of a gas chromatography (GC) method using flame ionization detection for the determination of tolclofos-methyl concentration in formulations containing corn oil and test substance ranging in concentration from 20.0 to 500 mg/mL. The method was validated in a previous study (Beck, 2010, WIL-118042) where assay specificity/selectivity, calibration reproducibility, precision, accuracy, ruggedness, and test substance stability in calibration standards and processed quality control (QC) samples stored at room temperature for 8 days were established. Also in that previous study, formulations prepared at target concentrations of 20 and 500 mg tolclofos-methyl/mL were analyzed, and test substance homogeneity and, following 8 days of refrigerated storage, resuspension homogeneity and stability were verified. In addition, test substance stability was verified in formulations prepared at target concentrations of 20 and 500 mg tolclofos-methyl/mL and following 8 hours of room temperature storage. In the present study, formulations used for dose administration were analyzed to verify test substance concentration acceptability.

3. REFERENCE STANDARD IDENTIFICATION

The reference standard, tolclofos-methyl A.S., was received from Sumitomo Chemical Company, Ltd., Osaka, Japan on 30 July 2009 as follows:

Identification	Quantity Received	Physical Description
Tolclofos-methyl A.S. Lot no. 000427G Expiration Date: 3 June 2010 [WIL log no. ARS-0872A]	1 Amber glass vial Gross weight: 8.762 g	White powder

Documentation regarding the purity and stability of the reference standard is on file with the Sponsor and WIL Research Laboratories, LLC. A Certificate of Analysis for the reference standard was provided by the Sponsor and is presented in Attachment I. The purity of the reference standard was 100%. The reference standard was stored refrigerated and protected from light, and was considered stable under these storage conditions. A reserve sample of the reference standard (approximately 0.002 g) was collected on 3 August 2009 and stored in the Archives at WIL Research Laboratories, LLC.

4. EXPERIMENTAL

4.1. GAS CHROMATOGRAPHY

Instrument:	Agilent 6890 gas chromatograph equipped with a flame ionization detector, an HP 7673 autosampler, and Dionex Chromeleon® data system, or equivalent
Column:	J&W Scientific DB-XLB column, 15 m × 0.25 mm ID, 0.1-µm film-thickness
Temperature Program:	Initial temperature 40°C, hold for 1.0 minute Ramp at 40°C/minute to 220°C Hold at 220°C for 0.5 minutes Ramp at 60°C/minute to 280°C Hold at 280°C for 1.0 minute
Carrier Gas:	Helium

Carrier Gas Flow Rate:	1.0 mL/minute
Injector Temperature:	275°C
Injection Volume:	0.2 µL split
Split Ratio:	1:10
Detector:	300°C
Retention Time:	Approximately 5.8 minutes for tolclofos-methyl
Run Time:	8.0 minutes

4.2. PREPARATION OF CALIBRATION STOCK SOLUTION AND STANDARDS

A calibration stock solution was prepared at a concentration of 500 µg tolclofos-methyl/mL as follows. Approximately 25 mg of tolclofos-methyl A.S. (WIL log no. ARS-0872A) was accurately weighed in a tared glass weigh funnel and transferred to a 50-mL volumetric flask with rinses of methylene chloride. The preparation was mixed as necessary to achieve complete dissolution of the test substance. Additional methylene chloride was added to obtain the desired concentration, and the solution was thoroughly mixed.

Calibration standards at concentrations of 50.0, 100, 150, 200, and 250 µg tolclofos-methyl/mL were prepared by diluting aliquots of the calibration stock solution with methylene chloride in autosampler vials. The vials were capped and mixed with vortex action. At least single calibration standards were prepared at each concentration; the standards were stored at room temperature.

4.3. PREPARATION OF QUALITY CONTROL STOCK SOLUTION AND SAMPLES

A QC stock solution was prepared at a concentration of 20.0 mg tolclofos-methyl/mL as follows. Approximately 4 g of tolclofos-methyl (WIL ID no. 0900BE) was accurately weighed in a 200-mL volumetric flask. Methylene chloride was added, and the preparation was mixed as necessary to achieve complete dissolution of the test substance.

Additional methylene chloride was added to obtain the desired concentration, and the solution was thoroughly mixed.

As detailed in the following table, QC samples were prepared to simulate the processing of formulations at concentrations of 20.0, 200, and 500 mg tolclofos-methyl/mL (nominal QC concentrations) by combining aliquots of the QC stock solution, vehicle (corn oil), and methylene chloride in polypropylene tubes. The processed samples were mixed with vortex action. Portions of the samples were further diluted with methylene chloride in autosampler vials or polypropylene tubes. Portions of the diluted samples in polypropylene tubes were transferred to autosampler vials for analysis. The QC samples were prepared in triplicate at each concentration; a single vehicle blank sample was prepared.

QC Level	Nominal QC Concentration (mg/mL)	Vehicle Volume (mL)	QC Stock Volume (mL)	Methylene Chloride Volume (mL)	Secondary Dilution	Theoretical Final Concentration (µg/mL)
Blank	0	1.00	0	19.0	6.67-fold	0
Low	20.0	1.00	1.00	18.0	6.67-fold	150
Middle	200	1.00	10.0	29.0	33.3-fold	150
High	500	1.00	25.0	24.0	66.67-fold	150

4.4. PROCESSING OF FORMULATION SAMPLES

Duplicate formulation samples were collected using a syringe and dosing cannula and placed in polypropylene tubes. As indicated in the following table, formulation samples were processed by adding methylene chloride and mixing with vortex action. Samples were further diluted with methylene chloride in autosampler vials or polypropylene tubes. Portions of the diluted samples in polypropylene tubes were transferred to autosampler vials for analysis.

Target Concentration (mg/mL)	Formulation Volume (mL)	Methylene Chloride Volume (mL)	Secondary Dilution	Theoretical Final Concentration (µg/mL)
0	1.0	19.0	13.3-fold	0
40	1.0	19.0	13.3-fold	150
140	1.0	39.0	23.3-fold	150
400	1.0	39.0	66.67-fold	150

4.5. CALIBRATION AND QUANTITATION

Single injections were made of each calibration standard and processed QC and formulation sample. A calibration curve was constructed for each set of analyses. The tolclofos-methyl peak areas (y) and the theoretical concentrations of the calibration standards (x) were fit with least-squares regression analysis to the linear function:

$$y = ax + b$$

Concentrations were calculated from the results of the regression analysis using Dionex Chromeleon® software. The concentration data were transferred to a Microsoft® Excel spreadsheet where appropriate summary statistics, i.e., mean, standard deviation (SD), percent relative standard deviation (RSD), percent relative error (%RE), and concentration as a percent of target concentration, were calculated and presented in tabular form. The concentrations of the formulation and QC samples were calculated by applying any necessary factors to correct for extraction, dilution, and unit conversion. A correction factor of 1.026 was also applied to the QC and formulation samples to correct for a difference in purity between the reference standard and test substance.

5. RESULTS AND DISCUSSION

Under the described chromatographic conditions, the retention time of the test substance was approximately 5.8 minutes. Figure 1, Figure 2, Figure 3, and Figure 4 are typical chromatograms of a calibration standard, a processed QC sample, a processed formulation sample, and a processed vehicle formulation sample, respectively. The total analysis time required for each run was 8 minutes.

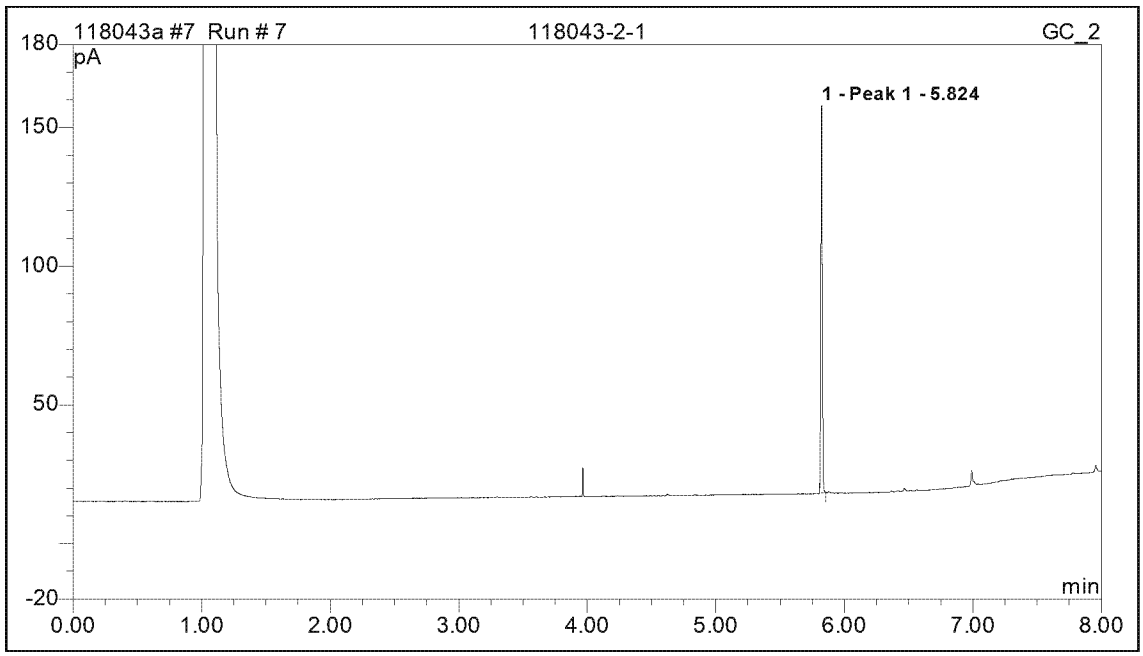

Figure 1: Representative Chromatogram Of A 50.0 µg Tolclofos-Methyl/mL Calibration Standard

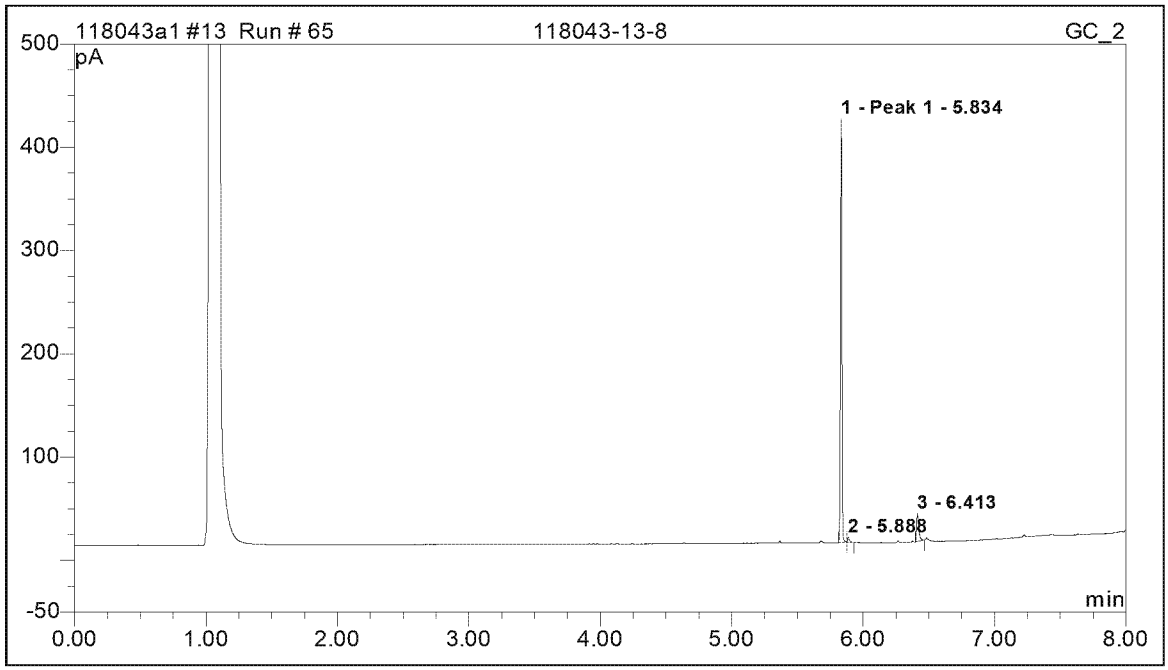

Figure 2: Representative Chromatogram of a Processed 500 mg Tolclofos-Methyl/mL Quality Control Sample

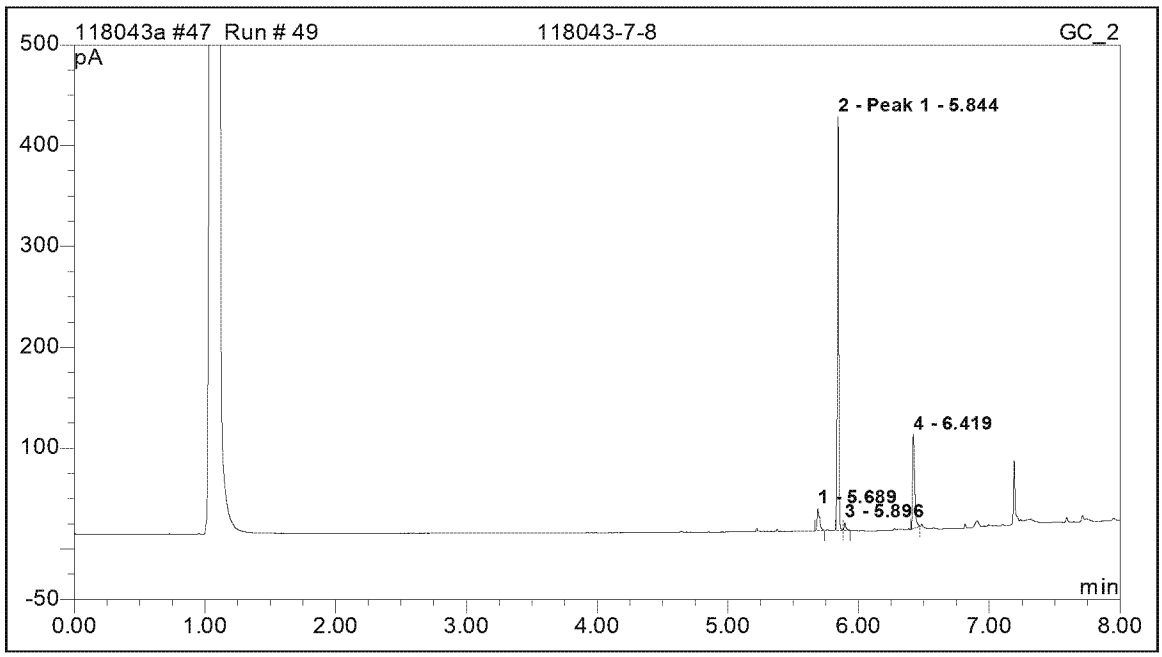

Figure 3: Representative Chromatogram of a Processed 400 mg Tolclofos-Methyl/mL Formulation Sample

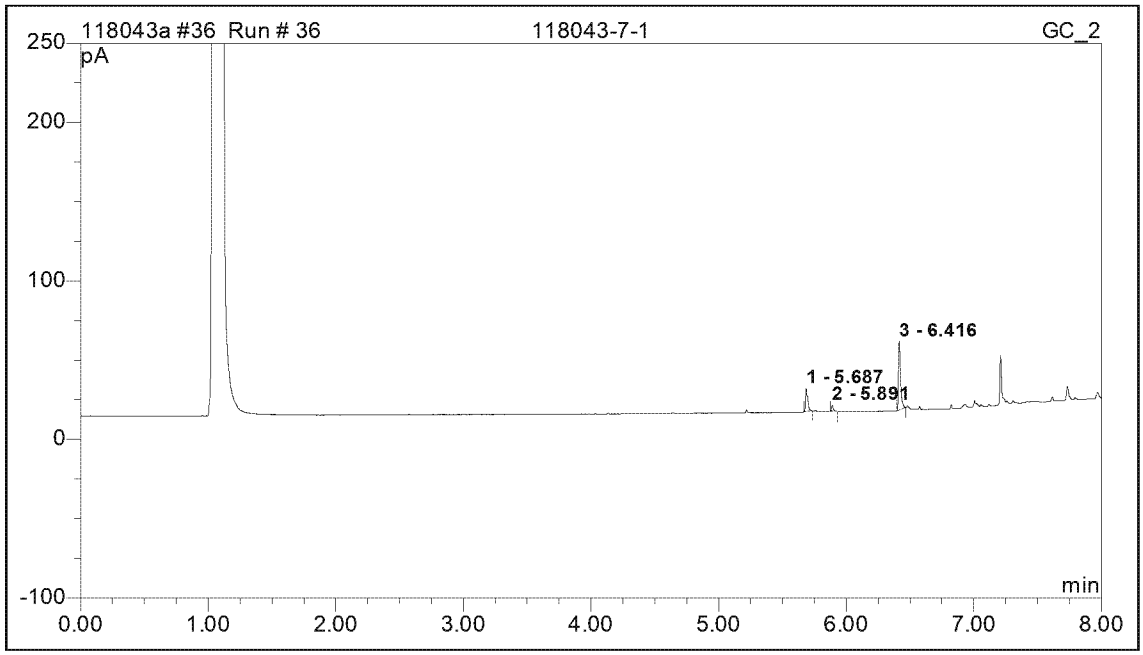

Figure 4: Chromatogram of a Processed Vehicle Formulation Sample

5.1. SPECIFICITY/SELECTIVITY

As shown in Figure 4 (and in contrast to the chromatograms shown in Figure 1, Figure 2, and Figure 3), assay specificity/selectivity was confirmed when GC/FID analysis of processed vehicle samples revealed that there were no significant peaks (with signal-to-noise ratio >10) at or near the retention time for the test substance (approximately 5.8 minutes).

5.2. ASSAY ACCEPTABILITY

In addition to the experimental samples, each analytical session consisted of (but was not limited to) calibration standards at 5 concentrations and triplicate QC samples prepared at each of 3 concentrations. In this study, the formulations were prepared at target concentrations of 0, 40, 140, and 400 mg tolclofos-methyl/mL, and the QC samples were prepared at nominal concentrations of 20.0, 200, and 500 mg tolclofos-methyl/mL. For an analytical session to be considered valid, at least two-thirds of the calculated QC concentrations with at least 1 sample at each concentration had to be 85% to 115% of the

nominal QC concentration. All reported results were from analytical sessions that met the acceptance criteria.

5.3. TEST SUBSTANCE CONCENTRATION IN FORMULATIONS

Formulations used for dose administration were analyzed to assess test substance concentration acceptability. The results of the concentration acceptability assessments are presented in Table 1 and Table 2 with the mean concentration and percent of target values summarized in the following table.

	Mean Concentration, mg/mL (% Of Target)			
Date Of Preparation	Group 1M/1F (0 mg/mL)	Group 2M (40 mg/mL)	Group 3M (140 mg/mL)	Group 4M (400 mg/mL)
27 November 2009	ND	39.4 (98.6)	135 (96.6)	394 (98.6)
		Group 2F (40 mg/mL)	Group 3F (140 mg/mL)	Group 4F (400 mg/mL)
		40.9 (102)	138 (98.3)	399 (99.8)

ND = No test substance chromatographic peak detected

The analyzed formulations used for dose administration met the WIL standard operating procedure (SOP) requirement for concentration acceptability for suspension formulations, i.e., the analyzed concentration was 85% to 115% of the target concentration. No test substance was detected in the analyzed vehicle administered to the control group (Group 1M/1F).

6. CONCLUSION

A validated GC/FID method was used for the determination of tolclofos-methyl concentration in formulations containing corn oil and test substance ranging in concentration from 40 to 400 mg/mL. Formulations used for dose administration met the applicable WIL SOP acceptance criteria for test substance concentration

acceptability. No test substance was detected in the analyzed vehicle administered to the control group.

7. REFERENCES

Beck, M.J. An Oral (Gavage) Dose Range-Finding Acute Neurotoxicity Study of Tolclofos-Methyl in Rats (Study No. WIL-118042). WIL Research Laboratories, LLC, Ashland, OH, **2010**.

8. KEY STUDY PERSONNEL AND REPORT SUBMISSION

Report Submitted by:

Melissa J. Beck, PhD
Assistant Director, Neurosciences
Study Director

21 Apr 2010
Date

Report Prepared by:

Eric S. Bodle, PhD
Research Chemist, Analytical Chemistry

21 Apr. 2010
Date

Report Reviewed by:

Philip L. Stetson, MD, PhD
Associate Director, Analytical Chemistry

21 Apr. 2010
Date

Daniel W. Syed, PhD
Director, Metabolism and Analytical Chemistry

21 Apr. 2010
Date

Study Personnel:

Stephen F. Farris, Jr., BS	Chemist II
Amber M. Hopkins, BA	Chemist I
Gregory A. Hawks, AS	Publishing Specialist, Study Analysis and Reports
Melissa A. Hull, BS	Group Supervisor, Regulatory Technical Services

TABLES 1 - 2

AN ORAL (GAVAGE) ACUTE
NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

Table 1: Concentration Assessment of the 27 November 2009 Formulations

(Analyzed 27 November 2009)

Group/Strata	Dose Conc (mg/mL)	Ref # (118043-)	Run #	Analyzed Conc* (mg/mL)	Percent of Target (%)	Mean Conc (mg/mL)	SD	RSD (%)	Mean Conc % of Target (%)
1M/1F/Mid	0	7 - 1	36			----------Not Detected----------			
		7 - 2	37			----------Not Detected----------			
2M/Mid	40	7 - 3	40	39.8	99.5	39.4	0.54	1.4	98.6
		7 - 4	41	39.1	97.6				
3M/Mid	140	7 - 5	44	132	93.9	135	5.2	3.9	96.6
		7 - 6	45	139	99.2				
4M/Mid	400	7 - 7	48	400	99.9	394	7.7	2.0	98.6
		7 - 8	49	389	97.2				

* Correction factor of 1.026 applied to formulation sample data to account for 2.5% purity discrepancy between ARS and TMS

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AN ORAL (GAVAGE) ACUTE
NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

Table 2: Concentration Assessment of the 27 November 2009 Formulations

(Analyzed 27 November 2009)

Group/Strata	Dose Conc (mg/mL)	Ref # (118043-)	Run #	Analyzed Conc* (mg/mL)	Percent of Target (%)	Mean Conc (mg/mL)	SD	RSD (%)	Mean Conc % of Target (%)
2F/Mid	40	9 - 1	42	41.5	104	40.9	0.82	2.0	102
		9 - 2	43	40.3	101				
3F/Mid	140	9 - 3	46	138	98.3	138	0.013	0.0096	98.3
		9 - 4	47	138	98.3				
4F/Mid	400	9 - 5	50	402	100	399	3.6	0.91	99.8
		9 - 6	51	397	99.1				

* Correction factor of 1.026 applied to formulation sample data to account for 2.5% purity discrepancy between ARS and TMS

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ATTACHMENT I

Certificate of Analysis

SUMITOMO CHEMICAL
http://www.sumitomo-chem.co.jp

CERTIFICATE OF ANALYSIS

We hereby declare that the purity of the material certified by the report (Study No.H07007 is effective until the following date.)

1. Material	:	Rizolex A.S.
2. Lot number	:	000427G
3. Purity	:	100%
4. Effective until	:	June 3,2010

RECEIVED
BY: LDT

June.26,2008
Sumitomo Chemical Co.,LTD.

Ken Otaka

Ken Otaka ,Manager
Crop Protection Division International

APPENDIX D

Food and Water Analyses

ED_005427A_00022422-00254

LabDiet PMI NUTRITION INTERNATIONAL

Return to Certified Analysis Retrieval

Product Code: 5002M
Product Desc: CERTIFIED RODENT DIET MEAL
Lab Number: L0920854-2
Lot Code: AUG 13 09 3B
Entered: 9/3/2009

Assay	Analysis	Units
PROTEIN	20.8	%
FAT (ACID HYDRO)	6.09	%
FIBER (CRUDE)	4.41	%
ARSENIC	LESS THAN 0.2	PPM
CADMIUM	0.0551	PPM
CALCIUM	0.8159	%
LEAD	0.187	PPM
MERCURY	LESS THAN 0.025	PPM
PHOSPHORUS	0.6314	%
SELENIUM	0.325	PPM

Organophosphates	PPM	Organophosphates	PPM
Diazinon	LESS THAN 0.02	Disulfoton	LESS THAN 0.02
Ethion	LESS THAN 0.02	Malathion	LESS THAN 0.02
Methyl Parathion	LESS THAN 0.02	Parathion	LESS THAN 0.02
Thimet	LESS THAN 0.02	Trithion	LESS THAN 0.02

Chlorinated Hydrocarbons and PCB	PPM	Chlorinated Hydrocarbons and PCB	PPM
Aldrin	LESS THAN 0.02	Alpha-BHC	LESS THAN 0.02
Beta-BHC	LESS THAN 0.02	Chlordane	LESS THAN 0.02
DDE	LESS THAN 0.02	DDT	LESS THAN 0.02
Delta-BHC	LESS THAN 0.02	Dieldrin	LESS THAN 0.02
Endrin	LESS THAN 0.02	HCB	LESS THAN 0.02
Heptachlor	LESS THAN 0.02	Heptachlor Epoxide	LESS THAN 0.02
Lindane	LESS THAN 0.02	Methoxychlor	LESS THAN 0.02
Mirex	LESS THAN 0.02	PCB	LESS THAN 0.15
Thiodan	LESS THAN 0.02		

AFLATOXINS	PPB Aflatoxins	LESS THAN 5

No notes.

Approved by: Angela Crutcher

Angela Crutcher

For additional information, please contact:
1) Customer Service at (314) 982-1310 -- for assay methodology
2) Dr. Kristi Thompson, (765)894-3104 or Dr. Carrie Schultz, (314)974-6529 -- for nutritional interpretation
3) Richmond, IN Manufacturing Plant at (765) 962-9561 -- all other questions

The term "Less Than" is used to signify the lower limit of quantitation of the procedure under the conditions employed.
The use of the term "Less Than" does not imply that traces of analyte were present.

LabDiet PMI NUTRITION INTERNATIONAL

Return to Certified Analysis Retrieval

Product Code: 5002M
Product Desc: CERTIFIED RODENT DIET MEAL
Lab Number: L0921833-1
Lot Code: SEP 03 09 3A
Entered: 9/22/2009

Assay	Analysis	Units
PROTEIN	20.8	%
FAT (ACID HYDRO)	5.7	%
FIBER (CRUDE)	4.42	%
ARSENIC	LESS THAN 0.2	PPM
CADMIUM	0.0833	PPM
CALCIUM	0.9721	%
LEAD	0.188	PPM
MERCURY	LESS THAN 0.025	PPM
PHOSPHORUS	0.682	%
SELENIUM	0.409	PPM

Organophosphates	PPM	Organophosphates	PPM
Diazinon	LESS THAN 0.02	Disulfoton	LESS THAN 0.02
Ethion	LESS THAN 0.02	Malathion	LESS THAN 0.02
Methyl Parathion	LESS THAN 0.02	Parathion	LESS THAN 0.02
Thimet	LESS THAN 0.02	Trithion	LESS THAN 0.02

Chlorinated Hydrocarbons and PCB	PPM	Chlorinated Hydrocarbons and PCB	PPM
Aldrin	LESS THAN 0.02	Alpha-BHC	LESS THAN 0.02
Beta-BHC	LESS THAN 0.02	Chlordane	LESS THAN 0.02
DDE	LESS THAN 0.02	DDT	LESS THAN 0.02
Delta-BHC	LESS THAN 0.02	Dieldrin	LESS THAN 0.02
Endrin	LESS THAN 0.02	HCB	LESS THAN 0.02
Heptachlor	LESS THAN 0.02	Heptachlor Epoxide	LESS THAN 0.02
Lindane	LESS THAN 0.02	Methoxychlor	LESS THAN 0.02
Mirex	LESS THAN 0.02	PCB	LESS THAN 0.15
Thiodan	LESS THAN 0.02		

AFLATOXINS	PPB Aflatoxins	LESS THAN 5

No notes.

Approved by: Angela Crutcher

Angela Crutcher

For additional information, please contact:
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The use of the term "Less Than" does not imply that traces of analyte were present.

LabDiet PMI NUTRITION INTERNATIONAL

Return to Certified Analysis Retrieval

Product Code: 5002M
Product Desc: CERTIFIED RODENT DIET MEAL
Lab Number: L0922910-2
Lot Code: SEP 25 09 3B
Entered: 11/5/2009

Assay	Analysis	Units
PROTEIN	20.6	%
FAT (ACID HYDRO)	5.72	%
FIBER (CRUDE)	4.4	%
ARSENIC	LESS THAN 0.2	PPM
CADMIUM	0.08	PPM
CALCIUM	0.8677	%
LEAD	0.171	PPM
MERCURY	LESS THAN 0.025	PPM
PHOSPHORUS	0.6186	%
SELENIUM	0.397	PPM

Organophosphates	PPM	Organophosphates	PPM
Diazinon	LESS THAN 0.02	Disulfoton	LESS THAN 0.02
Ethion	LESS THAN 0.02	Malathion	LESS THAN 0.02
Methyl Parathion	LESS THAN 0.02	Parathion	LESS THAN 0.02
Thimet	LESS THAN 0.02	Trithion	LESS THAN 0.02

Chlorinated Hydrocarbons and PCB	PPM	Chlorinated Hydrocarbons and PCB	PPM
Aldrin	LESS THAN 0.02	Alpha-BHC	LESS THAN 0.02
Beta-BHC	LESS THAN 0.02	Chlordane	LESS THAN 0.02
DDE	LESS THAN 0.02	DDT	LESS THAN 0.02
Delta-BHC	LESS THAN 0.02	Dieldrin	LESS THAN 0.02
Endrin	LESS THAN 0.02	HCB	LESS THAN 0.02
Heptachlor	LESS THAN 0.02	Heptachlor Epoxide	LESS THAN 0.02
Lindane	LESS THAN 0.02	Methoxychlor	LESS THAN 0.02
Mirex	LESS THAN 0.02	PCB	LESS THAN 0.15
Thiodan	LESS THAN 0.02		

AFLATOXINS	PPB Aflatoxins	LESS THAN 5

No notes.

Approved by: Angela Crutcher

Angela Crutcher

For additional information, please contact:
1) Customer Service at (314) 982-1310 -- for assay methodology
2) Dr. Kristi Thompson, (765)894-3104 or Dr. Carrie Schultz, (314)974-6529 -- for nutritional interpretation
3) Richmond, IN Manufacturing Plant at (765) 962-9561 -- all other questions

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The use of the term "Less Than" does not imply that traces of analyte were present.

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Client #: I0043
Wil Research Laboratories
1407 George Road
Ashland, OH 44805

Report Date: *20-Oct-09*

Phone: (419) 289-8700 **Ext:**
FAX: (419) 289-3650

Attn: Walt Miller

Our Lab #: 09-17255
Date Logged-In: 9/30/09
Sample Type: Drinking Water
Project #:

Your Sample ID: Before RO West
Sample Source: SDWA/WTP's
Client Project #:
Date Submitted to Lab: 9/30/2009
PO#:

- COLLECTION INFORMATION -

Date/Time/By: 9/30/2009 6:19 AM T Shriver

EPA Method	Analyst	Extraction Date	Analysis Date	Parameter	Result	PQL
200.7						
	RCM/DB		10/6/2009	Iron, Fe	< 40 µg/L	40
	RCM/DB		10/6/2009	Silver, Ag	< 20 µg/L	20
	RCM/DB		10/6/2009	Sodium, Na	80 mg/L	0.4
	RCM/DB		10/6/2009	Zinc, Zn	< 10 µg/L	10
200.8						
	RCM		10/8/2009	Arsenic, As	< 3.0 µg/L	3.0
	RCM		10/8/2009	Barium, Ba	< 10 µg/L	10
	RCM		10/8/2009	Cadmium, Cd	< 0.5 µg/L	0.5
	RCM		10/8/2009	Chromium, Cr	< 10 µg/L	10
	RCM		10/8/2009	Copper, Cu	< 10 µg/L	10
	RCM		10/8/2009	Lead, Pb	< 2.0 µg/L	2.0
	RCM		10/8/2009	Nickel, Ni	< 10 µg/L	10
	RCM		10/8/2009	Selenium, Se	< 3.0 µg/L	3.0
245.2						
	LGE		10/6/2009	Mercury, Hg	< 0.2 µg/L	0.2

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Lab Number 09-17255 -Continued from Previous Page

EPA Method	Analyst	Extraction Date	Analysis Date	Parameter	Result	PQL
353.2/SM4500NO3	*(Continued from previous page).*					
353.2/SM4500 NO3						
	TLL		10/1/2009	Nitrogen, Nitrate + Nitrite (as N)	< 0.10 mg/L	0.10
508						
	RDK	10/2/2009	10/13/2009	Aldrin	< 0.02 ug/L	0.02
	RDK	10/2/2009	10/13/2009	Aroclor 1016	< 0.09 ug/L	0.09
	RDK	10/2/2009	10/13/2009	Aroclor 1221	< 0.11 ug/L	0.11
	RDK	10/2/2009	10/13/2009	Aroclor 1232	< 0.11 ug/L	0.11
	RDK	10/2/2009	10/13/2009	Aroclor 1242	< 0.11 ug/L	0.11
	RDK	10/2/2009	10/13/2009	Aroclor 1248	< 0.11 ug/L	0.11
	RDK	10/2/2009	10/13/2009	Aroclor 1254	< 0.11 ug/L	0.11
	RDK	10/2/2009	10/13/2009	Aroclor 1260	< 0.11 ug/L	0.11
	RDK	10/2/2009	10/13/2009	Chlordane(Total)	< 0.22 ug/L	0.22
	RDK	10/2/2009	10/13/2009	Dieldrin	< 0.02 ug/L	0.02
	RDK	10/2/2009	10/13/2009	Endrin	< 0.01 ug/L	0.01
	RDK	10/2/2009	10/13/2009	gamma-BHC (Lindane)	< 0.02 ug/L	0.02
	RDK	10/2/2009	10/13/2009	Heptachlor	< 0.04 ug/L	0.04
	RDK	10/2/2009	10/13/2009	Heptachlor epoxide	< 0.02 ug/L	0.02
	RDK	10/2/2009	10/13/2009	Hexachlorobenzene	< 0.11 ug/L	0.11
	RDK	10/2/2009	10/13/2009	Hexachlorocyclopentadiene	< 0.11 ug/L	0.11
	RDK	10/2/2009	10/13/2009	Methoxychlor	< 0.11 ug/L	0.11
	RDK	10/2/2009	10/13/2009	Propachlor	< 0.06 ug/L	0.06
	RDK	10/2/2009	10/13/2009	Toxaphene	< 1.1 ug/L	1.1
515.1						
	KVS	10/2/2009	10/7/2009	2,4-Dichlorophenoxyacetic acid (2,4-D)	< 0.10 ug/L	0.10
	KVS	10/2/2009	10/7/2009	Dalapon	< 1.0 ug/L	1.0
	KVS	10/2/2009	10/7/2009	Dicamba	< 0.50 ug/L	0.50
	KVS	10/2/2009	10/7/2009	Dinoseb	< 0.20 ug/L	0.20
	KVS	10/2/2009	10/7/2009	Pentachlorophenol	< 0.04 ug/L	0.04

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Lab Number 09-17255 -Continued from Previous Page

EPA Method	Analyst	Extraction Date	Analysis Date	Parameter	Result	PQL
515.1	*(Continued from previous page).*					
	KVS	10/2/2009	10/7/2009	Picloram	< 0.10 ug/L	0.10
	KVS	10/2/2009	10/7/2009	Silvex	< 0.20 ug/L	0.20
524.2						
	SLB		10/5/2009	1,1,1,2-Tetrachloroethane	< 0.5 ug/l	0.5
	SLB		10/5/2009	1,1,1-Trichloroethane	< 0.5 ug/l	0.5
	SLB		10/5/2009	1,1,2,2-Tetrachloroethane	< 0.5 ug/l	0.5
	SLB		10/5/2009	1,1,2-Trichloroethane	< 0.5 ug/l	0.5
	SLB		10/5/2009	1,1-Dichloroethane	< 0.5 ug/l	0.5
	SLB		10/5/2009	1,1-Dichloroethene	< 0.5 ug/l	0.5
	SLB		10/5/2009	1,1-Dichloropropene	< 0.5 ug/l	0.5
	SLB		10/5/2009	1,2,3-Trichlorobenzene	< 0.5 ug/l	0.5
	SLB		10/5/2009	1,2,3-Trichloropropane	< 0.5 ug/l	0.5
	SLB		10/5/2009	1,2,4-Trichlorobenzene	< 0.5 ug/l	0.5
	SLB		10/5/2009	1,2,4-Trimethylbenzene	< 0.5 ug/l	0.5
	SLB		10/5/2009	1,2-Dibromo-3-chloropropane	< 0.50 ug/l	0.50
	SLB		10/5/2009	1,2-Dibromoethane (EDB)	< 0.50 ug/l	0.50
	SLB		10/5/2009	1,2-Dichlorobenzene	< 0.5 ug/l	0.5
	SLB		10/5/2009	1,2-Dichloroethane	< 0.5 ug/l	0.5
	SLB		10/5/2009	1,2-Dichloropropane	< 0.5 ug/l	0.5
	SLB		10/5/2009	1,3,5-Trimethylbenzene	< 0.5 ug/l	0.5
	SLB		10/5/2009	1,3-Dichlorobenzene	< 0.5 ug/l	0.5
	SLB		10/5/2009	1,3-Dichloropropane	< 0.5 ug/l	0.5
	SLB		10/5/2009	1,4-Dichlorobenzene	< 0.5 ug/l	0.5
	SLB		10/5/2009	2,2-Dichloropropane	< 0.5 ug/l	0.5
	SLB		10/5/2009	2-Chlorotoluene	< 0.5 ug/l	0.5
	SLB		10/5/2009	4-Chlorotoluene	< 0.5 ug/l	0.5
	SLB		10/5/2009	Benzene	< 0.5 ug/l	0.5
	SLB		10/5/2009	Bromobenzene	< 0.5 ug/l	0.5
	SLB		10/5/2009	Bromochloromethane	< 0.5 ug/l	0.5
	SLB		10/5/2009	Bromodichloromethane	8.5 ug/l	0.5
	SLB		10/5/2009	Bromoform	4.7 ug/l	0.5

Your Sample ID: Before RO West

Lab Number 09-17255

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Lab Number 09-17255 -Continued from Previous Page

EPA Method	Analyst	Extraction Date	Analysis Date	Parameter	Result	PQL
524.2	*(Continued from previous page).*					
	SLB		10/5/2009	Bromomethane	< 0.5 ug/l	0.5
	SLB		10/5/2009	Carbon tetrachloride	< 0.5 ug/l	0.5
	SLB		10/5/2009	Chlorobenzene	< 0.5 ug/l	0.5
	SLB		10/5/2009	Chloroethane	< 0.5 ug/l	0.5
	SLB		10/5/2009	Chloroform	4.0 ug/l	0.5
	SLB		10/5/2009	Chloromethane	< 0.5 ug/l	0.5
	SLB		10/5/2009	cis-1,2-Dichloroethene	< 0.5 ug/l	0.5
	SLB		10/5/2009	cis-1,3-Dichloropropene	< 0.50 ug/l	0.50
	SLB		10/5/2009	Dibromochloromethane	11 ug/l	0.5
	SLB		10/5/2009	Dibromomethane	< 0.5 ug/l	0.5
	SLB		10/5/2009	Dichlorodifluoromethane	< 0.5 ug/l	0.5
	SLB		10/5/2009	Ethylbenzene	< 0.5 ug/l	0.5
	SLB		10/5/2009	Hexachlorobutadiene	< 0.5 ug/l	0.5
	SLB		10/5/2009	Isopropylbenzene	< 0.5 ug/l	0.5
	SLB		10/5/2009	m&p Xylenes	< 1.0 ug/l	1.0
	SLB		10/5/2009	methyl-tert-butyl-ether	< 5.00 ug/l	5.00
	SLB		10/5/2009	Methylene chloride	< 0.5 ug/l	0.5
	SLB		10/5/2009	n-Butylbenzene	< 0.5 ug/l	0.5
	SLB		10/5/2009	n-Propylbenzene	< 0.5 ug/l	0.5
	SLB		10/5/2009	Naphthalene	< 0.5 ug/l	0.5
	SLB		10/5/2009	o-Xylene	< 0.5 ug/l	0.5
	SLB		10/5/2009	p-Isopropyltoluene	< 0.5 ug/l	0.5
	SLB		10/5/2009	sec-Butylbenzene	< 0.5 ug/l	0.5
	SLB		10/5/2009	Styrene	< 0.5 ug/l	0.5
	SLB		10/5/2009	tert-Butylbenzene	< 0.5 ug/l	0.5
	SLB		10/5/2009	Tetrachloroethene	< 0.5 ug/l	0.5
	SLB		10/5/2009	Toluene	< 0.5 ug/l	0.5
	SLB		10/5/2009	trans-1,2-Dichloroethene	< 0.5 ug/l	0.5
	SLB		10/5/2009	trans-1,3-Dichloropropene	< 0.50 ug/l	0.50
	SLB		10/5/2009	Trichloroethene	< 0.5 ug/l	0.5
	SLB		10/5/2009	Trichlorofluoromethane	< 0.5 ug/l	0.5
	SLB		10/5/2009	Vinyl chloride	< 0.5 ug/l	0.5

Your Sample ID: Before RO West

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Lab Number 09-17255 -Continued from Previous Page

EPA Method	Analyst	Extraction Date	Analysis Date	Parameter	Result	PQL
524.2	*(Continued from previous page).*					
	SLB		10/5/2009	Xylene, Total	< 1.5 ug/l	1.5
525.2						
	TMB	10/5/2009	10/6/2009	Alachlor	< 0.20 ug/L	0.20
	TMB	10/5/2009	10/6/2009	Atrazine	< 0.10 ug/L	0.10
	TMB	10/5/2009	10/6/2009	Benzo(a)pyrene	< 0.02 ug/L	0.02
	TMB	10/5/2009	10/6/2009	Bis(2-ethylhexyl)adipate	< 0.60 ug/L	0.60
	TMB	10/5/2009	10/6/2009	Bis(2-ethylhexyl)phthalate	< 0.60 ug/L	0.60
	TMB	10/5/2009	10/6/2009	Butachlor	< 0.10 ug/L	0.10
	TMB	10/5/2009	10/6/2009	Metolachlor	< 0.20 ug/L	0.20
	TMB	10/5/2009	10/6/2009	Metribuzin	< 0.20 ug/L	0.20
	TMB	10/5/2009	10/6/2009	Simazine	< 0.07 ug/L	0.07
531.2						
	TMB		10/1/2009	3-Hydroxycarbofuran	< 0.5 ug/L	0.5
	TMB		10/1/2009	Aldicarb	< 0.5 ug/L	0.5
	TMB		10/1/2009	Aldicarb sulfone	< 0.5 ug/L	0.5
	TMB		10/1/2009	Aldicarb sulfoxide	< 0.5 ug/L	0.5
	TMB		10/1/2009	Carbaryl (Sevin)	< 0.5 ug/L	0.5
	TMB		10/1/2009	Carbofuran	< 0.5 ug/L	0.5
	TMB		10/1/2009	Methiocarb	< 0.5 ug/L	0.5
	TMB		10/1/2009	Methomyl	< 0.5 ug/L	0.5
	TMB		10/1/2009	Oxamyl	< 0.5 ug/L	0.5
	TMB		10/1/2009	Propoxur (Baygon)	< 0.5 ug/L	0.5

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--- Surrogate Recoveries ---

QC Lab#	EPA Method	Surrogate Name	Percent Recovery	Lower Limit	Upper Limit
09-17255	508	Decachlorobiphenyl (Surr)	114 %R	70	130
09-17255	515.1	DCAA (Surr)	86 %R	70	130
09-17255	524.2	1,2-Dichlorobenzene-d4 (Surr)	88 %R	70	130
09-17255	524.2	Bromofluorobenzene (BFB) (Surr)	92 %R	70	130
09-17255	525.2	1,3-Dimethyl-2-nitrobenzene (Surr)	103 %R	70	130
09-17255	525.2	Perylene-d12 (Surr)	95 %R	70	130
09-17255	525.2	Triphenylphosphate (Surr)	119 %R	70	130
09-17255	531.2	BDMC (Surr)	74 %R	70	130

«-- End of Report --»

Total Pages in Report: 6

Report Approved By: Rhonda C. Morris
Rhonda C. Morris
Laboratory Manager

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- CERTIFICATE OF ANALYSIS -

Analyzed at Alloway - Marion

Client #: I0043
Wil Research Laboratories
1407 George Road
Ashland, OH 44805

Report Date: *20-Oct-09*

Phone: (419) 289-8700 **Ext:**
FAX: (419) 289-3650

Attn: Walt Miller

Our Lab #: 09-17256
Date Logged-In: 10/1/09
Sample Type: Drinking Water
Project #: 2009 Annual

Your Sample ID: After RO West
Sample Source: SDWA/WTP's
Client Project #:
Date Submitted to Lab: 9/30/2009
PO#:

- COLLECTION INFORMATION -

Date/Time/By: 9/30/2009 6:31 AM T Shriver

EPA Method	Analyst	Extraction Date	Analysis Date	Parameter	Result	PQL
200.7						
	RCM/DB		10/6/2009	Iron, Fe	< 40 µg/L	40
	RCM/DB		10/6/2009	Silver, Ag	< 20 µg/L	20
	RCM/DB		10/6/2009	Sodium, Na	1.3 mg/L	0.4
	RCM/DB		10/6/2009	Zinc, Zn	< 10 µg/L	10
200.8						
	RCM		10/8/2009	Arsenic, As	< 3.0 µg/L	3.0
	RCM		10/8/2009	Barium, Ba	< 10 µg/L	10
	RCM		10/8/2009	Cadmium, Cd	< 0.5 µg/L	0.5
	RCM		10/8/2009	Chromium, Cr	< 10 µg/L	10
	RCM		10/8/2009	Copper, Cu	< 10 µg/L	10
	RCM		10/8/2009	Lead, Pb	< 2.0 µg/L	2.0
	RCM		10/8/2009	Nickel, Ni	< 10 µg/L	10
	RCM		10/8/2009	Selenium, Se	< 3.0 µg/L	3.0
245.2						
	LGE		10/6/2009	Mercury, Hg	< 0.2 µg/L	0.2

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Analyzed at Alloway - Marion

Lab Number 09-17256 -Continued from Previous Page

EPA Method	Analyst	Extraction Date	Analysis Date	Parameter	Result	PQL
353.2/SM4500NO3	*(Continued from previous page).*					
353.2/SM4500 NO3						
	TLL		10/1/2009	Nitrogen, Nitrate + Nitrite (as N)	< 0.10 mg/L	0.10
508						
	RDK	10/2/2009	10/13/2009	Aldrin	< 0.02 ug/L	0.02
	RDK	10/2/2009	10/13/2009	Aroclor 1016	< 0.09 ug/L	0.09
	RDK	10/2/2009	10/13/2009	Aroclor 1221	< 0.11 ug/L	0.11
	RDK	10/2/2009	10/13/2009	Aroclor 1232	< 0.11 ug/L	0.11
	RDK	10/2/2009	10/13/2009	Aroclor 1242	< 0.11 ug/L	0.11
	RDK	10/2/2009	10/13/2009	Aroclor 1248	< 0.11 ug/L	0.11
	RDK	10/2/2009	10/13/2009	Aroclor 1254	< 0.11 ug/L	0.11
	RDK	10/2/2009	10/13/2009	Aroclor 1260	< 0.11 ug/L	0.11
	RDK	10/2/2009	10/13/2009	Chlordane(Total)	< 0.22 ug/L	0.22
	RDK	10/2/2009	10/13/2009	Dieldrin	< 0.02 ug/L	0.02
	RDK	10/2/2009	10/13/2009	Endrin	< 0.01 ug/L	0.01
	RDK	10/2/2009	10/13/2009	gamma-BHC (Lindane)	< 0.02 ug/L	0.02
	RDK	10/2/2009	10/13/2009	Heptachlor	< 0.04 ug/L	0.04
	RDK	10/2/2009	10/13/2009	Heptachlor epoxide	< 0.02 ug/L	0.02
	RDK	10/2/2009	10/13/2009	Hexachlorobenzene	< 0.11 ug/L	0.11
	RDK	10/2/2009	10/13/2009	Hexachlorocyclopentadiene	< 0.11 ug/L	0.11
	RDK	10/2/2009	10/13/2009	Methoxychlor	< 0.11 ug/L	0.11
	RDK	10/2/2009	10/13/2009	Propachlor	< 0.06 ug/L	0.06
	RDK	10/2/2009	10/13/2009	Toxaphene	< 1.1 ug/L	1.1
515.1						
	KVS	10/2/2009	10/7/2009	2,4-Dichlorophenoxyacetic acid (2,4-D)	< 0.10 ug/L	0.10
	KVS	10/2/2009	10/7/2009	Dalapon	< 1.0 ug/L	1.0
	KVS	10/2/2009	10/7/2009	Dicamba	< 0.50 ug/L	0.50
	KVS	10/2/2009	10/7/2009	Dinoseb	< 0.20 ug/L	0.20
	KVS	10/2/2009	10/7/2009	Pentachlorophenol	< 0.04 ug/L	0.04

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Lab Number 09-17256 -Continued from Previous Page

EPA Method	Analyst	Extraction Date	Analysis Date	Parameter	Result	PQL
515.1	*(Continued from previous page).*					
	KVS	10/2/2009	10/7/2009	Picloram	< 0.10 ug/L	0.10
	KVS	10/2/2009	10/7/2009	Silvex	< 0.20 ug/L	0.20
524.2						
	SLB		10/5/2009	1,1,1,2-Tetrachloroethane	< 0.5 ug/l	0.5
	SLB		10/5/2009	1,1,1-Trichloroethane	< 0.5 ug/l	0.5
	SLB		10/5/2009	1,1,2,2-Tetrachloroethane	< 0.5 ug/l	0.5
	SLB		10/5/2009	1,1,2-Trichloroethane	< 0.5 ug/l	0.5
	SLB		10/5/2009	1,1-Dichloroethane	< 0.5 ug/l	0.5
	SLB		10/5/2009	1,1-Dichloroethene	< 0.5 ug/l	0.5
	SLB		10/5/2009	1,1-Dichloropropene	< 0.5 ug/l	0.5
	SLB		10/5/2009	1,2,3-Trichlorobenzene	< 0.5 ug/l	0.5
	SLB		10/5/2009	1,2,3-Trichloropropane	< 0.5 ug/l	0.5
	SLB		10/5/2009	1,2,4-Trichlorobenzene	< 0.5 ug/l	0.5
	SLB		10/5/2009	1,2,4-Trimethylbenzene	< 0.5 ug/l	0.5
	SLB		10/5/2009	1,2-Dibromo-3-chloropropane	< 0.50 ug/l	0.50
	SLB		10/5/2009	1,2-Dibromoethane (EDB)	< 0.50 ug/l	0.50
	SLB		10/5/2009	1,2-Dichlorobenzene	< 0.5 ug/l	0.5
	SLB		10/5/2009	1,2-Dichloroethane	< 0.5 ug/l	0.5
	SLB		10/5/2009	1,2-Dichloropropane	< 0.5 ug/l	0.5
	SLB		10/5/2009	1,3,5-Trimethylbenzene	< 0.5 ug/l	0.5
	SLB		10/5/2009	1,3-Dichlorobenzene	< 0.5 ug/l	0.5
	SLB		10/5/2009	1,3-Dichloropropane	< 0.5 ug/l	0.5
	SLB		10/5/2009	1,4-Dichlorobenzene	< 0.5 ug/l	0.5
	SLB		10/5/2009	2,2-Dichloropropane	< 0.5 ug/l	0.5
	SLB		10/5/2009	2-Chlorotoluene	< 0.5 ug/l	0.5
	SLB		10/5/2009	4-Chlorotoluene	< 0.5 ug/l	0.5
	SLB		10/5/2009	Benzene	< 0.5 ug/l	0.5
	SLB		10/5/2009	Bromobenzene	< 0.5 ug/l	0.5
	SLB		10/5/2009	Bromochloromethane	< 0.5 ug/l	0.5
	SLB		10/5/2009	Bromodichloromethane	4.0 ug/l	0.5
	SLB		10/5/2009	Bromoform	< 0.5 ug/l	0.5

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Lab Number 09-17256 -Continued from Previous Page

EPA Method	Analyst	Extraction Date	Analysis Date	Parameter	Result	PQL
524.2	*(Continued from previous page).*					
	SLB		10/5/2009	Bromomethane	< 0.5 ug/l	0.5
	SLB		10/5/2009	Carbon tetrachloride	< 0.5 ug/l	0.5
	SLB		10/5/2009	Chlorobenzene	< 0.5 ug/l	0.5
	SLB		10/5/2009	Chloroethane	< 0.5 ug/l	0.5
	SLB		10/5/2009	Chloroform	2.5 ug/l	0.5
	SLB		10/5/2009	Chloromethane	< 0.5 ug/l	0.5
	SLB		10/5/2009	cis-1,2-Dichloroethene	< 0.5 ug/l	0.5
	SLB		10/5/2009	cis-1,3-Dichloropropene	< 0.50 ug/l	0.50
	SLB		10/5/2009	Dibromochloromethane	2.2 ug/l	0.5
	SLB		10/5/2009	Dibromomethane	< 0.5 ug/l	0.5
	SLB		10/5/2009	Dichlorodifluoromethane	< 0.5 ug/l	0.5
	SLB		10/5/2009	Ethylbenzene	< 0.5 ug/l	0.5
	SLB		10/5/2009	Hexachlorobutadiene	< 0.5 ug/l	0.5
	SLB		10/5/2009	Isopropylbenzene	< 0.5 ug/l	0.5
	SLB		10/5/2009	m&p Xylenes	< 1.0 ug/l	1.0
	SLB		10/5/2009	methyl-tert-butyl-ether	< 5.00 ug/l	5.00
	SLB		10/5/2009	Methylene chloride	< 0.5 ug/l	0.5
	SLB		10/5/2009	n-Butylbenzene	< 0.5 ug/l	0.5
	SLB		10/5/2009	n-Propylbenzene	< 0.5 ug/l	0.5
	SLB		10/5/2009	Naphthalene	< 0.5 ug/l	0.5
	SLB		10/5/2009	o-Xylene	< 0.5 ug/l	0.5
	SLB		10/5/2009	p-Isopropyltoluene	< 0.5 ug/l	0.5
	SLB		10/5/2009	sec-Butylbenzene	< 0.5 ug/l	0.5
	SLB		10/5/2009	Styrene	< 0.5 ug/l	0.5
	SLB		10/5/2009	tert-Butylbenzene	< 0.5 ug/l	0.5
	SLB		10/5/2009	Tetrachloroethene	< 0.5 ug/l	0.5
	SLB		10/5/2009	Toluene	< 0.5 ug/l	0.5
	SLB		10/5/2009	trans-1,2-Dichloroethene	< 0.5 ug/l	0.5
	SLB		10/5/2009	trans-1,3-Dichloropropene	< 0.50 ug/l	0.50
	SLB		10/5/2009	Trichloroethene	< 0.5 ug/l	0.5
	SLB		10/5/2009	Trichlorofluoromethane	< 0.5 ug/l	0.5
	SLB		10/5/2009	Vinyl chloride	< 0.5 ug/l	0.5

Your Sample ID: After RO West

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Lab Number 09-17256

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Lab Number 09-17256 -Continued from Previous Page

EPA Method	Analyst	Extraction Date	Analysis Date	Parameter	Result	PQL
524.2	*(Continued from previous page).*					
	SLB		10/5/2009	Xylene, Total	< 1.5 ug/l	1.5
525.2						
	TMB	10/5/2009	10/6/2009	Alachlor	< 0.20 ug/L	0.20
	TMB	10/5/2009	10/6/2009	Atrazine	< 0.10 ug/L	0.10
	TMB	10/5/2009	10/6/2009	Benzo(a)pyrene	< 0.02 ug/L	0.02
	TMB	10/5/2009	10/6/2009	Bis(2-ethylhexyl)adipate	< 0.61 ug/L	0.61
	TMB	10/5/2009	10/6/2009	Bis(2-ethylhexyl)phthalate	< 0.61 ug/L	0.61
	TMB	10/5/2009	10/6/2009	Butachlor	< 0.10 ug/L	0.10
	TMB	10/5/2009	10/6/2009	Metolachlor	< 0.20 ug/L	0.20
	TMB	10/5/2009	10/6/2009	Metribuzin	< 0.20 ug/L	0.20
	TMB	10/5/2009	10/6/2009	Simazine	< 0.07 ug/L	0.07
531.2						
	TMB		10/1/2009	3-Hydroxycarbofuran	< 0.5 ug/L	0.5
	TMB		10/1/2009	Aldicarb	< 0.5 ug/L	0.5
	TMB		10/1/2009	Aldicarb sulfone	< 0.5 ug/L	0.5
	TMB		10/1/2009	Aldicarb sulfoxide	< 0.5 ug/L	0.5
	TMB		10/1/2009	Carbaryl (Sevin)	< 0.5 ug/L	0.5
	TMB		10/1/2009	Carbofuran	< 0.5 ug/L	0.5
	TMB		10/1/2009	Methiocarb	< 0.5 ug/L	0.5
	TMB		10/1/2009	Methomyl	< 0.5 ug/L	0.5
	TMB		10/1/2009	Oxamyl	< 0.5 ug/L	0.5
	TMB		10/1/2009	Propoxur (Baygon)	< 0.5 ug/L	0.5

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--- Surrogate Recoveries ---

QC Lab#	EPA Method	Surrogate Name	Percent Recovery	Lower Limit	Upper Limit
09-17256	508	Decachlorobiphenyl (Surr)	117 %R	70	130
09-17256	515.1	DCAA (Surr)	90 %R	70	130
09-17256	524.2	1,2-Dichlorobenzene-d4 (Surr)	87 %R	70	130
09-17256	524.2	Bromofluorobenzene (BFB) (Surr)	95 %R	70	130
09-17256	525.2	1,3-Dimethyl-2-nitrobenzene (Surr)	103 %R	70	130
09-17256	525.2	Perylene-d12 (Surr)	94 %R	70	130
09-17256	525.2	Triphenylphosphate (Surr)	111 %R	70	130
09-17256	531.2	BDMC (Surr)	83 %R	70	130

«-- End of Report --»

Total Pages in Report: 6

Report Approved By: Rhonda C. Morris
Rhonda C. Morris
Laboratory Manager

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The results presented on this Certificate of Analysis only reflect those parameters that were requested by the client on the chain of custody or other documentation received with the sample(s). The analytical results relate only to the items tested. Analytical results are based on dry-weights for solid samples, unless otherwise specified.

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- CERTIFICATE OF ANALYSIS -

Analyzed at Alloway - Marion

Client #: I0043
Wil Research Laboratories
1407 George Road
Ashland, OH 44805

Report Date: *20-Oct-09*

Phone: (419) 289-8700 **Ext:**
FAX: (419) 289-3650

Attn: Walt Miller

Our Lab #: 09-17257
Date Logged-In: 10/1/09
Sample Type: Drinking Water
Project #: 2009 Annual

Your Sample ID: Before RO SW
Sample Source: SDWA/WTP's
Client Project #:
Date Submitted to Lab: 9/30/2009
PO#:

- COLLECTION INFORMATION -

Date/Time/By: 9/30/2009 6:55 AM T Shriver

EPA Method	Analyst	Extraction Date	Analysis Date	Parameter	Result	PQL
200.7						
	RCM/DB		10/6/2009	Iron, Fe	< 40 µg/L	40
	RCM/DB		10/6/2009	Silver, Ag	< 20 µg/L	20
	RCM/DB		10/6/2009	Sodium, Na	79 mg/L	0.4
	RCM/DB		10/6/2009	Zinc, Zn	< 10 µg/L	10
200.8						
	RCM		10/8/2009	Arsenic, As	< 3.0 µg/L	3.0
	RCM		10/8/2009	Barium, Ba	< 10 µg/L	10
	RCM		10/8/2009	Cadmium, Cd	< 0.5 µg/L	0.5
	RCM		10/8/2009	Chromium, Cr	< 10 µg/L	10
	RCM		10/8/2009	Copper, Cu	< 10 µg/L	10
	RCM		10/8/2009	Lead, Pb	< 2.0 µg/L	2.0
	RCM		10/8/2009	Nickel, Ni	< 10 µg/L	10
	RCM		10/8/2009	Selenium, Se	< 3.0 µg/L	3.0
245.2						
	LGE		10/6/2009	Mercury, Hg	< 0.2 µg/L	0.2

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Analyzed at Alloway - Marion

Lab Number 09-17257 -Continued from Previous Page

EPA Method	Analyst	Extraction Date	Analysis Date	Parameter	Result	PQL
353.2/SM4500N O3	*(Continued from previous page).*					
353.2/SM4500 NO3						
	TLL		10/1/2009	Nitrogen, Nitrate + Nitrite (as N)	< 0.10 mg/L	0.10
508						
	RDK	10/2/2009	10/13/2009	Aldrin	< 0.02 ug/L	0.02
	RDK	10/2/2009	10/13/2009	Aroclor 1016	< 0.09 ug/L	0.09
	RDK	10/2/2009	10/13/2009	Aroclor 1221	< 0.11 ug/L	0.11
	RDK	10/2/2009	10/13/2009	Aroclor 1232	< 0.11 ug/L	0.11
	RDK	10/2/2009	10/13/2009	Aroclor 1242	< 0.11 ug/L	0.11
	RDK	10/2/2009	10/13/2009	Aroclor 1248	< 0.11 ug/L	0.11
	RDK	10/2/2009	10/13/2009	Aroclor 1254	< 0.11 ug/L	0.11
	RDK	10/2/2009	10/13/2009	Aroclor 1260	< 0.11 ug/L	0.11
	RDK	10/2/2009	10/13/2009	Chlordane(Total)	< 0.22 ug/L	0.22
	RDK	10/2/2009	10/13/2009	Dieldrin	< 0.02 ug/L	0.02
	RDK	10/2/2009	10/13/2009	Endrin	< 0.01 ug/L	0.01
	RDK	10/2/2009	10/13/2009	gamma-BHC (Lindane)	< 0.02 ug/L	0.02
	RDK	10/2/2009	10/13/2009	Heptachlor	< 0.04 ug/L	0.04
	RDK	10/2/2009	10/13/2009	Heptachlor epoxide	< 0.02 ug/L	0.02
	RDK	10/2/2009	10/13/2009	Hexachlorobenzene	< 0.11 ug/L	0.11
	RDK	10/2/2009	10/13/2009	Hexachlorocyclopentadiene	< 0.11 ug/L	0.11
	RDK	10/2/2009	10/13/2009	Methoxychlor	< 0.11 ug/L	0.11
	RDK	10/2/2009	10/13/2009	Propachlor	< 0.06 ug/L	0.06
	RDK	10/2/2009	10/13/2009	Toxaphene	< 1.1 ug/L	1.1
515.1						
	KVS	10/2/2009	10/7/2009	2,4-Dichlorophenoxyacetic acid (2,4-D)	< 0.10 ug/L	0.10
	KVS	10/2/2009	10/7/2009	Dalapon	< 1.0 ug/L	1.0
	KVS	10/2/2009	10/7/2009	Dicamba	< 0.50 ug/L	0.50
	KVS	10/2/2009	10/7/2009	Dinoseb	< 0.20 ug/L	0.20
	KVS	10/2/2009	10/7/2009	Pentachlorophenol	< 0.04 ug/L	0.04

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Analyzed at Alloway - Marion

Lab Number 09-17257 -Continued from Previous Page

EPA Method	Analyst	Extraction Date	Analysis Date	Parameter	Result	PQL
515.1	*(Continued from previous page).*					
	KVS	10/2/2009	10/7/2009	Picloram	< 0.10 ug/L	0.10
	KVS	10/2/2009	10/7/2009	Silvex	< 0.20 ug/L	0.20
524.2						
	SLB		10/5/2009	1,1,1,2-Tetrachloroethane	< 0.5 ug/l	0.5
	SLB		10/5/2009	1,1,1-Trichloroethane	< 0.5 ug/l	0.5
	SLB		10/5/2009	1,1,2,2-Tetrachloroethane	< 0.5 ug/l	0.5
	SLB		10/5/2009	1,1,2-Trichloroethane	< 0.5 ug/l	0.5
	SLB		10/5/2009	1,1-Dichloroethane	< 0.5 ug/l	0.5
	SLB		10/5/2009	1,1-Dichloroethene	< 0.5 ug/l	0.5
	SLB		10/5/2009	1,1-Dichloropropene	< 0.5 ug/l	0.5
	SLB		10/5/2009	1,2,3-Trichlorobenzene	< 0.5 ug/l	0.5
	SLB		10/5/2009	1,2,3-Trichloropropane	< 0.5 ug/l	0.5
	SLB		10/5/2009	1,2,4-Trichlorobenzene	< 0.5 ug/l	0.5
	SLB		10/5/2009	1,2,4-Trimethylbenzene	< 0.5 ug/l	0.5
	SLB		10/5/2009	1,2-Dibromo-3-chloropropane	< 0.50 ug/l	0.50
	SLB		10/5/2009	1,2-Dibromoethane (EDB)	< 0.50 ug/l	0.50
	SLB		10/5/2009	1,2-Dichlorobenzene	< 0.5 ug/l	0.5
	SLB		10/5/2009	1,2-Dichloroethane	< 0.5 ug/l	0.5
	SLB		10/5/2009	1,2-Dichloropropane	< 0.5 ug/l	0.5
	SLB		10/5/2009	1,3,5-Trimethylbenzene	< 0.5 ug/l	0.5
	SLB		10/5/2009	1,3-Dichlorobenzene	< 0.5 ug/l	0.5
	SLB		10/5/2009	1,3-Dichloropropane	< 0.5 ug/l	0.5
	SLB		10/5/2009	1,4-Dichlorobenzene	< 0.5 ug/l	0.5
	SLB		10/5/2009	2,2-Dichloropropane	< 0.5 ug/l	0.5
	SLB		10/5/2009	2-Chlorotoluene	< 0.5 ug/l	0.5
	SLB		10/5/2009	4-Chlorotoluene	< 0.5 ug/l	0.5
	SLB		10/5/2009	Benzene	< 0.5 ug/l	0.5
	SLB		10/5/2009	Bromobenzene	< 0.5 ug/l	0.5
	SLB		10/5/2009	Bromochloromethane	< 0.5 ug/l	0.5
	SLB		10/5/2009	Bromodichloromethane	11 ug/l	0.5
	SLB		10/5/2009	Bromoform	4.4 ug/l	0.5

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Lab Number 09-17257 -Continued from Previous Page

EPA Method	Analyst	Extraction Date	Analysis Date	Parameter	Result	PQL
524.2	*(Continued from previous page).*					
	SLB		10/5/2009	Bromomethane	< 0.5 ug/l	0.5
	SLB		10/5/2009	Carbon tetrachloride	< 0.5 ug/l	0.5
	SLB		10/5/2009	Chlorobenzene	< 0.5 ug/l	0.5
	SLB		10/5/2009	Chloroethane	< 0.5 ug/l	0.5
	SLB		10/5/2009	Chloroform	4.6 ug/l	0.5
	SLB		10/5/2009	Chloromethane	< 0.5 ug/l	0.5
	SLB		10/5/2009	cis-1,2-Dichloroethene	< 0.5 ug/l	0.5
	SLB		10/5/2009	cis-1,3-Dichloropropene	< 0.50 ug/l	0.50
	SLB		10/5/2009	Dibromochloromethane	13 ug/l	0.5
	SLB		10/5/2009	Dibromomethane	< 0.5 ug/l	0.5
	SLB		10/5/2009	Dichlorodifluoromethane	< 0.5 ug/l	0.5
	SLB		10/5/2009	Ethylbenzene	< 0.5 ug/l	0.5
	SLB		10/5/2009	Hexachlorobutadiene	< 0.5 ug/l	0.5
	SLB		10/5/2009	Isopropylbenzene	< 0.5 ug/l	0.5
	SLB		10/5/2009	m&p Xylenes	< 1.0 ug/l	1.0
	SLB		10/5/2009	methyl-tert-butyl-ether	< 5.00 ug/l	5.00
	SLB		10/5/2009	Methylene chloride	< 0.5 ug/l	0.5
	SLB		10/5/2009	n-Butylbenzene	< 0.5 ug/l	0.5
	SLB		10/5/2009	n-Propylbenzene	< 0.5 ug/l	0.5
	SLB		10/5/2009	Naphthalene	< 0.5 ug/l	0.5
	SLB		10/5/2009	o-Xylene	< 0.5 ug/l	0.5
	SLB		10/5/2009	p-Isopropyltoluene	< 0.5 ug/l	0.5
	SLB		10/5/2009	sec-Butylbenzene	< 0.5 ug/l	0.5
	SLB		10/5/2009	Styrene	< 0.5 ug/l	0.5
	SLB		10/5/2009	tert-Butylbenzene	< 0.5 ug/l	0.5
	SLB		10/5/2009	Tetrachloroethene	< 0.5 ug/l	0.5
	SLB		10/5/2009	Toluene	< 0.5 ug/l	0.5
	SLB		10/5/2009	trans-1,2-Dichloroethene	< 0.5 ug/l	0.5
	SLB		10/5/2009	trans-1,3-Dichloropropene	< 0.50 ug/l	0.50
	SLB		10/5/2009	Trichloroethene	< 0.5 ug/l	0.5
	SLB		10/5/2009	Trichlorofluoromethane	< 0.5 ug/l	0.5
	SLB		10/5/2009	Vinyl chloride	< 0.5 ug/l	0.5

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Lab Number 09-17257 -Continued from Previous Page

EPA Method	Analyst	Extraction Date	Analysis Date	Parameter	Result	PQL
524.2	*(Continued from previous page).*					
	SLB		10/5/2009	Xylene, Total	< 1.5 ug/l	1.5
525.2						
	TMB	10/5/2009	10/6/2009	Alachlor	< 0.20 ug/L	0.20
	TMB	10/5/2009	10/6/2009	Atrazine	< 0.10 ug/L	0.10
	TMB	10/5/2009	10/6/2009	Benzo(a)pyrene	< 0.02 ug/L	0.02
	TMB	10/5/2009	10/6/2009	Bis(2-ethylhexyl)adipate	< 0.61 ug/L	0.61
	TMB	10/5/2009	10/6/2009	Bis(2-ethylhexyl)phthalate	< 0.61 ug/L	0.61
	TMB	10/5/2009	10/6/2009	Butachlor	< 0.10 ug/L	0.10
	TMB	10/5/2009	10/6/2009	Metolachlor	< 0.20 ug/L	0.20
	TMB	10/5/2009	10/6/2009	Metribuzin	< 0.20 ug/L	0.20
	TMB	10/5/2009	10/6/2009	Simazine	< 0.07 ug/L	0.07
531.2						
	TMB		10/1/2009	3-Hydroxycarbofuran	< 0.5 ug/L	0.5
	TMB		10/1/2009	Aldicarb	< 0.5 ug/L	0.5
	TMB		10/1/2009	Aldicarb sulfone	< 0.5 ug/L	0.5
	TMB		10/1/2009	Aldicarb sulfoxide	< 0.5 ug/L	0.5
	TMB		10/1/2009	Carbaryl (Sevin)	< 0.5 ug/L	0.5
	TMB		10/1/2009	Carbofuran	< 0.5 ug/L	0.5
	TMB		10/1/2009	Methiocarb	< 0.5 ug/L	0.5
	TMB		10/1/2009	Methomyl	< 0.5 ug/L	0.5
	TMB		10/1/2009	Oxamyl	< 0.5 ug/L	0.5
	TMB		10/1/2009	Propoxur (Baygon)	< 0.5 ug/L	0.5

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--- Surrogate Recoveries ---

QC Lab#	EPA Method	Surrogate Name	Percent Recovery	Lower Limit	Upper Limit
09-17257	508	Decachlorobiphenyl (Surr)	112 %R	70	130
09-17257	515.1	DCAA (Surr)	78 %R	70	130
09-17257	524.2	1,2-Dichlorobenzene-d4 (Surr)	89 %R	70	130
09-17257	524.2	Bromofluorobenzene (BFB) (Surr)	93 %R	70	130
09-17257	525.2	1,3-Dimethyl-2-nitrobenzene (Surr)	99 %R	70	130
09-17257	525.2	Perylene-d12 (Surr)	95 %R	70	130
09-17257	525.2	Triphenylphosphate (Surr)	111 %R	70	130
09-17257	531.2	BDMC (Surr)	80 %R	70	130

«-- End of Report --»

Total Pages in Report: 6

Report Approved By: Rhonda C. Morris
Rhonda C. Morris
Laboratory Manager

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The results presented on this Certificate of Analysis only reflect those parameters that were requested by the client on the chain of custody or other documentation received with the sample(s). The analytical results relate only to the items tested. Analytical results are based on dry-weights for solid samples, unless otherwise specified.

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Client #: I0043
Wil Research Laboratories
1407 George Road
Ashland, OH 44805

Attn: Walt Miller

Report Date: *20-Oct-09*

Phone: (419) 289-8700 **Ext:**
FAX: (419) 289-3650

Our Lab #: 09-17258 **Your Sample ID:** After RO SW
Date Logged-In: 10/1/09 **Sample Source:** SDWA/WTP's
Sample Type: Drinking Water **Client Project #:**
Project #: 2009 Annual **Date Submitted to Lab:** 9/30/2009 **PO#:**

- COLLECTION INFORMATION -

Date/Time/By: 9/30/2009 7:06 AM T Shriver

EPA Method	Analyst	Extraction Date	Analysis Date	Parameter	Result	PQL
200.7						
	RCM/DB		10/6/2009	Iron, Fe	< 40 µg/L	40
	RCM/DB		10/6/2009	Silver, Ag	< 20 µg/L	20
	RCM/DB		10/6/2009	Sodium, Na	< 0.4 mg/L	0.4
	RCM/DB		10/6/2009	Zinc, Zn	10 µg/L	10
200.8						
	RCM		10/8/2009	Arsenic, As	< 3.0 µg/L	3.0
	RCM		10/8/2009	Barium, Ba	< 10 µg/L	10
	RCM		10/8/2009	Cadmium, Cd	< 0.5 µg/L	0.5
	RCM		10/8/2009	Chromium, Cr	< 10 µg/L	10
	RCM		10/8/2009	Copper, Cu	< 10 µg/L	10
	RCM		10/8/2009	Lead, Pb	< 2.0 µg/L	2.0
	RCM		10/8/2009	Nickel, Ni	12 µg/L	10
	RCM		10/8/2009	Selenium, Se	< 3.0 µg/L	3.0
245.2						
	LGE		10/6/2009	Mercury, Hg	< 0.2 µg/L	0.2

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Lab Number 09-17258 -Continued from Previous Page

EPA Method	Analyst	Extraction Date	Analysis Date	Parameter	Result	PQL
353.2/SM4500N O3	*(Continued from previous page).*					
353.2/SM4500 NO3						
	TLL		10/1/2009	Nitrogen, Nitrate + Nitrite (as N)	< 0.10 mg/L	0.10
508						
	RDK	10/2/2009	10/13/2009	Aldrin	< 0.02 ug/L	0.02
	RDK	10/2/2009	10/13/2009	Aroclor 1016	< 0.09 ug/L	0.09
	RDK	10/2/2009	10/13/2009	Aroclor 1221	< 0.11 ug/L	0.11
	RDK	10/2/2009	10/13/2009	Aroclor 1232	< 0.11 ug/L	0.11
	RDK	10/2/2009	10/13/2009	Aroclor 1242	< 0.11 ug/L	0.11
	RDK	10/2/2009	10/13/2009	Aroclor 1248	< 0.11 ug/L	0.11
	RDK	10/2/2009	10/13/2009	Aroclor 1254	< 0.11 ug/L	0.11
	RDK	10/2/2009	10/13/2009	Aroclor 1260	< 0.11 ug/L	0.11
	RDK	10/2/2009	10/13/2009	Chlordane(Total)	< 0.22 ug/L	0.22
	RDK	10/2/2009	10/13/2009	Dieldrin	< 0.02 ug/L	0.02
	RDK	10/2/2009	10/13/2009	Endrin	< 0.01 ug/L	0.01
	RDK	10/2/2009	10/13/2009	gamma-BHC (Lindane)	< 0.02 ug/L	0.02
	RDK	10/2/2009	10/13/2009	Heptachlor	< 0.04 ug/L	0.04
	RDK	10/2/2009	10/13/2009	Heptachlor epoxide	< 0.02 ug/L	0.02
	RDK	10/2/2009	10/13/2009	Hexachlorobenzene	< 0.11 ug/L	0.11
	RDK	10/2/2009	10/13/2009	Hexachlorocyclopentadiene	< 0.11 ug/L	0.11
	RDK	10/2/2009	10/13/2009	Methoxychlor	< 0.11 ug/L	0.11
	RDK	10/2/2009	10/13/2009	Propachlor	< 0.06 ug/L	0.06
	RDK	10/2/2009	10/13/2009	Toxaphene	< 1.1 ug/L	1.1
515.1						
	KVS	10/2/2009	10/7/2009	2,4-Dichlorophenoxyacetic acid (2,4-D)	< 0.10 ug/L	0.10
	KVS	10/2/2009	10/7/2009	Dalapon	< 1.0 ug/L	1.0
	KVS	10/2/2009	10/7/2009	Dicamba	< 0.50 ug/L	0.50
	KVS	10/2/2009	10/7/2009	Dinoseb	< 0.20 ug/L	0.20
	KVS	10/2/2009	10/7/2009	Pentachlorophenol	< 0.04 ug/L	0.04

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Analyzed at Alloway - Marion

Lab Number 09-17258 -Continued from Previous Page

EPA Method	Analyst	Extraction Date	Analysis Date	Parameter	Result	PQL
515.1	*(Continued from previous page).*					
	KVS	10/2/2009	10/7/2009	Picloram	< 0.10 ug/L	0.10
	KVS	10/2/2009	10/7/2009	Silvex	< 0.20 ug/L	0.20
524.2						
	SLB		10/5/2009	1,1,1,2-Tetrachloroethane	< 0.5 ug/l	0.5
	SLB		10/5/2009	1,1,1-Trichloroethane	< 0.5 ug/l	0.5
	SLB		10/5/2009	1,1,2,2-Tetrachloroethane	< 0.5 ug/l	0.5
	SLB		10/5/2009	1,1,2-Trichloroethane	< 0.5 ug/l	0.5
	SLB		10/5/2009	1,1-Dichloroethane	< 0.5 ug/l	0.5
	SLB		10/5/2009	1,1-Dichloroethene	< 0.5 ug/l	0.5
	SLB		10/5/2009	1,1-Dichloropropene	< 0.5 ug/l	0.5
	SLB		10/5/2009	1,2,3-Trichlorobenzene	< 0.5 ug/l	0.5
	SLB		10/5/2009	1,2,3-Trichloropropane	< 0.5 ug/l	0.5
	SLB		10/5/2009	1,2,4-Trichlorobenzene	< 0.5 ug/l	0.5
	SLB		10/5/2009	1,2,4-Trimethylbenzene	< 0.5 ug/l	0.5
	SLB		10/5/2009	1,2-Dibromo-3-chloropropane	< 0.50 ug/l	0.50
	SLB		10/5/2009	1,2-Dibromoethane (EDB)	< 0.50 ug/l	0.50
	SLB		10/5/2009	1,2-Dichlorobenzene	< 0.5 ug/l	0.5
	SLB		10/5/2009	1,2-Dichloroethane	< 0.5 ug/l	0.5
	SLB		10/5/2009	1,2-Dichloropropane	< 0.5 ug/l	0.5
	SLB		10/5/2009	1,3,5-Trimethylbenzene	< 0.5 ug/l	0.5
	SLB		10/5/2009	1,3-Dichlorobenzene	< 0.5 ug/l	0.5
	SLB		10/5/2009	1,3-Dichloropropane	< 0.5 ug/l	0.5
	SLB		10/5/2009	1,4-Dichlorobenzene	< 0.5 ug/l	0.5
	SLB		10/5/2009	2,2-Dichloropropane	< 0.5 ug/l	0.5
	SLB		10/5/2009	2-Chlorotoluene	< 0.5 ug/l	0.5
	SLB		10/5/2009	4-Chlorotoluene	< 0.5 ug/l	0.5
	SLB		10/5/2009	Benzene	< 0.5 ug/l	0.5
	SLB		10/5/2009	Bromobenzene	< 0.5 ug/l	0.5
	SLB		10/5/2009	Bromochloromethane	< 0.5 ug/l	0.5
	SLB		10/5/2009	Bromodichloromethane	< 0.5 ug/l	0.5
	SLB		10/5/2009	Bromoform	< 0.5 ug/l	0.5

Your Sample ID: After RO SW

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Lab Number 09-17258

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Lab Number 09-17258 -Continued from Previous Page

EPA Method	Analyst	Extraction Date	Analysis Date	Parameter	Result	PQL
524.2	*(Continued from previous page).*					
	SLB		10/5/2009	Bromomethane	< 0.5 ug/l	0.5
	SLB		10/5/2009	Carbon tetrachloride	< 0.5 ug/l	0.5
	SLB		10/5/2009	Chlorobenzene	< 0.5 ug/l	0.5
	SLB		10/5/2009	Chloroethane	< 0.5 ug/l	0.5
	SLB		10/5/2009	Chloroform	< 0.5 ug/l	0.5
	SLB		10/5/2009	Chloromethane	< 0.5 ug/l	0.5
	SLB		10/5/2009	cis-1,2-Dichloroethene	< 0.5 ug/l	0.5
	SLB		10/5/2009	cis-1,3-Dichloropropene	< 0.50 ug/l	0.50
	SLB		10/5/2009	Dibromochloromethane	< 0.5 ug/l	0.5
	SLB		10/5/2009	Dibromomethane	< 0.5 ug/l	0.5
	SLB		10/5/2009	Dichlorodifluoromethane	< 0.5 ug/l	0.5
	SLB		10/5/2009	Ethylbenzene	< 0.5 ug/l	0.5
	SLB		10/5/2009	Hexachlorobutadiene	< 0.5 ug/l	0.5
	SLB		10/5/2009	Isopropylbenzene	< 0.5 ug/l	0.5
	SLB		10/5/2009	m&p Xylenes	< 1.0 ug/l	1.0
	SLB		10/5/2009	methyl-tert-butyl-ether	< 5.00 ug/l	5.00
	SLB		10/5/2009	Methylene chloride	< 0.5 ug/l	0.5
	SLB		10/5/2009	n-Butylbenzene	< 0.5 ug/l	0.5
	SLB		10/5/2009	n-Propylbenzene	< 0.5 ug/l	0.5
	SLB		10/5/2009	Naphthalene	< 0.5 ug/l	0.5
	SLB		10/5/2009	o-Xylene	< 0.5 ug/l	0.5
	SLB		10/5/2009	p-Isopropyltoluene	< 0.5 ug/l	0.5
	SLB		10/5/2009	sec-Butylbenzene	< 0.5 ug/l	0.5
	SLB		10/5/2009	Styrene	< 0.5 ug/l	0.5
	SLB		10/5/2009	tert-Butylbenzene	< 0.5 ug/l	0.5
	SLB		10/5/2009	Tetrachloroethene	< 0.5 ug/l	0.5
	SLB		10/5/2009	Toluene	< 0.5 ug/l	0.5
	SLB		10/5/2009	trans-1,2-Dichloroethene	< 0.5 ug/l	0.5
	SLB		10/5/2009	trans-1,3-Dichloropropene	< 0.50 ug/l	0.50
	SLB		10/5/2009	Trichloroethene	< 0.5 ug/l	0.5
	SLB		10/5/2009	Trichlorofluoromethane	< 0.5 ug/l	0.5
	SLB		10/5/2009	Vinyl chloride	< 0.5 ug/l	0.5

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Analyzed at Alloway - Marion

Lab Number 09-17258 -Continued from Previous Page

EPA Method	Analyst	Extraction Date	Analysis Date	Parameter	Result	PQL
524.2	*(Continued from previous page).*					
	SLB		10/5/2009	Xylene, Total	< 1.5 ug/l	1.5
525.2						
	TMB	10/5/2009	10/6/2009	Alachlor	< 0.20 ug/L	0.20
	TMB	10/5/2009	10/6/2009	Atrazine	< 0.10 ug/L	0.10
	TMB	10/5/2009	10/6/2009	Benzo(a)pyrene	< 0.02 ug/L	0.02
	TMB	10/5/2009	10/6/2009	Bis(2-ethylhexyl)adipate	< 0.61 ug/L	0.61
	TMB	10/5/2009	10/6/2009	Bis(2-ethylhexyl)phthalate	< 0.61 ug/L	0.61
	TMB	10/5/2009	10/6/2009	Butachlor	< 0.10 ug/L	0.10
	TMB	10/5/2009	10/6/2009	Metolachlor	< 0.20 ug/L	0.20
	TMB	10/5/2009	10/6/2009	Metribuzin	< 0.20 ug/L	0.20
	TMB	10/5/2009	10/6/2009	Simazine	< 0.07 ug/L	0.07
531.2						
	TMB		10/1/2009	3-Hydroxycarbofuran	< 0.5 ug/L	0.5
	TMB		10/1/2009	Aldicarb	< 0.5 ug/L	0.5
	TMB		10/1/2009	Aldicarb sulfone	< 0.5 ug/L	0.5
	TMB		10/1/2009	Aldicarb sulfoxide	< 0.5 ug/L	0.5
	TMB		10/1/2009	Carbaryl (Sevin)	< 0.5 ug/L	0.5
	TMB		10/1/2009	Carbofuran	< 0.5 ug/L	0.5
	TMB		10/1/2009	Methiocarb	< 0.5 ug/L	0.5
	TMB		10/1/2009	Methomyl	< 0.5 ug/L	0.5
	TMB		10/1/2009	Oxamyl	< 0.5 ug/L	0.5
	TMB		10/1/2009	Propoxur (Baygon)	< 0.5 ug/L	0.5

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--- Surrogate Recoveries ---

QC Lab#	EPA Method	Surrogate Name	Percent Recovery	Lower Limit	Upper Limit
09-17258	508	Decachlorobiphenyl (Surr)	106 %R	70	130
09-17258	515.1	DCAA (Surr)	96 %R	70	130
09-17258	524.2	1,2-Dichlorobenzene-d4 (Surr)	90 %R	70	130
09-17258	524.2	Bromofluorobenzene (BFB) (Surr)	95 %R	70	130
09-17258	525.2	1,3-Dimethyl-2-nitrobenzene (Surr)	100 %R	70	130
09-17258	525.2	Perylene-d12 (Surr)	100 %R	70	130
09-17258	525.2	Triphenylphosphate (Surr)	100 %R	70	130
09-17258	531.2	BDMC (Surr)	80 %R	70	130

«-- End of Report --»

Total Pages in Report: 6

Report Approved By: Rhonda C. Morris
Rhonda C. Morris
Laboratory Manager

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Analyzed at Alloway - Marion

Client #: I0043
Wil Research Laboratories
1407 George Road
Ashland, OH 44805

Report Date: *20-Oct-09*

Phone: (419) 289-8700 **Ext:**
FAX: (419) 289-3650

Attn: Walt Miller

Our Lab #: 09-17259
Date Logged-In: 10/1/09
Sample Type: Drinking Water
Project #: 2009 Annual

Your Sample ID: Before RO N
Sample Source: SDWA/WTP's
Client Project #:
Date Submitted to Lab: 9/30/2009
PO#:

- COLLECTION INFORMATION -

Date/Time/By: 9/30/2009 7:29 AM T Shriver

EPA Method	Analyst	Extraction Date	Analysis Date	Parameter	Result	PQL
200.7						
	RCM/DB		10/6/2009	Iron, Fe	< 40 µg/L	40
	RCM/DB		10/6/2009	Silver, Ag	< 20 µg/L	20
	RCM/DB		10/6/2009	Sodium, Na	80 mg/L	0.4
	RCM/DB		10/6/2009	Zinc, Zn	< 10 µg/L	10
200.8						
	RCM		10/8/2009	Arsenic, As	< 3.0 µg/L	3.0
	RCM		10/8/2009	Barium, Ba	< 10 µg/L	10
	RCM		10/8/2009	Cadmium, Cd	< 0.5 µg/L	0.5
	RCM		10/8/2009	Chromium, Cr	< 10 µg/L	10
	RCM		10/8/2009	Copper, Cu	< 10 µg/L	10
	RCM		10/8/2009	Lead, Pb	< 2.0 µg/L	2.0
	RCM		10/8/2009	Nickel, Ni	19 µg/L	10
	RCM		10/8/2009	Selenium, Se	< 3.0 µg/L	3.0
245.2						
	LGE		10/6/2009	Mercury, Hg	< 0.2 µg/L	0.2

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Lab Number 09-17259 -Continued from Previous Page

EPA Method	Analyst	Extraction Date	Analysis Date	Parameter	Result	PQL
353.2/SM4500N O3	*(Continued from previous page).*					
353.2/SM4500 NO3						
	TLL		10/1/2009	Nitrogen, Nitrate + Nitrite (as N)	0.10 mg/L	0.10
508						
	RDK	10/2/2009	10/13/2009	Aldrin	< 0.02 ug/L	0.02
	RDK	10/2/2009	10/13/2009	Aroclor 1016	< 0.09 ug/L	0.09
	RDK	10/2/2009	10/13/2009	Aroclor 1221	< 0.11 ug/L	0.11
	RDK	10/2/2009	10/13/2009	Aroclor 1232	< 0.11 ug/L	0.11
	RDK	10/2/2009	10/13/2009	Aroclor 1242	< 0.11 ug/L	0.11
	RDK	10/2/2009	10/13/2009	Aroclor 1248	< 0.11 ug/L	0.11
	RDK	10/2/2009	10/13/2009	Aroclor 1254	< 0.11 ug/L	0.11
	RDK	10/2/2009	10/13/2009	Aroclor 1260	< 0.11 ug/L	0.11
	RDK	10/2/2009	10/13/2009	Chlordane(Total)	< 0.22 ug/L	0.22
	RDK	10/2/2009	10/13/2009	Dieldrin	< 0.02 ug/L	0.02
	RDK	10/2/2009	10/13/2009	Endrin	< 0.01 ug/L	0.01
	RDK	10/2/2009	10/13/2009	gamma-BHC (Lindane)	< 0.02 ug/L	0.02
	RDK	10/2/2009	10/13/2009	Heptachlor	< 0.04 ug/L	0.04
	RDK	10/2/2009	10/13/2009	Heptachlor epoxide	< 0.02 ug/L	0.02
	RDK	10/2/2009	10/13/2009	Hexachlorobenzene	< 0.11 ug/L	0.11
	RDK	10/2/2009	10/13/2009	Hexachlorocyclopentadiene	< 0.11 ug/L	0.11
	RDK	10/2/2009	10/13/2009	Methoxychlor	< 0.11 ug/L	0.11
	RDK	10/2/2009	10/13/2009	Propachlor	< 0.06 ug/L	0.06
	RDK	10/2/2009	10/13/2009	Toxaphene	< 1.1 ug/L	1.1
515.1						
	KVS	10/2/2009	10/7/2009	2,4-Dichlorophenoxyacetic acid (2,4-D)	< 0.10 ug/L	0.10
	KVS	10/2/2009	10/7/2009	Dalapon	< 1.0 ug/L	1.0
	KVS	10/2/2009	10/7/2009	Dicamba	< 0.50 ug/L	0.50
	KVS	10/2/2009	10/7/2009	Dinoseb	< 0.20 ug/L	0.20
	KVS	10/2/2009	10/7/2009	Pentachlorophenol	< 0.04 ug/L	0.04

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Analyzed at Alloway - Marion

Lab Number 09-17259 -Continued from Previous Page

EPA Method	Analyst	Extraction Date	Analysis Date	Parameter	Result	PQL
515.1	*(Continued from previous page).*					
	KVS	10/2/2009	10/7/2009	Picloram	< 0.10 ug/L	0.10
	KVS	10/2/2009	10/7/2009	Silvex	< 0.20 ug/L	0.20
524.2						
	SLB		10/5/2009	1,1,1,2-Tetrachloroethane	< 0.5 ug/l	0.5
	SLB		10/5/2009	1,1,1-Trichloroethane	< 0.5 ug/l	0.5
	SLB		10/5/2009	1,1,2,2-Tetrachloroethane	< 0.5 ug/l	0.5
	SLB		10/5/2009	1,1,2-Trichloroethane	< 0.5 ug/l	0.5
	SLB		10/5/2009	1,1-Dichloroethane	< 0.5 ug/l	0.5
	SLB		10/5/2009	1,1-Dichloroethene	< 0.5 ug/l	0.5
	SLB		10/5/2009	1,1-Dichloropropene	< 0.5 ug/l	0.5
	SLB		10/5/2009	1,2,3-Trichlorobenzene	< 0.5 ug/l	0.5
	SLB		10/5/2009	1,2,3-Trichloropropane	< 0.5 ug/l	0.5
	SLB		10/5/2009	1,2,4-Trichlorobenzene	< 0.5 ug/l	0.5
	SLB		10/5/2009	1,2,4-Trimethylbenzene	< 0.5 ug/l	0.5
	SLB		10/5/2009	1,2-Dibromo-3-chloropropane	< 0.50 ug/l	0.50
	SLB		10/5/2009	1,2-Dibromoethane (EDB)	< 0.50 ug/l	0.50
	SLB		10/5/2009	1,2-Dichlorobenzene	< 0.5 ug/l	0.5
	SLB		10/5/2009	1,2-Dichloroethane	< 0.5 ug/l	0.5
	SLB		10/5/2009	1,2-Dichloropropane	< 0.5 ug/l	0.5
	SLB		10/5/2009	1,3,5-Trimethylbenzene	< 0.5 ug/l	0.5
	SLB		10/5/2009	1,3-Dichlorobenzene	< 0.5 ug/l	0.5
	SLB		10/5/2009	1,3-Dichloropropane	< 0.5 ug/l	0.5
	SLB		10/5/2009	1,4-Dichlorobenzene	< 0.5 ug/l	0.5
	SLB		10/5/2009	2,2-Dichloropropane	< 0.5 ug/l	0.5
	SLB		10/5/2009	2-Chlorotoluene	< 0.5 ug/l	0.5
	SLB		10/5/2009	4-Chlorotoluene	< 0.5 ug/l	0.5
	SLB		10/5/2009	Benzene	< 0.5 ug/l	0.5
	SLB		10/5/2009	Bromobenzene	< 0.5 ug/l	0.5
	SLB		10/5/2009	Bromochloromethane	< 0.5 ug/l	0.5
	SLB		10/5/2009	Bromodichloromethane	11 ug/l	0.5
	SLB		10/5/2009	Bromoform	14 ug/l	0.5

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Lab Number 09-17259 -Continued from Previous Page

EPA Method	Analyst	Extraction Date	Analysis Date	Parameter	Result	PQL
524.2	*(Continued from previous page).*					
	SLB		10/5/2009	Bromomethane	< 0.5 ug/l	0.5
	SLB		10/5/2009	Carbon tetrachloride	< 0.5 ug/l	0.5
	SLB		10/5/2009	Chlorobenzene	< 0.5 ug/l	0.5
	SLB		10/5/2009	Chloroethane	< 0.5 ug/l	0.5
	SLB		10/5/2009	Chloroform	4.1 ug/l	0.5
	SLB		10/5/2009	Chloromethane	< 0.5 ug/l	0.5
	SLB		10/5/2009	cis-1,2-Dichloroethene	< 0.5 ug/l	0.5
	SLB		10/5/2009	cis-1,3-Dichloropropene	< 0.50 ug/l	0.50
	SLB		10/5/2009	Dibromochloromethane	19 ug/l	0.5
	SLB		10/5/2009	Dibromomethane	< 0.5 ug/l	0.5
	SLB		10/5/2009	Dichlorodifluoromethane	< 0.5 ug/l	0.5
	SLB		10/5/2009	Ethylbenzene	< 0.5 ug/l	0.5
	SLB		10/5/2009	Hexachlorobutadiene	< 0.5 ug/l	0.5
	SLB		10/5/2009	Isopropylbenzene	< 0.5 ug/l	0.5
	SLB		10/5/2009	m&p Xylenes	< 1.0 ug/l	1.0
	SLB		10/5/2009	methyl-tert-butyl-ether	< 5.00 ug/l	5.00
	SLB		10/5/2009	Methylene chloride	< 0.5 ug/l	0.5
	SLB		10/5/2009	n-Butylbenzene	< 0.5 ug/l	0.5
	SLB		10/5/2009	n-Propylbenzene	< 0.5 ug/l	0.5
	SLB		10/5/2009	Naphthalene	< 0.5 ug/l	0.5
	SLB		10/5/2009	o-Xylene	< 0.5 ug/l	0.5
	SLB		10/5/2009	p-Isopropyltoluene	< 0.5 ug/l	0.5
	SLB		10/5/2009	sec-Butylbenzene	< 0.5 ug/l	0.5
	SLB		10/5/2009	Styrene	< 0.5 ug/l	0.5
	SLB		10/5/2009	tert-Butylbenzene	< 0.5 ug/l	0.5
	SLB		10/5/2009	Tetrachloroethene	< 0.5 ug/l	0.5
	SLB		10/5/2009	Toluene	< 0.5 ug/l	0.5
	SLB		10/5/2009	trans-1,2-Dichloroethene	< 0.5 ug/l	0.5
	SLB		10/5/2009	trans-1,3-Dichloropropene	< 0.50 ug/l	0.50
	SLB		10/5/2009	Trichloroethene	< 0.5 ug/l	0.5
	SLB		10/5/2009	Trichlorofluoromethane	< 0.5 ug/l	0.5
	SLB		10/5/2009	Vinyl chloride	< 0.5 ug/l	0.5

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Analyzed at Alloway - Marion

Lab Number 09-17259 -Continued from Previous Page

EPA Method	Analyst	Extraction Date	Analysis Date	Parameter	Result	PQL
524.2	*(Continued from previous page).*					
	SLB		10/5/2009	Xylene, Total	< 1.5 ug/l	1.5
525.2						
	TMB	10/5/2009	10/6/2009	Alachlor	< 0.20 ug/L	0.20
	TMB	10/5/2009	10/6/2009	Atrazine	< 0.10 ug/L	0.10
	TMB	10/5/2009	10/6/2009	Benzo(a)pyrene	< 0.02 ug/L	0.02
	TMB	10/5/2009	10/6/2009	Bis(2-ethylhexyl)adipate	< 0.60 ug/L	0.60
	TMB	10/5/2009	10/6/2009	Bis(2-ethylhexyl)phthalate	< 0.60 ug/L	0.60
	TMB	10/5/2009	10/6/2009	Butachlor	< 0.10 ug/L	0.10
	TMB	10/5/2009	10/6/2009	Metolachlor	< 0.20 ug/L	0.20
	TMB	10/5/2009	10/6/2009	Metribuzin	< 0.20 ug/L	0.20
	TMB	10/5/2009	10/6/2009	Simazine	< 0.07 ug/L	0.07
531.2						
	TMB		10/1/2009	3-Hydroxycarbofuran	< 0.5 ug/L	0.5
	TMB		10/1/2009	Aldicarb	< 0.5 ug/L	0.5
	TMB		10/1/2009	Aldicarb sulfone	< 0.5 ug/L	0.5
	TMB		10/1/2009	Aldicarb sulfoxide	< 0.5 ug/L	0.5
	TMB		10/1/2009	Carbaryl (Sevin)	< 0.5 ug/L	0.5
	TMB		10/1/2009	Carbofuran	< 0.5 ug/L	0.5
	TMB		10/1/2009	Methiocarb	< 0.5 ug/L	0.5
	TMB		10/1/2009	Methomyl	< 0.5 ug/L	0.5
	TMB		10/1/2009	Oxamyl	< 0.5 ug/L	0.5
	TMB		10/1/2009	Propoxur (Baygon)	< 0.5 ug/L	0.5

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--- Surrogate Recoveries ---

QC Lab#	EPA Method	Surrogate Name	Percent Recovery	Lower Limit	Upper Limit
09-17259	508	Decachlorobiphenyl (Surr)	114 %R	70	130
09-17259	515.1	DCAA (Surr)	98 %R	70	130
09-17259	524.2	1,2-Dichlorobenzene-d4 (Surr)	87 %R	70	130
09-17259	524.2	Bromofluorobenzene (BFB) (Surr)	94 %R	70	130
09-17259	525.2	1,3-Dimethyl-2-nitrobenzene (Surr)	102 %R	70	130
09-17259	525.2	Perylene-d12 (Surr)	90 %R	70	130
09-17259	525.2	Triphenylphosphate (Surr)	106 %R	70	130
09-17259	531.2	BDMC (Surr)	79 %R	70	130

«-- End of Report --»

Total Pages in Report: 6

Report Approved By: Rhonda C. Morris
Rhonda C. Morris
Laboratory Manager

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Analyzed at Alloway - Marion

Client #: I0043
Wil Research Laboratories
1407 George Road
Ashland, OH 44805

Report Date: *20-Oct-09*

Phone: (419) 289-8700 **Ext:**
FAX: (419) 289-3650

Attn: Walt Miller

Our Lab #: 09-17260
Date Logged-In: 10/1/09
Sample Type: Drinking Water
Project #: 2009 Annual

Your Sample ID: After RO N
Sample Source: SDWA/WTP's
Client Project #:
Date Submitted to Lab: 9/30/2009
PO#:

- COLLECTION INFORMATION -

Date/Time/By: 9/30/2009 7:48 AM T Shriver

EPA Method	Analyst	Extraction Date	Analysis Date	Parameter	Result	PQL
200.7						
	RCM/DB		10/6/2009	Iron, Fe	< 40 µg/L	40
	RCM/DB		10/6/2009	Silver, Ag	< 20 µg/L	20
	RCM/DB		10/6/2009	Sodium, Na	1.4 mg/L	0.4
	RCM/DB		10/6/2009	Zinc, Zn	< 10 µg/L	10
200.8						
	RCM		10/8/2009	Arsenic, As	< 3.0 µg/L	3.0
	RCM		10/8/2009	Barium, Ba	< 10 µg/L	10
	RCM		10/8/2009	Cadmium, Cd	< 0.5 µg/L	0.5
	RCM		10/8/2009	Chromium, Cr	< 10 µg/L	10
	RCM		10/8/2009	Copper, Cu	< 10 µg/L	10
	RCM		10/8/2009	Lead, Pb	< 2.0 µg/L	2.0
	RCM		10/8/2009	Nickel, Ni	< 10 µg/L	10
	RCM		10/8/2009	Selenium, Se	< 3.0 µg/L	3.0
245.2						
	LGE		10/6/2009	Mercury, Hg	< 0.2 µg/L	0.2

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Analyzed at Alloway - Marion

Lab Number 09-17260 -Continued from Previous Page

EPA Method	Analyst	Extraction Date	Analysis Date	Parameter	Result	PQL
353.2/SM4500N O3	*(Continued from previous page).*					
353.2/SM4500 NO3						
	TLL		10/1/2009	Nitrogen, Nitrate + Nitrite (as N)	< 0.10 mg/L	0.10
508						
	RDK	10/2/2009	10/13/2009	Aldrin	< 0.02 ug/L	0.02
	RDK	10/2/2009	10/13/2009	Aroclor 1016	< 0.09 ug/L	0.09
	RDK	10/2/2009	10/13/2009	Aroclor 1221	< 0.11 ug/L	0.11
	RDK	10/2/2009	10/13/2009	Aroclor 1232	< 0.11 ug/L	0.11
	RDK	10/2/2009	10/13/2009	Aroclor 1242	< 0.11 ug/L	0.11
	RDK	10/2/2009	10/13/2009	Aroclor 1248	< 0.11 ug/L	0.11
	RDK	10/2/2009	10/13/2009	Aroclor 1254	< 0.11 ug/L	0.11
	RDK	10/2/2009	10/13/2009	Aroclor 1260	< 0.11 ug/L	0.11
	RDK	10/2/2009	10/13/2009	Chlordane(Total)	< 0.22 ug/L	0.22
	RDK	10/2/2009	10/13/2009	Dieldrin	< 0.02 ug/L	0.02
	RDK	10/2/2009	10/13/2009	Endrin	< 0.01 ug/L	0.01
	RDK	10/2/2009	10/13/2009	gamma-BHC (Lindane)	< 0.02 ug/L	0.02
	RDK	10/2/2009	10/13/2009	Heptachlor	< 0.04 ug/L	0.04
	RDK	10/2/2009	10/13/2009	Heptachlor epoxide	< 0.02 ug/L	0.02
	RDK	10/2/2009	10/13/2009	Hexachlorobenzene	< 0.11 ug/L	0.11
	RDK	10/2/2009	10/13/2009	Hexachlorocyclopentadiene	< 0.11 ug/L	0.11
	RDK	10/2/2009	10/13/2009	Methoxychlor	< 0.11 ug/L	0.11
	RDK	10/2/2009	10/13/2009	Propachlor	< 0.06 ug/L	0.06
	RDK	10/2/2009	10/13/2009	Toxaphene	< 1.1 ug/L	1.1
515.1						
	KVS	10/2/2009	10/7/2009	2,4-Dichlorophenoxyacetic acid (2,4-D)	< 0.10 ug/L	0.10
	KVS	10/2/2009	10/7/2009	Dalapon	< 1.0 ug/L	1.0
	KVS	10/2/2009	10/7/2009	Dicamba	< 0.50 ug/L	0.50
	KVS	10/2/2009	10/7/2009	Dinoseb	< 0.20 ug/L	0.20
	KVS	10/2/2009	10/7/2009	Pentachlorophenol	< 0.04 ug/L	0.04

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Lab Number 09-17260 -Continued from Previous Page

EPA Method	Analyst	Extraction Date	Analysis Date	Parameter	Result	PQL
515.1	*(Continued from previous page).*					
	KVS	10/2/2009	10/7/2009	Picloram	< 0.10 ug/L	0.10
	KVS	10/2/2009	10/7/2009	Silvex	< 0.20 ug/L	0.20
524.2						
	SLB		10/5/2009	1,1,1,2-Tetrachloroethane	< 0.5 ug/l	0.5
	SLB		10/5/2009	1,1,1-Trichloroethane	< 0.5 ug/l	0.5
	SLB		10/5/2009	1,1,2,2-Tetrachloroethane	< 0.5 ug/l	0.5
	SLB		10/5/2009	1,1,2-Trichloroethane	< 0.5 ug/l	0.5
	SLB		10/5/2009	1,1-Dichloroethane	< 0.5 ug/l	0.5
	SLB		10/5/2009	1,1-Dichloroethene	< 0.5 ug/l	0.5
	SLB		10/5/2009	1,1-Dichloropropene	< 0.5 ug/l	0.5
	SLB		10/5/2009	1,2,3-Trichlorobenzene	< 0.5 ug/l	0.5
	SLB		10/5/2009	1,2,3-Trichloropropane	< 0.5 ug/l	0.5
	SLB		10/5/2009	1,2,4-Trichlorobenzene	< 0.5 ug/l	0.5
	SLB		10/5/2009	1,2,4-Trimethylbenzene	< 0.5 ug/l	0.5
	SLB		10/5/2009	1,2-Dibromo-3-chloropropane	< 0.50 ug/l	0.50
	SLB		10/5/2009	1,2-Dibromoethane (EDB)	< 0.50 ug/l	0.50
	SLB		10/5/2009	1,2-Dichlorobenzene	< 0.5 ug/l	0.5
	SLB		10/5/2009	1,2-Dichloroethane	< 0.5 ug/l	0.5
	SLB		10/5/2009	1,2-Dichloropropane	< 0.5 ug/l	0.5
	SLB		10/5/2009	1,3,5-Trimethylbenzene	< 0.5 ug/l	0.5
	SLB		10/5/2009	1,3-Dichlorobenzene	< 0.5 ug/l	0.5
	SLB		10/5/2009	1,3-Dichloropropane	< 0.5 ug/l	0.5
	SLB		10/5/2009	1,4-Dichlorobenzene	< 0.5 ug/l	0.5
	SLB		10/5/2009	2,2-Dichloropropane	< 0.5 ug/l	0.5
	SLB		10/5/2009	2-Chlorotoluene	< 0.5 ug/l	0.5
	SLB		10/5/2009	4-Chlorotoluene	< 0.5 ug/l	0.5
	SLB		10/5/2009	Benzene	< 0.5 ug/l	0.5
	SLB		10/5/2009	Bromobenzene	< 0.5 ug/l	0.5
	SLB		10/5/2009	Bromochloromethane	< 0.5 ug/l	0.5
	SLB		10/5/2009	Bromodichloromethane	8.7 ug/l	0.5
	SLB		10/5/2009	Bromoform	< 0.5 ug/l	0.5

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Lab Number 09-17260 -Continued from Previous Page

EPA Method	Analyst	Extraction Date	Analysis Date	Parameter	Result	PQL
524.2	*(Continued from previous page).*					
	SLB		10/5/2009	Bromomethane	< 0.5 ug/l	0.5
	SLB		10/5/2009	Carbon tetrachloride	< 0.5 ug/l	0.5
	SLB		10/5/2009	Chlorobenzene	< 0.5 ug/l	0.5
	SLB		10/5/2009	Chloroethane	< 0.5 ug/l	0.5
	SLB		10/5/2009	Chloroform	7.3 ug/l	0.5
	SLB		10/5/2009	Chloromethane	< 0.5 ug/l	0.5
	SLB		10/5/2009	cis-1,2-Dichloroethene	< 0.5 ug/l	0.5
	SLB		10/5/2009	cis-1,3-Dichloropropene	< 0.50 ug/l	0.50
	SLB		10/5/2009	Dibromochloromethane	4.2 ug/l	0.5
	SLB		10/5/2009	Dibromomethane	< 0.5 ug/l	0.5
	SLB		10/5/2009	Dichlorodifluoromethane	< 0.5 ug/l	0.5
	SLB		10/5/2009	Ethylbenzene	< 0.5 ug/l	0.5
	SLB		10/5/2009	Hexachlorobutadiene	< 0.5 ug/l	0.5
	SLB		10/5/2009	Isopropylbenzene	< 0.5 ug/l	0.5
	SLB		10/5/2009	m&p Xylenes	< 1.0 ug/l	1.0
	SLB		10/5/2009	methyl-tert-butyl-ether	< 5.00 ug/l	5.00
	SLB		10/5/2009	Methylene chloride	< 0.5 ug/l	0.5
	SLB		10/5/2009	n-Butylbenzene	< 0.5 ug/l	0.5
	SLB		10/5/2009	n-Propylbenzene	< 0.5 ug/l	0.5
	SLB		10/5/2009	Naphthalene	< 0.5 ug/l	0.5
	SLB		10/5/2009	o-Xylene	< 0.5 ug/l	0.5
	SLB		10/5/2009	p-Isopropyltoluene	< 0.5 ug/l	0.5
	SLB		10/5/2009	sec-Butylbenzene	< 0.5 ug/l	0.5
	SLB		10/5/2009	Styrene	< 0.5 ug/l	0.5
	SLB		10/5/2009	tert-Butylbenzene	< 0.5 ug/l	0.5
	SLB		10/5/2009	Tetrachloroethene	< 0.5 ug/l	0.5
	SLB		10/5/2009	Toluene	< 0.5 ug/l	0.5
	SLB		10/5/2009	trans-1,2-Dichloroethene	< 0.5 ug/l	0.5
	SLB		10/5/2009	trans-1,3-Dichloropropene	< 0.50 ug/l	0.50
	SLB		10/5/2009	Trichloroethene	< 0.5 ug/l	0.5
	SLB		10/5/2009	Trichlorofluoromethane	< 0.5 ug/l	0.5
	SLB		10/5/2009	Vinyl chloride	< 0.5 ug/l	0.5

Your Sample ID: After RO N

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Lab Number 09-17260

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Lab Number 09-17260 -Continued from Previous Page

EPA Method	Analyst	Extraction Date	Analysis Date	Parameter	Result	PQL
524.2	*(Continued from previous page).*					
	SLB		10/5/2009	Xylene, Total	< 1.5 ug/l	1.5
525.2						
	TMB	10/5/2009	10/6/2009	Alachlor	< 0.20 ug/L	0.20
	TMB	10/5/2009	10/6/2009	Atrazine	< 0.10 ug/L	0.10
	TMB	10/5/2009	10/6/2009	Benzo(a)pyrene	< 0.02 ug/L	0.02
	TMB	10/5/2009	10/6/2009	Bis(2-ethylhexyl)adipate	< 0.61 ug/L	0.61
	TMB	10/5/2009	10/6/2009	Bis(2-ethylhexyl)phthalate	< 0.61 ug/L	0.61
	TMB	10/5/2009	10/6/2009	Butachlor	< 0.10 ug/L	0.10
	TMB	10/5/2009	10/6/2009	Metolachlor	< 0.20 ug/L	0.20
	TMB	10/5/2009	10/6/2009	Metribuzin	< 0.20 ug/L	0.20
	TMB	10/5/2009	10/6/2009	Simazine	< 0.07 ug/L	0.07
531.2						
	TMB		10/1/2009	3-Hydroxycarbofuran	< 0.5 ug/L	0.5
	TMB		10/1/2009	Aldicarb	< 0.5 ug/L	0.5
	TMB		10/1/2009	Aldicarb sulfone	< 0.5 ug/L	0.5
	TMB		10/1/2009	Aldicarb sulfoxide	< 0.5 ug/L	0.5
	TMB		10/1/2009	Carbaryl (Sevin)	< 0.5 ug/L	0.5
	TMB		10/1/2009	Carbofuran	< 0.5 ug/L	0.5
	TMB		10/1/2009	Methiocarb	< 0.5 ug/L	0.5
	TMB		10/1/2009	Methomyl	< 0.5 ug/L	0.5
	TMB		10/1/2009	Oxamyl	< 0.5 ug/L	0.5
	TMB		10/1/2009	Propoxur (Baygon)	< 0.5 ug/L	0.5

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--- Surrogate Recoveries ---

QC Lab#	EPA Method	Surrogate Name	Percent Recovery	Lower Limit	Upper Limit
09-17260	508	Decachlorobiphenyl (Surr)	108 %R	70	130
09-17260	515.1	DCAA (Surr)	83 %R	70	130
09-17260	524.2	1,2-Dichlorobenzene-d4 (Surr)	93 %R	70	130
09-17260	524.2	Bromofluorobenzene (BFB) (Surr)	92 %R	70	130
09-17260	525.2	1,3-Dimethyl-2-nitrobenzene (Surr)	99 %R	70	130
09-17260	525.2	Perylene-d12 (Surr)	90 %R	70	130
09-17260	525.2	Triphenylphosphate (Surr)	120 %R	70	130
09-17260	531.2	BDMC (Surr)	80 %R	70	130

«-- End of Report --»

Total Pages in Report: 6

Report Approved By: Rhonda C. Morris
Rhonda C. Morris
Laboratory Manager

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The results presented on this Certificate of Analysis only reflect those parameters that were requested by the client on the chain of custody or other documentation received with the sample(s). The analytical results relate only to the items tested. Analytical results are based on dry-weights for solid samples, unless otherwise specified.

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Client #: 10043
Wil Research Laboratories
1407 George Road
Ashland, OH 44805

Report Date: *20-Oct-09*

Phone: (419) 289-8700 **Ext:**
FAX: (419) 289-3650

Attn: Walt Miller

Our Lab #: 09-17261
Date Logged-In: 10/1/09
Sample Type: Drinking Water
Project #: 2009 Annual

Your Sample ID: Incoming City
Sample Source: SDWA/WTP's
Client Project #:
Date Submitted to Lab: 9/30/2009
PO#:

- COLLECTION INFORMATION -

Date/Time/By: 9/30/2009 8:25 AM T Shriver

EPA Method	Analyst	Extraction Date	Analysis Date	Parameter	Result	PQL
200.7						
	RCM/DB		10/6/2009	Iron, Fe	100 µg/L	40
	RCM/DB		10/6/2009	Silver, Ag	< 20 µg/L	20
	RCM/DB		10/6/2009	Sodium, Na	32 mg/L	0.4
	RCM/DB		10/6/2009	Zinc, Zn	< 10 µg/L	10
200.8						
	RCM		10/8/2009	Arsenic, As	< 3.0 µg/L	3.0
	RCM		10/8/2009	Barium, Ba	31 µg/L	10
	RCM		10/8/2009	Cadmium, Cd	< 0.5 µg/L	0.5
	RCM		10/8/2009	Chromium, Cr	< 10 µg/L	10
	RCM		10/8/2009	Copper, Cu	< 10 µg/L	10
	RCM		10/8/2009	Lead, Pb	< 2.0 µg/L	2.0
	RCM		10/8/2009	Nickel, Ni	< 10 µg/L	10
	RCM		10/8/2009	Selenium, Se	< 3.0 µg/L	3.0
245.2						
	LGE		10/6/2009	Mercury, Hg	< 0.2 µg/L	0.2

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Lab Number 09-17261 -Continued from Previous Page

EPA Method	Analyst	Extraction Date	Analysis Date	Parameter	Result	PQL
353.2/SM4500NO3	*(Continued from previous page).*					
353.2/SM4500 NO3						
	TLL		10/1/2009	Nitrogen, Nitrate + Nitrite (as N)	< 0.10 mg/L	0.10
508						
	RDK	10/2/2009	10/13/2009	Aldrin	< 0.02 ug/L	0.02
	RDK	10/2/2009	10/13/2009	Aroclor 1016	< 0.09 ug/L	0.09
	RDK	10/2/2009	10/13/2009	Aroclor 1221	< 0.11 ug/L	0.11
	RDK	10/2/2009	10/13/2009	Aroclor 1232	< 0.11 ug/L	0.11
	RDK	10/2/2009	10/13/2009	Aroclor 1242	< 0.11 ug/L	0.11
	RDK	10/2/2009	10/13/2009	Aroclor 1248	< 0.11 ug/L	0.11
	RDK	10/2/2009	10/13/2009	Aroclor 1254	< 0.11 ug/L	0.11
	RDK	10/2/2009	10/13/2009	Aroclor 1260	< 0.11 ug/L	0.11
	RDK	10/2/2009	10/13/2009	Chlordane(Total)	< 0.22 ug/L	0.22
	RDK	10/2/2009	10/13/2009	Dieldrin	< 0.02 ug/L	0.02
	RDK	10/2/2009	10/13/2009	Endrin	< 0.01 ug/L	0.01
	RDK	10/2/2009	10/13/2009	gamma-BHC (Lindane)	< 0.02 ug/L	0.02
	RDK	10/2/2009	10/13/2009	Heptachlor	< 0.04 ug/L	0.04
	RDK	10/2/2009	10/13/2009	Heptachlor epoxide	< 0.02 ug/L	0.02
	RDK	10/2/2009	10/13/2009	Hexachlorobenzene	< 0.11 ug/L	0.11
	RDK	10/2/2009	10/13/2009	Hexachlorocyclopentadiene	< 0.11 ug/L	0.11
	RDK	10/2/2009	10/13/2009	Methoxychlor	< 0.11 ug/L	0.11
	RDK	10/2/2009	10/13/2009	Propachlor	< 0.06 ug/L	0.06
	RDK	10/2/2009	10/13/2009	Toxaphene	< 1.1 ug/L	1.1
515.1						
	KVS	10/2/2009	10/7/2009	2,4-Dichlorophenoxyacetic acid (2,4-D)	< 0.10 ug/L	0.10
	KVS	10/2/2009	10/7/2009	Dalapon	< 1.0 ug/L	1.0
	KVS	10/2/2009	10/7/2009	Dicamba	< 0.50 ug/L	0.50
	KVS	10/2/2009	10/7/2009	Dinoseb	< 0.20 ug/L	0.20
	KVS	10/2/2009	10/7/2009	Pentachlorophenol	< 0.04 ug/L	0.04

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Lab Number 09-17261 -Continued from Previous Page

EPA Method	Analyst	Extraction Date	Analysis Date	Parameter	Result	PQL
515.1	*(Continued from previous page).*					
	KVS	10/2/2009	10/7/2009	Picloram	< 0.10 ug/L	0.10
	KVS	10/2/2009	10/7/2009	Silvex	< 0.20 ug/L	0.20
524.2						
	SLB		10/5/2009	1,1,1,2-Tetrachloroethane	< 0.5 ug/l	0.5
	SLB		10/5/2009	1,1,1-Trichloroethane	< 0.5 ug/l	0.5
	SLB		10/5/2009	1,1,2,2-Tetrachloroethane	< 0.5 ug/l	0.5
	SLB		10/5/2009	1,1,2-Trichloroethane	< 0.5 ug/l	0.5
	SLB		10/5/2009	1,1-Dichloroethane	< 0.5 ug/l	0.5
	SLB		10/5/2009	1,1-Dichloroethene	< 0.5 ug/l	0.5
	SLB		10/5/2009	1,1-Dichloropropene	< 0.5 ug/l	0.5
	SLB		10/5/2009	1,2,3-Trichlorobenzene	< 0.5 ug/l	0.5
	SLB		10/5/2009	1,2,3-Trichloropropane	< 0.5 ug/l	0.5
	SLB		10/5/2009	1,2,4-Trichlorobenzene	< 0.5 ug/l	0.5
	SLB		10/5/2009	1,2,4-Trimethylbenzene	< 0.5 ug/l	0.5
	SLB		10/5/2009	1,2-Dibromo-3-chloropropane	< 0.50 ug/l	0.50
	SLB		10/5/2009	1,2-Dibromoethane (EDB)	< 0.50 ug/l	0.50
	SLB		10/5/2009	1,2-Dichlorobenzene	< 0.5 ug/l	0.5
	SLB		10/5/2009	1,2-Dichloroethane	< 0.5 ug/l	0.5
	SLB		10/5/2009	1,2-Dichloropropane	< 0.5 ug/l	0.5
	SLB		10/5/2009	1,3,5-Trimethylbenzene	< 0.5 ug/l	0.5
	SLB		10/5/2009	1,3-Dichlorobenzene	< 0.5 ug/l	0.5
	SLB		10/5/2009	1,3-Dichloropropane	< 0.5 ug/l	0.5
	SLB		10/5/2009	1,4-Dichlorobenzene	< 0.5 ug/l	0.5
	SLB		10/5/2009	2,2-Dichloropropane	< 0.5 ug/l	0.5
	SLB		10/5/2009	2-Chlorotoluene	< 0.5 ug/l	0.5
	SLB		10/5/2009	4-Chlorotoluene	< 0.5 ug/l	0.5
	SLB		10/5/2009	Benzene	< 0.5 ug/l	0.5
	SLB		10/5/2009	Bromobenzene	< 0.5 ug/l	0.5
	SLB		10/5/2009	Bromochloromethane	< 0.5 ug/l	0.5
	SLB		10/5/2009	Bromodichloromethane	5.6 ug/l	0.5
	SLB		10/5/2009	Bromoform	8.1 ug/l	0.5

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EPA Method	Analyst	Extraction Date	Analysis Date	Parameter	Result	PQL
524.2	*(Continued from previous page).*					
	SLB		10/5/2009	Bromomethane	< 0.5 ug/l	0.5
	SLB		10/5/2009	Carbon tetrachloride	< 0.5 ug/l	0.5
	SLB		10/5/2009	Chlorobenzene	< 0.5 ug/l	0.5
	SLB		10/5/2009	Chloroethane	< 0.5 ug/l	0.5
	SLB		10/5/2009	Chloroform	1.7 ug/l	0.5
	SLB		10/5/2009	Chloromethane	< 0.5 ug/l	0.5
	SLB		10/5/2009	cis-1,2-Dichloroethene	< 0.5 ug/l	0.5
	SLB		10/5/2009	cis-1,3-Dichloropropene	< 0.50 ug/l	0.50
	SLB		10/5/2009	Dibromochloromethane	11 ug/l	0.5
	SLB		10/5/2009	Dibromomethane	< 0.5 ug/l	0.5
	SLB		10/5/2009	Dichlorodifluoromethane	< 0.5 ug/l	0.5
	SLB		10/5/2009	Ethylbenzene	< 0.5 ug/l	0.5
	SLB		10/5/2009	Hexachlorobutadiene	< 0.5 ug/l	0.5
	SLB		10/5/2009	Isopropylbenzene	< 0.5 ug/l	0.5
	SLB		10/5/2009	m&p Xylenes	< 1.0 ug/l	1.0
	SLB		10/5/2009	methyl-tert-butyl-ether	< 5.00 ug/l	5.00
	SLB		10/5/2009	Methylene chloride	< 0.5 ug/l	0.5
	SLB		10/5/2009	n-Butylbenzene	< 0.5 ug/l	0.5
	SLB		10/5/2009	n-Propylbenzene	< 0.5 ug/l	0.5
	SLB		10/5/2009	Naphthalene	< 0.5 ug/l	0.5
	SLB		10/5/2009	o-Xylene	< 0.5 ug/l	0.5
	SLB		10/5/2009	p-Isopropyltoluene	< 0.5 ug/l	0.5
	SLB		10/5/2009	sec-Butylbenzene	< 0.5 ug/l	0.5
	SLB		10/5/2009	Styrene	< 0.5 ug/l	0.5
	SLB		10/5/2009	tert-Butylbenzene	< 0.5 ug/l	0.5
	SLB		10/5/2009	Tetrachloroethene	< 0.5 ug/l	0.5
	SLB		10/5/2009	Toluene	< 0.5 ug/l	0.5
	SLB		10/5/2009	trans-1,2-Dichloroethene	< 0.5 ug/l	0.5
	SLB		10/5/2009	trans-1,3-Dichloropropene	< 0.50 ug/l	0.50
	SLB		10/5/2009	Trichloroethene	< 0.5 ug/l	0.5
	SLB		10/5/2009	Trichlorofluoromethane	< 0.5 ug/l	0.5
	SLB		10/5/2009	Vinyl chloride	< 0.5 ug/l	0.5

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Analyzed at Alloway - Marion

Lab Number 09-17261 -Continued from Previous Page

EPA Method	Analyst	Extraction Date	Analysis Date	Parameter	Result	PQL
524.2	*(Continued from previous page).*					
	SLB		10/5/2009	Xylene, Total	< 1.5 ug/l	1.5
525.2						
	TMB	10/5/2009	10/6/2009	Alachlor	< 0.20 ug/L	0.20
	TMB	10/5/2009	10/6/2009	Atrazine	< 0.10 ug/L	0.10
	TMB	10/5/2009	10/6/2009	Benzo(a)pyrene	< 0.02 ug/L	0.02
	TMB	10/5/2009	10/6/2009	Bis(2-ethylhexyl)adipate	< 0.61 ug/L	0.61
	TMB	10/5/2009	10/6/2009	Bis(2-ethylhexyl)phthalate	< 0.61 ug/L	0.61
	TMB	10/5/2009	10/6/2009	Butachlor	< 0.10 ug/L	0.10
	TMB	10/5/2009	10/6/2009	Metolachlor	< 0.20 ug/L	0.20
	TMB	10/5/2009	10/6/2009	Metribuzin	< 0.20 ug/L	0.20
	TMB	10/5/2009	10/6/2009	Simazine	< 0.07 ug/L	0.07
531.2						
	TMB		10/1/2009	3-Hydroxycarbofuran	< 0.5 ug/L	0.5
	TMB		10/1/2009	Aldicarb	< 0.5 ug/L	0.5
	TMB		10/1/2009	Aldicarb sulfone	< 0.5 ug/L	0.5
	TMB		10/1/2009	Aldicarb sulfoxide	< 0.5 ug/L	0.5
	TMB		10/1/2009	Carbaryl (Sevin)	< 0.5 ug/L	0.5
	TMB		10/1/2009	Carbofuran	< 0.5 ug/L	0.5
	TMB		10/1/2009	Methiocarb	< 0.5 ug/L	0.5
	TMB		10/1/2009	Methomyl	< 0.5 ug/L	0.5
	TMB		10/1/2009	Oxamyl	< 0.5 ug/L	0.5
	TMB		10/1/2009	Propoxur (Baygon)	< 0.5 ug/L	0.5

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--- Surrogate Recoveries ---

QC Lab#	EPA Method	Surrogate Name	Percent Recovery	Lower Limit	Upper Limit
09-17261	508	Decachlorobiphenyl (Surr)	118 %R	70	130
09-17261	515.1	DCAA (Surr)	92 %R	70	130
09-17261	524.2	1,2-Dichlorobenzene-d4 (Surr)	86 %R	70	130
09-17261	524.2	Bromofluorobenzene (BFB) (Surr)	91 %R	70	130
09-17261	525.2	1,3-Dimethyl-2-nitrobenzene (Surr)	96 %R	70	130
09-17261	525.2	Perylene-d12 (Surr)	77 %R	70	130
09-17261	525.2	Triphenylphosphate (Surr)	108 %R	70	130
09-17261	531.2	BDMC (Surr)	87 %R	70	130

«-- End of Report --»

Total Pages in Report: 6

Report Approved By: Rhonda C. Morris
Rhonda C. Morris
Laboratory Manager

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Client #: I0043
Wil Research Laboratories
1407 George Road
Ashland, OH 44805

Report Date: *20-Oct-09*

Phone: (419) 289-8700 **Ext:**
FAX: (419) 289-3650

Attn: Walt Miller

Our Lab #: 09-17262 **Your Sample ID:** B70
Date Logged-In: 10/1/09 **Sample Source:** SDWA/WTP's
Sample Type: Drinking Water **Client Project #:**
Project #: 2009 Annual **Date Submitted to Lab:** 9/30/2009 **PO#:**

- COLLECTION INFORMATION -

Date/Time/By: 9/30/2009 8:50 AM T Shriver

EPA Method	Analyst	Extraction Date	Analysis Date	Parameter	Result	PQL
200.7						
	RCM/DB		10/6/2009	Iron, Fe	< 40 µg/L	40
	RCM/DB		10/6/2009	Silver, Ag	< 20 µg/L	20
	RCM/DB		10/6/2009	Sodium, Na	1.2 mg/L	0.4
	RCM/DB		10/6/2009	Zinc, Zn	< 10 µg/L	10
200.8						
	RCM		10/8/2009	Arsenic, As	< 3.0 µg/L	3.0
	RCM		10/8/2009	Barium, Ba	< 10 µg/L	10
	RCM		10/8/2009	Cadmium, Cd	< 0.5 µg/L	0.5
	RCM		10/8/2009	Chromium, Cr	< 10 µg/L	10
	RCM		10/8/2009	Copper, Cu	< 10 µg/L	10
	RCM		10/8/2009	Lead, Pb	< 2.0 µg/L	2.0
	RCM		10/8/2009	Nickel, Ni	< 10 µg/L	10
	RCM		10/8/2009	Selenium, Se	< 3.0 µg/L	3.0
245.2						
	LGE		10/6/2009	Mercury, Hg	< 0.2 µg/L	0.2

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Lab Number 09-17262 -Continued from Previous Page

EPA Method	Analyst	Extraction Date	Analysis Date	Parameter	Result	PQL
353.2/SM4500NO3	*(Continued from previous page).*					
353.2/SM4500 NO3						
	TLL		10/1/2009	Nitrogen, Nitrate + Nitrite (as N)	< 0.10 mg/L	0.10
508						
	RDK	10/2/2009	10/13/2009	Aldrin	< 0.02 ug/L	0.02
	RDK	10/2/2009	10/13/2009	Aroclor 1016	< 0.09 ug/L	0.09
	RDK	10/2/2009	10/13/2009	Aroclor 1221	< 0.11 ug/L	0.11
	RDK	10/2/2009	10/13/2009	Aroclor 1232	< 0.11 ug/L	0.11
	RDK	10/2/2009	10/13/2009	Aroclor 1242	< 0.11 ug/L	0.11
	RDK	10/2/2009	10/13/2009	Aroclor 1248	< 0.11 ug/L	0.11
	RDK	10/2/2009	10/13/2009	Aroclor 1254	< 0.11 ug/L	0.11
	RDK	10/2/2009	10/13/2009	Aroclor 1260	< 0.11 ug/L	0.11
	RDK	10/2/2009	10/13/2009	Chlordane(Total)	< 0.22 ug/L	0.22
	RDK	10/2/2009	10/13/2009	Dieldrin	< 0.02 ug/L	0.02
	RDK	10/2/2009	10/13/2009	Endrin	< 0.01 ug/L	0.01
	RDK	10/2/2009	10/13/2009	gamma-BHC (Lindane)	< 0.02 ug/L	0.02
	RDK	10/2/2009	10/13/2009	Heptachlor	< 0.04 ug/L	0.04
	RDK	10/2/2009	10/13/2009	Heptachlor epoxide	< 0.02 ug/L	0.02
	RDK	10/2/2009	10/13/2009	Hexachlorobenzene	< 0.11 ug/L	0.11
	RDK	10/2/2009	10/13/2009	Hexachlorocyclopentadiene	< 0.11 ug/L	0.11
	RDK	10/2/2009	10/13/2009	Methoxychlor	< 0.11 ug/L	0.11
	RDK	10/2/2009	10/13/2009	Propachlor	< 0.06 ug/L	0.06
	RDK	10/2/2009	10/13/2009	Toxaphene	< 1.1 ug/L	1.1
515.1						
	KVS	10/2/2009	10/7/2009	2,4-Dichlorophenoxyacetic acid (2,4-D)	< 0.10 ug/L	0.10
	KVS	10/2/2009	10/7/2009	Dalapon	< 1.0 ug/L	1.0
	KVS	10/2/2009	10/7/2009	Dicamba	< 0.50 ug/L	0.50
	KVS	10/2/2009	10/7/2009	Dinoseb	< 0.20 ug/L	0.20
	KVS	10/2/2009	10/7/2009	Pentachlorophenol	< 0.04 ug/L	0.04

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Lab Number 09-17262 -Continued from Previous Page

EPA Method	Analyst	Extraction Date	Analysis Date	Parameter	Result	PQL
515.1	*(Continued from previous page).*					
	KVS	10/2/2009	10/7/2009	Picloram	< 0.10 ug/L	0.10
	KVS	10/2/2009	10/7/2009	Silvex	< 0.20 ug/L	0.20
524.2						
	SLB		10/5/2009	1,1,1,2-Tetrachloroethane	< 0.5 ug/l	0.5
	SLB		10/5/2009	1,1,1-Trichloroethane	< 0.5 ug/l	0.5
	SLB		10/5/2009	1,1,2,2-Tetrachloroethane	< 0.5 ug/l	0.5
	SLB		10/5/2009	1,1,2-Trichloroethane	< 0.5 ug/l	0.5
	SLB		10/5/2009	1,1-Dichloroethane	< 0.5 ug/l	0.5
	SLB		10/5/2009	1,1-Dichloroethene	< 0.5 ug/l	0.5
	SLB		10/5/2009	1,1-Dichloropropene	< 0.5 ug/l	0.5
	SLB		10/5/2009	1,2,3-Trichlorobenzene	< 0.5 ug/l	0.5
	SLB		10/5/2009	1,2,3-Trichloropropane	< 0.5 ug/l	0.5
	SLB		10/5/2009	1,2,4-Trichlorobenzene	< 0.5 ug/l	0.5
	SLB		10/5/2009	1,2,4-Trimethylbenzene	< 0.5 ug/l	0.5
	SLB		10/5/2009	1,2-Dibromo-3-chloropropane	< 0.50 ug/l	0.50
	SLB		10/5/2009	1,2-Dibromoethane (EDB)	< 0.50 ug/l	0.50
	SLB		10/5/2009	1,2-Dichlorobenzene	< 0.5 ug/l	0.5
	SLB		10/5/2009	1,2-Dichloroethane	< 0.5 ug/l	0.5
	SLB		10/5/2009	1,2-Dichloropropane	< 0.5 ug/l	0.5
	SLB		10/5/2009	1,3,5-Trimethylbenzene	< 0.5 ug/l	0.5
	SLB		10/5/2009	1,3-Dichlorobenzene	< 0.5 ug/l	0.5
	SLB		10/5/2009	1,3-Dichloropropane	< 0.5 ug/l	0.5
	SLB		10/5/2009	1,4-Dichlorobenzene	< 0.5 ug/l	0.5
	SLB		10/5/2009	2,2-Dichloropropane	< 0.5 ug/l	0.5
	SLB		10/5/2009	2-Chlorotoluene	< 0.5 ug/l	0.5
	SLB		10/5/2009	4-Chlorotoluene	< 0.5 ug/l	0.5
	SLB		10/5/2009	Benzene	< 0.5 ug/l	0.5
	SLB		10/5/2009	Bromobenzene	< 0.5 ug/l	0.5
	SLB		10/5/2009	Bromochloromethane	< 0.5 ug/l	0.5
	SLB		10/5/2009	Bromodichloromethane	4.2 ug/l	0.5
	SLB		10/5/2009	Bromoform	< 0.5 ug/l	0.5

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Lab Number 09-17262 -Continued from Previous Page

EPA Method	Analyst	Extraction Date	Analysis Date	Parameter	Result	PQL
524.2	*(Continued from previous page).*					
	SLB		10/5/2009	Bromomethane	< 0.5 ug/l	0.5
	SLB		10/5/2009	Carbon tetrachloride	< 0.5 ug/l	0.5
	SLB		10/5/2009	Chlorobenzene	< 0.5 ug/l	0.5
	SLB		10/5/2009	Chloroethane	< 0.5 ug/l	0.5
	SLB		10/5/2009	Chloroform	2.7 ug/l	0.5
	SLB		10/5/2009	Chloromethane	< 0.5 ug/l	0.5
	SLB		10/5/2009	cis-1,2-Dichloroethene	< 0.5 ug/l	0.5
	SLB		10/5/2009	cis-1,3-Dichloropropene	< 0.50 ug/l	0.50
	SLB		10/5/2009	Dibromochloromethane	1.6 ug/l	0.5
	SLB		10/5/2009	Dibromomethane	< 0.5 ug/l	0.5
	SLB		10/5/2009	Dichlorodifluoromethane	< 0.5 ug/l	0.5
	SLB		10/5/2009	Ethylbenzene	< 0.5 ug/l	0.5
	SLB		10/5/2009	Hexachlorobutadiene	< 0.5 ug/l	0.5
	SLB		10/5/2009	Isopropylbenzene	< 0.5 ug/l	0.5
	SLB		10/5/2009	m&p Xylenes	< 1.0 ug/l	1.0
	SLB		10/5/2009	methyl-tert-butyl-ether	< 5.00 ug/l	5.00
	SLB		10/5/2009	Methylene chloride	< 0.5 ug/l	0.5
	SLB		10/5/2009	n-Butylbenzene	< 0.5 ug/l	0.5
	SLB		10/5/2009	n-Propylbenzene	< 0.5 ug/l	0.5
	SLB		10/5/2009	Naphthalene	< 0.5 ug/l	0.5
	SLB		10/5/2009	o-Xylene	< 0.5 ug/l	0.5
	SLB		10/5/2009	p-Isopropyltoluene	< 0.5 ug/l	0.5
	SLB		10/5/2009	sec-Butylbenzene	< 0.5 ug/l	0.5
	SLB		10/5/2009	Styrene	< 0.5 ug/l	0.5
	SLB		10/5/2009	tert-Butylbenzene	< 0.5 ug/l	0.5
	SLB		10/5/2009	Tetrachloroethene	< 0.5 ug/l	0.5
	SLB		10/5/2009	Toluene	< 0.5 ug/l	0.5
	SLB		10/5/2009	trans-1,2-Dichloroethene	< 0.5 ug/l	0.5
	SLB		10/5/2009	trans-1,3-Dichloropropene	< 0.50 ug/l	0.50
	SLB		10/5/2009	Trichloroethene	< 0.5 ug/l	0.5
	SLB		10/5/2009	Trichlorofluoromethane	< 0.5 ug/l	0.5
	SLB		10/5/2009	Vinyl chloride	< 0.5 ug/l	0.5

Your Sample ID: B70 Page 4 of 6 *Lab Number 09-17262*

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Analyzed at Alloway - Marion

Lab Number 09-17262 -Continued from Previous Page

EPA Method	Analyst	Extraction Date	Analysis Date	Parameter	Result	PQL
524.2	*(Continued from previous page).*					
	SLB		10/5/2009	Xylene, Total	< 1.5 ug/l	1.5
525.2						
	TMB	10/5/2009	10/6/2009	Alachlor	< 0.20 ug/L	0.20
	TMB	10/5/2009	10/6/2009	Atrazine	< 0.10 ug/L	0.10
	TMB	10/5/2009	10/6/2009	Benzo(a)pyrene	< 0.02 ug/L	0.02
	TMB	10/5/2009	10/6/2009	Bis(2-ethylhexyl)adipate	< 0.61 ug/L	0.61
	TMB	10/5/2009	10/6/2009	Bis(2-ethylhexyl)phthalate	< 0.61 ug/L	0.61
	TMB	10/5/2009	10/6/2009	Butachlor	< 0.10 ug/L	0.10
	TMB	10/5/2009	10/6/2009	Metolachlor	< 0.20 ug/L	0.20
	TMB	10/5/2009	10/6/2009	Metribuzin	< 0.20 ug/L	0.20
	TMB	10/5/2009	10/6/2009	Simazine	< 0.07 ug/L	0.07
531.2						
	TMB		10/1/2009	3-Hydroxycarbofuran	< 0.5 ug/L	0.5
	TMB		10/1/2009	Aldicarb	< 0.5 ug/L	0.5
	TMB		10/1/2009	Aldicarb sulfone	< 0.5 ug/L	0.5
	TMB		10/1/2009	Aldicarb sulfoxide	< 0.5 ug/L	0.5
	TMB		10/1/2009	Carbaryl (Sevin)	< 0.5 ug/L	0.5
	TMB		10/1/2009	Carbofuran	< 0.5 ug/L	0.5
	TMB		10/1/2009	Methiocarb	< 0.5 ug/L	0.5
	TMB		10/1/2009	Methomyl	< 0.5 ug/L	0.5
	TMB		10/1/2009	Oxamyl	< 0.5 ug/L	0.5
	TMB		10/1/2009	Propoxur (Baygon)	< 0.5 ug/L	0.5

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--- Surrogate Recoveries ---

QC Lab#	EPA Method	Surrogate Name	Percent Recovery	Lower Limit	Upper Limit
09-17262	508	Decachlorobiphenyl (Surr)	117 %R	70	130
09-17262	515.1	DCAA (Surr)	89 %R	70	130
09-17262	524.2	1,2-Dichlorobenzene-d4 (Surr)	87 %R	70	130
09-17262	524.2	Bromofluorobenzene (BFB) (Surr)	95 %R	70	130
09-17262	525.2	1,3-Dimethyl-2-nitrobenzene (Surr)	104 %R	70	130
09-17262	525.2	Perylene-d12 (Surr)	94 %R	70	130
09-17262	525.2	Triphenylphosphate (Surr)	112 %R	70	130
09-17262	531.2	BDMC (Surr)	89 %R	70	130

«-- End of Report --»

Total Pages in Report: 6

Report Approved By: Rhonda C. Morris
Rhonda C. Morris
Laboratory Manager

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Client #: I0043
Wil Research Laboratories
1407 George Road
Ashland, OH 44805

Attn: Walt Miller

Report Date: *20-Oct-09*

Phone: (419) 289-8700 **Ext:**
FAX: (419) 289-3650

Our Lab #: 09-17263 **Your Sample ID:** B128
Date Logged-In: 10/1/09 **Sample Source:** SDWA/WTP's
Sample Type: Drinking Water **Client Project #:**
Project #: 2009 Annual **Date Submitted to Lab:** 9/30/2009 **PO#:**

- COLLECTION INFORMATION -

Date/Time/By: 9/30/2009 9:03 AM T Shriver

EPA Method	Analyst	Extraction Date	Analysis Date	Parameter	Result	PQL
200.7						
	RCM/DB		10/6/2009	Iron, Fe	< 40 µg/L	40
	RCM/DB		10/6/2009	Silver, Ag	< 20 µg/L	20
	RCM/DB		10/6/2009	Sodium, Na	1.0 mg/L	0.4
	RCM/DB		10/6/2009	Zinc, Zn	62 µg/L	10
200.8						
	RCM		10/8/2009	Arsenic, As	< 3.0 µg/L	3.0
	RCM		10/8/2009	Barium, Ba	< 10 µg/L	10
	RCM		10/8/2009	Cadmium, Cd	< 0.5 µg/L	0.5
	RCM		10/8/2009	Chromium, Cr	< 10 µg/L	10
	RCM		10/8/2009	Copper, Cu	55 µg/L	10
	RCM		10/8/2009	Lead, Pb	2.8 µg/L	2.0
	RCM		10/8/2009	Nickel, Ni	< 10 µg/L	10
	RCM		10/8/2009	Selenium, Se	< 3.0 µg/L	3.0
245.2						
	LGE		10/6/2009	Mercury, Hg	< 0.2 µg/L	0.2

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Lab Number 09-17263 -Continued from Previous Page

EPA Method	Analyst	Extraction Date	Analysis Date	Parameter	Result	PQL
508	*(Continued from previous page).*					
508						
	RDK	10/2/2009	10/13/2009	Aldrin	< 0.02 ug/L	0.02
	RDK	10/2/2009	10/13/2009	Aroclor 1016	< 0.09 ug/L	0.09
	RDK	10/2/2009	10/13/2009	Aroclor 1221	< 0.11 ug/L	0.11
	RDK	10/2/2009	10/13/2009	Aroclor 1232	< 0.11 ug/L	0.11
	RDK	10/2/2009	10/13/2009	Aroclor 1242	< 0.11 ug/L	0.11
	RDK	10/2/2009	10/13/2009	Aroclor 1248	< 0.11 ug/L	0.11
	RDK	10/2/2009	10/13/2009	Aroclor 1254	< 0.11 ug/L	0.11
	RDK	10/2/2009	10/13/2009	Aroclor 1260	< 0.11 ug/L	0.11
	RDK	10/2/2009	10/13/2009	Chlordane(Total)	< 0.22 ug/L	0.22
	RDK	10/2/2009	10/13/2009	Dieldrin	< 0.02 ug/L	0.02
	RDK	10/2/2009	10/13/2009	Endrin	< 0.01 ug/L	0.01
	RDK	10/2/2009	10/13/2009	gamma-BHC (Lindane)	< 0.02 ug/L	0.02
	RDK	10/2/2009	10/13/2009	Heptachlor	< 0.04 ug/L	0.04
	RDK	10/2/2009	10/13/2009	Heptachlor epoxide	< 0.02 ug/L	0.02
	RDK	10/2/2009	10/13/2009	Hexachlorobenzene	< 0.11 ug/L	0.11
	RDK	10/2/2009	10/13/2009	Hexachlorocyclopentadiene	< 0.11 ug/L	0.11
	RDK	10/2/2009	10/13/2009	Methoxychlor	< 0.11 ug/L	0.11
	RDK	10/2/2009	10/13/2009	Propachlor	< 0.06 ug/L	0.06
	RDK	10/2/2009	10/13/2009	Toxaphene	< 1.1 ug/L	1.1
515.1						
	KVS	10/2/2009	10/7/2009	2,4-Dichlorophenoxyacetic acid (2,4-D)	< 0.10 ug/L	0.10
	KVS	10/2/2009	10/7/2009	Dalapon	< 1.0 ug/L	1.0
	KVS	10/2/2009	10/7/2009	Dicamba	< 0.50 ug/L	0.50
	KVS	10/2/2009	10/7/2009	Dinoseb	< 0.20 ug/L	0.20
	KVS	10/2/2009	10/7/2009	Pentachlorophenol	< 0.04 ug/L	0.04
	KVS	10/2/2009	10/7/2009	Picloram	< 0.10 ug/L	0.10
	KVS	10/2/2009	10/7/2009	Silvex	< 0.20 ug/L	0.20

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Lab Number 09-17263 -Continued from Previous Page

EPA Method	Analyst	Extraction Date	Analysis Date	Parameter	Result	PQL
524.2	*(Continued from previous page).*					
524.2						
	SLB		10/5/2009	1,1,1,2-Tetrachloroethane	< 0.5 ug/l	0.5
	SLB		10/5/2009	1,1,1-Trichloroethane	< 0.5 ug/l	0.5
	SLB		10/5/2009	1,1,2,2-Tetrachloroethane	< 0.5 ug/l	0.5
	SLB		10/5/2009	1,1,2-Trichloroethane	< 0.5 ug/l	0.5
	SLB		10/5/2009	1,1-Dichloroethane	< 0.5 ug/l	0.5
	SLB		10/5/2009	1,1-Dichloroethene	< 0.5 ug/l	0.5
	SLB		10/5/2009	1,1-Dichloropropene	< 0.5 ug/l	0.5
	SLB		10/5/2009	1,2,3-Trichlorobenzene	< 0.5 ug/l	0.5
	SLB		10/5/2009	1,2,3-Trichloropropane	< 0.5 ug/l	0.5
	SLB		10/5/2009	1,2,4-Trichlorobenzene	< 0.5 ug/l	0.5
	SLB		10/5/2009	1,2,4-Trimethylbenzene	< 0.5 ug/l	0.5
	SLB		10/5/2009	1,2-Dibromo-3-chloropropane	< 0.50 ug/l	0.50
	SLB		10/5/2009	1,2-Dibromoethane (EDB)	< 0.50 ug/l	0.50
	SLB		10/5/2009	1,2-Dichlorobenzene	< 0.5 ug/l	0.5
	SLB		10/5/2009	1,2-Dichloroethane	< 0.5 ug/l	0.5
	SLB		10/5/2009	1,2-Dichloropropane	< 0.5 ug/l	0.5
	SLB		10/5/2009	1,3,5-Trimethylbenzene	< 0.5 ug/l	0.5
	SLB		10/5/2009	1,3-Dichlorobenzene	< 0.5 ug/l	0.5
	SLB		10/5/2009	1,3-Dichloropropane	< 0.5 ug/l	0.5
	SLB		10/5/2009	1,4-Dichlorobenzene	< 0.5 ug/l	0.5
	SLB		10/5/2009	2,2-Dichloropropane	< 0.5 ug/l	0.5
	SLB		10/5/2009	2-Chlorotoluene	< 0.5 ug/l	0.5
	SLB		10/5/2009	4-Chlorotoluene	< 0.5 ug/l	0.5
	SLB		10/5/2009	Benzene	< 0.5 ug/l	0.5
	SLB		10/5/2009	Bromobenzene	< 0.5 ug/l	0.5
	SLB		10/5/2009	Bromochloromethane	< 0.5 ug/l	0.5
	SLB		10/5/2009	Bromodichloromethane	5.2 ug/l	0.5
	SLB		10/5/2009	Bromoform	< 0.5 ug/l	0.5
	SLB		10/5/2009	Bromomethane	< 0.5 ug/l	0.5
	SLB		10/5/2009	Carbon tetrachloride	< 0.5 ug/l	0.5

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Lab Number 09-17263 -Continued from Previous Page

EPA Method	Analyst	Extraction Date	Analysis Date	Parameter	Result	PQL
524.2	*(Continued from previous page).*					
	SLB		10/5/2009	Chlorobenzene	< 0.5 ug/l	0.5
	SLB		10/5/2009	Chloroethane	< 0.5 ug/l	0.5
	SLB		10/5/2009	Chloroform	2.8 ug/l	0.5
	SLB		10/5/2009	Chloromethane	< 0.5 ug/l	0.5
	SLB		10/5/2009	cis-1,2-Dichloroethene	< 0.5 ug/l	0.5
	SLB		10/5/2009	cis-1,3-Dichloropropene	< 0.50 ug/l	0.50
	SLB		10/5/2009	Dibromochloromethane	2.5 ug/l	0.5
	SLB		10/5/2009	Dibromomethane	< 0.5 ug/l	0.5
	SLB		10/5/2009	Dichlorodifluoromethane	< 0.5 ug/l	0.5
	SLB		10/5/2009	Ethylbenzene	< 0.5 ug/l	0.5
	SLB		10/5/2009	Hexachlorobutadiene	< 0.5 ug/l	0.5
	SLB		10/5/2009	Isopropylbenzene	< 0.5 ug/l	0.5
	SLB		10/5/2009	m&p Xylenes	< 1.0 ug/l	1.0
	SLB		10/5/2009	methyl-tert-butyl-ether	< 5.00 ug/l	5.00
	SLB		10/5/2009	Methylene chloride	< 0.5 ug/l	0.5
	SLB		10/5/2009	n-Butylbenzene	< 0.5 ug/l	0.5
	SLB		10/5/2009	n-Propylbenzene	< 0.5 ug/l	0.5
	SLB		10/5/2009	Naphthalene	< 0.5 ug/l	0.5
	SLB		10/5/2009	o-Xylene	< 0.5 ug/l	0.5
	SLB		10/5/2009	p-Isopropyltoluene	< 0.5 ug/l	0.5
	SLB		10/5/2009	sec-Butylbenzene	< 0.5 ug/l	0.5
	SLB		10/5/2009	Styrene	< 0.5 ug/l	0.5
	SLB		10/5/2009	tert-Butylbenzene	< 0.5 ug/l	0.5
	SLB		10/5/2009	Tetrachloroethene	< 0.5 ug/l	0.5
	SLB		10/5/2009	Toluene	< 0.5 ug/l	0.5
	SLB		10/5/2009	trans-1,2-Dichloroethene	< 0.5 ug/l	0.5
	SLB		10/5/2009	trans-1,3-Dichloropropene	< 0.50 ug/l	0.50
	SLB		10/5/2009	Trichloroethene	< 0.5 ug/l	0.5
	SLB		10/5/2009	Trichlorofluoromethane	< 0.5 ug/l	0.5
	SLB		10/5/2009	Vinyl chloride	< 0.5 ug/l	0.5
	SLB		10/5/2009	Xylene, Total	< 1.5 ug/l	1.5

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Lab Number 09-17263 -Continued from Previous Page

EPA Method	Analyst	Extraction Date	Analysis Date	Parameter	Result	PQL
525.2	*(Continued from previous page).*					
525.2						
	TMB	10/5/2009	10/6/2009	Alachlor	< 0.20 ug/L	0.20
	TMB	10/5/2009	10/6/2009	Atrazine	< 0.10 ug/L	0.10
	TMB	10/5/2009	10/6/2009	Benzo(a)pyrene	< 0.02 ug/L	0.02
	TMB	10/5/2009	10/6/2009	Bis(2-ethylhexyl)adipate	< 0.60 ug/L	0.60
	TMB	10/5/2009	10/6/2009	Bis(2-ethylhexyl)phthalate	< 0.60 ug/L	0.60
	TMB	10/5/2009	10/6/2009	Butachlor	< 0.10 ug/L	0.10
	TMB	10/5/2009	10/6/2009	Metolachlor	< 0.20 ug/L	0.20
	TMB	10/5/2009	10/6/2009	Metribuzin	< 0.20 ug/L	0.20
	TMB	10/5/2009	10/6/2009	Simazine	< 0.07 ug/L	0.07
531.2						
	TMB		10/1/2009	3-Hydroxycarbofuran	< 0.5 ug/L	0.5
	TMB		10/1/2009	Aldicarb	< 0.5 ug/L	0.5
	TMB		10/1/2009	Aldicarb sulfone	< 0.5 ug/L	0.5
	TMB		10/1/2009	Aldicarb sulfoxide	< 0.5 ug/L	0.5
	TMB		10/1/2009	Carbaryl (Sevin)	< 0.5 ug/L	0.5
	TMB		10/1/2009	Carbofuran	< 0.5 ug/L	0.5
	TMB		10/1/2009	Methiocarb	< 0.5 ug/L	0.5
	TMB		10/1/2009	Methomyl	< 0.5 ug/L	0.5
	TMB		10/1/2009	Oxamyl	< 0.5 ug/L	0.5
	TMB		10/1/2009	Propoxur (Baygon)	< 0.5 ug/L	0.5

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--- Surrogate Recoveries ---

QC Lab#	EPA Method	Surrogate Name	Percent Recovery	Lower Limit	Upper Limit
09-17263	508	Decachlorobiphenyl (Surr)	114 %R	70	130
09-17263	515.1	DCAA (Surr)	96 %R	70	130
09-17263	524.2	1,2-Dichlorobenzene-d4 (Surr)	90 %R	70	130
09-17263	524.2	Bromofluorobenzene (BFB) (Surr)	96 %R	70	130
09-17263	525.2	1,3-Dimethyl-2-nitrobenzene (Surr)	104 %R	70	130
09-17263	525.2	Perylene-d12 (Surr)	92 %R	70	130
09-17263	525.2	Triphenylphosphate (Surr)	111 %R	70	130
09-17263	531.2	BDMC (Surr)	88 %R	70	130

«-- End of Report --»

Total Pages in Report: 6

Report Approved By: Rhonda C. Morris
Rhonda C. Morris
Laboratory Manager

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Analyzed at Alloway - Marion

Client #: I0043
Wil Research Laboratories
1407 George Road
Ashland, OH 44805

Report Date: *07-Oct-09*

Phone: (419) 289-8700 **Ext:**
FAX: (419) 289-3650

Attn: Walt Miller

Our Lab #: 09-17343 **Your Sample ID:** B128
Date Logged-In: 10/2/09 **Sample Source:** SDWA/WTP's
Sample Type: Drinking Water **Client Project #:**
Project #: 2009 Annual **Date Submitted to Lab:** 10/2/2009 **PO#:**

- COLLECTION INFORMATION -

Date/Time/By: 10/1/2009 10:30 AM T Shriver

EPA Method	Analyst	Extraction Date	Analysis Date	Parameter	Result	PQL
353.2/SM4500 NO3						
	TLL		10/6/2009	Nitrogen, Nitrate + Nitrite (as N)	< 0.10 mg/L	0.10

«-- End of Report --»

Total Pages in Report: 1

Report Approved By: Rhonda C. Morris
Rhonda C. Morris
Laboratory Manager

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Client #: I0043
Wil Research Laboratories
1407 George Road
Ashland, OH 44805

Report Date: *20-Oct-09*

Phone: (419) 289-8700 **Ext:**
FAX: (419) 289-3650

Attn: Walt Miller

Our Lab #: 09-17264
Date Logged-In: 10/1/09
Sample Type: Drinking Water
Project #: 2009 Annual

Your Sample ID: Room B41
Sample Source: SDWA/WTP's
Client Project #:
Date Submitted to Lab: 9/30/2009
PO#:

- COLLECTION INFORMATION -

Date/Time/By: 9/30/2009 8:05 AM T Shriver

EPA Method	Analyst	Extraction Date	Analysis Date	Parameter	Result	PQL
200.7						
	RCM/DB		10/6/2009	Iron, Fe	< 40 µg/L	40
	RCM/DB		10/6/2009	Silver, Ag	< 20 µg/L	20
	RCM/DB		10/6/2009	Sodium, Na	2.4 mg/L	0.4
	RCM/DB		10/6/2009	Zinc, Zn	< 10 µg/L	10
200.8						
	RCM		10/8/2009	Arsenic, As	< 3.0 µg/L	3.0
	RCM		10/8/2009	Barium, Ba	< 10 µg/L	10
	RCM		10/8/2009	Cadmium, Cd	1.0 µg/L	0.5
	RCM		10/8/2009	Chromium, Cr	< 10 µg/L	10
	RCM		10/8/2009	Copper, Cu	< 10 µg/L	10
	RCM		10/8/2009	Lead, Pb	2.4 µg/L	2.0
	RCM		10/8/2009	Nickel, Ni	11 µg/L	10
	RCM		10/8/2009	Selenium, Se	< 3.0 µg/L	3.0
245.2						
	LGE		10/6/2009	Mercury, Hg	< 0.2 µg/L	0.2

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Lab Number 09-17264 -Continued from Previous Page

EPA Method	Analyst	Extraction Date	Analysis Date	Parameter	Result	PQL
353.2/SM4500N O3	*(Continued from previous page).*					
353.2/SM4500 NO3						
	TLL		10/1/2009	Nitrogen, Nitrate + Nitrite (as N)	< 0.10 mg/L	0.10
508						
	RDK	10/2/2009	10/13/2009	Aldrin	< 0.02 ug/L	0.02
	RDK	10/2/2009	10/13/2009	Aroclor 1016	< 0.09 ug/L	0.09
	RDK	10/2/2009	10/13/2009	Aroclor 1221	< 0.11 ug/L	0.11
	RDK	10/2/2009	10/13/2009	Aroclor 1232	< 0.11 ug/L	0.11
	RDK	10/2/2009	10/13/2009	Aroclor 1242	< 0.11 ug/L	0.11
	RDK	10/2/2009	10/13/2009	Aroclor 1248	< 0.11 ug/L	0.11
	RDK	10/2/2009	10/13/2009	Aroclor 1254	< 0.11 ug/L	0.11
	RDK	10/2/2009	10/13/2009	Aroclor 1260	< 0.11 ug/L	0.11
	RDK	10/2/2009	10/13/2009	Chlordane(Total)	< 0.22 ug/L	0.22
	RDK	10/2/2009	10/13/2009	Dieldrin	< 0.02 ug/L	0.02
	RDK	10/2/2009	10/13/2009	Endrin	< 0.01 ug/L	0.01
	RDK	10/2/2009	10/13/2009	gamma-BHC (Lindane)	< 0.02 ug/L	0.02
	RDK	10/2/2009	10/13/2009	Heptachlor	< 0.04 ug/L	0.04
	RDK	10/2/2009	10/13/2009	Heptachlor epoxide	< 0.02 ug/L	0.02
	RDK	10/2/2009	10/13/2009	Hexachlorobenzene	< 0.11 ug/L	0.11
	RDK	10/2/2009	10/13/2009	Hexachlorocyclopentadiene	< 0.11 ug/L	0.11
	RDK	10/2/2009	10/13/2009	Methoxychlor	< 0.11 ug/L	0.11
	RDK	10/2/2009	10/13/2009	Propachlor	< 0.06 ug/L	0.06
	RDK	10/2/2009	10/13/2009	Toxaphene	< 1.1 ug/L	1.1
515.1						
	KVS	10/2/2009	10/7/2009	2,4-Dichlorophenoxyacetic acid (2,4-D)	< 0.10 ug/L	0.10
	KVS	10/2/2009	10/7/2009	Dalapon	< 1.0 ug/L	1.0
	KVS	10/2/2009	10/7/2009	Dicamba	< 0.50 ug/L	0.50
	KVS	10/2/2009	10/7/2009	Dinoseb	< 0.20 ug/L	0.20
	KVS	10/2/2009	10/7/2009	Pentachlorophenol	< 0.04 ug/L	0.04

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Analyzed at Alloway - Marion

Lab Number 09-17264 -Continued from Previous Page

EPA Method	Analyst	Extraction Date	Analysis Date	Parameter	Result	PQL
515.1	*(Continued from previous page).*					
	KVS	10/2/2009	10/7/2009	Picloram	< 0.10 ug/L	0.10
	KVS	10/2/2009	10/8/2009	Silvex	< 0.20 ug/L	0.20
524.2						
	SLB		10/5/2009	1,1,1,2-Tetrachloroethane	< 0.5 ug/l	0.5
	SLB		10/5/2009	1,1,1-Trichloroethane	< 0.5 ug/l	0.5
	SLB		10/5/2009	1,1,2,2-Tetrachloroethane	< 0.5 ug/l	0.5
	SLB		10/5/2009	1,1,2-Trichloroethane	< 0.5 ug/l	0.5
	SLB		10/5/2009	1,1-Dichloroethane	< 0.5 ug/l	0.5
	SLB		10/5/2009	1,1-Dichloroethene	< 0.5 ug/l	0.5
	SLB		10/5/2009	1,1-Dichloropropene	< 0.5 ug/l	0.5
	SLB		10/5/2009	1,2,3-Trichlorobenzene	< 0.5 ug/l	0.5
	SLB		10/5/2009	1,2,3-Trichloropropane	< 0.5 ug/l	0.5
	SLB		10/5/2009	1,2,4-Trichlorobenzene	< 0.5 ug/l	0.5
	SLB		10/5/2009	1,2,4-Trimethylbenzene	< 0.5 ug/l	0.5
	SLB		10/5/2009	1,2-Dibromo-3-chloropropane	< 0.50 ug/l	0.50
	SLB		10/5/2009	1,2-Dibromoethane (EDB)	< 0.50 ug/l	0.50
	SLB		10/5/2009	1,2-Dichlorobenzene	< 0.5 ug/l	0.5
	SLB		10/5/2009	1,2-Dichloroethane	< 0.5 ug/l	0.5
	SLB		10/5/2009	1,2-Dichloropropane	< 0.5 ug/l	0.5
	SLB		10/5/2009	1,3,5-Trimethylbenzene	< 0.5 ug/l	0.5
	SLB		10/5/2009	1,3-Dichlorobenzene	< 0.5 ug/l	0.5
	SLB		10/5/2009	1,3-Dichloropropane	< 0.5 ug/l	0.5
	SLB		10/5/2009	1,4-Dichlorobenzene	< 0.5 ug/l	0.5
	SLB		10/5/2009	2,2-Dichloropropane	< 0.5 ug/l	0.5
	SLB		10/5/2009	2-Chlorotoluene	< 0.5 ug/l	0.5
	SLB		10/5/2009	4-Chlorotoluene	< 0.5 ug/l	0.5
	SLB		10/5/2009	Benzene	< 0.5 ug/l	0.5
	SLB		10/5/2009	Bromobenzene	< 0.5 ug/l	0.5
	SLB		10/5/2009	Bromochloromethane	< 0.5 ug/l	0.5
	SLB		10/5/2009	Bromodichloromethane	6.9 ug/l	0.5
	SLB		10/5/2009	Bromoform	< 0.5 ug/l	0.5

Your Sample ID: Room B41

Lab Number 09-17264

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- CERTIFICATE OF ANALYSIS -

Analyzed at Alloway - Marion

Lab Number 09-17264 -Continued from Previous Page

EPA Method	Analyst	Extraction Date	Analysis Date	Parameter	Result	PQL
524.2	*(Continued from previous page).*					
	SLB		10/5/2009	Bromomethane	< 0.5 ug/l	0.5
	SLB		10/5/2009	Carbon tetrachloride	< 0.5 ug/l	0.5
	SLB		10/5/2009	Chlorobenzene	< 0.5 ug/l	0.5
	SLB		10/5/2009	Chloroethane	< 0.5 ug/l	0.5
	SLB		10/5/2009	Chloroform	5.7 ug/l	0.5
	SLB		10/5/2009	Chloromethane	< 0.5 ug/l	0.5
	SLB		10/5/2009	cis-1,2-Dichloroethene	< 0.5 ug/l	0.5
	SLB		10/5/2009	cis-1,3-Dichloropropene	< 0.50 ug/l	0.50
	SLB		10/5/2009	Dibromochloromethane	3.0 ug/l	0.5
	SLB		10/5/2009	Dibromomethane	< 0.5 ug/l	0.5
	SLB		10/5/2009	Dichlorodifluoromethane	< 0.5 ug/l	0.5
	SLB		10/5/2009	Ethylbenzene	< 0.5 ug/l	0.5
	SLB		10/5/2009	Hexachlorobutadiene	< 0.5 ug/l	0.5
	SLB		10/5/2009	Isopropylbenzene	< 0.5 ug/l	0.5
	SLB		10/5/2009	m&p Xylenes	< 1.0 ug/l	1.0
	SLB		10/5/2009	methyl-tert-butyl-ether	< 5.00 ug/l	5.00
	SLB		10/5/2009	Methylene chloride	< 0.5 ug/l	0.5
	SLB		10/5/2009	n-Butylbenzene	< 0.5 ug/l	0.5
	SLB		10/5/2009	n-Propylbenzene	< 0.5 ug/l	0.5
	SLB		10/5/2009	Naphthalene	< 0.5 ug/l	0.5
	SLB		10/5/2009	o-Xylene	< 0.5 ug/l	0.5
	SLB		10/5/2009	p-Isopropyltoluene	< 0.5 ug/l	0.5
	SLB		10/5/2009	sec-Butylbenzene	< 0.5 ug/l	0.5
	SLB		10/5/2009	Styrene	< 0.5 ug/l	0.5
	SLB		10/5/2009	tert-Butylbenzene	< 0.5 ug/l	0.5
	SLB		10/5/2009	Tetrachloroethene	< 0.5 ug/l	0.5
	SLB		10/5/2009	Toluene	< 0.5 ug/l	0.5
	SLB		10/5/2009	trans-1,2-Dichloroethene	< 0.5 ug/l	0.5
	SLB		10/5/2009	trans-1,3-Dichloropropene	< 0.50 ug/l	0.50
	SLB		10/5/2009	Trichloroethene	< 0.5 ug/l	0.5
	SLB		10/5/2009	Trichlorofluoromethane	< 0.5 ug/l	0.5
	SLB		10/5/2009	Vinyl chloride	< 0.5 ug/l	0.5

Your Sample ID: Room B41 Page 4 of 6 *Lab Number 09-17264*

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Analyzed at Alloway - Marion

Lab Number 09-17264 -Continued from Previous Page

EPA Method	Analyst	Extraction Date	Analysis Date	Parameter	Result	PQL
524.2	*(Continued from previous page).*					
	SLB		10/5/2009	Xylene, Total	< 1.5 ug/l	1.5
525.2						
	TMB	10/5/2009	10/6/2009	Alachlor	< 0.20 ug/L	0.20
	TMB	10/5/2009	10/6/2009	Atrazine	< 0.10 ug/L	0.10
	TMB	10/5/2009	10/6/2009	Benzo(a)pyrene	< 0.02 ug/L	0.02
	TMB	10/5/2009	10/6/2009	Bis(2-ethylhexyl)adipate	< 0.60 ug/L	0.60
	TMB	10/5/2009	10/6/2009	Bis(2-ethylhexyl)phthalate	< 0.60 ug/L	0.60
	TMB	10/5/2009	10/6/2009	Butachlor	< 0.10 ug/L	0.10
	TMB	10/5/2009	10/6/2009	Metolachlor	< 0.20 ug/L	0.20
	TMB	10/5/2009	10/6/2009	Metribuzin	< 0.20 ug/L	0.20
	TMB	10/5/2009	10/6/2009	Simazine	< 0.07 ug/L	0.07
531.2						
	TMB		10/2/2009	3-Hydroxycarbofuran	< 0.5 ug/L	0.5
	TMB		10/2/2009	Aldicarb	< 0.5 ug/L	0.5
	TMB		10/2/2009	Aldicarb sulfone	< 0.5 ug/L	0.5
	TMB		10/2/2009	Aldicarb sulfoxide	< 0.5 ug/L	0.5
	TMB		10/2/2009	Carbaryl (Sevin)	< 0.5 ug/L	0.5
	TMB		10/2/2009	Carbofuran	< 0.5 ug/L	0.5
	TMB		10/2/2009	Methiocarb	< 0.5 ug/L	0.5
	TMB		10/2/2009	Methomyl	< 0.5 ug/L	0.5
	TMB		10/2/2009	Oxamyl	< 0.5 ug/L	0.5
	TMB		10/2/2009	Propoxur (Baygon)	< 0.5 ug/L	0.5

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--- Surrogate Recoveries ---

QC Lab#	EPA Method	Surrogate Name	Percent Recovery	Lower Limit	Upper Limit
09-17264	508	Decachlorobiphenyl (Surr)	111 %R	70	130
09-17264	515.1	DCAA (Surr)	98 %R	70	130
09-17264	524.2	1,2-Dichlorobenzene-d4 (Surr)	88 %R	70	130
09-17264	524.2	Bromofluorobenzene (BFB) (Surr)	92 %R	70	130
09-17264	525.2	1,3-Dimethyl-2-nitrobenzene (Surr)	99 %R	70	130
09-17264	525.2	Perylene-d12 (Surr)	92 %R	70	130
09-17264	525.2	Triphenylphosphate (Surr)	110 %R	70	130
09-17264	531.2	BDMC (Surr)	84 %R	70	130

«-- End of Report --»

Total Pages in Report: 6

Report Approved By: Rhonda C. Morris
Rhonda C. Morris
Laboratory Manager

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The results presented on this Certificate of Analysis only reflect those parameters that were requested by the client on the chain of custody or other documentation received with the sample(s). The analytical results relate only to the items tested. Analytical results are based on dry weights for solid samples, unless otherwise specified.

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APPENDIX E

Animal Room Environmental Conditions

STUDY SPECIFICATIONS: 118043 DATE IN 11/17/09 TIME IN 11:00
DATE OUT 12/18/09 TIME OUT 10:00

ROOM SPECIFICATIONS: B ROOM 29 LOW TEMPERATURE °F: 66.0 HIGH TEMPERATURE °F: 76.0 LOW HUMIDITY %RH: 30.0
TEST SYSTEM: RAT LOW TEMPERATURE °C: 18.9 HIGH TEMPERATURE °C: 24.4 HIGH HUMIDITY %RH: 70.0

	PRIMARY TEMP		SECONDARY TEMP		PRIMARY HUM	SECONDARY HUM
DATE	MEAN (°F)	MEAN (°C)	MEAN (°F)	MEAN (°C)	MEAN (%RH)	MEAN (%RH)
11/17/09	70.5	21.4	70.7	21.5	43.0	43.8
11/18/09	70.6	21.4	70.9	21.6	47.1	47.2
11/19/09	70.3	21.3	70.6	21.4	49.8	49.4
11/20/09	71.0	21.7	71.2	21.8	45.3	45.7
11/21/09	70.5	21.4	70.8	21.6	45.3	45.8
11/22/09	70.7	21.5	71.0	21.7	43.8	44.4
11/23/09	70.5	21.4	70.8	21.6	45.3	45.7
11/24/09	70.7	21.5	70.9	21.6	47.3	47.4
11/25/09	70.8	21.6	71.0	21.7	46.1	46.4
11/26/09	70.2	21.2	70.6	21.4	43.5	44.0
11/27/09	70.6	21.4	70.9	21.6	42.3	43.0
11/28/09	70.4	21.3	70.8	21.6	41.6	42.4
11/29/09	70.2	21.2	70.5	21.4	45.9	46.2
11/30/09	70.8	21.6	71.1	21.7	43.5	44.1
12/01/09	70.6	21.4	70.9	21.6	43.8	44.4
12/02/09	70.5	21.4	70.9	21.6	46.6	46.7
12/03/09	70.6	21.4	70.9	21.6	46.6	46.8
12/04/09	70.6	21.4	70.9	21.6	43.5	44.0
12/05/09	70.7	21.5	71.1	21.7	42.6	43.1

	PRIMARY TEMP		SECONDARY TEMP		PRIMARY HUM	SECONDARY HUM
DATE	MEAN (°F)	MEAN (°C)	MEAN (°F)	MEAN (°C)	MEAN (%RH)	MEAN (%RH)
12/06/09	70.6	21.4	71.1	21.7	42.5	43.0
12/07/09	70.9	21.6	71.3	21.8	42.1	42.7
12/08/09	70.9	21.6	71.3	21.8	42.4	43.0
12/09/09	70.5	21.4	70.8	21.6	45.0	45.4
12/10/09	70.7	21.5	71.1	21.7	42.5	43.1
12/11/09	70.7	21.5	71.1	21.7	44.1	44.4
12/12/09	70.3	21.3	70.9	21.6	44.2	44.6
12/13/09	70.8	21.6	71.2	21.8	45.2	45.4
12/14/09	70.9	21.6	71.2	21.8	46.9	47.0
12/15/09	70.3	21.3	70.7	21.5	45.4	45.8
12/16/09	70.7	21.5	71.1	21.7	41.9	42.6
12/17/09	71.1	21.7	71.3	21.8	42.7	43.4
12/18/09	69.9	21.1	70.5	21.4	44.0	44.3

SUMMARY OF DAILY MEANS	MEAN	MIN	MAX
PRIMARY TEMP °F:	70.6	69.9	71.1
PRIMARY TEMP °C:	21.4	21.1	21.7
SECONDARY TEMP °F:	71.0	70.5	71.3
SECONDARY TEMP °C:	21.7	21.4	21.8
PRIMARY HUM %RH:	44.5	41.6	49.8
SECONDARY HUM %RH:	44.9	42.4	49.4
N DAYS	32		

B ROOM 29 SUMMARY OF HOURLY VALUES

	PRIMARY TEMP				SECONDARY TEMP				PRIMARY HUM		SECONDARY HUM	
MEAN	70.6	°F	21.4	°C	71.0	°F	21.7	°C	44.5	%RH	44.9	%RH
MIN	69.2	°F	20.7	°C	69.9	°F	21.1	°C	20.0	%RH	23.3	%RH
MAX	72.2	°F	22.3	°C	72.4	°F	22.4	°C	61.1	%RH	58.7	%RH
SD	0.80		0.44		0.66		0.37		3.16		2.75	
SE	0.03		0.02		0.02		0.01		0.12		0.10	
N SAMPLES	743				743				743		743	
FIRST DAY	11/17/09											
LAST DAY	12/18/09											
N DAYS	32											

STUDY 118043 SUMMARY OF HOURLY VALUES

	PRIMARY TEMP				SECONDARY TEMP				PRIMARY HUM		SECONDARY HUM	
MEAN	70.6	°F	21.4	°C	71.0	°F	21.7	°C	44.5	%RH	44.9	%RH
MIN	69.2	°F	20.7	°C	69.9	°F	21.1	°C	20.0	%RH	23.3	%RH
MAX	72.2	°F	22.3	°C	72.4	°F	22.4	°C	61.1	%RH	58.7	%RH
SD	0.80		0.44		0.66		0.37		3.16		2.75	
SE	0.03		0.02		0.02		0.01		0.12		0.10	
N SAMPLES	743				743				743		743	
FIRST DAY	11/17/09											
LAST DAY	12/18/09											
N DAYS	32											

FINAL REPORT

Contents:	Volume 2 of 4 Appendices F-K and Appendix L - Tables I1-I7
Study Title:	An Oral (Gavage) Acute Neurotoxicity Study of Tolclofos-Methyl in Rats
Study Number:	WIL-118043
Study Director:	Melissa J. Beck, PhD
Data Requirements:	OECD Guideline 424 U.S. EPA OPPTS Guideline 870.6200 JMAFF Notification No. 12 NohSan No. 8147
Study Initiation Date:	16 November 2009
Study Completion Date:	21 April 2010
Performing Laboratory:	WIL Research Laboratories, LLC 1407 George Road Ashland, OH 44805-8946
Sponsor:	Sumitomo Chemical Company, Ltd. 27-1, Shinkawa 2-chome Chuo-ku, Tokyo 104-8260, Japan

ED_005427A_00022422-00324

APPENDIX F

Summaries of Validation Studies
(WIL-99435, WIL-99441, WIL-99443, WIL-99263, and WIL-99310)

STUDY TITLE

A POSITIVE CONTROL VALIDATION STUDY
OF LOCOMOTOR ACTIVITY IN RATS

STUDY NUMBER

WIL-99435

STUDY DIRECTOR

Melissa J. Beck, PhD

STUDY INITIATION DATE

1 October 2007

STUDY COMPLETION DATE

3 June 2008

PERFORMING LABORATORY

WIL Research Laboratories, LLC
1407 George Road
Ashland, OH 44805-8946

STATEMENT OF NO DATA CONFIDENTIALITY CLAIMS

The purpose of the study was to validate the use of the Kinder Scientific MotorMonitor System in our laboratory and to demonstrate the ability to detect decreases in locomotor activity using this system. Therefore, this page has been intentionally left blank.

1. ABSTRACT

The objective of this study was to demonstrate the ability of the Kinder Scientific MotorMonitor System (Kinder Scientific, LLC, Poway, CA, USA) to detect decreases in activity in response to haloperidol within the U.S. EPA OPPTS Guideline 870.6300 (Developmental Neurotoxicity) and the International Conference on Harmonization (ICH) Guideline 4.1.2 (Pre- and Postnatal Development, Including Maternal Function). Haloperidol was administered at dosage levels of 0.05, 0.1, and 0.5 mg/kg by a single intraperitoneal injection 30 minutes prior to behavioral testing on postnatal day (PND) 13, 17, 21 or 61. Male and female Sprague-Dawley Crl:CD (SD) rats were used for assessment of locomotor behavior with the Kinder Scientific Motor Monitor System. Overall, haloperidol caused a dose-dependent decrease in locomotor activity (total activity counts and ambulatory counts) for both male and female rats at PND 13, 17, 21 and 61. Habituation was noted in PND 17, 21, and 61, but not in PND 13, males and females. The experimental design used in this study demonstrated that WIL Research Laboratories, LLC can detect locomotor effects of haloperidol using the Kinder Scientific Motor Monitor System, and that the results can be considered to validate methodologies for OPPTS Guideline 870.6300 developmental neurotoxicity studies and ICH Guideline 4.1.2 pre- and postnatal development studies.

2. INTRODUCTION

The U.S. EPA guidelines (OPPTS 870.6300) for developmental neurotoxicity studies indicate that locomotor activity testing should be performed on postnatal day (PND) 13, 17, 21 and 60 (± 2 days). Both the OPPTS 870.6300 and ICH 4.1.2 guidelines require that neurobehavioral endpoints such as motor behavior be included with standard toxicological indices. Validation of laboratory methodologies and demonstration of the sensitivity of the equipment to detect test article-related changes are requirements of these guidelines. WIL Research Laboratories, LLC chose to evaluate the use of the Kinder Scientific MotorMonitor System to measure locomotor behavior in control and test article-treated animals using haloperidol, which is a potent neuroleptic known to decrease locomotor behavior.In rodent models used in behavioral assessment of motor behavior, haloperidol impairs motor activity, decreases startle responsiveness and often induces catalepsy (Fowler and Senvus, 1993; Patacchioli et al., 1996; Swerdlow et al., 1998; Tada et al., 2004; Ballard et al., 2007). Specifically, at 0.1 mg/kg (s.c.), haloperidol was able to decrease the startle magnitude in rats following acoustic stimulation (Swerdlow et al. 1998). Regarding generalized motor behavior during open field assessments, haloperidol at 0.05 mg/kg (i.p.) decreased activity counts, distance traveled, and overall velocity (van den Buuse, 2003). For physically demanding performance tasks, haloperidol at 0.16 and 0.32 mg/kg decreased the overall locomotor speed of the rat during testing, while a dose as low as 0.04 mg/kg caused impaired task performance (Fowler and Senyuz, 1993). Further behavioral measurements by Patacchioli et al. (1996) showed that haloperidol at 0.5 mg/kg (i.p.) when given to stimulated rats increased catalepsy time, while decreasing ambulations, rears, locomotor starts, and overall activity. These findings were supported in methamphetamine-stimulated rats where haloperidol induced catalepsy and decreased locomotion at dosages ranging from 0.032 to 0.32 mg/kg (Tada et al., 2004).

3. MATERIALS AND METHODS

3.1. TEST SPECIES AND HUSBANDRY

Sprague-Dawley Crl:CD(SD) rats were obtained from Charles River Laboratories, Inc. (Raleigh, NC, USA). Twenty females with litters (5 pups/sex) were ordered to provide 20 rats/sex/group for testing on PND 13, 17 and 21. The breeder females were individually housed in plastic maternity cages with nesting material (Bed-O'Cobs®). The dams and pups remained in these cages until euthanasia on lactation day/PND 21. For the PND 61 group, 80 rats/sex for motor assessment. The animals were housed 2-3/cage (by sex) for 1 week, then individually in suspended wire mesh cages until euthanasia.

Environmental controls were set to maintain temperature at 71 ± 5° F and relative humidity between 30–70%. Air handling units provided a minimum of 10 fresh air changes per hour. Fluorescent lighting, controlled by timers, provided illumination for a 12-hour (6:00 a.m. – 6:00 p.m.) light/dark photoperiod. Temperature and relative humidity were monitored continuously. Reverse osmosis-purified water and PMI Nutrition International, LLC Certified Rodent LabDiet® 5002 were offered *ad libitum* during the course of the study.

3.2. TEST MATERIAL AND PREPARATION

Haloperidol was purchased from Sigma Aldrich, Inc., St.Louis, MO, USA. An appropriate amount of haloperidol was mixed with the vehicle (1% lactic acid) to produce dosing levels of 0.05, 0.1 and 0.5 mg/kg of body weight with a corresponding dosage volume of 10 mL/kg (for PND 13, 17 and 21 neonates) and 1 mL/kg (for PND 61 young adults) Dosing solutions, including the vehicle for administration to the control group, were prepared on each day of dose administration.

3.3. EXPERIMENTAL DESIGN

For the neonatal phase, four groups of 20 rats/sex received an intraperitoneal injection of 0, 0.05, 0.1 or 0.5 mg/kg haloperidol on PND 13, 17 and 21. For the young adult phase, the same dosages of haloperidol were administered to four groups of 20 rats/sex on PND 61. At all four ages, the haloperidol was administered 30 minutes prior to assessment of locomotor behavior. All rats were observed twice daily for moribundity and mortality, once in the morning and once in the afternoon until euthanasia. Body

weight and clinical observations were recorded on each day of dose administration. The observations included, but were not limited to, evaluations for changes in appearance of skin and fur, eyes, mucous membranes, respiratory and circulatory systems, autonomic and central nervous systems, somatomotor activity and behavior. Additional observations, if needed, were documented in the study records. The following table summarizes the testing paradigm:

Neonatal Phase (Postnatal Day 13, 17 and 21)

Group Number	Test Article	Dosage Level (mg/kg)	Number of Males[a]	Number of Females[a]
1	Vehicle Control	0	20	20
2	Haloperidol	0.05	20	20
3	Haloperidol	0.1	20	20
4	Haloperidol	0.5	20	20

a - Animals used for neonatal phase assessments were selected from 20 litters for PND 13, 17 and 21 testing, such that 1 rat/sex/litter was assigned to each group.

Young Adult Phase (Postnatal Day 61)

Group Number	Test Article	Dosage Level (mg/kg)	Number of Males	Number of Females
1	Vehicle Control	0	20	20
2	Haloperidol	0.05	20	20
3	Haloperidol	0.1	20	20
4	Haloperidol	0.5	20	20

3.4. BEHAVIORAL TESTING

Twenty neonatal animals/sex/group were assigned to the locomotor activity tests performed on PND 13, 17, 21, and 20 young adult animals/sex/group were assigned to the locomotor activity test performed on PND 61 using the automated Kinder Scientific MotorMonitor System (Kinder Scientific, LLC, Poway, CA, USA). The test session was in a sound-attenuated room and was 60 minutes in duration, consisting of 6 subintervals lasting 10 minutes each. Locomotor activity was evaluated as total and ambulatory activity counts obtained over each subinterval (0-10 minutes, 11-20 minutes, 21-30 minutes, 31-40 minutes, 41-50 minutes and 51-60 minutes) and the entire 60-minute session.

3.5. STATISTICAL ANALYSIS

All analyses were two-tailed for minimum significance levels of 5% and 1%. All statistical tests were performed by a computer with appropriate programming as referenced below. Total and ambulatory locomotor activity counts were analyzed, by sex and session, with a repeated measure analysis of variance (RANOVA). Factors in the model included treatment group (TRT), time interval (TIME), and the interaction of time interval and treatment group (TRT*TIME). The SAS® procedure PROC MIXED was used for analysis with the random effect of animal included as the repeated measurement. The covariance structure across time was selected by comparing Akaike's Information Criterion.

The monotonic dose-response relationship was evaluated using sequential linear trend tests based on ordinal spacing of dose levels. The linear dose by time interaction was evaluated and, if significant at the 0.05 level, trend tests on treatment means were performed at the 0.05 level for each time interval. If the linear dose by time interaction was not significant, the trend test was conducted across the pooled time intervals of the entire session only.

Nonmonotonic dose responses were evaluated whenever no significant linear trends were detected but TRT and/or TRT*TIME interaction was significant at the 0.01 level. Within the framework of the RANOVA, pairwise comparisons were made for each individual test article-treated group with the control group through linear contrasts. If TRT*TIME was significant, the comparisons were conducted for each time interval. If only the TRT effect was significant, the comparisons were conducted across the pooled time intervals of the entire session. These nonmonotonic dose-response comparisons were conducted at the 0.01 significance level.

All statistical analyses were conducted by BioSTAT Consultants, Inc., Portage, MI, USA, using SAS Version 8.2 (SAS Institute, Inc., 1999-2001) software.

4. RESULTS AND DISCUSSION

A normal ontogenic profile of activity in control animals was demonstrated by the Kinder Scientific MotorMonitor System when examining both the mean total and mean ambulatory activity counts from PND 13, 17, and 21 males (Figures 1A and 2A). This trend, however, was not present in females (Figures 1B and 2B) because of the elevated level of activity in the PND 13 control females. Specifically, the PND 13 vehicle control males tended to be less active than the PND 17 males in the same group, with activity decreasing on PND 21. This is consistent with the development of motor behavior in a novel environment, where activity is relatively low in PND 13 neonatal rats, increases around PND 17 and then decreases around PND 21. Total activity counts measured in each subinterval by the Kinder Scientific MotorMonitor in PND 13 haloperidol treatment groups (Figure 3A and B) shows a decreased motor activity for males (0.5 mg/kg) and females (0.05, 0.1, and 0.5 mg/kg). This same haloperidol effect was also present in ambulatory activity counts over the subintervals (Figure 4A and B), where ambulatory activity was decreased in males (0.5 mg/kg) and females (0.05, 0.1, and 0.5 mg/kg). When examining the mean total and ambulatory activity taken over all subintervals (Figure 1A and B; Figure 2A and B), there was also an indication that the PND 13 females showed a dose-dependent decrease in activity for each haloperidol treatment, whereas PND 13 males only showed decreased motor activity at 0.5 mg/kg. In the PND 13 males, the lower haloperidol doses (0.05 and 0.1 mg/kg) did not consistently decrease motor activity. Although the decreased motor activity following haloperidol treatment was attenuated in males, the decreased total and ambulatory activity counts are consistent with previously published studies indicating that haloperidol decreases overall motor activity (Fowler and Senyuz, 1993; Patacchioli et al., 1996; Swerdlow et al., 1998; Tada et al., 2004; Ballard et al., 2007).

The total activity counts across individual subintervals measured in PND 17 males and females (Figure 5A and B) showed a more robust dose-dependent decrease than in the PND 13 haloperidol treatment groups (0.05, 0.1, and 0.5 mg/kg). In a similar manner, the PND 17 male and female (Figure 6A and B) ambulatory activity counts followed the same dose-dependent trend following haloperidol treatment at 0.05, 0.1, and 0.5 mg/kg. For both total and ambulatory activity, the presence of a dose-dependent decrease in the

PND 17 males was partially the result of the relatively large increase (approximately 3-fold) in the baseline (vehicle control) activity compared to the vehicle control group on PND 13. In addition, there was the presence of habituation over the course of the behavioral assessment in the vehicle control males and females on PND 17. When examining the mean total and ambulatory activity taken over all subintervals (Figure 1A and B, Figure 2A and B), there was also an indication that the PND 17 males and females showed the same dose-dependent decrease in activity with haloperidol treatment. This is consistent with the effects of various doses of haloperidol (0.03 mg/kg to 0.5 mg/kg) decreasing overall and ambulatory activity, while increasing catalepsy in male and female rats (Fowler and Senyuz, 1993; Patacchioli et al., 1996; Swerdlow et al., 1998; Tada et al., 2004; Ballard et al., 2007).

This effect of haloperidol decreasing total activity counts over the six subintervals was also present in the PND 21 male and female 0.1 and 0.5 mg/kg treatment groups (Figure 7A and B). Ambulatory activity taken over the six subintervals also decreased in a dose-dependent manner for both males and females (Figure 8A and B). In the PND 21 males and females, habituation to the environment was present in controls, as well as in the 0.01, 0.1, 0.5 mg/kg haloperidol treatment groups, although the habituation profile was difficult to evaluate for males and females in the 0.5 mg/kg group. The decreased motor behavior (total and ambulatory activity counts) was similar to the overall trend noted in PND 17 males and females, as well as the effect of haloperidol decreasing motor activity indicated in the literature. This is also consistent with the effects of various doses of haloperidol (0.03 mg/kg to 0.5 mg/kg) decreasing overall and ambulatory activity, while increasing catalepsy in male and female rats (Fowler and Senyuz, 1993; Patacchioli et al., 1996; Swerdlow et al., 1998; Tada et al., 2004; Ballard et al., 2007).

In general for the PND 13 males and females, habituation did not occur over the course of assessment for both total and ambulatory activity (Figure 3A and B, Figure 4A and B). There was also an apparent gender effect in both total and ambulatory activity counts taken over the individual subinterval or over the entire assessment period suggesting that females are more sensitive to haloperidol treatment than males. This apparently attenuated effect, however, is likely due to elevated baseline (vehicle control) activity

measurements in females compared to males at PND 13. As previously noted, the PND 13 rats did not have an habituation profile, whereas this profile became present in the PND 17 and 21 rats (Figures 5 through 8). This indicates that the Kinder Scientific MotorMonitor System was able to detect the development of activity for PND 13, 17 and 21 males and females.

Haloperidol treatment of male and female PND 61 young adults (Figure 10A and B) identified a decrease in total activity over the course of the six subintervals only at the two higher doses (0.1 and 0.5 mg/kg). This same dose effect of 0.1 and 0.5 mg/kg haloperidol was also present in the ambulatory activity data over all subintervals (Figure 11A and B). Although habituation was present in the control and haloperidol treatments (0.05, 0.1, and 0.5 mg/kg), the 0.5 mg/kg profile was attenuated. Since trend of habituation was specific within all PND 61 rats, this was likely indicative of a decreased sensitivity in the young adult rats (or increased sensitivity in younger rats). This was also apparent in the mean total and ambulatory activity counts for the entire testing session (Figure 9A and B) where only the 0.1 mg/kg and 0.5 mg/kg doses substantially decreased activity. However, haloperidol still decreased motor activity (total and ambulatory activity counts) in both males and females, which is consistent with the previously examined ages in this study and with the published literature (Fowler and Senyuz, 1993; Patacchioli et al., 1996; Swerdlow et al., 1998; Tada et al., 2004; Ballard et al., 2007).

In conclusion, the motor activity data (i.e. total activity and ambulatory activity) for Sprague Dawley Crl:CD (SD) rats generated by the Kinder Scientific MotorMonitor System are consistent with the effects of haloperidol on motor behavior. This motor monitoring system is therefore capable and sensitive enough to measure reductions in motor activity in neonatal and young adult rodents with a positive control agent such as haloperidol.

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6. KEY STUDY PERSONNEL AND REPORT SUBMISSION

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3 June 2008
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Date

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Associate Director, Developmental and
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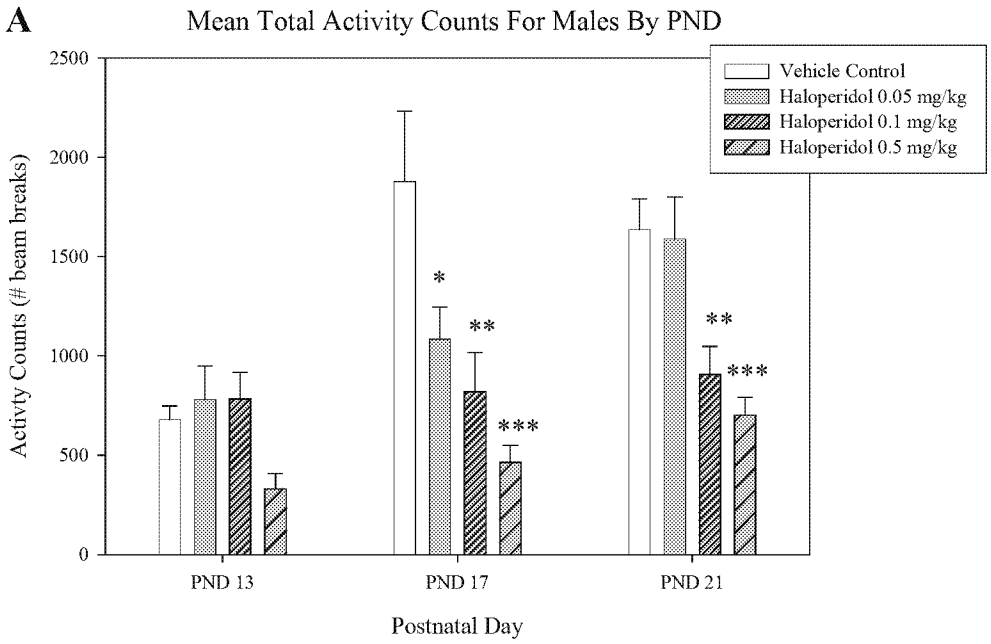
FIGURES 1 - 11



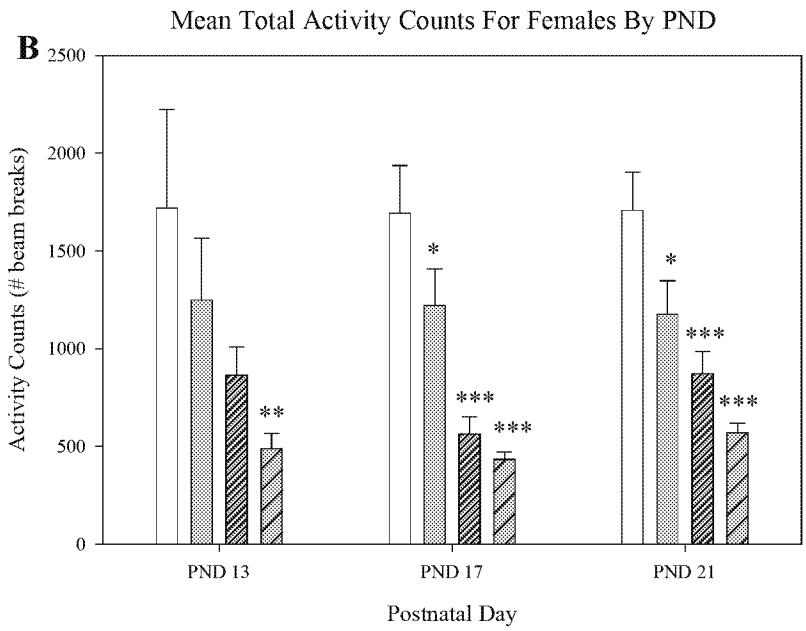


Figure 1: Mean total activity counts for (A) male and (B) female PND 13, 17 and 21 neonates, expressed as mean ± SEM. Significance between the treatment and vehicle control group is indicated by $^{*}p<0.05$, $^{**}p<0.01$ and $^{***}p<0.001$.

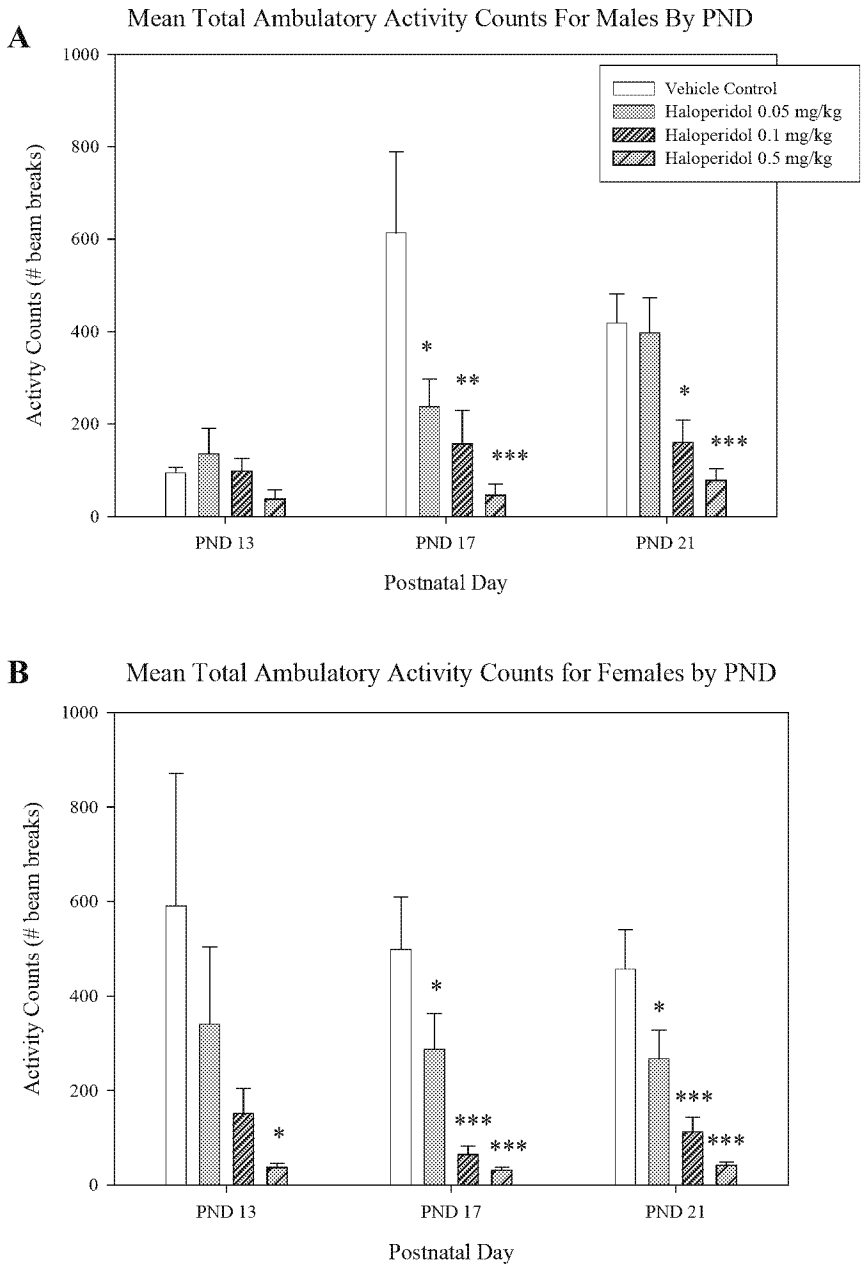


Figure 2: Mean total ambulatory activity counts (A) male and (B) female PND 13, 17 and 21 neonates, expressed as mean ± SEM. Significance between the treatment and vehicle control group is indicated by *p<0.05, **p<0.01 and ***p<0.001.

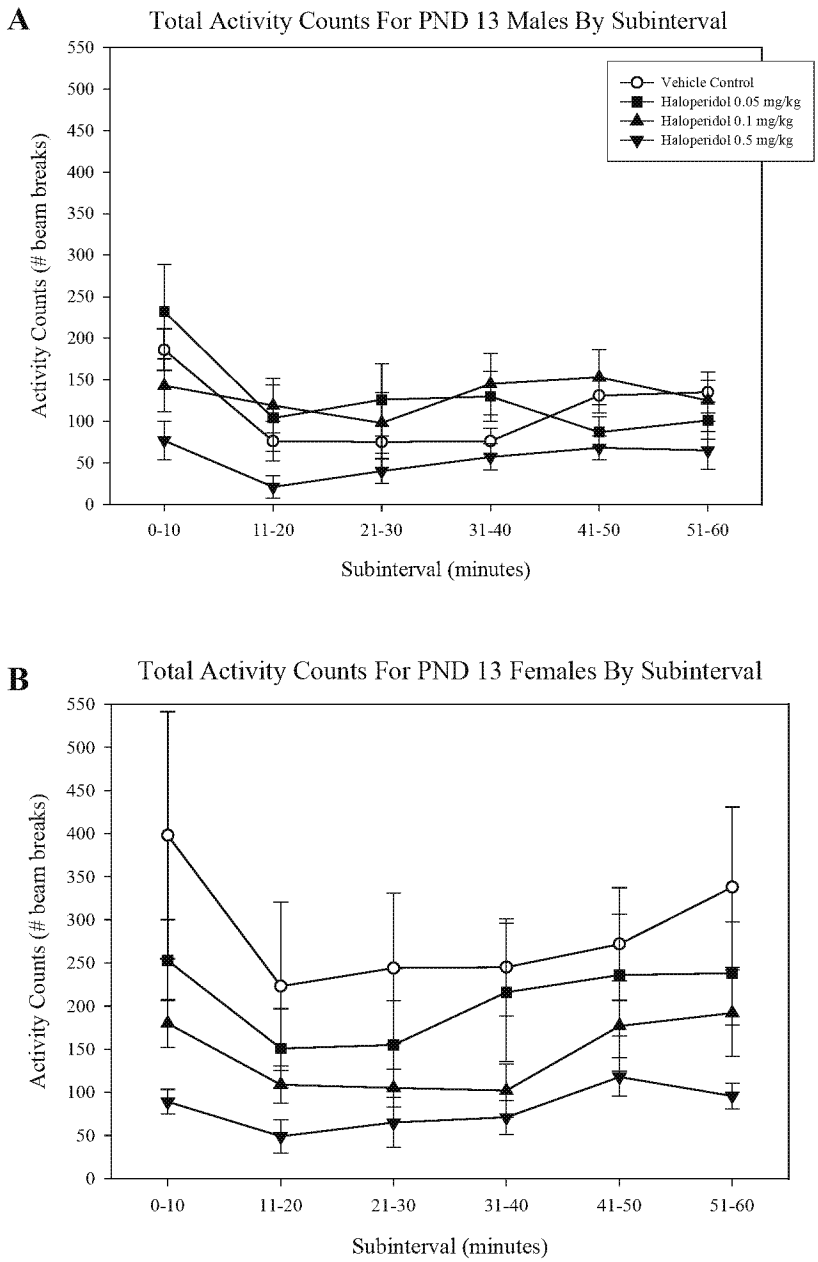
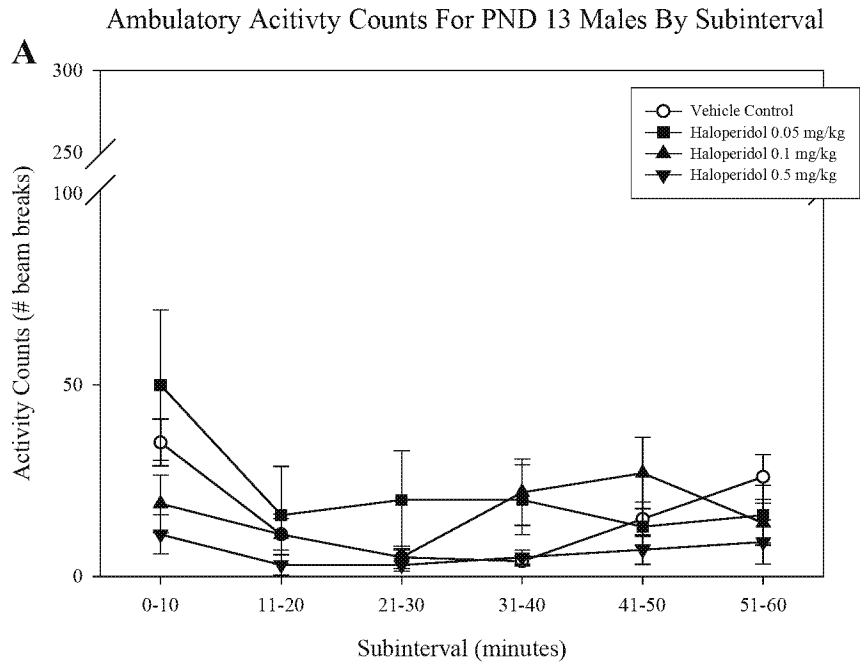


Figure 3: Mean total activity counts for (A) male and (B) female PND 13 neonates over each subinterval, expressed as mean ± SEM.



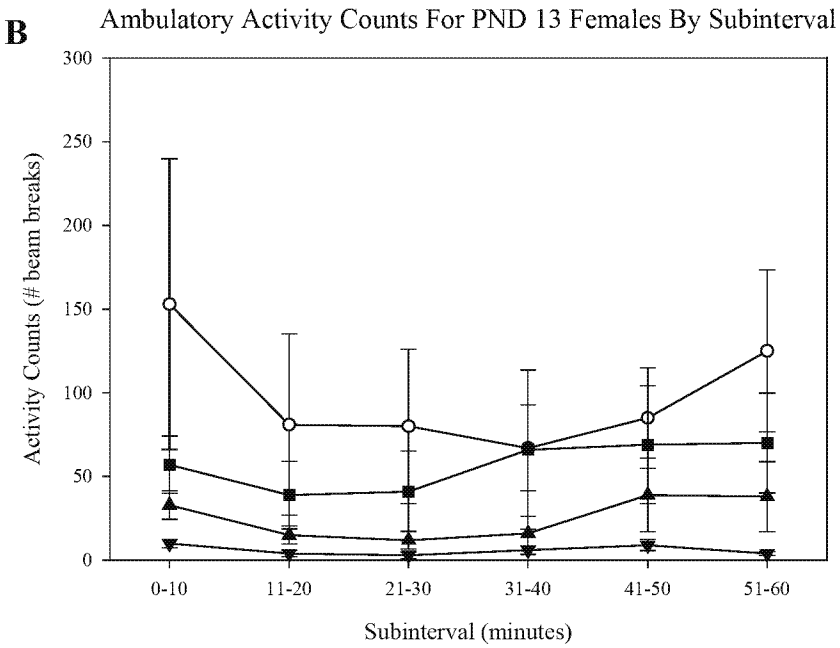
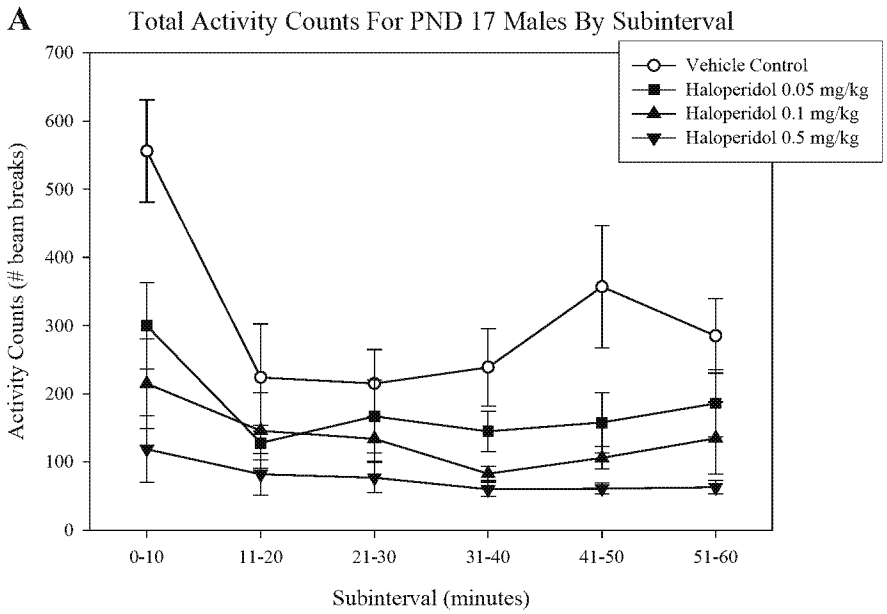


Figure 4: Mean ambulatory activity counts for (A) male and (B) female PND 13 neonates over each subinterval, expressed as mean ± SEM.



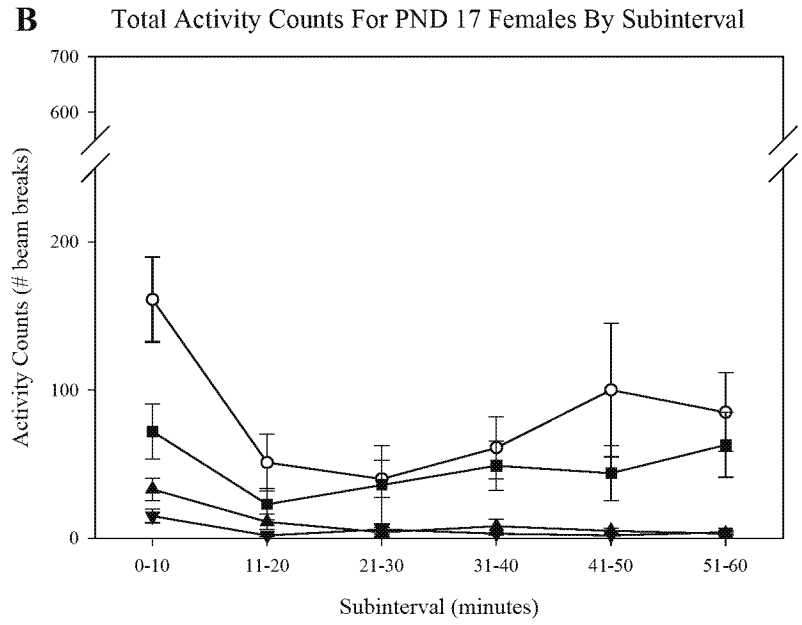


Figure 5: Mean total activity counts for (A) male and (B) female PND 17 neonates over each subinterval, expressed as mean ± SEM.

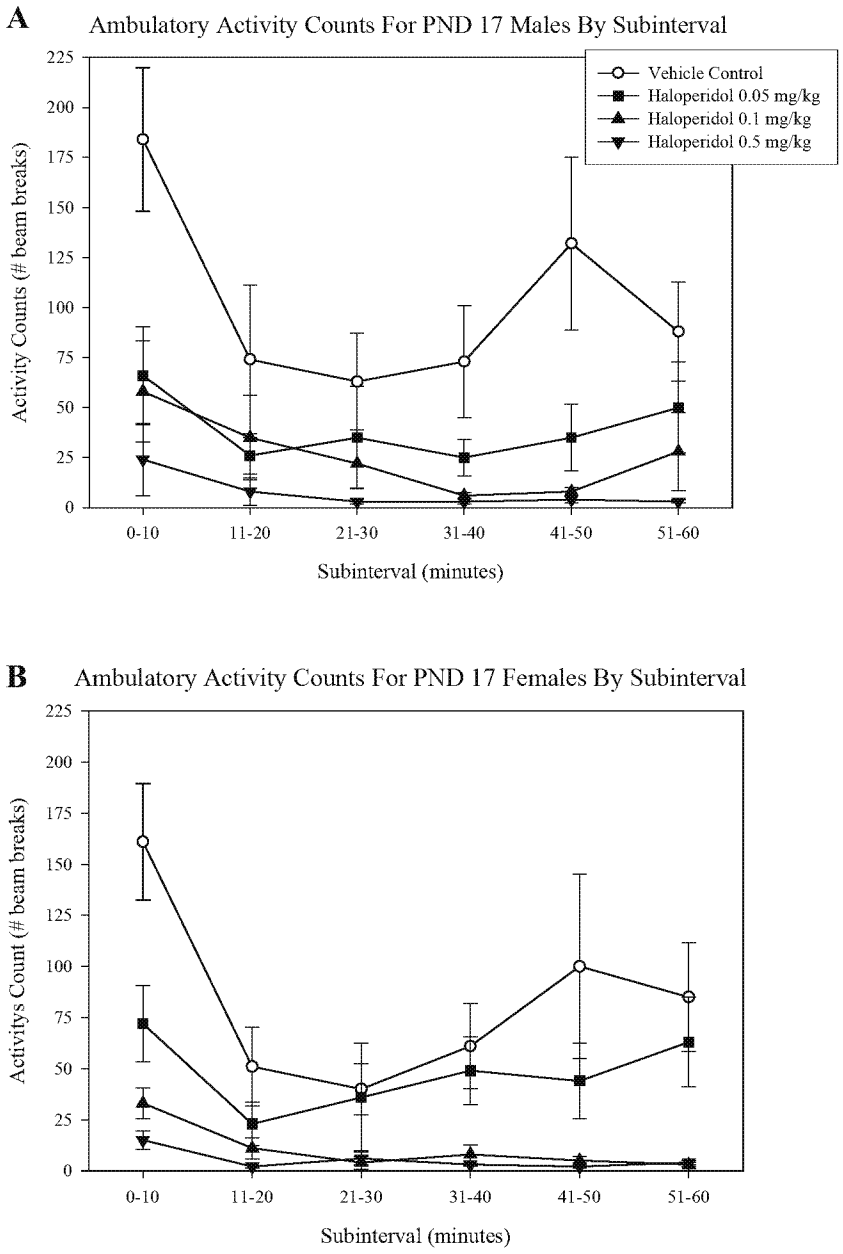
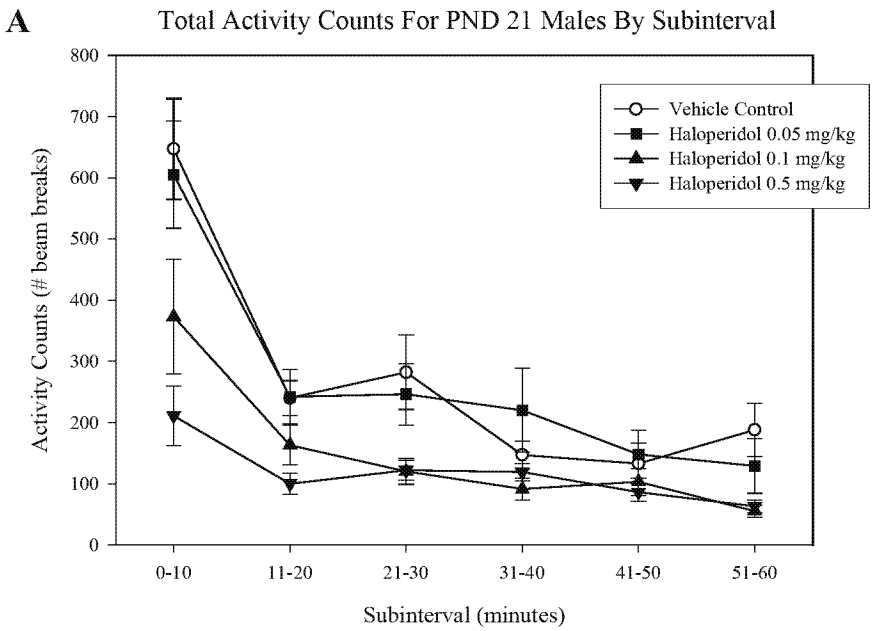


Figure 6: Mean ambulatory activity counts for (A) male and (B) female PND 17 neonates over each subinterval, expressed as mean ± SEM.



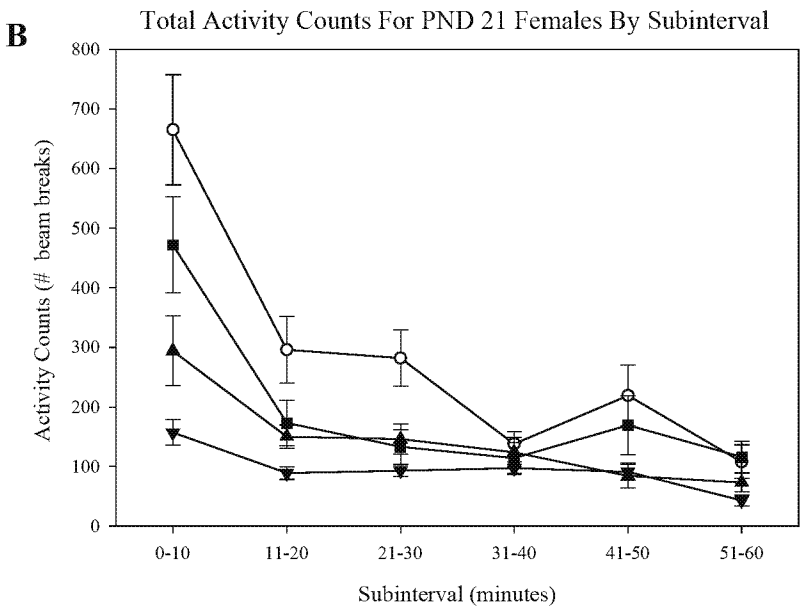
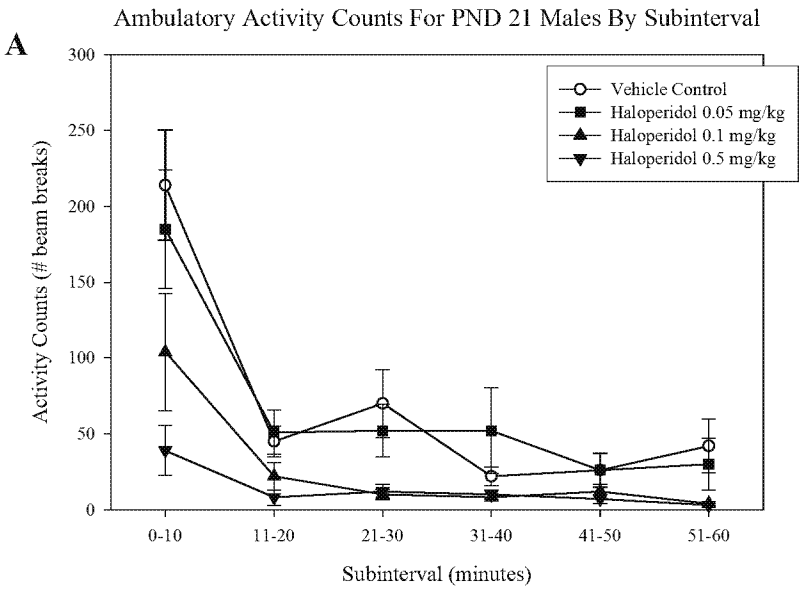


Figure 7: Mean total activity counts for (A) male and (B) female PND 21 neonates over each subinterval, expressed as mean ± SEM.



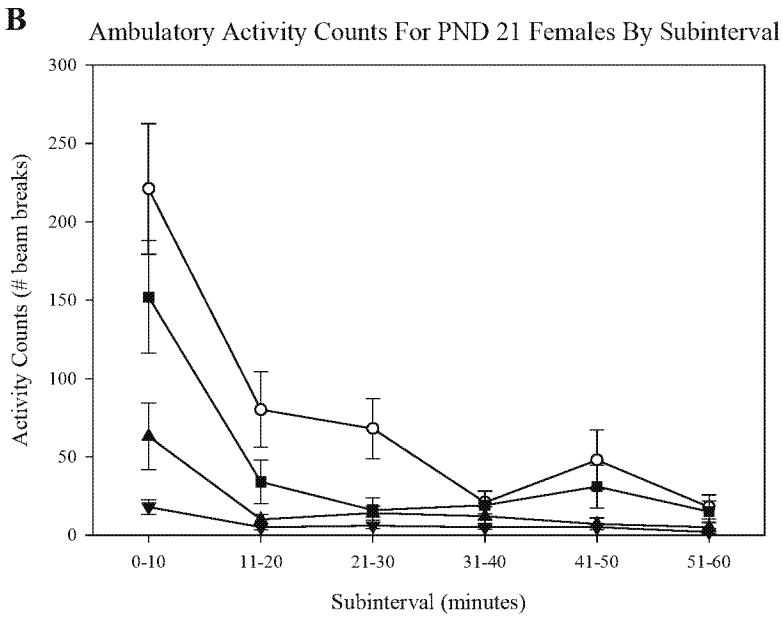


Figure 8: Mean ambulatory activity counts for (A) male and (B) female PND 21 neonates over each subinterval, expressed as mean ± SEM.

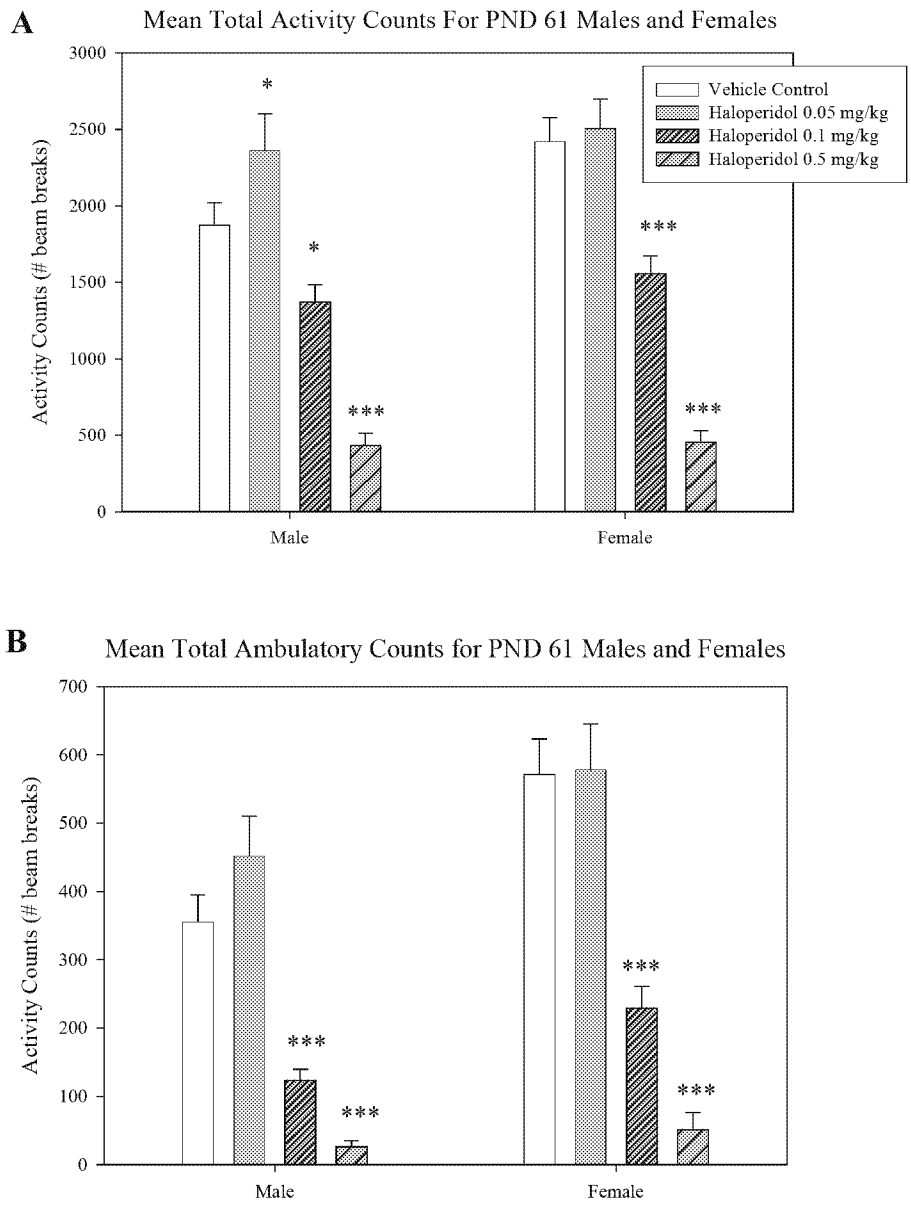
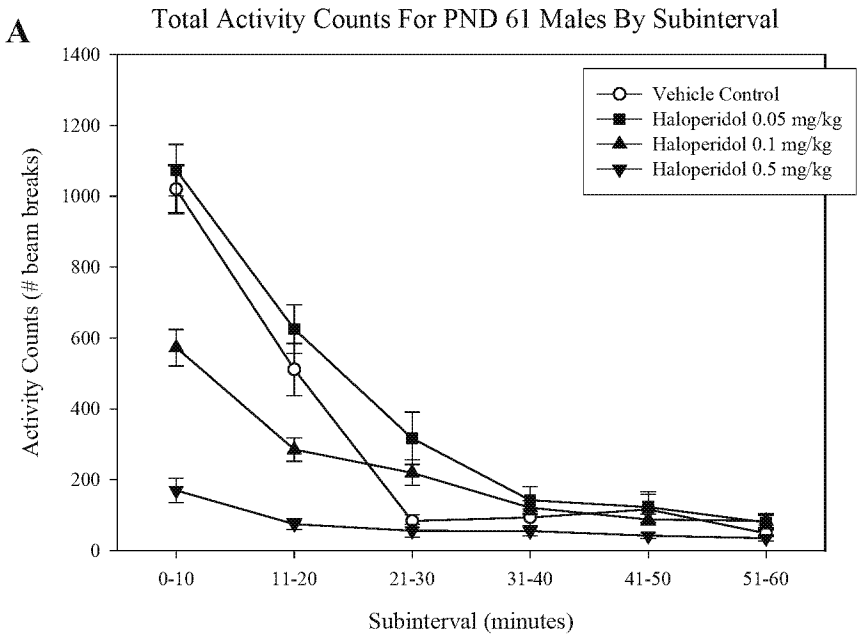


Figure 9: Mean total activity and ambulatory activity counts for (A) male and (B) female PND 61 young adults, expressed as mean ± SEM. Significance between the treatment and vehicle control group is indicated by *$p<0.05$ and ***$p<0.001$.



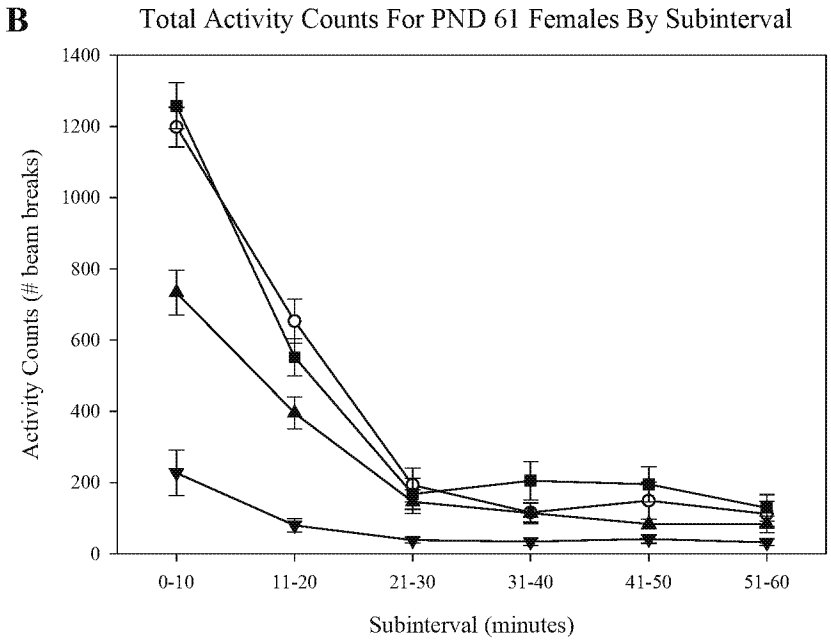


Figure 10: Mean total activity counts for (A) male and (B) female PND 61 young adults over each subinterval, expressed as mean ± SEM.

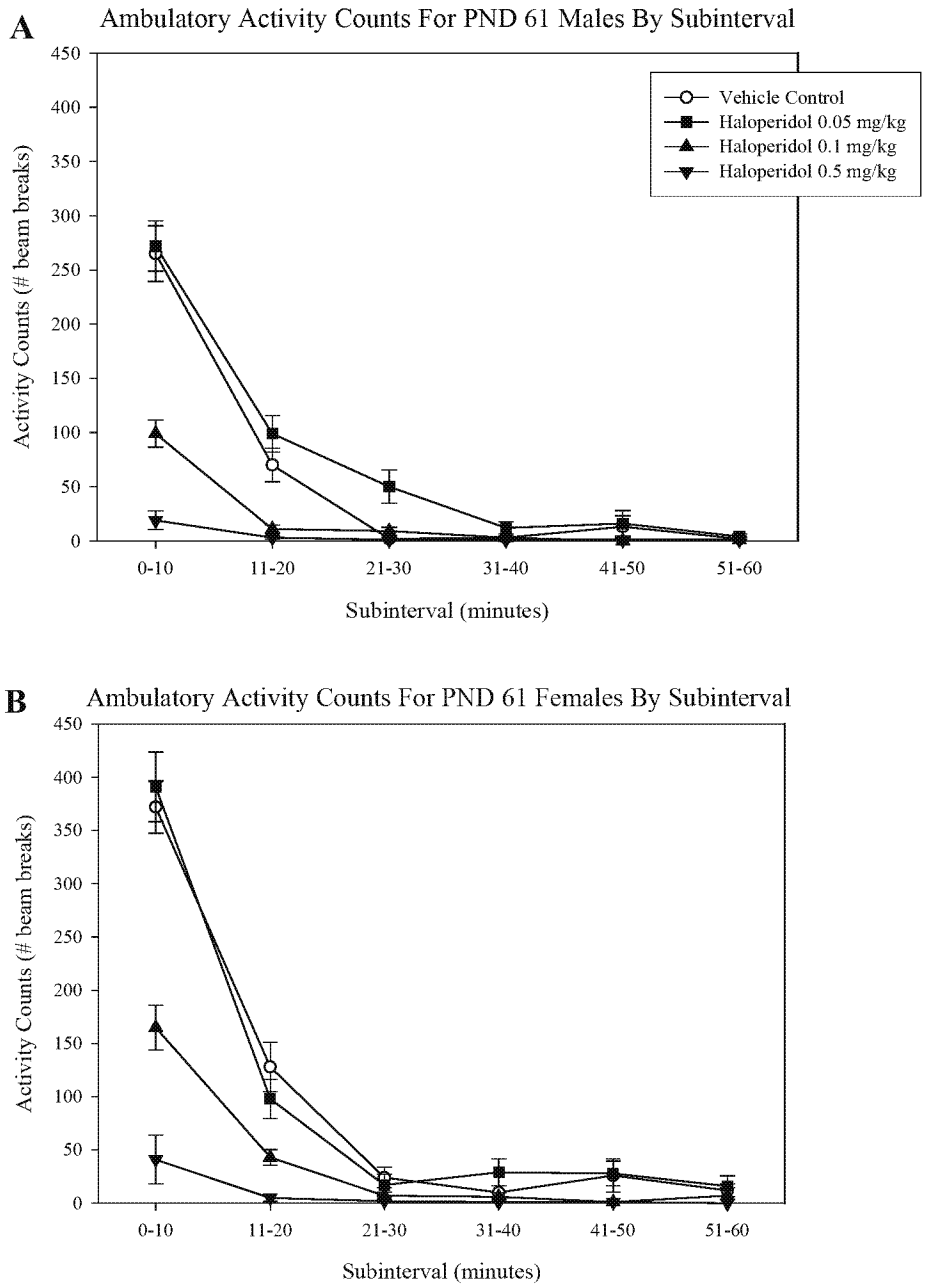


Figure 11: Mean ambulatory activity counts for (A) male and (B) female PND 61 young adults over each subinterval, expressed as mean ± SEM.

STUDY TITLE

A POSITIVE CONTROL VALIDATION
STUDY OF LOCOMOTOR ACTIVITY IN RATS

STUDY NUMBER

WIL-99441

STUDY DIRECTOR

Melissa J. Beck, PhD

STUDY INITIATION DATE

26 October 2007

STUDY COMPLETION DATE

27 May 2008

PERFORMING LABORATORY

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1407 George Road
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STATEMENT OF NO DATA CONFIDENTIALITY CLAIMS

The purpose of the study was to validate the use of the Kinder Scientific MotorMonitor System in our laboratory and to demonstrate the ability to detect increases in locomotor activity using this system. Therefore, this page has been intentionally left blank.

1. ABSTRACT

The objective of this study was to demonstrate the ability of the Kinder Scientific MotorMonitor System to detect increases in activity in response to nicotine and amphetamine within the U.S. EPA OPPTS 870.6300 (Developmental Neurotoxicity), OECD 426 (Developmental Neurotoxicity) and ICH 4.1.2 (Pre- and Postnatal Development) guidelines. Nicotine and amphetamine were administered to male and female Sprague-Dawley Crl:CD rats 3 and 15 minutes, respectively, prior to assessment of locomotor behavior with the Kinder Scientific MotorMonitor System. Nicotine was administered at a dosage level of 0.1 or 0.5 mg/kg by a single intraperitoneal injection to neonatal rats on postnatal days (PND) 13, 17 and 21. Amphetamine was administered at a dosage level of 1 or 3 mg/kg by a single intraperitoneal injection to young adult rats (male and female) on PND 61 and at a dosage level of 0.2 or 1 mg/kg to young adult PND 61 females. Nicotine caused an increase in locomotor activity (mean total and ambulatory activity) in male and female neonatal rats at PND 13, 17 and 21. The habituation profile was evident in the PND 17 and 21 males and females. In a similar manner, amphetamine stimulated locomotor behavior in male and female rats at PND 61, causing both total and ambulatory activity to increase. The subsequent female-only groups (0.2 and 1 mg/kg amphetamine) exhibited a dose response with increased total and ambulatory activity compared to controls. In the PND 61 males and females (given 1 or 3 mg/kg amphetamine), the habituation profile was only present in the control and 3 mg/kg amphetamine treatment groups, whereas the habituation profile was present in the female-only PND 61 control and 0.2 mg/kg amphetamine groups. The experimental design used in this study demonstrated that WIL Research can detect locomotor effects of nicotine and amphetamine using the Kinder Scientific MotorMonitor System, and that the results can be considered to validate methodologies for OPPTS 870.6300 and OECD 426 developmental neurotoxicity studies and ICH 4.1.2 pre- and postnatal development studies.

2. INTRODUCTION

The U.S. EPA Guideline OPPTS 870.6300 and OECD Guideline 426 for developmental neurotoxicity studies indicate that locomotor activity testing should be performed on postnatal (PND) 13, 17, 21 and 60 (± 2 days). The guidelines, and also ICH 4.1.2 require that neurobehavioral endpoints such as motor behavior be included with standard toxicological indices to support product registration under the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA) and the Toxic Substances Control Act (TSCA). Validation of laboratory methodologies and demonstration of the sensitivity of the equipment to detect test article-related changes are requirements of this guideline. WIL Research Laboratories, LLC chose to evaluate the use of the Kinder Scientific MotorMonitor System to measure locomotor behavior in control and test article-treated animals using nicotine and amphetamine, which are known to increase indices of locomotor behavior.

Both nicotine and amphetamine are widely used in the rodent animal model to measure various behaviors, specifically involving motor function. Treatment of rodents with nicotine increases motor function associated with the startle response (Gould et al., 2005; Lewis and Gould, 2003; Acri et al., 1995). Specifically, acute treatment of nicotine (0.1 and 0.5 mg/kg, s.c.) stimulates overall motor activity in both male neonates and young adults (Faraday et al., 2003). Interestingly, following delivery of nicotine to neonates, they exhibited increases in movements and rearing behaviors; whereas, young adults did not show these same levels (Faraday et al., 2003). This same stimulatory effect of nicotine is also present in females treated with similar levels of nicotine (0.1 and 0.5 mg/kg, s.c.) under similar testing parameters (Elliot et al., 2005). Nicotine, however, appears to be the most effective at increasing motor function in neonatal age ranges rather in than in young adults (Domino et al., 2001; Bevins and Besheer, 2001; Shoaib and Shippenberg, 1996).

Amphetamine at low concentrations (0.2, 0.4 and 0.8 mg/kg) increases overall locomotor behavior in adult rats in a dose-dependent manner (Mobini et al., 2000). The same trend is also present when compared to moderately higher doses of amphetamine (2 mg/kg), which show significant dose-dependent increases in locomotor activity (Yates et al.,

2007; Chatterjie et al., 1998). This noted effect of amphetamine increasing of horizontal and vertical motor activity, total distance covered, and stereotypic behaviors for up to 2 hours post-treatment (Gaytan et al., 1996). Although still elevated when compared to control animals, amphetamine at even higher doses (6, 10, 12, 16, and 20 mg/kg) actually becomes less effective at increasing the distance covered and other general locomotor-related behaviors (Yates et al., 2007).

3. MATERIALS AND METHODS

3.1. TEST SPECIES AND HUSBANDRY

Sprague-Dawley Crl:CD(SD) rats were obtained from Charles River Laboratories, Inc. (Raleigh, NC, USA). Twenty females with litters (5 pups/sex) were ordered to provide 20 rats/sex/group for testing on PND 13, 17 and 21. The breeder females were individually housed in plastic maternity cages with nesting material (Bed-O'Cobs®). The dams and pups remained in these cages until euthanasia on lactation day/PND 21. For the PND 61 groups, 84 young adult rats/sex were ordered for startle response testing of 80 rats/sex. The animals were housed 2-3/cage (by sex) for 1 week, then individually in suspended wire mesh cages until euthanasia.

Environmental controls were set to maintain temperature at 71 ± 5° F and relative humidity between 30–70%. Air handling units provided a minimum of 10 fresh air changes per hour. Fluorescent lighting, controlled by timers, provided illumination for a 12-hour (6:00 a.m. – 6:00 p.m.) light/dark photoperiod. Temperature and relative humidity were monitored continuously. Reverse osmosis-purified water and PMI Nutrition International, Inc. Certified Rodent LabDiet® 5002 were offered *ad libitum* during the course of the study.

3.2. TEST MATERIAL AND PREPARATION

(-)-Nicotine Hydrogen Tartrate Salt was purchased from Sigma Aldrich, St.Louis, MO, USA. An appropriate amount of nicotine was mixed with the vehicle (0.9% sodium chloride for injection) to produce dosing concentrations of 0.005 and 0.025 mg/mL with a corresponding dosage volume of 20 mL/kg. Dosing solutions were prepared on each day of dose administration.

D–Amphetamine Sulfate was purchased from Sigma Aldrich, St. Louis, MO. An appropriate amount of amphetamine, corrected for salt content, was mixed with the vehicle (0.9% sodium chloride for injection) to produce dosing concentrations of 0.2, 1 and 3 mg/mL with a corresponding dosage volume of 1 mL/kg. Dosing solutions were prepared on each day of dose administration.

On each day of dose administration, a sufficient amount of vehicle was dispensed for administration to all control groups.

3.3. EXPERIMENTAL DESIGN

For the neonatal phase, four groups of 20 rats/sex received an intraperitoneal injection of nicotine at 0, 0.1 or 0.5 mg/kg on PND 13, 17 and 21, approximately 3 minutes prior to assessment of locomotor behavior. For the young adult phase, amphetamine was administered by an intraperitoneal injection to four groups of 20 rats/sex at 0, 1 or 3 mg/kg on PND 61, approximately 15 minutes prior to assessment of locomotor behavior. In addition, 3 separate groups of 20 female rats/group at 0, 0.2 or 1 mg/kg on PND 61 were also administered amphetamine by intraperitoneal injection approximately 15 minutes prior to locomotor assessment. The corresponding dosage volumes were 20 mL/kg for nicotine and 1 mL/kg for amphetamine. All rats were observed twice daily for moribundity and mortality, once in the morning and once in the afternoon until euthanasia. Body weights and clinical observations were recorded on each day of dose administration. The observations included, but were not limited to evaluations for changes in appearance of skin and fur, eyes, mucous membranes, respiratory and circulatory systems, autonomic and central nervous systems, somatomotor activity and behavior. Additional observations, if needed, were documented in the study records. The following table summarizes the testing paradigm:

Neonatal Phase (Postnatal Day 13, 17 and 21)

Group Number	Test Article	Dosage Level (mg/kg)	Number of Males[a]	Number of Females[a]
1	Vehicle Control	0	20	20
2	Vehicle Control	0	20	20
3	Nicotine	0.1	20	20
4	Nicotine	0.5	20	20

a- Animals used for neonatal phase assessments was selected from 20 litters for PND 13, 17 and 21 testing, such that 1 rat/sex/litter was assigned to each group.

Young Adult Phase (Postnatal Day 61)

Group Number	Test Article	Dosage Level (mg/kg)	Number of Males	Number of Females
1	Vehicle Control	0	20	20
2	Vehicle Control	0	20	20
3	Amphetamine	1	20	20
4	Amphetamine	3	20	20

Young Adult Phase (Postnatal Day 61; Females Only)

Group Number	Test Article	Dosage Level (mg/kg)	Number of Females
1	Vehicle Control	0	20
2	Amphetamine	0.2	20
3	Amphetamine	1	20

3.4. BEHAVIORAL TESTING

Twenty neonatal animals/sex/group were assigned to the locomotor activity tests performed on PND 13, 17 and 21, and 20 young adult animals/sex/group with an additional 20 young adult females/group were assigned to the locomotor activity test performed on PND 61 using the automated Kinder Scientific MotorMonitor System (Kinder Scientific, LLC, Poway, CA, USA). The test session was 60 minutes in duration, consisting of 6 subintervals lasting 10 minutes each. Locomotor activity was evaluated as total and ambulatory activity counts obtained over each subinterval (0-10 minutes, 11-20 minutes, 21-30 minutes, 31-40 minutes, 41-50 minutes and 51-60 minutes) and the entire 60-minute session.

3.5. STATISTICAL ANALYSIS

All analyses were two-tailed for minimum significance levels of 5% and 1%. All statistical tests were performed by a computer with appropriate programming as referenced below. Total and ambulatory counts were analyzed, by sex and session, with a repeated measure analysis of variance (RANOVA). Factors in the model included treatment group (TRT), time interval (TIME), and the interaction of time interval and treatment group (TRT*TIME). The SAS® procedure PROC MIXED was used for analysis with the random effect of animal included as the repeated measurement. The

covariance structure across time was selected by comparing Akaike's Information Criterion.

The monotonic dose-response relationship was evaluated using sequential linear trend tests based on ordinal spacing of dose levels. The linear dose by time interaction was evaluated and, if significant at the 0.05 level, trend tests on treatment means were performed at the 0.05 level for each time interval. If the linear dose by time interaction was not significant, the trend test was conducted across the pooled time intervals of the entire session only.

Nonmonotonic dose responses were evaluated whenever no significant linear trends were detected but TRT and/or TRT*TIME interaction was significant at the 0.01 level. Within the framework of the RANOVA, pairwise comparisons were made for each individual test article-treated group with the control group through linear contrasts. If TRT*TIME was significant, the comparisons were conducted for each time interval. If only the TRT effect was significant, the comparisons were conducted across the pooled time intervals of the entire session. These nonmonotonic dose-response comparisons were conducted at the 0.01 significance level.

4. RESULTS AND DISCUSSION

The ontogenic profile of activity in control animals was demonstrated by the Kinder Scientific MotorMonitor System when examining both the mean total and mean ambulatory activity counts from PND 13, 17 and 21 males and females (Figure 1A and B; Figure 2A and B). This behavioral profile of motor function is evident by the relatively low activity in PND 13 neonates, followed by an increase in activity at PND 17 and then a decrease in activity at PND 21. This is consistent with the development of motor behavior in male and female neonates when exposed to a novel environment over these three time points (PND 13, 17 and 21).

Total activity counts measured over each subinterval by the Kinder Scientific MotorMonitor System in PND 13 male and female treatment groups (Figure 3A and B) showed a slight tendency of nicotine to increase activity in males and females at 0.5 mg/kg. This effect was more evident in the ambulatory activity counts over subinterval 1-10 (Figure 4A and B). For both total and ambulatory activity counts in the PND 13 male and female high nicotine groups (0.5 mg/kg) there was a marked drop from subinterval 1-10 to 11-20, after which there was no distinction between groups. This initial elevation is the first sign in the development of an habituation profile, and also supports the effect of nicotine increasing motor activity that has been documented in the literature (Domino et al., 2001; Bevins and Besheer, 2001; Shoaib and Shippenberg, 1996).

The PND 17 male (0.1 and 0.5 mg/kg) and female (0.5 mg/kg) nicotine treatment groups exhibited increased total and ambulatory locomotor behavior over all of the subintervals (Figure 1A and B; Figure 2A and B). The apparent greater effect of nicotine in the PND 17 males and females (compared to PND 13) may be due to the tendency of motor behavior to increase in this age group. Examining each subinterval during behavioral assessment indicated that the nicotine-treated males and females tended to be more active (total and ambulatory) than the control groups over the initial 3 subintervals (Figure 5A and B; Figure 6A and B). This increased level of motor activity is comparable to the increased activity measurements at similar doses present in the literature (Shoaib and Shippenberg, 1996; Bevins and Besheer, 2001; Faraday et al., 2003; Elliot et al., 2005).

In addition, an habituation profile was present in each PND 17 male and female group over the six subintervals.

The nicotine treatment effect, primarily at 0.5 mg/kg, also resulted in an increased mean total and ambulatory activity in the PND 21 males and females (Figure 1A and B; Figure 2A and B). This effect of nicotine was apparently dose dependent for both males and females, with the 0.5 mg/kg having the greatest level of activity. The effect of nicotine on PND 21 motor activity was also more pronounced for the total and ambulatory activity measurements taken over all six subintervals (Figure 7A and B; Figure 8A and B). In addition, the development of the habituation profile was more evident in the PND 21 nicotine-treated males and females. Even in this age group (PND 21), the effects of nicotine at 0.1 and 0.5 mg/kg are consistent with previously published behavioral assessment research (Shoaib and Shippenberg, 1996; Bevins and Besheer, 2001; Faraday et al., 2003; Elliot et al., 2005).

The use of the Kinder Scientific MotorMonitor System showed that amphetamine treatment (1 and 3 mg/kg) increased PND 61 male and female mean total and ambulatory activity counts (Figure 9A and B). This effect was not dose dependent, because the most activity was present in the 1 mg/kg amphetamine male and female treatment groups. However, addition of the amphetamine-treated (0.2 and 1 mg/kg) PND 61 females indicated that there was a dose-dependent effect of amphetamine (Figure 12A and B) on mean total and ambulatory activity counts. The 3 mg/kg amphetamine treatment in the previously mentioned PND 61 males and females resulted in substantially lower level of mean total activity than in the 1 mg/kg groups, although still above the control groups. This same decrease in activity was also present in the mean ambulatory data suggesting that generalized activity or movement (i.e., shaking) was not substituted with an increase in ambulation. Reports in the literature do indicate that, although amphetamine acts to increase motor activity, there is a point where amphetamine can become inhibitory in nature depending on the strain, age, gender and testing paradigm used (Gaytan et al., 1996; Mobini et al. 2000; Chatterjie et al., 1998; Yates et al., 2007).

Similarly, amphetamine treatment (1 and 3 mg/kg) of the young adult PND 61 males and females (Figure 10A and B) increased the total activity counts by subinterval in a non-dose-related manner. In addition, the ambulatory activity by subinterval for males and females (Figures 11A and B) was also increased for the majority of motor activity assessment following amphetamine treatment (1 and 3 mg/kg). An habituation profile was present for both total and ambulatory activity for the PND 61 control animals, with the 3 mg/kg amphetamine treatment group only showing some possible habituation regarding ambulatory activity. The 1 mg/kg treatment groups for both males and females lacked habituation, with the total and ambulatory activity remaining elevated over all subintervals. In a similar manner to the total activity, the PND 61 (0, 0.2 and 1 mg/kg) treated females exhibited a dose response for ambulatory activity (Figure 13 A and B). Overall, the effect of amphetamine increasing activity above baseline, as well as inhibiting activity at higher amphetamine doses (3 mg/kg) in the PND 61 males and females, is consistent with the previously published literature (Gaytan et al., 1996; Mobini et al. 2000; Chatterjie et al., 1998; Yates et al., 2007).

In conclusion, the motor activity data (i.e. total activity and ambulatory activity) for Sprague Dawley Crl:CD (SD) rats generated by the Kinder Scientific MotorMonitor System are consistent with previously reported effects of nicotine and amphetamine on motor behavior. This motor monitoring system is therefore capable and sensitive enough to measure increases in motor activity in neonatal and young adult rodents with positive control agents such as nicotine and amphetamine.

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6. KEY STUDY PERSONNEL AND REPORT SUBMISSION

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Assistant Director, Neurosciences
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27 May 2008
Date

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27 May 2008
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27-May-2008
Date

Donald G. Stump, PhD, DABT
Associate Director, Developmental and
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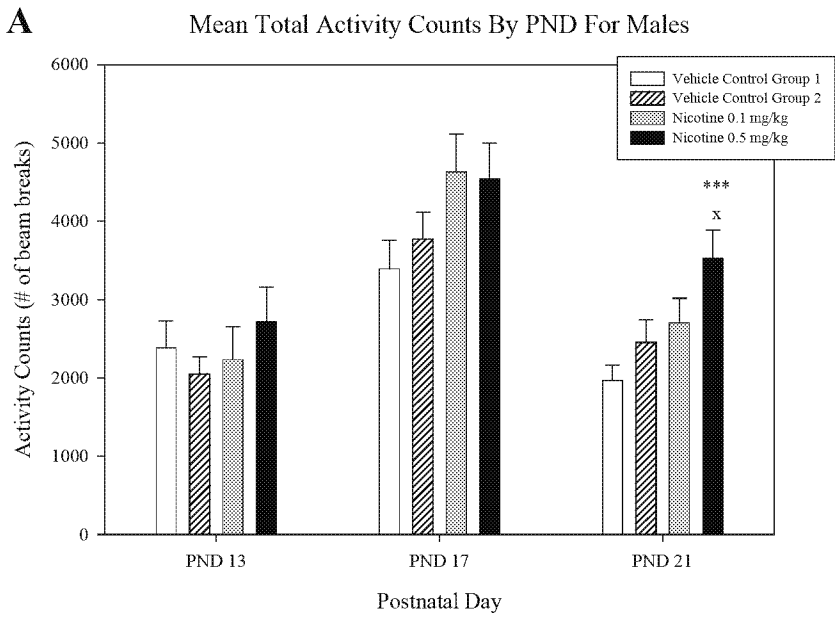
27 May 2008
Date

FIGURES 1 - 13



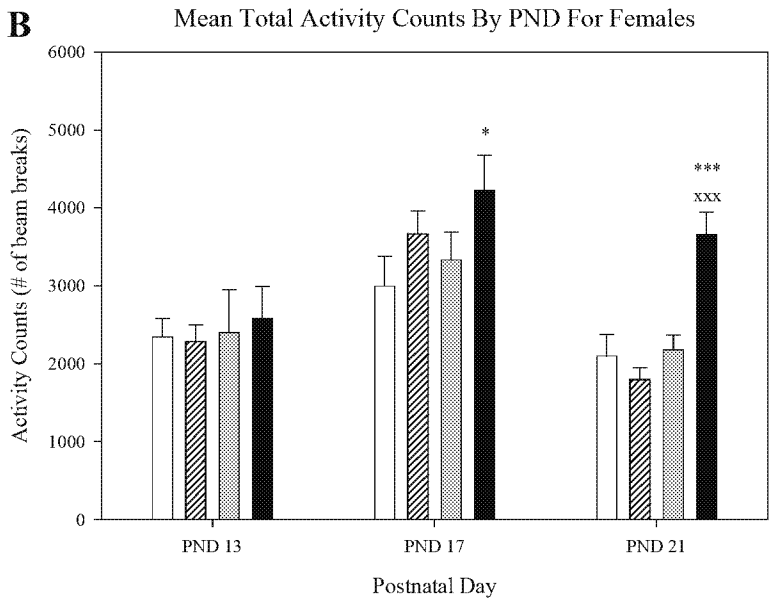
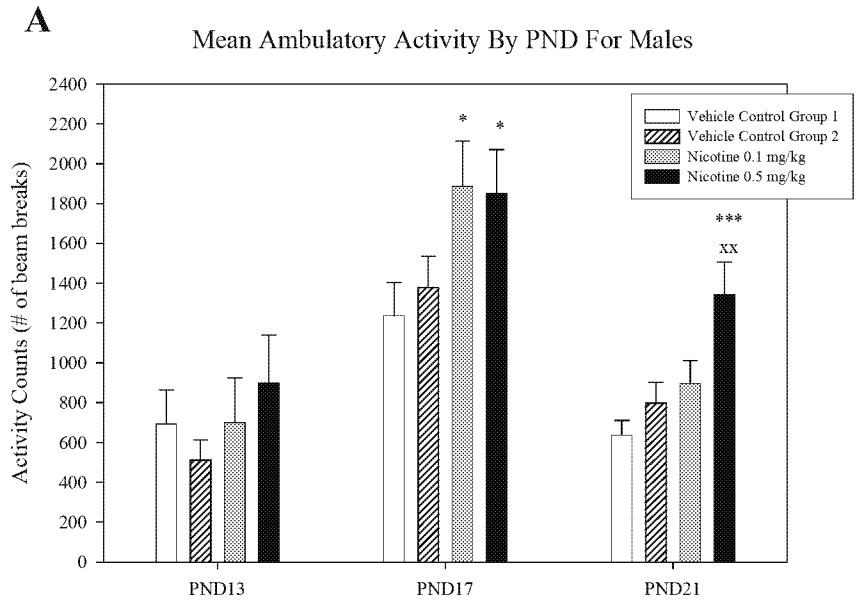


FIGURE 1. Postnatal days 13, 17, and 21 (A) male and (B) female mean total activity counts averaged over all subintervals, expressed as mean ± SEM. Significance between the treatment and vehicle control group 1 is indicated by $^{*}p<0.05$ and $^{***}p<0.001$ and between the treatment and vehicle control group 2 is indicated by $^{x}p<0.05$ and $^{xxx}p<0.001$.



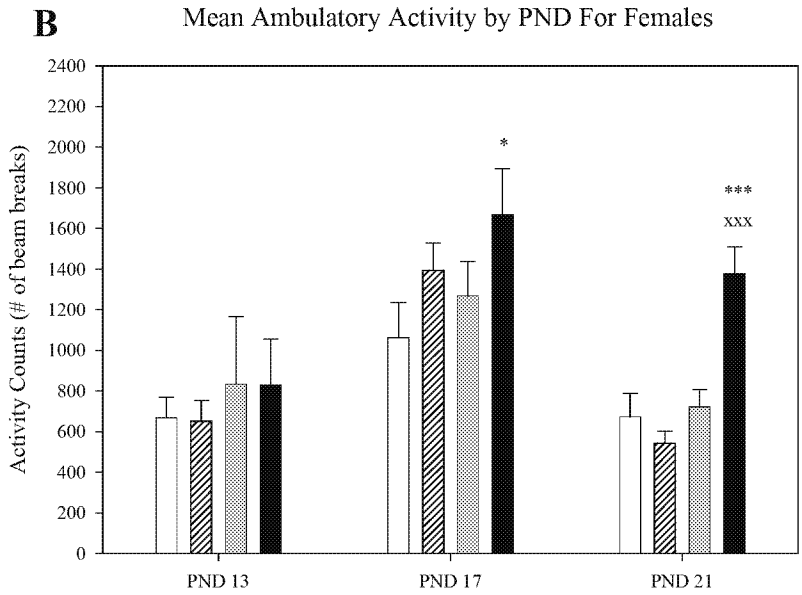


FIGURE 2. Postnatal days 13, 17, and 21 (A) male and (B) female mean ambulatory activity counts averaged over all subintervals, expressed as mean ± SEM. Significance between the treatment and vehicle control group 1 is indicated by $^{*}p<0.05$ and $^{***}p<0.001$ and to group 2 is indicated by $^{xx}p<0.01$ and $^{xxx}p<0.001$.

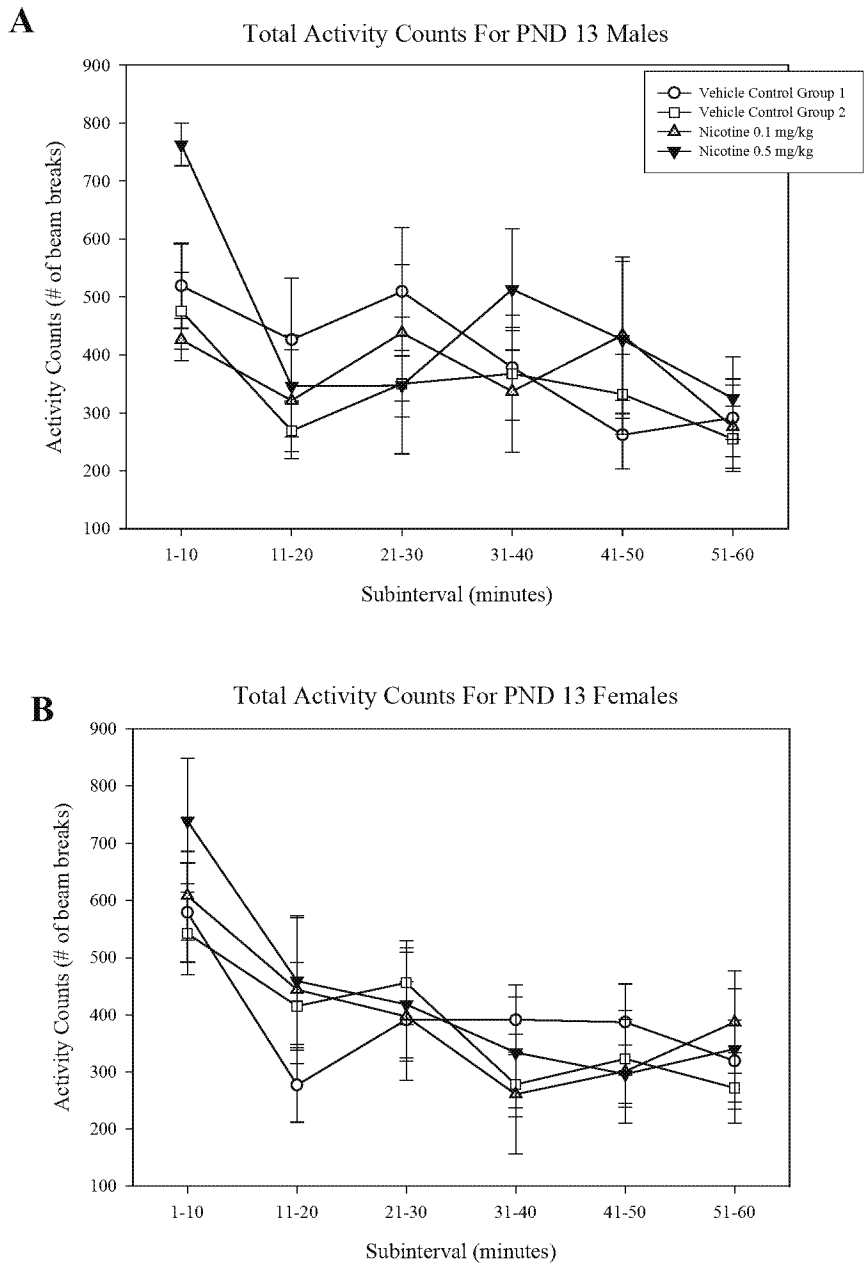


FIGURE 3. Postnatal day 13 (A) male and (B) female total activity counts or beam breaks taken over each subinterval, expressed as mean ± SEM.

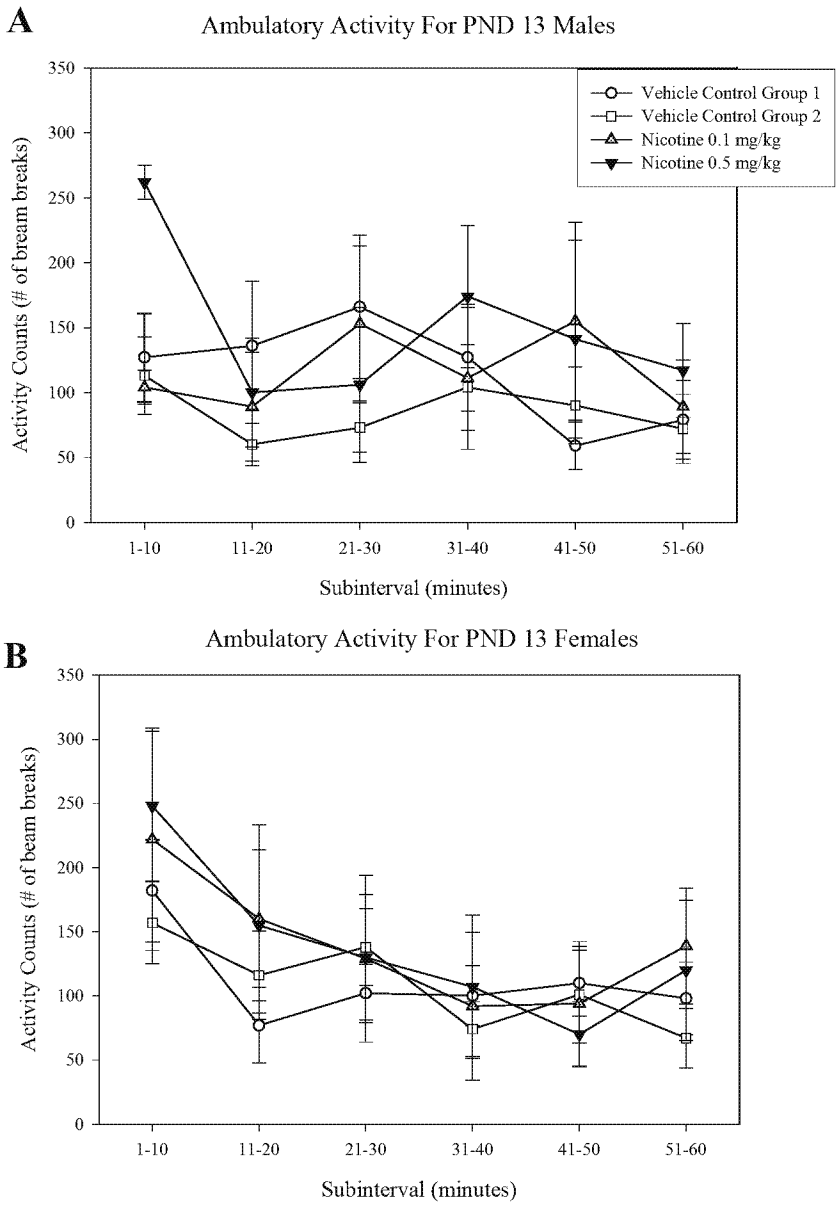
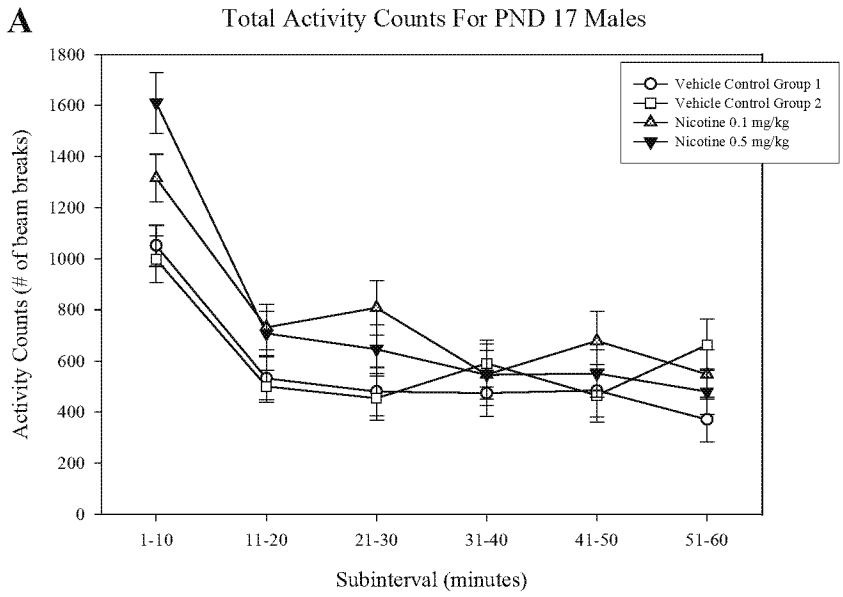


FIGURE 4. Postnatal day 13 (A) male and (B) female ambulatory activity counts or beam breaks taken over each subinterval, expressed as mean ± SEM.



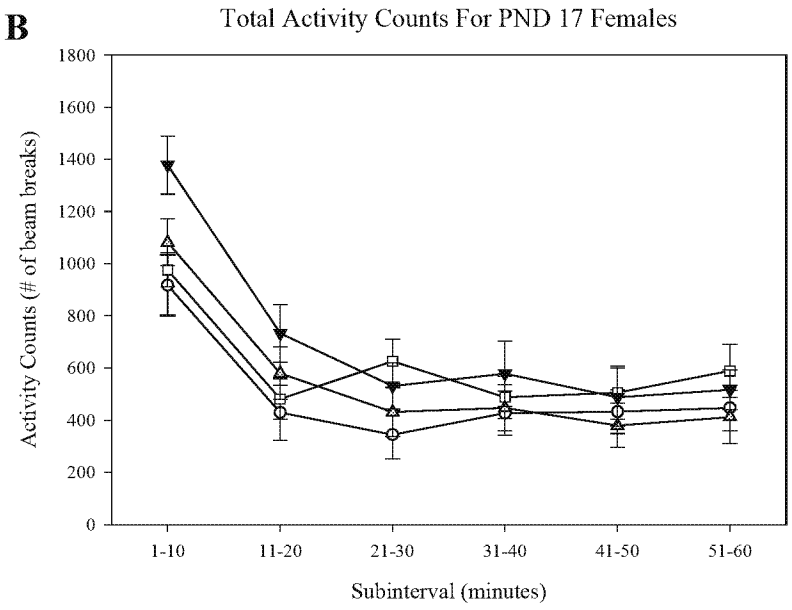


FIGURE 5. Postnatal day 17 (A) male and (B) female total activity counts or beam breaks taken over each subinterval, expressed as mean ± SEM.

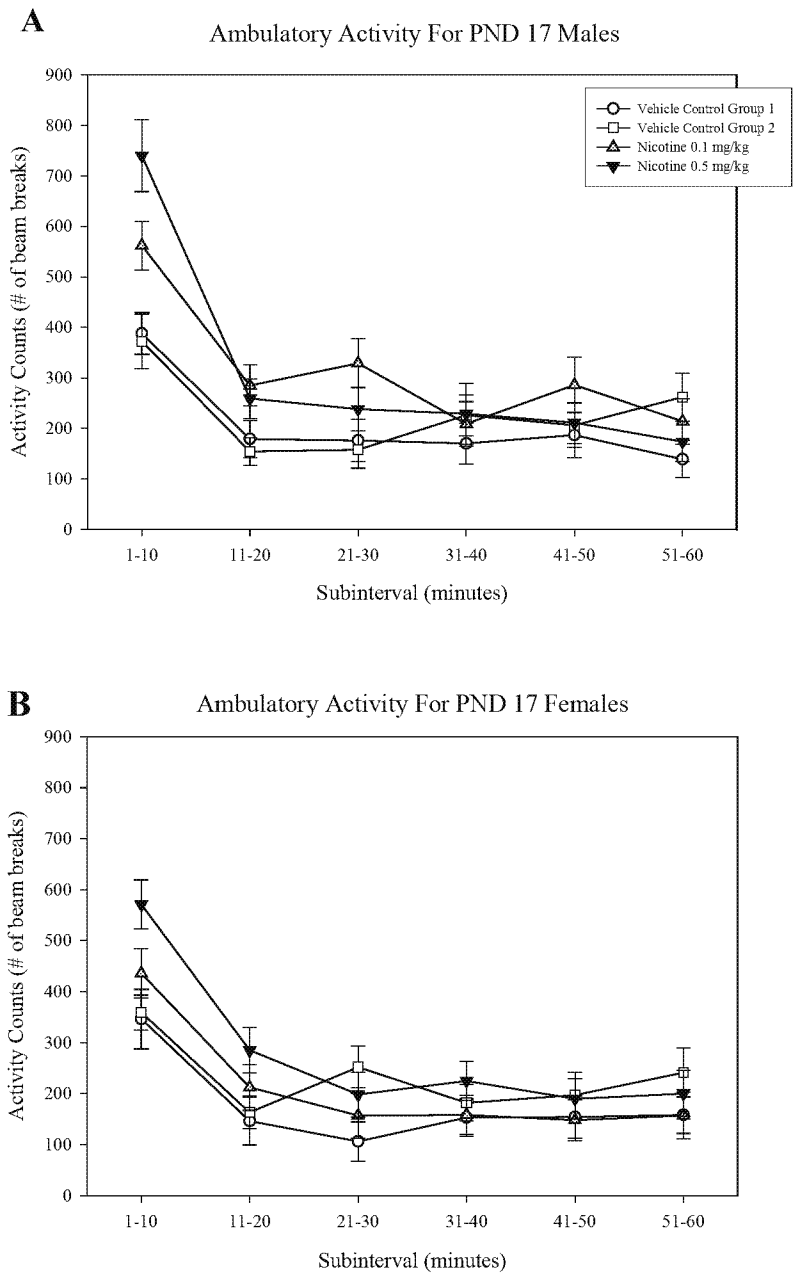
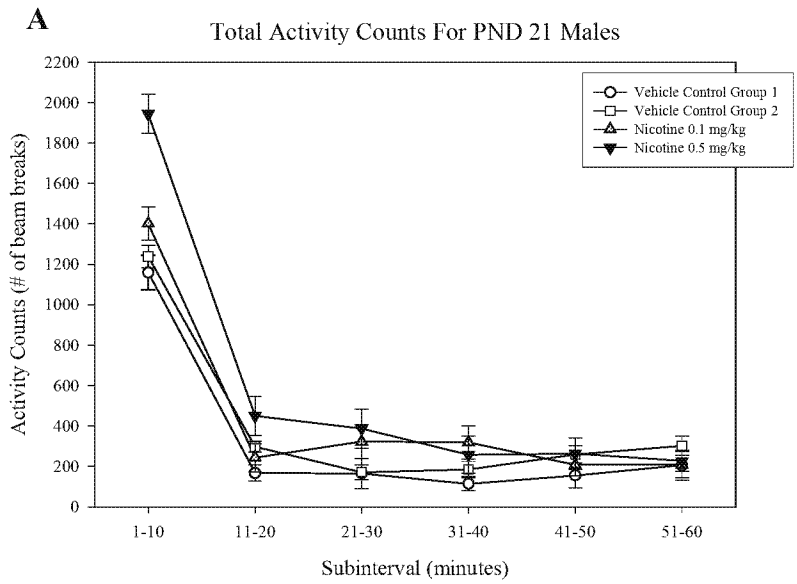


FIGURE 6. Postnatal day 17 (A) male and (B) female ambulatory activity counts or beam breaks taken over each subinterval, expressed as mean ± SEM.



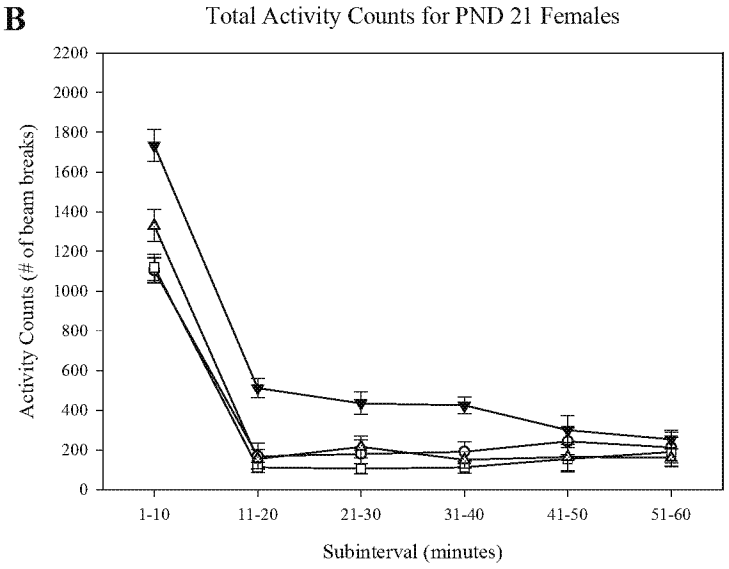


FIGURE 7. Postnatal day 21 (A) male and (B) female total activity counts or beam breaks taken over each subinterval, expressed as mean ± SEM.

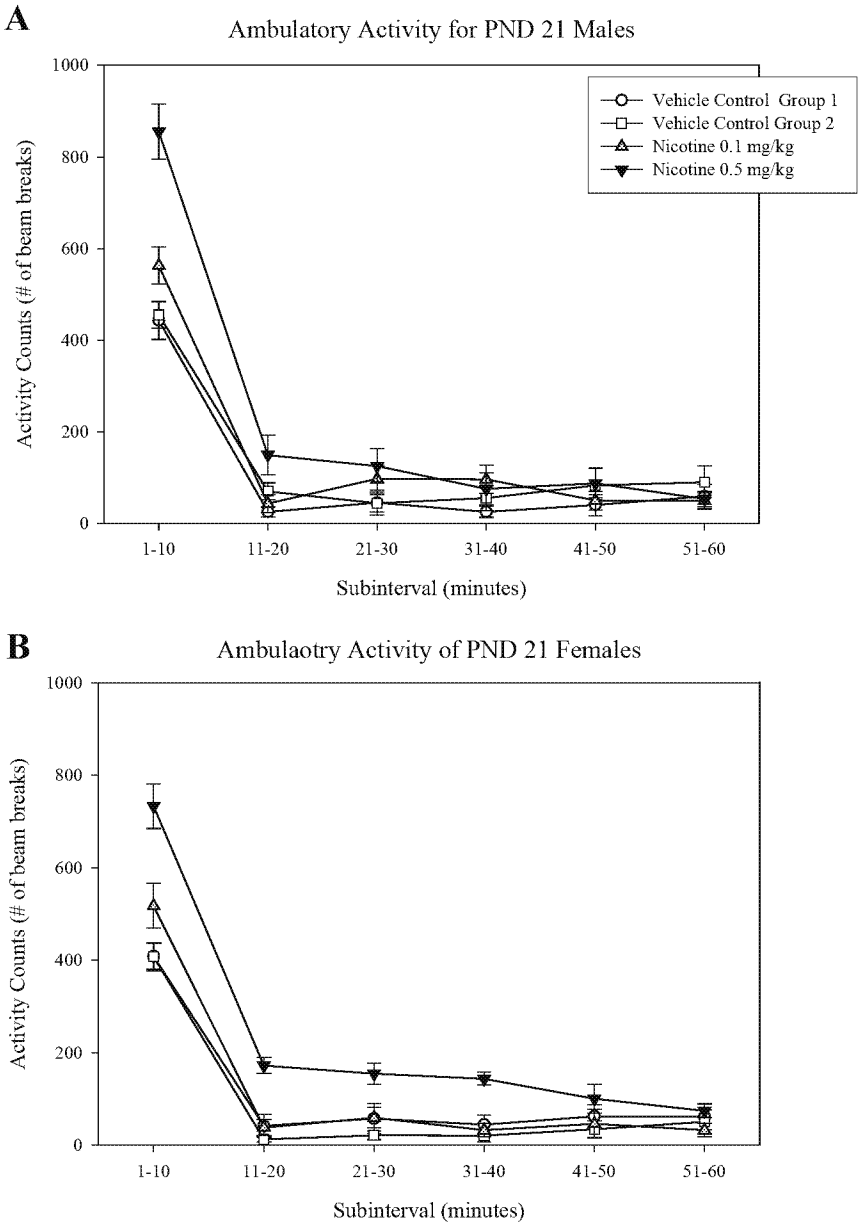


FIGURE 8. Postnatal day 21 (A) male and (B) female ambulatory activity counts or beam breaks taken over each subinterval, expressed as mean ± SEM.

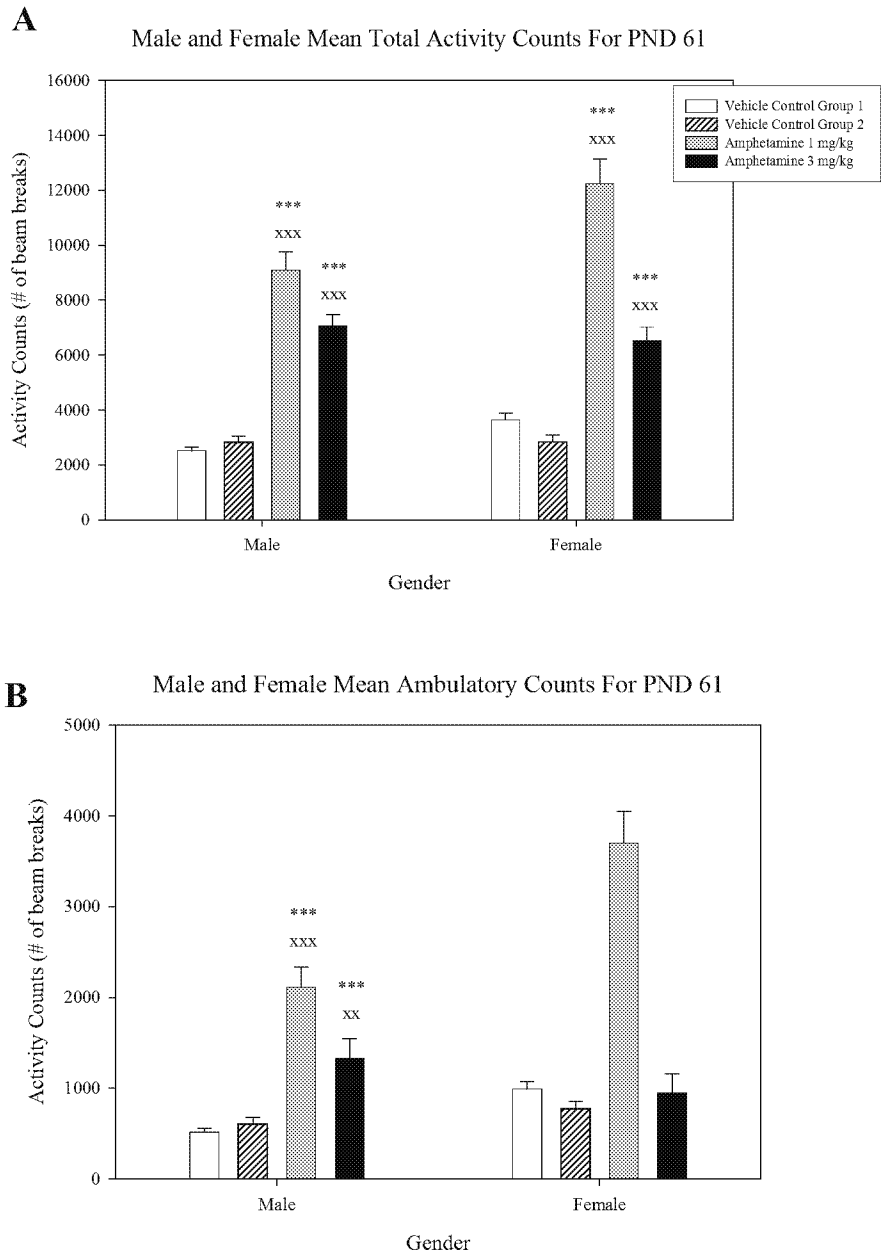


FIGURE 9. Postnatal day 61 male and female (A) mean total activity and (B) mean ambulatory activity averaged over all subintervals, expressed as mean ± SEM. Significance between the treatment and vehicle control group 1 is indicated by $^{***}p<0.001$ and between the treatment and vehicle control group 2 is indicated by $^{xx}p<0.01$ and $^{xxx}p<0.001$.

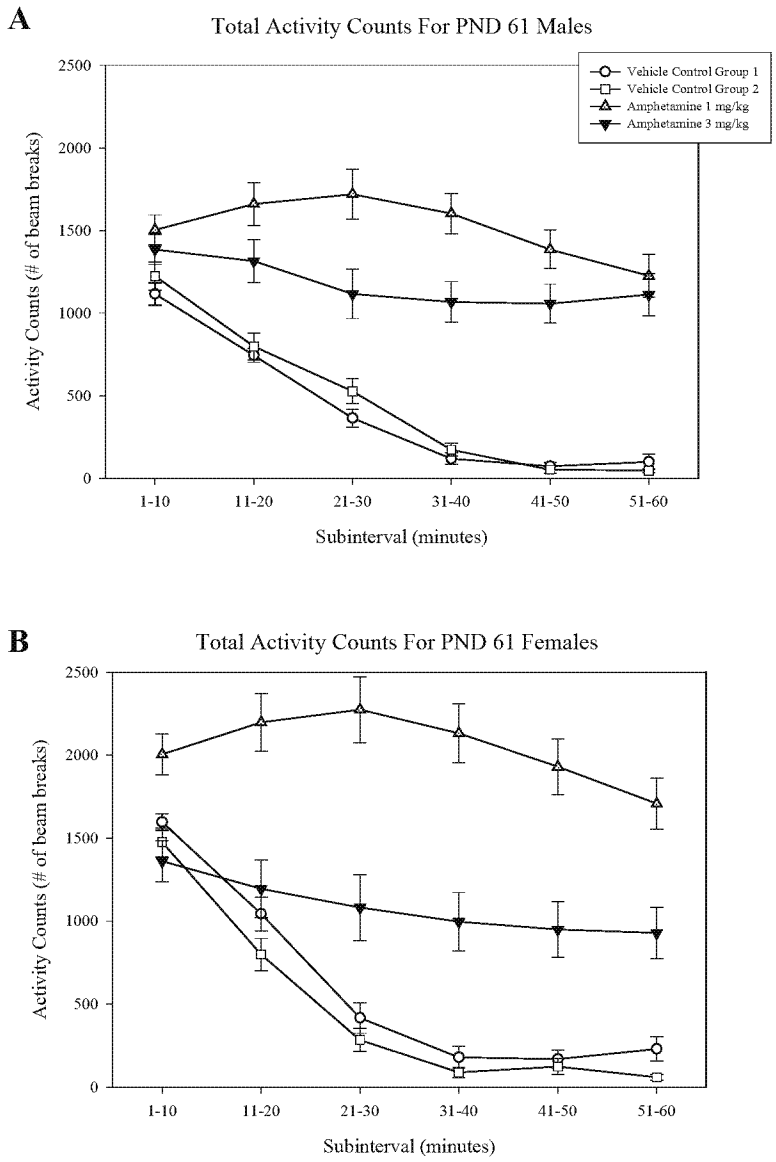


FIGURE 10. Postnatal day 61 (A) male and (B) female total activity counts or beam breaks taken over each subinterval, expressed as mean ± SEM.

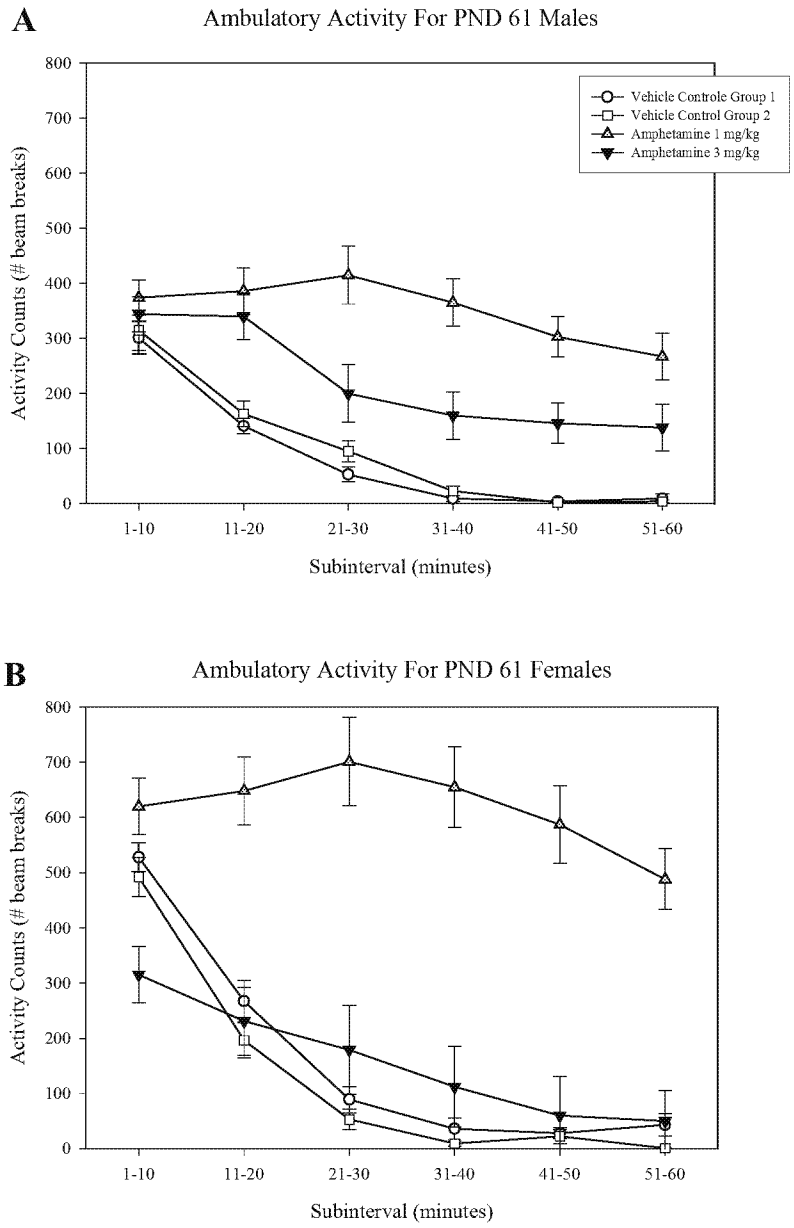
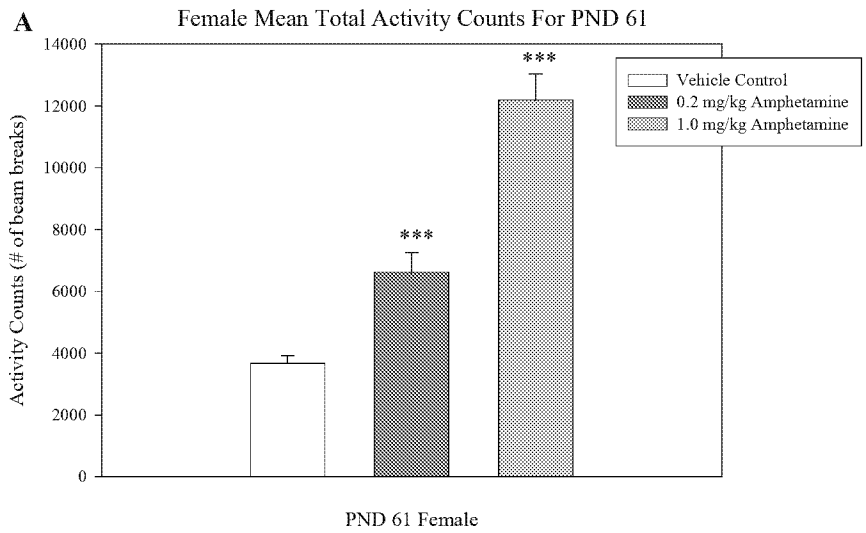


FIGURE 11. Postnatal day 61 (A) male and (B) female ambulatory activity counts or beam breaks taken over each subinterval, expressed as mean ± SEM.



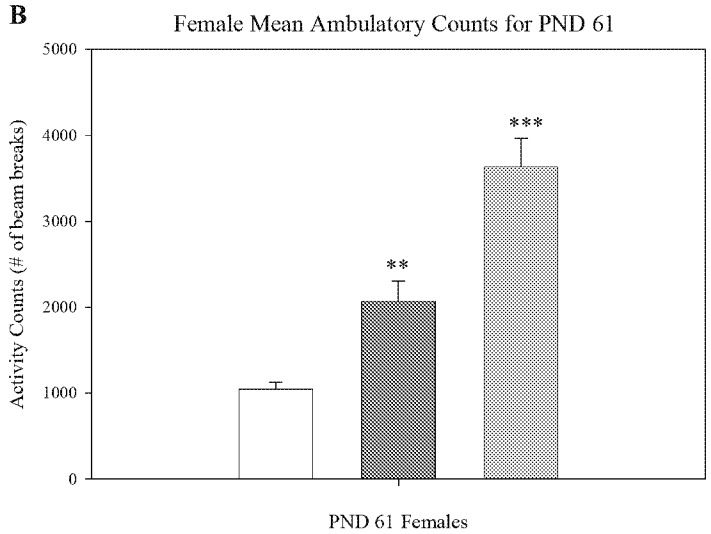


FIGURE 12. Postnatal day 61 female (A) mean total activity and (B) mean ambulatory activity averaged over all subintervals, expressed as mean ± SEM. Significance between the treatment and vehicle control group is indicated by $^{**}p<0.01$ and $^{***}p<0.001$.

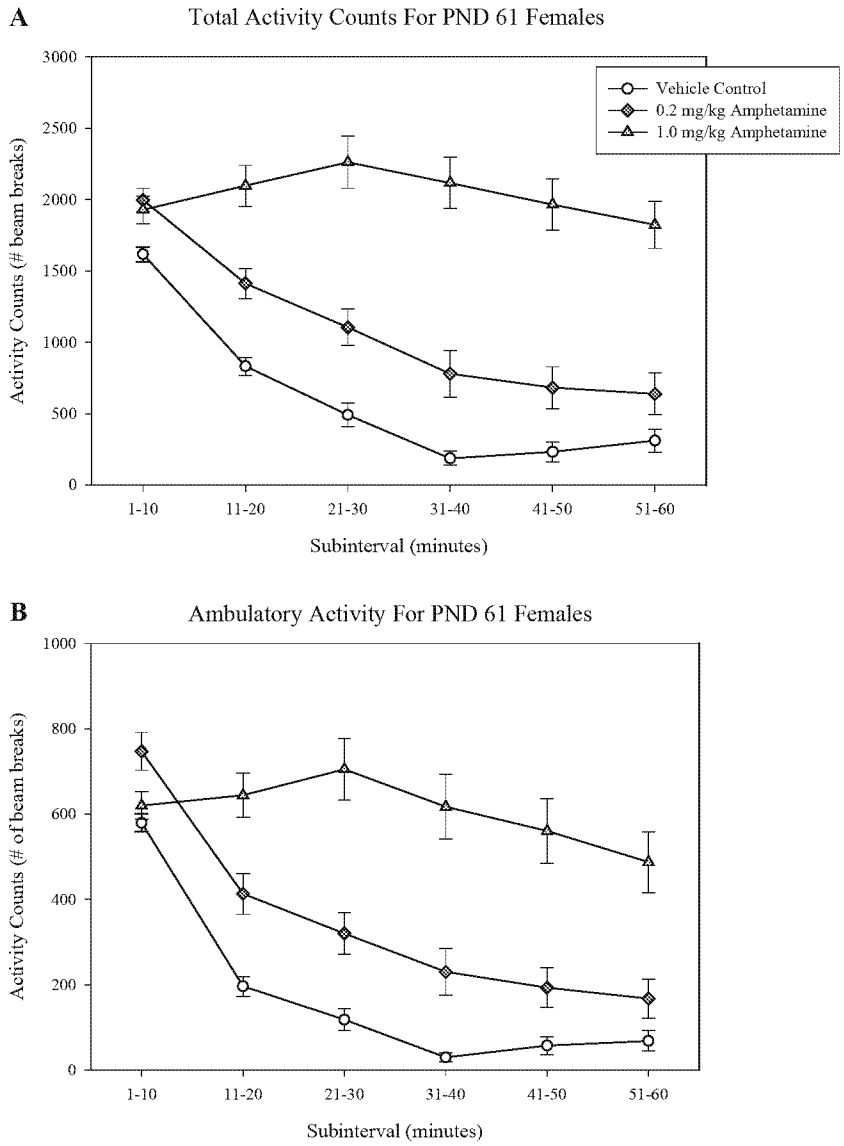


FIGURE 13. Postnatal day 61 female (A) total activity counts and (B) ambulatory activity counts or beam breaks taken over each subinterval, expressed as mean ± SEM

STUDY TITLE

A POSITIVE CONTROL ACUTE NEUROTOXICITY STUDY IN RATS

STUDY NUMBER

WIL-99443

STUDY DIRECTOR

Mark T. Herberth, BS, LAT

STUDY INITIATION DATE

2 November 2007

STUDY COMPLETION DATE

5 September 2008

PERFORMING LABORATORY

WIL Research Laboratories, LLC
1407 George Road
Ashland, OH 44805-8946

STATEMENT OF NO DATA CONFIDENTIALITY CLAIMS

The purpose of the study was to validate the use of the Kinder Scientific MotorMonitor System in our laboratory and to demonstrate the ability to detect decreases in activity using this system as well as a functional observational battery (FOB). Therefore, this page has been intentionally left blank.

1. ABSTRACT

The objective of this study was to demonstrate the ability of the Kinder Scientific MotorMonitor System (Kinder Scientific, LLC, Poway, CA, USA) to detect decreases in activity in response to chlorpyrifos within the U.S. EPA Health Effects Guideline OPPTS 870.6200 (Neurotoxicity Screening Battery) and the Organization of Economic Cooperation and Development (OECD) Guidelines for Testing of Chemicals Guideline 424 (Neurotoxicity Study in Rodents). In addition, the study evaluated the ability to detect changes in behavior using a functional observational battery (FOB). Chlorpyrifos was administered at a single dose of 20 or 100 mg/kg by oral gavage 3.5 hours prior to behavioral assessment. Male and female Sprague Dawley Crl:CD (SD) rats (6 weeks of age) were evaluated using a Neurotoxicity Screening Battery consisting of FOB assessment and locomotor behavior. The FOB detected a general decrease in the initiation of movement (time to first step in the open field), body temperature and Rotarod performance, along with impaired gait and increased catalepsy time. Motor activity (i.e., total and ambulatory activity) measured by the Kinder Scientific MotorMonitor System showed a consistent decrease in mean activity by both males and females treated with 100 mg/kg chlorpyrifos. The experimental design used in this study demonstrated that WIL Research can detect behavioral changes in an FOB, as well as locomotor effects of chlorpyrifos using the Kinder Scientific MotorMonitor System, and that the results can be considered to validate methodologies for OPPTS Guideline 870.6200 and OECD Guideline 424.

2. INTRODUCTION

This study was conducted in accordance with the appropriate provisions of the U.S. EPA Health Effects Guideline (OPPTS 870.6200), Neurotoxicity Screening Battery and the OECD Guidelines for Testing of Chemicals Guideline 424, Neurotoxicity Study in Rodents. The exception is that the study assessments were be completed only during pretest and at the time of peak effect on study day 0. Validation of laboratory methodologies and demonstration of the sensitivity of the equipment to detect test article-related changes are requirements of these guidelines. WIL Research Laboratories, LLC chose to evaluate the use of the Kinder Scientific MotorMonitor System to measure locomotor behavior in control and test article-treated animals using chlorpyrifos, a known cholinesterase inhibitor used commonly in insecticides.

In rodents, a single dose of chlorpyrifos often results in the presence of tremors, increased lacrimation and salivation, loss of muscle tone, hypothermia, changes in gait, increased catalepsy times and inhibited pupil responsiveness (Moser 1995; Mattsson et al., 1996). When evaluated at the time of peak effect (approximately 3.5 hours post-administration) these effects, specifically regarding muscle tone and function, are consistent with the decreased motor activity observed at dose levels of 20, 50 and 100 mg/kg (Moser, 1995). This was also noted in other studies using higher dose levels (50, 100, 150 and 200 mg/kg), administered once by oral gavage, which were sufficient to cause generalized decreases in muscle tone and motor activity for both male and female adult rats (Mattsson et al., 1996). This same trend was also present in low-dose (3 to 12 mg/kg) chronic studies lasting several days to weeks using male and female rats (PND 30 and 40), where motor activity in the open field was inhibited (Carr et al., 2001). Further analysis of chlorpyrifos via alternative delivery routes identified impaired visual discrimination (following oral or subcutaneous administration at 50 mg/kg) and significantly lowered general activity in the behavioral test battery (following subcutaneous administration at 250 mg/kg) for up to 18 consecutive days (Bushnell et al., 2001).

3. MATERIALS AND METHODS

3.1. TEST SPECIES AND HUSBANDRY

Sprague Dawley Crl:CD(SD) rats were obtained from Charles River Laboratories, Inc. (Raleigh, North Carolina, USA). 48 males and females (nulliparous and non-pregnant) at 3 to 5 weeks of age were ordered for the in-life testing of 12 rats/sex/group for FOB and motor activity assessment starting at approximately 6 weeks of age. Upon receipt, animals were housed 2-3/cage by sex. Following acclimation, the animals were individually housed in clean suspended wire-mesh cages until euthanasia.

Environmental controls were set to maintain temperature at 71 ± 5° F and relative humidity between 30–70%. Air handling units provided a minimum of 10 fresh air changes per hour. Fluorescent lighting, controlled by timers, provided illumination for a 12-hour light (6:00 a.m. – 6:00 p.m.)/dark photoperiod. Temperature and relative humidity were monitored continuously. Reverse osmosis-purified water and PMI Nutrition International, Inc., Certified Rodent LabDiet® 5002 were offered *ad libitum* during the study.

3.2. TEST MATERIAL AND PREPARATION

Chlorpyrifos was purchased from Supelco, Bellefonte, PA, USA. An appropriate amount of chlorpyrifos was mixed with the vehicle (corn oil) to produce dosing concentrations of 4 and 20 mg/mL, with a corresponding dose volume of 5 mL/kg. Dosing solutions were prepared daily, stored at room temperature and protected from light prior to dispensation for dosing.

3.3. EXPERIMENTAL DESIGN

Functional observational battery assessments and locomotor activity (Kinder Scientific MotorMonitor System) were made at pretest and approximately 3.5 hours post-dose administration to 4 groups of 12 rats/sex/group on the day of chlorpyrifos administration. All rats were observed twice daily for moribundity and mortality, once in the morning and once in the afternoon until euthanasia. Body weight and clinical observations regarding general appearance were recorded on the day of dose administration. The observations included, but were not limited to evaluations for changes in appearance of skin and fur, eyes, mucous membranes, respiratory and circulatory systems, autonomic

and central nervous systems, somatomotor activity and behavior. The following table summarizes the testing paradigm:

Group Number	Test Article	Dose Level (mg/kg)	Number of Males	Number of Females
1	Vehicle Control	0	12	12
2	Vehicle Control	0	12	12
3	Chlorpyrifos	20	12	12
4	Chlorpyrifos	100	12	12

3.4. BEHAVIORAL TESTING

Twelve rats/sex/group were evaluated in the FOB and the Kinder Scientific MotorMonitor System at pretest and on study day 0. The FOB utilized was based on previously developed protocols which included: home cage, handling, open field, sensory, neuromuscular and physiological observations (Moser et al., 1991; Irwin, 1968; Gad, 1982; Moser et al., 1988; Haggerty, 1989; O'Donoghue, 1989). All animals were observed for the following parameters as described below:

3.4.1. HOME CAGE OBSERVATIONS

Posture
Convulsions/tremors
Feces consistency
Biting
Palpebral (eyelid) closure

3.4.2. HANDLING OBSERVATIONS

Ease of removal from cage
Lacrimation/chromodacryorrhea
Piloerection
Palpebral closure
Eye prominence
Red/crusty deposits
Ease of handling animal in hand
Salivation
Fur appearance
Respiratory rate/character
Mucous membranes/eye/skin color
Muscle tone

3.4.3. Open Field Observations (Evaluated Over A 2-Minute Observation Period)

Mobility	Gait
Rearing	Arousal
Convulsions/tremors	Urination/defecation
Grooming	Gait score
Bizarre/stereotypic behavior	Backing
Time to first step (seconds)	

3.4.4. Sensory Observations

Approach response	Touch response
Startle response	Tail pinch response
Pupil response	Eyeblink response
Forelimb extension	Hindlimb extension
Air righting reflex	Olfactory orientation

3.4.5. Neuromuscular Observations

Hindlimb extensor strength	Grip strength-hind and forelimb
Hindlimb foot splay	Rotarod performance

3.4.6. Physiological Observations

Catalepsy	Body weight
Body temperature	

Testing was performed by the same technicians, whenever possible, who did not know the animal's group assignment. Although data were collected and statistically analyzed for each testing parameter (when necessary) the FOB data presented in this report only include functional domains that are significantly different from the control group and/or were affected by test article administration. Locomotor activity was monitored with the automated Kinder Scientific MotorMonitor System (Kinder Scientific, Poway, CA, USA). The test session was 60 minutes in duration, consisting of 6 subintervals lasting 10 minutes each. Locomotor activity was evaluated as total and ambulatory activity counts obtained over each subinterval (0-10 minutes, 11-20 minutes, 21-30 minutes, 31-40 minutes, 41-50 minutes and 51-60 minutes) and the entire 60-minute session.

3.5. Statistical Analysis

All analyses were two-tailed for minimum significance levels of 5% and 1%. All statistical tests were performed by a computer with appropriate programming as

referenced below. Total and ambulatory counts were analyzed, by sex and session, with a repeated measures analysis of variance (RANOVA). Factors in the model included treatment group (TRT), time interval (TIME), and the interaction of time interval and treatment group (TRT*TIME). The SAS® procedure PROC MIXED was used for analysis with the random effect of animal included as the repeated measurement. The covariance structure across time was selected by comparing Akaike's Information Criterion.

Continuous FOB data were subjected to parametric one-way analysis of variance (ANOVA) to determine intergroup differences (Snedecor, 1980). If significant differences were determined by the ANOVA, Dunnett's test (Dunnett, 1964) was used to compare each control group with the test article-treated groups. Functional Observational Battery parameters yielding scalar or descriptive data were analyzed by Fisher's Exact Test (Steel and Torrie, 1980).

The monotonic dose-response relationship was evaluated using sequential linear trend tests based on ordinal spacing of dose levels. The linear dose by time interaction was evaluated and, if significant at the 0.05 level, trend tests on treatment means were performed at the 0.05 level for each time interval.

Nonmonotonic dose responses were evaluated whenever no significant linear trends were detected, but TRT and/or TRT*TIME were significant at the 0.01 level. Within the framework of the RANOVA, pairwise comparisons were made for each individual test article-treated group with each control group through linear contrasts. If TRT*TIME was significant, the comparisons were conducted for each time interval. If only the TRT effect was significant, the comparisons were conducted across the pooled time intervals of the entire session. These nonmonotonic dose-response comparisons were conducted at the 0.01 significance level.

All statistical analyses for locomotor activity were conducted by BioSTAT Consultants, Inc., Portage, MI, USA, using Version 9.1 (SAS Institute, Inc., 2002-2003) software.

4. RESULTS AND DISCUSSION

The FOB performed prior to chlorpyrifos administration (pretest) showed no differences in handling, sensory, neuromuscular and physiological parameters. Increased urination (in the open field; $p<0.05$ or $p<0.01$, Table 4) by females assigned to the 20 mg/kg chlorpyrifos groups; as well as a longer time to first step by 20 mg/kg chlorpyrifos treated males ($p<0.01$), compared to control groups 1 or 2. However, approximately 3.5 hours following dose administration, chlorpyrifos-treated animals exhibited test article-related differences (compared to the control groups) in the home cage, open field, neuromuscular and physiological parameters, while handling and sensory parameters were largely unaffected. This was not considered to be test article related since the differences were not consistent between control groups 1 and 2.

4.1. HOME CAGE AND OPEN FIELD ASSESSMENTS

The first two components of the FOB, including home cage and open field assessments identified repetitive movement of the mouth and jaw (1 female each at 20 mg/kg and 100 mg/kg and 2 males at 100 mg/kg; Table 2) in the home cage, which is an expected effect of chlorpyrifos treatment. The open field observations during the FOB test identified a more robust test article-related effect with an increased time until the initiation of motor behavior, i.e., the first step taken, for both the 100 mg/kg group males and females (Table 4, $p<0.01$). This increased latency compared to both vehicle control group males and females, indicates that chlorpyrifos treatment prolonged the time to initiation of motor movement and inhibited motor function. This, along with the general decline in mean total and ambulatory activity, further suggests that chlorpyrifos impaired movement. Another aspect of motor movement, gait, was affected by chlorpyrifos administration (Table 4). The numbers of males and females with normal gait were decreased in the 100 mg/kg group (the difference was significant [$p<0.01$] for males compared to both control groups). Specifically, both sexes showed an increase in the incidence of hunched body posture; splayed or dragging hind limbs were also noted for 1 male, while 2 females were observed walking on tiptoes. These effects on gait are consistent with decreases in motor activity as well as the results of previous research regarding chlorpyrifos and motor behavior (Moser, 1995; Mattsson et al., 1996; Carr et al., 2001; Bushnell et al., 2001). In addition, there was a significant decrease in the

number of rears exhibited by chlorpyrifos treated females (100 mg/kg) compared to control group 1 (Table 4, $p<0.05$).

4.2. NEUROMUSCULAR ASSESSMENT

Neuromuscular impairment was particularly evident in males and females receiving the 100 mg/kg dose, where Rotarod performance (Table 6) was significantly decreased compared to both control groups ($p<0.05$ or $p<0.01$) and decreased compared to pretest; 1 male and 1 female in the 100 mg/kg group also exhibited slight tremors. This would indicate that there was impaired motor movement and/or balance. Since locomotor activity data also showed a decline in mean total and ambulatory activity, chlorpyrifos was indeed acting to impair motor function. In females, there was an apparent increase in forelimb grip strength (Table 6) at the 20 mg/kg dose ($p<0.05$); although not significant, this same group of females also had the greatest grip strength during the pretest evaluations (Table 5). The FOB data regarding impaired motor movement/balance and decreased activity are supported by published studies addressing neuromuscular impairments and chlorpyrifos (Moser 1995; Mattsson et al., 1996).

4.3. PHYSIOLOGICAL ASSESSMENT

Physiological parameters, specifically catalepsy and body temperature, were also affected by chlorpyrifos treatment in males and/or females (Table 8). Catalepsy time (the length of time spent motionless) was significantly increased in 100 mg/kg group males ($p<0.05$). The increased catalepsy time corresponds to the previously discussed impairments in the initiation and overall motor behaviors examined. Along with the increased catalepsy time, there were significantly decreased body temperatures ($p<0.01$) for males and females in the 100 mg/kg group. The results are consistent with similar doses used in published research, which also show increased catalepsy time and decreased body temperature (Moser 1995; Mattsson et al., 1996; Timofeeva and Gordon, 2002).

4.4. MOTOR ACTIVITY

The motor activity data over all 6 subintervals measured by the Kinder Scientific MotorMonitor System in the pretest male and female groups show that there was no difference in mean total and ambulatory activity prior to chlorpyrifos administration (Figure 1A and 2A). Examining the total and ambulatory activity during the

6 subintervals also shows no difference prior to chlorpyrifos treatment in pretest males and females (Figure 3A and B; Figure 4A and B). In addition, there was an habituation profile present for both males and females over the 6 subintervals prior to chlorpyrifos administration. These similarities were expected, as there was no test article administered.

There was a significant decrease ($p<0.01$ or $p<0.001$) in mean total and ambulatory activity counts compared to the vehicle control groups following delivery of 100 mg/kg chlorpyrifos to males and females and following delivery of 20 mg/kg chlorpyrifos to females (Figure 1B, Figure 2B) approximately 3.5 hours following chlorpyrifos delivery. With respect to the individual subintervals of total and ambulatory activity, there were similar decreases in activity following chlorpyrifos treatment over the first 2 subintervals (1-10 minutes and 11-20 minutes) in males at 100 mg/kg and females at 20 and 100 mg/kg (Figure 5A and B; Figure 6A and B). These decreases in activity also followed a dose-dependent profile with the highest level of chlorpyrifos (100 mg/kg) resulting in the lowest overall activity. Females appeared to be more sensitive to chlorpyrifos treatment, as both the low and high doses (20 and 100 mg/kg, respectively) resulted in decreased activity, similar to behavioral results observed in the FOB.

Because there were no differences in motor activity prior to chlorpyrifos administration, the decreased total and ambulatory activity can be attributed to chlorpyrifos. These decreases in motor activity are also consistent with the results of previous studies at similar dose levels of chlorpyrifos (Moser 1995; Mattsson et al., 1996; Carr et al., 2001; Bushnell et al., 2001).

5. CONCLUSION

In conclusion, the data generated using the functional observational battery and Kinder Scientific MotorMonitor System in male and female Sprague Dawley Crl:CD (SD) rats are consistent with the cited effects of chlorpyrifos on motor behavior. These procedures are therefore capable and sensitive enough to detect reductions in motor function with the positive control agent, chlorpyrifos, and can be considered to validate methodologies for OPPTS Guideline 870.6200 and OECD Guideline 424.

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7. KEY STUDY PERSONNEL AND REPORT SUBMISSION

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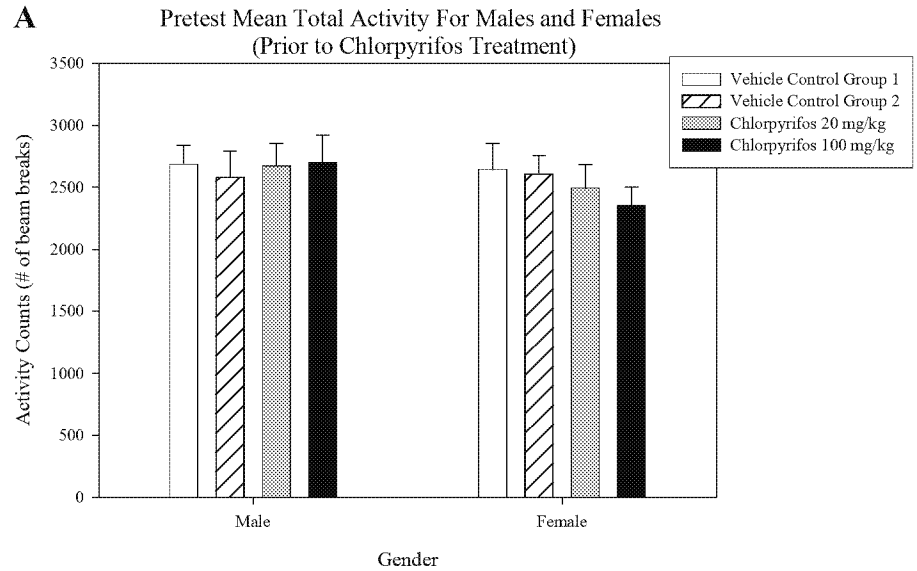
5 Sep 2008
Date

FIGURES 1-6



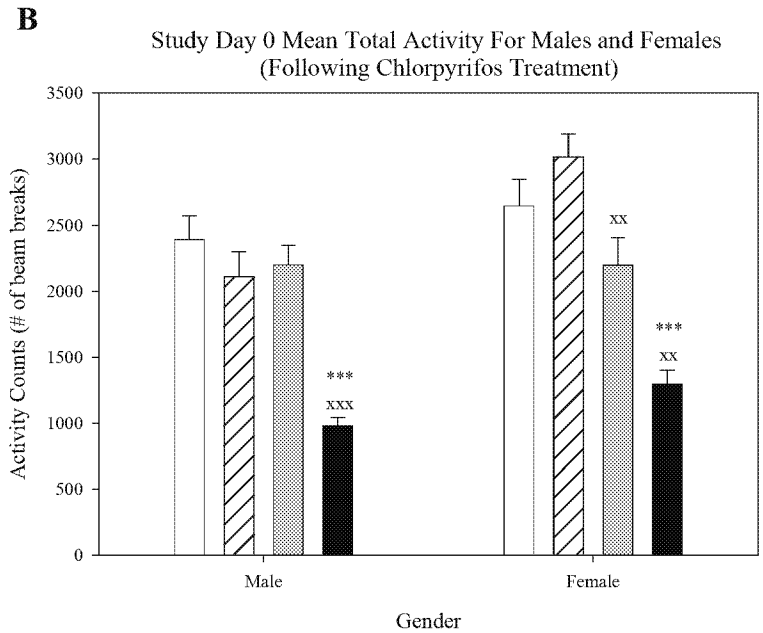
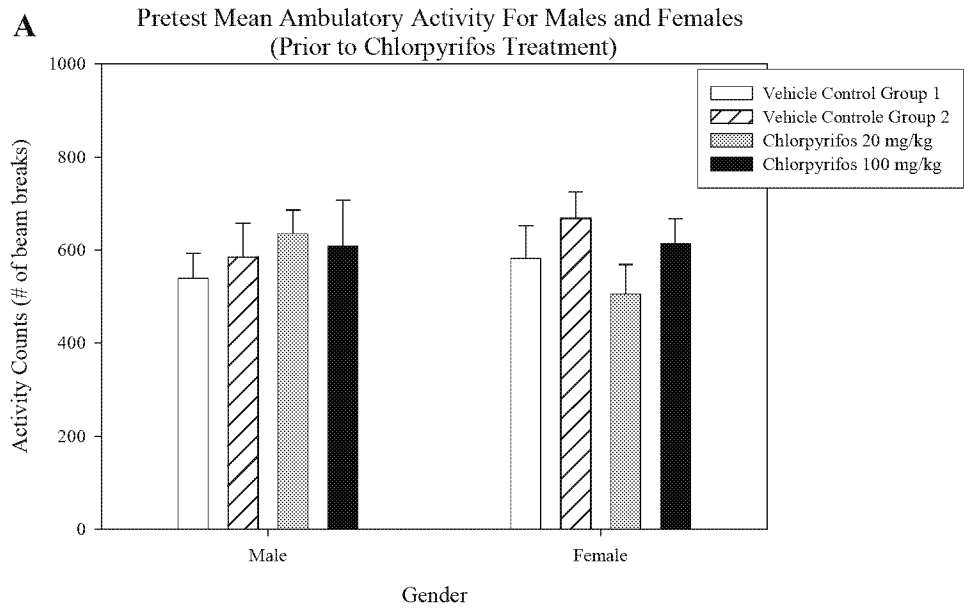


FIGURE 1. Mean total activity counts over all subintervals for (A) males and females at pretest and (B) males and females on Study Day 0, expressed as mean ± SEM. Significance between the treatment groups and vehicle control group 1 is indicated by $^{***}p<0.001$ and between the treatment and vehicle control group 2 is indicated by $^{xx}p<0.01$ and $^{xxx}p<0.001$.



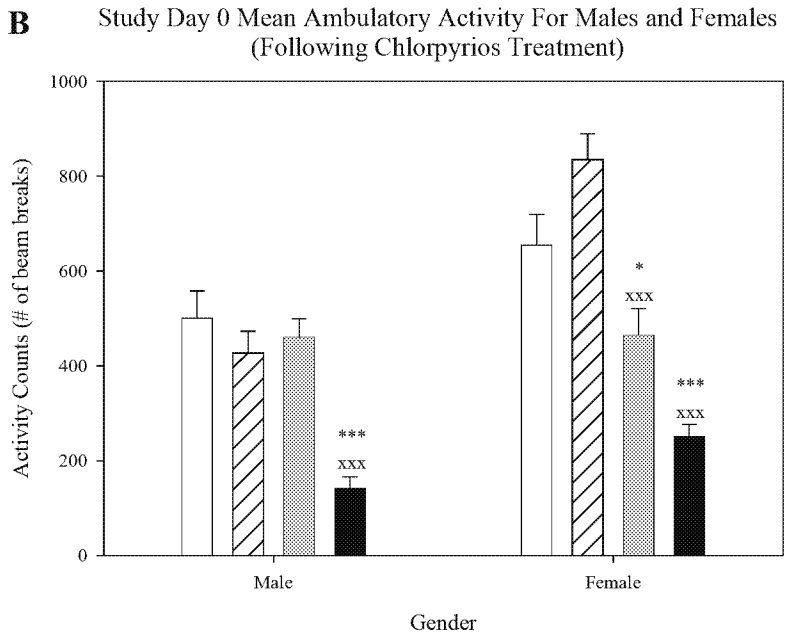
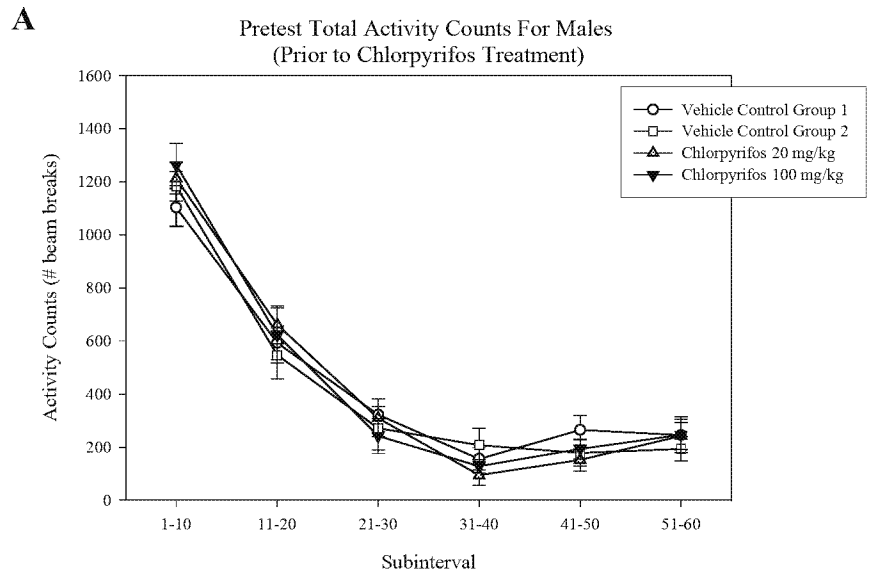


FIGURE 2. Mean ambulatory counts over all subintervals for (A) males and females and (B) males and females on Study Day 0, expressed as mean ± SEM. Significance between the treatment groups and vehicle control group 1 is indicated by $^{*}p<0.05$ and $^{***}p<0.001$ and between the treatment and vehicle control group 2 is indicated by $^{xxx}p<0.001$.



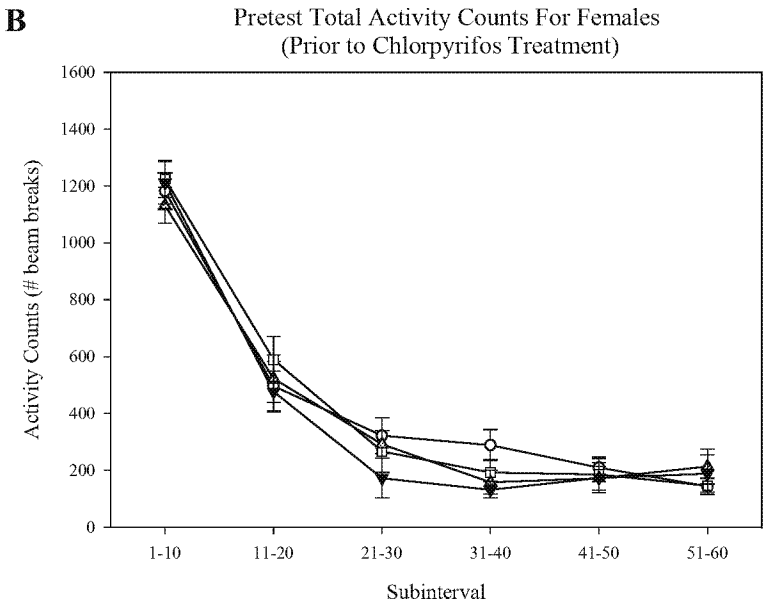
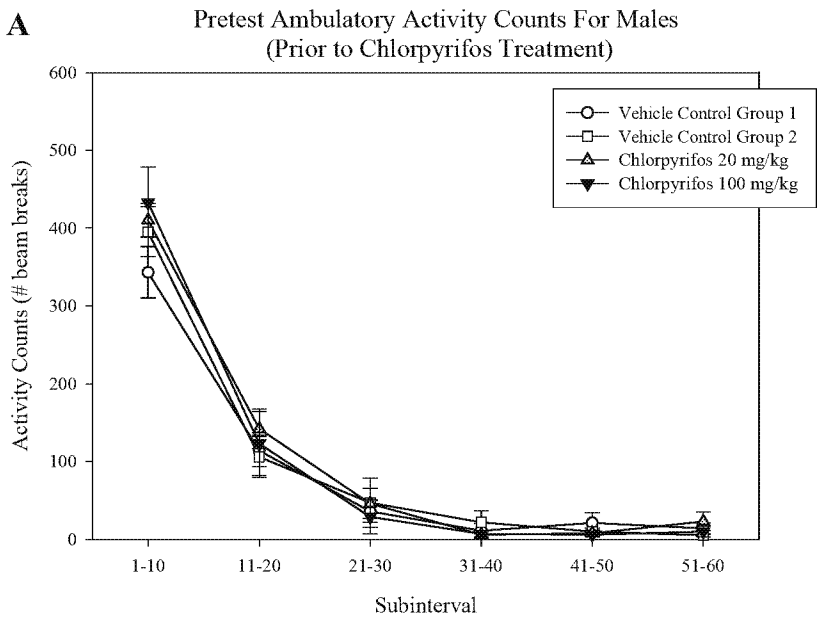


FIGURE 3. Total activity counts over each subinterval for (A) males at pretest and (B) pretest females at pretest, expressed as mean ± SEM



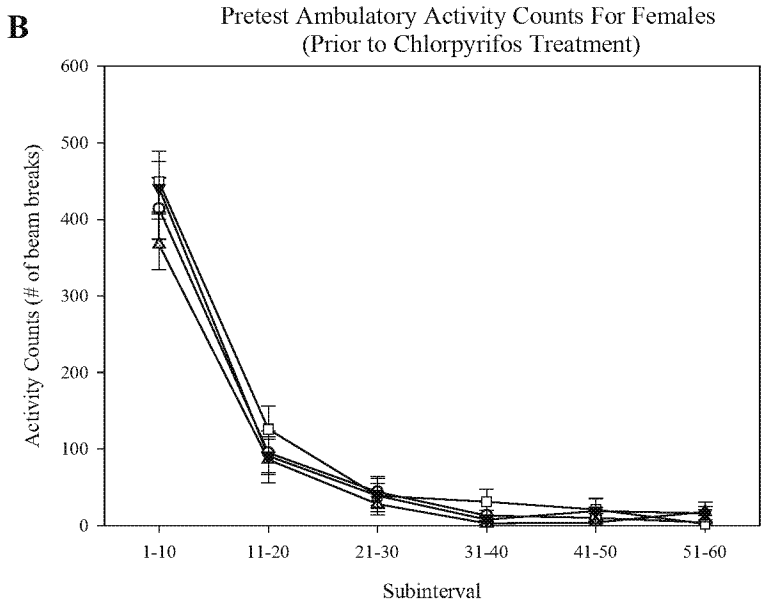


FIGURE 4. Total ambulatory activity counts over each subinterval for (A) males at pretest and (B) females at pretest, expressed as means ± SEM

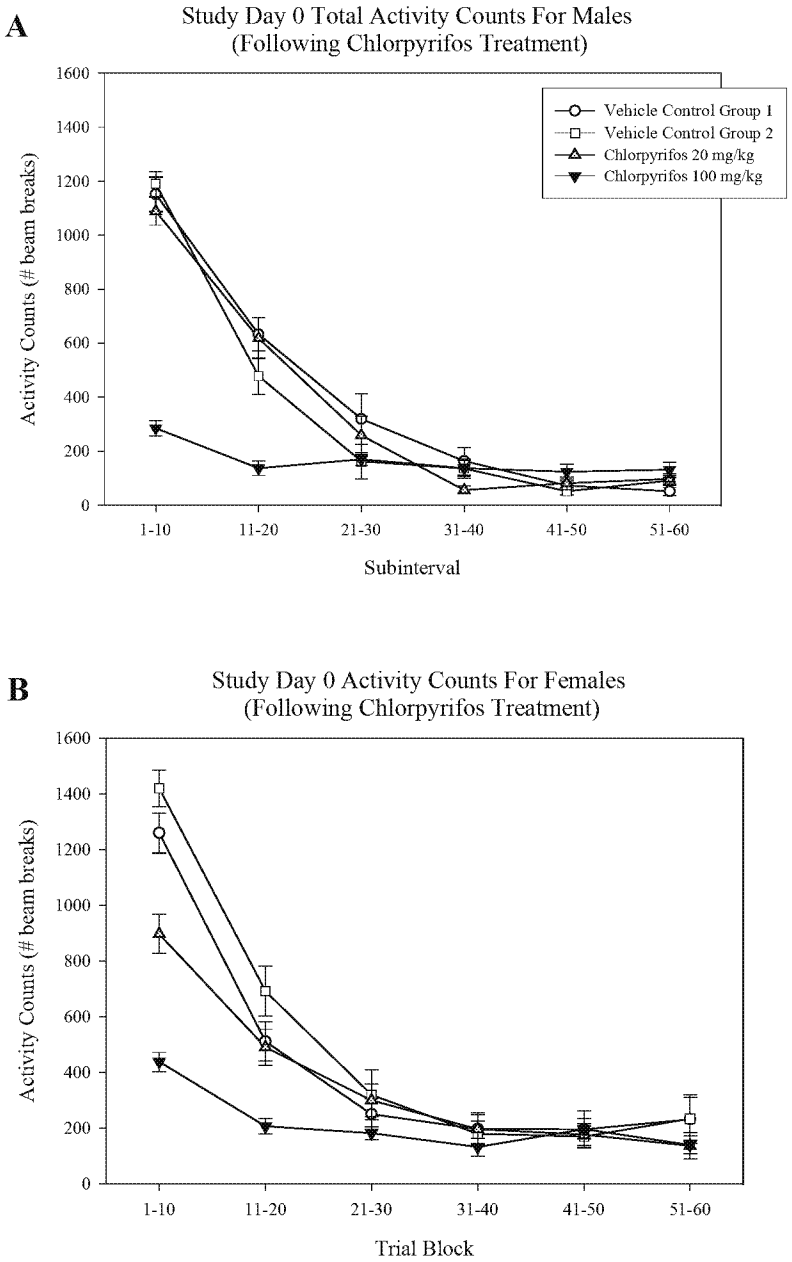


FIGURE 5. Total activity counts over each subinterval for (A) males on Study Day 0 and (B) females on Study Day 0, expressed as mean ± SEM

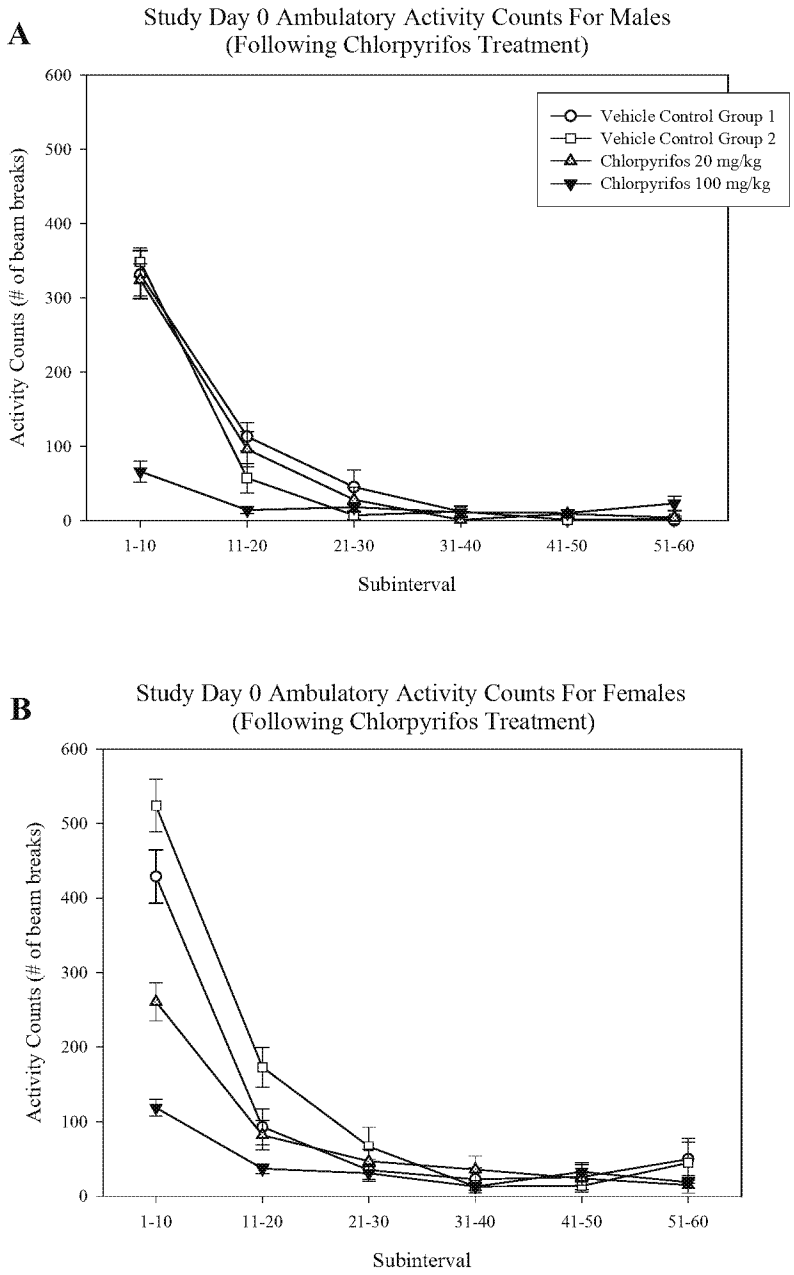


FIGURE 6. Total ambulatory activity counts over each subinterval for (A) males on Study Day 0 and (B) females on Study Day 0, expressed as mean ± SEM

FOB SUMMARY TABLES

TABLE 1 (HOME CAGE OBSERVATIONS - PRETEST EVALUATION)
POSITIVE CONTROL NT STUDY IN RATS USING CHLORPYRIFOS
SUMMARY OF FUNCTIONAL OBSERVATIONAL BATTERY DATA

HOME CAGE OBSERVATIONS
MALES
NUMBER OF ANIMALS SHOWING EACH OBSERVATION

GROUP:	1	2	3	4
NUMBER TESTED:	12	12	12	12
POSTURE				
SITTING OR STANDING NORMALLY	7	7	7	6
ASLEEP, LYING ON SIDE OR CURLED UP	5	5	5	6
CONVULSIONS - CLONIC				
ABSENT	12	12	12	12
CONVULSIONS - TONIC				
ABSENT	12	12	12	12
TREMORS				
NONE	12	12	12	12
BITING				
NONE	12	12	12	12
PALPEBRAL CLOSURE				
EYELIDS WIDE OPEN	7	8	6	6
EYELIDS SLIGHTLY DROOPING	0	0	1	0
DROOPING EYELIDS (HALF-CLOSED)	1	0	1	0
EYELIDS COMPLETELY SHUT	4	4	4	6
FECES CONSISTENCY				
PELLETS	11	10	8	9
PELLETS ABSENT	1	2	4	3

1- 0 MG/KG 2- 0 MG/KG 3- 20 MG/KG 4- 100 MG/KG
NONE SIGNIFICANTLY DIFFERENT FROM THE CONTROLS USING FISHER'S EXACT TEST

TABLE 1 (HOME CAGE OBSERVATIONS - PRETEST EVALUATION)
POSITIVE CONTROL NT STUDY IN RATS USING CHLORPYRIFOS
SUMMARY OF FUNCTIONAL OBSERVATIONAL BATTERY DATA

HOME CAGE OBSERVATIONS
FEMALES
NUMBER OF ANIMALS SHOWING EACH OBSERVATION

GROUP:	1	2	3	4
NUMBER TESTED:	12	12	12	12
POSTURE				
SITTING OR STANDING NORMALLY	5	6	5	7
ASLEEP, LYING ON SIDE OR CURLED UP	6	6	7	5
ALERT, ORIENTED TOWARD OBSERVER	1	0	0	0
CONVULSIONS - CLONIC				
ABSENT	12	12	12	12
CONVULSIONS - TONIC				
ABSENT	12	12	12	12
TREMORS				
NONE	12	12	12	12
BITING				
NONE	12	12	12	12
PALPEBRAL CLOSURE				
EYELIDS WIDE OPEN	6	6	6	7
DROOPING EYELIDS (HALF-CLOSED)	0	0	1	1
EYELIDS COMPLETELY SHUT	6	6	5	4
FECES CONSISTENCY				
PELLETS	9	8	10	8
PELLETS ABSENT	3	4	2	4

1- 0 MG/KG 2- 0 MG/KG 3- 20 MG/KG 4- 100 MG/KG
NONE SIGNIFICANTLY DIFFERENT FROM THE CONTROLS USING FISHER'S EXACT TEST

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TABLE 2 (HOME CAGE OBSERVATIONS - DAY 0 EVALUATION)

PROJECT NO.:WIL-99443 | POSITIVE CONTROL NT STUDY IN RATS USING CHLORPYRIFOS | PAGE 1

SPONSOR:WIL RESEARCH | SUMMARY OF FUNCTIONAL OBSERVATIONAL BATTERY DATA | DAY 0

HOME CAGE OBSERVATIONS
MALES
NUMBER OF ANIMALS SHOWING EACH OBSERVATION

GROUP:	1	2	3	4
NUMBER TESTED:	12	12	12	12
POSTURE				
SITTING OR STANDING NORMALLY	2	7	7	9a
ASLEEP, LYING ON SIDE OR CURLED UP	10	5	5	1b
SITTING, HEAD HELD LOW	0	0	0	2
CONVULSIONS - CLONIC				
ABSENT	12	12	12	10
REPETITIVE MOVEMENT OF MOUTH AND JAWS	0	0	0	2
CONVULSIONS - TONIC				
ABSENT	12	12	12	12
TREMORS				
NONE	12	12	12	12
BITING				
NONE	12	12	12	12
PALPEBRAL CLOSURE				
EYELIDS WIDE OPEN	2	8	7	10b
EYELIDS SLIGHTLY DROOPING	0	0	0	1
EYELIDS COMPLETELY SHUT	10	4	5	1b
FECES CONSISTENCY				
PELLETS	3	7	5	9a
PELLETS ABSENT	9	5	7	3a

1- 0 MG/KG 2- 0 MG/KG 3- 20 MG/KG 4- 100 MG/KG

a = SIGNIFICANTLY DIFFERENT FROM CONTROL GROUP 1 AT 0.05 USING FISHER'S EXACT TEST

b = SIGNIFICANTLY DIFFERENT FROM CONTROL GROUP 1 AT 0.01 USING FISHER'S EXACT TEST

c = SIGNIFICANTLY DIFFERENT FROM CONTROL GROUP 2 AT 0.05 USING FISHER'S EXACT TEST

TABLE 2 (HOME CAGE OBSERVATIONS - DAY 0 EVALUATION)

PROJECT NO.:WIL-99443 | POSITIVE CONTROL NT STUDY IN RATS USING CHLORPYRIFOS | PAGE 2

SPONSOR:WIL RESEARCH | SUMMARY OF FUNCTIONAL OBSERVATIONAL BATTERY DATA | DAY 0

HOME CAGE OBSERVATIONS
FEMALES
NUMBER OF ANIMALS SHOWING EACH OBSERVATION

GROUP:	1	2	3	4
NUMBER TESTED:	12	12	12	12
POSTURE				
SITTING OR STANDING NORMALLY	4	8	8	11b
ASLEEP, LYING ON SIDE OR CURLED UP	8	4	3	1b
ALERT, ORIENTED TOWARD OBSERVER	0	0	1	0
CONVULSIONS - CLONIC				
ABSENT	12	12	11	11
REPETITIVE MOVEMENT OF MOUTH AND JAWS	0	0	1	1
CONVULSIONS - TONIC				
ABSENT	12	12	12	12
TREMORS				
NONE	12	12	12	12
BITING				
NONE	12	12	12	11
BITING OF SELF	0	0	0	1
PALPEBRAL CLOSURE				
EYELIDS WIDE OPEN	4	8	9	10a
EYELIDS SLIGHTLY DROOPING	1	0	0	1
DROOPING EYELIDS (HALF-CLOSED)	1	0	1	0
EYELIDS COMPLETELY SHUT	6	4	2	1
FECES CONSISTENCY				
PELLETS	6	5	5	7
PELLETS ABSENT	6	7	7	5

1- 0 MG/KG 2- 0 MG/KG 3- 20 MG/KG 4- 100 MG/KG

a = SIGNIFICANTLY DIFFERENT FROM CONTROL GROUP 1 AT 0.05 USING FISHER'S EXACT TEST

b = SIGNIFICANTLY DIFFERENT FROM CONTROL GROUP 1 AT 0.01 USING FISHER'S EXACT TEST

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TABLE 3 (OPEN FIELD OBSERVATIONS - PRETEST EVALUATION)
POSITIVE CONTROL NT STUDY IN RATS USING CHLORPYRIFOS
SUMMARY OF FUNCTIONAL OBSERVATIONAL BATTERY DATA

PROJECT NO.:WIL-99443
SPONSOR:WIL RESEARCH

PRETEST

OPEN FIELD OBSERVATIONS
MALES
NUMBER OF ANIMALS SHOWING EACH OBSERVATION

GROUP:		1	2	3	4
NUMBER TESTED:		12	12	12	12
TIME TO FIRST STEP (seconds)	: MEAN	0.4	0.4	0.6g	0.5
	S.D.	0.14	0.09	0.40	0.14
MOBILITY					
NORMAL		12	12	12	12
GAIT					
NORMAL		12	12	12	12
CONVULSIONS - CLONIC					
ABSENT		12	12	12	12
CONVULSIONS - TONIC					
ABSENT		12	12	12	12
TREMORS					
NONE		12	12	12	12
GAIT SCORE					
NORMAL		12	12	12	12
AROUSAL					
NORMAL: ALERT, EXPLORATORY MOVEMENTS		12	12	12	12
BIZARRE/STEREOTYPIC BEHAVIOR					
NONE		12	12	12	12

1- 0 MG/KG 2- 0 MG/KG 3- 20 MG/KG 4- 100 MG/KG
g = SIGNIFICANTLY DIFFERENT FROM CONTROL GROUP 2 AT 0.05 USING DUNNETT'S TEST
NONE SIGNIFICANTLY DIFFERENT FROM THE CONTROLS USING FISHER'S EXACT TEST

TABLE 3 (OPEN FIELD OBSERVATIONS - PRETEST EVALUATION)
POSITIVE CONTROL NT STUDY IN RATS USING CHLORPYRIFOS
SUMMARY OF FUNCTIONAL OBSERVATIONAL BATTERY DATA

OPEN FIELD OBSERVATIONS
MALES
NUMBER OF ANIMALS SHOWING EACH OBSERVATION

GROUP:		1	2	3	4
NUMBER TESTED:		12	12	12	12
REARING	: MEAN	5.1	4.4	4.7	6.5
	S.D.	2.64	2.50	2.50	2.20
BACKING	: MEAN	0.0	0.0	0.0	0.0
	S.D.	0.00	0.00	0.00	0.00
GROOMING	: MEAN	0.3	0.3	0.1	0.5
	S.D.	0.65	0.45	0.29	0.80
URINATION	: MEAN	0.7	0.3	0.5	0.6
	S.D.	0.65	0.49	0.52	0.67
DEFECATION	: MEAN	0.3	0.3	0.3	0.7
	S.D.	0.89	0.49	0.62	1.37

1- 0 MG/KG 2- 0 MG/KG 3- 20 MG/KG 4- 100 MG/KG
NONE SIGNIFICANTLY DIFFERENT FROM THE CONTROLS USING DUNNETT'S TEST

TABLE 3 (OPEN FIELD OBSERVATIONS - PRETEST EVALUATION)
POSITIVE CONTROL NT STUDY IN RATS USING CHLORPYRIFOS
SUMMARY OF FUNCTIONAL OBSERVATIONAL BATTERY DATA

OPEN FIELD OBSERVATIONS
FEMALES
NUMBER OF ANIMALS SHOWING EACH OBSERVATION

GROUP:		1	2	3	4
NUMBER TESTED:		12	12	12	12
TIME TO FIRST STEP (seconds)	: MEAN	0.5	0.5	0.4	0.4
	S.D.	0.26	0.14	0.14	0.20
MOBILITY					
NORMAL		12	12	12	12
GAIT					
NORMAL		12	12	12	12
CONVULSIONS - CLONIC					
ABSENT		12	12	12	12
CONVULSIONS - TONIC					
ABSENT		12	12	12	12
TREMORS					
NONE		12	12	12	12
GAIT SCORE					
NORMAL		12	12	12	12
AROUSAL					
NORMAL: ALERT, EXPLORATORY MOVEMENTS		12	12	12	12
BIZARRE/STEREOTYPIC BEHAVIOR					
NONE		12	12	12	12

1- 0 MG/KG 2- 0 MG/KG 3- 20 MG/KG 4- 100 MG/KG
NONE SIGNIFICANTLY DIFFERENT FROM THE CONTROLS USING FISHER'S EXACT TEST
NONE SIGNIFICANTLY DIFFERENT FROM THE CONTROLS USING DUNNETT'S TEST

TABLE 3 (OPEN FIELD OBSERVATIONS - PRETEST EVALUATION)
POSITIVE CONTROL NT STUDY IN RATS USING CHLORPYRIFOS
SUMMARY OF FUNCTIONAL OBSERVATIONAL BATTERY DATA

OPEN FIELD OBSERVATIONS
FEMALES
NUMBER OF ANIMALS SHOWING EACH OBSERVATION

GROUP:		1	2	3	4
NUMBER TESTED:		12	12	12	12
REARING	: MEAN	6.2	7.5	5.9	6.6
	S.D.	3.24	3.61	2.15	3.70
BACKING	: MEAN	0.0	0.0	0.0	0.0
	S.D.	0.00	0.00	0.00	0.00
GROOMING	: MEAN	0.2	0.1	0.3	0.3
	S.D.	0.39	0.29	0.62	0.87
URINATION	: MEAN	0.2	0.1	0.8eh	0.2
	S.D.	0.39	0.29	0.62	0.39
DEFECATION	: MEAN	0.2	0.0	0.2	0.0
	S.D.	0.39	0.00	0.39	0.00

1- 0 MG/KG 2- 0 MG/KG 3- 20 MG/KG 4- 100 MG/KG
e = SIGNIFICANTLY DIFFERENT FROM CONTROL GROUP 1 AT 0.05 USING DUNNETT'S TEST
h = SIGNIFICANTLY DIFFERENT FROM CONTROL GROUP 2 AT 0.01 USING DUNNETT'S TEST

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TABLE 4 (OPEN FIELD OBSERVATIONS - DAY 0 EVALUATION)

PROJECT NO.:WIL-99443 | POSITIVE CONTROL NT STUDY IN RATS USING CHLORPYRIFOS | PAGE 1

SPONSOR:WIL RESEARCH | SUMMARY OF FUNCTIONAL OBSERVATIONAL BATTERY DATA | DAY 0

OPEN FIELD OBSERVATIONS
MALES
NUMBER OF ANIMALS SHOWING EACH OBSERVATION

GROUP:	1	2	3	4
NUMBER TESTED:	12	12	12	12
TIME TO FIRST STEP (seconds) : MEAN	0.5	0.5	0.6	1.7fh
S.D.	0.13	0.21	0.11	1.17
MOBILITY				
NORMAL	12	12	12	12
GAIT				
NORMAL	12	12	12	5bd
HINDLIMBS SPLAYED OR DRAGGING, UNABLE TO SUPPORT WEIGHT	0	0	0	1
HUNCHED BODY	0	0	0	7bd
CONVULSIONS - CLONIC				
ABSENT	12	12	12	12
CONVULSIONS - TONIC				
ABSENT	12	12	12	12
TREMORS				
NONE	12	12	12	11
SLIGHT (1.5mm)	0	0	0	1
GAIT SCORE				
NORMAL	12	12	12	12
AROUSAL				
NORMAL: ALERT, EXPLORATORY MOVEMENTS	12	12	12	12

1- 0 MG/KG 2- 0 MG/KG 3- 20 MG/KG 4- 100 MG/KG
b = SIGNIFICANTLY DIFFERENT FROM CONTROL GROUP 1 AT 0.01 USING FISHER'S EXACT TEST
d = SIGNIFICANTLY DIFFERENT FROM CONTROL GROUP 2 AT 0.01 USING FISHER'S EXACT TEST
f = SIGNIFICANTLY DIFFERENT FROM CONTROL GROUP 1 AT 0.01 USING DUNNETT'S TEST
h = SIGNIFICANTLY DIFFERENT FROM CONTROL GROUP 2 AT 0.01 USING DUNNETT'S TEST

TABLE 4 (OPEN FIELD OBSERVATIONS - DAY 0 EVALUATION)

PROJECT NO.:WIL-99443 | POSITIVE CONTROL NT STUDY IN RATS USING CHLORPYRIFOS | PAGE 2

SPONSOR:WIL RESEARCH | SUMMARY OF FUNCTIONAL OBSERVATIONAL BATTERY DATA | DAY 0

OPEN FIELD OBSERVATIONS
MALES
NUMBER OF ANIMALS SHOWING EACH OBSERVATION

GROUP:		1	2	3	4
NUMBER TESTED:		12	12	12	12
BIZARRE/STEREOTYPIC BEHAVIOR					
NONE		12	12	12	12
REARING	: MEAN	1.6	1.5	1.4	1.1
	S.D.	2.61	1.88	1.44	1.44
BACKING	: MEAN	0.0	0.0	0.0	0.0
	S.D.	0.00	0.00	0.00	0.00
GROOMING	: MEAN	0.3	0.2	0.0	0.3
	S.D.	0.65	0.39	0.00	0.45
URINATION	: MEAN	0.4	0.0	0.5	0.4
	S.D.	0.67	0.00	0.80	0.51
DEFECATION	: MEAN	0.8	1.3	1.0	0.1
	S.D.	0.83	1.91	1.48	0.29

1- 0 MG/KG 2- 0 MG/KG 3- 20 MG/KG 4- 100 MG/KG
NONE SIGNIFICANTLY DIFFERENT FROM THE CONTROLS USING FISHER'S EXACT TEST
NONE SIGNIFICANTLY DIFFERENT FROM THE CONTROLS USING DUNNETT'S TEST

TABLE 4 (OPEN FIELD OBSERVATIONS - DAY 0 EVALUATION)

PROJECT NO.:WIL-99443 | POSITIVE CONTROL NT STUDY IN RATS USING CHLORPYRIFOS | PAGE 3

SPONSOR:WIL RESEARCH | SUMMARY OF FUNCTIONAL OBSERVATIONAL BATTERY DATA | DAY 0

OPEN FIELD OBSERVATIONS
FEMALES
NUMBER OF ANIMALS SHOWING EACH OBSERVATION

GROUP:	1	2	3	4
NUMBER TESTED:	12	12	12	12
TIME TO FIRST STEP (seconds) : MEAN	0.5	0.5	0.5	0.9fh
S.D.	0.12	0.11	0.08	0.59
MOBILITY				
NORMAL	12	12	12	12
GAIT				
NORMAL	12	11	10	8
WALKS ON TIPTOES	0	1	0	2
HUNCHED BODY	0	1	2	4
CONVULSIONS - CLONIC				
ABSENT	12	12	12	12
CONVULSIONS - TONIC				
ABSENT	12	12	12	12
TREMORS				
NONE	12	12	12	11
SLIGHT (1.5mm)	0	0	0	1
GAIT SCORE				
NORMAL	12	12	12	12
AROUSAL				
NORMAL: ALERT, EXPLORATORY MOVEMENTS	12	12	12	12

1- 0 MG/KG 2- 0 MG/KG 3- 20 MG/KG 4- 100 MG/KG

f = SIGNIFICANTLY DIFFERENT FROM CONTROL GROUP 1 AT 0.01 USING DUNNETT'S TEST

h = SIGNIFICANTLY DIFFERENT FROM CONTROL GROUP 2 AT 0.01 USING DUNNETT'S TEST

TABLE 4 (OPEN FIELD OBSERVATIONS - DAY 0 EVALUATION)
POSITIVE CONTROL NT STUDY IN RATS USING CHLORPYRIFOS
SUMMARY OF FUNCTIONAL OBSERVATIONAL BATTERY DATA

OPEN FIELD OBSERVATIONS
FEMALES
NUMBER OF ANIMALS SHOWING EACH OBSERVATION

GROUP:		1	2	3	4
NUMBER TESTED:		12	12	12	12
BIZARRE/STEREOTYPIC BEHAVIOR					
NONE		12	12	12	12
REARING	: MEAN	3.2	3.8	1.9	1.7g
	S.D.	2.98	3.35	1.31	1.50
BACKING	: MEAN	0.0	0.0	0.0	0.0
	S.D.	0.00	0.00	0.00	0.00
GROOMING	: MEAN	0.1	0.0	0.0	0.4
	S.D.	0.29	0.00	0.00	0.90
URINATION	: MEAN	0.1	0.3	0.6	0.1
	S.D.	0.29	0.62	0.90	0.29
DEFECATION	: MEAN	0.3	0.2	0.3	0.3
	S.D.	1.15	0.58	0.65	0.87

1- 0 MG/KG 2- 0 MG/KG 3- 20 MG/KG 4- 100 MG/KG
NONE SIGNIFICANTLY DIFFERENT FROM THE CONTROLS USING FISHER'S EXACT TEST
g = SIGNIFICANTLY DIFFERENT FROM CONTROL GROUP 2 AT 0.05 USING DUNNETT'S TEST

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TABLE 5 (NEUROMUSCULAR OBSERVATIONS - PRETEST EVALUATION)

PROJECT NO.:WIL-99443 | POSITIVE CONTROL NT STUDY IN RATS USING CHLORPYRIFOS | PAGE 1

SPONSOR:WIL RESEARCH | SUMMARY OF FUNCTIONAL OBSERVATIONAL BATTERY DATA | PRETEST

NEUROMUSCULAR OBSERVATIONS
MALES
NUMBER OF ANIMALS SHOWING EACH OBSERVATION

GROUP:		1	2	3	4
NUMBER TESTED:		12	12	12	12
HINDLIMB EXTENSOR STRENGTH					
HINDLIMB RESISTANCE PRESENT		12	12	12	12
GRIP STRENGTH (g) - FORE/HINDLIMB	FORE: MEAN	384.7	418.1	423.9	422.3
	S.D.	66.82	87.88	80.50	42.51
	HIND: MEAN	182.7	190.8	207.3	182.2
	S.D.	33.98	51.73	61.44	46.11
ROTAROD PERFORMANCE (seconds)	: MEAN	60.9	91.4	100.5	83.0
	S.D.	44.42	38.59	38.60	43.89
HINDLIMB FOOTSPLAY (mm)	: MEAN	54.5	58.6	58.5	61.8
	S.D.	13.79	10.00	15.99	12.04

1- 0 MG/KG 2- 0 MG/KG 3- 20 MG/KG 4- 100 MG/KG

NONE SIGNIFICANTLY DIFFERENT FROM THE CONTROLS USING FISHER'S EXACT TEST

NONE SIGNIFICANTLY DIFFERENT FROM THE CONTROLS USING DUNNETT'S TEST

TABLE 5 (NEUROMUSCULAR OBSERVATIONS - PRETEST EVALUATION)

PROJECT NO.:WIL-99443
SPONSOR:WIL RESEARCH

POSITIVE CONTROL NT STUDY IN RATS USING CHLORPYRIFOS
SUMMARY OF FUNCTIONAL OBSERVATIONAL BATTERY DATA

NEUROMUSCULAR OBSERVATIONS
FEMALES
NUMBER OF ANIMALS SHOWING EACH OBSERVATION

GROUP:		1	2	3	4
NUMBER TESTED:		12	12	12	12
HINDLIMB EXTENSOR STRENGTH					
HINDLIMB RESISTANCE PRESENT		12	12	12	12
GRIP STRENGTH (g) - FORE/HINDLIMB	FORE: MEAN	382.8	391.8	405.9	383.2
	S.D.	55.42	63.42	71.51	88.78
	HIND: MEAN	181.9	196.9	200.7	185.6
	S.D.	46.04	59.21	57.78	45.55
ROTAROD PERFORMANCE (seconds)	: MEAN	92.8	89.0	81.6	84.1
	S.D.	38.53	45.94	42.50	39.89
HINDLIMB FOOTSPLAY (mm)	: MEAN	55.5	57.6	56.3	61.1
	S.D.	9.62	19.84	10.42	12.03

1- 0 MG/KG 2- 0 MG/KG 3- 20 MG/KG 4- 100 MG/KG
NONE SIGNIFICANTLY DIFFERENT FROM THE CONTROLS USING FISHER'S EXACT TEST
NONE SIGNIFICANTLY DIFFERENT FROM THE CONTROLS USING DUNNETT'S TEST

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TABLE 6 (NEUROMUSCULAR OBSERVATIONS - DAY 0 EVALUATION)

PROJECT NO.:WIL-99443 | POSITIVE CONTROL NT STUDY IN RATS USING CHLORPYRIFOS | PAGE 1

SPONSOR:WIL RESEARCH | SUMMARY OF FUNCTIONAL OBSERVATIONAL BATTERY DATA | DAY 0

NEUROMUSCULAR OBSERVATIONS
MALES
NUMBER OF ANIMALS SHOWING EACH OBSERVATION

GROUP:		1	2	3	4
NUMBER TESTED:		12	12	12	12
HINDLIMB EXTENSOR STRENGTH					
REDUCED HINDLIMB RESISTANCE, ANIMAL SHOWS SOME WEAKNESS		0	1	0	4
HINDLIMB RESISTANCE PRESENT		12	11	12	8
GRIP STRENGTH (g) - FORE/HINDLIMB	FORE: MEAN	506.5	532.1	552.8	661.3e
	S.D.	123.84	175.17	170.47	88.68
	HIND: MEAN	317.7	308.8	298.7	336.4
	S.D.	100.42	98.90	67.93	77.86
ROTAROD PERFORMANCE (seconds)	: MEAN	87.0	120.0	98.7	41.7eh
	S.D.	45.07	0.00	34.62	41.13
HINDLIMB FOOTSPLAY (mm)	: MEAN	55.1	62.2	56.9	48.6
	S.D.	10.47	10.99	14.61	15.29

1- 0 MG/KG 2- 0 MG/KG 3- 20 MG/KG 4- 100 MG/KG

e = SIGNIFICANTLY DIFFERENT FROM CONTROL GROUP 1 AT 0.05 USING DUNNETT'S TEST

h = SIGNIFICANTLY DIFFERENT FROM CONTROL GROUP 2 AT 0.01 USING DUNNETT'S TEST

NONE SIGNIFICANTLY DIFFERENT FROM CONTROLS USING FISHER'S EXACT TEST

TABLE 6 (NEUROMUSCULAR OBSERVATIONS - DAY 0 EVALUATION)
POSITIVE CONTROL NT STUDY IN RATS USING CHLORPYRIFOS
SUMMARY OF FUNCTIONAL OBSERVATIONAL BATTERY DATA

NEUROMUSCULAR OBSERVATIONS
FEMALES
NUMBER OF ANIMALS SHOWING EACH OBSERVATION

GROUP:		1	2	3	4
NUMBER TESTED:		12	12	12	12
HINDLIMB EXTENSOR STRENGTH					
REDUCED HINDLIMB RESISTANCE, ANIMAL SHOWS SOME WEAKNESS		0	0	0	3
HINDLIMB RESISTANCE PRESENT		12	12	12	9
GRIP STRENGTH (g) - FORE/HINDLIMB	FORE: MEAN	512.2	591.8	622.8e	537.8
	S.D.	96.35	85.27	118.23	108.67
	HIND: MEAN	308.6	343.7	306.3	307.3
	S.D.	107.05	101.68	80.22	49.45
ROTAROD PERFORMANCE (seconds)	: MEAN	103.7	113.0	102.3	71.7h
	S.D.	38.61	20.76	34.06	37.23
HINDLIMB FOOTSPLAY (mm)	: MEAN	54.8	59.8	51.2	47.0
	S.D.	9.11	19.99	11.95	16.91

1- 0 MG/KG 2- 0 MG/KG 3- 20 MG/KG 4- 100 MG/KG
e = SIGNIFICANTLY DIFFERENT FROM CONTROL GROUP 1 AT 0.05 USING DUNNETT'S TEST
h = SIGNIFICANTLY DIFFERENT FROM CONTROL GROUP 2 AT 0.01 USING DUNNETT'S TEST
NONE SIGNIFICANTLY DIFFERENT FROM CONTROLS USING FISHER'S EXACT TEST

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TABLE 7 (PHYSIOLOGICAL OBSERVATIONS - PRETEST EVALUATION)

PROJECT NO.:WIL-99443 | POSITIVE CONTROL NT STUDY IN RATS USING CHLORPYRIFOS | PAGE 1

SPONSOR:WIL RESEARCH | SUMMARY OF FUNCTIONAL OBSERVATIONAL BATTERY DATA | PRETEST

PHYSIOLOGICAL OBSERVATIONS
MALES

GROUP:		1	2	3	4
NUMBER TESTED:		12	12	12	12
CATALEPSY (seconds)	: MEAN	0.2	0.2	0.2	0.2
	S.D.	0.00	0.00	0.00	0.00
	N	12	12	12	12
BODY TEMPERATURE (degrees C)	: MEAN	37.8	38.0	37.9	38.0
	S.D.	0.26	0.30	0.27	0.33
	N	12	12	12	12
BODY WEIGHT (g)	: MEAN	135.3	135.8	136.0	135.5
	S.D.	29.86	26.22	25.83	20.26
	N	12	12	12	12

1- 0 MG/KG 2- 0 MG/KG 3- 20 MG/KG 4- 100 MG/KG

NONE SIGNIFICANTLY DIFFERENT FROM THE CONTROLS USING DUNNETT'S TEST

TABLE 7 (PHYSIOLOGICAL OBSERVATIONS - PRETEST EVALUATION)

PROJECT NO.:WIL-99443 | POSITIVE CONTROL NT STUDY IN RATS USING CHLORPYRIFOS | PAGE 2

SPONSOR:WIL RESEARCH | SUMMARY OF FUNCTIONAL OBSERVATIONAL BATTERY DATA | PRETEST

PHYSIOLOGICAL OBSERVATIONS
FEMALES

GROUP:		1	2	3	4
NUMBER TESTED:		12	12	12	12
CATALEPSY (seconds)	: MEAN	0.2	0.2	0.2	0.2
	S.D.	0.03	0.00	0.00	0.00
	N	12	12	12	12
BODY TEMPERATURE (degrees C)	: MEAN	37.9	37.9	37.8	37.9
	S.D.	0.34	0.31	0.32	0.20
	N	12	12	12	12
BODY WEIGHT (g)	: MEAN	118.2	114.5	113.7	115.8
	S.D.	16.19	12.50	13.12	10.17
	N	12	12	12	12

1- 0 MG/KG 2- 0 MG/KG 3- 20 MG/KG 4- 100 MG/KG

NONE SIGNIFICANTLY DIFFERENT FROM THE CONTROLS USING DUNNETT'S TEST

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TABLE 8 (PHYSIOLOGICAL OBSERVATIONS - DAY 0 EVALUATION)
POSITIVE CONTROL NT STUDY IN RATS USING CHLORPYRIFOS
SUMMARY OF FUNCTIONAL OBSERVATIONAL BATTERY DATA

PROJECT NO.:WIL-99443
SPONSOR:WIL RESEARCH

DAY 0

PHYSIOLOGICAL OBSERVATIONS
MALES

GROUP:		1	2	3	4
NUMBER TESTED:		12	12	12	12
CATALEPSY (seconds)	: MEAN	0.5	0.5	0.5	1.7eg
	S.D.	0.21	0.16	0.17	2.01
	N	12	12	12	12
BODY TEMPERATURE (degrees C)	: MEAN	37.7	37.7	37.5	35.1fh
	S.D.	0.67	0.80	0.93	1.03
	N	12	12	12	12
BODY WEIGHT (g)	: MEAN	204.9	203.0	203.6	200.2
	S.D.	31.80	28.79	26.93	26.38
	N	12	12	12	12

1- 0 MG/KG 2- 0 MG/KG 3- 20 MG/KG 4- 100 MG/KG
e = SIGNIFICANTLY DIFFERENT FROM CONTROL GROUP 1 AT 0.05 USING DUNNETT'S TEST
f = SIGNIFICANTLY DIFFERENT FROM CONTROL GROUP 2 AT 0.01 USING DUNNETT'S TEST
g = SIGNIFICANTLY DIFFERENT FROM CONTROL GROUP 2 AT 0.05 USING DUNNETT'S TEST
h = SIGNIFICANTLY DIFFERENT FROM CONTROL GROUP 2 AT 0.01 USING DUNNETT'S TEST

TABLE 8 (PHYSIOLOGICAL OBSERVATIONS - DAY 0 EVALUATION)
POSITIVE CONTROL NT STUDY IN RATS USING CHLORPYRIFOS
SUMMARY OF FUNCTIONAL OBSERVATIONAL BATTERY DATA

PHYSIOLOGICAL OBSERVATIONS
FEMALES

GROUP:		1	2	3	4
NUMBER TESTED:		12	12	12	12
CATALEPSY (seconds)	: MEAN	0.5	0.5	0.6	0.7
	S.D.	0.22	0.17	0.41	0.62
	N	12	12	12	12
BODY TEMPERATURE (degrees C)	: MEAN	37.6	37.8	37.1	35.8fh
	S.D.	0.93	0.90	1.10	1.02
	N	12	12	12	12
BODY WEIGHT (g)	: MEAN	157.4	152.6	149.9	150.2
	S.D.	13.69	12.05	14.09	9.68
	N	12	12	12	12

1- 0 MG/KG 2- 0 MG/KG 3- 20 MG/KG 4- 100 MG/KG
f = SIGNIFICANTLY DIFFERENT FROM CONTROL GROUP 2 AT 0.01 USING DUNNETT'S TEST
h = SIGNIFICANTLY DIFFERENT FROM CONTROL GROUP 2 AT 0.01 USING DUNNETT'S TEST

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WIL-99263

AN INTER-OBSERVER RELIABILITY STUDY OF TECHNICIANS ASSIGNED TO PERFORM FUNCTIONAL OBSERVATIONAL BATTERY ASSESSMENTS IN RATS

Study Date Range: December 14, 2001 - October 9, 2002

STUDY OBJECTIVE:

The objective of this study was to train personnel to conduct the Functional Observational Battery (FOB) and to assess inter-observer reliability of the same technicians. FOB. inter-observer reliability studies serve as training for new employees, as well as on-going training for current employees.

CONTROL ARTICLES:

Deionized water was used as the negative control article. Two positive control articles, 3,3′-Iminodipropionitrile (IDPN) and Parathion, were used to elicit behavioral changes in the animals. IDPN was administered orally at 2000 mg/kg, and Parathion was administered orally at 4 mg/kg. All control articles were administered as a single dose.

TEST SYSTEM:

All animals used on the study were female Sprague-Dawley Crl:CD® (SD)IGS BR rats obtained from the WIL Research Laboratories, Inc. stock colony. Animals were randomly assigned to treatment groups using a computer program. The study was conducted according the protocol and WIL standard operating procedures.

ENVIRONMENTAL CONDITIONS:

The animals were housed and maintained under conditions consistent with maintaining good health. Temperature and relative humidity were set to maintain at 71 ± 5° C and 30-70%, respectively, in a room with a 12 hour light (6 a.m. to 6 p.m.)/dark photoperiod. Temperature and relative humidity were recorded once daily. The facilities at WIL Research Laboratories, Inc. are fully accredited by the Association for Assessment and Accreditation of Laboratory Animal Care International (AAALAC International).

VIABILITY OBSERVATIONS:

The rats were observed for mortality/moribundity and general condition twice daily, in the morning and in the afternoon.

BODY WEIGHTS:

Body weights were recorded on days of dosing for calculation of doses only.

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FUNCTIONAL OBSERVATIONAL BATTERY ASSESSMENTS:

The Functional Observational Battery used at WIL Research Laboratories, Inc. is based on previously developed protocols (Moser et al., 1991; Irwin, 1968; Gad, 1982; Moser et al., 1988; Haggerty, 1989; O'Donoghue, 1989). Testing for Phase III (described below) was performed by trained technicians who did not know the animal's group assignment. The time of testing was determined by the Study Director based on the appearance of the expected behavioral signs following dosing. Animals were observed for the following parameters as described below (see WIL standard operating procedure No. T1-112, as revised, for a description of scoring criteria):

HOME CAGE OBSERVATIONS:

Posture
Convulsions/Tremors
Feces consistency
Biting
Palpebral (eyelid) closure

HANDLING OBSERVATIONS:

Ease of removal from cage
Lacrimation/chromodacryorrhea
Piloerection
Palpebral closure
Red/crusty deposits
Eye prominence
Ease of handling animal in hand
Salivation
Fur appearance
Respiratory rate/character
Mucous membranes/eye/skin color
Muscle tone

OPEN FIELD OBSERVATIONS: (evaluated over a 2-minute observation period)

Mobility
Rearing
Convulsions/tremors
Grooming
Bizarre/stereotypic behavior
Time to first step (seconds)
Gait
Arousal
Urination/defecation
Gait score
Backing

SENSORY OBSERVATIONS:

Approach response
Startle response
Pupil response
Forelimb extension
Air righting reflex
Touch response
Tail pinch
Eyeblink response
Hindlimb extension
Olfactory orientation

The study design consisted of three distinct phases to ensure the most adequate training and reliability among the technicians. Phases were designed as a progression to allow for

training and discussion prior to the final phase, which evaluated the inter-observer reliability. The phases of testing are described as follows:

PHASE I:

Phase I testing consisted of FOB assessments on naive stock animals. Each technician observed up to 60 rats through the entire FOB assessment. The purpose of Phase I testing was to ensure consistent and accurate use of all equipment and to gain a strong knowledge of the stereotypic behavior of naive animals. All rats used in Phase I testing were returned to stock following FOB assessments.

PHASE II:

Phase II testing consisted of an open discussion of each animal's observations conducted in a group setting. Two animals per group were dosed with Parathion, IDPN or deionized water and evaluated by the observers once the effects were apparent. Phase II allowed for open discussion of observations and interpretation of the findings. All animals used in Phase II testing were euthanized by carbon dioxide inhalation and carcasses discarded following testing.

PHASE III:

Phase III testing consisted of three animals per group dosed with a single dose of Parathion, IDPN or deionized water and observed at a time determined by the Study Director. Each technician individually recorded observations for each animal to evaluate the inter-observer reliability. All animals used in Phase III testing were euthanized by carbon dioxide inhalation and carcasses discarded following testing.

CRITERIA FOR EVALUATION OF TECHNICIANS:

The following criteria were used to evaluate the ability of technicians to reliably distinguish signs of neurotoxicity.

1. No omission of findings within the categories of Home Cage Observations, Handling Observations, Open Field Observations and Sensory Observations.

2. A difference of no more than two grades (severity) for a given finding in each category.

RESULTS:

VIABILITY:

All animals survived until scheduled euthanasia.

FUNCTIONAL OBSERVATIONAL BATTERY ASSESSMENTS:

Technicians were consistent in the findings reported when deionized water, IDPN or Parathion was administered (Table 1). There were no obvious or gross inconsistencies among the calls.

It was determined that the previously established criteria for evaluation were fulfilled to a degree deemed acceptable by the Study Director. It should be noted that there were a few apparent omissions of findings (Table 2) which upon further review were found to be of no practical significance.

CONCLUSIONS:

It was determined that the technicians fulfilled the criteria for reliably observing FOB parameters to assess behavioral changes in rats in a manner consistent with good science and WIL Research Laboratories, Inc. standard operating procedures.

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TABLE 1

FOB OBSERVATIONS - NO. OF OCCURRENCES OF FINDINGS

TREATMENT:	CONTROL				IDPN				Parathion			
TECHNICIAN	GRG	MJM	TAP	AZ	GRG	MJM	TAP	AZ	GRG	MJM	TAP	AZ
POSTURE												
1 - SITTING OR STANDING NORMALLY	1	2	1	2					3	2	3	2
2 - ASLEEP, LYING ON SIDE OR CURLED UP	2	1	2	1	3	3	3	3				
3 - ALERT, ORIENTED TOWARD OBSERVER										1		1
4 - SITTING, HEAD HELD LOW												
5 - FLATTENED, LIMBS MAY BE EXTENDED												
6 - LYING ON SIDE, LIMBS IN AIR												
7 - IMMOBILE												
8 - REARING												
9 - SPLAYED HINDLEGS												
10 - PROSTRATION												
CONVULSIONS - CLONIC												
1 - ABSENT	3	3	3	3	3	3	3	3	2	3	3	3
2 - TWITCHES (BACK MUSCLES)												
3 - IRREGULAR JERKING MOVEMENTS OF THE LIMBS												
4 - CLONIC WHOLE-BODY CONVULSIONS												
5 - HEAD AND/OR BODY TWITCHES (MYOCLONUS)												
6 - MUSCLE FASICULATIONS												
7 - REPETITIVE MOVEMENT OF MOUTH AND JAWS (CHEWING)												
CONVULSIONS - TONIC												
1 - ABSENT	3	3	3	3	3	3	3	3	3	3	3	3
2 - TONIC: CONTRACTION OF EXTENSORS SUCH THAT LIMBS ARE RIGID AND EXTENDED												
3 - OPISTHOTONUS: HEAD, BODY AND LIMBS RIGIDLY ARCHED BACKWARDS												
4 - EMPROSTHOTONUS: HEAD, BODY AND LIMBS EXTENDED FORWARD												
5 - 'POPCORN SEIZURE': ANIMAL REPEATEDLY JUMPS OR BOUNCES IN AIR												
6 - ASPHYXIAL: BOUTS OF SEVERE CLONIC-TONIC CONVULSIONS												
TREMORS												
1 - NONE	3	3	3	3	3	3	3	3	3	3	3	3
2 - SLIGHT (1.5mm)												
3 - MODERATELY COARSE (3 mm)												
4 - MARKEDLY COARSE (4.5mm)												
5 - EXTREMELY COARSE (6 mm)												

Counts indicate the number of animals observed with a particular finding.

TABLE 1

FOB OBSERVATIONS - NO. OF OCCURRENCES OF FINDINGS

TREATMENT:	CONTROL				IDPN				Parathion			
TECHNICIAN	GRG	MJM	TAP	AZ	GRG	MJM	TAP	AZ	GRG	MJM	TAP	AZ
BITING												
1 - NONE	3	3	3	3	3	3	3	3	3	2	3	3
2 - BITING OF CAGE												
3 - BITING OF SELF												
PALPEBRAL CLOSURE												
1 - EYELIDS WIDE OPEN	1	2	1	2					2	3	3	3
2 - EYELIDS SLIGHTLY DROOPING									1			
3 - DROOPING EYELIDS (HALF-CLOSED)												
4 - EYELIDS COMPLETELY SHUT	2	1	2	1	3	3	3	3				
FECES CONSISTENCY												
1 - PELLETS									2	2	2	2
2 - PELLETS, PARTIALLY FORMED									1	1	1	1
3 - UNFORMED, DIARRHEA												
4 - PELLETS ABSENT	3	3	3	3	3	3	3	3				
EASE OF REMOVAL												
1 - VERY EASY: ANIMAL SITS QUIETLY, ALLOWS INVESTIGATOR TO PICK IT UP									2	2	2	1
2 - EASY: WITH/WITHOUT VOCALIZATION, WITHOUT RESISTANCE OR SLIGHT RESISTANCE	3	3	3	3	2	2	2	1				1
3 - MODERATELY DIFFICULT: ANIMAL REARS, OFTEN FOLLOWING THE INVESTIGATOR'S HAND					1	1	1	1	1	1	1	1
4 - FREEZES: WITH/WITHOUT VOCALIZATION												
5 - DIFFICULT: RUNS AROUND CAGE, IS HARD TO GRAB, WITH/WITHOUT VOCALIZATION												
6 - VERY DIFFICULT: TAIL AND THROAT RATTLES WITH/WITHOUT VOCALIZATION; MAY ATTACK												
EASE OF HANDLING IN HAND												
1 - LOW: NO RESISTANCE, ANIMAL IS EASY TO HANDLE	2	1	2	1					1	1		1
2 - MODERATELY LOW: SLIGHT RESISTANCE TO BEING HANDLED, WITH/WITHOUT VOCALIZATION	1	2	1	2	2	2	2	2	2	2	3	2
3 - MODERATELY HIGH: MAY FREEZE, BE TENSE OR RIGID, WITH/WITHOUT VOCALIZATION					1	1	1	1				
4 - HIGH: SQUIRMS, TWISTS, ATTEMPTS TO BITE, WITH/WITHOUT VOCALIZATION												
LACRIMATION												
1 - NONE	3	3	3	3	2	2	2	2	3	3	3	3
2 - SLIGHT					1	1	1	1				
3 - SEVERE												
CHROMODACRYORRHEA												
1 - ABSENT	3	3	3	3	3	3	3	3	3	3	3	3
2 - PRESENT												

Counts indicate the number of animals observed with a particular finding.

TABLE 1
FOB OBSERVATIONS - NO. OF OCCURRENCES OF FINDINGS

TREATMENT:	CONTROL				IDPN				Parathion			
TECHNICIAN	GRG	MJM	TAP	AZ	GRG	MJM	TAP	AZ	GRG	MJM	TAP	AZ
SALIVATION												
1 - NONE	3	3	3	3	3	3	3	3	3	3	3	3
2 - SLIGHT												
3 - SEVERE												
PILOERECTION												
1 - NONE	3	3	3	3	3	3	3	3	3	3	3	3
2 - SLIGHT												
3 - SEVERE												
FUR APPEARANCE												
1 - NORMAL: CLEAN AND GROOMED	3	3	3	3	3	3	3	3	2	2	2	2
2 - SLIGHTLY SOILED									1	1	1	1
3 - VERY SOILED, CRUSTY												
PALPEBRAL CLOSURE												
1 - EYELIDS WIDE OPEN	3	3	3	3	2	2	2	2	3	3	3	3
2 - EYELIDS SLIGHTLY DROOPING					1	1	1	1				
3 - DROOPING EYELIDS (HALF-CLOSED)												
4 - EYELIDS COMPLETELY SHUT												
RESPIRATORY RATE												
1 - NORMAL: BY OBSERVATION (80-110/MIN.)	3	3	3	3	3	3	3	3	3	3	3	3
2 - DECREASED: BELOW 80/MIN.												
3 - INCREASED: ABOVE 110/MIN.												
RESPIRATORY CHARACTER												
1 - NORMAL	3	3	3	3	3	3	2	3	3	3	3	3
2 - RALES: ABNORMAL SOUND ACCOMPANYING BREATHING												
3 - RETCHING												
4 - DYSPNEIC: SHORT OF BREATH												
5 - GASPING												
RED DEPOSITS - eyes												
1 - PRESENT												
2 - ABSENT	3	3	3	3	3	3	3	3	3	3	3	3
RED DEPOSITS - nose												
1 - PRESENT									1	1	1	1
2 - ABSENT	3	3	3	3	3	3	3	3	2	2	2	2

Counts indicate the number of animals observed with a particular finding.

TABLE 1
FOB OBSERVATIONS - NO. OF OCCURRENCES OF FINDINGS

TREATMENT:	CONTROL				IDPN				Parathion			
TECHNICIAN	GRG	MJM	TAP	AZ	GRG	MJM	TAP	AZ	GRG	MJM	TAP	AZ
RED DEPOSITS - mouth												
1 - PRESENT												
2 - ABSENT	3	3	3	3	3	3	3	3	3	3	3	3
CRUSTY DEPOSITS - eyes												
1 - PRESENT												
2 - ABSENT	3	3	3	3	3	3	3	3	3	3	3	3
CRUSTY DEPOSITS - nose												
1 - PRESENT												
2 - ABSENT	3	3	3	3	3	3	3	3	3	3	3	3
CRUSTY DEPOSITS - mouth												
1 - PRESENT												
2 - ABSENT	3	3	3	3	3	3	3	3	3	3	3	3
MUCOUS MEMBRANES - color												
1 - PINK	3	3	3	3	3	3	3	3	3	3	3	3
2 - PALE												
3 - DARKENED												
4 - DARKENED, BROWN												
5 - BRIGHT, DEEP RED FLUSH												
EYES - color												
1 - PINK	3	3	3	3	3	3	3	3	3	3	3	3
2 - PALE												
3 - DARKENED												
4 - DARKENED, BROWN												
5 - BRIGHT, DEEP RED FLUSH												
SKIN - color												
1 - PINK	3	3	3	3	3	3	3	3	3	3	3	3
2 - PALE												
3 - DARKENED												
4 - DARKENED, BROWN												
5 - BRIGHT, DEEP RED FLUSH												

Counts indicate the number of animals observed with a particular finding.

TABLE 1
FOB OBSERVATIONS - NO. OF OCCURRENCES OF FINDINGS

TREATMENT:	CONTROL				IDPN				Parathion			
TECHNICIAN	GRG	MJM	TAP	AZ	GRG	MJM	TAP	AZ	GRG	MJM	TAP	AZ
EYE PROMINENCE												
1 - NORMAL	3	3	3	3	3	3	3	3	3	3	3	3
2 - EXOPHTHALMUS												
3 - ENOPHTHALMUS												
MUSCLE TONE												
1 - MUSCLE IS FIRM BUT NOT HARD (NORMAL)	2	2	2	2	3	3	3	3	1	1	1	1
2 - MUSCLE IS SOFT AND FLABBY									1	1	1	1
3 - MUSCLE IS TENSE AND HARD	1	1	1	1					1	1	1	1
TIME TO FIRST STEP (seconds)												
REQUIRES NUMERICAL INPUT												
MOBILITY												
1 - NORMAL	3	3	3	3					3	3	3	3
2 - SLIGHTLY IMPAIRED					3	3	3	3				
3 - MODERATELY IMPAIRED												
4 - TOTALLY IMPAIRED, LOCOMOTION IMPOSSIBLE												
GAIT												
1 - NORMAL	3	3	3	3					2	2	1	1
2 - WALKS ON TIPTOES									1	1	2	1
3 - BODY DRAGS, ABDOMEN CONTACTS SURFACE, BODY SWAYS												
4 - HINDLIMBS SPLAYED OR DRAGGING, UNABLE TO SUPPORT WEIGHT					2	3	3	3				1
5 - HUNCHED BODY					2	3	3	3	1	1	1	1
6 - ATAXIA, EXCESSIVE SWAY, ROCKS OR LURCHES AS PROCEEDS FORWARD					3	2	2	3				
7 - WALKS ON METATARSUS												
CONVULSIONS - CLONIC												
1 - ABSENT	3	3	3	3	2	2	1	2	3	3	3	3
2- TWITCHES (BACK MUSCLES)												
3 - REPETITIVE MOVEMENT OF MOUTH AND JAWS					1	1	2	1				
4 - CLONIC TREMORS OF THE LIMBS												
5 - WHOLE BODY TREMORS												
6 - CLONIC CONVULSIONS												
7 - WET DOG SHAKES												

Counts indicate the number of animals observed with a particular finding.

TABLE 1

FOB OBSERVATIONS - NO. OF OCCURRENCES OF FINDINGS

TREATMENT:	CONTROL				IDPN				Parathion			
TECHNICIAN	GRG	MJM	TAP	AZ	GRG	MJM	TAP	AZ	GRG	MJM	TAP	AZ
CONVULSIONS - TONIC												
1 - ABSENT	3	3	3	3	3	3	3	3	3	3	3	3
2 - TONIC: CONTRACTION OF EXTENSORS SUCH THAT LIMBS ARE RIGID AND EXTENDED												
3 - OPISTHOTONUS: HEAD, BODY AND LIMBS RIGIDLY ARCHED BACKWARDS												
4 - EMPROSTHOTONUS: HEAD, BODY AND LIMBS EXTENDED FORWARD												
5 - 'POPCORN SEIZURE': ANIMAL REPEATEDLY JUMPS OR BOUNCES IN AIR												
6 - ASPHYXIAL: BOUTS OF SEVERE CLONIC-TONIC CONVULSIONS												
TREMORS												
1 - NONE	3	3	3	3	3	3	3	3	3	3	3	3
2 - SLIGHT (1.5mm)												
3 - MODERATELY COARSE (3 mm), SLIGHT IMPAIRMENT OF LOCOMOTION												
4 - MARKEDLY COARSE (4.5mm), MODERATE/MARKED IMPAIRMENT OF LOCOMOTION												
5 - EXTREMELY COARSE (6 mm), LOCOMOTION IMPOSSIBLE												
GAIT SCORE												
1 - NORMAL	3	3	3	3					2	2	2	2
2 - SLIGHT IMPAIRMENT, BUT DEFINITE					3	3	3	3	1	1	1	1
3 - CONSIDERABLE IMPAIRMENT, WITHOUT FALLING												
4 - MARKED IMPAIRMENT, FALLS EVERY 4 TO 6 STEPS												
5 - SEVERE IMPAIRMENT, CANNOT WALK WITHOUT FALLING												
AROUSAL												
1 - VERY LOW: STUPOR, COMA, LITTLE OR NO RESPONSIVENESS												
2 - LOW: SOMEWHAT STUPOROUS						1						
3 - NORMAL: ALERT, EXPLORATORY MOVEMENTS	3	3	3	3	3	2	2	3	3	3	3	3
4 - SOMEWHAT HIGH: SLIGHT EXCITEMENT, TENSE, SUDDEN DARTING OR FREEZING							1					
5 - VERY HIGH: HYPERALERT, EXCITED, SUDDEN BOUTS OF RUNNING OR BODY MOVEMENTS												

Counts indicate the number of animals observed with a particular finding.

TABLE 1

FOB OBSERVATIONS - NO. OF OCCURRENCES OF FINDINGS

TREATMENT:	CONTROL				IDPN				Parathion			
TECHNICIAN	GRG	MJM	TAP	AZ	GRG	MJM	TAP	AZ	GRG	MJM	TAP	AZ
BIZARRE/STEREOTYPIC BEHAVIOR												
1 - NONE	3	3	3	3					2	2	2	2
2 - HEAD FLICK: HEAD SHAKING OR BACKWARD FLIP OF HEAD					3	3	2	3				
3 - HEAD SEARCH: STEREOTYPED, REPETITIVE TURNING OF HEAD FROM SIDE TO SIDE					3	3	3	3				
4 - HALLUCINATORY: APPEARS TO BE RESPONDING TO OBJECTS NOT PRESENT												
5 - COMPULSIVE LICKING OR BITING												
6 - PRANCING: RESTLESS SHIFTING FROM ONE FORELIMB TO THE OTHER												
7 - UPRIGHT WALKING: ON HINDLIMBS ONLY												
8 - AIMLESS WANDERING: PROGRESSIVE, SLOW, PLODDING MOVEMENTS, NO APPARENT PURPOSE												
9 - CIRCLING: TENDENCY TO MOVE IN CIRCLES AROUND OBJECTS, OR IN AN OPEN ENVIRONMENT					2	2	2	2				
10 - WALTZING: RAPID TURNING IN CIRCLES												
11 - RETROPULSION: ANIMAL WALKS BACKWARDS					1	2	2	2	1	1	1	1
12 - SPATIAL DISORIENTATION: WALKING OR STUMBLING INTO OBJECTS												
13 - SIDE TO SIDE ROCKING												
14 - STRAUB TAIL: INCREASED TAIL ELEVATION												
15 - VERTICAL JUMPING												
16 - PACING WITHOUT PURPOSE												
17 - HEAD BOBBING												
18 - WRITHING: LYING DOWN, WAVELIKE MOVEMENTS OF ABDOMEN, ALTERNATING LIMB MOVEMENTS												
REARING												
REQUIRES NUMERICAL INPUT	17	17	17	17	1	1	1	1	13	13	13	13
BACKING												
REQUIRES NUMERICAL INPUT	0	0	0	0	4	4	4	4	2	2	2	2
GROOMING												
REQUIRES NUMERICAL INPUT	3	3	3	3	1	1	1	1	2	2	2	2
URINATION												
REQUIRES NUMERICAL INPUT	0	0	0	0	1	1	1	1	1	1	1	1
DEFECATION												
REQUIRES NUMERICAL INPUT	1	1	1	1	0	0	0	0	0	0	0	0

Counts indicate the number of animals observed with a particular finding.

TABLE 1
FOB OBSERVATIONS - NO. OF OCCURRENCES OF FINDINGS

TREATMENT:	CONTROL				IDPN				Parathion			
TECHNICIAN	GRG	MJM	TAP	AZ	GRG	MJM	TAP	AZ	GRG	MJM	TAP	AZ
APPROACH RESPONSE												
1 - NO REACTION	1	1	1	1								
2 - SLOW APPROACH, SNIFFING OR TURNING AWAY	2	2	2	2	3	3	3	3	3	3	2	3
3 - MORE ENERGETIC RESPONSE THAN (2), WITH/WITHOUT VOCALIZATION											1	
4 - FREEZES, ACTUAL MUSCLE CONTRACTION												
5 - BIZARRE REACTION: JUMPS, BITES OR ATTACKS												
TOUCH RESPONSE												
1 - NO REACTION												
2 - ANIMAL MAY SLOWLY TURN, WALK AWAY	2	2	2	2	3	3	3	3	3	3	3	3
3 - MORE ENERGETIC RESPONSE THAN (2), WITH/WITHOUT VOCALIZATION	1	1	1	1								
4 - FREEZES, ACTUAL MUSCLE CONTRACTION												
5 - BIZARRE REACTION: JUMPS, BITES OR ATTACKS												
STARTLE RESPONSE												
1 - NO REACTION					3	3	3	3				
2 - SLIGHT REACTION, EAR FLICK OR SOME EVIDENCE THAT SNAP WAS HEARD	3	3	2	3					1	2	1	2
3 - MORE ENERGETIC RESPONSE THAN (2), WITH/WITHOUT VOCALIZATION			1						2	1	2	1
4 - FREEZES, ACTUAL MUSCLE CONTRACTION												
5 - BIZARRE REACTION: JUMPS, BITES OR ATTACKS												
TAIL PINCH RESPONSE												
1 - NO REACTION												
2 - ANIMAL MAY SLOWLY TURN, WALK AWAY	2	2	2	2	3	3	3	3	2	2	2	2
3 - MORE ENERGETIC RESPONSE THAN (2), WITH/WITHOUT VOCALIZATION	1	1	1	1					1	1	1	1
4 - FREEZES, ACTUAL MUSCLE CONTRACTION												
5 - BIZARRE REACTION: JUMPS, BITES OR ATTACKS												
OLFACTORY ORIENTATION												
1 - NO REACTION PRESENT												
2 - REACTION PRESENT: ANIMAL APPROACHES SWAB MAKING SNIFFING MOVEMENTS WITH NOSE	3	3	3	3	3	3	3	3	3	3	3	3
PUPIL RESPONSE												
1 - NO PUPIL RESPONSE					3	3	3	3				
2 - PUPIL RESPONSE PRESENT	3	3	3	3					3	3	3	3
EYEBLINK RESPONSE												
1 - NO EYEBLINK RESPONSE												
2 - EYEBLINK RESPONSE PRESENT	3	3	3	3	3	3	3	3	3	3	3	3

Counts indicate the number of animals observed with a particular finding.

TABLE 1
FOB OBSERVATIONS - NO. OF OCCURRENCES OF FINDINGS

TREATMENT:	CONTROL				IDPN				Parathion			
TECHNICIAN	GRG	MJM	TAP	AZ	GRG	MJM	TAP	AZ	GRG	MJM	TAP	AZ
FORELIMB EXTENSION												
1 - NO FORELIMB EXTENSION					2	2	2	2				
2 - FORELIMB EXTENSION PRESENT	3	3	3	3	1	1	1	1	3	3	3	3
HINDLIMB EXTENSION												
1 - NO HINDLIMB EXTENSION					3	3	3	3	2	2	1	1
2 - HINDLIMB EXTENSION PRESENT	3	3	3	3					1	1	2	2
AIR RIGHTING REFLEX												
1 - NORMAL	3	3	3	3					3	3	3	3
2 - SLIGHTLY UNCOORDINATED					1	1	1	1				
3 - LANDS ON SIDE					1	1	1	1				
4 - LANDS ON BACK					1	1	1	1				

Counts indicate the number of animals observed with a particular finding.

TABLE 2
FOB OBSERVATIONS – FINDINGS OMITTED

TECHNICIAN	TREATMENT	CATEGORY OMITTED
TAP	IDPN	RESPIRATORY CHARACTER
AZ	IDPN	EASE OF REMOVAL
GRG	PARATHION	CONVULSIONS – CLONIC
MJM	PARATHION	BITING

AN INTER-OBSERVER RELIABILITY STUDY OF INDIVIDUALS ASSIGNED TO PERFORM FUNCTIONAL OBSERVATIONAL BATTERY OBSERVATIONS FOR NEUROTOXICITY STUDIES

Study Date Range: April 13-29, 2004

STUDY OBJECTIVE:

The objective of this study was to train personnel to conduct the Functional Observational Battery (FOB) and to assess inter-observer reliability of the same individuals. The inter-observer reliability also included one individual that had been previously trained to further demonstrate inter-observer reliability of the newly trained individuals with those currently approved to conduct neurotoxicity studies. FOB inter-observer reliability studies serve as training for new employees, as well as on-going training for current employees.

CONTROL ARTICLES:

Mazola® corn oil was used as the negative control article. Three positive control articles, 3,3′-Iminodipropionitrile (IDPN), Parathion and d-Amphetamine, were used to elicit behavioral changes in the animals. IDPN was administered orally (gavage) at 2000 mg/kg, Parathion was administered orally (gavage) at 4 mg/kg, and d-Amphetamine was administered by intraperitoneal injection at 2 mg/kg. All positive and negative control articles were administered as a single dose.

TEST SYSTEM:

All animals used on the study were female Sprague-Dawley Crl:CD® (SD)IGS BR rats obtained from the WIL Research Laboratories, Inc. stock colony. Animals were randomly assigned to treatment groups using a computer program. The study was conducted according the protocol and WIL standard operating procedures.

ENVIRONMENTAL CONDITIONS:

The animals were housed and maintained under conditions consistent with maintaining good health. Temperature and relative humidity were set to maintain at 71 ± 5° C and 30-70%, respectively, in a room with a 12 hour light (6 a.m. to 6 p.m.)/dark photoperiod. Temperature and relative humidity were recorded once daily. The ventilation rate was set at a minimum of 10 room air changes per hour using 100% fresh air. The facilities at WIL Research Laboratories, Inc. are fully accredited by the Association for Assessment and Accreditation of Laboratory Animal Care International (AAALAC International).

VIABILITY OBSERVATIONS:

The rats were observed for mortality/moribundity and general condition twice daily, in the morning and in the afternoon.

BODY WEIGHTS:

Body weights were recorded on days of dose administration for calculation of doses only.

FUNCTIONAL OBSERVATIONAL BATTERY ASSESSMENTS:

The Functional Observational Battery used at WIL Research Laboratories, Inc. is based on previously developed protocols (Moser et al., 1991; Irwin, 1968; Gad, 1982; Moser et al., 1988; Haggerty, 1989; O'Donoghue, 1989). Testing for the Inter-observer Reliability testing (described below) was performed by trained technicians who did not know the animal's group assignment. The time of testing was determined by the Study Director based on the appearance of the expected behavioral signs following dosing. Animals were observed for the following parameters as described below (see WIL standard operating procedure No. T1-112, as revised, for a description of scoring criteria):

HOME CAGE OBSERVATIONS:

Posture
Convulsions/Tremors
Feces consistency
Biting
Palpebral (eyelid) closure

HANDLING OBSERVATIONS:

Ease of removal from cage
Lacrimation/chromodacryorrhea
Piloerection
Palpebral closure
Red/crusty deposits
Eye prominence
Ease of handling animal in hand
Salivation
Fur appearance
Respiratory rate/character
Mucous membranes/eye/skin color
Muscle tone

OPEN FIELD OBSERVATIONS: (evaluated over a 2-minute observation period)

Mobility
Rearing
Convulsions/tremors
Grooming
Bizarre/stereotypic behavior
Time to first step (seconds)
Gait
Arousal
Urination/defecation
Gait score
Backing

SENSORY OBSERVATIONS:

Approach response	Touch response
Startle response	Tail pinch
Pupil response	Eyeblink response
Forelimb extension	Hindlimb extension
Air righting reflex	Olfactory orientation

The study design consisted of three distinct phases to ensure the most adequate training and reliability among the technicians. Phases were designed as a progression to allow for training and discussion prior to the final phase, which evaluated the inter-observer reliability. The phases of testing are described as follows:

PHASE I:

Phase I testing consisted of FOB assessments on naive stock animals. Each technician observed up to 60 rats through the entire FOB assessment. The purpose of Phase I testing was to ensure consistent and accurate use of all equipment and to gain a strong knowledge of the stereotypic behavior of naive animals. All rats used in Phase I testing were returned to stock following FOB assessments.

PHASE II:

Phase II testing consisted of an open discussion of each animal's observations conducted in a group setting. Two animals per group were dosed with IDPN, Parathion, d-Amphetamine or corn oil and evaluated by the observers once the effects were apparent. Phase II allowed for open discussion of observations and interpretation of the findings. All animals used in Phase II testing were euthanized by carbon dioxide inhalation and carcasses discarded following testing.

PHASE III:

Inter-observer Reliability testing consisted of three animals per group dosed with a single dose of Parathion, IDPN, d-Amphetamine or corn oil and observed at a time determined by the Study Director or designee. Each observer individually recorded observations for each animal to evaluate the inter-observer reliability. All animals used in Inter-observer Reliability testing were euthanized by carbon dioxide inhalation and carcasses discarded following testing.

CRITERIA FOR EVALUATION OF TECHNICIANS:

The following criteria were used to evaluate the ability of technicians to reliably distinguish signs of neurotoxicity.

1. No omission of findings within the categories of Home Cage Observations, Handling Observations, Open Field Observations and Sensory Observations.

2. A difference of no more than two grades (severity) for a given finding in each category.

RESULTS:

VIABILITY:

All animals survived until scheduled euthanasia.

FUNCTIONAL OBSERVATIONAL BATTERY ASSESSMENTS:

Observers B, C, D and E were consistent in the findings reported when corn oil, IDPN, Parathion or d-Amphetamine was administered (Table 1). There were no obvious or gross inconsistencies among the calls with the exception of observer E who differed consistently when evaluating pupillary response. Therefore, these four observers were considered to have met acceptable for performing the functional observational battery on neurotoxicity studies. However, prior to working independently on studies, observer E will undergo additional training and demonstrate proficiency in the evaluation of pupillary response.

Observer A differed significantly from the common response of the other observers in several categories. Therefore, observer A was not considered to have met acceptable criteria for performing functional observational battery testing on neurotoxicity studies.

It should be noted there were six apparent omissions of observations (Table 2) which upon further review were found to be of no consequence.

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TABLE 1
FOB2 - INTEROBSERVER COMPARISONS

	Animal #52298					Animal #52277					Animal #52222					Animal #52210					Animal #52321					Animal #52315				
Observer:	A	E	D	C	B	A	E	D	C	B	A	E	D	C	B	A	E	D	C	B	A	E	D	C	B	A	E	D	C	B
POSTURE																														
1 - SITTING OR STANDING NORMALLY		X		X	X	X	X		X	X			X								X									
2 - ASLEEP, LYING ON SIDE OR CURLED UP								X																						
3 - ALERT, ORIENTED TOWARD OBSERVER			X								X	X			X	X	X	X	X	X		X	X	X	X	X	X	X	X	X
4 - SITTING, HEAD HELD LOW	X		X																											
5 - FLATTENED, LIMBS MAY BE EXTENDED																														
6 - LYING ON SIDE, LIMBS IN AIR																														
7 - IMMOBILE																														
8 - REARING														X															X	
9 - SPLAYED HINDLEGS																														
10 - PROSTRATION																														
CONVULSIONS - CLONIC																														
1 - ABSENT	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X
2 - TWITCHES (BACK MUSCLES)																														
3 - IRREGULAR JERKING MOVEMENTS OF THE LIMBS																														
4 - CLONIC WHOLE-BODY CONVULSIONS																														
5 - HEAD AND/OR BODY TWITCHES (MYOCLONUS)																				X										
6 - MUSCLE FASICULATIONS																														
(CHEWING)																														
CONVULSIONS - TONIC																														
1 - ABSENT	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
2 - TONIC: CONTRACTION OF EXTENSORS SUCH THAT LIMBS ARE RIGID AND EXTENDED																														
ARCHED BACKWARDS																														
EXTENDED FORWARD																														
5 - 'POPCORN SEIZURE': ANIMAL REPEATEDLY JUMPS OR BOUNCES IN AIR																														
6 - ASPHYXIAL: BOUTS OF SEVERE CLONIC-TONIC CONVULSIONS																														

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TABLE 1
FOB2 - INTEROBSERVER COMPARISONS

Observer:	A	E	D	C	B	A	E	D	C	B	A	E	D	C	B	A	E	D	C	B	A	E	D	C	B	A	E	D	C	B
POSTURE																														
TREMORS																														
1 - ABSENT	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X		X	X	X	X
2 - SLIGHT (1.5mm)																X										X				
3 - MODERATELY COARSE (3 mm)																														
4 - MARKEDLY COARSE (4.5mm)																														
5 - EXTREMELY COARSE (6 mm)																														
BITING																														
1 - NONE	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
2 - BITING OF CAGE																														
3 - BITING OF SELF																														
PALPEBRAL CLOSURE																														
1 - EYELIDS WIDE OPEN		X	X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
2 - EYELIDS SLIGHTLY DROOPING	X			X	X																									
3 - DROOPING EYELIDS (HALF-CLOSED)																														
4 - EYELIDS COMPLETELY SHUT																														
FECES CONSISTENCY																														
1 - PELLETS	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X
2 - PELLETS, PARTIALLY FORMED																														
3 - UNFORMED, DIARRHEA																														
4 - PELLETS ABSENT																														
EASE OF HANDLING IN HAND																														
1 - LOW: NO RESISTANCE, ANIMAL IS EASY TO HANDLE	X	X	X	X	X	X	X		X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
2 - MODERATELY LOW: SLIGHT RESISTANCE TO BEING HANDLED, WITH/WITHOUT VOCALIZATION								X							X															
3 - MODERATELY HIGH: MAY FREEZE, BE TENSE OR RIGID, WITH/WITHOUT VOCALIZATION																														
4 - HIGH: SQUIRMS, TWISTS, ATTEMPTS TO BITE, WITH/WITHOUT VOCALIZATION																														
LACRIMATION																														
1 - NONE	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
2 - SLIGHT																														
3 - SEVERE																														
CHROMODACRYORRHEA																														
1 - ABSENT	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
2 - PRESENT																														

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TABLE 1
FOB2 - INTEROBSERVER COMPARISONS

Observer:	A	E	D	C	B	A	E	D	C	B	A	E	D	C	B	A	E	D	C	B	A	E	D	C	B	A	E	D	C	B
POSTURE																														
SALIVATION																														
1 - NONE	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X
2 - SLIGHT																X														
3 - SEVERE																														
PILOERECTION																														
1 - NONE	X	X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X	X	X	X	X	X	X		X	X		
2 - SLIGHT											X				X											X			X	X
3 - SEVERE																														
FUR APPEARANCE																														
1 - NORMAL: CLEAN AND GROOMED	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
2 - SLIGHTLY SOILED																														
3 - VERY SOILED, CRUSTY																														
PALPEBRAL CLOSURE																														
1 - EYELIDS WIDE OPEN	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
2 - EYELIDS SLIGHTLY DROOPING																														
3 - DROOPING EYELIDS (HALF-CLOSED)																														
4 - EYELIDS COMPLETELY SHUT																														
RESPIRATORY RATE																														
1 - NORMAL: BY OBSERVATION (80-110/MIN.)	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
2 - DECREASED: BELOW 80/MIN.																														
3 - INCREASED: ABOVE 110/MIN.																														
RESPIRATORY CHARACTER																														
1 - NORMAL	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
2 - RALES: ABNORMAL SOUND ACCOMPANYING BREATHING																														
3 - RETCHING																														
4 - DYSPNEIC: SHORT OF BREATH																														
5 - GASPING																														
RED DEPOSITS - eyes																														
1 - PRESENT																														
2 - ABSENT	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
RED DEPOSITS - nose																														
1 - PRESENT																											X			
2 - ABSENT	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X

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TABLE 1
FOB2 - INTEROBSERVER COMPARISONS

Observer:	A	E	D	C	B	A	E	D	C	B	A	E	D	C	B	A	E	D	C	B	A	E	D	C	B	A	E	D	C	B
POSTURE																														
RED DEPOSITS - mouth																														
1 - PRESENT																														
2 - ABSENT	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CRUSTY DEPOSITS - eyes																														
1 - PRESENT																														
2 - ABSENT	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CRUSTY DEPOSITS - nose																														
1 - PRESENT																														
2 - ABSENT	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CRUSTY DEPOSITS - mouth																														
1 - PRESENT																														
2 - ABSENT	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
MUCOUS MEMBRANES - color																														
1 - PINK	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
2 - PALE																														
3 - DARKENED																														
4 - DARKENED, BROWN																														
5 - BRIGHT, DEEP RED FLUSH																														
EYES - color																														
1 - PINK	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
2 - PALE																														
3 - DARKENED																														
4 - DARKENED, BROWN																														
5 - BRIGHT, DEEP RED FLUSH																														
SKIN - color																														
1 - PINK	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
2 - PALE																														
3 - DARKENED																														
4 - DARKENED, BROWN																														
5 - BRIGHT, DEEP RED FLUSH																														
EYE PROMINENCE																														
1 - NORMAL	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X	X	X	X	X	X	X
2 - EXOPHTHALMUS																X			X											
3 - ENOPHTHALMUS																														

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TABLE 1
FOB2 - INTEROBSERVER COMPARISONS

Observer:	A	E	D	C	B	A	E	D	C	B	A	E	D	C	B	A	E	D	C	B	A	E	D	C	B	A	E	D	C	B
POSTURE																														
MUSCLE TONE																														
1 - MUSCLE IS FIRM BUT NOT HARD (NORMAL)	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
2 - MUSCLE IS SOFT AND FLABBY																														
3 - MUSCLE IS TENSE AND HARD																														
MOBILITY																														
1 - NORMAL						X	X	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X
2 - SLIGHTLY IMPAIRED	X	X	X	X	X																									
3 - MODERATELY IMPAIRED																														
4 - TOTALLY IMPAIRED, LOCOMOTION IMPOSSIBLE																														
GAIT																														
1 - NORMAL						X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X		
2 - WALKS ON TIPTOES																									X					X
3 - BODY DRAGS, ABDOMEN CONTACTS SURFACE, BODY SWAYS																														
4 - HINDLIMBS SPLAYED OR DRAGGING, UNABLE TO SUPPORT WEIGHT	X	X			X																									
5 - HUNCHED BODY	X	X								X															X	X			X	X
6 - ATAXIA, EXCESSIVE SWAY, ROCKS OR LURCHES AS PROCEEDS FORWARD	X	X	X	X																										
7 - WALKS ON METATARSUS																														
CONVULSIONS - CLONIC																														
1 - ABSENT	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X
2- TWITCHES (BACK MUSCLES)					X																									
3 - REPETITIVE MOVEMENT OF MOUTH AND JAWS																														
4 - CLONIC TREMORS OF THE LIMBS																														
5 - WHOLE BODY TREMORS																														
6 - CLONIC CONVULSIONS																														
7 - WET DOG SHAKES																														
CONVULSIONS - TONIC																														
1 - ABSENT	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
2 - TONIC: CONTRACTION OF EXTENSORS SUCH THAT LIMBS ARE RIGID AND EXTENDED																														
3 - OPISTHOTONUS: HEAD, BODY AND LIMBS RIGIDLY ARCHED BACKWARDS																														
4 - EMPROSTHOTONUS: HEAD, BODY AND LIMBS EXTENDED FORWARD																														

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TABLE 1
FOB2 - INTEROBSERVER COMPARISONS

Observer:	A	E	D	C	B	A	E	D	C	B	A	E	D	C	B	A	E	D	C	B	A	E	D	C	B	A	E	D	C	B
POSTURE																														
5 - 'POPCORN SEIZURE': ANIMAL REPEATEDLY JUMPS OR BOUNCES IN AIR																														
6 - ASPHYXIAL: BOUTS OF SEVERE CLONIC-TONIC CONVULSIONS																														
TREMORS																														
1 - NONE	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X
2 - SLIGHT (1.5mm)																										X				
3 - MODERATELY COARSE (3 mm), SLIGHT IMPAIRMENT OF LOCOMOTION																														
4 - MARKEDLY COARSE (4.5mm), MODERATE/MARKED IMPAIRMENT OF LOCOMOTION																														
5 - EXTREMELY COARSE (6 mm), LOCOMOTION IMPOSSIBLE																														
GAIT SCORE																														
1 - NORMAL						X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
2 - SLIGHT IMPAIRMENT, BUT DEFINITE	X	X	X	X																										
3 - CONSIDERABLE IMPAIRMENT, WITHOUT FALLING					X																									
4 - MARKED IMPAIRMENT, FALLS EVERY 4 TO 6 STEPS																														
5 - SEVERE IMPAIRMENT, CANNOT WALK WITHOUT FALLING																														
AROUSAL																														
1 - VERY LOW: STUPOR, COMA, LITTLE OR NO RESPONSIVENESS																														
2 - LOW: SOMEWHAT STUPOROUS																									X					
3 - NORMAL: ALERT, EXPLORATORY MOVEMENTS	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X
4 - SOMEWHAT HIGH: SLIGHT EXCITEMENT, TENSE, SUDDEN DARTING OR FREEZING																														
5 - VERY HIGH: HYPERALERT, EXCITED, SUDDEN BOUTS OF RUNNING OR BODY MOVEMENTS																														

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TABLE 1
FOB2 - INTEROBSERVER COMPARISONS

Observer:	A	E	D	C	B	A	E	D	C	B	A	E	D	C	B	A	E	D	C	B	A	E	D	C	B	A	E	D	C	B
POSTURE																														
BIZARRE/STEREOTYPIC BEHAVIOR																														
1 - NONE						X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X
2 - HEAD FLICK: HEAD SHAKING OR BACKWARD FLIP OF HEAD	X	X	X	X	X																			X						
3 - HEAD SEARCH: STEREOTYPED, REPETITIVE TURNING OF HEAD FROM SIDE TO SIDE		X		X	X																									
4 - HALLUCINATORY: APPEARS TO BE RESPONDING TO OBJECTS NOT PRESENT																														
5 - COMPULSIVE LICKING OR BITING																														
6 - PRANCING: RESTLESS SHIFTING FROM ONE FORELIMB TO THE OTHER																														
7 - UPRIGHT WALKING: ON HINDLIMBS ONLY																														
8 - AIMLESS WANDERING: PROGRESSIVE, SLOW, PLODDING MOVEMENTS, NO APPARENT PURPOSE																														
BIZARRE/STEREOTYPIC BEHAVIOR (Continued)																														
9 - CIRCLING: TENDENCY TO MOVE IN CIRCLES AROUND OBJECTS, OR IN AN OPEN ENVIRONMENT	X		X		X																									
10 - WALTZING: RAPID TURNING IN CIRCLES																														
11 - RETROPULSION: ANIMAL WALKS BACKWARDS				X																										
12 - SPATIAL DISORIENTATION: WALKING OR STUMBLING INTO OBJECTS	X																													
13 - SIDE TO SIDE ROCKING																														
14 - STRAUB TAIL: INCREASED TAIL ELEVATION																														
15 - VERTICAL JUMPING																														
16 - PACING WITHOUT PURPOSE																														
17 - HEAD BOBBING			X		X																									
18 - WRITHING: LYING DOWN, WAVELIKE MOVEMENTS OF ABDOMEN, ALTERNATING LIMB MOVEMENTS																														
PUPIL RESPONSE																														
1 - NO PUPIL RESPONSE	X	X	X	X	X												X										X			
2 - PUPIL RESPONSE PRESENT						X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X		X	X	X
AIR RIGHTING REFLEX																														
1 - NORMAL						X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
2 - SLIGHTLY UNCOORDINATED																														
3 - LANDS ON SIDE	X			X																										
4 - LANDS ON BACK		X	X		X																									

TABLE 1
FOB2 - INTER-OBSERVER COMPARISONS

	Animal #52247					Animal #52225					Animal #52216					Animal #51868					Animal #52254					Animal #52338				
Observer:	A	E	D	C	B	A	E	D	C	B	A	E	D	C	B	A	E	D	C	B	A	E	D	C	B	A	E	D	C	B
POSTURE																														
1 - SITTING OR STANDING NORMALLY	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						X	X	X	X	X
2 - ASLEEP, LYING ON SIDE OR CURLED UP																					X	X	X	X	X					
3 - ALERT, ORIENTED TOWARD OBSERVER			X																											
4 - SITTING, HEAD HELD LOW																														
5 - FLATTENED, LIMBS MAY BE EXTENDED																														
6 - LYING ON SIDE, LIMBS IN AIR																														
7 - IMMOBILE																														
8 - REARING																														
9 - SPLAYED HINDLEGS																														
10 - PROSTRATION																														
CONVULSIONS - CLONIC																														
1 - ABSENT	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X	X	X	X	X	X	X
2 - TWITCHES (BACK MUSCLES)																														
3 - IRREGULAR JERKING MOVEMENTS OF THE LIMBS																														
4 - CLONIC WHOLE-BODY CONVULSIONS																														
5 - HEAD AND/OR BODY TWITCHES (MYOCLONUS)																X				X										
6 - MUSCLE FASICULATIONS																														
7 - REPETITIVE MOVEMENT OF MOUTH AND JAWS (CHEWING)																														
CONVULSIONS - TONIC																														
1 - ABSENT	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
2 - TONIC: CONTRACTION OF EXTENSORS SUCH THAT LIMBS ARE RIGID AND EXTENDED																														
3 - OPISTHOTONUS: HEAD, BODY AND LIMBS RIGIDLY ARCHED BACKWARDS																														
4 - EMPROSTHOTONUS: HEAD, BODY AND LIMBS EXTENDED FORWARD																														
5 - 'POPCORN SEIZURE': ANIMAL REPEATEDLY JUMPS OR BOUNCES IN AIR																														
6 - ASPHYXIAL: BOUTS OF SEVERE CLONIC-TONIC CONVULSIONS																														
TREMORS																														
1 - ABSENT	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X
2 - SLIGHT (1.5mm)											X																		X	
3 - MODERATELY COARSE (3 mm)																														

TABLE 1
FOB2 - INTER-OBSERVER COMPARISONS

	Animal #52247					Animal #52225					Animal #52216					Animal #51868					Animal #52254					Animal #52338				
Observer:	A	E	D	C	B	A	E	D	C	B	A	E	D	C	B	A	E	D	C	B	A	E	D	C	B	A	E	D	C	B
4 - MARKEDLY COARSE (4.5mm)																														
5 - EXTREMELY COARSE (6 mm)																														
BITING																														
1 - NONE	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
2 - BITING OF CAGE																														
3 - BITING OF SELF																														
PALPEBRAL CLOSURE																														
1 - EYELIDS WIDE OPEN	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X					X			X	X	X	X	X
2 - EYELIDS SLIGHTLY DROOPING																	X		X	X										
3 - DROOPING EYELIDS (HALF-CLOSED)																														
4 - EYELIDS COMPLETELY SHUT																					X	X		X	X					
FECES CONSISTENCY																														
1 - PELLETS		X		X	X	X	X	X	X	X	X	X	X	X		X	X	X	X		X	X		X			X	X	X	
2 - PELLETS, PARTIALLY FORMED	X		X																	X					X	X				
3 - UNFORMED, DIARRHEA			X												X										X			X		X
4 - PELLETS ABSENT																														
EASE OF HANDLING IN HAND																														
1 - LOW: NO RESISTANCE, ANIMAL IS EASY TO HANDLE	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
2 - MODERATELY LOW: SLIGHT RESISTANCE TO BEING HANDLED, WITH/WITHOUT VOCALIZATION															X															
3 - MODERATELY HIGH: MAY FREEZE, BE TENSE OR RIGID, WITH/WITHOUT VOCALIZATION																														
4 - HIGH: SQUIRMS, TWISTS, ATTEMPTS TO BITE, WITH/WITHOUT VOCALIZATION																														
LACRIMATION																														
1 - NONE	X	X	X	X	X	X	X	X	X	X		X					X	X	X	X		X		X	X	X	X	X	X	
2 - SLIGHT											X		X	X	X	X					X		X							X
3 - SEVERE																														
CHROMODACRYORRHEA																														
1 - ABSENT	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
2 - PRESENT																														
SALIVATION																														
1 - NONE	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
2 - SLIGHT																														
3 - SEVERE																														

TABLE 1
FOB2 - INTER-OBSERVER COMPARISONS

	Animal #52247					Animal #52225					Animal #52216					Animal #51868					Animal #52254					Animal #52338				
Observer:	A	E	D	C	B	A	E	D	C	B	A	E	D	C	B	A	E	D	C	B	A	E	D	C	B	A	E	D	C	B
PILOERECTION																														
1 - NONE	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
2 - SLIGHT					X																									
3 - SEVERE																														
FUR APPEARANCE																														
1 - NORMAL: CLEAN AND GROOMED						X	X	X	X	X	X	X	X	X			X	X	X	X		X	X	X		X	X	X	X	X
2 - SLIGHTLY SOILED	X	X	X	X	X										X	X					X				X					
3 - VERY SOILED, CRUSTY																														
PALPEBRAL CLOSURE																														
1 - EYELIDS WIDE OPEN	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				X			X	X	X	X	X
2 - EYELIDS SLIGHTLY DROOPING																				X	X	X		X						
3 - DROOPING EYELIDS (HALF-CLOSED)																									X					
4 - EYELIDS COMPLETELY SHUT																														
RESPIRATORY RATE																														
1 - NORMAL: BY OBSERVATION (80-110/MIN.)	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
2 - DECREASED: BELOW 80/MIN.																														
3 - INCREASED: ABOVE 110/MIN.																														
RESPIRATORY CHARACTER																														
1 - NORMAL	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
2 - RALES: ABNORMAL SOUND ACCOMPANYING BREATHING																														
3 - RETCHING																														
4 - DYSPNEIC: SHORT OF BREATH																														
5 - GASPING																														
RED DEPOSITS - eyes																														
1 - PRESENT											X						X					X								
2 - ABSENT	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X		X	X	X	X		X	X	X	X	X	X	X	X
RED DEPOSITS - nose																														
1 - PRESENT		X														X	X					X								
2 - ABSENT	X		X	X	X	X	X	X	X	X	X	X	X	X	X			X	X	X	X		X	X	X	X	X	X	X	X
RED DEPOSITS - mouth																														
1 - PRESENT																	X													
2 - ABSENT	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X
CRUSTY DEPOSITS - eyes																														
1 - PRESENT																														
2 - ABSENT	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

TABLE 1
FOB2 - INTER-OBSERVER COMPARISONS

	Animal #52247					Animal #52225					Animal #52216					Animal #51868					Animal #52254					Animal #52338				
Observer:	A	E	D	C	B	A	E	D	C	B	A	E	D	C	B	A	E	D	C	B	A	E	D	C	B	A	E	D	C	B
CRUSTY DEPOSITS - nose																														
1 - PRESENT																														
2 - ABSENT	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CRUSTY DEPOSITS - mouth																														
1 - PRESENT																														
2 - ABSENT	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
MUCOUS MEMBRANES - color																														
1 - PINK	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
2 - PALE																														
3 - DARKENED																														
4 - DARKENED, BROWN																														
5 - BRIGHT, DEEP RED FLUSH																														
EYES - color																														
1 - PINK	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
2 - PALE																														
3 - DARKENED																														
4 - DARKENED, BROWN																														
5 - BRIGHT, DEEP RED FLUSH																														
SKIN - color																														
1 - PINK	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X
2 - PALE																X														
3 - DARKENED																														
4 - DARKENED, BROWN																														
5 - BRIGHT, DEEP RED FLUSH																														
EYE PROMINENCE																														
1 - NORMAL	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
2 - EXOPHTHALMUS																														
3 - ENOPHTHALMUS																														
MUSCLE TONE																														
1 - MUSCLE IS FIRM BUT NOT HARD (NORMAL)	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X			X		X	X		X	X	X	X	X	X	X
2 - MUSCLE IS SOFT AND FLABBY																	X	X		X			X							
3 - MUSCLE IS TENSE AND HARD					X																									

TABLE 1
FOB2 - INTER-OBSERVER COMPARISONS

	Animal #52247					Animal #52225					Animal #52216					Animal #51868					Animal #52254					Animal #52338				
Observer:	A	E	D	C	B	A	E	D	C	B	A	E	D	C	B	A	E	D	C	B	A	E	D	C	B	A	E	D	C	B
MOBILITY																														
1 - NORMAL	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X											X	X	X	X	X
2 - SLIGHTLY IMPAIRED																		X	X	X										
3 - MODERATELY IMPAIRED																X	X				X	X	X	X	X					
4 - TOTALLY IMPAIRED, LOCOMOTION IMPOSSIBLE																														
GAIT																														
1 - NORMAL		X	X	X		X	X	X	X	X	X	X	X	X												X	X	X		
2 - WALKS ON TIPTOES																														
3 - BODY DRAGS, ABDOMEN CONTACTS SURFACE, BODY SWAYS	X																								X					
4 - HINDLIMBS SPLAYED OR DRAGGING, UNABLE TO SUPPORT WEIGHT																X	X		X	X		X		X	X					
5 - HUNCHED BODY	X				X										X	X	X		X		X	X	X	X	X				X	X
6 - ATAXIA, EXCESSIVE SWAY, ROCKS OR LURCHES AS PROCEEDS FORWARD																	X	X	X		X	X	X	X						
7 - WALKS ON METATARSUS																														
CONVULSIONS - CLONIC																														
1 - ABSENT	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X		X	X	X		X	X	X	X	X
2- TWITCHES (BACK MUSCLES)																									X					
3 - REPETITIVE MOVEMENT OF MOUTH AND JAWS																														
4 - CLONIC TREMORS OF THE LIMBS																														
5 - WHOLE BODY TREMORS																X														
6 - CLONIC CONVULSIONS																					X									
7 - WET DOG SHAKES																														
CONVULSIONS - TONIC																														
1 - ABSENT	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
2 - TONIC: CONTRACTION OF EXTENSORS SUCH THAT LIMBS ARE RIGID AND EXTENDED																														
3 - OPISTHOTONUS: HEAD, BODY AND LIMBS RIGIDLY ARCHED BACKWARDS																														
4 - EMPROSTHOTONUS: HEAD, BODY AND LIMBS EXTENDED FORWARD																														
5 - 'POPCORN SEIZURE': ANIMAL REPEATEDLY JUMPS OR BOUNCES IN AIR																														
6 - ASPHYXIAL: BOUTS OF SEVERE CLONIC-TONIC CONVULSIONS																														

TABLE 1
FOB2 - INTER-OBSERVER COMPARISONS

	Animal #52247					Animal #52225					Animal #52216					Animal #51868					Animal #52254					Animal #52338				
Observer:	A	E	D	C	B	A	E	D	C	B	A	E	D	C	B	A	E	D	C	B	A	E	D	C	B	A	E	D	C	B
TREMORS																														
1 - NONE	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X		X
2 - SLIGHT (1.5mm)											X			X															X	
3 - MODERATELY COARSE (3 mm), SLIGHT IMPAIRMENT OF LOCOMOTION																														
4 - MARKEDLY COARSE (4.5mm), MODERATE/MARKED IMPAIRMENT OF LOCOMOTION																														
5 - EXTREMELY COARSE (6 mm), LOCOMOTION IMPOSSIBLE																														
GAIT SCORE																														
1 - NORMAL	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X											X	X	X	X	X
2 - SLIGHT IMPAIRMENT, BUT DEFINITE																X		X		X			X		X					
3 - CONSIDERABLE IMPAIRMENT, WITHOUT FALLING																	X		X		X	X		X						
4 - MARKED IMPAIRMENT, FALLS EVERY 4 TO 6 STEPS																														
5 - SEVERE IMPAIRMENT, CANNOT WALK WITHOUT FALLING																														
AROUSAL																														
1 - VERY LOW: STUPOR, COMA, LITTLE OR NO RESPONSIVENESS																														
2 - LOW: SOMEWHAT STUPOROUS																					X		X	X			X		X	
3 - NORMAL: ALERT, EXPLORATORY MOVEMENTS	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X			X	X		X		X
4 - SOMEWHAT HIGH: SLIGHT EXCITEMENT, TENSE, SUDDEN DARTING OR FREEZING																														
5 - VERY HIGH: HYPERALERT, EXCITED, SUDDEN BOUTS OF RUNNING OR BODY MOVEMENTS																														
BIZARRE/STEREOTYPIC BEHAVIOR																														
1 - NONE	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X											X		X	X	X
2 - HEAD FLICK: HEAD SHAKING OR BACKWARD FLIP OF HEAD																	X		X	X	X	X	X	X	X					
3 - HEAD SEARCH: STEREOTYPED, REPETITIVE TURNING OF HEAD FROM SIDE TO SIDE																	X	X	X	X		X	X	X	X					
4 - HALLUCINATORY: APPEARS TO BE RESPONDING TO OBJECTS NOT PRESENT																					X									
5 - COMPULSIVE LICKING OR BITING																														
6 - PRANCING: RESTLESS SHIFTING FROM ONE FORELIMB TO THE OTHER																														
7 - UPRIGHT WALKING: ON HINDLIMBS ONLY																														
8 - AIMLESS WANDERING: PROGRESSIVE, SLOW, PLODDING MOVEMENTS, NO APPARENT PURPOSE																														

TABLE 1
FOB2 - INTER-OBSERVER COMPARISONS

	Animal #52247					Animal #52225					Animal #52216					Animal #51868					Animal #52254					Animal #52338				
Observer:	A	E	D	C	B	A	E	D	C	B	A	E	D	C	B	A	E	D	C	B	A	E	D	C	B	A	E	D	C	B
BIZARRE/STEREOTYPIC BEHAVIOR (Continued)																														
9 - CIRCLING: TENDENCY TO MOVE IN CIRCLES AROUND OBJECTS, OR IN AN OPEN ENVIRONMENT																X	X			X	X		X							
10 - WALTZING: RAPID TURNING IN CIRCLES																														
11 - RETROPULSION: ANIMAL WALKS BACKWARDS																X	X	X	X	X	X	X		X	X					
12 - SPATIAL DISORIENTATION: WALKING OR STUMBLING INTO OBJECTS																														
13 - SIDE TO SIDE ROCKING																														
14 - STRAUB TAIL: INCREASED TAIL ELEVATION																														
15 - VERTICAL JUMPING																														
16 - PACING WITHOUT PURPOSE																														
17 - HEAD BOBBING																		X		X			X		X					
18 - WRITHING: LYING DOWN, WAVELIKE MOVEMENTS OF ABDOMEN, ALTERNATING LIMB MOVEMENTS																														
PUPIL RESPONSE																														
1 - NO PUPIL RESPONSE		X					X					X		X			X	X	X	X	X	X	X	X	X		X			
2 - PUPIL RESPONSE PRESENT	X		X	X	X	X		X	X	X	X		X		X	X										X		X	X	X
AIR RIGHTING REFLEX																														
1 - NORMAL	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X											X	X	X	X	
2 - SLIGHTLY UNCOORDINATED																														X
3 - LANDS ON SIDE																	X	X	X				X							
4 - LANDS ON BACK																X				X	X	X		X	X					

TABLE 2
FOB OBSERVATIONS – FINDINGS OMITTED

OBSERVER	OBSERVATION	NUMBER OMITTED
E	MOBILITY	1
D	MOBILITY	1
E	CONVULSIONS- CLONIC	1
D	FECES CONSISTENCY	1
A	FECES CONSISTENCY	1
E	BIZARRE/STEREOTYPIC BEHAVIOR	1

APPENDIX G

Scoring Criteria for the Functional Observational Battery

ED_005427A_00022422-00456

Scoring Criteria for the Functional Observational Battery

Definition:

The Functional Observational Battery (FOB) is a procedure used to detect gross functional deficits in test animals.

Description:

The FOB consists of a series of tests. The tests are categorized into home cage, handling, open field, sensory, neuromuscular and physiological observations and are as follows:

1. Home Cage Observations

    a. Posture
    b. Convulsions
    c. Tremors
    d. Biting
    e. Palpebral (eyelid) closure
    f. Feces Consistency

2. Handling Observations

    a. Ease of removal from cage
    b. Ease of handling animal in hand
    c. Lacrimation
    d. Chromodacryorrhea
    e. Salivation
    f. Piloerection
    g. Fur appearance
    h. Palpebral closure
    i. Respiratory rate
    j. Respiratory character
    k. Red deposits
    l. Crusty deposits
    m. Mucous membranes/eye/skin color
    n. Eye prominence
    o. Muscle tone

3. Open Field Observations

   a. Time to first step (seconds)
   b. Rearing
   c. Mobility
   d. Backing
   e. Grooming
   f. Gait
   g. Convulsions
   h. Tremors
   i. Gait Score
   j. Arousal
   k. Bizarre/Stereotypic behavior
   l. Urination
   m. Defecation

4. Sensory Observations

   a. Approach response
   b. Touch response
   c. Startle response
   d. Tail pinch
   e. Olfactory orientation
   f. Pupil response
   g. Eyeblink response
   h. Forelimb extension
   i. Hindlimb extension
   j. Air righting reflex

5. Neuromuscular Observations

   a. Hindlimb extensor strength
   b. Grip strength-hind and forelimb
   c. Rotarod performance
   d. Hindlimb foot splay

6. Physiological Observations

   a. Catalepsy
   b. Body Temperature
   c. Body Weight

Procedure

The FOB was performed on those study days specified in the study protocol. Test animals were removed from their "home cage" and placed into a separate bank in replicate order if the animals are not normally housed in replicate order with blinded cage cards. Test animals were allowed a minimum of 15 minutes in this new caging prior to the start of the FOB. Test animals were removed from this caging one at a time on the designated day of testing, and unless specified by study protocol were taken through the FOB in the following order: FOB1 (inclusive of categories 1a-1f and 2a), FOB2 (inclusive of categories 2b-2o, 3a-3m and 4a-4J) and FOB3 (inclusive of categories 5a-5d and 6a-6c).

Testing was performed by technicians, who did not know the group assignment of the animals. A description of the scoring criteria for each test is provided below:

1. HOME CAGE OBSERVATIONS

Observations of the animal in its home cage and while opening the home cage were performed and scored as follows:

a. Posture

Sitting or standing normally	1
Asleep, lying on side or curled up	2
Alert, oriented toward observer	3
Sitting, head held low	4
Flattened, limbs may be extended	5
Lying on side, limbs in air	6
Immobile	7
Rearing	8

b. Convulsions

I. Clonic

Absent	1
Repetitive movement of mouth and jaws	2
Clonic tremors of the limbs (contraction followed by relaxation)	3
Whole body tremors	4
Clonic convulsions	5
Wet Dog Shakes	6
'Popcorn seizure': animal repeatedly jumps or bounces in air	7

II. Tonic

Absent	1
Tonic: contraction of extensors such that limbs are rigid and extended	2
Opisthotonus: head, body and limbs rigidly arched backwards	3
Emprosthotonus: head, body and limbs extended forward	4
Asphyxial: bouts of severe clonic-tonic convulsions	5

c. Tremors

None	1
Slight (1.5 mm)	2
Moderately coarse (3 mm), slight impairment of locomotion	3
Markedly coarse (4.5 mm), moderate/marked impairment of locomotion	4
Extremely coarse (6 mm), locomotion impossible	5

d. Biting

None	1
Biting of cage	2
Biting of self	3

e. Palpebral (eyelid) closure

Eyelids wide open	1
Eyelids slightly drooping	2
Drooping eyelids (half closed)	3
Eyelids completely shut	4

f. Feces Consistency

Pellets	1
Pellets, partially formed	2
Unformed, diarrhea	3
Pellets absent	4

2. HANDLING OBSERVATIONS

Animals were removed singly from their cages and observed and scored as follows:

a. Ease of removal from cage

Very easy: animal sits quietly, allows investigator to pick it up	1
Easy: with or without vocalization, without resistance or slight resistance to being picked up	2
Moderately difficult: animal rears, often following investigator's hand	3
Freezes: with or without vocalization	4
Difficult: runs around cage, is hard to grab, with or without vocalization	5
Very difficult: tail and throat rattles with or without vocalization, may attack hand	6

b. Ease of handling animal in hand

No resistance, animal is easy to handle	1
Slight resistance to being handled, with or without vocalization	2
May freeze, or be tense or rigid in hand, with or without vocalization	3
Twists, attempts to bite with or without vocalization	4

c. Lacrimation

None	1
Slight	2
Severe	3

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d. Chromodacryorrhea

Absent	1
Present	2

e. Salivation

None	1
Slight	2
Severe	3

f. Piloerection

None	1
Slight	2
Severe	3

g. Fur Appearance

Normal: clean and groomed	1
Slightly soiled	2
Very soiled, crusty	3

h. Palpebral closure

Eyelids wide open	1
Eyelids slightly drooping	2
Drooping eyelids (half closed)	3
Eyelids completely shut	4

i. Respiratory Rate (counts per minute listed as a general reference; finding is based on qualitative assessment only)

Normal: by observation (80-110/min.)	1
Decreased: below 80/min.	2
Increased: above 110/min.	3

j. Respiratory Character

Normal	1
Rales: abnormal sound accompanying breathing	2
Retching	3
Dyspneic: short of breath	4
Gasping	5

k. Red Deposits - eyes, nose, mouth

Present	1
Absent	2

l. Crusty Deposits - eyes, nose, mouth

Present	1
Absent	2

m. Mucous membranes/eye/skin color

Pink	1
Pale	2
Darkened	3
Darkened, brown	4
Bright, deep red flush	5

n. Eye Prominence

Normal	1
Exophthalmus	2
Enophthalmus	3

o. Muscle Tone

The musculature of the limbs was palpated between the thumb and forefinger.

Muscle is firm but not hard (normal)	1
Muscle is soft and flabby	2
Muscle is tense and hard	3

3. OPEN FIELD OBSERVATIONS

Animals were placed singly in the open field arena (24" x 24" x 6"; constructed from Plexiglas® and black in color) and evaluated over a 2-minute observation period as follows:

a. Time to first step (seconds)

The time taken for the animal to take its first step in the open field arena was recorded to the hundredth (0.01) of a second. If the animal does not take an actual step in a direction, an entry of 120 seconds was recorded.

b. Rearing

The number of times the animal reared back onto its hind legs and stood up with both front paws raised off the surface was recorded over a 2-minute observation period in the open field arena.

c. Mobility (scored within 30 seconds of placing animal in the open field arena)

Normal	1
Slightly Impaired	2
Moderately Impaired	3
Totally Impaired, Locomotion impossible	4

d. Backing

The number of times the animal took three or more backward steps over a 2-minute observation period in the open field arena was recorded.

e. Grooming

The number of times the animal groomed itself over a 2-minute observation period in the open field arena was recorded. Grooming included washing the face and head with the forepaws, scratching the head or body with a hind paw, and biting the fur.

f. Gait

Normal, head horizontal, abdomen just above surface, slight up and down movement with each step	1
Walks on tiptoes	2
Body drags, abdomen makes contact with surface, body sway	3
Hindlimbs splayed or dragging, unable to support weight	4
Hunched body, bottom up, nose held down, arched back	5
Ataxia, excessive sway, rocks or lurches as animal proceeds forward	6
Walks on Metatarsus	7

g. Convulsions

I. Clonic

Absent	1
Repetitive movement of mouth and jaws	2
Clonic tremors of the limbs (contraction followed by relaxation)	3
Whole body tremors	4
Clonic convulsions	5
Wet Dog Shakes	6
'Popcorn seizure': animal repeatedly jumps or bounces in air	7

II. Tonic

Absent	1
Tonic: contraction of extensors such that limbs are rigid and extended	2
Opisthotonus: head, body and limbs rigidly arched backwards	3
Emprosthotonus: head, body and limbs arched forward	4
Asphyxial: bouts of severe clonic-tonic convulsions	5

h. Tremors

None	1
Slight (1.5 mm)	2
Moderately coarse (3 mm), slight impairment of locomotion	3
Markedly coarse (4.5 mm), moderate/marked impairment of locomotion	4
Extremely coarse (6 mm), locomotion impossible	5

i. Gait Score: Ability to locomote despite abnormalities in gait

Normal	1
Slight impairment, but definite	2
Considerable impairment, without falling	3
Marked impairment, falls every 4 to 6 steps	4
Severe impairment, cannot walk without falling	5

j. Arousal

Very low: Stupor, coma, little or no responsiveness	1
Low: Somewhat stuporous	2
Normal: Alert, exploratory movements	3
Somewhat high: Slight excitement, tense, excited sudden darting or freezing	4
Very high: Hyperalert, excited, sudden bouts of running or body movements	5

k. Bizarre/Stereotypic Behavior

None	1
Head Flick: head shaking or backward flip of head	2
Head Search: stereotyped, repetitive turning of head from side to side as though searching the environment	3
Hallucinatory: animal appears to be responding to objects not present	4
Compulsive licking or biting	5
Prancing: restless shifting from one forelimb to other, with slight turning of the body from side to side	6
Upright walking: on hindlimbs only	7
Aimless wandering: progressive, slow, plodding movements about environment, with no apparent purpose	8
Circling: tendency to move in circles around and along objects, or in an open environment	9
Waltzing: rapid turning in circles	10
Retropulsion: where animal walks backwards	11
Spatial disorientation: walking or stumbling into objects	12
Side to side rocking	13
Straub tail: increased tail elevation	14
Vertical Jumping	15
Pacing without purpose	16
Head bobbing	17
Writhing: lying down, wavelike movement of abdomen, alternating limb movements	18

l. Urination

The number of pools of urine in the open field arena was counted.

m. Defecation

The number of fecal boluses in the open field arena was counted.

4. SENSORY OBSERVATIONS

Sensory tests were performed in the open field arena as follows:

a. Approach Response

The animal was approached head-on with a blunt object held approximately 3 cm from its face for a 4-second period.

No reaction	1
Slow approach, sniffing or turning away	2
More energetic than (2) may include vocalization	3
Freezes, actual muscle contraction	4
Bizarre reaction: jumps, bites or attacks	5

b. Touch Response

The rump of the animal was approached from the side and touched with a blunt object.

No reaction	1
Animal may slowly turn, walk away	2
More energetic response than (2), may include vocalization	3
Freezes, actual muscle contraction	4
Bizarre reaction: jumps, bites or attacks	5

c. Startle Response

A clicker held approximately 5 cm above the head of the animal was used to make a sudden sound.

No reaction	1
Slight reaction, ear flick or some evidence that snap was heard	2
More energetic response than (2), may include vocalization	3
Freezes, actual muscle contraction	4
Bizarre reactions: jumps, attacks, bites	5

d. Tail Pinch

Metal tweezers were used to squeeze tail approximately 2-3 cm from tip.

No reaction	1
Animal may turn or walk away	2
More energetic than (2), may include vocalization	3
Freezes, actual muscle contraction	4
Bizarre reaction: jumps, attacks or bites	5

e. Olfactory Orientation

Approaching the animal from behind, a cotton swab that had been dipped into a jar of commercially available homogenized baby food was brought to within approximately 4-5 cm of the side of the animal's head.

No reaction present	1
Reaction present, animal approaches swab making sniffing movements with nose, may lick swab	2

f. Pupil Response

The beam from a pen light was brought to within approximately 5 mm of the surface of the eye. Changes in pupil size were recorded.

No pupil response	1
Pupil response present	2

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g. Eyeblink Response

The corner of the eye was touched gently with a blunt object.

No eyeblink response	1
Eyeblink response present	2

h. Forelimb Extension

The animal was held by the tail and lowered towards a table top. The presence or absence of normal forelimb extension was recorded.

No forelimb extension	1
Forelimb extension present	2

i. Hindlimb Extension

The animal was placed on a table top and lifted by the tail. The presence of normal hindlimb extension was recorded.

No hindlimb extension	1
Hindlimb extension present	2

j. Air Righting Reflex

The animal was held in a supine position and dropped from a height of approximately 30 cm. The ease of landing was scored as follows:

Normal	1
Slightly uncoordinated	2
Lands on side	3
Lands on back	4

5. NEUROMUSCULAR OBSERVATIONS

a. Hindlimb Extensor Strength

The animal was picked up and slight pressure was applied to its hindlimbs. The normal response is for the animal to extend its hindlimbs against the pressure.

Hindlimb resistance absent	1
Reduced hindlimb resistance, animal shows some weakness	2
Hindlimb resistance present	3

b. Grip Strength - hind and forelimb

Forelimb and hindlimb grip strength were measured using a device similar to the one described by Meyer *et al* (Neurobehav. Toxicol. 1:233-239, 1979). The animal was allowed to grip a T-shaped grip bar with its forepaws and was pulled back gently along a platform until its grip was broken. As the backward locomotion continued, the animal's hindpaws reached a T-shaped rearlimb grip bar, which it was allowed to grasp and then forced to release by continued pulling. Mark-10 series EG digital force gauge (Mark-10 Corporation, Copiague, NY) was used to record the maximum strain required to break forelimb and hindlimb grip. The average of three valid measurements was taken as the animal's score for each grip strength measure. Grip strength measurements were recorded as grams (g).

c. Rotarod Performance

During the pretest period, the animals were trained to walk on a rotarod (a 7.0-cm-diameter rod rotating at 12 rpm; AccuScan Instruments, Inc., Columbus, Ohio) for a period of two minutes. The duration of time each animal remained on the rotarod (up to a maximum time of 120 seconds) during testing was recorded.

d. Hindlimb Foot Splay

The heel pads of the hindfeet of the animal were painted with a non-toxic water-based paint. Animals were dropped from a horizontal position approximately 30 cm above a table onto the Hindlimb Foot Splay Test sheet for a total of 3 trials. The distance (to the nearest millimeter) between the inner edge of the ink blots made by each foot was measured for the latter 2 trials and the average score (to the nearest millimeter) was calculated.

6. PHYSIOLOGICAL OBSERVATIONS

a. Catalepsy

The animal was placed on four Plexiglas® platforms (35 mm high and 40 mm in diameter) that were a distance of 100 mm from each other between the fore and hind feet and 60 mm between right and left feet (when measured from the center of the platforms). The time each animal remained on the four platforms was recorded. The duration of immobility was measured (up to a maximum time of 60 seconds). Times are recorded to the hundredth (0.01) of a second.

b. Body Temperature

A thermometer was inserted into the rectum of the animal, and the body temperature was recorded after an equilibration period of approximately 30 seconds. Temperatures were recorded to the tenth (0.1) of a degree.

c. Body Weight

The weight of the animal was recorded.

The Functional Observational Battery is normally recorded on-line via the WTDMS™ "IFOB" program in NT-module. In the event that the Data Management System is unavailable for on-line data collection, data are hand-recorded on the Functional Observational Battery Individual Data Sheets (T1-228, as revised). When appropriate, the hand-recorded data are late entered into the Data Management System.

APPENDIX H

Pathology Report (WIL Research Laboratories, LLC)

AN ORAL (GAVAGE) ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

PATHOLOGY REPORT

Pathology Department

WIL Research Laboratories, LLC

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1. INTRODUCTION

The objective of this study was to evaluate the acute neurotoxic potential of the test substance when administered as a single oral dose to rats. The neurotoxic potential of the test substance was evaluated using a neurotoxicity screening battery (consisting of functional observational battery (FOB), locomotor activity, and neuropathological assessments).

2. STUDY DESIGN

Male and female Crl:CD(SD) rats, a minimum of 42 days of age, were administered vehicle control or Tolclofos-methyl formulations by oral gavage as a single dose, as indicated in the following table. The dosage volume was 5 mL/kg for all groups.

Group Number	Test Substance	Dose Level (mg/kg)	Number of Animals Males	Females
1	Vehicle control [a]	0	12	12
2	Tolclofos-methyl	200	12	12
3	Tolclofos-methyl	700	12	12
4	Tolclofos-methyl	2000	12	12

[a] = The vehicle was corn oil.

3. METHODS

3.1. NEUROPATHOLOGY

3.1.1. MACROSCOPIC EXAMINATION

At the termination of the study (study day 15), rats were deeply anesthetized by an intraperitoneal injection of sodium pentobarbital and perfused in situ with a buffered 4.0% paraformaldehyde/1.4% glutaraldehyde solution. Brain weight (including olfactory bulbs) and size (length [excluding olfactory bulbs] and width) of the perfused brains were recorded. Any abnormal coloration or lesions of the brain and spinal cord was recorded.

3.1.2. MICROSCOPIC EXAMINATION

Of the 12 rats/sex/group perfused in situ, 6 rats/sex/group (high–dose and control groups only) were randomly selected for microscopic neuropathological evaluation. The following tissues were collected:

Brain - olfactory bulbs, cerebral cortex (2 levels), hippocampus/dentate gyrus, basal ganglia, thalamus, hypothalamus, midbrain, cerebellum, pons and medulla oblongata
Spinal cord - at cervical swellings C3-C7 and at lumbar swellings T13-L4
Trigeminal ganglia/nerves[a]
Lumbar dorsal root ganglia at T13-L4*
Lumbar dorsal root fibers at T13-L4*
Lumbar ventral root fibers at T13-L4*
Cervical dorsal root ganglia at C3-C7*
Cervical dorsal root fibers at C3-C7*
Cervical ventral root fibers at C3-C7*
Cervical spinal nerve
Lumbar spinal nerve
Sciatic nerves (mid-thigh region) [(2)+]
Sciatic nerves (sciatic notch) [(2)+]
Sural nerves [(2)+]
Tibial nerves [(2)+]
Peroneal nerves [(2)+]
Optic nerves[a]
Eyes[a]
Skeletal muscle - gastrocnemius
Other sites - if deemed necessary

a Both processed and evaluated microscopically
* 4-6 tissues were collected at necropsy; 2 were evaluated microscopically.
\+ One processed for microscopic examination
2 Indicates that 2 sections (1 transverse and 1 longitudinal) of the tissue were evaluated from the right hind leg. The tissues from the left hind leg were collected and preserved for possible future evaluation.

The central nervous system tissues listed above were embedded in paraffin. The peripheral nervous system tissues were embedded in plastic. Tissues in the control and

high-dose groups were prepared for microscopic evaluation by sectioning and staining with hematoxylin and eosin.

Stained histologic sections were examined by light microscopy and observations were entered in the WIL Toxicology Data Management System (WTDMS™) by the pathologist. All gross necropsy observations were addressed. Histologic sections were of adequate size and quality for detailed evaluation, and the number of tissues examined from each treatment group was sufficient to allow detection of test substance-related microscopic alterations. Microscopic observations were classified using standard published terminology to the extent possible. The WTDMS™ histopathology tables contain all of the recorded data and serve as the basis for this narrative report.

4. RESULTS

4.1. SURVIVAL

There were no unscheduled deaths in this study.

4.2. MACROSCOPIC OBSERVATIONS

Review of the gross necropsy observations revealed no observations that were considered to be associated with administration of the test substance.

4.3. BRAIN WEIGHT AND SIZE (LENGTH AND WIDTH)

There were no significant findings with respect to brain weight and size.

4.4. MICROSCOPIC OBSERVATIONS

There were no test substance-related microscopic observations.

5. CONCLUSIONS

Single oral doses of 0, 200, 700, and 2000 mg/kg Tolclofos-methyl were administered to 12 rats/sex/group, followed by euthanasia with perfusion fixation on study day 15. Six rats/sex/group were selected from the control and 2000 mg/kg Tolclofos-methyl groups for microscopic evaluations. For these selected animals, the central nervous system tissues were embedded in paraffin and the peripheral nervous system tissues were embedded in plastic. All embedded tissues were processed to hematoxylin/eosin-stained sections and evaluated microscopically. The data collected included macroscopic/microscopic observations and brain weights, lengths, and widths.

Tolclofos-methyl, as administered in this study, had no evident neuropathological effects at the 2000 mg/kg dose level.

6. REPORT SUBMISSION

Report Submitted By:

John Boyce, DVM, PhD, DACVP, DACLAM
Study Pathologist

20 Apr 2010
Date

Report Reviewed By:

Catherine Picut, VMD, DACVP, DABT
Reviewing Pathologist

20 Apr 2010
Date

APPENDIX I

Statistical Analysis Summary (BioSTAT Consultants, Inc.)

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Statistical Analysis Summary
WIL Research Laboratories, LLC
Study Protocol – 118043
Version 1.0

1 Statistical Methodology
1.1 Analysis Endpoints
1.2 Motor Activity Analysis Methodology
2 Results
Table 2.1: Summary of Statistically Significant Dose Group Findings
3 Statistical Analysis Summaries
Table 3.1: Analysis Summary Table for Motor Activity

Report Approval:

Les Freshwater
BioSTAT Consultants, Inc.
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APR 15, 2010
Date

ED_005427A_00022422-00481

BioSTAT Consultants, Inc.
Statement of Quality Control

This report was quality checked in accordance with BioSTAT Procedural Guideline 2: *Quality Control Process for Tables and Reports*. The statistical methodology and results of inferential statistics were verified by an independent quality control statistician. Based on these documented quality control activities, it is concluded that the statistical results incorporated in this report accurately reflect the statistical analysis of data received by BioSTAT.

1 Statistical Methodology

1.1 Analysis Endpoints

- Motor Activity
  - Total Count
  - Ambulatory Count

1.2 Motor Activity Analysis Methodology

Each analysis endpoint (total and ambulatory counts) was analyzed, by sex and session, with a repeated measure analysis of variance (RANOVA). Factors in the model included treatment group (TRT), time interval (TIME), and the interaction of time interval and treatment group (TRT*TIME). The SAS® procedure PROC MIXED was used for analysis with the random effect of animal included as the repeated measurement. The covariance structure across time was selected by comparing Akaike's Information Criterion (AIC).

The monotonic dose response relationship was evaluated using sequential linear trend tests based on ordinal spacing of dose levels. The linear dose by time interaction (LinTrt*Time) was evaluated and, if significant at the 0.05 level, trend tests on treatment means were performed at the 0.05 level for each time interval. If the linear dose by time interaction was not significant, the trend test was conducted across the pooled time intervals of the entire session only.

Nonmonotonic dose responses were evaluated whenever no significant linear trends were detected but TRT and/or TRT*TIME interaction was significant at the 0.01 level. Within the framework of the RANOVA, pairwise comparisons were made for each individual test substance-treated group with the control group through linear contrasts. If TRT* TIME was significant, the comparisons were conducted for each time interval. If only the TRT effect was significant, the comparisons were conducted across the pooled time intervals of the entire session. These nonmonotonic dose response comparisons were conducted at the 0.01 significance level.

All statistical analyses were conducted using SAS® software.

2 Results

Results of statistical analyses are summarized in Section 3. Table 2.1 summarizes the statistically significant dose group findings.

Table 2.1: Summary of Statistically Significant Dose Group Findings

Motor Activity

			Minutes						
Period	**Sex**	**Endpoint**	**0-10**	**11-20**	**21-30**	**31-40**	**41-50**	**51-60**	**Overall**
PRETEST	M	Total							NS
		Ambulatory							NS
	F	Total	NS	NS	↑	NS	NS	NS	NS
		Ambulatory							NS
DAY 0	M	Total	↓↓	↓↓	NS	NS	NS	NS	↓↓
		Ambulatory	↓↓	↓↓	NS	NS	NS	NS	↓↓
	F	Total							↓↓
		Ambulatory							↓
DAY 7	M	Total							NS
		Ambulatory							NS
	F	Total	NS	NS	NS	NS	NS	NS	NS
		Ambulatory							NS
DAY 14	M	Total	NS	↓L	NS	NS	NS	NS	NS
		Ambulatory							NS
	F	Total							NS
		Ambulatory							NS

A blank cell implies individual time point was not analyzed per statistical methodology

NS: Not statistically significant
↑ (↓) Dose-related increase (decrease) through 2000 mg/kg dose group
↑↑ (↓↓) Dose-related increase (decrease) through 700 mg/kg dose group

↑L (↓L) Non-dose-related increase (decrease) at 200 mg/kg dose group

Tables Legend

Motor Activity: For each analysis endpoint (study period/sex/endpoint), data are summarized by treatment group for each post-dose time interval and cumulative across post-dose time intervals. P-values for interaction terms are shown at the bottom of the table. If LinTrt*Time was not significant, sequential trend testing (described below) was conducted across the pooled time intervals only and the p-values are reported in the "Overall" row. "NT" (not tested) is reported for the p-value in the individual time interval rows. If LinTrt*Time was significant, sequential trend testing was conducted for each individual time interval as well as across the pooled time intervals. P-values are reported in the individual time interval and "Overall" rows.

Sequential trend tests: All dose groups are included in an initial trend test. If the trend test is not significant it is concluded that there is no significant dose-related trend and no further testing is conducted. If the trend test is significant, the highest dose group is flagged as significant and a trend test is conducted excluding the highest dose group. The sequence of trend tests continues until a test is not significant or the lowest nonzero dose is flagged as significant.

Table Key

Mean = arithmetic mean
S.D. = standard deviation of the sample
S.E. = standard error (standard deviation of the mean)
N = number of animals
% Difference Control = group mean percent difference from control
Linear Trend p-value = p-value for the treatment linear trend test
Trt F-test p-value = p-value for treatment group effect
Trt*Time p-value = p-value for the treatment by time interaction
LinTrt*Time p-value = p-value for the linear trend by time interaction
Covariance Structure: AR1=Autoregressive order 1, CS=Compound symmetric, ARH(1)=Autoregressive heterogenous order 1, CSH=Compound symmetric heterogenous

References

SAS® Proprietary Software; Version 9.1, SAS Institute Inc.: Cary, NC, 2002-2003.

3 Statistical Analysis Summaries

Table 3.1: Analysis Summary Table for Motor Activity

Period	Sex	Variable	Minutes	Statistic	Dosage Level (mg/kg) 0	200	700	2000	Statistical Model
PRETEST	M	TOTAL	0-10	Mean	1022	1078	965	1074	
				% Difference Control	NA	5.5	-5.6	5.1	
				S.D.	204.4	282.3	209.6	198.1	
				S.E.	59.0	81.5	60.5	57.2	
				N	12	12	12	12	
				Linear Trend p-value#		NT	NT	NT	
			11-20	Mean	650	655	486	609	
				% Difference Control	NA	0.8	-25.2	-6.3	
				S.D.	233.6	225.8	262.0	201.1	
				S.E.	67.4	65.2	75.6	58.1	
				N	12	12	12	12	
				Linear Trend p-value#		NT	NT	NT	
			21-30	Mean	320	354	285	313	
				% Difference Control	NA	10.6	-10.9	-2.2	
				S.D.	214.3	226.7	260.8	187.9	
				S.E.	61.9	65.5	75.3	54.2	
				N	12	12	12	12	
				Linear Trend p-value#		NT	NT	NT	
			31-40	Mean	218	209	249	223	
				S.D.	177.8	217.1	199.2	217.2	
				S.E.	51.3	62.7	57.5	62.7	
				N	12	12	12	12	
				Linear Trend p-value#		NT	NT	NT	

: Level of Significance tested = .05. ++ : Level of Significance tested = .01.
* : Statistically Significant. NT : Not tested. NA : Not applicable.

Table 3.1: Analysis Summary Table for Motor Activity

Period	Sex	Variable	Minutes	Statistic	Dosage Level (mg/kg) 0	200	700	2000	Statistical Model
PRETEST	M	TOTAL	41-50	Mean	203	273	239	268	
				S.D.	259.4	227.6	112.1	195.1	
				S.E.	74.9	65.7	32.3	56.3	
				N	12	12	12	12	
				Linear Trend p-value#		NT	NT	NT	
			51-60	Mean	202	239	349	351	
				S.D.	178.0	138.1	234.2	191.0	
				S.E.	51.4	39.9	67.6	55.1	
				N	12	12	12	12	
				Linear Trend p-value#		NT	NT	NT	
			Cumulative	Mean	2614	2809	2571	2838	
				% Difference Control	NA	7.5	-1.6	8.6	
				S.D.	610.3	899.5	609.6	415.7	
				S.E.	176.2	259.7	176.0	120.0	
				N	12	12	12	12	
			Overall	Linear Trend p-value#		NT	NT	0.605	
				Trt F-test p-value++					0.673
				Trt*Time p-value++					0.772
				LinTrt*Time p-value#					0.417
				Covariance Structure					AR1

: Level of Significance tested = .05.
* : Statistically Significant.
++ : Level of Significance tested = .01.
NT : Not tested. NA : Not applicable.

Table 3.1: Analysis Summary Table for Motor Activity

Period	Sex	Variable	Minutes	Statistic	Dosage Level (mg/kg) 0	200	700	2000	Statistical Model
PRETEST	M	AMBULATORY	0-10	Mean	316	349	303	324	
				% Difference Control	NA	10.4	-4.1	2.5	
				S.D.	77.1	124.8	88.7	91.5	
				S.E.	22.3	36.0	25.6	26.4	
				N	12	12	12	12	
				Linear Trend p-value#		NT	NT	NT	
			11-20	Mean	119	123	82	126	
				% Difference Control	NA	3.4	-31.1	5.9	
				S.D.	58.3	81.8	70.6	87.0	
				S.E.	16.8	23.6	20.4	25.1	
				N	12	12	12	12	
				Linear Trend p-value#		NT	NT	NT	
			21-30	Mean	27	44	24	35	
				% Difference Control	NA	63.0	-11.1	29.6	
				S.D.	37.7	63.5	38.4	56.3	
				S.E.	10.9	18.3	11.1	16.3	
				N	12	12	12	12	
				Linear Trend p-value#		NT	NT	NT	
			31-40	Mean	24	23	14	4	
				S.D.	40.6	40.7	41.9	7.3	
				S.E.	11.7	11.8	12.1	2.1	
				N	12	12	12	12	
				Linear Trend p-value#		NT	NT	NT	

: Level of Significance tested = .05.
* : Statistically Significant.
++ : Level of Significance tested = .01.
NT : Not tested. NA : Not applicable.

Table 3.1: Analysis Summary Table for Motor Activity

Period	Sex	Variable	Minutes	Statistic	Dosage Level (mg/kg) 0	200	700	2000	Statistical Model
PRETEST	M	AMBULATORY	41-50	Mean	4	6	11	6	
				S.D.	7.9	8.3	24.8	9.4	
				S.E.	2.3	2.4	7.2	2.7	
				N	12	12	12	12	
				Linear Trend p-value#		NT	NT	NT	
			51-60	Mean	7	6	17	7	
				S.D.	7.8	6.9	24.1	9.9	
				S.E.	2.3	2.0	7.0	2.9	
				N	12	12	12	12	
				Linear Trend p-value#		NT	NT	NT	
			Cumulative	Mean	496	550	451	503	
				% Difference Control	NA	10.9	-9.1	1.4	
				S.D.	139.5	223.8	162.3	164.8	
				S.E.	40.3	64.6	46.9	47.6	
				N	12	12	12	12	
			Overall	Linear Trend p-value#		NT	NT	0.751	
				Trt F-test p-value++					0.651
				Trt*Time p-value++					0.685
				LinTrt*Time p-value#					0.729
				Covariance Structure					ARH1

: Level of Significance tested = .05.
* : Statistically Significant.
++ : Level of Significance tested = .01.
NT : Not tested. NA : Not applicable.

Table 3.1: Analysis Summary Table for Motor Activity

Period	Sex	Variable	Minutes	Statistic	Dosage Level (mg/kg) 0	200	700	2000	Statistical Model
PRETEST	F	TOTAL	0-10	Mean	1057	1194	1123	1059	
				% Difference Control	NA	13.0	6.2	0.2	
				S.D.	366.7	260.8	252.3	261.1	
				S.E.	105.8	75.3	72.8	75.4	
				N	12	12	12	12	
				Linear Trend p-value#		NT	NT	0.840	
			11-20	Mean	500	526	575	542	
				% Difference Control	NA	5.2	15.0	8.4	
				S.D.	302.4	254.5	239.6	243.5	
				S.E.	87.3	73.5	69.2	70.3	
				N	12	12	12	12	
				Linear Trend p-value#		NT	NT	0.575	
			21-30	Mean	234	222	418	491	
				% Difference Control	NA	-5.1	78.6	109.8	
				S.D.	160.3	136.5	274.2	349.4	
				S.E.	46.3	39.4	79.1	100.9	
				N	12	12	12	12	
				Linear Trend p-value#		NT	0.065	0.002*	
			31-40	Mean	230	228	354	326	
				S.D.	142.7	124.9	264.7	295.6	
				S.E.	41.2	36.1	76.4	85.3	
				N	12	12	12	12	
				Linear Trend p-value#		NT	NT	0.189	

: Level of Significance tested = .05. ++ : Level of Significance tested = .01.
* : Statistically Significant. NT : Not tested. NA : Not applicable.

Table 3.1: Analysis Summary Table for Motor Activity

Period	Sex	Variable	Minutes	Statistic	Dosage Level (mg/kg) 0	200	700	2000	Statistical Model
PRETEST	F	TOTAL	41-50	Mean	437	281	234	266	
				S.D.	282.6	176.6	160.5	230.7	
				S.E.	81.6	51.0	46.3	66.6	
				N	12	12	12	12	
				Linear Trend p-value#		NT	NT	0.075	
			51-60	Mean	295	402	235	240	
				S.D.	176.6	286.6	172.6	173.3	
				S.E.	51.0	82.7	49.8	50.0	
				N	12	12	12	12	
				Linear Trend p-value#		NT	NT	0.291	
			Cumulative	Mean	2753	2854	2939	2925	
				% Difference Control	NA	3.7	6.8	6.2	
				S.D.	835.4	586.5	676.4	780.3	
				S.E.	241.2	169.3	195.3	225.3	
				N	12	12	12	12	
			Overall	Linear Trend p-value#		NT	NT	0.555	
				Trt F-test p-value++					0.936
				Trt*Time p-value++					0.038
				LinTrt*Time p-value#					0.009*
				Covariance Structure					AR1

: Level of Significance tested = .05.
* : Statistically Significant.
++ : Level of Significance tested = .01.
NT : Not tested. NA : Not applicable.

Table 3.1: Analysis Summary Table for Motor Activity

Period	Sex	Variable	Minutes	Statistic	Dosage Level (mg/kg) 0	200	700	2000	Statistical Model
PRETEST	F	AMBULATORY	0-10	Mean	335	429	368	363	
				% Difference Control	NA	28.1	9.9	8.4	
				S.D.	170.7	153.1	148.6	129.4	
				S.E.	49.3	44.2	42.9	37.4	
				N	12	12	12	12	
				Linear Trend p-value#		NT	NT	NT	
			11-20	Mean	105	102	132	123	
				% Difference Control	NA	-2.9	25.7	17.1	
				S.D.	100.6	97.1	101.4	98.2	
				S.E.	29.0	28.0	29.3	28.3	
				N	12	12	12	12	
				Linear Trend p-value#		NT	NT	NT	
			21-30	Mean	16	17	82	64	
				% Difference Control	NA	6.3	412.5	300.0	
				S.D.	20.3	26.6	116.4	54.0	
				S.E.	5.9	7.7	33.6	15.6	
				N	12	12	12	12	
				Linear Trend p-value#		NT	NT	NT	
			31-40	Mean	14	8	21	38	
				S.D.	17.4	15.2	29.6	64.3	
				S.E.	5.0	4.4	8.5	18.6	
				N	12	12	12	12	
				Linear Trend p-value#		NT	NT	NT	

: Level of Significance tested = .05. ++ : Level of Significance tested = .01.
* : Statistically Significant. NT : Not tested. NA : Not applicable.

Table 3.1: Analysis Summary Table for Motor Activity

Period	Sex	Variable	Minutes	Statistic	Dosage Level (mg/kg) 0	200	700	2000	Statistical Model
PRETEST	F	AMBULATORY	41-50	Mean	38	10	14	33	
				S.D.	65.0	11.7	18.3	82.8	
				S.E.	18.8	3.4	5.3	23.9	
				N	12	12	12	12	
				Linear Trend p-value#		NT	NT	NT	
			51-60	Mean	18	15	10	5	
				S.D.	23.2	27.0	13.5	7.3	
				S.E.	6.7	7.8	3.9	2.1	
				N	12	12	12	12	
				Linear Trend p-value#		NT	NT	NT	
			Cumulative	Mean	526	582	627	626	
				% Difference Control	NA	10.6	19.2	19.0	
				S.D.	252.3	221.2	301.5	177.2	
				S.E.	72.8	63.8	87.0	51.1	
				N	12	12	12	12	
			Overall	Linear Trend p-value#		NT	NT	0.275	
				Trt F-test p-value++					0.711
				Trt*Time p-value++					0.191
				LinTrt*Time p-value#					0.089
				Covariance Structure					ARH1

: Level of Significance tested = .05.
* : Statistically Significant.
++ : Level of Significance tested = .01.
NT : Not tested. NA : Not applicable.

Table 3.1: Analysis Summary Table for Motor Activity

Period	Sex	Variable	Minutes	Statistic	Dosage Level (mg/kg) 0	200	700	2000	Statistical Model
DAY_000	M	TOTAL	0-10	Mean	1185	1055	775	855	
				% Difference Control	NA	-11.0	-34.6	-27.8	
				S.D.	238.9	359.6	229.7	215.6	
				S.E.	69.0	103.8	66.3	62.2	
				N	12	12	12	12	
				Linear Trend p-value#		0.218	<.001*	<.001*	
			11-20	Mean	444	391	173	160	
				% Difference Control	NA	-11.9	-61.0	-64.0	
				S.D.	213.2	261.6	155.4	171.7	
				S.E.	61.5	75.5	44.9	49.6	
				N	12	12	12	12	
				Linear Trend p-value#		0.518	<.001*	<.001*	
			21-30	Mean	102	169	99	108	
				% Difference Control	NA	65.7	-2.9	5.9	
				S.D.	52.4	152.5	56.4	121.9	
				S.E.	15.1	44.0	16.3	35.2	
				N	12	12	12	12	
				Linear Trend p-value#		NT	NT	0.710	
			31-40	Mean	77	125	116	135	
				S.D.	97.5	154.6	115.3	170.5	
				S.E.	28.1	44.6	33.3	49.2	
				N	12	12	12	12	
				Linear Trend p-value#		NT	NT	0.361	

: Level of Significance tested = .05.
* : Statistically Significant.
++ : Level of Significance tested = .01.
NT : Not tested. NA : Not applicable.

Table 3.1: Analysis Summary Table for Motor Activity

Period	Sex	Variable	Minutes	Statistic	Dosage Level (mg/kg) 0	200	700	2000	Statistical Model
DAY_000	M	TOTAL	41-50	Mean	160	111	134	171	
				S.D.	134.2	142.2	117.5	131.9	
				S.E.	38.7	41.1	33.9	38.1	
				N	12	12	12	12	
				Linear Trend p-value#		NT	NT	0.736	
			51-60	Mean	240	124	195	158	
				S.D.	228.0	72.1	203.6	136.8	
				S.E.	65.8	20.8	58.8	39.5	
				N	12	12	12	12	
				Linear Trend p-value#		NT	NT	0.446	
			Cumulative	Mean	2207	1975	1491	1587	
				% Difference Control	NA	-10.5	-32.4	-28.1	
				S.D.	519.8	699.1	499.8	483.6	
				S.E.	150.1	201.8	144.3	139.6	
				N	12	12	12	12	
			Overall	Linear Trend p-value#		0.287	0.001*	<.001*	
				Trt F-test p-value++					0.003*
				Trt*Time p-value++					0.003*
				LinTrt*Time p-value#					<0.001*
				Covariance Structure					ARH1

: Level of Significance tested = .05.
* : Statistically Significant.
++ : Level of Significance tested = .01.
NT : Not tested. NA : Not applicable.

Table 3.1: Analysis Summary Table for Motor Activity

Period	Sex	Variable	Minutes	Statistic	Dosage Level (mg/kg) 0	200	700	2000	Statistical Model
DAY_000	M	AMBULATORY	0-10	Mean	348	312	212	240	
				% Difference Control	NA	-10.3	-39.1	-31.0	
				S.D.	112.8	153.2	68.2	83.5	
				S.E.	32.6	44.2	19.7	24.1	
				N	12	12	12	12	
				Linear Trend p-value#		0.417	0.002*	0.003*	
			11-20	Mean	57	49	21	16	
				% Difference Control	NA	-14.0	-63.2	-71.9	
				S.D.	40.8	56.8	32.4	30.2	
				S.E.	11.8	16.4	9.3	8.7	
				N	12	12	12	12	
				Linear Trend p-value#		0.588	0.027*	0.004*	
			21-30	Mean	2	13	1	10	
				% Difference Control	NA	550.0	-50.0	400.0	
				S.D.	3.9	17.4	2.0	24.1	
				S.E.	1.1	5.0	0.6	6.9	
				N	12	12	12	12	
				Linear Trend p-value#		NT	NT	0.550	
			31-40	Mean	1	1	2	4	
				S.D.	1.5	3.3	3.6	9.3	
				S.E.	0.4	1.0	1.0	2.7	
				N	12	12	12	12	
				Linear Trend p-value#		NT	NT	0.174	

: Level of Significance tested = .05.
* : Statistically Significant.
++ : Level of Significance tested = .01.
NT : Not tested. NA : Not applicable.

Table 3.1: Analysis Summary Table for Motor Activity

Period	Sex	Variable	Minutes	Statistic	Dosage Level (mg/kg) 0	200	700	2000	Statistical Model
DAY_000	M	AMBULATORY	41-50	Mean	13	1	3	10	
				S.D.	39.9	3.0	3.3	14.3	
				S.E.	11.5	0.9	0.9	4.1	
				N	12	12	12	12	
				Linear Trend p-value#		NT	NT	0.760	
			51-60	Mean	19	8	1	15	
				S.D.	43.2	13.3	1.8	24.5	
				S.E.	12.5	3.8	0.5	7.1	
				N	12	12	12	12	
				Linear Trend p-value#		NT	NT	0.607	
			Cumulative	Mean	440	384	240	295	
				% Difference Control	NA	-12.7	-45.5	-33.0	
				S.D.	139.7	189.9	83.0	93.2	
				S.E.	40.3	54.8	23.9	26.9	
				N	12	12	12	12	
			Overall	Linear Trend p-value#		0.275	<.001*	<.001*	
				Trt F-test p-value++					<0.001*
				Trt*Time p-value++					0.015
				LinTrt*Time p-value#					0.004*
				Covariance Structure					ARH1

: Level of Significance tested = .05.
* : Statistically Significant.
++ : Level of Significance tested = .01.
NT : Not tested. NA : Not applicable.

Table 3.1: Analysis Summary Table for Motor Activity

Period	Sex	Variable	Minutes	Statistic	Dosage Level (mg/kg) 0	200	700	2000	Statistical Model
DAY_000	F	TOTAL	0-10	Mean	1372	1348	1114	1022	
				% Difference Control	NA	-1.7	-18.8	-25.5	
				S.D.	278.4	308.0	312.1	351.6	
				S.E.	80.4	88.9	90.1	101.5	
				N	12	12	12	12	
				Linear Trend p-value#		NT	NT	NT	
			11-20	Mean	564	506	321	324	
				% Difference Control	NA	-10.3	-43.1	-42.6	
				S.D.	290.8	275.0	238.8	333.1	
				S.E.	83.9	79.4	68.9	96.2	
				N	12	12	12	12	
				Linear Trend p-value#		NT	NT	NT	
			21-30	Mean	230	288	244	172	
				% Difference Control	NA	25.2	6.1	-25.2	
				S.D.	270.3	288.2	274.3	184.9	
				S.E.	78.0	83.2	79.2	53.4	
				N	12	12	12	12	
				Linear Trend p-value#		NT	NT	NT	
			31-40	Mean	317	177	191	122	
				S.D.	308.9	149.7	174.4	119.4	
				S.E.	89.2	43.2	50.3	34.5	
				N	12	12	12	12	
				Linear Trend p-value#		NT	NT	NT	

: Level of Significance tested = .05. ++ : Level of Significance tested = .01.
* : Statistically Significant. NT : Not tested. NA : Not applicable.

Table 3.1: Analysis Summary Table for Motor Activity

Period	Sex	Variable	Minutes	Statistic	Dosage Level (mg/kg) 0	200	700	2000	Statistical Model
DAY_000	F	TOTAL	41-50	Mean	184	229	98	60	
				S.D.	107.6	204.3	99.0	63.0	
				S.E.	31.1	59.0	28.6	18.2	
				N	12	12	12	12	
				Linear Trend p-value#		NT	NT	NT	
			51-60	Mean	281	237	136	69	
				S.D.	213.7	163.0	75.2	66.6	
				S.E.	61.7	47.0	21.7	19.2	
				N	12	12	12	12	
				Linear Trend p-value#		NT	NT	NT	
			Cumulative	Mean	2947	2783	2103	1769	
				% Difference Control	NA	-5.6	-28.6	-40.0	
				S.D.	535.1	726.1	628.1	792.5	
				S.E.	154.5	209.6	181.3	228.8	
				N	12	12	12	12	
			Overall	Linear Trend p-value#		0.596	0.007*	<.001*	
				Trt F-test p-value++					<0.001*
				Trt*Time p-value++					0.427
				LinTrt*Time p-value#					0.245
				Covariance Structure					ARH1

: Level of Significance tested = .05.
* : Statistically Significant.
++ : Level of Significance tested = .01.
NT : Not tested. NA : Not applicable.

Table 3.1: Analysis Summary Table for Motor Activity

Period	Sex	Variable	Minutes	Statistic	Dosage Level (mg/kg) 0	200	700	2000	Statistical Model
DAY_000	F	AMBULATORY	0-10	Mean	453	482	382	318	
				% Difference Control	NA	6.4	-15.7	-29.8	
				S.D.	136.8	205.0	126.9	133.9	
				S.E.	39.5	59.2	36.6	38.7	
				N	12	12	12	12	
				Linear Trend p-value#		NT	NT	NT	
			11-20	Mean	139	110	64	65	
				% Difference Control	NA	-20.9	-54.0	-53.2	
				S.D.	121.4	107.0	74.3	97.6	
				S.E.	35.0	30.9	21.5	28.2	
				N	12	12	12	12	
				Linear Trend p-value#		NT	NT	NT	
			21-30	Mean	36	46	40	25	
				% Difference Control	NA	27.8	11.1	-30.6	
				S.D.	99.4	78.9	82.2	52.9	
				S.E.	28.7	22.8	23.7	15.3	
				N	12	12	12	12	
				Linear Trend p-value#		NT	NT	NT	
			31-40	Mean	57	23	27	10	
				S.D.	86.7	46.6	56.3	20.1	
				S.E.	25.0	13.5	16.2	5.8	
				N	12	12	12	12	
				Linear Trend p-value#		NT	NT	NT	

: Level of Significance tested = .05. ++ : Level of Significance tested = .01.
* : Statistically Significant. NT : Not tested. NA : Not applicable.

Table 3.1: Analysis Summary Table for Motor Activity

Period	Sex	Variable	Minutes	Statistic	Dosage Level (mg/kg) 0	200	700	2000	Statistical Model
DAY_000	F	AMBULATORY	41-50	Mean	7	16	1	1	
				S.D.	14.8	45.3	1.7	2.0	
				S.E.	4.3	13.1	0.5	0.6	
				N	12	12	12	12	
				Linear Trend p-value#		NT	NT	NT	
			51-60	Mean	6	23	5	3	
				S.D.	16.6	34.7	13.3	4.1	
				S.E.	4.8	10.0	3.8	1.2	
				N	12	12	12	12	
				Linear Trend p-value#		NT	NT	NT	
			Cumulative	Mean	698	700	518	421	
				% Difference Control	NA	0.3	-25.8	-39.7	
				S.D.	249.1	345.5	254.9	247.4	
				S.E.	71.9	99.7	73.6	71.4	
				N	12	12	12	12	
			Overall	Linear Trend p-value#		NT	0.074	0.002*	
				Trt F-test p-value++					0.011
				Trt*Time p-value++					0.369
				LinTrt*Time p-value#					0.077
				Covariance Structure					ARH1

: Level of Significance tested = .05.
* : Statistically Significant.
++ : Level of Significance tested = .01.
NT : Not tested. NA : Not applicable.

Table 3.1: Analysis Summary Table for Motor Activity

Period	Sex	Variable	Minutes	Statistic	Dosage Level (mg/kg) 0	200	700	2000	Statistical Model
DAY_007	M	TOTAL	0-10	Mean	1329	1283	1176	1407	
				% Difference Control	NA	-3.5	-11.5	5.9	
				S.D.	229.4	351.7	264.0	186.7	
				S.E.	66.2	101.5	76.2	53.9	
				N	12	12	12	12	
				Linear Trend p-value#		NT	NT	NT	
			11-20	Mean	730	648	663	776	
				% Difference Control	NA	-11.2	-9.2	6.3	
				S.D.	259.8	290.9	245.0	242.2	
				S.E.	75.0	84.0	70.7	69.9	
				N	12	12	12	12	
				Linear Trend p-value#		NT	NT	NT	
			21-30	Mean	334	204	278	383	
				% Difference Control	NA	-38.9	-16.8	14.7	
				S.D.	323.9	219.8	220.2	166.0	
				S.E.	93.5	63.5	63.6	47.9	
				N	12	12	12	12	
				Linear Trend p-value#		NT	NT	NT	
			31-40	Mean	233	108	83	167	
				S.D.	326.3	163.6	71.6	187.0	
				S.E.	94.2	47.2	20.7	54.0	
				N	12	12	12	12	
				Linear Trend p-value#		NT	NT	NT	

: Level of Significance tested = .05. ++ : Level of Significance tested = .01.
* : Statistically Significant. NT : Not tested. NA : Not applicable.

Table 3.1: Analysis Summary Table for Motor Activity

Period	Sex	Variable	Minutes	Statistic	Dosage Level (mg/kg) 0	200	700	2000	Statistical Model
DAY_007	M	TOTAL	41-50	Mean	92	123	67	119	
				S.D.	107.5	155.8	66.2	206.2	
				S.E.	31.0	45.0	19.1	59.5	
				N	12	12	12	12	
				Linear Trend p-value#		NT	NT	NT	
			51-60	Mean	105	150	47	68	
				S.D.	130.7	208.9	42.8	70.7	
				S.E.	37.7	60.3	12.3	20.4	
				N	12	12	12	12	
				Linear Trend p-value#		NT	NT	NT	
			Cumulative	Mean	2823	2516	2314	2920	
				% Difference Control	NA	-10.9	-18.0	3.4	
				S.D.	909.7	717.1	681.5	597.0	
				S.E.	262.6	207.0	196.7	172.3	
				N	12	12	12	12	
			Overall	Linear Trend p-value#		NT	NT	0.929	
				Trt F-test p-value++					0.174
				Trt*Time p-value++					0.597
				LinTrt*Time p-value#					0.506
				Covariance Structure					ARH1

: Level of Significance tested = .05.
* : Statistically Significant.
++ : Level of Significance tested = .01.
NT : Not tested. NA : Not applicable.

Table 3.1: Analysis Summary Table for Motor Activity

Period	Sex	Variable	Minutes	Statistic	Dosage Level (mg/kg) 0	200	700	2000	Statistical Model
DAY_007	M	AMBULATORY	0-10	Mean	390	376	336	420	
				% Difference Control	NA	-3.6	-13.8	7.7	
				S.D.	107.3	182.2	97.9	103.0	
				S.E.	31.0	52.6	28.3	29.7	
				N	12	12	12	12	
				Linear Trend p-value#		NT	NT	NT	
			11-20	Mean	148	122	109	166	
				% Difference Control	NA	-17.6	-26.4	12.2	
				S.D.	79.9	112.9	88.2	72.3	
				S.E.	23.1	32.6	25.4	20.9	
				N	12	12	12	12	
				Linear Trend p-value#		NT	NT	NT	
			21-30	Mean	53	28	34	54	
				% Difference Control	NA	-47.2	-35.8	1.9	
				S.D.	78.4	47.4	48.5	58.1	
				S.E.	22.6	13.7	14.0	16.8	
				N	12	12	12	12	
				Linear Trend p-value#		NT	NT	NT	
			31-40	Mean	40	5	9	20	
				S.D.	72.6	15.2	19.4	39.1	
				S.E.	21.0	4.4	5.6	11.3	
				N	12	12	12	12	
				Linear Trend p-value#		NT	NT	NT	

: Level of Significance tested = .05. ++ : Level of Significance tested = .01.
* : Statistically Significant. NT : Not tested. NA : Not applicable.

Table 3.1: Analysis Summary Table for Motor Activity

Period	Sex	Variable	Minutes	Statistic	Dosage Level (mg/kg) 0	200	700	2000	Statistical Model
DAY_007	M	AMBULATORY	41-50	Mean	2	16	0	10	
				S.D.	3.2	29.5	1.2	25.8	
				S.E.	0.9	8.5	0.3	7.4	
				N	12	12	12	12	
				Linear Trend p-value#		NT	NT	NT	
			51-60	Mean	6	19	1	6	
				S.D.	15.0	42.7	2.5	16.5	
				S.E.	4.3	12.3	0.7	4.8	
				N	12	12	12	12	
				Linear Trend p-value#		NT	NT	NT	
			Cumulative	Mean	639	566	489	676	
				% Difference Control	NA	-11.4	-23.5	5.8	
				S.D.	231.9	269.1	220.2	211.7	
				S.E.	66.9	77.7	63.6	61.1	
				N	12	12	12	12	
			Overall	Linear Trend p-value#		NT	NT	0.910	
				Trt F-test p-value++					0.206
				Trt*Time p-value++					0.535
				LinTrt*Time p-value#					0.715
				Covariance Structure					ARH1

: Level of Significance tested = .05.
* : Statistically Significant.
++ : Level of Significance tested = .01.
NT : Not tested. NA : Not applicable.

Table 3.1: Analysis Summary Table for Motor Activity

Period	Sex	Variable	Minutes	Statistic	Dosage Level (mg/kg) 0	200	700	2000	Statistical Model
DAY_007	F	TOTAL	0-10	Mean	1494	1498	1406	1534	
				% Difference Control	NA	0.3	-5.9	2.7	
				S.D.	326.3	260.0	195.9	311.5	
				S.E.	94.2	75.0	56.6	89.9	
				N	12	12	12	12	
				Pairwise p-value++		0.974	0.440	0.730	
				Linear Trend p-value#		NT	NT	NT	
			11-20	Mean	751	777	678	944	
				% Difference Control	NA	3.5	-9.7	25.7	
				S.D.	306.8	239.0	184.1	265.6	
				S.E.	88.6	69.0	53.1	76.7	
				N	12	12	12	12	
				Pairwise p-value++		0.817	0.523	0.091	
				Linear Trend p-value#		NT	NT	NT	
			21-30	Mean	566	508	356	699	
				% Difference Control	NA	-10.2	-37.1	23.5	
				S.D.	299.4	384.8	327.3	355.1	
				S.E.	86.4	111.1	94.5	102.5	
				N	12	12	12	12	
				Pairwise p-value++		0.611	0.066	0.243	
				Linear Trend p-value#		NT	NT	NT	
			31-40	Mean	297	186	501	442	
				S.D.	303.1	184.1	414.9	234.5	
				S.E.	87.5	53.1	119.8	67.7	
				N	12	12	12	12	
				Pairwise p-value++		0.329	0.075	0.204	
				Linear Trend p-value#		NT	NT	NT	

: Level of Significance tested = .05. ++ : Level of Significance tested = .01.
* : Statistically Significant. NT : Not tested. NA : Not applicable.

Table 3.1: Analysis Summary Table for Motor Activity

Period	Sex	Variable	Minutes	Statistic	Dosage Level (mg/kg) 0	200	700	2000	Statistical Model
DAY_007	F	TOTAL	41-50	Mean	103	153	370	112	
				S.D.	117.7	186.3	302.1	130.5	
				S.E.	34.0	53.8	87.2	37.7	
				N	12	12	12	12	
				Pairwise p-value++		0.660	0.020	0.937	
				Linear Trend p-value#		NT	NT	NT	
			51-60	Mean	208	281	120	181	
				S.D.	251.3	316.6	246.5	292.6	
				S.E.	72.5	91.4	71.2	84.5	
				N	12	12	12	12	
				Pairwise p-value++		0.522	0.440	0.817	
				Linear Trend p-value#		NT	NT	NT	
			Cumulative	Mean	3419	3402	3431	3912	
				% Difference Control	NA	-0.5	0.4	14.4	
				S.D.	1035.6	1140.2	879.3	1130.0	
				S.E.	299.0	329.2	253.8	326.2	
				N	12	12	12	12	
			Overall	Pairwise p-value++		0.971	0.976	0.258	
				Linear Trend p-value#		NT	NT	0.274	
				Trt F-test p-value++					0.585
				Trt*Time p-value++					<0.001*
				LinTrt*Time p-value#					0.255
				Covariance Structure					AR1

: Level of Significance tested = .05. ++ : Level of Significance tested = .01.
* : Statistically Significant. NT : Not tested. NA : Not applicable.

Table 3.1: Analysis Summary Table for Motor Activity

Period	Sex	Variable	Minutes	Statistic	Dosage Level (mg/kg) 0	200	700	2000	Statistical Model
DAY_007	F	AMBULATORY	0-10	Mean	527	516	475	522	
				% Difference Control	NA	-2.1	-9.9	-0.9	
				S.D.	182.3	154.4	131.5	141.3	
				S.E.	52.6	44.6	38.0	40.8	
				N	12	12	12	12	
				Linear Trend p-value#		NT	NT	NT	
			11-20	Mean	178	177	167	257	
				% Difference Control	NA	-0.6	-6.2	44.4	
				S.D.	104.7	118.0	75.3	115.2	
				S.E.	30.2	34.1	21.7	33.2	
				N	12	12	12	12	
				Linear Trend p-value#		NT	NT	NT	
			21-30	Mean	141	132	75	175	
				% Difference Control	NA	-6.4	-46.8	24.1	
				S.D.	103.4	122.5	87.6	117.7	
				S.E.	29.9	35.4	25.3	34.0	
				N	12	12	12	12	
				Linear Trend p-value#		NT	NT	NT	
			31-40	Mean	62	24	124	87	
				S.D.	99.3	40.8	137.1	66.7	
				S.E.	28.7	11.8	39.6	19.3	
				N	12	12	12	12	
				Linear Trend p-value#		NT	NT	NT	

: Level of Significance tested = .05. ++ : Level of Significance tested = .01.
* : Statistically Significant. NT : Not tested. NA : Not applicable.

Table 3.1: Analysis Summary Table for Motor Activity

Period	Sex	Variable	Minutes	Statistic	Dosage Level (mg/kg) 0	200	700	2000	Statistical Model
DAY_007	F	AMBULATORY	41-50	Mean	11	14	71	20	
				S.D.	25.0	24.4	82.5	47.9	
				S.E.	7.2	7.0	23.8	13.8	
				N	12	12	12	12	
				Linear Trend p-value#		NT	NT	NT	
			51-60	Mean	27	61	25	30	
				S.D.	59.7	93.8	68.0	78.7	
				S.E.	17.2	27.1	19.6	22.7	
				N	12	12	12	12	
				Linear Trend p-value#		NT	NT	NT	
			Cumulative	Mean	946	924	937	1090	
				% Difference Control	NA	-2.3	-1.0	15.2	
				S.D.	427.3	429.8	298.1	392.6	
				S.E.	123.4	124.1	86.1	113.3	
				N	12	12	12	12	
			Overall	Linear Trend p-value#		NT	NT	0.297	
				Trt F-test p-value++					0.575
				Trt*Time p-value++					0.013
				LinTrt*Time p-value#					0.343
				Covariance Structure					ARH1

: Level of Significance tested = .05. ++ : Level of Significance tested = .01.
* : Statistically Significant. NT : Not tested. NA : Not applicable.

Table 3.1: Analysis Summary Table for Motor Activity

Period	Sex	Variable	Minutes	Statistic	Dosage Level (mg/kg) 0	200	700	2000	Statistical Model
DAY_014	M	TOTAL	0-10	Mean	1229	1203	1186	1358	
				% Difference Control	NA	-2.1	-3.5	10.5	
				S.D.	203.5	326.9	212.9	166.5	
				S.E.	58.7	94.4	61.5	48.1	
				N	12	12	12	12	
				Pairwise p-value++		0.774	0.640	0.170	
				Linear Trend p-value#		NT	NT	NT	
			11-20	Mean	704	405	557	761	
				% Difference Control	NA	-42.5	-20.9	8.1	
				S.D.	189.1	315.3	291.3	280.9	
				S.E.	54.6	91.0	84.1	81.1	
				N	12	12	12	12	
				Pairwise p-value++		0.008*	0.191	0.608	
				Linear Trend p-value#		NT	NT	NT	
			21-30	Mean	321	154	220	275	
				% Difference Control	NA	-52.0	-31.5	-14.3	
				S.D.	187.0	198.0	288.2	222.6	
				S.E.	54.0	57.2	83.2	64.3	
				N	12	12	12	12	
				Pairwise p-value++		0.081	0.291	0.630	
				Linear Trend p-value#		NT	NT	NT	
			31-40	Mean	54	50	146	50	
				S.D.	73.2	72.0	325.3	71.1	
				S.E.	21.1	20.8	93.9	20.5	
				N	12	12	12	12	
				Pairwise p-value++		0.950	0.223	0.953	
				Linear Trend p-value#		NT	NT	NT	

: Level of Significance tested = .05. ++ : Level of Significance tested = .01.
* : Statistically Significant. NT : Not tested. NA : Not applicable.

Table 3.1: Analysis Summary Table for Motor Activity

Period	Sex	Variable	Minutes	Statistic	Dosage Level (mg/kg) 0	200	700	2000	Statistical Model
DAY_014	M	TOTAL	41-50	Mean	183	50	81	44	
				S.D.	223.6	63.9	120.4	62.1	
				S.E.	64.6	18.5	34.8	17.9	
				N	12	12	12	12	
				Pairwise p-value++		0.019	0.071	0.014	
				Linear Trend p-value#		NT	NT	NT	
			51-60	Mean	103	115	42	35	
				S.D.	180.1	157.0	30.7	51.6	
				S.E.	52.0	45.3	8.9	14.9	
				N	12	12	12	12	
				Pairwise p-value++		0.809	0.230	0.180	
				Linear Trend p-value#		NT	NT	NT	
			Cumulative	Mean	2594	1977	2232	2523	
				% Difference Control	NA	-23.8	-14.0	-2.7	
				S.D.	563.4	790.2	947.3	563.7	
				S.E.	162.6	228.1	273.5	162.7	
				N	12	12	12	12	
			Overall	Pairwise p-value++		0.056	0.262	0.827	
				Linear Trend p-value#		NT	NT	0.965	
				Trt F-test p-value++					0.201
				Trt*Time p-value++					0.002*
				LinTrt*Time p-value#					0.089
				Covariance Structure					ARH1

: Level of Significance tested = .05.
* : Statistically Significant.
++ : Level of Significance tested = .01.
NT : Not tested. NA : Not applicable.

Table 3.1: Analysis Summary Table for Motor Activity

Period	Sex	Variable	Minutes	Statistic	Dosage Level (mg/kg) 0	200	700	2000	Statistical Model
DAY_014	M	AMBULATORY	0-10	Mean	316	328	297	386	
				% Difference Control	NA	3.8	-6.0	22.2	
				S.D.	78.2	151.9	73.3	82.6	
				S.E.	22.6	43.9	21.1	23.9	
				N	12	12	12	12	
				Linear Trend p-value#		NT	NT	NT	
			11-20	Mean	119	68	91	168	
				% Difference Control	NA	-42.9	-23.5	41.2	
				S.D.	67.3	66.0	83.2	105.2	
				S.E.	19.4	19.1	24.0	30.4	
				N	12	12	12	12	
				Linear Trend p-value#		NT	NT	NT	
			21-30	Mean	53	15	36	44	
				% Difference Control	NA	-71.7	-32.1	-17.0	
				S.D.	47.0	34.4	73.4	56.5	
				S.E.	13.6	9.9	21.2	16.3	
				N	12	12	12	12	
				Linear Trend p-value#		NT	NT	NT	
			31-40	Mean	4	4	20	5	
				S.D.	11.5	12.6	67.7	11.0	
				S.E.	3.3	3.6	19.5	3.2	
				N	12	12	12	12	
				Linear Trend p-value#		NT	NT	NT	

: Level of Significance tested = .05. ++ : Level of Significance tested = .01.
* : Statistically Significant. NT : Not tested. NA : Not applicable.

Table 3.1: Analysis Summary Table for Motor Activity

Period	Sex	Variable	Minutes	Statistic	Dosage Level (mg/kg) 0	200	700	2000	Statistical Model
DAY_014	M	AMBULATORY	41-50	Mean	23	6	2	1	
				S.D.	40.7	20.7	3.7	1.4	
				S.E.	11.7	6.0	1.1	0.4	
				N	12	12	12	12	
				Linear Trend p-value#		NT	NT	NT	
			51-60	Mean	13	18	1	3	
				S.D.	29.4	50.9	1.5	9.2	
				S.E.	8.5	14.7	0.4	2.7	
				N	12	12	12	12	
				Linear Trend p-value#		NT	NT	NT	
			Cumulative	Mean	528	439	446	607	
				% Difference Control	NA	-16.9	-15.5	15.0	
				S.D.	157.3	248.1	236.6	200.9	
				S.E.	45.4	71.6	68.3	58.0	
				N	12	12	12	12	
			Overall	Linear Trend p-value#		NT	NT	0.392	
				Trt F-test p-value++					0.201
				Trt*Time p-value++					0.020
				LinTrt*Time p-value#					0.074
				Covariance Structure					ARH1

: Level of Significance tested = .05.
* : Statistically Significant.
++ : Level of Significance tested = .01.
NT : Not tested. NA : Not applicable.

Table 3.1: Analysis Summary Table for Motor Activity

Period	Sex	Variable	Minutes	Statistic	Dosage Level (mg/kg) 0	200	700	2000	Statistical Model
DAY_014	F	TOTAL	0-10	Mean	1484	1556	1372	1410	
				% Difference Control	NA	4.9	-7.5	-5.0	
				S.D.	281.0	307.1	287.2	300.6	
				S.E.	81.1	88.7	82.9	86.8	
				N	12	12	12	12	
				Linear Trend p-value#		NT	NT	NT	
			11-20	Mean	721	696	689	799	
				% Difference Control	NA	-3.5	-4.4	10.8	
				S.D.	270.8	253.7	339.3	369.7	
				S.E.	78.2	73.2	97.9	106.7	
				N	12	12	12	12	
				Linear Trend p-value#		NT	NT	NT	
			21-30	Mean	421	287	405	485	
				% Difference Control	NA	-31.8	-3.8	15.2	
				S.D.	388.2	299.3	372.4	371.6	
				S.E.	112.1	86.4	107.5	107.3	
				N	12	12	12	12	
				Linear Trend p-value#		NT	NT	NT	
			31-40	Mean	417	259	267	239	
				S.D.	500.7	367.8	308.5	323.6	
				S.E.	144.5	106.2	89.0	93.4	
				N	12	12	12	12	
				Linear Trend p-value#		NT	NT	NT	

: Level of Significance tested = .05. ++ : Level of Significance tested = .01.
* : Statistically Significant. NT : Not tested. NA : Not applicable.

Table 3.1: Analysis Summary Table for Motor Activity

Period	Sex	Variable	Minutes	Statistic	Dosage Level (mg/kg) 0	200	700	2000	Statistical Model
DAY_014	F	TOTAL	41-50	Mean	275	257	243	224	
				S.D.	299.1	363.2	367.1	265.3	
				S.E.	86.4	104.9	106.0	76.6	
				N	12	12	12	12	
				Linear Trend p-value#		NT	NT	NT	
			51-60	Mean	134	219	274	328	
				S.D.	190.4	289.6	389.9	397.7	
				S.E.	55.0	83.6	112.6	114.8	
				N	12	12	12	12	
				Linear Trend p-value#		NT	NT	NT	
			Cumulative	Mean	3452	3272	3249	3486	
				% Difference Control	NA	-5.2	-5.9	1.0	
				S.D.	1466.7	1081.4	1302.0	1085.4	
				S.E.	423.4	312.2	375.9	313.3	
				N	12	12	12	12	
			Overall	Linear Trend p-value#		NT	NT	0.961	
				Trt F-test p-value++					0.950
				Trt*Time p-value++					0.595
				LinTrt*Time p-value#					0.104
				Covariance Structure					AR1

: Level of Significance tested = .05.
* : Statistically Significant.
++ : Level of Significance tested = .01.
NT : Not tested. NA : Not applicable.

Table 3.1: Analysis Summary Table for Motor Activity

Period	Sex	Variable	Minutes	Statistic	Dosage Level (mg/kg) 0	200	700	2000	Statistical Model
DAY_014	F	AMBULATORY	0-10	Mean	484	508	457	480	
				% Difference Control	NA	5.0	-5.6	-0.8	
				S.D.	145.0	159.4	166.2	147.1	
				S.E.	41.9	46.0	48.0	42.5	
				N	12	12	12	12	
				Linear Trend p-value#		NT	NT	NT	
			11-20	Mean	154	151	163	186	
				% Difference Control	NA	-1.9	5.8	20.8	
				S.D.	103.5	90.0	109.5	101.1	
				S.E.	29.9	26.0	31.6	29.2	
				N	12	12	12	12	
				Linear Trend p-value#		NT	NT	NT	
			21-30	Mean	97	48	95	106	
				% Difference Control	NA	-50.5	-2.1	9.3	
				S.D.	114.0	71.0	116.9	103.4	
				S.E.	32.9	20.5	33.8	29.8	
				N	12	12	12	12	
				Linear Trend p-value#		NT	NT	NT	
			31-40	Mean	103	62	69	46	
				S.D.	157.5	113.8	100.7	87.5	
				S.E.	45.5	32.8	29.1	25.3	
				N	12	12	12	12	
				Linear Trend p-value#		NT	NT	NT	

: Level of Significance tested = .05. ++ : Level of Significance tested = .01.
* : Statistically Significant. NT : Not tested. NA : Not applicable.

Table 3.1: Analysis Summary Table for Motor Activity

Period	Sex	Variable	Minutes	Statistic	Dosage Level (mg/kg) 0	200	700	2000	Statistical Model
DAY_014	F	AMBULATORY	41-50	Mean	56	62	61	43	
				S.D.	91.0	112.0	119.9	65.5	
				S.E.	26.3	32.3	34.6	18.9	
				N	12	12	12	12	
				Linear Trend p-value#		NT	NT	NT	
			51-60	Mean	24	41	53	72	
				S.D.	59.6	79.1	93.2	109.2	
				S.E.	17.2	22.8	26.9	31.5	
				N	12	12	12	12	
				Linear Trend p-value#		NT	NT	NT	
			Cumulative	Mean	917	872	898	933	
				% Difference Control	NA	-4.9	-2.1	1.7	
				S.D.	497.3	375.0	453.2	302.4	
				S.E.	143.6	108.3	130.8	87.3	
				N	12	12	12	12	
			Overall	Linear Trend p-value#		NT	NT	0.889	
				Trt F-test p-value++					0.984
				Trt*Time p-value++					0.889
				LinTrt*Time p-value#					0.392
				Covariance Structure					ARH1

: Level of Significance tested = .05.
* : Statistically Significant.
++ : Level of Significance tested = .01.
NT : Not tested. NA : Not applicable.

Statistical Analysis Summary Addendum
WIL Research Laboratories, LLC
Study Protocol – 118043
Version 1.0

1 Statistical Methodology
2 Results
3 Statistical Analysis Summaries
TABLE 3.1 FINDINGS: MALES
TABLE 3.2 FINDINGS: FEMALES

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APR 15, 2010
Date

ED_005427A_00022422-00518

BioSTAT Consultants, Inc.
Statement of Quality Control

This report was quality checked in accordance with BioSTAT Procedural Guideline 2: *Quality Control Process for Tables and Reports*. The statistical methodology and results of inferential statistics were verified by an independent quality control statistician. Based on these documented quality control activities, it is concluded that the statistical results incorporated in this report accurately reflect the statistical analysis of data received by BioSTAT.

1 Statistical Methodology

Graded histopathologic findings of each treated group were compared to the control group utilizing the Mann-Whitney U-Test.

All statistical analyses were conducted with the SAS® software system.

2 Results

Results of statistical analyses are summarized in Sections 3

References

SAS® Proprietary Software; Version 9.1, SAS Institute Inc.: Cary, NC, 2002-2003.

3 Statistical Analysis Summaries
TABLE 3.1 FINDINGS: MALES

SEX	ORGAN	FINDING	GRADE		Dosage Level (mg/kg) 0	2000
M	EYES	TOTAL EXAMINED		(N)	6	6
		DYSPLASIA, RETINAL	MINIMAL	(a)	0	1
			MODERATE	(a)	0	1
				(MW)		0.140

(N) NUMBER OF ANIMALS EXAMINED
(a) NUMBER OF ANIMALS WITH FINDING
(MW) MANN-WHITNEY P-VALUE FOR COMPARISON WITH CONTROL GROUP

TABLE 3.2 FINDINGS: FEMALES

SEX	ORGAN	FINDING	GRADE		Dosage Level (mg/kg) 0	2000
F	EYES	TOTAL EXAMINED		(N)	6	6
		DYSPLASIA, RETINAL	MINIMAL	(a)	1	0
			MILD	(a)	0	1
				(MW)		0.902

(N) NUMBER OF ANIMALS EXAMINED
(a) NUMBER OF ANIMALS WITH FINDING
(MW) MANN-WHITNEY P-VALUE FOR COMPARISON WITH CONTROL GROUP

APPENDIX J

WIL Acute Functional Observational Battery Historical Control Data
Version 2.2 [Crl:CD(SD) Rats]

ED_005427A_00022422-00523

Acute - Functional Observation Battery
WIL Research Laboratories - Historical Control Data
Study Table

HC #	ROUTE	VEHICLE	START	END	AGE
1	ORAL (GAVAGE)	DEIONIZED WATER	05/28/01	06/10/01	13
2	ORAL (GAVAGE)	0.1 N HCL IN WATER	06/11/01	06/21/01	8
3	ORAL (GAVAGE)	STERILE WATER	09/24/01	10/05/01	7
4	ORAL (GAVAGE)	0.4% METHYLCELLULOSE	02/08/02	02/15/02	7
5	INHALATION	FILTERED AIR	04/24/01	05/25/01	7
6	ORAL (GAVAGE)	0.4% METHYLCELLULOSE	07/30/01	08/08/01	6
7	ORAL (GAVAGE)	0.4% METHYLCELLULOSE	07/17/01	07/25/01	6
8	IV (BOLUS)	5% DEXTROSE	01/31/02	08/09/02	7
9	ORAL (GAVAGE)	0.4% HYDROXYPROPYL METHYLCELLULOSE	10/16/02	10/30/02	6
10	ORAL (GAVAGE)	0.4% HYDROXYPROPYL METHYLCELLULOSE	12/03/02	12/20/02	7
11	ORAL (GAVAGE)	0.4% HYDROXYPROPYL METHYLCELLULOSE	01/06/03	01/16/03	7
12	ORAL (GAVAGE)	0.4% HYDROXYPROPYL METHYLCELLULOSE	01/21/03	02/21/03	6
13	ORAL (GAVAGE)	0.4% HYDROXYPROPYL METHYLCELLULOSE	02/20/03	03/14/03	6
14	ORAL (GAVAGE)	0.1 N HCL IN WATER	04/04/03	05/02/03	6
15	ORAL (GAVAGE)	0.4% HYDROXYPROPYL METHYLCELLULOSE	06/17/03	07/18/03	6
16	ORAL (GAVAGE)	PLACEBO IN CYCLODEXTRIN	11/11/03	11/20/03	6
17	ORAL (GAVAGE)	DEIONIZED WATER	08/26/03	08/26/03	6
18	ORAL (GAVAGE)	DEIONIZED WATER	02/26/02	03/17/02	6
19	ORAL (GAVAGE)	CORN OIL	05/06/02	05/09/02	6
20	ORAL (GAVAGE)	CORN OIL	05/13/02	05/16/02	6
21	ORAL (GAVAGE)	CORN OIL	05/27/02	05/30/02	6
22	ORAL (GAVAGE)	CORN OIL	06/03/02	06/06/02	6

Acute - Functional Observation Battery
WIL Research Laboratories - Historical Control Data
Study Table

HC #	ROUTE	VEHICLE	START	END	AGE
23	ORAL (GAVAGE)	CORN OIL	09/26/02	09/27/02	6
24	ORAL (GAVAGE)	CORN OIL	09/23/02	09/27/02	6
25	ORAL (GAVAGE)	CORN OIL	09/23/02	09/27/02	6
26	ORAL (GAVAGE)	CORN OIL	09/25/02	09/26/02	6
27	INHALATION	FILTERED AIR	08/10/04	08/28/04	6
28	ORAL (GAVAGE)	SODIUM BICARBONATE CYCLODEXTRIN	01/11/05	01/20/05	9
29	ORAL (GAVAGE)	CORN OIL	03/29/04	04/16/04	6
30	ORAL (GAVAGE)	POLYETHYLENE GLYCOL	10/03/05	10/21/05	6
31	SUBQ INJECTION	PLACEBO	05/15/06	05/28/06	9
32	IV (BOLUS)	0.9% SODIUM CHLORIDE	05/30/06	06/12/06	7
33	ORAL (GAVAGE)	0.5% METHYLCELLULOSE	01/17/05	02/09/05	8
34	ORAL (GAVAGE)	0.25% TWEEN 20 IN 0.5% METHYLCELLULOSE WITH 0.1N HCL	07/11/05	09/14/05	6
35	ORAL (GAVAGE)	0.1% TWEEN 20 IN 0.5% METHYLCELLULOSE WITH HCL	09/26/05	10/04/05	7
36	ORAL (GAVAGE)	0.5% METHYLCELLULOSE	06/26/06	07/05/06	9
37	ORAL (GAVAGE)	HYPROMELLOSE IN POLYSORBATE 80 WITH GLYCEROL	02/27/06	03/02/06	8
38	CISTERNA MAGNA INJECTION	SODIUM CHLORIDE	11/11/05	11/11/05	7

Acute - Functional Observation Battery
WIL Research Laboratories - Historical Control Data
Males

TIME POINT (STUDY DAY)	PRETEST	0	1	7	14
NUMBER OF STUDIES	30	38	3	4	4
NUMBER OF ANIMALS TESTED	249	329	30	48	48
AGE RANGE OF ANIMALS TESTED	5 - 12	6-13	6-13	8	9
HOME CAGE OBSERVATIONS					
POSTURE					
1 - SITTING OR STANDING NORMALLY	170	228	9	31	21
2 - ASLEEP, LYING ON SIDE OR CURLED UP	61	65	14	9	12
3 - ALERT, ORIENTED TOWARD OBSERVER	15	27	6	8	15
4 - SITTING, HEAD HELD LOW	3	8	1	0	0
8 - REARING	0	4	0	0	0
9 - SPLAYED HINDLIMBS	0	1	0	0	0
CONVULSIONS - CLONIC					
1 - ABSENT	249	324	30	48	48
2 - REPETITIVE MOVEMENT OF MOUTH AND JAWS	0	5	0	0	0
CONVULSIONS - TONIC					
1 - ABSENT	249	329	30	48	48
TREMORS					
1 - NONE	249	329	30	48	48
BITING					
1 - NONE	249	327	30	48	48
2 - BITING OF CAGE	0	0	0	0	0
3 - BITING OF SELF	0	2	0	0	0

Acute - Functional Observation Battery
WIL Research Laboratories - Historical Control Data
Males

TIME POINT (STUDY DAY)	PRETEST	0	1	7	14
NUMBER OF STUDIES	30	38	3	4	4
NUMBER OF ANIMALS TESTED	249	329	30	48	48
AGE RANGE OF ANIMALS TESTED	5 - 12	6-13	6-13	8	9
HOME CAGE OBSERVATIONS					
PALPEBRAL CLOSURE					
1 - EYELIDS WIDE OPEN	176	251	13	38	38
2 - EYELIDS SLIGHTLY DROOPING	25	25	2	4	4
3 - DROOPING EYELIDS (HALF CLOSED)	12	13	5	1	2
4 - EYELIDS COMPLETELY SHUT	36	40	10	5	4
FECES CONSISTENCY					
1 - PELLETS	238	240	24	32	31
2 - PELLETS, PARTIALLY FORMED	0	0	0	0	0
4 - PELLETS ABSENT	11	89	6	16	17

Acute - Functional Observation Battery
WIL Research Laboratories - Historical Control Data
Males

TIME POINT (STUDY DAY)	PRETEST	0	1	7	14
NUMBER OF STUDIES	30	38	3	4	4
NUMBER OF ANIMALS TESTED	249	329	30	48	48
AGE RANGE OF ANIMALS TESTED	5 - 12	6-13	6-13	8	9
HANDLING OBSERVATIONS					
EASE OF REMOVAL FROM CAGE					
1 - VERY EASY	195	276	29	47	46
2 - EASY	47	49	1	1	2
3 - MODERATELY DIFFICULT	1	0	0	0	0
5 - DIFFICULT	6	3	0	0	0
6 - VERY DIFFICULT	0	1	0	0	0
EASE OF HANDLING ANIMAL IN HAND					
1 - LOW	236	297	30	47	47
2 - MODERATELY LOW	13	32	0	1	1
LACRIMATION					
1 - NONE	249	329	30	48	48
CHROMODACRYORRHEA					
1 - ABSENT	249	329	30	48	48
SALIVATION					
1 - NONE	249	326	30	47	47
2 - SLIGHT	0	3	0	1	1

Acute - Functional Observation Battery
WIL Research Laboratories - Historical Control Data
Males

TIME POINT (STUDY DAY)	PRETEST	0	1	7	14
NUMBER OF STUDIES	30	38	3	4	4
NUMBER OF ANIMALS TESTED	249	329	30	48	48
AGE RANGE OF ANIMALS TESTED	5 - 12	6-13	6-13	8	9
HANDLING OBSERVATIONS					
PILOERECTION					
1 - NONE	249	328	30	45	47
2 - SLIGHT	0	1	0	3	1
FUR APPEARANCE					
1 - NORMAL: CLEAN AND GROOMED	249	329	30	48	48
PALPEBRAL CLOSURE					
1 - EYELIDS WIDE OPEN	249	329	30	48	48
RESPIRATORY RATE					
1 - NORMAL: BY OBSERVATION (80-110/MIN.)	249	329	30	48	48
RESPIRATORY CHARACTER					
1 - NORMAL	249	328	30	48	48
2 - RALES	0	1	0	0	0
RED DEPOSITS - EYES					
1 - PRESENT	2	3	0	1	1
2 - ABSENT	247	326	30	47	47

Acute - Functional Observation Battery
WIL Research Laboratories - Historical Control Data
Males

TIME POINT (STUDY DAY)	PRETEST	0	1	7	14
NUMBER OF STUDIES	30	38	3	4	4
NUMBER OF ANIMALS TESTED	249	329	30	48	48
AGE RANGE OF ANIMALS TESTED	5 - 12	6-13	6-13	8	9
HANDLING OBSERVATIONS					
RED DEPOSITS - NOSE					
1 - PRESENT	6	7	4	0	0
2 - ABSENT	243	322	26	48	48
RED DEPOSITS - MOUTH					
1 - PRESENT	0	0	0	0	0
2 - ABSENT	249	329	30	48	48
CRUSTY DEPOSITS - EYES					
1 - PRESENT	0	1	0	0	0
2 - ABSENT	249	328	30	48	48
CRUSTY DEPOSITS - NOSE					
1 - PRESENT	6	2	3	3	1
2 - ABSENT	243	327	27	45	47
CRUSTY DEPOSITS - MOUTH					
1 - PRESENT	0	0	0	0	0
2 - ABSENT	249	329	30	48	48

Acute - Functional Observation Battery
WIL Research Laboratories - Historical Control Data
Males

TIME POINT (STUDY DAY)	PRETEST	0	1	7	14
NUMBER OF STUDIES	30	38	3	4	4
NUMBER OF ANIMALS TESTED	249	329	30	48	48
AGE RANGE OF ANIMALS TESTED	5 - 12	6-13	6-13	8	9
HANDLING OBSERVATIONS					
MUCOUS MEMBRANES - COLOR					
1 - PINK	249	328	30	48	48
2 - PALE	0	1	0	0	0
EYES - COLOR					
1 - PINK	249	329	30	48	48
SKIN - COLOR					
1 - PINK	249	329	30	48	48
EYE PROMINENCE					
1 - NORMAL	249	329	30	48	48
MUSCLE TONE					
1 - MUSCLE IS FIRM BUT NOT HARD (NORMAL)	249	328	30	48	48
2 - MUSCLE IS SOFT AND FLABBY	0	1	0	0	0
3 - MUSCLE IS TENSE AND HARD	0	0	0	0	0

Acute - Functional Observation Battery
WIL Research Laboratories - Historical Control Data
Males

TIME POINT (STUDY DAY)	PRETEST	0	1	7	14
NUMBER OF STUDIES	30	38	3	4	4
NUMBER OF ANIMALS TESTED	249	329	30	48	48
AGE RANGE OF ANIMALS TESTED	5 - 12	6-13	6-13	8	9
OPEN FIELD OBSERVATIONS					
MOBILITY					
1 - NORMAL	249	329	30	48	48
GAIT					
1 - NORMAL	249	327	30	48	48
2 - WALKS ON TIPTOES	0	1	0	0	0
5 - HUNCHED BODY, BOTTOM UP, NOSE HELD DOWN, ARC	0	1	0	0	0
CONVULSIONS - CLONIC					
1 - ABSENT	249	328	30	48	48
5 - CLONIC CONVULSIONS	0	1	0	0	0
CONVULSIONS - TONIC					
1 - ABSENT	249	329	30	48	48
TREMORS					
1 - NONE	249	328	30	48	48
2 - SLIGHT (1.5MM)	0	1	0	0	0
GAIT SCORE					
1 - NORMAL	249	328	30	48	48
3 - CONSIDERABLE IMPAIRMENT, WITHOUT FALLING	0	1	0	0	0

Acute - Functional Observation Battery
WIL Research Laboratories - Historical Control Data
Males

TIME POINT (STUDY DAY)	PRETEST	0	1	7	14
NUMBER OF STUDIES	30	38	3	4	4
NUMBER OF ANIMALS TESTED	249	329	30	48	48
AGE RANGE OF ANIMALS TESTED	5 - 12	6-13	6-13	8	9
OPEN FIELD OBSERVATIONS					
AROUSAL					
2 - LOW	2	25	10	3	4
3 - NORMAL	247	300	20	45	44
4 - SOMEWHAT HIGH	0	4	0	0	0
5 - VERY HIGH	0	0	0	0	0
BIZARRE/STEREOTYPIC BEHAVIOR					
1 - NONE	249	329	30	48	47
11 - RETROPULSION	0	0	0	0	1
13 - SIDE TO SIDE ROCKING	0	0	0	0	0

Acute - Functional Observation Battery
WIL Research Laboratories - Historical Control Data
Males

TIME POINT (STUDY DAY)		PRETEST	0	1	7	14
NUMBER OF STUDIES		30	38	3	4	4
NUMBER OF ANIMALS TESTED		249	329	30	48	48
AGE RANGE OF ANIMALS TESTED		5 - 12	6-13	6-13	8	9
OPEN FIELD OBSERVATIONS						
TIME TO FIRST STEP (seconds)						
	MEAN	0.4	0.4	0.4	0.4	0.4
	S.D.	0.11	0.08	0.04	0.05	0.09
	MIN	0.3	0.2	0.4	0.3	0.3
	MAX	0.7	0.6	0.4	0.5	0.5
REARING						
	MEAN	6.7	5.2	3.9	5.4	7.4
	S.D.	1.64	1.68	3.00	1.18	2.17
	MIN	3.6	2.1	1.4	4.4	5.3
	MAX	10.0	9.5	7.2	6.5	9.8
BACKING						
	MEAN	0.0	0.0	0.0	0.0	0.0
	S.D.	0.04	0.00	0.00	0.00	0.04
	MIN	0.0	0.0	0.0	0.0	0.0
	MAX	0.2	0.0	0.0	0.0	0.1
GROOMING						
	MEAN	0.4	0.3	0.2	0.4	0.3
	S.D.	0.35	0.27	0.29	0.16	0.11
	MIN	0.0	0.0	0.0	0.3	0.2
	MAX	1.5	1.1	0.5	0.6	0.4

Acute - Functional Observation Battery
WIL Research Laboratories - Historical Control Data
Males

TIME POINT (STUDY DAY)		PRETEST	0	1	7	14
NUMBER OF STUDIES		30	38	3	4	4
NUMBER OF ANIMALS TESTED		249	329	30	48	48
AGE RANGE OF ANIMALS TESTED		5 - 12	6-13	6-13	8	9
OPEN FIELD OBSERVATIONS						
URINATION						
	MEAN	0.6	0.5	0.4	0.5	0.8
	S.D.	0.41	0.33	0.31	0.18	0.42
	MIN	0.0	0.0	0.1	0.3	0.3
	MAX	2.3	1.2	0.7	0.7	1.3
DEFECATION						
	MEAN	0.5	0.9	1.1	0.5	0.4
	S.D.	0.44	0.70	1.07	0.31	0.24
	MIN	0.0	0.0	0.4	0.1	0.1
	MAX	1.8	3.0	2.3	0.8	0.6

Acute - Functional Observation Battery
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Males

TIME POINT (STUDY DAY)	PRETEST	0	1	7	14
NUMBER OF STUDIES	30	38	3	4	4
NUMBER OF ANIMALS TESTED	249	329	30	48	48
AGE RANGE OF ANIMALS TESTED	5 - 12	6-13	6-13	8	9
SENSORY OBSERVATIONS					
APPROACH RESPONSE					
1 - NO REACTION	4	9	1	6	3
2 - SLOW APPROACH, SNIFFING OR TURNING AWAY	244	320	29	42	45
3 - MORE ENERGETIC RESPONSE THAN (2)	1	0	0	0	0
4 - FREEZES, ACTUAL MUSCLE CONTRACTION	0	0	0	0	0
TOUCH RESPONSE					
1 - NO REACTION	6	20	5	4	2
2 - ANIMAL MAY SLOWLY TURN, WALK AWAY	239	307	25	44	46
3 - MORE ENERGETIC RESPONSE THAN (2)	4	2	0	0	0
4 - FREEZES, ACTUAL MUSCLE CONTRACTION	0	0	0	0	0
STARTLE RESPONSE					
1 - NO REACTION	0	2	0	0	0
2 - SLIGHT REACTION	237	313	30	47	47
3 - MORE ENERGETIC RESPONSE THAN (2)	12	14	0	1	1

Acute - Functional Observation Battery
WIL Research Laboratories - Historical Control Data
Males

TIME POINT (STUDY DAY)	PRETEST	0	1	7	14
NUMBER OF STUDIES	30	38	3	4	4
NUMBER OF ANIMALS TESTED	249	329	30	48	48
AGE RANGE OF ANIMALS TESTED	5 - 12	6-13	6-13	8	9
SENSORY OBSERVATIONS					
TAIL PINCH					
1 - NO REACTION	5	1	1	0	1
2 - ANIMAL MAY TURN OR WALK AWAY	194	236	24	41	40
3 - MORE ENERGETIC RESPONSE THAN (2)	50	92	5	7	7
5 - BIZARRE REACTION: JUMPS, ATTACKS OR BITES	0	0	0	0	0
OLFACTORY ORIENTATION					
1 - NO REACTION PRESENT	0	9	2	6	3
2 - REACTION PRESENT	249	320	28	42	45
PUPIL RESPONSE					
1 - NO PUPIL RESPONSE	0	2	0	1	0
2 - PUPIL RESPONSE PRESENT	249	327	30	47	48
EYEBLINK RESPONSE					
2 - EYEBLINK RESPONSE PRESENT	249	329	30	48	48
FORELIMB EXTENSION					
1 - NO FORELIMB EXTENSION	0	0	0	0	0
2 - FORELIMB EXTENSION PRESENT	249	329	30	48	48

Acute - Functional Observation Battery
WIL Research Laboratories - Historical Control Data
Males

TIME POINT (STUDY DAY)	PRETEST	0	1	7	14
NUMBER OF STUDIES	30	38	3	4	4
NUMBER OF ANIMALS TESTED	249	329	30	48	48
AGE RANGE OF ANIMALS TESTED	5 - 12	6-13	6-13	8	9
SENSORY OBSERVATIONS					
HINDLIMB EXTENSION					
1 - NO HINDLIMB EXTENSION	0	1	0	0	1
2 - HINDLIMB EXTENSION PRESENT	249	328	30	48	47
AIR RIGHTING REFLEX					
1 - NORMAL	248	326	30	46	48
2 - SLIGHTLY UNCOORDINATED	1	3	0	2	0
NEUROMUSCULAR OBSERVATIONS					
HINDLIMB EXTENSOR STRENGTH					
2 - REDUCED HINDLIMB RESISTANCE	3	0	0	0	0
3 - HINDLIMB RESISTANCE PRESENT	246	329	30	48	48

Acute - Functional Observation Battery
WIL Research Laboratories - Historical Control Data
Males

TIME POINT (STUDY DAY)		PRETEST	0	1	7	14
NUMBER OF STUDIES		30	38	3	4	4
NUMBER OF ANIMALS TESTED		249	329	30	48	48
AGE RANGE OF ANIMALS TESTED		5 - 12	6-13	6-13	8	9
NEUROMUSCULAR OBSERVATIONS						
GRIPSTRENGTH - FORELIMB (g)						
	MEAN	556.4	536.3	564.7	543.4	546.7
	S.D.	157.09	146.62	124.01	148.66	124.77
	MIN	321.2	289.5	423.3	398.0	446.5
	MAX	877.5	1002.5	655.0	677.1	719.4
GRIPSTRENGTH - HINDLIMB (g)						
	MEAN	282.2	311.0	426.1	344.4	354.3
	S.D.	93.92	98.15	142.42	61.37	23.07
	MIN	172.3	165.7	262.6	280.5	328.5
	MAX	540.3	554.0	523.2	399.3	379.2
ROTAROD PERFORMANCE (seconds)						
	MEAN	78.0	91.3	90.8	101.4	90.9
	S.D.	21.20	16.09	1.95	5.94	17.02
	MIN	33.5	50.4	88.8	94.2	75.1
	MAX	120.0	119.7	92.7	106.8	106.5
HINDLIMB FOOTSPLAY (mm)						
	MEAN	65.6	64.9	58.7	65.0	65.9
	S.D.	10.38	9.35	8.07	11.18	7.35
	MIN	43.0	38.3	49.6	50.3	57.2
	MAX	82.4	83.8	65.0	74.1	74.4

Acute - Functional Observation Battery
WIL Research Laboratories - Historical Control Data
Males

TIME POINT (STUDY DAY)		PRETEST	0	1	7	14
NUMBER OF STUDIES		30	38	3	4	4
NUMBER OF ANIMALS TESTED		249	329	30	48	48
AGE RANGE OF ANIMALS TESTED		5 - 12	6-13	6-13	8	9
PHYSIOLOGICAL OBSERVATIONS						
CATALEPSY (seconds)						
	MEAN	0.4	0.4	0.6	0.4	0.4
	S.D.	0.15	0.19	0.17	0.23	0.19
	MIN	0.2	0.2	0.4	0.2	0.2
	MAX	0.7	1.1	0.7	0.6	0.6
BODY TEMPERATURE (°C)						
	MEAN	37.6	38.1	37.2	38.3	38.5
	S.D.	0.73	0.85	0.43	0.34	0.66
	MIN	35.8	36.0	36.7	38.0	37.5
	MAX	38.7	39.2	37.6	38.6	38.9
BODY WEIGHT (g)						
	MEAN	195.7	238.9	266.1	260.2	309.3
	S.D.	64.71	52.39	35.36	15.02	9.33
	MIN	122.8	180.2	225.5	237.9	296.8
	MAX	434.4	446.0	289.9	269.2	317.8

Acute - Functional Observation Battery
WIL Research Laboratories - Historical Control Data
Females

TIME POINT (STUDY DAY)	PRETEST	0	1	7	14
NUMBER OF STUDIES	30	30	3	4	4
NUMBER OF ANIMALS TESTED	249	249	30	48	48
AGE RANGE OF ANIMALS TESTED	5 - 12	6-13	6-13	8	9
HOME CAGE OBSERVATIONS					
POSTURE					
1 - SITTING OR STANDING NORMALLY	182	164	8	25	31
2 - ASLEEP, LYING ON SIDE OR CURLED UP	44	26	9	8	4
3 - ALERT, ORIENTED TOWARD OBSERVER	22	50	12	15	14
4 - SITTING, HEAD HELD LOW	0	2	1	0	0
8 - REARING	3	13	4	2	5
9 - SPLAYED HINDLIMBS	0	0	0	0	0
CONVULSIONS - CLONIC					
1 - ABSENT	249	246	30	48	48
2 - REPETITIVE MOVEMENT OF MOUTH AND JAWS	0	3	0	0	0
CONVULSIONS - TONIC					
1 - ABSENT	249	249	30	48	48
TREMORS					
1 - NONE	249	249	30	48	48
BITING					
1 - NONE	249	246	30	48	48
2 - BITING OF CAGE	0	1	0	0	0
3 - BITING OF SELF	0	2	0	0	0

Acute - Functional Observation Battery
WIL Research Laboratories - Historical Control Data
Females

TIME POINT (STUDY DAY)	PRETEST	0	1	7	14
NUMBER OF STUDIES	30	30	3	4	4
NUMBER OF ANIMALS TESTED	249	249	30	48	48
AGE RANGE OF ANIMALS TESTED	5 - 12	6-13	6-13	8	9
HOME CAGE OBSERVATIONS					
PALPEBRAL CLOSURE					
1 - EYELIDS WIDE OPEN	201	210	19	37	46
2 - EYELIDS SLIGHTLY DROOPING	16	16	2	4	0
3 - DROOPING EYELIDS (HALF CLOSED)	8	7	4	1	0
4 - EYELIDS COMPLETELY SHUT	24	16	5	6	2
FECES CONSISTENCY					
1 - PELLETS	219	169	22	26	29
2 - PELLETS, PARTIALLY FORMED	0	1	0	0	0
4 - PELLETS ABSENT	30	79	8	22	19

Acute - Functional Observation Battery
WIL Research Laboratories - Historical Control Data
Females

TIME POINT (STUDY DAY)	PRETEST	0	1	7	14
NUMBER OF STUDIES	30	30	3	4	4
NUMBER OF ANIMALS TESTED	249	249	30	48	48
AGE RANGE OF ANIMALS TESTED	5 - 12	6-13	6-13	8	9
HANDLING OBSERVATIONS					
EASE OF REMOVAL FROM CAGE					
1 - VERY EASY	190	194	28	45	45
2 - EASY	49	53	2	3	3
3 - MODERATELY DIFFICULT	2	0	0	0	0
5 - DIFFICULT	8	2	0	0	0
6 - VERY DIFFICULT	0	0	0	0	0
EASE OF HANDLING ANIMAL IN HAND					
1 - LOW	228	217	30	45	46
2 - MODERATELY LOW	21	32	0	3	2
LACRIMATION					
1 - NONE	249	249	30	48	48
CHROMODACRYORRHEA					
1 - ABSENT	249	249	30	48	48
SALIVATION					
1 - NONE	249	249	30	48	48
2 - SLIGHT	0	0	0	0	0

Acute - Functional Observation Battery
WIL Research Laboratories - Historical Control Data
Females

TIME POINT (STUDY DAY)	PRETEST	0	1	7	14
NUMBER OF STUDIES	30	30	3	4	4
NUMBER OF ANIMALS TESTED	249	249	30	48	48
AGE RANGE OF ANIMALS TESTED	5 - 12	6-13	6-13	8	9
HANDLING OBSERVATIONS					
PILOERECTION					
1 - NONE	249	249	30	48	48
2 - SLIGHT	0	0	0	0	0
FUR APPEARANCE					
1 - NORMAL: CLEAN AND GROOMED	249	249	30	48	48
PALPEBRAL CLOSURE					
1 - EYELIDS WIDE OPEN	249	249	30	48	48
RESPIRATORY RATE					
1 - NORMAL: BY OBSERVATION (80-110/MIN.)	249	249	30	48	48
RESPIRATORY CHARACTER					
1 - NORMAL	249	249	30	48	48
2 - RALES	0	0	0	0	0
RED DEPOSITS - EYES					
1 - PRESENT	0	0	0	0	0
2 - ABSENT	249	249	30	48	48

Acute - Functional Observation Battery
WIL Research Laboratories - Historical Control Data
Females

TIME POINT (STUDY DAY)	PRETEST	0	1	7	14
NUMBER OF STUDIES	30	30	3	4	4
NUMBER OF ANIMALS TESTED	249	249	30	48	48
AGE RANGE OF ANIMALS TESTED	5 - 12	6-13	6-13	8	9
HANDLING OBSERVATIONS					
RED DEPOSITS - NOSE					
1 - PRESENT	2	3	0	0	0
2 - ABSENT	247	246	30	48	48
RED DEPOSITS - MOUTH					
1 - PRESENT	0	0	0	0	0
2 - ABSENT	249	249	30	48	48
CRUSTY DEPOSITS - EYES					
1 - PRESENT	0	0	0	0	0
2 - ABSENT	249	249	30	48	48
CRUSTY DEPOSITS - NOSE					
1 - PRESENT	0	2	0	2	1
2 - ABSENT	249	247	30	46	47
CRUSTY DEPOSITS - MOUTH					
1 - PRESENT	0	1	0	0	0
2 - ABSENT	249	248	30	48	48

Acute - Functional Observation Battery
WIL Research Laboratories - Historical Control Data
Females

TIME POINT (STUDY DAY)	PRETEST	0	1	7	14
NUMBER OF STUDIES	30	30	3	4	4
NUMBER OF ANIMALS TESTED	249	249	30	48	48
AGE RANGE OF ANIMALS TESTED	5 - 12	6-13	6-13	8	9
HANDLING OBSERVATIONS					
MUCOUS MEMBRANES - COLOR					
1 - PINK	249	249	30	48	48
2 - PALE	0	0	0	0	0
EYES - COLOR					
1 - PINK	249	249	30	48	48
SKIN - COLOR					
1 - PINK	249	249	30	48	48
EYE PROMINENCE					
1 - NORMAL	249	249	30	48	48
MUSCLE TONE					
1 - MUSCLE IS FIRM BUT NOT HARD (NORMAL)	248	247	30	48	48
2 - MUSCLE IS SOFT AND FLABBY	0	0	0	0	0
3 - MUSCLE IS TENSE AND HARD	1	2	0	0	0

Acute - Functional Observation Battery
WIL Research Laboratories - Historical Control Data
Females

TIME POINT (STUDY DAY)	PRETEST	0	1	7	14
NUMBER OF STUDIES	30	30	3	4	4
NUMBER OF ANIMALS TESTED	249	249	30	48	48
AGE RANGE OF ANIMALS TESTED	5 - 12	6-13	6-13	8	9
OPEN FIELD OBSERVATIONS					
MOBILITY					
1 - NORMAL	249	249	30	48	48
GAIT					
1 - NORMAL	249	243	30	46	46
2 - WALKS ON TIPTOES	0	6	0	2	2
5 - HUNCHED BODY, BOTTOM UP, NOSE HELD DOWN, ARC	0	0	0	0	1
CONVULSIONS - CLONIC					
1 - ABSENT	249	248	30	48	48
5 - CLONIC CONVULSIONS	0	1	0	0	0
CONVULSIONS - TONIC					
1 - ABSENT	249	249	30	48	48
TREMORS					
1 - NONE	249	249	30	48	48
2 - SLIGHT (1.5MM)	0	0	0	0	0
GAIT SCORE					
1 - NORMAL	249	249	30	48	48
3 - CONSIDERABLE IMPAIRMENT, WITHOUT FALLING	0	0	0	0	0

Acute - Functional Observation Battery
WIL Research Laboratories - Historical Control Data
Females

TIME POINT (STUDY DAY)	PRETEST	0	1	7	14
NUMBER OF STUDIES	30	30	3	4	4
NUMBER OF ANIMALS TESTED	249	249	30	48	48
AGE RANGE OF ANIMALS TESTED	5 - 12	6-13	6-13	8	9
OPEN FIELD OBSERVATIONS					
AROUSAL					
2 - LOW	0	9	0	1	1
3 - NORMAL	249	231	30	44	44
4 - SOMEWHAT HIGH	0	8	0	3	2
5 - VERY HIGH	0	1	0	0	1
BIZARRE/STEREOTYPIC BEHAVIOR					
1 - NONE	249	249	30	48	48
11 - RETROPULSION	0	0	0	0	0
13 - SIDE TO SIDE ROCKING	0	1	0	0	0

Acute - Functional Observation Battery
WIL Research Laboratories - Historical Control Data
Females

TIME POINT (STUDY DAY)		PRETEST	0	1	7	14
NUMBER OF STUDIES		30	30	3	4	4
NUMBER OF ANIMALS TESTED		249	249	30	48	48
AGE RANGE OF ANIMALS TESTED		5 - 12	6-13	6-13	8	9
OPEN FIELD OBSERVATIONS						
TIME TO FIRST STEP (seconds)						
	MEAN	0.4	0.4	0.3	0.4	0.4
	S.D.	0.13	0.10	0.04	0.07	0.05
	MIN	0.2	0.2	0.3	0.3	0.3
	MAX	0.8	0.6	0.4	0.4	0.4
REARING						
	MEAN	8.1	7.8	7.4	9.2	11.5
	S.D.	2.21	2.74	1.45	0.91	0.64
	MIN	4.4	1.0	6.0	8.1	11.1
	MAX	12.9	15.8	8.9	10.3	12.4
BACKING						
	MEAN	0.0	0.1	0.0	0.0	0.0
	S.D.	0.00	0.40	0.00	0.00	0.00
	MIN	0.0	0.0	0.0	0.0	0.0
	MAX	0.0	2.2	0.0	0.0	0.0
GROOMING						
	MEAN	0.4	0.4	0.8	0.4	0.6
	S.D.	0.30	0.28	0.51	0.11	0.36
	MIN	0.0	0.0	0.2	0.3	0.3
	MAX	1.1	1.0	1.2	0.5	1.0

Acute - Functional Observation Battery
WIL Research Laboratories - Historical Control Data
Females

TIME POINT (STUDY DAY)		PRETEST	0	1	7	14
NUMBER OF STUDIES		30	30	3	4	4
NUMBER OF ANIMALS TESTED		249	249	30	48	48
AGE RANGE OF ANIMALS TESTED		5 - 12	6-13	6-13	8	9
OPEN FIELD OBSERVATIONS						
URINATION						
	MEAN	0.3	0.2	0.1	0.1	0.0
	S.D.	0.26	0.24	0.06	0.08	0.04
	MIN	0.0	0.0	0.0	0.0	0.0
	MAX	1.2	0.8	0.1	0.2	0.1
DEFECATION						
	MEAN	0.3	0.2	0.1	0.1	0.1
	S.D.	0.36	0.27	0.12	0.13	0.21
	MIN	0.0	0.0	0.0	0.0	0.0
	MAX	1.2	1.2	0.2	0.3	0.4

Acute - Functional Observation Battery
WIL Research Laboratories - Historical Control Data
Females

TIME POINT (STUDY DAY)	PRETEST	0	1	7	14
NUMBER OF STUDIES	30	30	3	4	4
NUMBER OF ANIMALS TESTED	249	249	30	48	48
AGE RANGE OF ANIMALS TESTED	5 - 12	6-13	6-13	8	9
SENSORY OBSERVATIONS					
APPROACH RESPONSE					
1 - NO REACTION	4	7	0	3	1
2 - SLOW APPROACH, SNIFFING OR TURNING AWAY	240	237	30	45	46
3 - MORE ENERGETIC RESPONSE THAN (2)	5	4	0	0	1
4 - FREEZES, ACTUAL MUSCLE CONTRACTION	0	1	0	0	0
TOUCH RESPONSE					
1 - NO REACTION	5	11	2	1	0
2 - ANIMAL MAY SLOWLY TURN, WALK AWAY	240	232	28	46	47
3 - MORE ENERGETIC RESPONSE THAN (2)	4	5	0	1	1
4 - FREEZES, ACTUAL MUSCLE CONTRACTION	0	1	0	0	0
STARTLE RESPONSE					
1 - NO REACTION	0	1	0	0	0
2 - SLIGHT REACTION	238	233	30	46	43
3 - MORE ENERGETIC RESPONSE THAN (2)	11	15	0	2	5

Acute - Functional Observation Battery
WIL Research Laboratories - Historical Control Data
Females

TIME POINT (STUDY DAY)	PRETEST	0	1	7	14
NUMBER OF STUDIES	30	30	3	4	4
NUMBER OF ANIMALS TESTED	249	249	30	48	48
AGE RANGE OF ANIMALS TESTED	5 - 12	6-13	6-13	8	9
SENSORY OBSERVATIONS					
TAIL PINCH					
1 - NO REACTION	4	1	0	0	0
2 - ANIMAL MAY TURN OR WALK AWAY	181	169	22	41	35
3 - MORE ENERGETIC RESPONSE THAN (2)	64	77	8	7	13
5 - BIZARRE REACTION: JUMPS, ATTACKS OR BITES	0	2	0	0	0
OLFACTORY ORIENTATION					
1 - NO REACTION PRESENT	0	0	0	1	0
2 - REACTION PRESENT	249	249	30	47	48
PUPIL RESPONSE					
1 - NO PUPIL RESPONSE	0	1	0	1	3
2 - PUPIL RESPONSE PRESENT	249	248	30	47	45
EYEBLINK RESPONSE					
2 - EYEBLINK RESPONSE PRESENT	249	249	30	48	48
FORELIMB EXTENSION					
1 - NO FORELIMB EXTENSION	0	1	0	0	1
2 - FORELIMB EXTENSION PRESENT	249	248	30	48	47

Acute - Functional Observation Battery
WIL Research Laboratories - Historical Control Data
Females

TIME POINT (STUDY DAY)	PRETEST	0	1	7	14
NUMBER OF STUDIES	30	30	3	4	4
NUMBER OF ANIMALS TESTED	249	249	30	48	48
AGE RANGE OF ANIMALS TESTED	5 - 12	6-13	6-13	8	9
SENSORY OBSERVATIONS					
HINDLIMB EXTENSION					
1 - NO HINDLIMB EXTENSION	0	0	0	0	1
2 - HINDLIMB EXTENSION PRESENT	249	249	30	48	47
AIR RIGHTING REFLEX					
1 - NORMAL	249	248	30	48	47
2 - SLIGHTLY UNCOORDINATED	0	1	0	0	1
NEUROMUSCULAR OBSERVATIONS					
HINDLIMB EXTENSOR STRENGTH					
2 - REDUCED HINDLIMB RESISTANCE	0	0	0	0	0
3 - HINDLIMB RESISTANCE PRESENT	249	249	30	48	48

Acute - Functional Observation Battery
WIL Research Laboratories - Historical Control Data
Females

TIME POINT (STUDY DAY)		PRETEST	0	1	7	14
NUMBER OF STUDIES		30	30	3	4	4
NUMBER OF ANIMALS TESTED		249	249	30	48	48
AGE RANGE OF ANIMALS TESTED		5 - 12	6-13	6-13	8	9
NEUROMUSCULAR OBSERVATIONS						
GRIPSTRENGTH - FORELIMB (g)						
	MEAN	534.5	517.1	527.3	531.2	448.5
	S.D.	152.75	145.48	45.38	98.02	72.34
	MIN	321.8	285.5	475.1	393.7	383.3
	MAX	971.2	941.8	557.6	618.3	544.6
GRIPSTRENGTH - HINDLIMB (g)						
	MEAN	270.9	306.0	385.5	343.0	305.6
	S.D.	80.46	89.51	80.82	52.23	31.56
	MIN	161.2	180.7	322.4	287.5	274.9
	MAX	447.3	549.8	476.6	407.6	345.2
ROTAROD PERFORMANCE (seconds)						
	MEAN	71.1	83.6	93.8	90.2	96.6
	S.D.	21.46	24.15	19.20	2.25	9.48
	MIN	31.6	26.2	77.4	87.3	83.7
	MAX	120.0	120.0	114.9	92.1	104.7
HINDLIMB FOOTSPLAY (mm)						
	MEAN	62.3	58.9	53.3	58.2	53.3
	S.D.	8.33	8.13	4.60	8.35	10.41
	MIN	48.0	41.5	48.1	46.7	39.9
	MAX	84.6	72.7	56.9	66.1	63.6

Acute - Functional Observation Battery
WIL Research Laboratories - Historical Control Data
Females

TIME POINT (STUDY DAY)		PRETEST	0	1	7	14
NUMBER OF STUDIES		30	30	3	4	4
NUMBER OF ANIMALS TESTED		249	249	30	48	48
AGE RANGE OF ANIMALS TESTED		5 - 12	6-13	6-13	8	9
PHYSIOLOGICAL OBSERVATIONS						
CATALEPSY (seconds)						
	MEAN	0.4	0.4	0.3	0.4	0.3
	S.D.	0.13	0.15	0.03	0.21	0.17
	MIN	0.2	0.2	0.3	0.2	0.2
	MAX	0.7	0.7	0.4	0.6	0.5
BODY TEMPERATURE (°C)						
	MEAN	37.8	38.3	38.1	38.5	38.6
	S.D.	0.70	0.70	0.43	0.29	0.66
	MIN	35.9	36.5	37.7	38.2	37.7
	MAX	39.0	39.4	38.5	38.8	39.2
BODY WEIGHT (g)						
	MEAN	153.4	177.8	187.2	179.4	200.1
	S.D.	34.87	28.43	16.27	4.13	3.88
	MIN	109.0	146.1	168.4	173.3	197.4
	MAX	262.0	268.4	197.6	182.2	205.8

APPENDIX K

WIL Acute Locomotor Activity Historical Control Data
Version 1.2 [Crl:CD(SD) Rats]

ED_005427A_00022422-00556

WIL Research Laboratories - Historical Control Summary of Locomotor Activity
Kinder Scientific

Sex: M Study Type: ACUTE Species: CRL:CD(SD) Strain: RAT

		TOTAL							AMBULATORY						
		PRETEST													
Minutes		0-10	11-20	21-30	31-40	41-50	51-60	Cumulative	0-10	11-20	21-30	31-40	41-50	51-60	Cumulative
HC Number	Time														
9	PM	1113	514	236	75	78	189	2205	336	80	24	2	1	2	445
14	PM	1154	577	344	98	62	86	2322	345	113	56	7	1	2	524
17	PM	1103	593	322	156	265	246	2686	343	114	36	11	21	14	539
22	PM	1183	547	271	208	178	194	2580	395	106	47	22	10	5	585
Mean		1138	558	293	134	146	179	2448	355	103	41	10	8	6	523
StDev		37.0	34.8	49.0	59.8	94.8	66.9	222.9	27.0	16.0	13.9	8.9	9.7	5.9	58.6
SEM		18.5	17.4	24.5	29.9	47.4	33.4	111.4	13.5	8.0	7.0	4.4	4.9	2.9	29.3
Count		4	4	4	4	4	4	4	4	4	4	4	4	4	4
Min		1103	514	236	75	62	86	2205	336	80	24	2	1	2	445
Max		1183	593	344	208	265	246	2686	395	114	56	22	21	14	585
25th Quartile		1111	539	262	92	74	163	2292	341	100	33	6	1	2	504
75th Quartile		1161	581	328	169	200	207	2607	357	113	49	14	13	8	551

NA = Not applicable

WIL Research Laboratories - Historical Control Summary of Locomotor Activity
Kinder Scientific

Sex: M Study Type: ACUTE Species: CRL:CD(SD) Strain: RAT

		TOTAL							AMBULATORY						
		DAY 0													
Minutes		0-10	11-20	21-30	31-40	41-50	51-60	Cumulative	0-10	11-20	21-30	31-40	41-50	51-60	Cumulative
HC Number	Time														
9	PM	1172	552	426	188	81	219	2638	344	97	74	20	3	43	582
14	PM	1102	544	195	58	70	149	2118	290	82	17	0	4	25	418
17	PM	1152	633	319	163	73	51	2391	331	113	45	12	1	0	501
22	PM	1190	478	162	136	51	91	2109	348	57	7	12	1	2	427
Mean		1154	552	276	136	69	128	2314	328	87	36	11	2	18	482
StDev		37.7	63.5	120.9	56.4	12.4	72.8	252.5	26.4	23.5	30.3	8.2	1.8	20.3	76.3
SEM		18.9	31.7	60.4	28.2	6.2	36.4	126.3	13.2	11.8	15.1	4.1	0.9	10.2	38.2
Count		4	4	4	4	4	4	4	4	4	4	4	4	4	4
Min		1102	478	162	58	51	51	2109	290	57	7	0	1	0	418
Max		1190	633	426	188	81	219	2638	348	113	74	20	4	43	582
25th Quartile		1139	527	187	117	65	81	2115	320	76	14	9	1	2	425
75th Quartile		1176	573	346	169	75	166	2453	345	101	52	14	3	29	522

NA = Not applicable

WIL Research Laboratories - Historical Control Summary of Locomotor Activity
Kinder Scientific

Sex: M Study Type: ACUTE Species: CRL:CD(SD) Strain: RAT

		TOTAL							AMBULATORY						
		DAY 7													
Minutes		0-10	11-20	21-30	31-40	41-50	51-60	Cumulative	0-10	11-20	21-30	31-40	41-50	51-60	Cumulative
HC Number	Time														
9	PM	1226	648	337	199	78	63	2552	360	115	49	20	8	5	557
Mean		1226	648	337	199	78	63	2552	360	115	49	20	8	5	557
StDev															
SEM															
Count		1	1	1	1	1	1	1	1	1	1	1	1	1	1
Min		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Max		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
25th Quartile		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
75th Quartile		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

NA = Not applicable

WIL Research Laboratories - Historical Control Summary of Locomotor Activity
Kinder Scientific

Sex: M Study Type: ACUTE Species: CRL:CD(SD) Strain: RAT

		TOTAL							AMBULATORY						
		DAY 14													
Minutes		0-10	11-20	21-30	31-40	41-50	51-60	Cumulative	0-10	11-20	21-30	31-40	41-50	51-60	Cumulative
HC Number	Time														
9	PM	1366	627	415	177	178	127	2891	382	112	65	21	24	14	618
Mean		1366	627	415	177	178	127	2891	382	112	65	21	24	14	618
StDev															
SEM															
Count		1	1	1	1	1	1	1	1	1	1	1	1	1	1
Min		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Max		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
25th Quartile		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
75th Quartile		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

NA = Not applicable

Version 1.2
08-Jun-09

WIL Research Laboratories - Historical Control Summary of Locomotor Activity
Kinder Scientific

Sex: F Study Type: ACUTE Species: CRL:CD(SD) Strain: RAT

		TOTAL							AMBULATORY						
		PRETEST													
Minutes		0-10	11-20	21-30	31-40	41-50	51-60	Cumulative	0-10	11-20	21-30	31-40	41-50	51-60	Cumulative
HC Number	Time														
9	PM	1305	476	214	363	205	140	2703	440	106	35	86	22	9	698
14	PM	1421	670	236	218	73	86	2703	458	177	43	49	9	11	748
17	PM	1182	497	322	289	210	144	2643	414	95	44	13	10	4	582
22	PM	1225	589	266	192	186	146	2605	449	126	39	31	21	2	668
Mean		1283	558	259	266	168	129	2664	440	126	40	45	16	6	674
StDev		104.7	89.3	46.7	77.0	64.3	28.8	48.5	18.8	36.4	4.3	31.2	6.9	4.1	69.7
SEM		52.4	44.6	23.4	38.5	32.2	14.4	24.3	9.4	18.2	2.2	15.6	3.4	2.1	34.8
Count		4	4	4	4	4	4	4	4	4	4	4	4	4	4
Min		1182	476	214	192	73	86	2605	414	95	35	13	9	2	582
Max		1421	670	322	363	210	146	2703	458	177	44	86	22	11	748
25th Quartile		1215	492	230	212	158	126	2634	433	104	38	26	10	4	647
75th Quartile		1334	609	280	307	206	144	2703	451	139	44	58	21	9	710

NA = Not applicable

WIL Research Laboratories - Historical Control Summary of Locomotor Activity
Kinder Scientific

Sex: F Study Type: ACUTE Species: CRL:CD(SD) Strain: RAT

		TOTAL							AMBULATORY						
		DAY 0													
Minutes		0-10	11-20	21-30	31-40	41-50	51-60	Cumulative	0-10	11-20	21-30	31-40	41-50	51-60	Cumulative
HC Number	Time														
9	PM	1263	551	206	280	233	63	2596	446	107	24	32	44	1	653
14	PM	1344	607	324	38	102	66	2480	378	135	59	1	19	12	604
17	PM	1260	511	250	197	195	232	2646	429	93	35	23	26	50	655
22	PM	1420	692	320	180	169	234	3016	524	173	67	13	14	45	835
Mean		1322	590	275	174	175	149	2684	444	127	46	17	26	27	687
StDev		76.2	78.5	57.1	100.7	55.2	97.2	231.6	60.5	35.5	19.7	13.1	13.0	24.2	101.3
SEM		38.1	39.2	28.6	50.3	27.6	48.6	115.8	30.3	17.7	9.9	6.5	6.5	12.1	50.6
Count		4	4	4	4	4	4	4	4	4	4	4	4	4	4
Min		1260	511	206	38	102	63	2480	378	93	24	1	14	1	604
Max		1420	692	324	280	233	234	3016	524	173	67	32	44	50	835
25th Quartile		1262	541	239	145	152	65	2567	416	103	32	10	18	9	641
75th Quartile		1363	628	321	218	204	232	2738	466	145	61	25	30	46	700

NA = Not applicable

WIL Research Laboratories - Historical Control Summary of Locomotor Activity
Kinder Scientific

Sex: F Study Type: ACUTE Species: CRL:CD(SD) Strain: RAT

		TOTAL							AMBULATORY						
		DAY 7													
Minutes		0-10	11-20	21-30	31-40	41-50	51-60	Cumulative	0-10	11-20	21-30	31-40	41-50	51-60	Cumulative
HC Number	Time														
9	PM	1504	805	268	183	258	184	3203	491	190	60	44	74	43	901
Mean		1504	805	268	183	258	184	3203	491	190	60	44	74	43	901
StDev															
SEM															
Count		1	1	1	1	1	1	1	1	1	1	1	1	1	1
Min		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Max		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
25th Quartile		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
75th Quartile		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

NA = Not applicable

WIL Research Laboratories - Historical Control Summary of Locomotor Activity
Kinder Scientific

Sex: F Study Type: ACUTE Species: CRL:CD(SD) Strain: RAT

		TOTAL							AMBULATORY						
		DAY 14													
Minutes		0-10	11-20	21-30	31-40	41-50	51-60	Cumulative	0-10	11-20	21-30	31-40	41-50	51-60	Cumulative
HC Number	Time														
9	PM	1472	761	323	349	245	122	3273	488	172	77	95	52	15	899
Mean		1472	761	323	349	245	122	3273	488	172	77	95	52	15	899
StDev															
SEM															
Count		1	1	1	1	1	1	1	1	1	1	1	1	1	1
Min		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Max		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
25th Quartile		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
75th Quartile		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

NA = Not applicable

Version 1.2
08-Jun-09

APPENDIX L

Individual Animal Data

TABLE I1 (DAILY EXAMINATIONS)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL CLINICAL OBSERVATIONS

TABLE RANGE: 12-01-09 TO 12-18-09

ANIMAL	SEX	GROUP	CATEGORY	DATE	TIME	GRADE	OBSERVATIONS
59866	M	0 MG/KG	NORMAL	12-04-09	7:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-05-09	9:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-06-09	10:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-07-09	9:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-08-09	10:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-09-09	10:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-11-09	10:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-12-09	12:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
59866	M	0 MG/KG	DISPOSITION	12-18-09	7:50	P	SCHEDULED EUTHANASIA
59866	M	0 MG/KG	EYES/EARS/NOSE	12-13-09	9:04	1	WET RED MATERIAL AROUND NOSE
				12-14-09	10:38	1	DRIED RED MATERIAL AROUND RIGHT EYE
				12-15-09	6:52	1	DRIED RED MATERIAL AROUND NOSE
				12-15-09	6:52	1	DRIED RED MATERIAL AROUND RIGHT EYE
				12-16-09	8:54	1	DRIED RED MATERIAL AROUND RIGHT EYE
				12-18-09	7:42	1	DRIED RED MATERIAL AROUND RIGHT EYE
59866	M	0 MG/KG	ORAL/DENTAL	12-13-09	9:03	P	UPPER INCISORS MALALIGNED
				12-14-09	10:38	P	UPPER INCISORS MALALIGNED
				12-15-09	6:52	P	UPPER INCISORS MALALIGNED
				12-16-09	8:54	P	UPPER INCISORS MALALIGNED
				12-18-09	7:42	P	UPPER INCISORS MALALIGNED
59867	M	0 MG/KG	NORMAL	12-04-09	7:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-05-09	9:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-06-09	10:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-07-09	9:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-08-09	10:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-09-09	10:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-11-09	10:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-12-09	12:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-13-09	9:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

TABLE I1 (DAILY EXAMINATIONS)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL CLINICAL OBSERVATIONS

TABLE RANGE: 12-01-09 TO 12-18-09

ANIMAL	SEX	GROUP	CATEGORY	DATE	TIME	GRADE	OBSERVATIONS
59867	M	0 MG/KG	NORMAL	12-14-09	10:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-15-09	6:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-16-09	8:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-18-09	7:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
59867	M	0 MG/KG	DISPOSITION	12-18-09	7:50	P	SCHEDULED EUTHANASIA
59869	M	0 MG/KG	NORMAL	12-02-09	10:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-03-09	10:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-04-09	7:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-05-09	9:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-06-09	10:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-07-09	9:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-09-09	10:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-10-09	10:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-11-09	10:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-12-09	12:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-13-09	9:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-14-09	10:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-16-09	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
59869	M	0 MG/KG	DISPOSITION	12-16-09	8:02	P	SCHEDULED EUTHANASIA
59870	M	0 MG/KG	NORMAL	12-03-09	10:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-04-09	7:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-05-09	9:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-06-09	10:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-07-09	9:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-08-09	10:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-10-09	10:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-11-09	10:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-12-09	12:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-13-09	9:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

TABLE I1 (DAILY EXAMINATIONS)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL CLINICAL OBSERVATIONS

TABLE RANGE: 12-01-09 TO 12-18-09

ANIMAL	SEX	GROUP	CATEGORY	DATE	TIME	GRADE	OBSERVATIONS
59870	M	0 MG/KG	NORMAL	12-14-09	10:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-15-09	6:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-17-09	7:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
59870	M	0 MG/KG	DISPOSITION	12-17-09	7:41	P	SCHEDULED EUTHANASIA
59881	M	0 MG/KG	NORMAL	12-02-09	10:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-03-09	10:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-04-09	7:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-05-09	9:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-06-09	10:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-07-09	9:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-09-09	10:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-10-09	10:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-11-09	10:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-12-09	12:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-13-09	9:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-14-09	10:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-16-09	7:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
59881	M	0 MG/KG	DISPOSITION	12-16-09	8:02	P	SCHEDULED EUTHANASIA
59884	M	0 MG/KG	NORMAL	12-01-09	11:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-02-09	10:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-03-09	10:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-04-09	7:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-05-09	9:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-06-09	10:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-08-09	10:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-09-09	10:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-10-09	10:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-11-09	10:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-12-09	12:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

TABLE RANGE: 12-01-09 TO 12-18-09

ANIMAL	SEX	GROUP	CATEGORY	DATE	TIME	GRADE	OBSERVATIONS
59884	M	0 MG/KG	NORMAL	12-13-09	9:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-15-09	6:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
59884	M	0 MG/KG	DISPOSITION	12-15-09	7:29	P	SCHEDULED EUTHANASIA
59885	M	0 MG/KG	NORMAL	12-01-09	11:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-02-09	10:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-03-09	10:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-04-09	7:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-05-09	9:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-06-09	10:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-08-09	10:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-09-09	10:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-10-09	10:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-11-09	11:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-12-09	12:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-13-09	9:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-15-09	6:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
59885	M	0 MG/KG	DISPOSITION	12-15-09	7:29	P	SCHEDULED EUTHANASIA
59891	M	0 MG/KG	NORMAL	12-04-09	7:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-05-09	9:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-06-09	10:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-07-09	9:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-08-09	10:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-09-09	10:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-11-09	11:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-12-09	12:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-13-09	9:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-14-09	10:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-15-09	6:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-16-09	8:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

TABLE RANGE: 12-01-09 TO 12-18-09

ANIMAL	SEX	GROUP	CATEGORY	DATE	TIME	GRADE	OBSERVATIONS
59891	M	0 MG/KG	NORMAL	12-18-09	7:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
59891	M	0 MG/KG	DISPOSITION	12-18-09	7:50	P	SCHEDULED EUTHANASIA
59892	M	0 MG/KG	NORMAL	12-03-09	10:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-04-09	7:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-05-09	9:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-06-09	10:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-07-09	9:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-08-09	10:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-10-09	10:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-11-09	11:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
59892	M	0 MG/KG	DISPOSITION	12-17-09	7:41	P	SCHEDULED EUTHANASIA
59892	M	0 MG/KG	BODY/INTEGUMENT	12-12-09	12:27	1	HAIR LOSS RIGHT FORELIMB
				12-13-09	9:06	1	HAIR LOSS RIGHT FORELIMB
				12-14-09	10:40	1	HAIR LOSS RIGHT FORELIMB
				12-15-09	6:55	1	HAIR LOSS RIGHT FORELIMB
				12-15-09	6:55	1	HAIR LOSS LEFT FORELIMB
				12-17-09	7:35	1	HAIR LOSS RIGHT FORELIMB
				12-17-09	7:35	1	HAIR LOSS LEFT FORELIMB
59901	M	0 MG/KG	NORMAL	12-03-09	10:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-04-09	7:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-05-09	9:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-06-09	10:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-07-09	9:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-08-09	10:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-10-09	10:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-11-09	11:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-12-09	12:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-13-09	9:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-14-09	10:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

TABLE I1 (DAILY EXAMINATIONS)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL CLINICAL OBSERVATIONS

TABLE RANGE: 12-01-09 TO 12-18-09

ANIMAL	SEX	GROUP	CATEGORY	DATE	TIME	GRADE	OBSERVATIONS
59901	M	0 MG/KG	NORMAL	12-15-09	6:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-17-09	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
59901	M	0 MG/KG	DISPOSITION	12-17-09	7:42	P	SCHEDULED EUTHANASIA
59914	M	0 MG/KG	NORMAL	12-02-09	10:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-03-09	10:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-04-09	7:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-05-09	9:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-06-09	10:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-07-09	10:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-09-09	10:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-10-09	10:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-11-09	11:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-12-09	12:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-13-09	9:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-14-09	10:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-16-09	7:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
59914	M	0 MG/KG	DISPOSITION	12-16-09	8:02	P	SCHEDULED EUTHANASIA
59915	M	0 MG/KG	NORMAL	12-01-09	11:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-02-09	10:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-03-09	10:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-04-09	7:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-05-09	9:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-06-09	10:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-08-09	10:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-09-09	10:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-10-09	10:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-11-09	11:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-12-09	12:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-13-09	9:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

TABLE RANGE: 12-01-09 TO 12-18-09

ANIMAL	SEX	GROUP	CATEGORY	DATE	TIME	GRADE	OBSERVATIONS
59915	M	0 MG/KG	NORMAL	12-15-09	6:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
59915	M	0 MG/KG	DISPOSITION	12-15-09	7:29	P	SCHEDULED EUTHANASIA
59865	M	200 MG/KG	NORMAL	12-03-09	10:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-04-09	7:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-05-09	9:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-06-09	10:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-07-09	10:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-08-09	10:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-10-09	10:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-11-09	11:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-12-09	12:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-13-09	9:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-14-09	10:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-15-09	6:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-17-09	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
59865	M	200 MG/KG	DISPOSITION	12-17-09	7:42	P	SCHEDULED EUTHANASIA
59873	M	200 MG/KG	NORMAL	12-01-09	11:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-02-09	10:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-03-09	10:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-04-09	7:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-05-09	9:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-06-09	10:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-08-09	10:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-09-09	10:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-10-09	10:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-11-09	11:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-12-09	12:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-13-09	9:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-15-09	6:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

TABLE RANGE: 12-01-09 TO 12-18-09

ANIMAL	SEX	GROUP	CATEGORY	DATE	TIME	GRADE	OBSERVATIONS
59873	M	200 MG/KG	DISPOSITION	12-15-09	7:30	P	SCHEDULED EUTHANASIA
59875	M	200 MG/KG	NORMAL	12-01-09	11:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-02-09	10:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-03-09	10:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-04-09	7:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-05-09	9:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-06-09	10:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-08-09	10:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-09-09	10:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-10-09	10:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-11-09	11:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-12-09	12:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-13-09	9:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-15-09	6:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
59875	M	200 MG/KG	DISPOSITION	12-15-09	7:30	P	SCHEDULED EUTHANASIA
59878	M	200 MG/KG	NORMAL	12-02-09	10:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-03-09	10:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-04-09	7:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-06-09	10:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-07-09	10:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-09-09	10:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-10-09	10:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-11-09	11:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-12-09	12:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-14-09	10:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-16-09	7:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
59878	M	200 MG/KG	DISPOSITION	12-16-09	8:02	P	SCHEDULED EUTHANASIA
59878	M	200 MG/KG	EYES/EARS/NOSE	12-05-09	9:54	1	DRIED RED MATERIAL AROUND NOSE
				12-13-09	9:07	1	DRIED RED MATERIAL AROUND NOSE

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

TABLE I1 (DAILY EXAMINATIONS)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL CLINICAL OBSERVATIONS

TABLE RANGE: 12-01-09 TO 12-18-09

ANIMAL	SEX	GROUP	CATEGORY	DATE	TIME	GRADE	OBSERVATIONS
59879	M	200 MG/KG	NORMAL	12-05-09	9:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-06-09	10:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-07-09	10:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-08-09	10:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-10-09	10:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-11-09	11:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-12-09	12:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-13-09	9:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-14-09	10:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-15-09	6:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-17-09	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
59879	M	200 MG/KG	DISPOSITION	12-17-09	7:42	P	SCHEDULED EUTHANASIA
59879	M	200 MG/KG	EYES/EARS/NOSE	12-03-09	10:44	1	DRIED RED MATERIAL AROUND NOSE
				12-04-09	7:05	1	DRIED RED MATERIAL AROUND NOSE
59880	M	200 MG/KG	NORMAL	12-03-09	10:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-04-09	7:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-05-09	9:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-06-09	10:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-07-09	10:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-08-09	10:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-10-09	10:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-11-09	11:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-12-09	12:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-13-09	9:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-14-09	10:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-15-09	6:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-17-09	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
59880	M	200 MG/KG	DISPOSITION	12-17-09	7:42	P	SCHEDULED EUTHANASIA
59882	M	200 MG/KG	NORMAL	12-04-09	7:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

TABLE RANGE: 12-01-09 TO 12-18-09

ANIMAL	SEX	GROUP	CATEGORY	DATE	TIME	GRADE	OBSERVATIONS
59882	M	200 MG/KG	NORMAL	12-05-09	9:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-06-09	10:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-07-09	10:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-08-09	10:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-09-09	10:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-11-09	11:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-12-09	12:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-13-09	9:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-14-09	10:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-15-09	6:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-16-09	8:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-18-09	7:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
59882	M	200 MG/KG	DISPOSITION	12-18-09	7:50	P	SCHEDULED EUTHANASIA
59889	M	200 MG/KG	NORMAL	12-02-09	10:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-03-09	10:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-04-09	7:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-05-09	9:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-06-09	10:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-07-09	10:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-09-09	10:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-10-09	10:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-11-09	11:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-12-09	12:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-13-09	9:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-14-09	10:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-16-09	7:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
59889	M	200 MG/KG	DISPOSITION	12-16-09	8:02	P	SCHEDULED EUTHANASIA
59893	M	200 MG/KG	NORMAL	12-05-09	9:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-06-09	10:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

TABLE RANGE: 12-01-09 TO 12-18-09

ANIMAL	SEX	GROUP	CATEGORY	DATE	TIME	GRADE	OBSERVATIONS
59893	M	200 MG/KG	NORMAL	12-07-09	10:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-08-09	10:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-09-09	10:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-11-09	11:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-12-09	12:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-13-09	9:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-14-09	10:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-15-09	6:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-16-09	8:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-18-09	7:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
59893	M	200 MG/KG	DISPOSITION	12-18-09	7:50	P	SCHEDULED EUTHANASIA
59893	M	200 MG/KG	BODY/INTEGUMENT	12-04-09	7:06	1	DRIED RED MATERIAL UROGENITAL AREA
59897	M	200 MG/KG	NORMAL	12-02-09	10:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-03-09	10:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-04-09	7:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-05-09	9:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-06-09	10:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-07-09	10:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-09-09	10:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-10-09	10:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-11-09	11:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-12-09	12:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-13-09	9:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-14-09	10:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-16-09	7:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
59897	M	200 MG/KG	DISPOSITION	12-16-09	8:02	P	SCHEDULED EUTHANASIA
59911	M	200 MG/KG	NORMAL	12-04-09	7:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-05-09	9:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-06-09	10:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

TABLE RANGE: 12-01-09 TO 12-18-09

ANIMAL	SEX	GROUP	CATEGORY	DATE	TIME	GRADE	OBSERVATIONS
59911	M	200 MG/KG	NORMAL	12-07-09	10:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-08-09	10:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-09-09	10:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-11-09	11:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-12-09	12:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-13-09	9:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-14-09	10:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-15-09	6:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-16-09	8:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-18-09	7:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
59911	M	200 MG/KG	DISPOSITION	12-18-09	7:50	P	SCHEDULED EUTHANASIA
59913	M	200 MG/KG	NORMAL	12-01-09	11:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-02-09	10:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-03-09	10:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-04-09	7:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-05-09	9:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-06-09	10:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-08-09	10:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-09-09	10:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-10-09	10:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-11-09	11:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-12-09	12:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-13-09	9:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-15-09	6:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
59913	M	200 MG/KG	DISPOSITION	12-15-09	7:30	P	SCHEDULED EUTHANASIA
59874	M	700 MG/KG	NORMAL	12-02-09	10:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-03-09	10:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-04-09	7:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-05-09	9:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

TABLE RANGE: 12-01-09 TO 12-18-09

ANIMAL	SEX	GROUP	CATEGORY	DATE	TIME	GRADE	OBSERVATIONS
59874	M	700 MG/KG	NORMAL	12-06-09	10:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-07-09	10:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-09-09	10:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-10-09	10:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-11-09	11:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-12-09	12:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-13-09	9:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-14-09	10:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-16-09	7:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
59874	M	700 MG/KG	DISPOSITION	12-16-09	8:02	P	SCHEDULED EUTHANASIA
59894	M	700 MG/KG	NORMAL	12-04-09	7:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-05-09	9:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-06-09	10:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-07-09	10:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-08-09	10:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-09-09	10:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-11-09	11:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-12-09	12:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-13-09	9:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-14-09	10:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-15-09	7:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-16-09	8:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-18-09	7:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
59894	M	700 MG/KG	DISPOSITION	12-18-09	7:50	P	SCHEDULED EUTHANASIA
59895	M	700 MG/KG	NORMAL	12-03-09	10:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-04-09	7:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-05-09	9:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-06-09	10:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-07-09	10:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

TABLE RANGE: 12-01-09 TO 12-18-09

ANIMAL	SEX	GROUP	CATEGORY	DATE	TIME	GRADE	OBSERVATIONS
59895	M	700 MG/KG	NORMAL	12-08-09	10:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-10-09	10:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-11-09	11:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-12-09	12:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-13-09	9:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-14-09	10:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-15-09	7:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-17-09	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
59895	M	700 MG/KG	DISPOSITION	12-17-09	7:42	P	SCHEDULED EUTHANASIA
59896	M	700 MG/KG	NORMAL	12-01-09	11:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-02-09	10:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-03-09	10:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-04-09	7:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-05-09	9:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-06-09	10:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-08-09	10:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-09-09	10:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-10-09	10:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-11-09	11:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-12-09	12:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-13-09	9:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-15-09	7:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
59896	M	700 MG/KG	DISPOSITION	12-15-09	7:30	P	SCHEDULED EUTHANASIA
59899	M	700 MG/KG	NORMAL	12-02-09	10:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-03-09	10:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-04-09	7:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-05-09	9:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-06-09	10:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-07-09	10:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

TABLE RANGE: 12-01-09 TO 12-18-09

ANIMAL	SEX	GROUP	CATEGORY	DATE	TIME	GRADE	OBSERVATIONS
59899	M	700 MG/KG	NORMAL	12-09-09	10:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-10-09	10:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-11-09	11:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-12-09	12:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-13-09	9:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-14-09	10:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-16-09	7:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
59899	M	700 MG/KG	DISPOSITION	12-16-09	8:02	P	SCHEDULED EUTHANASIA
59902	M	700 MG/KG	DISPOSITION	12-18-09	7:50	P	SCHEDULED EUTHANASIA
59902	M	700 MG/KG	BODY/INTEGUMENT	12-04-09	7:09	1	HAIR LOSS LEFT HINDLIMB
				12-05-09	9:59	1	HAIR LOSS LEFT HINDLIMB
				12-06-09	10:08	1	HAIR LOSS LEFT HINDLIMB
				12-07-09	10:05	1	HAIR LOSS LEFT HINDLIMB
				12-08-09	10:21	1	HAIR LOSS LEFT HINDLIMB
				12-09-09	10:11	1	HAIR LOSS LEFT HINDLIMB
				12-11-09	11:05	1	HAIR LOSS LEFT HINDLIMB
				12-12-09	12:33	2	HAIR LOSS LEFT HINDLIMB
				12-13-09	9:11	2	HAIR LOSS LEFT HINDLIMB
				12-14-09	10:45	1	HAIR LOSS LEFT HINDLIMB
				12-15-09	7:02	2	HAIR LOSS LEFT HINDLIMB
				12-16-09	8:59	2	HAIR LOSS LEFT HINDLIMB
				12-18-09	7:44	2	HAIR LOSS LEFT HINDLIMB
59903	M	700 MG/KG	NORMAL	12-01-09	11:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-02-09	10:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-03-09	10:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-04-09	7:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-05-09	9:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-06-09	10:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-08-09	10:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

TABLE I1 (DAILY EXAMINATIONS)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL CLINICAL OBSERVATIONS

TABLE RANGE: 12-01-09 TO 12-18-09

ANIMAL	SEX	GROUP	CATEGORY	DATE	TIME	GRADE	OBSERVATIONS
59903	M	700 MG/KG	NORMAL	12-09-09	10:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-10-09	10:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-11-09	11:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-12-09	12:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-13-09	9:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-15-09	7:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
59903	M	700 MG/KG	DISPOSITION	12-15-09	7:30	P	SCHEDULED EUTHANASIA
59904	M	700 MG/KG	NORMAL	12-03-09	10:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-04-09	7:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-05-09	9:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-06-09	10:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-07-09	10:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-08-09	10:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-10-09	10:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-11-09	11:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-12-09	12:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-13-09	9:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-14-09	10:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-15-09	7:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-17-09	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
59904	M	700 MG/KG	DISPOSITION	12-17-09	7:42	P	SCHEDULED EUTHANASIA
59905	M	700 MG/KG	NORMAL	12-02-09	10:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-03-09	10:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-04-09	7:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-05-09	10:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-06-09	10:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-07-09	10:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-09-09	10:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-10-09	10:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

TABLE RANGE: 12-01-09 TO 12-18-09

ANIMAL	SEX	GROUP	CATEGORY	DATE	TIME	GRADE	OBSERVATIONS
59905	M	700 MG/KG	NORMAL	12-11-09	11:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-12-09	12:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-13-09	9:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-14-09	10:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-16-09	7:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
59905	M	700 MG/KG	DISPOSITION	12-16-09	8:03	P	SCHEDULED EUTHANASIA
59909	M	700 MG/KG	NORMAL	12-01-09	11:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-02-09	10:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-03-09	10:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-04-09	7:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-05-09	10:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-06-09	10:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-08-09	10:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-09-09	10:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-10-09	10:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-11-09	11:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-12-09	12:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-13-09	9:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-15-09	7:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
59909	M	700 MG/KG	DISPOSITION	12-15-09	7:30	P	SCHEDULED EUTHANASIA
59910	M	700 MG/KG	NORMAL	12-03-09	10:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-04-09	7:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-05-09	10:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-06-09	10:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-07-09	10:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-08-09	10:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-10-09	10:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-11-09	11:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-12-09	12:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

TABLE RANGE: 12-01-09 TO 12-18-09

ANIMAL	SEX	GROUP	CATEGORY	DATE	TIME	GRADE	OBSERVATIONS
59910	M	700 MG/KG	NORMAL	12-13-09	9:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-14-09	10:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-15-09	7:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-17-09	7:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
59910	M	700 MG/KG	DISPOSITION	12-17-09	7:42	P	SCHEDULED EUTHANASIA
59916	M	700 MG/KG	NORMAL	12-04-09	7:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-05-09	10:00	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-07-09	10:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-18-09	7:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
59916	M	700 MG/KG	DISPOSITION	12-18-09	7:51	P	SCHEDULED EUTHANASIA
59916	M	700 MG/KG	BODY/INTEGUMENT	12-06-09	10:11	1	HAIR LOSS VENTRAL NECK
				12-06-09	10:11	P	SCABBING VENTRAL NECK
				12-08-09	10:23	1	HAIR LOSS VENTRAL NECK
				12-08-09	10:23	P	SCABBING VENTRAL NECK
				12-09-09	10:14	1	HAIR LOSS VENTRAL NECK
				12-09-09	10:14	P	SCABBING VENTRAL NECK
				12-09-09	10:14	1	WET RED MATERIAL VENTRAL NECK
				12-11-09	11:06	2	HAIR LOSS VENTRAL NECK
				12-11-09	11:06	2	WET RED MATERIAL VENTRAL NECK
				12-12-09	12:35	P	SCABBING VENTRAL NECK
				12-13-09	9:14	P	SCABBING VENTRAL NECK
				12-13-09	9:14	1	HAIR LOSS VENTRAL NECK
				12-14-09	10:46	1	HAIR LOSS VENTRAL NECK
				12-15-09	7:05	1	HAIR LOSS VENTRAL NECK
				12-15-09	7:05	P	SCABBING VENTRAL NECK
				12-16-09	9:00	1	HAIR LOSS VENTRAL NECK
				12-16-09	9:00	P	SCABBING VENTRAL NECK
59876	M	2000 MG/KG	NORMAL	12-01-09	11:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-02-09	10:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

TABLE RANGE: 12-01-09 TO 12-18-09

ANIMAL	SEX	GROUP	CATEGORY	DATE	TIME	GRADE	OBSERVATIONS
59876	M	2000 MG/KG	NORMAL	12-03-09	10:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-04-09	7:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-05-09	10:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-06-09	10:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-08-09	10:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-09-09	10:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-10-09	10:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-11-09	11:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-12-09	12:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-13-09	9:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-15-09	7:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
59876	M	2000 MG/KG	DISPOSITION	12-15-09	7:30	P	SCHEDULED EUTHANASIA
59883	M	2000 MG/KG	NORMAL	12-01-09	11:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-02-09	10:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-03-09	10:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-04-09	7:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-05-09	10:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-06-09	10:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-08-09	10:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-09-09	10:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-10-09	10:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-11-09	11:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-12-09	12:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-13-09	9:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-15-09	7:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
59883	M	2000 MG/KG	DISPOSITION	12-15-09	7:30	P	SCHEDULED EUTHANASIA
59886	M	2000 MG/KG	NORMAL	12-03-09	10:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-04-09	7:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-05-09	10:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

TABLE RANGE: 12-01-09 TO 12-18-09

ANIMAL	SEX	GROUP	CATEGORY	DATE	TIME	GRADE	OBSERVATIONS
59886	M	2000 MG/KG	NORMAL	12-06-09	10:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-07-09	10:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-08-09	10:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-10-09	10:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-11-09	11:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-12-09	12:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-13-09	9:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-14-09	10:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-15-09	7:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-17-09	7:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
59886	M	2000 MG/KG	DISPOSITION	12-17-09	7:42	P	SCHEDULED EUTHANASIA
59887	M	2000 MG/KG	NORMAL	12-02-09	10:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-03-09	10:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-04-09	7:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-05-09	10:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-06-09	10:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-07-09	10:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-09-09	10:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-10-09	10:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-11-09	11:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-12-09	12:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-13-09	9:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-14-09	10:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-16-09	7:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
59887	M	2000 MG/KG	DISPOSITION	12-16-09	8:03	P	SCHEDULED EUTHANASIA
59890	M	2000 MG/KG	NORMAL	12-04-09	7:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-05-09	10:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-06-09	10:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-07-09	10:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

TABLE RANGE: 12-01-09 TO 12-18-09

ANIMAL	SEX	GROUP	CATEGORY	DATE	TIME	GRADE	OBSERVATIONS
59890	M	2000 MG/KG	NORMAL	12-08-09	10:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-09-09	10:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-11-09	11:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-12-09	12:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-13-09	9:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-14-09	10:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-15-09	7:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-16-09	9:01	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-18-09	7:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
59890	M	2000 MG/KG	DISPOSITION	12-18-09	7:51	P	SCHEDULED EUTHANASIA
59898	M	2000 MG/KG	NORMAL	12-01-09	11:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-02-09	10:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-03-09	10:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-04-09	7:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-05-09	10:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-06-09	10:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-08-09	10:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-09-09	10:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-10-09	10:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-11-09	11:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-12-09	12:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-13-09	9:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-15-09	7:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
59898	M	2000 MG/KG	DISPOSITION	12-15-09	7:31	P	SCHEDULED EUTHANASIA
59900	M	2000 MG/KG	NORMAL	12-03-09	10:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-04-09	7:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-05-09	10:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-06-09	10:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-07-09	10:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

TABLE RANGE: 12-01-09 TO 12-18-09

ANIMAL	SEX	GROUP	CATEGORY	DATE	TIME	GRADE	OBSERVATIONS
59900	M	2000 MG/KG	NORMAL	12-08-09	10:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-10-09	10:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-11-09	11:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-12-09	12:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-13-09	9:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-14-09	10:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-15-09	7:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-17-09	7:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
59900	M	2000 MG/KG	DISPOSITION	12-17-09	7:43	P	SCHEDULED EUTHANASIA
59906	M	2000 MG/KG	NORMAL	12-04-09	7:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-05-09	10:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-06-09	10:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-07-09	10:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-08-09	10:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-09-09	10:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-11-09	11:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-12-09	12:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-13-09	9:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-14-09	10:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-15-09	7:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-16-09	9:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-18-09	7:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
59906	M	2000 MG/KG	DISPOSITION	12-18-09	7:51	P	SCHEDULED EUTHANASIA
59907	M	2000 MG/KG	NORMAL	12-02-09	10:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-03-09	10:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-04-09	7:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-05-09	10:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-06-09	10:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-07-09	10:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

TABLE RANGE: 12-01-09 TO 12-18-09

ANIMAL	SEX	GROUP	CATEGORY	DATE	TIME	GRADE	OBSERVATIONS
59907	M	2000 MG/KG	NORMAL	12-09-09	10:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-10-09	10:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-11-09	11:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-12-09	12:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-13-09	9:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-14-09	10:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-16-09	7:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
59907	M	2000 MG/KG	DISPOSITION	12-16-09	8:03	P	SCHEDULED EUTHANASIA
59908	M	2000 MG/KG	NORMAL	12-04-09	7:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-05-09	10:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-06-09	10:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-07-09	10:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-08-09	10:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-09-09	10:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-11-09	11:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-12-09	12:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-13-09	9:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-14-09	10:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-15-09	7:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-16-09	9:02	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-18-09	7:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
59908	M	2000 MG/KG	DISPOSITION	12-18-09	7:51	P	SCHEDULED EUTHANASIA
59912	M	2000 MG/KG	NORMAL	12-02-09	10:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-03-09	10:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-04-09	7:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-05-09	10:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-06-09	10:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-07-09	10:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-09-09	10:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

TABLE I1 (DAILY EXAMINATIONS)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL CLINICAL OBSERVATIONS

TABLE RANGE: 12-01-09 TO 12-18-09

ANIMAL	SEX	GROUP	CATEGORY	DATE	TIME	GRADE	OBSERVATIONS
59912	M	2000 MG/KG	NORMAL	12-10-09	10:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-11-09	11:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-12-09	12:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-13-09	9:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-14-09	10:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-16-09	7:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
59912	M	2000 MG/KG	DISPOSITION	12-16-09	8:03	P	SCHEDULED EUTHANASIA
59917	M	2000 MG/KG	NORMAL	12-03-09	10:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-04-09	7:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-05-09	10:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-06-09	10:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-07-09	10:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-08-09	10:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-10-09	10:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-11-09	11:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-12-09	12:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-13-09	9:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-14-09	10:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-15-09	7:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-17-09	7:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
59917	M	2000 MG/KG	DISPOSITION	12-17-09	7:43	P	SCHEDULED EUTHANASIA
59919	F	0 MG/KG	NORMAL	12-04-09	7:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-05-09	10:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-06-09	10:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-07-09	10:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-08-09	10:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-09-09	10:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-11-09	11:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-12-09	12:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

TABLE RANGE: 12-01-09 TO 12-18-09

ANIMAL	SEX	GROUP	CATEGORY	DATE	TIME	GRADE	OBSERVATIONS
59919	F	0 MG/KG	NORMAL	12-13-09	9:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-14-09	10:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-15-09	7:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-16-09	9:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-18-09	7:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
59919	F	0 MG/KG	DISPOSITION	12-18-09	7:51	P	SCHEDULED EUTHANASIA
59920	F	0 MG/KG	NORMAL	12-03-09	10:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-04-09	7:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-05-09	10:03	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-06-09	10:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-07-09	10:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-08-09	10:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-10-09	10:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-11-09	11:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-12-09	12:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-13-09	9:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-14-09	10:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-15-09	7:09	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-17-09	7:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
59920	F	0 MG/KG	DISPOSITION	12-17-09	7:43	P	SCHEDULED EUTHANASIA
59923	F	0 MG/KG	NORMAL	12-01-09	11:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-02-09	10:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-03-09	10:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-04-09	7:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-05-09	10:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-06-09	10:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-08-09	10:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-09-09	10:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-10-09	10:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

TABLE RANGE: 12-01-09 TO 12-18-09

ANIMAL	SEX	GROUP	CATEGORY	DATE	TIME	GRADE	OBSERVATIONS
59923	F	0 MG/KG	NORMAL	12-11-09	11:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-12-09	12:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-13-09	9:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-15-09	7:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
59923	F	0 MG/KG	DISPOSITION	12-15-09	7:31	P	SCHEDULED EUTHANASIA
59924	F	0 MG/KG	NORMAL	12-04-09	7:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-05-09	10:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-06-09	10:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-07-09	10:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-08-09	10:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-09-09	10:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-11-09	11:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-12-09	12:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-13-09	9:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-14-09	10:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-15-09	7:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-16-09	9:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-18-09	7:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
59924	F	0 MG/KG	DISPOSITION	12-18-09	7:51	P	SCHEDULED EUTHANASIA
59933	F	0 MG/KG	NORMAL	12-02-09	10:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-03-09	10:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-04-09	7:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-05-09	10:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-06-09	10:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-07-09	10:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-09-09	10:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-10-09	10:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-11-09	11:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-12-09	12:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

TABLE RANGE: 12-01-09 TO 12-18-09

ANIMAL	SEX	GROUP	CATEGORY	DATE	TIME	GRADE	OBSERVATIONS
59933	F	0 MG/KG	NORMAL	12-13-09	9:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-14-09	10:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-16-09	7:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
59933	F	0 MG/KG	DISPOSITION	12-16-09	8:03	P	SCHEDULED EUTHANASIA
59939	F	0 MG/KG	NORMAL	12-03-09	10:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-04-09	7:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-05-09	10:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-06-09	10:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-07-09	10:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-08-09	10:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-10-09	10:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-11-09	11:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-12-09	12:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-13-09	9:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-14-09	10:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-15-09	7:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-17-09	7:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
59939	F	0 MG/KG	DISPOSITION	12-17-09	7:43	P	SCHEDULED EUTHANASIA
59941	F	0 MG/KG	NORMAL	12-03-09	10:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-04-09	7:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-05-09	10:04	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-06-09	10:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-07-09	10:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-08-09	10:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-10-09	10:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-11-09	11:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-12-09	12:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-13-09	9:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-14-09	10:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

TABLE I1 (DAILY EXAMINATIONS)
INDIVIDUAL CLINICAL OBSERVATIONS

TABLE RANGE: 12-01-09 TO 12-18-09

ANIMAL	SEX	GROUP	CATEGORY	DATE	TIME	GRADE	OBSERVATIONS
59941	F	0 MG/KG	NORMAL	12-15-09	7:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-17-09	7:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
59941	F	0 MG/KG	DISPOSITION	12-17-09	7:43	P	SCHEDULED EUTHANASIA
59942	F	0 MG/KG	NORMAL	12-01-09	11:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-02-09	10:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-03-09	10:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-04-09	7:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-05-09	10:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-06-09	10:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-08-09	10:28	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-09-09	10:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-10-09	10:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-11-09	11:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-12-09	12:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-13-09	9:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-15-09	7:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
59942	F	0 MG/KG	DISPOSITION	12-15-09	7:31	P	SCHEDULED EUTHANASIA
59950	F	0 MG/KG	NORMAL	12-02-09	10:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-03-09	10:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-04-09	7:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-05-09	10:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-06-09	10:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-07-09	10:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-09-09	10:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-10-09	10:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-11-09	11:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-12-09	12:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-13-09	9:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-14-09	10:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

TABLE RANGE: 12-01-09 TO 12-18-09

ANIMAL	SEX	GROUP	CATEGORY	DATE	TIME	GRADE	OBSERVATIONS
59950	F	0 MG/KG	NORMAL	12-16-09	7:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
59950	F	0 MG/KG	DISPOSITION	12-16-09	8:03	P	SCHEDULED EUTHANASIA
59956	F	0 MG/KG	NORMAL	12-02-09	10:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-03-09	10:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-04-09	7:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-05-09	10:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-06-09	10:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-07-09	10:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-09-09	10:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-10-09	10:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-11-09	11:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-12-09	12:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-13-09	9:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-14-09	10:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-16-09	7:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
59956	F	0 MG/KG	DISPOSITION	12-16-09	8:03	P	SCHEDULED EUTHANASIA
59969	F	0 MG/KG	NORMAL	12-04-09	7:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-05-09	10:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-06-09	10:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-07-09	10:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-08-09	10:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-09-09	10:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-11-09	11:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-12-09	12:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-13-09	9:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-14-09	10:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-15-09	7:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-16-09	9:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-18-09	7:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

TABLE I1 (DAILY EXAMINATIONS)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL CLINICAL OBSERVATIONS

TABLE RANGE: 12-01-09 TO 12-18-09

ANIMAL	SEX	GROUP	CATEGORY	DATE	TIME	GRADE	OBSERVATIONS
59969	F	0 MG/KG	DISPOSITION	12-18-09	7:51	P	SCHEDULED EUTHANASIA
59970	F	0 MG/KG	NORMAL	12-01-09	11:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-02-09	10:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-03-09	10:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-04-09	7:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-05-09	10:05	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-06-09	10:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-08-09	10:29	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-09-09	10:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-10-09	10:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-11-09	11:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-12-09	12:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-13-09	9:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-15-09	7:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
59970	F	0 MG/KG	DISPOSITION	12-15-09	7:31	P	SCHEDULED EUTHANASIA
59922	F	200 MG/KG	NORMAL	12-03-09	10:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-04-09	7:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-05-09	10:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-06-09	10:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-07-09	10:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-08-09	10:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-10-09	10:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-11-09	11:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-12-09	12:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-13-09	9:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-14-09	10:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-15-09	7:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-17-09	7:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
59922	F	200 MG/KG	DISPOSITION	12-17-09	7:43	P	SCHEDULED EUTHANASIA

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

TABLE RANGE: 12-01-09 TO 12-18-09

ANIMAL	SEX	GROUP	CATEGORY	DATE	TIME	GRADE	OBSERVATIONS
59926	F	200 MG/KG	NORMAL	12-02-09	10:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-03-09	10:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-04-09	7:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-05-09	10:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-06-09	10:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-07-09	10:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-09-09	10:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-10-09	10:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-11-09	11:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-12-09	12:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-13-09	9:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-14-09	10:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-16-09	7:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
59926	F	200 MG/KG	DISPOSITION	12-16-09	8:03	P	SCHEDULED EUTHANASIA
59927	F	200 MG/KG	NORMAL	12-01-09	11:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-02-09	10:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-03-09	10:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-04-09	7:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-05-09	10:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-06-09	10:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-08-09	10:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-09-09	10:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-10-09	10:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-11-09	11:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-12-09	12:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-13-09	9:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-15-09	7:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
59927	F	200 MG/KG	DISPOSITION	12-15-09	7:31	P	SCHEDULED EUTHANASIA
59936	F	200 MG/KG	NORMAL	12-03-09	10:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

TABLE RANGE: 12-01-09 TO 12-18-09

ANIMAL	SEX	GROUP	CATEGORY	DATE	TIME	GRADE	OBSERVATIONS
59936	F	200 MG/KG	NORMAL	12-04-09	7:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-05-09	10:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-06-09	10:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-07-09	10:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-08-09	10:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-10-09	10:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-11-09	11:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-12-09	12:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
59936	F	200 MG/KG	DISPOSITION	12-17-09	7:43	P	SCHEDULED EUTHANASIA
59936	F	200 MG/KG	BODY/INTEGUMENT	12-13-09	9:23	1	HAIR LOSS RIGHT FORELIMB
				12-13-09	9:23	1	HAIR LOSS LEFT FORELIMB
				12-14-09	10:51	1	HAIR LOSS RIGHT FORELIMB
				12-14-09	10:51	1	HAIR LOSS LEFT FORELIMB
				12-15-09	7:13	1	HAIR LOSS RIGHT FORELIMB
				12-15-09	7:13	1	HAIR LOSS LEFT FORELIMB
				12-17-09	7:38	1	HAIR LOSS RIGHT FORELIMB
				12-17-09	7:38	1	HAIR LOSS LEFT FORELIMB
59937	F	200 MG/KG	NORMAL	12-04-09	7:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-05-09	10:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-07-09	10:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-08-09	10:30	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-09-09	10:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-11-09	11:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-12-09	12:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-13-09	9:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-14-09	10:52	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-15-09	7:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-16-09	9:06	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-18-09	7:46	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

TABLE I1 (DAILY EXAMINATIONS)
INDIVIDUAL CLINICAL OBSERVATIONS

TABLE RANGE: 12-01-09 TO 12-18-09

ANIMAL	SEX	GROUP	CATEGORY	DATE	TIME	GRADE	OBSERVATIONS
59937	F	200 MG/KG	DISPOSITION	12-18-09	7:51	P	SCHEDULED EUTHANASIA
59937	F	200 MG/KG	EYES/EARS/NOSE	12-06-09	10:18	1	DRIED RED MATERIAL AROUND NOSE
59949	F	200 MG/KG	NORMAL	12-01-09	11:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-02-09	10:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-03-09	10:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-04-09	7:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-05-09	10:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-06-09	10:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-08-09	10:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-09-09	10:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-10-09	10:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-11-09	11:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-12-09	12:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-13-09	9:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-15-09	7:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
59949	F	200 MG/KG	DISPOSITION	12-15-09	7:31	P	SCHEDULED EUTHANASIA
59952	F	200 MG/KG	NORMAL	12-03-09	10:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-04-09	7:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-05-09	10:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-06-09	10:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-07-09	10:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-08-09	10:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-12-09	12:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
59952	F	200 MG/KG	DISPOSITION	12-17-09	7:43	P	SCHEDULED EUTHANASIA
59952	F	200 MG/KG	BODY/INTEGUMENT	12-10-09	10:33	1	HAIR LOSS VENTRAL ABDOMINAL AREA
				12-11-09	11:15	1	HAIR LOSS VENTRAL ABDOMINAL AREA
				12-13-09	9:24	1	HAIR LOSS VENTRAL ABDOMINAL AREA
				12-14-09	10:52	1	HAIR LOSS VENTRAL ABDOMINAL AREA
				12-15-09	7:15	1	HAIR LOSS VENTRAL ABDOMINAL AREA

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

TABLE RANGE: 12-01-09 TO 12-18-09

ANIMAL	SEX	GROUP	CATEGORY	DATE	TIME	GRADE	OBSERVATIONS
59952	F	200 MG/KG	BODY/INTEGUMENT	12-17-09	7:39	1	HAIR LOSS VENTRAL ABDOMINAL AREA
59954	F	200 MG/KG	NORMAL	12-04-09	7:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-05-09	10:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-06-09	10:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-07-09	10:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-08-09	10:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-09-09	10:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
59954	F	200 MG/KG	DISPOSITION	12-18-09	7:52	P	SCHEDULED EUTHANASIA
59954	F	200 MG/KG	BODY/INTEGUMENT	12-11-09	11:16	1	HAIR LOSS RIGHT FORELIMB
				12-11-09	11:16	1	HAIR LOSS LEFT FORELIMB
				12-12-09	12:43	1	HAIR LOSS LEFT FORELIMB
				12-13-09	9:25	1	HAIR LOSS RIGHT FORELIMB
				12-13-09	9:25	1	HAIR LOSS LEFT FORELIMB
				12-14-09	10:53	1	HAIR LOSS RIGHT FORELIMB
				12-14-09	10:53	1	HAIR LOSS LEFT FORELIMB
				12-15-09	7:15	1	HAIR LOSS RIGHT FORELIMB
				12-15-09	7:15	1	HAIR LOSS LEFT FORELIMB
				12-16-09	9:06	1	HAIR LOSS RIGHT FORELIMB
				12-16-09	9:06	1	HAIR LOSS LEFT FORELIMB
				12-18-09	7:46	1	HAIR LOSS RIGHT FORELIMB
				12-18-09	7:46	1	HAIR LOSS LEFT FORELIMB
59958	F	200 MG/KG	NORMAL	12-01-09	11:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-02-09	10:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-03-09	10:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-04-09	7:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-05-09	10:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-06-09	10:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-08-09	10:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-09-09	10:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

TABLE RANGE: 12-01-09 TO 12-18-09

ANIMAL	SEX	GROUP	CATEGORY	DATE	TIME	GRADE	OBSERVATIONS
59958	F	200 MG/KG	NORMAL	12-10-09	10:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-11-09	11:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-12-09	12:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-13-09	9:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-15-09	7:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
59958	F	200 MG/KG	DISPOSITION	12-15-09	7:31	P	SCHEDULED EUTHANASIA
59962	F	200 MG/KG	NORMAL	12-02-09	10:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-03-09	10:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-04-09	7:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-05-09	10:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-06-09	10:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-07-09	10:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-09-09	10:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-10-09	10:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-11-09	11:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-12-09	12:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-13-09	9:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-14-09	10:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-16-09	7:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
59962	F	200 MG/KG	DISPOSITION	12-16-09	8:04	P	SCHEDULED EUTHANASIA
59967	F	200 MG/KG	NORMAL	12-02-09	10:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-03-09	10:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-04-09	7:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-05-09	10:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-06-09	10:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-07-09	10:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-09-09	10:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-10-09	10:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-11-09	11:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

TABLE RANGE: 12-01-09 TO 12-18-09

ANIMAL	SEX	GROUP	CATEGORY	DATE	TIME	GRADE	OBSERVATIONS
59967	F	200 MG/KG	NORMAL	12-12-09	12:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-13-09	9:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-14-09	10:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-16-09	7:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
59967	F	200 MG/KG	DISPOSITION	12-16-09	8:04	P	SCHEDULED EUTHANASIA
59968	F	200 MG/KG	NORMAL	12-04-09	7:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-05-09	10:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-06-09	10:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-07-09	10:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-08-09	10:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-09-09	10:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-11-09	11:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-12-09	12:44	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-13-09	9:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-14-09	10:53	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-15-09	7:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-16-09	9:07	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-18-09	7:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
59968	F	200 MG/KG	DISPOSITION	12-18-09	7:52	P	SCHEDULED EUTHANASIA
59918	F	700 MG/KG	NORMAL	12-04-09	7:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-05-09	10:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-06-09	10:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-07-09	10:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-08-09	10:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-09-09	10:27	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-11-09	11:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-12-09	12:45	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-13-09	9:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-14-09	10:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

TABLE RANGE: 12-01-09 TO 12-18-09

ANIMAL	SEX	GROUP	CATEGORY	DATE	TIME	GRADE	OBSERVATIONS
59918	F	700 MG/KG	NORMAL	12-15-09	7:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-16-09	9:08	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-18-09	7:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
59918	F	700 MG/KG	DISPOSITION	12-18-09	7:52	P	SCHEDULED EUTHANASIA
59925	F	700 MG/KG	NORMAL	12-04-09	7:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-05-09	10:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-06-09	10:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-07-09	10:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
59925	F	700 MG/KG	DISPOSITION	12-18-09	7:52	P	SCHEDULED EUTHANASIA
59925	F	700 MG/KG	BODY/INTEGUMENT	12-08-09	10:36	1	HAIR LOSS DORSAL THORACIC AREA
				12-08-09	10:36	P	SCABBING DORSAL THORACIC AREA
				12-08-09	10:37	1	WET RED MATERIAL DORSAL THORACIC AREA
				12-09-09	10:28	1	HAIR LOSS DORSAL THORACIC AREA
				12-09-09	10:28	1	WET RED MATERIAL DORSAL THORACIC AREA
				12-09-09	10:28	P	SCABBING DORSAL THORACIC AREA
				12-11-09	11:18	1	HAIR LOSS DORSAL THORACIC AREA
				12-11-09	11:18	1	HAIR LOSS VENTRAL NECK
				12-11-09	11:18	P	SCABBING VENTRAL NECK
				12-11-09	11:18	P	SCABBING DORSAL THORACIC AREA
				12-12-09	12:45	P	SCABBING DORSAL THORACIC AREA
				12-12-09	12:45	1	HAIR LOSS DORSAL THORACIC AREA
				12-12-09	12:45	1	HAIR LOSS VENTRAL NECK
				12-13-09	9:27	2	HAIR LOSS VENTRAL NECK
				12-14-09	10:54	1	HAIR LOSS VENTRAL NECK
				12-15-09	7:18	2	HAIR LOSS DORSAL THORACIC AREA
				12-16-09	9:08	2	HAIR LOSS DORSAL THORACIC AREA
				12-16-09	9:09	1	HAIR LOSS DORSAL HEAD
				12-18-09	7:48	2	HAIR LOSS DORSAL THORACIC AREA
				12-18-09	7:48	1	HAIR LOSS DORSAL HEAD

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

TABLE RANGE: 12-01-09 TO 12-18-09

ANIMAL	SEX	GROUP	CATEGORY	DATE	TIME	GRADE	OBSERVATIONS
59930	F	700 MG/KG	NORMAL	12-01-09	11:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-02-09	10:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-03-09	10:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-04-09	7:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-05-09	10:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-06-09	10:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-08-09	10:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-09-09	10:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-10-09	10:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-11-09	11:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-12-09	12:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-13-09	9:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-15-09	7:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
59930	F	700 MG/KG	DISPOSITION	12-15-09	7:31	P	SCHEDULED EUTHANASIA
59931	F	700 MG/KG	NORMAL	12-03-09	10:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-04-09	7:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-05-09	10:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-06-09	10:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-07-09	10:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-08-09	10:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-10-09	10:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-11-09	11:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-12-09	12:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-13-09	9:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-14-09	10:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-15-09	7:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-17-09	7:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
59931	F	700 MG/KG	DISPOSITION	12-17-09	7:44	P	SCHEDULED EUTHANASIA
59932	F	700 MG/KG	NORMAL	12-03-09	10:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

TABLE RANGE: 12-01-09 TO 12-18-09

ANIMAL	SEX	GROUP	CATEGORY	DATE	TIME	GRADE	OBSERVATIONS
59932	F	700 MG/KG	NORMAL	12-04-09	7:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-05-09	10:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-06-09	10:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-07-09	10:17	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-08-09	10:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-10-09	10:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-11-09	11:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-12-09	12:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-13-09	9:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-14-09	10:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-15-09	7:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-17-09	7:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
59932	F	700 MG/KG	DISPOSITION	12-17-09	7:44	P	SCHEDULED EUTHANASIA
59935	F	700 MG/KG	NORMAL	12-01-09	11:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-02-09	10:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-03-09	10:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-04-09	7:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-05-09	10:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-06-09	10:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-08-09	10:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-09-09	10:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-10-09	10:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-11-09	11:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-12-09	12:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-13-09	9:31	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-15-09	7:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
59935	F	700 MG/KG	DISPOSITION	12-15-09	7:32	P	SCHEDULED EUTHANASIA
59940	F	700 MG/KG	NORMAL	12-02-09	10:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-03-09	10:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

TABLE RANGE: 12-01-09 TO 12-18-09

ANIMAL	SEX	GROUP	CATEGORY	DATE	TIME	GRADE	OBSERVATIONS
59940	F	700 MG/KG	NORMAL	12-04-09	7:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-05-09	10:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-06-09	10:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-07-09	10:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-09-09	10:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-10-09	10:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-11-09	11:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-12-09	12:47	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-13-09	9:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-14-09	10:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-16-09	7:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
59940	F	700 MG/KG	DISPOSITION	12-16-09	8:04	P	SCHEDULED EUTHANASIA
59944	F	700 MG/KG	NORMAL	12-03-09	10:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-04-09	7:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-05-09	10:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-06-09	10:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-07-09	10:18	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-08-09	10:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-10-09	10:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-11-09	11:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-12-09	12:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-13-09	9:32	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-14-09	10:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-15-09	7:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-17-09	7:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
59944	F	700 MG/KG	DISPOSITION	12-17-09	7:44	P	SCHEDULED EUTHANASIA
59945	F	700 MG/KG	NORMAL	12-02-09	10:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-03-09	10:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-04-09	7:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

TABLE RANGE: 12-01-09 TO 12-18-09

ANIMAL	SEX	GROUP	CATEGORY	DATE	TIME	GRADE	OBSERVATIONS
59945	F	700 MG/KG	NORMAL	12-05-09	10:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-14-09	10:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-16-09	7:54	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
59945	F	700 MG/KG	DISPOSITION	12-16-09	8:04	P	SCHEDULED EUTHANASIA
59945	F	700 MG/KG	BODY/INTEGUMENT	12-06-09	10:22	1	HAIR LOSS RIGHT FORELIMB
				12-06-09	10:22	1	HAIR LOSS LEFT FORELIMB
				12-07-09	10:19	1	HAIR LOSS RIGHT FORELIMB
				12-07-09	10:19	1	HAIR LOSS LEFT FORELIMB
				12-09-09	10:34	1	HAIR LOSS RIGHT FORELIMB
				12-09-09	10:34	1	HAIR LOSS LEFT FORELIMB
				12-10-09	10:38	P	HAIR LOSS RIGHT FORELIMB
				12-10-09	10:38	P	HAIR LOSS LEFT FORELIMB
				12-11-09	11:19	1	HAIR LOSS RIGHT FORELIMB
				12-11-09	11:19	1	HAIR LOSS LEFT FORELIMB
				12-12-09	12:48	1	HAIR LOSS LEFT FORELIMB
				12-12-09	12:48	1	HAIR LOSS RIGHT FORELIMB
				12-13-09	9:32	1	HAIR LOSS RIGHT FORELIMB
59948	F	700 MG/KG	NORMAL	12-02-09	10:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-03-09	10:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-04-09	7:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-05-09	10:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-06-09	10:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-07-09	10:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-09-09	10:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-10-09	10:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-11-09	11:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-12-09	12:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-13-09	9:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-14-09	10:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

TABLE RANGE: 12-01-09 TO 12-18-09

ANIMAL	SEX	GROUP	CATEGORY	DATE	TIME	GRADE	OBSERVATIONS
59948	F	700 MG/KG	NORMAL	12-16-09	7:55	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
59948	F	700 MG/KG	DISPOSITION	12-16-09	8:04	P	SCHEDULED EUTHANASIA
59959	F	700 MG/KG	NORMAL	12-01-09	11:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-02-09	10:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-03-09	10:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-04-09	7:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-05-09	10:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-06-09	10:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-08-09	10:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-09-09	10:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-10-09	10:38	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-11-09	11:19	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-12-09	12:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-13-09	9:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-15-09	7:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
59959	F	700 MG/KG	DISPOSITION	12-15-09	7:32	P	SCHEDULED EUTHANASIA
59963	F	700 MG/KG	NORMAL	12-04-09	7:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-05-09	10:12	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-06-09	10:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-07-09	10:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-08-09	10:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-09-09	10:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-11-09	11:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-12-09	12:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-13-09	9:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-14-09	10:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-15-09	7:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-16-09	9:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-18-09	7:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

TABLE I1 (DAILY EXAMINATIONS)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL CLINICAL OBSERVATIONS

TABLE RANGE: 12-01-09 TO 12-18-09

ANIMAL	SEX	GROUP	CATEGORY	DATE	TIME	GRADE	OBSERVATIONS
59963	F	700 MG/KG	DISPOSITION	12-18-09	7:52	P	SCHEDULED EUTHANASIA
59921	F	2000 MG/KG	NORMAL	12-02-09	10:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-03-09	10:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-04-09	7:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-05-09	10:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-06-09	10:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-07-09	10:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-09-09	10:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-10-09	10:39	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-11-09	11:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-12-09	12:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-13-09	9:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-14-09	10:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-16-09	7:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
59921	F	2000 MG/KG	DISPOSITION	12-16-09	8:04	P	SCHEDULED EUTHANASIA
59928	F	2000 MG/KG	NORMAL	12-04-09	7:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-05-09	10:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-06-09	10:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-07-09	10:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-08-09	10:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-09-09	10:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-11-09	11:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-12-09	12:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-13-09	9:33	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-14-09	10:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-15-09	7:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-16-09	9:10	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-18-09	7:48	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
59928	F	2000 MG/KG	DISPOSITION	12-18-09	7:52	P	SCHEDULED EUTHANASIA

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

TABLE RANGE: 12-01-09 TO 12-18-09

ANIMAL	SEX	GROUP	CATEGORY	DATE	TIME	GRADE	OBSERVATIONS
59929	F	2000 MG/KG	NORMAL	12-02-09	10:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-03-09	10:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-04-09	7:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-05-09	10:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-06-09	10:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-07-09	10:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-09-09	10:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-10-09	10:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-11-09	11:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-12-09	12:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-13-09	9:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-14-09	10:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-16-09	7:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
59929	F	2000 MG/KG	DISPOSITION	12-16-09	8:04	P	SCHEDULED EUTHANASIA
59934	F	2000 MG/KG	NORMAL	12-01-09	11:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-02-09	10:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-03-09	10:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-04-09	7:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-05-09	10:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-06-09	10:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-08-09	10:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-09-09	10:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-10-09	10:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-11-09	11:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-12-09	12:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-13-09	9:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-15-09	7:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
59934	F	2000 MG/KG	DISPOSITION	12-15-09	7:32	P	SCHEDULED EUTHANASIA
59938	F	2000 MG/KG	NORMAL	12-04-09	7:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

TABLE RANGE: 12-01-09 TO 12-18-09

ANIMAL	SEX	GROUP	CATEGORY	DATE	TIME	GRADE	OBSERVATIONS
59938	F	2000 MG/KG	NORMAL	12-05-09	10:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-06-09	10:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-07-09	10:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-08-09	10:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-09-09	10:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-11-09	11:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-12-09	12:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-13-09	9:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-14-09	10:56	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-15-09	7:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-16-09	9:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-18-09	7:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
59938	F	2000 MG/KG	DISPOSITION	12-18-09	7:52	P	SCHEDULED EUTHANASIA
59943	F	2000 MG/KG	NORMAL	12-03-09	10:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-04-09	7:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-05-09	10:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-06-09	10:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-07-09	10:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-08-09	10:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-10-09	10:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-11-09	11:20	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-12-09	12:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-13-09	9:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-14-09	10:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-15-09	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-17-09	7:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
59943	F	2000 MG/KG	DISPOSITION	12-17-09	7:44	P	SCHEDULED EUTHANASIA
59946	F	2000 MG/KG	NORMAL	12-04-09	7:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-05-09	10:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

TABLE RANGE: 12-01-09 TO 12-18-09

ANIMAL	SEX	GROUP	CATEGORY	DATE	TIME	GRADE	OBSERVATIONS
59946	F	2000 MG/KG	NORMAL	12-06-09	10:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-07-09	10:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-08-09	10:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-09-09	10:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-11-09	11:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-12-09	12:50	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-13-09	9:34	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-14-09	10:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-15-09	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-16-09	9:11	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-18-09	7:49	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
59946	F	2000 MG/KG	DISPOSITION	12-18-09	7:52	P	SCHEDULED EUTHANASIA
59947	F	2000 MG/KG	DISPOSITION	12-17-09	7:44	P	SCHEDULED EUTHANASIA
59947	F	2000 MG/KG	EYES/EARS/NOSE	12-03-09	11:11	P	ENOPHTHALMUS RIGHT EYE
				12-04-09	7:23	P	ENOPHTHALMUS RIGHT EYE
				12-05-09	10:15	P	ENOPHTHALMUS RIGHT EYE
				12-06-09	10:25	P	ENOPHTHALMUS RIGHT EYE
				12-07-09	10:21	P	ENOPHTHALMUS RIGHT EYE
				12-08-09	10:42	P	ENOPHTHALMUS RIGHT EYE
				12-10-09	10:41	P	ENOPHTHALMUS RIGHT EYE
				12-11-09	11:21	P	ENOPHTHALMUS RIGHT EYE
				12-12-09	12:50	P	ENOPHTHALMUS RIGHT EYE
				12-13-09	9:35	P	ENOPHTHALMUS RIGHT EYE
				12-14-09	10:57	P	ENOPHTHALMUS RIGHT EYE
				12-15-09	7:23	P	ENOPHTHALMUS RIGHT EYE
				12-17-09	7:40	P	ENOPHTHALMUS RIGHT EYE
59951	F	2000 MG/KG	NORMAL	12-02-09	10:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-03-09	11:13	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-04-09	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

TABLE RANGE: 12-01-09 TO 12-18-09

ANIMAL	SEX	GROUP	CATEGORY	DATE	TIME	GRADE	OBSERVATIONS
59951	F	2000 MG/KG	NORMAL	12-05-09	10:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-06-09	10:25	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-07-09	10:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-09-09	10:36	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-10-09	10:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-11-09	11:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-12-09	12:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-13-09	9:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-14-09	10:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-16-09	7:59	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
59951	F	2000 MG/KG	DISPOSITION	12-16-09	8:05	P	SCHEDULED EUTHANASIA
59955	F	2000 MG/KG	NORMAL	12-03-09	11:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-04-09	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-05-09	10:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-06-09	10:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-07-09	10:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-08-09	10:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-10-09	10:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-11-09	11:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-12-09	12:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-13-09	9:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-14-09	10:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-15-09	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-17-09	7:40	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
59955	F	2000 MG/KG	DISPOSITION	12-17-09	7:45	P	SCHEDULED EUTHANASIA
59964	F	2000 MG/KG	NORMAL	12-01-09	11:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-02-09	10:57	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-03-09	11:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-04-09	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

TABLE RANGE: 12-01-09 TO 12-18-09

ANIMAL	SEX	GROUP	CATEGORY	DATE	TIME	GRADE	OBSERVATIONS
59964	F	2000 MG/KG	NORMAL	12-05-09	10:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-06-09	10:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-08-09	10:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-09-09	10:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-10-09	10:41	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-11-09	11:21	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-12-09	12:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-13-09	9:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-15-09	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
59964	F	2000 MG/KG	DISPOSITION	12-15-09	7:32	P	SCHEDULED EUTHANASIA
59966	F	2000 MG/KG	NORMAL	12-01-09	11:15	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-02-09	10:58	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-03-09	11:14	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-04-09	7:23	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-05-09	10:16	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-06-09	10:26	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-08-09	10:43	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-09-09	10:37	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-10-09	10:42	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-11-09	11:22	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-12-09	12:51	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-13-09	9:35	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
				12-15-09	7:24	P	NO SIGNIFICANT CLINICAL OBSERVATIONS
59966	F	2000 MG/KG	DISPOSITION	12-15-09	7:32	P	SCHEDULED EUTHANASIA

GRADE CODE: 1 - SLIGHT 2 - MODERATE 3 - SEVERE P - PRESENT

TABLE I2

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL BODY WEIGHTS [G]

MALES

DAY	-7	0	7	14
ANIMALS FROM GROUP 1:		0 MG/KG		
59866	125.	183.	234.	279.
59867	140.	194.	243.	298.
59869	138.	212.	272.	344.
59870	141.	217.	272.	337.
59881	136.	210.	261.	312.
59884	105.	164.	200.	256.
59885	115.	183.	234.	292.
59891	157.	227.	277.	328.
59892	141.	210.	257.	296.
59901	139.	204.	250.	296.
59914	111.	177.	221.	283.
59915	112.	182.	228.	279.
MEAN	130.	197.	246.	300.
S.D.	16.1	19.1	23.5	25.9
S.E.	4.6	5.5	6.8	7.5
N	12	12	12	12

TABLE I2

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS PAGE 2

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL BODY WEIGHTS [G]

MALES

DAY	-7	0	7	14
ANIMALS FROM GROUP 2:	200 MG/KG			
59865	147.	220.	277.	331.
59873	103.	163.	202.	252.
59875	115.	177.	212.	254.
59878	117.	193.	245.	319.
59879	122.	186.	235.	286.
59880	145.	207.	254.	297.
59882	146.	216.	260.	312.
59889	142.	218.	271.	334.
59893	138.	206.	265.	324.
59897	112.	166.	204.	257.
59911	149.	220.	281.	341.
59913	120.	185.	232.	272.
MEAN	130.	196.	245.	298.
S.D.	16.5	21.1	27.9	33.1
S.E.	4.7	6.1	8.1	9.6
N	12	12	12	12

TABLE I2

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL BODY WEIGHTS [G]

MALES

DAY	-7	0	7	14
ANIMALS FROM GROUP 3: 700 MG/KG				
59874	131.	202.	247.	302.
59894	158.	227.	281.	337.
59895	142.	216.	263.	313.
59896	122.	202.	262.	325.
59899	120.	183.	224.	277.
59902	121.	189.	234.	285.
59903	118.	176.	221.	269.
59904	129.	191.	244.	300.
59905	122.	196.	241.	302.
59909	107.	170.	216.	257.
59910	121.	198.	257.	334.
59916	147.	203.	240.	285.
MEAN	128.	196.	244.	299.
S.D.	14.2	15.9	19.4	25.5
S.E.	4.1	4.6	5.6	7.4
N	12	12	12	12

TABLE I2

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL BODY WEIGHTS [G]

MALES

DAY	-7	0	7	14
ANIMALS FROM GROUP 4: 2000 MG/KG				
59876	118.	183.	227.	285.
59883	102.	159.	197.	249.
59886	141.	218.	264.	323.
59887	109.	168.	205.	249.
59890	139.	204.	262.	323.
59898	129.	198.	250.	311.
59900	142.	220.	274.	336.
59906	152.	214.	255.	299.
59907	125.	185.	226.	284.
59908	144.	209.	259.	309.
59912	109.	164.	199.	259.
59917	132.	201.	250.	311.
MEAN	128.	193.	239.	295.
S.D.	15.9	21.3	27.0	29.9
S.E.	4.6	6.2	7.8	8.6
N	12	12	12	12

TABLE I2

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS PAGE 5

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL BODY WEIGHTS [G]

FEMALES

DAY	-7	0	7	14
ANIMALS FROM GROUP 1:		0 MG/KG		
59919	125.	165.	188.	207.
59920	120.	155.	173.	191.
59923	124.	184.	206.	227.
59924	141.	168.	177.	203.
59933	109.	149.	171.	200.
59939	123.	148.	161.	168.
59941	122.	160.	184.	209.
59942	115.	160.	185.	211.
59950	118.	157.	175.	197.
59956	93.	129.	146.	166.
59969	123.	156.	177.	191.
59970	119.	160.	181.	198.
MEAN	119.	158.	177.	197.
S.D.	11.1	13.0	14.6	17.2
S.E.	3.2	3.8	4.2	5.0
N	12	12	12	12

TABLE I2

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS PAGE 6

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL BODY WEIGHTS [G]

FEMALES

DAY	-7	0	7	14
ANIMALS FROM GROUP 2: 200 MG/KG				
59922	122.	152.	176.	199.
59926	109.	146.	160.	192.
59927	119.	154.	174.	199.
59936	132.	174.	193.	221.
59937	117.	146.	170.	182.
59949	123.	162.	174.	201.
59952	109.	146.	158.	173.
59954	134.	165.	195.	219.
59958	113.	155.	174.	185.
59962	118.	158.	169.	199.
59967	125.	167.	180.	198.
59968	113.	150.	166.	179.
MEAN	119.	156.	174.	195.
S.D.	8.1	9.1	11.3	14.6
S.E.	2.3	2.6	3.3	4.2
N	12	12	12	12

TABLE I2

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL BODY WEIGHTS [G]

FEMALES

DAY	-7	0	7	14
ANIMALS FROM GROUP 3: 700 MG/KG				
59918	138.	164.	192.	207.
59925	131.	153.	177.	200.
59930	106.	158.	182.	214.
59931	141.	174.	189.	210.
59932	117.	144.	163.	184.
59935	117.	158.	179.	207.
59940	123.	156.	179.	216.
59944	126.	159.	169.	194.
59945	120.	167.	189.	208.
59948	92.	134.	152.	161.
59959	106.	144.	166.	187.
59963	125.	156.	172.	192.
MEAN	120.	155.	176.	198.
S.D.	14.1	10.9	11.9	15.6
S.E.	4.1	3.1	3.4	4.5
N	12	12	12	12

TABLE I2

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS PAGE 8

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL BODY WEIGHTS [G]

FEMALES

DAY	-7	0	7	14
ANIMALS FROM GROUP 4: 2000 MG/KG				
59921	102.	127.	148.	165.
59928	149.	179.	204.	227.
59929	120.	157.	181.	195.
59934	120.	158.	171.	197.
59938	122.	151.	167.	182.
59943	109.	152.	179.	215.
59946	122.	156.	171.	191.
59947	121.	161.	181.	206.
59951	119.	149.	173.	195.
59955	117.	154.	170.	188.
59964	116.	159.	179.	194.
59966	118.	158.	171.	186.
MEAN	119.	155.	174.	195.
S.D.	11.0	11.9	12.8	15.7
S.E.	3.2	3.4	3.7	4.5
N	12	12	12	12

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TABLE I3

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL BODY WEIGHT CHANGES [G]

MALES

DAY	-7- 0	0- 7	7- 14	0- 14
ANIMALS FROM GROUP 1: 0 MG/KG				
59866	59.	51.	45.	96.
59867	54.	49.	56.	104.
59869	74.	60.	72.	132.
59870	76.	55.	65.	120.
59881	74.	51.	51.	102.
59884	59.	36.	57.	93.
59885	69.	50.	59.	109.
59891	70.	50.	51.	101.
59892	69.	47.	38.	85.
59901	65.	46.	46.	92.
59914	67.	44.	62.	106.
59915	71.	46.	51.	97.
MEAN	67.	49.	54.	103.
S.D.	6.8	6.0	9.3	12.8
S.E.	2.0	1.7	2.7	3.7
N	12	12	12	12

TABLE I3

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS PAGE 2

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL BODY WEIGHT CHANGES [G]

MALES

DAY	-7- 0	0- 7	7- 14	0- 14
ANIMALS FROM GROUP 2: 200 MG/KG				
59865	74.	56.	54.	111.
59873	60.	39.	50.	90.
59875	62.	34.	42.	76.
59878	76.	53.	73.	126.
59879	64.	49.	52.	100.
59880	62.	47.	43.	90.
59882	69.	45.	51.	96.
59889	77.	52.	63.	116.
59893	68.	59.	58.	118.
59897	54.	39.	53.	91.
59911	71.	61.	60.	121.
59913	65.	47.	40.	87.
MEAN	67.	48.	53.	102.
S.D.	6.9	8.3	9.5	15.9
S.E.	2.0	2.4	2.7	4.6
N	12	12	12	12

TABLE I3

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS PAGE 3

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL BODY WEIGHT CHANGES [G]

MALES

DAY	-7- 0	0- 7	7- 14	0- 14
ANIMALS FROM GROUP 3: 700 MG/KG				
59874	71.	45.	55.	100.
59894	68.	55.	56.	111.
59895	74.	47.	50.	97.
59896	80.	59.	64.	123.
59899	63.	41.	54.	95.
59902	67.	46.	51.	97.
59903	59.	45.	48.	92.
59904	62.	53.	56.	109.
59905	74.	45.	61.	106.
59909	63.	46.	41.	87.
59910	77.	59.	77.	136.
59916	57.	37.	45.	82.
MEAN	68.	48.	55.	103.
S.D.	7.5	7.1	9.4	15.4
S.E.	2.2	2.0	2.7	4.4
N	12	12	12	12

TABLE I3

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS PAGE 4

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL BODY WEIGHT CHANGES [G]

MALES

DAY	-7- 0	0- 7	7- 14	0- 14
ANIMALS FROM GROUP 4: 2000 MG/KG				
59876	65.	44.	58.	101.
59883	56.	38.	52.	90.
59886	77.	45.	60.	105.
59887	59.	37.	44.	81.
59890	65.	58.	62.	120.
59898	69.	52.	61.	114.
59900	78.	54.	62.	116.
59906	62.	41.	45.	86.
59907	59.	41.	58.	99.
59908	65.	50.	50.	100.
59912	56.	35.	59.	94.
59917	69.	50.	61.	111.
MEAN	65.	45.	56.	101.
S.D.	7.4	7.3	6.6	12.2
S.E.	2.2	2.1	1.9	3.5
N	12	12	12	12

TABLE I3

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL BODY WEIGHT CHANGES [G]

FEMALES

DAY	-7- 0	0- 7	7- 14	0- 14
ANIMALS FROM GROUP 1: 0 MG/KG				
59919	39.	23.	20.	43.
59920	35.	18.	18.	36.
59923	60.	22.	21.	43.
59924	28.	9.	26.	35.
59933	40.	22.	29.	51.
59939	26.	13.	7.	20.
59941	38.	24.	24.	48.
59942	45.	25.	26.	51.
59950	39.	18.	22.	40.
59956	36.	16.	20.	37.
59969	33.	21.	13.	35.
59970	41.	22.	17.	39.
MEAN	38.	19.	20.	40.
S.D.	8.8	4.8	6.1	8.7
S.E.	2.5	1.4	1.8	2.5
N	12	12	12	12

TABLE I3

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS PAGE 6

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL BODY WEIGHT CHANGES [G]

FEMALES

DAY	-7- 0	0- 7	7- 14	0- 14
ANIMALS FROM GROUP 2: 200 MG/KG				
59922	31.	24.	23.	46.
59926	38.	13.	32.	45.
59927	35.	20.	25.	44.
59936	42.	19.	28.	47.
59937	29.	24.	12.	36.
59949	40.	12.	27.	38.
59952	37.	12.	15.	27.
59954	32.	30.	23.	53.
59958	42.	19.	12.	31.
59962	40.	12.	30.	42.
59967	42.	13.	18.	31.
59968	37.	16.	13.	29.
MEAN	37.	18.	21.	39.
S.D.	4.6	5.9	7.3	8.5
S.E.	1.3	1.7	2.1	2.5
N	12	12	12	12

TABLE I3

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL BODY WEIGHT CHANGES [G]

FEMALES

DAY	-7- 0	0- 7	7- 14	0- 14
ANIMALS FROM GROUP 3: 700 MG/KG				
59918	25.	29.	14.	43.
59925	22.	24.	23.	47.
59930	53.	24.	32.	56.
59931	33.	15.	22.	37.
59932	26.	19.	22.	41.
59935	41.	21.	28.	49.
59940	33.	23.	37.	60.
59944	33.	11.	24.	35.
59945	46.	22.	19.	41.
59948	42.	18.	9.	28.
59959	39.	22.	21.	43.
59963	31.	16.	20.	36.
MEAN	35.	20.	23.	43.
S.D.	9.1	4.8	7.3	9.1
S.E.	2.6	1.4	2.1	2.6
N	12	12	12	12

TABLE I3
INDIVIDUAL BODY WEIGHT CHANGES [G]

FEMALES

DAY	-7- 0	0- 7	7- 14	0- 14
ANIMALS FROM GROUP 4: 2000 MG/KG				
59921	25.	22.	17.	39.
59928	31.	25.	23.	47.
59929	38.	23.	15.	38.
59934	38.	13.	25.	39.
59938	29.	17.	15.	32.
59943	43.	27.	35.	63.
59946	35.	15.	20.	34.
59947	41.	20.	25.	45.
59951	29.	24.	22.	46.
59955	37.	16.	18.	34.
59964	43.	20.	16.	36.
59966	40.	12.	15.	28.
MEAN	36.	19.	20.	40.
S.D.	5.9	4.8	6.0	9.2
S.E.	1.7	1.4	1.7	2.7
N	12	12	12	12

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TABLE I4 (HOME CAGE OBSERVATIONS - PRETEST)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL FUNCTIONAL OBSERVATIONAL BATTERY DATA

HOME CAGE OBSERVATIONS

DOSE GROUP: 1

DOSE LEVEL: 0 MG/KG SEX: MALES

TEST PERIOD: PRETEST

ANIMAL NUMBER	POSTURE	CONVULSIONS CLONIC	CONVULSIONS TONIC	TREMORS	BITING	PALPEBRAL CLOSURE	FECES CONSISTENCY
59866	2	1	1	1	1	3	2
59867	4	1	1	1	1	2	1
59869	1	1	1	1	1	1	4
59870	2	1	1	1	1	4	1
59881	1	1	1	1	1	1	4
59884	1	1	1	1	1	1	3
59885	1	1	1	1	1	1	1
59891	2	1	1	1	1	4	1
59892	1	1	1	1	1	1	4
59901	2	1	1	1	1	4	4
59914	2	1	1	1	1	3	4
59915	1	1	1	1	1	1	1

OBSERVATION SCORE, UNLESS STATED OTHERWISE

TABLE I4 (HOME CAGE OBSERVATIONS - PRETEST)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL FUNCTIONAL OBSERVATIONAL BATTERY DATA

HOME CAGE OBSERVATIONS

DOSE GROUP: 2

DOSE LEVEL: 200 MG/KG SEX: MALES

TEST PERIOD: PRETEST

ANIMAL NUMBER	POSTURE	CONVULSIONS CLONIC	CONVULSIONS TONIC	TREMORS	BITING	PALPEBRAL CLOSURE	FECES CONSISTENCY
59865	1	1	1	1	1	1	4
59873	1	1	1	1	1	1	4
59875	1	1	1	1	1	1	1
59878	1	1	1	1	1	1	1
59879	2	1	1	1	1	4	4
59880	2	1	1	1	1	3	1
59882	2	1	1	1	1	4	1
59889	1	1	1	1	1	1	1
59893	2	1	1	1	1	4	1
59897	1	1	1	1	1	1	4
59911	1	1	1	1	1	1	1
59913	2	1	1	1	1	4	1

OBSERVATION SCORE, UNLESS STATED OTHERWISE

TABLE I4 (HOME CAGE OBSERVATIONS - PRETEST)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL FUNCTIONAL OBSERVATIONAL BATTERY DATA

HOME CAGE OBSERVATIONS

DOSE GROUP: 3

DOSE LEVEL: 700 MG/KG SEX: MALES

TEST PERIOD: PRETEST

ANIMAL NUMBER	POSTURE	CONVULSIONS CLONIC	CONVULSIONS TONIC	TREMORS	BITING	PALPEBRAL CLOSURE	FECES CONSISTENCY
59874	1	1	1	1	1	1	1
59894	1	1	1	1	1	1	1
59895	2	1	1	1	1	4	4
59896	1	1	1	1	1	1	4
59899	2	1	1	1	1	4	4
59902	4	1	1	1	1	2	1
59903	2	1	1	1	1	4	1
59904	1	1	1	1	1	1	4
59905	2	1	1	1	1	3	1
59909	1	1	1	1	1	1	1
59910	2	1	1	1	1	4	4
59916	4	1	1	1	1	3	1

OBSERVATION SCORE, UNLESS STATED OTHERWISE

TABLE I4 (HOME CAGE OBSERVATIONS - PRETEST)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL FUNCTIONAL OBSERVATIONAL BATTERY DATA

HOME CAGE OBSERVATIONS

DOSE GROUP: 4

DOSE LEVEL: 2000 MG/KG SEX: MALES

TEST PERIOD: PRETEST

ANIMAL NUMBER	POSTURE	CONVULSIONS CLONIC	CONVULSIONS TONIC	TREMORS	BITING	PALPEBRAL CLOSURE	FECES CONSISTENCY
59876	2	1	1	1	1	4	1
59883	1	1	1	1	1	1	1
59886	2	1	1	1	1	4	4
59887	2	1	1	1	1	3	1
59890	4	1	1	1	1	2	1
59898	2	1	1	1	1	4	4
59900	2	1	1	1	1	4	4
59906	2	1	1	1	1	3	1
59907	2	1	1	1	1	4	4
59908	2	1	1	1	1	3	1
59912	1	1	1	1	1	1	1
59917	2	1	1	1	1	4	4

OBSERVATION SCORE, UNLESS STATED OTHERWISE

TABLE I4 (HOME CAGE OBSERVATIONS - PRETEST)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL FUNCTIONAL OBSERVATIONAL BATTERY DATA

HOME CAGE OBSERVATIONS

DOSE GROUP: 1
DOSE LEVEL: 0 MG/KG SEX: FEMALES
TEST PERIOD: PRETEST

ANIMAL NUMBER	POSTURE	CONVULSIONS CLONIC	CONVULSIONS TONIC	TREMORS	BITING	PALPEBRAL CLOSURE	FECES CONSISTENCY
59919	2	1	1	1	1	4	1
59920	1	1	1	1	1	1	4
59923	1	1	1	1	1	1	1
59924	2	1	1	1	1	3	1
59933	2	1	1	1	1	4	4
59939	1	1	1	1	1	1	4
59941	2	1	1	1	1	4	4
59942	1	1	1	1	1	1	1
59950	2	1	1	1	1	4	1
59956	2	1	1	1	1	4	4
59969	4	1	1	1	1	3	1
59970	1	1	1	1	1	1	1

OBSERVATION SCORE, UNLESS STATED OTHERWISE

TABLE I4 (HOME CAGE OBSERVATIONS - PRETEST)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL FUNCTIONAL OBSERVATIONAL BATTERY DATA

HOME CAGE OBSERVATIONS

DOSE GROUP: 2

DOSE LEVEL: 200 MG/KG SEX: FEMALES

TEST PERIOD: PRETEST

ANIMAL NUMBER	POSTURE	CONVULSIONS CLONIC	CONVULSIONS TONIC	TREMORS	BITING	PALPEBRAL CLOSURE	FECES CONSISTENCY
59922	2	1	1	1	1	4	1
59926	1	1	1	1	1	1	4
59927	1	1	1	1	1	1	1
59936	1	1	1	1	1	1	4
59937	4	1	1	1	1	3	1
59949	1	1	1	1	1	1	1
59952	1	1	1	1	1	1	1
59954	4	1	1	1	1	2	1
59958	1	1	1	1	1	1	1
59962	1	1	1	1	1	1	1
59967	2	1	1	1	1	4	1
59968	4	1	1	1	1	2	1

OBSERVATION SCORE, UNLESS STATED OTHERWISE

TABLE I4 (HOME CAGE OBSERVATIONS - PRETEST)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL FUNCTIONAL OBSERVATIONAL BATTERY DATA

HOME CAGE OBSERVATIONS

DOSE GROUP: 3

DOSE LEVEL: 700 MG/KG SEX: FEMALES

TEST PERIOD: PRETEST

ANIMAL NUMBER	POSTURE	CONVULSIONS CLONIC	CONVULSIONS TONIC	TREMORS	BITING	PALPEBRAL CLOSURE	FECES CONSISTENCY
59918	1	1	1	1	1	1	1
59925	1	1	1	1	1	1	1
59930	1	1	1	1	1	1	1
59931	1	1	1	1	1	1	4
59932	2	1	1	1	1	4	4
59935	2	1	1	1	1	4	1
59940	2	1	1	1	1	3	4
59944	2	1	1	1	1	4	1
59945	2	1	1	1	1	2	4
59948	1	1	1	1	1	1	4
59959	1	1	1	1	1	1	1
59963	2	1	1	1	1	3	1

OBSERVATION SCORE, UNLESS STATED OTHERWISE

TABLE I4 (HOME CAGE OBSERVATIONS - PRETEST)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL FUNCTIONAL OBSERVATIONAL BATTERY DATA

HOME CAGE OBSERVATIONS

DOSE GROUP: 4

DOSE LEVEL: 2000 MG/KG SEX: FEMALES

TEST PERIOD: PRETEST

ANIMAL NUMBER	POSTURE	CONVULSIONS CLONIC	CONVULSIONS TONIC	TREMORS	BITING	PALPEBRAL CLOSURE	FECES CONSISTENCY
59921	2	1	1	1	1	4	1
59928	8,3	1	1	1	1	1	1
59929	2	1	1	1	1	3	4
59934	1	1	1	1	1	1	1
59938	1	1	1	1	1	1	1
59943	2	1	1	1	1	4	4
59946	2	1	1	1	1	4	1
59947	2	1	1	1	1	4	4
59951	2	1	1	1	1	2	1
59955	1	1	1	1	1	1	4
59964	2	1	1	1	1	4	1
59966	1	1	1	1	1	1	4

OBSERVATION SCORE, UNLESS STATED OTHERWISE

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01/13/2010
R:01/13/2010

TABLE I5 (HOME CAGE OBSERVATIONS - DAY 0)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL FUNCTIONAL OBSERVATIONAL BATTERY DATA

HOME CAGE OBSERVATIONS

DOSE GROUP: 1

DOSE LEVEL: 0 MG/KG SEX: MALES

TEST PERIOD: DAY 0

ANIMAL NUMBER	POSTURE	CONVULSIONS CLONIC	CONVULSIONS TONIC	TREMORS	BITING	PALPEBRAL CLOSURE	FECES CONSISTENCY
59866	1	1	1	1	1	1	1
59867	1	1	1	1	1	1	4
59869	1	1	1	1	1	1	1
59870	1	1	1	1	1	1	4
59881	1	1	1	1	1	1	4
59884	2	1	1	1	1	3	4
59885	2	1	1	1	1	4	4
59891	1	1	1	1	1	1	1
59892	2	1	1	1	1	4	4
59901	1	1	1	1	1	1	4
59914	2	1	1	1	1	4	1
59915	2	1	1	1	1	4	4

OBSERVATION SCORE, UNLESS STATED OTHERWISE

TABLE I5 (HOME CAGE OBSERVATIONS - DAY 0)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS PAGE 2

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL FUNCTIONAL OBSERVATIONAL BATTERY DATA

HOME CAGE OBSERVATIONS

DOSE GROUP: 2

DOSE LEVEL: 200 MG/KG SEX: MALES

TEST PERIOD: DAY 0

ANIMAL NUMBER	POSTURE	CONVULSIONS CLONIC	CONVULSIONS TONIC	TREMORS	BITING	PALPEBRAL CLOSURE	FECES CONSISTENCY
59865	2	1	1	1	1	4	4
59873	8	1	1	1	1	1	4
59875	2	1	1	1	1	3	4
59878	2	1	1	1	1	4	4
59879	2	1	1	1	1	4	4
59880	2	1	1	1	1	4	4
59882	2	1	1	1	1	4	1
59889	2	1	1	1	1	4	4
59893	2	1	1	1	1	3	1
59897	1	1	1	1	1	1	4
59911	2	1	1	1	1	2	4
59913	2	1	1	1	1	4	4

OBSERVATION SCORE, UNLESS STATED OTHERWISE

TABLE I5 (HOME CAGE OBSERVATIONS - DAY 0)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL FUNCTIONAL OBSERVATIONAL BATTERY DATA

HOME CAGE OBSERVATIONS

DOSE GROUP: 3

DOSE LEVEL: 700 MG/KG SEX: MALES

TEST PERIOD: DAY 0

ANIMAL NUMBER	POSTURE	CONVULSIONS CLONIC	CONVULSIONS TONIC	TREMORS	BITING	PALPEBRAL CLOSURE	FECES CONSISTENCY
59874	2	1	1	1	1	4	1
59894	2	1	1	1	1	4	4
59895	2	1	1	1	1	3	1
59896	2	1	1	1	1	3	4
59899	2	1	1	1	1	4	1
59902	2	1	1	1	1	3	1
59903	2	1	1	1	1	3	4
59904	1	1	1	1	1	1	4
59905	1	1	1	1	1	1	4
59909	2	1	1	1	1	3	4
59910	1	1	1	1	1	1	4
59916	1	1	1	1	1	1	1

OBSERVATION SCORE, UNLESS STATED OTHERWISE

TABLE I5 (HOME CAGE OBSERVATIONS - DAY 0)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL FUNCTIONAL OBSERVATIONAL BATTERY DATA

HOME CAGE OBSERVATIONS

DOSE GROUP: 4

DOSE LEVEL: 2000 MG/KG SEX: MALES

TEST PERIOD: DAY 0

ANIMAL NUMBER	POSTURE	CONVULSIONS CLONIC	CONVULSIONS TONIC	TREMORS	BITING	PALPEBRAL CLOSURE	FECES CONSISTENCY
59876	2	1	1	1	1	4	4
59883	2	1	1	1	1	4	1
59886	2	1	1	1	1	3	4
59887	2	1	1	1	1	4	1
59890	1	1	1	1	1	1	4
59898	2	1	1	1	1	4	4
59900	2	1	1	1	1	4	1
59906	2	1	1	1	1	2	4
59907	2	1	1	1	1	3	4
59908	2	1	1	1	1	4	4
59912	1	1	1	1	1	1	4
59917	1	1	1	1	1	1	4

OBSERVATION SCORE, UNLESS STATED OTHERWISE

TABLE I5 (HOME CAGE OBSERVATIONS - DAY 0)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS PAGE 5

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL FUNCTIONAL OBSERVATIONAL BATTERY DATA

HOME CAGE OBSERVATIONS

DOSE GROUP: 1

DOSE LEVEL: 0 MG/KG SEX: FEMALES

TEST PERIOD: DAY 0

ANIMAL NUMBER	POSTURE	CONVULSIONS CLONIC	CONVULSIONS TONIC	TREMORS	BITING	PALPEBRAL CLOSURE	FECES CONSISTENCY
59919	2	1	1	1	1	3	4
59920	2	1	1	1	1	3	4
59923	2	1	1	1	1	4	4
59924	1	1	1	1	1	1	1
59933	8	1	1	1	1	1	1
59939	1	1	1	1	1	1	4
59941	2	1	1	1	1	4	1
59942	1	1	1	1	1	1	4
59950	1	1	1	1	1	1	4
59956	2	1	1	1	1	3	4
59969	2	1	1	1	1	4	4
59970	1	1	1	1	1	1	4

OBSERVATION SCORE, UNLESS STATED OTHERWISE

TABLE I5 (HOME CAGE OBSERVATIONS - DAY 0)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS PAGE 6

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL FUNCTIONAL OBSERVATIONAL BATTERY DATA

HOME CAGE OBSERVATIONS

DOSE GROUP: 2

DOSE LEVEL: 200 MG/KG SEX: FEMALES

TEST PERIOD: DAY 0

ANIMAL NUMBER	POSTURE	CONVULSIONS CLONIC	CONVULSIONS TONIC	TREMORS	BITING	PALPEBRAL CLOSURE	FECES CONSISTENCY
59922	1	1	1	1	1	1	4
59926	2	1	1	1	1	4	4
59927	2	1	1	1	1	4	4
59936	2	1	1	1	1	4	1
59937	2	1	1	1	1	3	1
59949	1	1	1	1	1	1	4
59952	2	1	1	1	1	4	4
59954	1	1	1	1	1	1	4
59958	2	1	1	1	1	4	4
59962	2	1	1	1	1	4	1
59967	1	1	1	1	1	1	4
59968	1	1	1	1	1	1	1

OBSERVATION SCORE, UNLESS STATED OTHERWISE

TABLE I5 (HOME CAGE OBSERVATIONS - DAY 0)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL FUNCTIONAL OBSERVATIONAL BATTERY DATA

HOME CAGE OBSERVATIONS

DOSE GROUP: 3

DOSE LEVEL: 700 MG/KG SEX: FEMALES

TEST PERIOD: DAY 0

ANIMAL NUMBER	POSTURE	CONVULSIONS CLONIC	CONVULSIONS TONIC	TREMORS	BITING	PALPEBRAL CLOSURE	FECES CONSISTENCY
59918	2	1	1	1	1	4	4
59925	2	1	1	1	1	4	4
59930	1	1	1	1	1	1	4
59931	2	1	1	1	1	4	4
59932	1	1	1	1	1	1	4
59935	2	1	1	1	1	4	4
59940	1	1	1	1	1	1	4
59944	1	1	1	1	1	1	4
59945	2	1	1	1	1	4	1
59948	2	1	1	1	1	3	1
59959	2	1	1	1	1	4	4
59963	2	1	1	1	1	4	4

OBSERVATION SCORE, UNLESS STATED OTHERWISE

TABLE I5 (HOME CAGE OBSERVATIONS - DAY 0)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL FUNCTIONAL OBSERVATIONAL BATTERY DATA

HOME CAGE OBSERVATIONS

DOSE GROUP: 4

DOSE LEVEL: 2000 MG/KG SEX: FEMALES

TEST PERIOD: DAY 0

ANIMAL NUMBER	POSTURE	CONVULSIONS CLONIC	CONVULSIONS TONIC	TREMORS	BITING	PALPEBRAL CLOSURE	FECES CONSISTENCY
59921	2	1	1	1	1	4	4
59928	2	1	1	1	1	3	1
59929	1	1	1	1	1	1	4
59934	2	1	1	1	1	4	4
59938	1	1	1	1	1	1	1
59943	2	1	1	1	1	3	1
59946	2	1	1	1	1	4	4
59947	2	1	1	1	1	4	4
59951	3	1	1	1	1	1	1
59955	2	1	1	1	1	4	4
59964	2	1	1	1	1	4	4
59966	2	1	1	1	1	4	4

OBSERVATION SCORE, UNLESS STATED OTHERWISE

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TABLE I6 (HOME CAGE OBSERVATIONS - DAY 7)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL FUNCTIONAL OBSERVATIONAL BATTERY DATA

HOME CAGE OBSERVATIONS

DOSE GROUP: 1

DOSE LEVEL: 0 MG/KG SEX: MALES

TEST PERIOD: DAY 7

ANIMAL NUMBER	POSTURE	CONVULSIONS CLONIC	CONVULSIONS TONIC	TREMORS	BITING	PALPEBRAL CLOSURE	FECES CONSISTENCY
59866	2	1	1	1	1	4	1
59867	2	1	1	1	1	4	4
59869	1	1	1	1	1	1	4
59870	2	1	1	1	1	3	4
59881	1	1	1	1	1	1	4
59884	2	1	1	1	1	4	1
59885	1	1	1	1	1	1	1
59891	2	1	1	1	1	4	4
59892	1	1	1	1	1	1	4
59901	2	1	1	1	1	3	4
59914	2	1	1	1	1	4	4
59915	2	1	1	1	1	4	4

OBSERVATION SCORE, UNLESS STATED OTHERWISE

TABLE I6 (HOME CAGE OBSERVATIONS - DAY 7)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL FUNCTIONAL OBSERVATIONAL BATTERY DATA

HOME CAGE OBSERVATIONS

DOSE GROUP: 2

DOSE LEVEL: 200 MG/KG SEX: MALES

TEST PERIOD: DAY 7

ANIMAL NUMBER	POSTURE	CONVULSIONS CLONIC	CONVULSIONS TONIC	TREMORS	BITING	PALPEBRAL CLOSURE	FECES CONSISTENCY
59865	1	1	1	1	1	1	4
59873	2	1	1	1	1	3	4
59875	1	1	1	1	1	1	4
59878	1	1	1	1	1	1	4
59879	1	1	1	1	1	1	4
59880	2	1	1	1	1	4	4
59882	2	1	1	1	1	4	4
59889	2	1	1	1	1	4	4
59893	2	1	1	1	1	4	4
59897	1	1	1	1	1	1	4
59911	1	1	1	1	1	1	4
59913	2	1	1	1	1	4	4

OBSERVATION SCORE, UNLESS STATED OTHERWISE

TABLE I6 (HOME CAGE OBSERVATIONS - DAY 7)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL FUNCTIONAL OBSERVATIONAL BATTERY DATA

HOME CAGE OBSERVATIONS

DOSE GROUP: 3

DOSE LEVEL: 700 MG/KG SEX: MALES

TEST PERIOD: DAY 7

ANIMAL NUMBER	POSTURE	CONVULSIONS CLONIC	CONVULSIONS TONIC	TREMORS	BITING	PALPEBRAL CLOSURE	FECES CONSISTENCY
59874	1	1	1	1	1	1	4
59894	2	1	1	1	1	4	4
59895	2	1	1	1	1	4	1
59896	2	1	1	1	1	4	4
59899	1	1	1	1	1	1	4
59902	2	1	1	1	1	4	4
59903	8	1	1	1	1	1	4
59904	2	1	1	1	1	4	4
59905	2	1	1	1	1	4	1
59909	2	1	1	1	1	4	1
59910	2	1	1	1	1	4	4
59916	1	1	1	1	1	1	4

OBSERVATION SCORE, UNLESS STATED OTHERWISE

TABLE I6 (HOME CAGE OBSERVATIONS - DAY 7)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL FUNCTIONAL OBSERVATIONAL BATTERY DATA

HOME CAGE OBSERVATIONS

DOSE GROUP: 4

DOSE LEVEL: 2000 MG/KG SEX: MALES

TEST PERIOD: DAY 7

ANIMAL NUMBER	POSTURE	CONVULSIONS CLONIC	CONVULSIONS TONIC	TREMORS	BITING	PALPEBRAL CLOSURE	FECES CONSISTENCY
59876	2	1	1	1	1	4	4
59883	2	1	1	1	1	4	4
59886	2	1	1	1	1	4	4
59887	1	1	1	1	1	1	4
59890	1	1	1	1	1	1	4
59898	1	1	1	1	1	1	4
59900	2	1	1	1	1	1	4
59906	2	1	1	1	1	4	4
59907	2	1	1	1	1	3	4
59908	2	1	1	1	1	3	4
59912	1	1	1	1	1	1	4
59917	2	1	1	1	1	4	4

OBSERVATION SCORE, UNLESS STATED OTHERWISE

TABLE I6 (HOME CAGE OBSERVATIONS - DAY 7)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL FUNCTIONAL OBSERVATIONAL BATTERY DATA

HOME CAGE OBSERVATIONS

DOSE GROUP: 1

DOSE LEVEL: 0 MG/KG SEX: FEMALES

TEST PERIOD: DAY 7

ANIMAL NUMBER	POSTURE	CONVULSIONS CLONIC	CONVULSIONS TONIC	TREMORS	BITING	PALPEBRAL CLOSURE	FECES CONSISTENCY
59919	8	1	1	1	1	1	4
59920	1	1	1	1	1	1	1
59923	2	1	1	1	1	4	1
59924	1	1	1	1	1	1	4
59933	1	1	1	1	1	1	4
59939	1	1	1	1	1	1	4
59941	1	1	1	1	1	1	1
59942	1	1	1	1	1	1	4
59950	2	1	1	1	1	2	4
59956	2	1	1	1	1	1	4
59969	1	1	1	1	1	1	4
59970	2	1	1	1	1	4	4

OBSERVATION SCORE, UNLESS STATED OTHERWISE

TABLE I6 (HOME CAGE OBSERVATIONS - DAY 7)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL FUNCTIONAL OBSERVATIONAL BATTERY DATA

HOME CAGE OBSERVATIONS

DOSE GROUP: 2

DOSE LEVEL: 200 MG/KG SEX: FEMALES

TEST PERIOD: DAY 7

ANIMAL NUMBER	POSTURE	CONVULSIONS CLONIC	CONVULSIONS TONIC	TREMORS	BITING	PALPEBRAL CLOSURE	FECES CONSISTENCY
59922	2	1	1	1	1	4	4
59926	2	1	1	1	1	4	1
59927	2	1	1	1	1	2	4
59936	2	1	1	1	1	4	4
59937	2	1	1	1	1	4	4
59949	1	1	1	1	1	1	4
59952	2	1	1	1	1	4	4
59954	1	1	1	1	1	1	4
59958	2	1	1	1	1	3	4
59962	2	1	1	1	1	4	4
59967	1	1	1	1	1	1	4
59968	1	1	1	1	1	1	4

OBSERVATION SCORE, UNLESS STATED OTHERWISE

TABLE I6 (HOME CAGE OBSERVATIONS - DAY 7)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL FUNCTIONAL OBSERVATIONAL BATTERY DATA

HOME CAGE OBSERVATIONS

DOSE GROUP: 3

DOSE LEVEL: 700 MG/KG SEX: FEMALES

TEST PERIOD: DAY 7

ANIMAL NUMBER	POSTURE	CONVULSIONS CLONIC	CONVULSIONS TONIC	TREMORS	BITING	PALPEBRAL CLOSURE	FECES CONSISTENCY
59918	1	1	1	1	1	1	4
59925	1	1	1	1	1	1	4
59930	2	1	1	1	1	4	4
59931	2	1	1	1	1	4	4
59932	2	1	1	1	1	4	4
59935	2	1	1	1	1	3	4
59940	1	1	1	1	1	1	4
59944	2	1	1	1	1	4	1
59945	2	1	1	1	1	1	4
59948	2	1	1	1	1	4	4
59959	2	1	1	1	1	2	4
59963	2	1	1	1	1	3	4

OBSERVATION SCORE, UNLESS STATED OTHERWISE

TABLE I6 (HOME CAGE OBSERVATIONS - DAY 7)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL FUNCTIONAL OBSERVATIONAL BATTERY DATA

HOME CAGE OBSERVATIONS

DOSE GROUP: 4

DOSE LEVEL: 2000 MG/KG SEX: FEMALES

TEST PERIOD: DAY 7

ANIMAL NUMBER	POSTURE	CONVULSIONS CLONIC	CONVULSIONS TONIC	TREMORS	BITING	PALPEBRAL CLOSURE	FECES CONSISTENCY
59921	2	1	1	1	1	4	1
59928	1	1	1	1	1	1	4
59929	1	1	1	1	1	1	4
59934	2	1	1	1	1	3	1
59938	1	1	1	1	1	1	4
59943	1	1	1	1	1	1	1
59946	2	1	1	1	1	4	4
59947	2	1	1	1	1	4	4
59951	2	1	1	1	1	4	4
59955	2	1	1	1	1	4	1
59964	2	1	1	1	1	4	4
59966	1	1	1	1	1	1	1

OBSERVATION SCORE, UNLESS STATED OTHERWISE

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TABLE I7 (HOME CAGE OBSERVATIONS - DAY 14)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL FUNCTIONAL OBSERVATIONAL BATTERY DATA

HOME CAGE OBSERVATIONS

DOSE GROUP: 1
DOSE LEVEL: 0 MG/KG SEX: MALES
TEST PERIOD: DAY 14

ANIMAL NUMBER	POSTURE	CONVULSIONS CLONIC	CONVULSIONS TONIC	TREMORS	BITING	PALPEBRAL CLOSURE	FECES CONSISTENCY
59866	1	1	1	1	1	1	1
59867	2	1	1	1	1	4	1
59869	2	1	1	1	1	4	1
59870	2	1	1	1	1	2	4
59881	1	1	1	1	1	1	1
59884	2	1	1	1	1	4	1
59885	2	1	1	1	1	4	1
59891	2	1	1	1	1	4	1
59892	2	1	1	1	1	2	4
59901	3	1	1	1	1	1	4
59914	2	1	1	1	1	4	4
59915	1	1	1	1	1	1	1

OBSERVATION SCORE, UNLESS STATED OTHERWISE

TABLE I7 (HOME CAGE OBSERVATIONS - DAY 14)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL FUNCTIONAL OBSERVATIONAL BATTERY DATA

HOME CAGE OBSERVATIONS

DOSE GROUP: 2

DOSE LEVEL: 200 MG/KG SEX: MALES

TEST PERIOD: DAY 14

ANIMAL NUMBER	POSTURE	CONVULSIONS CLONIC	CONVULSIONS TONIC	TREMORS	BITING	PALPEBRAL CLOSURE	FECES CONSISTENCY
59865	1	1	1	1	1	3	4
59873	2	1	1	1	1	3	4
59875	2	1	1	1	1	3	1
59878	1	1	1	1	1	1	4
59879	3	1	1	1	1	1	4
59880	2	1	1	1	1	4	4
59882	1	1	1	1	1	1	1
59889	1	1	1	1	1	1	4
59893	1	1	1	1	1	1	4
59897	1	1	1	1	1	1	4
59911	1	1	1	1	1	1	4
59913	2	1	1	1	1	4	1

OBSERVATION SCORE, UNLESS STATED OTHERWISE

TABLE I7 (HOME CAGE OBSERVATIONS - DAY 14)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL FUNCTIONAL OBSERVATIONAL BATTERY DATA

HOME CAGE OBSERVATIONS

DOSE GROUP: 3

DOSE LEVEL: 700 MG/KG SEX: MALES

TEST PERIOD: DAY 14

ANIMAL NUMBER	POSTURE	CONVULSIONS CLONIC	CONVULSIONS TONIC	TREMORS	BITING	PALPEBRAL CLOSURE	FECES CONSISTENCY
59874	2	1	1	1	1	4	4
59894	1	1	1	1	1	1	4
59895	2	1	1	1	1	4	4
59896	2	1	1	1	1	4	1
59899	2	1	1	1	1	4	4
59902	1	1	1	1	1	1	4
59903	1	1	1	1	1	1	1
59904	2	1	1	1	1	4	1
59905	2	1	1	1	1	4	4
59909	2	1	1	1	1	3	4
59910	2	1	1	1	1	4	1
59916	1	1	1	1	1	1	4

OBSERVATION SCORE, UNLESS STATED OTHERWISE

TABLE I7 (HOME CAGE OBSERVATIONS - DAY 14)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL FUNCTIONAL OBSERVATIONAL BATTERY DATA

HOME CAGE OBSERVATIONS

DOSE GROUP: 4

DOSE LEVEL: 2000 MG/KG SEX: MALES

TEST PERIOD: DAY 14

ANIMAL NUMBER	POSTURE	CONVULSIONS CLONIC	CONVULSIONS TONIC	TREMORS	BITING	PALPEBRAL CLOSURE	FECES CONSISTENCY
59876	2	1	1	1	1	4	4
59883	1	1	1	1	1	1	4
59886	2	1	1	1	1	3	4
59887	1	1	1	1	1	1	4
59890	2	1	1	1	1	4	1
59898	2	1	1	1	1	4	4
59900	1	1	1	1	1	2	4
59906	1	1	1	1	1	1	1
59907	2	1	1	1	1	4	1
59908	1	1	1	1	1	1	4
59912	1	1	1	1	1	1	4
59917	2	1	1	1	1	4	4

OBSERVATION SCORE, UNLESS STATED OTHERWISE

TABLE I7 (HOME CAGE OBSERVATIONS - DAY 14)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL FUNCTIONAL OBSERVATIONAL BATTERY DATA

HOME CAGE OBSERVATIONS

DOSE GROUP: 1

DOSE LEVEL: 0 MG/KG SEX: FEMALES

TEST PERIOD: DAY 14

ANIMAL NUMBER	POSTURE	CONVULSIONS CLONIC	CONVULSIONS TONIC	TREMORS	BITING	PALPEBRAL CLOSURE	FECES CONSISTENCY
59919	1	1	1	1	1	1	1
59920	2	1	1	1	1	4	1
59923	1	1	1	1	1	1	4
59924	2	1	1	1	1	4	1
59933	3	1	1	1	1	1	4
59939	1	1	1	1	1	1	4
59941	1	1	1	1	1	1	1
59942	1	1	1	1	1	1	4
59950	2	1	1	1	1	4	4
59956	2	1	1	1	1	4	1
59969	2	1	1	1	1	4	4
59970	2	1	1	1	1	4	4

OBSERVATION SCORE, UNLESS STATED OTHERWISE

TABLE I7 (HOME CAGE OBSERVATIONS - DAY 14)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL FUNCTIONAL OBSERVATIONAL BATTERY DATA

HOME CAGE OBSERVATIONS

DOSE GROUP: 2

DOSE LEVEL: 200 MG/KG SEX: FEMALES

TEST PERIOD: DAY 14

ANIMAL NUMBER	POSTURE	CONVULSIONS CLONIC	CONVULSIONS TONIC	TREMORS	BITING	PALPEBRAL CLOSURE	FECES CONSISTENCY
59922	2	1	1	1	1	4	4
59926	1	1	1	1	1	1	1
59927	1	1	1	1	1	1	1
59936	1	1	1	1	1	4	4
59937	1	1	1	1	1	1	4
59949	2	1	1	1	1	4	4
59952	2	1	1	1	1	4	4
59954	1	1	1	1	1	1	4
59958	1	1	1	1	1	1	4
59962	2	1	1	1	1	4	4
59967	3	1	1	1	1	1	4
59968	2	1	1	1	1	4	1

OBSERVATION SCORE, UNLESS STATED OTHERWISE

TABLE I7 (HOME CAGE OBSERVATIONS - DAY 14)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL FUNCTIONAL OBSERVATIONAL BATTERY DATA

HOME CAGE OBSERVATIONS

DOSE GROUP: 3

DOSE LEVEL: 700 MG/KG SEX: FEMALES

TEST PERIOD: DAY 14

ANIMAL NUMBER	POSTURE	CONVULSIONS CLONIC	CONVULSIONS TONIC	TREMORS	BITING	PALPEBRAL CLOSURE	FECES CONSISTENCY
59918	1	1	1	1	1	1	4
59925	1	1	1	1	1	2	4
59930	3	1	1	1	2	1	4
59931	3	1	1	1	1	1	1
59932	3	1	1	1	1	1	4
59935	1	1	1	1	1	1	4
59940	1	1	1	1	1	1	1
59944	1	1	1	1	1	4	4
59945	2	1	1	1	1	4	4
59948	1	1	1	1	1	1	4
59959	1	1	1	1	1	1	4
59963	1	1	1	1	1	1	1

OBSERVATION SCORE, UNLESS STATED OTHERWISE

TABLE I7 (HOME CAGE OBSERVATIONS - DAY 14)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL FUNCTIONAL OBSERVATIONAL BATTERY DATA

HOME CAGE OBSERVATIONS

DOSE GROUP: 4

DOSE LEVEL: 2000 MG/KG SEX: FEMALES

TEST PERIOD: DAY 14

ANIMAL NUMBER	POSTURE	CONVULSIONS CLONIC	CONVULSIONS TONIC	TREMORS	BITING	PALPEBRAL CLOSURE	FECES CONSISTENCY
59921	1	1	1	1	1	1	4
59928	1	1	1	1	1	1	4
59929	1	1	1	1	1	1	4
59934	1	1	1	1	1	1	4
59938	1	1	1	1	1	1	4
59943	3	1	1	1	1	1	1
59946	1	1	1	1	1	1	1
59947	1	1	1	1	1	1	1
59951	3	1	1	1	1	1	4
59955	3	1	1	1	1	1	4
59964	2	1	1	1	1	4	4
59966	1	1	1	1	1	1	4

OBSERVATION SCORE, UNLESS STATED OTHERWISE

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FINAL REPORT

Contents:	Volume 3 of 4 Appendix L - Tables I8-I27
Study Title:	An Oral (Gavage) Acute Neurotoxicity Study of Tolclofos-Methyl in Rats
Study Number:	WIL-118043
Study Director:	Melissa J. Beck, PhD
Data Requirements:	OECD Guideline 424 U.S. EPA OPPTS Guideline 870.6200 JMAFF Notification No. 12 NohSan No. 8147
Study Initiation Date:	16 November 2009
Study Completion Date:	21 April 2010
Performing Laboratory:	WIL Research Laboratories, LLC 1407 George Road Ashland, OH 44805-8946
Sponsor:	Sumitomo Chemical Company, Ltd. 27-1, Shinkawa 2-chome Chuo-ku, Tokyo 104-8260, Japan

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APPENDIX L

Individual Animal Data [continued]

Tables I8-I27

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TABLE I8 (HANDLING OBSERVATIONS - PRETEST)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL FUNCTIONAL OBSERVATIONAL BATTERY DATA

HANDLING OBSERVATIONS

DOSE GROUP: 1
DOSE LEVEL: 0 MG/KG SEX: MALES
TEST PERIOD: PRETEST

ANIMAL NUMBER	EASE OF REMOVAL FROM CAGE	EASE OF HANDLING ANIMAL IN HAND	LACRIMATION	CHROMODACRYORRHEA	SALIVATION
59866	1	1	1	1	1
59867	1	1	1	1	1
59869	1	1	1	1	1
59870	1	1	1	1	1
59881	1	1	1	1	1
59884	1	1	1	1	1
59885	1	1	1	1	1
59891	1	1	1	1	1
59892	1	1	1	1	1
59901	1	1	1	1	1
59914	1	1	1	1	1
59915	1	1	1	1	1

OBSERVATION SCORE, UNLESS STATED OTHERWISE

TABLE I8 (HANDLING OBSERVATIONS - PRETEST)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL FUNCTIONAL OBSERVATIONAL BATTERY DATA

HANDLING OBSERVATIONS

DOSE GROUP: 1
DOSE LEVEL: 0 MG/KG SEX: MALES
TEST PERIOD: PRETEST

ANIMAL NUMBER	PILOERECTION	FUR APPEARANCE	PALPEBRAL CLOSURE	RESPIRATORY RATE	RESPIRATORY CHARACTER	RED DEPOSITS EYES	RED DEPOSITS NOSE	RED DEPOSITS MOUTH
59866	1	1	1	1	1	2	2	2
59867	1	1	1	1	1	2	2	2
59869	1	1	1	1	1	2	2	2
59870	1	1	1	1	1	2	2	2
59881	1	1	1	1	1	2	2	2
59884	1	1	1	1	1	2	2	2
59885	1	1	1	1	1	2	2	2
59891	1	1	1	1	1	2	2	2
59892	1	1	1	1	1	2	2	2
59901	1	1	1	1	1	2	2	2
59914	1	1	1	1	1	2	2	2
59915	1	1	1	1	1	2	2	2

OBSERVATION SCORE, UNLESS STATED OTHERWISE

TABLE I8 (HANDLING OBSERVATIONS - PRETEST)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS PAGE 3

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL FUNCTIONAL OBSERVATIONAL BATTERY DATA

HANDLING OBSERVATIONS

DOSE GROUP: 1

DOSE LEVEL: 0 MG/KG SEX: MALES

TEST PERIOD: PRETEST

ANIMAL NUMBER	CRUSTY DEPOSITS EYES	CRUSTY DEPOSITS NOSE	CRUSTY DEPOSITS MOUTH	COLOR MUCOUS MEMBRANES	COLOR EYES	COLOR SKIN	EYE PROMINENCE	MUSCLE TONE
59866	2	2	2	1	1	1	1	1
59867	2	2	2	1	1	1	1	1
59869	2	2	2	1	1	1	1	1
59870	2	2	2	1	1	1	1	1
59881	2	2	2	1	1	1	1	1
59884	2	2	2	1	1	1	1	1
59885	2	2	2	1	1	1	1	1
59891	2	2	2	1	1	1	1	1
59892	2	2	2	1	1	1	1	1
59901	2	2	2	1	1	1	1	1
59914	2	2	2	1	1	1	1	1
59915	2	2	2	1	1	1	1	1

OBSERVATION SCORE, UNLESS STATED OTHERWISE

HANDLING OBSERVATIONS

DOSE GROUP: 2
DOSE LEVEL: 200 MG/KG SEX: MALES
TEST PERIOD: PRETEST

ANIMAL NUMBER	EASE OF REMOVAL FROM CAGE	EASE OF HANDLING ANIMAL IN HAND	LACRIMATION	CHROMODACRYORRHEA	SALIVATION
59865	1	1	1	1	1
59873	2	1	1	1	1
59875	1	1	1	1	1
59878	1	1	1	1	1
59879	1	1	1	1	1
59880	1	1	1	1	1
59882	2	1	1	1	1
59889	1	1	1	1	1
59893	1	1	1	1	1
59897	1	1	1	1	1
59911	1	1	1	1	1
59913	1	1	1	1	1

OBSERVATION SCORE, UNLESS STATED OTHERWISE

TABLE I8 (HANDLING OBSERVATIONS - PRETEST)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL FUNCTIONAL OBSERVATIONAL BATTERY DATA

HANDLING OBSERVATIONS

DOSE GROUP: 2
DOSE LEVEL: 200 MG/KG SEX: MALES
TEST PERIOD: PRETEST

ANIMAL NUMBER	PILOERECTION	FUR APPEARANCE	PALPEBRAL CLOSURE	RESPIRATORY RATE	RESPIRATORY CHARACTER	RED DEPOSITS EYES	RED DEPOSITS NOSE	RED DEPOSITS MOUTH
59865	1	1	1	1	1	2	2	2
59873	1	1	1	1	1	2	2	2
59875	1	1	1	1	1	2	2	2
59878	1	1	1	1	1	2	2	2
59879	1	1	1	1	1	2	2	2
59880	1	1	1	1	1	2	2	2
59882	1	1	1	1	1	2	2	2
59889	1	1	1	1	1	2	2	2
59893	1	1	1	1	1	2	2	2
59897	1	1	1	1	1	2	2	2
59911	1	1	1	1	1	2	2	2
59913	1	1	1	1	1	2	2	2

OBSERVATION SCORE, UNLESS STATED OTHERWISE

HANDLING OBSERVATIONS

DOSE GROUP: 2
DOSE LEVEL: 200 MG/KG SEX: MALES
TEST PERIOD: PRETEST

ANIMAL NUMBER	CRUSTY DEPOSITS EYES	CRUSTY DEPOSITS NOSE	CRUSTY DEPOSITS MOUTH	COLOR MUCOUS MEMBRANES	COLOR EYES	COLOR SKIN	EYE PROMINENCE	MUSCLE TONE
59865	2	2	2	1	1	1	1	1
59873	2	2	2	1	1	1	1	1
59875	2	2	2	1	1	1	1	1
59878	2	2	2	1	1	1	1	1
59879	2	2	2	1	1	1	1	1
59880	2	2	2	1	1	1	1	1
59882	2	2	2	1	1	1	1	1
59889	2	2	2	1	1	1	1	1
59893	2	2	2	1	1	1	1	1
59897	2	2	2	1	1	1	1	1
59911	2	2	2	1	1	1	1	1
59913	2	2	2	1	1	1	1	1

OBSERVATION SCORE, UNLESS STATED OTHERWISE

HANDLING OBSERVATIONS

DOSE GROUP: 3
DOSE LEVEL: 700 MG/KG SEX: MALES
TEST PERIOD: PRETEST

ANIMAL NUMBER	EASE OF REMOVAL FROM CAGE	EASE OF HANDLING ANIMAL IN HAND	LACRIMATION	CHROMODACRYORRHEA	SALIVATION
59874	1	1	1	1	1
59894	2	1	1	1	1
59895	1	1	1	1	1
59896	1	1	1	1	1
59899	1	1	1	1	1
59902	2	1	1	1	1
59903	2	1	1	1	1
59904	2*	1	1	1	1
59905	1	1	1	1	1
59909	1	1	1	1	1
59910	1	2	1	1	1
59916	1	1	1	1	1

OBSERVATION SCORE, UNLESS STATED OTHERWISE
* = ANIMAL VOCALIZED

HANDLING OBSERVATIONS

DOSE GROUP: 3
DOSE LEVEL: 700 MG/KG SEX: MALES
TEST PERIOD: PRETEST

ANIMAL NUMBER	PILOERECTION	FUR APPEARANCE	PALPEBRAL CLOSURE	RESPIRATORY RATE	RESPIRATORY CHARACTER	RED DEPOSITS EYES	RED DEPOSITS NOSE	RED DEPOSITS MOUTH
59874	1	1	1	1	1	2	2	2
59894	1	1	1	1	1	2	2	2
59895	1	1	1	1	1	2	2	2
59896	1	1	1	1	1	2	2	2
59899	1	1	1	1	1	2	2	2
59902	1	1	1	1	1	2	2	2
59903	1	1	1	1	1	2	2	2
59904	1	1	1	1	1	2	2	2
59905	1	1	1	1	1	2	2	2
59909	1	1	1	1	1	2	2	2
59910	1	1	1	1	1	2	2	2
59916	1	1	1	1	1	2	2	2

OBSERVATION SCORE, UNLESS STATED OTHERWISE

HANDLING OBSERVATIONS

DOSE GROUP: 3
DOSE LEVEL: 700 MG/KG SEX: MALES
TEST PERIOD: PRETEST

ANIMAL NUMBER	CRUSTY DEPOSITS EYES	CRUSTY DEPOSITS NOSE	CRUSTY DEPOSITS MOUTH	COLOR MUCOUS MEMBRANES	COLOR EYES	COLOR SKIN	EYE PROMINENCE	MUSCLE TONE
59874	2	2	2	1	1	1	1	1
59894	2	2	2	1	1	1	1	1
59895	2	2	2	1	1	1	1	1
59896	2	2	2	1	1	1	1	1
59899	2	2	2	1	1	1	1	1
59902	2	2	2	1	1	1	1	1
59903	2	2	2	1	1	1	1	1
59904	2	2	2	1	1	1	1	1
59905	2	2	2	1	1	1	1	1
59909	2	2	2	1	1	1	1	1
59910	2	2	2	1	1	1	1	1
59916	2	2	2	1	1	1	1	1

OBSERVATION SCORE, UNLESS STATED OTHERWISE

HANDLING OBSERVATIONS

DOSE GROUP: 4
DOSE LEVEL: 2000 MG/KG SEX: MALES
TEST PERIOD: PRETEST

ANIMAL NUMBER	EASE OF REMOVAL FROM CAGE	EASE OF HANDLING ANIMAL IN HAND	LACRIMATION	CHROMODACRYORRHEA	SALIVATION
59876	1	1	1	1	1
59883	1	1	1	1	1
59886	1	1	1	1	1
59887	1	1	1	1	1
59890	1	1	1	1	1
59898	1	1	1	1	1
59900	1	1	1	1	1
59906	2	1	1	1	1
59907	1	1	1	1	1
59908	1	1	1	1	1
59912	1	1	1	1	1
59917	1	1	1	1	1

OBSERVATION SCORE, UNLESS STATED OTHERWISE

TABLE I8 (HANDLING OBSERVATIONS - PRETEST)

HANDLING OBSERVATIONS

DOSE GROUP: 4
DOSE LEVEL: 2000 MG/KG SEX: MALES
TEST PERIOD: PRETEST

ANIMAL NUMBER	PILOERECTION	FUR APPEARANCE	PALPEBRAL CLOSURE	RESPIRATORY RATE	RESPIRATORY CHARACTER	RED DEPOSITS EYES	RED DEPOSITS NOSE	RED DEPOSITS MOUTH
59876	1	1	1	1	1	2	2	2
59883	1	1	1	1	1	2	2	2
59886	1	1	1	1	1	2	2	2
59887	1	1	1	1	1	2	2	2
59890	1	1	1	1	1	2	2	2
59898	1	1	1	1	1	2	2	2
59900	1	1	1	1	1	2	2	2
59906	1	1	1	1	1	2	2	2
59907	1	1	1	1	1	2	2	2
59908	1	1	1	1	1	2	2	2
59912	1	1	1	1	1	2	2	2
59917	1	1	1	1	1	2	2	2

OBSERVATION SCORE, UNLESS STATED OTHERWISE

TABLE I8 (HANDLING OBSERVATIONS - PRETEST)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL FUNCTIONAL OBSERVATIONAL BATTERY DATA

HANDLING OBSERVATIONS

DOSE GROUP: 4

DOSE LEVEL: 2000 MG/KG SEX: MALES

TEST PERIOD: PRETEST

ANIMAL NUMBER	CRUSTY DEPOSITS EYES	CRUSTY DEPOSITS NOSE	CRUSTY DEPOSITS MOUTH	COLOR MUCOUS MEMBRANES	COLOR EYES	COLOR SKIN	EYE PROMINENCE	MUSCLE TONE
59876	2	2	2	1	1	1	1	1
59883	2	2	2	1	1	1	1	1
59886	2	2	2	1	1	1	1	1
59887	2	2	2	1	1	1	1	1
59890	2	2	2	1	1	1	1	1
59898	2	2	2	1	1	1	1	1
59900	2	2	2	1	1	1	1	1
59906	2	2	2	1	1	1	1	1
59907	2	2	2	1	1	1	1	1
59908	2	2	2	1	1	1	1	1
59912	2	2	2	1	1	1	1	1
59917	2	2	2	1	1	1	1	1

OBSERVATION SCORE, UNLESS STATED OTHERWISE

HANDLING OBSERVATIONS

DOSE GROUP: 1
DOSE LEVEL: 0 MG/KG SEX: FEMALES
TEST PERIOD: PRETEST

ANIMAL NUMBER	EASE OF REMOVAL FROM CAGE	EASE OF HANDLING ANIMAL IN HAND	LACRIMATION	CHROMODACRYORRHEA	SALIVATION
59919	1	1	1	1	1
59920	2*	1	1	1	1
59923	2	1	1	1	1
59924	1	1	1	1	1
59933	1	1	1	1	1
59939	1	1	1	1	1
59941	1	1	1	1	1
59942	1	1	1	1	1
59950	1	1	1	1	1
59956	1	1	1	1	1
59969	1	1	1	1	1
59970	1	1	1	1	1

OBSERVATION SCORE, UNLESS STATED OTHERWISE
* = ANIMAL VOCALIZED

HANDLING OBSERVATIONS

DOSE GROUP: 1
DOSE LEVEL: 0 MG/KG SEX: FEMALES
TEST PERIOD: PRETEST

ANIMAL NUMBER	PILOERECTION	FUR APPEARANCE	PALPEBRAL CLOSURE	RESPIRATORY RATE	RESPIRATORY CHARACTER	RED DEPOSITS EYES	RED DEPOSITS NOSE	RED DEPOSITS MOUTH
59919	1	1	1	1	1	2	2	2
59920	1	1	1	1	1	2	2	2
59923	1	1	1	1	1	2	2	2
59924	1	1	1	1	1	2	2	2
59933	1	1	1	1	1	2	2	2
59939	1	1	1	1	1	2	2	2
59941	1	1	1	1	1	2	2	2
59942	1	1	1	1	1	2	2	2
59950	1	1	1	1	1	2	2	2
59956	1	1	1	1	1	2	2	2
59969	1	1	1	1	1	2	2	2
59970	1	1	1	1	1	2	2	2

OBSERVATION SCORE, UNLESS STATED OTHERWISE

HANDLING OBSERVATIONS

DOSE GROUP: 1
DOSE LEVEL: 0 MG/KG SEX: FEMALES
TEST PERIOD: PRETEST

ANIMAL NUMBER	CRUSTY DEPOSITS EYES	CRUSTY DEPOSITS NOSE	CRUSTY DEPOSITS MOUTH	COLOR MUCOUS MEMBRANES	COLOR EYES	COLOR SKIN	EYE PROMINENCE	MUSCLE TONE
59919	2	2	2	1	1	1	1	1
59920	2	2	2	1	1	1	1	1
59923	2	2	2	1	1	1	1	1
59924	2	2	2	1	1	1	1	1
59933	2	2	2	1	1	1	1	1
59939	2	2	2	1	1	1	1	1
59941	2	2	2	1	1	1	1	1
59942	2	2	2	1	1	1	1	1
59950	2	2	2	1	1	1	1	1
59956	2	2	2	1	1	1	1	1
59969	2	2	2	1	1	1	1	1
59970	2	2	2	1	1	1	1	1

OBSERVATION SCORE, UNLESS STATED OTHERWISE

HANDLING OBSERVATIONS

DOSE GROUP: 2
DOSE LEVEL: 200 MG/KG SEX: FEMALES
TEST PERIOD: PRETEST

ANIMAL NUMBER	EASE OF REMOVAL FROM CAGE	EASE OF HANDLING ANIMAL IN HAND	LACRIMATION	CHROMODACRYORRHEA	SALIVATION
59922	1	1	1	1	1
59926	1	1	1	1	1
59927	1	1	1	1	1
59936	1	1	1	1	1
59937	1	1	1	1	1
59949	1	1	1	1	1
59952	1	1	1	1	1
59954	2*	1	1	1	1
59958	1	1	1	1	1
59962	1	1	1	1	1
59967	2*	1	1	1	1
59968	2	2	1	1	1

OBSERVATION SCORE, UNLESS STATED OTHERWISE
* = ANIMAL VOCALIZED

HANDLING OBSERVATIONS

DOSE GROUP: 2
DOSE LEVEL: 200 MG/KG SEX: FEMALES
TEST PERIOD: PRETEST

ANIMAL NUMBER	PILOERECTION	FUR APPEARANCE	PALPEBRAL CLOSURE	RESPIRATORY RATE	RESPIRATORY CHARACTER	RED DEPOSITS EYES	RED DEPOSITS NOSE	RED DEPOSITS MOUTH
59922	1	1	1	1	1	2	2	2
59926	1	1	1	1	1	2	2	2
59927	1	1	1	1	1	2	2	2
59936	1	1	1	1	1	2	2	2
59937	1	1	1	1	1	2	2	2
59949	1	1	1	1	1	2	2	2
59952	1	1	1	1	1	2	2	2
59954	1	1	1	1	1	2	2	2
59958	1	1	1	1	1	2	2	2
59962	1	1	1	1	1	2	2	2
59967	1	1	1	1	1	2	2	2
59968	1	1	1	1	1	2	2	2

OBSERVATION SCORE, UNLESS STATED OTHERWISE

HANDLING OBSERVATIONS

DOSE GROUP: 2
DOSE LEVEL: 200 MG/KG SEX: FEMALES
TEST PERIOD: PRETEST

ANIMAL NUMBER	CRUSTY DEPOSITS EYES	CRUSTY DEPOSITS NOSE	CRUSTY DEPOSITS MOUTH	COLOR MUCOUS MEMBRANES	COLOR EYES	COLOR SKIN	EYE PROMINENCE	MUSCLE TONE
59922	2	2	2	1	1	1	1	1
59926	2	2	2	1	1	1	1	1
59927	2	2	2	1	1	1	1	1
59936	2	2	2	1	1	1	1	1
59937	2	2	2	1	1	1	1	1
59949	2	2	2	1	1	1	1	1
59952	2	2	2	1	1	1	1	1
59954	2	2	2	1	1	1	1	1
59958	2	2	2	1	1	1	1	1
59962	2	2	2	1	1	1	1	1
59967	2	2	2	1	1	1	1	1
59968	2	2	2	1	1	1	1	1

OBSERVATION SCORE, UNLESS STATED OTHERWISE

HANDLING OBSERVATIONS

DOSE GROUP: 3
DOSE LEVEL: 700 MG/KG SEX: FEMALES
TEST PERIOD: PRETEST

ANIMAL NUMBER	EASE OF REMOVAL FROM CAGE	EASE OF HANDLING ANIMAL IN HAND	LACRIMATION	CHROMODACRYORRHEA	SALIVATION
59918	1	1	1	1	1
59925	2	1	1	1	1
59930	1	1	1	1	1
59931	1	1	1	1	1
59932	1	1	1	1	1
59935	1	1	1	1	1
59940	1	1	1	1	1
59944	1	1	1	1	1
59945	1	1	1	1	1
59948	1	1	1	1	1
59959	1	1	1	1	1
59963	1	1	1	1	1

OBSERVATION SCORE, UNLESS STATED OTHERWISE

HANDLING OBSERVATIONS

DOSE GROUP: 3
DOSE LEVEL: 700 MG/KG SEX: FEMALES
TEST PERIOD: PRETEST

ANIMAL NUMBER	PILOERECTION	FUR APPEARANCE	PALPEBRAL CLOSURE	RESPIRATORY RATE	RESPIRATORY CHARACTER	RED DEPOSITS EYES	RED DEPOSITS NOSE	RED DEPOSITS MOUTH
59918	1	1	1	1	1	2	2	2
59925	1	1	1	1	1	2	2	2
59930	1	1	1	1	1	2	2	2
59931	1	1	1	1	1	2	2	2
59932	1	1	1	1	1	2	2	2
59935	1	1	1	1	1	2	2	2
59940	1	1	1	1	1	2	2	2
59944	1	1	1	1	1	2	2	2
59945	1	1	1	1	1	2	2	2
59948	1	1	1	1	1	2	2	2
59959	1	1	1	1	1	2	2	2
59963	1	1	1	1	1	2	2	2

OBSERVATION SCORE, UNLESS STATED OTHERWISE

TABLE I8 (HANDLING OBSERVATIONS - PRETEST)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL FUNCTIONAL OBSERVATIONAL BATTERY DATA

HANDLING OBSERVATIONS

DOSE GROUP: 3

DOSE LEVEL: 700 MG/KG SEX: FEMALES

TEST PERIOD: PRETEST

ANIMAL NUMBER	CRUSTY DEPOSITS EYES	CRUSTY DEPOSITS NOSE	CRUSTY DEPOSITS MOUTH	COLOR MUCOUS MEMBRANES	COLOR EYES	COLOR SKIN	EYE PROMINENCE	MUSCLE TONE
59918	2	2	2	1	1	1	1	1
59925	2	2	2	1	1	1	1	1
59930	2	2	2	1	1	1	1	1
59931	2	2	2	1	1	1	1	1
59932	2	2	2	1	1	1	1	1
59935	2	2	2	1	1	1	1	1
59940	2	2	2	1	1	1	1	1
59944	2	2	2	1	1	1	1	1
59945	2	2	2	1	1	1	1	1
59948	2	2	2	1	1	1	1	1
59959	2	2	2	1	1	1	1	1
59963	2	2	2	1	1	1	1	1

OBSERVATION SCORE, UNLESS STATED OTHERWISE

HANDLING OBSERVATIONS

DOSE GROUP: 4
DOSE LEVEL: 2000 MG/KG SEX: FEMALES
TEST PERIOD: PRETEST

ANIMAL NUMBER	EASE OF REMOVAL FROM CAGE	EASE OF HANDLING ANIMAL IN HAND	LACRIMATION	CHROMODACRYORRHEA	SALIVATION
59921	1	1	1	1	1
59928	1	1	1	1	1
59929	1	1	1	1	1
59934	1	1	1	1	1
59938	2	1	1	1	1
59943	1	1	1	1	1
59946	1	1	1	1	1
59947	1	1	1	1	1
59951	1	1	1	1	1
59955	1	1	1	1	1
59964	1	1	1	1	1
59966	1	1	1	1	1

OBSERVATION SCORE, UNLESS STATED OTHERWISE

HANDLING OBSERVATIONS

DOSE GROUP: 4
DOSE LEVEL: 2000 MG/KG SEX: FEMALES
TEST PERIOD: PRETEST

ANIMAL NUMBER	PILOERECTION	FUR APPEARANCE	PALPEBRAL CLOSURE	RESPIRATORY RATE	RESPIRATORY CHARACTER	RED DEPOSITS EYES	RED DEPOSITS NOSE	RED DEPOSITS MOUTH
59921	1	1	1	1	1	2	2	2
59928	1	1	1	1	1	2	2	2
59929	1	1	1	1	1	2	2	2
59934	1	1	1	1	1	2	2	2
59938	1	1	1	1	1	2	2	2
59943	1	1	1	1	1	2	2	2
59946	1	1	1	1	1	2	2	2
59947	1	1	2	1	1	2	2	2
59951	1	1	1	1	1	2	2	2
59955	1	1	1	1	1	2	2	2
59964	1	1	1	1	1	2	2	2
59966	1	1	1	1	1	2	2	2

OBSERVATION SCORE, UNLESS STATED OTHERWISE

HANDLING OBSERVATIONS

DOSE GROUP: 4
DOSE LEVEL: 2000 MG/KG SEX: FEMALES
TEST PERIOD: PRETEST

ANIMAL NUMBER	CRUSTY DEPOSITS EYES	CRUSTY DEPOSITS NOSE	CRUSTY DEPOSITS MOUTH	COLOR MUCOUS MEMBRANES	COLOR EYES	COLOR SKIN	EYE PROMINENCE	MUSCLE TONE
59921	2	2	2	1	1	1	1	1
59928	2	2	2	1	1	1	1	1
59929	2	2	2	1	1	1	1	1
59934	2	2	2	1	1	1	1	1
59938	2	2	2	1	1	1	1	1
59943	2	2	2	1	1	1	1	1
59946	2	2	2	1	1	1	1	1
59947	2	2	2	1	1	1	1	1
59951	2	2	2	1	1	1	1	1
59955	2	2	2	1	1	1	1	1
59964	2	2	2	1	1	1	1	1
59966	2	2	2	1	1	1	1	1

OBSERVATION SCORE, UNLESS STATED OTHERWISE

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01/13/2010
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TABLE I9 (HANDLING OBSERVATIONS - DAY 0)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL FUNCTIONAL OBSERVATIONAL BATTERY DATA

HANDLING OBSERVATIONS

DOSE GROUP: 1
DOSE LEVEL: 0 MG/KG SEX: MALES
TEST PERIOD: DAY 0

ANIMAL NUMBER	EASE OF REMOVAL FROM CAGE	EASE OF HANDLING ANIMAL IN HAND	LACRIMATION	CHROMODACRYORRHEA	SALIVATION
59866	1	1	1	1	1
59867	1	1	1	1	1
59869	1	1	1	1	1
59870	1	1	1	1	1
59881	1	1	1	1	1
59884	1	1	1	1	1
59885	1	1	1	1	1
59891	1	1	1	1	1
59892	1	1	1	1	1
59901	1	1	1	1	1
59914	1	1	1	1	1
59915	1	1	1	1	1

OBSERVATION SCORE, UNLESS STATED OTHERWISE

HANDLING OBSERVATIONS

DOSE GROUP: 1
DOSE LEVEL: 0 MG/KG SEX: MALES
TEST PERIOD: DAY 0

ANIMAL NUMBER	PILOERECTION	FUR APPEARANCE	PALPEBRAL CLOSURE	RESPIRATORY RATE	RESPIRATORY CHARACTER	RED DEPOSITS EYES	RED DEPOSITS NOSE	RED DEPOSITS MOUTH
59866	1	1	1	1	1	2	2	2
59867	1	1	1	1	1	2	2	2
59869	1	1	1	1	1	2	2	2
59870	1	1	1	1	1	2	2	2
59881	1	1	1	1	1	2	2	2
59884	1	1	1	1	1	2	2	2
59885	1	1	1	1	1	2	2	2
59891	1	1	1	1	1	2	2	2
59892	1	1	1	1	1	1	2	2
59901	1	1	1	1	1	2	2	2
59914	1	1	1	1	1	2	2	2
59915	1	1	1	1	1	2	2	2

OBSERVATION SCORE, UNLESS STATED OTHERWISE

TABLE I9 (HANDLING OBSERVATIONS - DAY 0)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL FUNCTIONAL OBSERVATIONAL BATTERY DATA

HANDLING OBSERVATIONS

DOSE GROUP: 1

DOSE LEVEL: 0 MG/KG SEX: MALES

TEST PERIOD: DAY 0

ANIMAL NUMBER	CRUSTY DEPOSITS EYES	CRUSTY DEPOSITS NOSE	CRUSTY DEPOSITS MOUTH	COLOR MUCOUS MEMBRANES	COLOR EYES	COLOR SKIN	EYE PROMINENCE	MUSCLE TONE
59866	2	2	2	1	1	1	1	1
59867	2	2	2	1	1	1	1	1
59869	2	2	2	1	1	1	1	1
59870	2	2	2	1	1	1	1	1
59881	2	2	2	1	1	1	1	1
59884	2	2	2	1	1	1	1	1
59885	2	2	2	1	1	1	1	1
59891	2	2	2	1	1	1	1	1
59892	1	2	2	1	1	1	1	1
59901	2	2	2	1	1	1	1	1
59914	2	2	2	1	1	1	1	1
59915	2	2	2	1	1	1	1	1

OBSERVATION SCORE, UNLESS STATED OTHERWISE

HANDLING OBSERVATIONS

DOSE GROUP: 2
DOSE LEVEL: 200 MG/KG SEX: MALES
TEST PERIOD: DAY 0

ANIMAL NUMBER	EASE OF REMOVAL FROM CAGE	EASE OF HANDLING ANIMAL IN HAND	LACRIMATION	CHROMODACRYORRHEA	SALIVATION
59865	1	1	1	1	1
59873	1	1	1	1	1
59875	1	1	1	1	1
59878	2*	1	1	1	1
59879	1	1	1	1	1
59880	1	1	1	1	1
59882	1	1	1	1	1
59889	1	1	1	1	1
59893	1	1	1	1	1
59897	1	1	1	1	1
59911	1	1	1	1	1
59913	1	1	1	1	1

OBSERVATION SCORE, UNLESS STATED OTHERWISE
* = ANIMAL VOCALIZED

TABLE I9 (HANDLING OBSERVATIONS - DAY 0)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL FUNCTIONAL OBSERVATIONAL BATTERY DATA

HANDLING OBSERVATIONS

DOSE GROUP: 2
DOSE LEVEL: 200 MG/KG SEX: MALES
TEST PERIOD: DAY 0

ANIMAL NUMBER	PILOERECTION	FUR APPEARANCE	PALPEBRAL CLOSURE	RESPIRATORY RATE	RESPIRATORY CHARACTER	RED DEPOSITS EYES	RED DEPOSITS NOSE	RED DEPOSITS MOUTH
59865	1	1	1	1	1	2	2	2
59873	1	1	1	1	1	2	2	2
59875	1	1	1	1	1	2	2	2
59878	1	1	1	1	1	2	2	2
59879	1	1	1	1	1	2	2	2
59880	1	1	1	1	1	2	2	2
59882	1	1	1	1	1	2	2	2
59889	1	1	1	1	1	2	2	2
59893	1	1	1	1	1	2	2	2
59897	1	1	1	1	1	2	2	2
59911	1	1	1	1	1	2	2	2
59913	1	1	1	1	1	2	2	2

OBSERVATION SCORE, UNLESS STATED OTHERWISE

HANDLING OBSERVATIONS

DOSE GROUP: 2
DOSE LEVEL: 200 MG/KG SEX: MALES
TEST PERIOD: DAY 0

ANIMAL NUMBER	CRUSTY DEPOSITS EYES	CRUSTY DEPOSITS NOSE	CRUSTY DEPOSITS MOUTH	COLOR MUCOUS MEMBRANES	COLOR EYES	COLOR SKIN	EYE PROMINENCE	MUSCLE TONE
59865	2	2	2	1	1	1	1	1
59873	2	2	2	1	1	1	1	1
59875	2	2	2	1	1	1	1	1
59878	2	2	2	1	1	1	1	1
59879	2	2	2	1	1	1	1	1
59880	2	2	2	1	1	1	1	1
59882	2	2	2	1	1	1	1	1
59889	2	2	2	1	1	1	1	1
59893	2	2	2	1	1	1	1	1
59897	2	2	2	1	1	1	1	1
59911	2	2	2	1	1	1	1	1
59913	2	2	2	1	1	1	1	1

OBSERVATION SCORE, UNLESS STATED OTHERWISE

TABLE I9 (HANDLING OBSERVATIONS - DAY 0)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL FUNCTIONAL OBSERVATIONAL BATTERY DATA

HANDLING OBSERVATIONS

DOSE GROUP: 3

DOSE LEVEL: 700 MG/KG SEX: MALES

TEST PERIOD: DAY 0

ANIMAL NUMBER	EASE OF REMOVAL FROM CAGE	EASE OF HANDLING ANIMAL IN HAND	LACRIMATION	CHROMODACRYORRHEA	SALIVATION
59874	1	1	1	1	1
59894	1	1	1	1	1
59895	1	1	1	1	1
59896	1	1	1	1	1
59899	1	1	1	1	1
59902	1	1	1	1	1
59903	1	1	1	1	1
59904	1	1	1	1	1
59905	1	1	1	1	1
59909	1	1	1	1	1
59910	1	1	1	1	1
59916	1	1	1	1	1

OBSERVATION SCORE, UNLESS STATED OTHERWISE

TABLE I9 (HANDLING OBSERVATIONS - DAY 0)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL FUNCTIONAL OBSERVATIONAL BATTERY DATA

HANDLING OBSERVATIONS

DOSE GROUP: 3
DOSE LEVEL: 700 MG/KG SEX: MALES
TEST PERIOD: DAY 0

ANIMAL NUMBER	PILOERECTION	FUR APPEARANCE	PALPEBRAL CLOSURE	RESPIRATORY RATE	RESPIRATORY CHARACTER	RED DEPOSITS EYES	RED DEPOSITS NOSE	RED DEPOSITS MOUTH
59874	1	1	1	1	1	2	2	2
59894	1	1	1	1	1	2	2	2
59895	1	1	1	1	1	2	2	2
59896	1	1	1	1	1	2	2	2
59899	1	1	1	1	1	2	2	2
59902	1	1	1	1	1	2	2	2
59903	1	1	1	1	1	2	2	2
59904	1	1	1	1	1	2	2	2
59905	1	1	1	1	1	2	2	2
59909	1	1	1	1	1	2	2	2
59910	1	1	1	1	1	2	2	2
59916	1	1	1	1	1	2	2	2

OBSERVATION SCORE, UNLESS STATED OTHERWISE

TABLE I9 (HANDLING OBSERVATIONS - DAY 0)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL FUNCTIONAL OBSERVATIONAL BATTERY DATA

HANDLING OBSERVATIONS

DOSE GROUP: 3
DOSE LEVEL: 700 MG/KG SEX: MALES
TEST PERIOD: DAY 0

ANIMAL NUMBER	CRUSTY DEPOSITS EYES	CRUSTY DEPOSITS NOSE	CRUSTY DEPOSITS MOUTH	COLOR MUCOUS MEMBRANES	COLOR EYES	COLOR SKIN	EYE PROMINENCE	MUSCLE TONE
59874	2	2	2	1	1	1	1	1
59894	2	2	2	1	1	1	1	1
59895	2	2	2	1	1	1	1	1
59896	2	2	2	1	1	1	1	1
59899	2	2	2	1	1	1	1	1
59902	2	2	2	1	1	1	1	1
59903	2	2	2	1	1	1	1	1
59904	2	2	2	1	1	1	1	1
59905	2	2	2	1	1	1	1	1
59909	2	2	2	1	1	1	1	1
59910	2	2	2	1	1	1	1	1
59916	2	2	2	1	1	1	1	1

OBSERVATION SCORE, UNLESS STATED OTHERWISE

HANDLING OBSERVATIONS

DOSE GROUP: 4
DOSE LEVEL: 2000 MG/KG SEX: MALES
TEST PERIOD: DAY 0

ANIMAL NUMBER	EASE OF REMOVAL FROM CAGE	EASE OF HANDLING ANIMAL IN HAND	LACRIMATION	CHROMODACRYORRHEA	SALIVATION
59876	1	1	1	1	1
59883	1	1	1	1	1
59886	1	1	1	1	1
59887	2*	1	1	1	1
59890	1	1	1	1	1
59898	1	1	1	1	1
59900	1	1	1	1	1
59906	1	1	1	1	1
59907	1	1	1	1	1
59908	1	1	1	1	1
59912	1	1	1	1	1
59917	1	1	1	1	1

OBSERVATION SCORE, UNLESS STATED OTHERWISE
* = ANIMAL VOCALIZED

HANDLING OBSERVATIONS

DOSE GROUP: 4
DOSE LEVEL: 2000 MG/KG SEX: MALES
TEST PERIOD: DAY 0

ANIMAL NUMBER	PILOERECTION	FUR APPEARANCE	PALPEBRAL CLOSURE	RESPIRATORY RATE	RESPIRATORY CHARACTER	RED DEPOSITS EYES	RED DEPOSITS NOSE	RED DEPOSITS MOUTH
59876	1	1	1	1	1	2	2	2
59883	1	1	1	1	1	2	2	2
59886	1	1	1	1	1	2	2	2
59887	1	1	1	1	1	2	2	2
59890	1	1	1	1	1	2	2	2
59898	1	1	1	1	1	2	2	2
59900	1	1	1	1	1	2	2	2
59906	1	1	1	1	1	2	2	2
59907	1	1	1	1	1	2	2	2
59908	1	1	1	1	1	2	2	2
59912	1	1	1	1	1	2	2	2
59917	1	1	1	1	1	2	2	2

OBSERVATION SCORE, UNLESS STATED OTHERWISE

HANDLING OBSERVATIONS

DOSE GROUP: 4
DOSE LEVEL: 2000 MG/KG SEX: MALES
TEST PERIOD: DAY 0

ANIMAL NUMBER	CRUSTY DEPOSITS EYES	CRUSTY DEPOSITS NOSE	CRUSTY DEPOSITS MOUTH	COLOR MUCOUS MEMBRANES	COLOR EYES	COLOR SKIN	EYE PROMINENCE	MUSCLE TONE
59876	2	2	2	1	1	1	1	1
59883	2	2	2	1	1	1	1	1
59886	2	2	2	1	1	1	1	1
59887	2	2	2	1	1	1	1	1
59890	2	2	2	1	1	1	1	1
59898	2	2	2	1	1	1	1	1
59900	2	2	2	1	1	1	1	1
59906	2	2	2	1	1	1	1	1
59907	2	2	2	1	1	1	1	1
59908	2	2	2	1	1	1	1	1
59912	2	2	2	1	1	1	1	1
59917	2	2	2	1	1	1	1	1

OBSERVATION SCORE, UNLESS STATED OTHERWISE

HANDLING OBSERVATIONS

DOSE GROUP: 1
DOSE LEVEL: 0 MG/KG SEX: FEMALES
TEST PERIOD: DAY 0

ANIMAL NUMBER	EASE OF REMOVAL FROM CAGE	EASE OF HANDLING ANIMAL IN HAND	LACRIMATION	CHROMODACRYORRHEA	SALIVATION
59919	1	1	1	1	1
59920	2*	1	1	1	1
59923	1	1	1	1	1
59924	1	1	1	1	1
59933	1	1	1	1	1
59939	1	1	1	1	1
59941	1	1	1	1	1
59942	1	1	1	1	1
59950	1	1	1	1	1
59956	1	1	1	1	1
59969	1	1	1	1	1
59970	1	1	1	1	1

OBSERVATION SCORE, UNLESS STATED OTHERWISE
* = ANIMAL VOCALIZED

HANDLING OBSERVATIONS

DOSE GROUP: 1
DOSE LEVEL: 0 MG/KG SEX: FEMALES
TEST PERIOD: DAY 0

ANIMAL NUMBER	PILOERECTION	FUR APPEARANCE	PALPEBRAL CLOSURE	RESPIRATORY RATE	RESPIRATORY CHARACTER	RED DEPOSITS EYES	RED DEPOSITS NOSE	RED DEPOSITS MOUTH
59919	1	1	1	1	1	2	2	2
59920	1	1	1	1	1	2	2	2
59923	1	1	1	1	1	2	2	2
59924	1	1	1	1	1	2	2	2
59933	1	1	1	1	1	2	2	2
59939	1	1	1	1	1	2	2	2
59941	1	1	1	1	1	2	2	2
59942	1	1	1	1	1	2	2	2
59950	1	1	1	1	1	2	2	2
59956	1	1	1	1	1	2	2	2
59969	1	1	1	1	1	2	2	2
59970	1	1	1	1	1	2	2	2

OBSERVATION SCORE, UNLESS STATED OTHERWISE

HANDLING OBSERVATIONS

DOSE GROUP: 1
DOSE LEVEL: 0 MG/KG SEX: FEMALES
TEST PERIOD: DAY 0

ANIMAL NUMBER	CRUSTY DEPOSITS EYES	CRUSTY DEPOSITS NOSE	CRUSTY DEPOSITS MOUTH	COLOR MUCOUS MEMBRANES	COLOR EYES	COLOR SKIN	EYE PROMINENCE	MUSCLE TONE
59919	2	2	2	1	1	1	1	1
59920	2	2	2	1	1	1	1	1
59923	2	2	2	1	1	1	1	1
59924	2	2	2	1	1	1	1	1
59933	2	2	2	1	1	1	1	1
59939	2	2	2	1	1	1	1	1
59941	2	2	2	1	1	1	1	1
59942	2	2	2	1	1	1	1	1
59950	2	2	2	1	1	1	1	1
59956	2	2	2	1	1	1	1	1
59969	2	2	2	1	1	1	1	1
59970	2	2	2	1	1	1	1	1

OBSERVATION SCORE, UNLESS STATED OTHERWISE

HANDLING OBSERVATIONS

DOSE GROUP: 2
DOSE LEVEL: 200 MG/KG SEX: FEMALES
TEST PERIOD: DAY 0

ANIMAL NUMBER	EASE OF REMOVAL FROM CAGE	EASE OF HANDLING ANIMAL IN HAND	LACRIMATION	CHROMODACRYORRHEA	SALIVATION
59922	1	1	1	1	1
59926	1	1	1	1	1
59927	1	1	1	1	1
59936	1	1	1	1	1
59937	1	1	1	1	1
59949	1	1	1	1	1
59952	1	1	1	1	1
59954	1	1	1	1	1
59958	1	1	1	1	1
59962	1	1	1	1	1
59967	2*	1	1	1	1
59968	1	1	1	1	1

OBSERVATION SCORE, UNLESS STATED OTHERWISE
* = ANIMAL VOCALIZED

HANDLING OBSERVATIONS

DOSE GROUP: 2
DOSE LEVEL: 200 MG/KG SEX: FEMALES
TEST PERIOD: DAY 0

ANIMAL NUMBER	PILOERECTION	FUR APPEARANCE	PALPEBRAL CLOSURE	RESPIRATORY RATE	RESPIRATORY CHARACTER	RED DEPOSITS EYES	RED DEPOSITS NOSE	RED DEPOSITS MOUTH
59922	1	1	1	1	1	2	2	2
59926	1	1	1	1	1	2	2	2
59927	1	1	1	1	1	2	2	2
59936	1	1	1	1	1	2	2	2
59937	1	1	1	1	1	2	2	2
59949	1	1	1	1	1	2	2	2
59952	1	1	1	1	1	2	2	2
59954	1	1	1	1	1	2	2	2
59958	1	1	1	1	1	2	2	2
59962	1	1	1	1	1	2	2	2
59967	1	1	1	1	1	2	2	2
59968	1	1	1	1	1	2	2	2

OBSERVATION SCORE, UNLESS STATED OTHERWISE

HANDLING OBSERVATIONS

DOSE GROUP: 2
DOSE LEVEL: 200 MG/KG SEX: FEMALES
TEST PERIOD: DAY 0

ANIMAL NUMBER	CRUSTY DEPOSITS EYES	CRUSTY DEPOSITS NOSE	CRUSTY DEPOSITS MOUTH	COLOR MUCOUS MEMBRANES	COLOR EYES	COLOR SKIN	EYE PROMINENCE	MUSCLE TONE
59922	2	2	2	1	1	1	1	1
59926	2	2	2	1	1	1	1	1
59927	2	2	2	1	1	1	1	1
59936	2	2	2	1	1	1	1	1
59937	2	2	2	1	1	1	1	1
59949	2	2	2	1	1	1	1	1
59952	2	2	2	1	1	1	1	1
59954	2	2	2	1	1	1	1	1
59958	2	2	2	1	1	1	1	1
59962	2	2	2	1	1	1	1	1
59967	2	2	2	1	1	1	1	1
59968	2	2	2	1	1	1	1	1

OBSERVATION SCORE, UNLESS STATED OTHERWISE

HANDLING OBSERVATIONS

DOSE GROUP: 3
DOSE LEVEL: 700 MG/KG SEX: FEMALES
TEST PERIOD: DAY 0

ANIMAL NUMBER	EASE OF REMOVAL FROM CAGE	EASE OF HANDLING ANIMAL IN HAND	LACRIMATION	CHROMODACRYORRHEA	SALIVATION
59918	1	1	1	1	1
59925	1	1	1	1	1
59930	1	1	1	1	1
59931	1	1	1	1	1
59932	1	1	1	1	1
59935	1	1	1	1	1
59940	1	1	1	1	1
59944	2*	1	1	1	1
59945	2*	1	1	1	1
59948	1	1	1	1	1
59959	1	1	1	1	1
59963	1	1	1	1	1

OBSERVATION SCORE, UNLESS STATED OTHERWISE
* = ANIMAL VOCALIZED

HANDLING OBSERVATIONS

DOSE GROUP: 3
DOSE LEVEL: 700 MG/KG SEX: FEMALES
TEST PERIOD: DAY 0

ANIMAL NUMBER	PILOERECTION	FUR APPEARANCE	PALPEBRAL CLOSURE	RESPIRATORY RATE	RESPIRATORY CHARACTER	RED DEPOSITS EYES	RED DEPOSITS NOSE	RED DEPOSITS MOUTH
59918	1	1	1	1	1	2	2	2
59925	1	1	1	1	1	2	2	2
59930	1	1	1	1	1	2	2	2
59931	1	1	1	1	1	2	2	2
59932	1	1	1	1	1	2	2	2
59935	1	1	1	1	1	2	2	2
59940	1	1	1	1	1	2	2	2
59944	1	1	1	1	1	2	2	2
59945	1	1	1	1	1	2	2	2
59948	1	1	1	1	1	2	2	2
59959	1	1	1	1	1	2	2	2
59963	1	1	1	1	1	2	2	2

OBSERVATION SCORE, UNLESS STATED OTHERWISE

HANDLING OBSERVATIONS

DOSE GROUP: 3
DOSE LEVEL: 700 MG/KG SEX: FEMALES
TEST PERIOD: DAY 0

ANIMAL NUMBER	CRUSTY DEPOSITS EYES	CRUSTY DEPOSITS NOSE	CRUSTY DEPOSITS MOUTH	COLOR MUCOUS MEMBRANES	COLOR EYES	COLOR SKIN	EYE PROMINENCE	MUSCLE TONE
59918	2	2	2	1	1	1	1	1
59925	2	2	2	1	1	1	1	1
59930	2	2	2	1	1	1	1	1
59931	2	2	2	1	1	1	1	1
59932	2	2	2	1	1	1	1	1
59935	2	2	2	1	1	1	1	1
59940	2	2	2	1	1	1	1	1
59944	2	2	2	1	1	1	1	1
59945	2	2	2	1	1	1	1	1
59948	2	2	2	1	1	1	1	1
59959	2	2	2	1	1	1	1	1
59963	2	2	2	1	1	1	1	1

OBSERVATION SCORE, UNLESS STATED OTHERWISE

HANDLING OBSERVATIONS

DOSE GROUP: 4
DOSE LEVEL: 2000 MG/KG SEX: FEMALES
TEST PERIOD: DAY 0

ANIMAL NUMBER	EASE OF REMOVAL FROM CAGE	EASE OF HANDLING ANIMAL IN HAND	LACRIMATION	CHROMODACRYORRHEA	SALIVATION
59921	1	1	1	1	1
59928	1	1	1	1	1
59929	1	1	1	1	1
59934	1	1	1	1	1
59938	1	1	1	1	1
59943	1	1	1	1	1
59946	1	1	1	1	1
59947	1	1	1	1	1
59951	1	1	1	1	1
59955	1	1	1	1	1
59964	1	1	1	1	1
59966	1	1	1	1	1

OBSERVATION SCORE, UNLESS STATED OTHERWISE

TABLE I9 (HANDLING OBSERVATIONS - DAY 0)

HANDLING OBSERVATIONS

DOSE GROUP: 4
DOSE LEVEL: 2000 MG/KG SEX: FEMALES
TEST PERIOD: DAY 0

ANIMAL NUMBER	PILOERECTION	FUR APPEARANCE	PALPEBRAL CLOSURE	RESPIRATORY RATE	RESPIRATORY CHARACTER	RED DEPOSITS EYES	RED DEPOSITS NOSE	RED DEPOSITS MOUTH
59921	1	1	1	1	1	2	2	2
59928	1	1	1	1	1	2	2	2
59929	1	1	1	1	1	2	2	2
59934	1	1	1	1	1	2	2	2
59938	1	1	1	1	1	2	2	2
59943	1	1	1	1	1	2	2	2
59946	1	1	1	1	1	2	2	2
59947	1	1	1	1	1	2	2	2
59951	1	1	1	1	1	2	2	2
59955	1	1	1	1	1	2	2	2
59964	1	1	1	1	1	2	2	2
59966	1	1	1	1	1	2	2	2

OBSERVATION SCORE, UNLESS STATED OTHERWISE

HANDLING OBSERVATIONS

DOSE GROUP: 4
DOSE LEVEL: 2000 MG/KG SEX: FEMALES
TEST PERIOD: DAY 0

ANIMAL NUMBER	CRUSTY DEPOSITS EYES	CRUSTY DEPOSITS NOSE	CRUSTY DEPOSITS MOUTH	COLOR MUCOUS MEMBRANES	COLOR EYES	COLOR SKIN	EYE PROMINENCE	MUSCLE TONE
59921	2	2	2	1	1	1	1	1
59928	2	2	2	1	1	1	1	1
59929	2	2	2	1	1	1	1	1
59934	2	2	2	1	1	1	1	1
59938	2	2	2	1	1	1	1	1
59943	2	2	2	1	1	1	1	1
59946	2	2	2	1	1	1	1	1
59947	2	2	2	1	1	1	1	1
59951	2	2	2	1	1	1	1	1
59955	2	2	2	1	1	1	1	1
59964	2	2	2	1	1	1	1	1
59966	2	2	2	1	1	1	1	1

OBSERVATION SCORE, UNLESS STATED OTHERWISE

PFOBv3.25
01/13/2010
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TABLE I10 (HANDLING OBSERVATIONS - DAY 7)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS PAGE 1

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL FUNCTIONAL OBSERVATIONAL BATTERY DATA

HANDLING OBSERVATIONS

DOSE GROUP: 1

DOSE LEVEL: 0 MG/KG SEX: MALES

TEST PERIOD: DAY 7

ANIMAL NUMBER	EASE OF REMOVAL FROM CAGE	EASE OF HANDLING ANIMAL IN HAND	LACRIMATION	CHROMODACRYORRHEA	SALIVATION
59866	1	1	1	1	1
59867	1	1	1	1	1
59869	1	1	1	1	1
59870	1	1	1	1	1
59881	1	1	1	1	1
59884	1	2	1	1	1
59885	1	1	1	1	1
59891	1	1	1	1	1
59892	1	1	1	1	1
59901	1	1	1	1	1
59914	1	1	1	1	1
59915	1	1	1	1	1

OBSERVATION SCORE, UNLESS STATED OTHERWISE

TABLE I10 (HANDLING OBSERVATIONS - DAY 7)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS PAGE 2

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL FUNCTIONAL OBSERVATIONAL BATTERY DATA

HANDLING OBSERVATIONS

DOSE GROUP: 1

DOSE LEVEL: 0 MG/KG SEX: MALES

TEST PERIOD: DAY 7

ANIMAL NUMBER	PILOERECTION	FUR APPEARANCE	PALPEBRAL CLOSURE	RESPIRATORY RATE	RESPIRATORY CHARACTER	RED DEPOSITS EYES	RED DEPOSITS NOSE	RED DEPOSITS MOUTH
59866	1	1	1	1	1	2	2	2
59867	1	1	1	1	1	2	2	2
59869	1	1	1	1	1	2	2	2
59870	1	1	1	1	1	2	2	2
59881	1	1	1	1	1	2	2	2
59884	1	1	1	1	1	2	2	2
59885	1	1	1	1	1	2	2	2
59891	1	1	1	1	1	2	2	2
59892	1	1	1	1	1	2	2	2
59901	1	1	1	1	1	2	2	2
59914	1	1	1	1	1	2	2	2
59915	1	1	1	1	1	2	2	2

OBSERVATION SCORE, UNLESS STATED OTHERWISE

TABLE I10 (HANDLING OBSERVATIONS - DAY 7)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL FUNCTIONAL OBSERVATIONAL BATTERY DATA

HANDLING OBSERVATIONS

DOSE GROUP: 1

DOSE LEVEL: 0 MG/KG SEX: MALES

TEST PERIOD: DAY 7

ANIMAL NUMBER	CRUSTY DEPOSITS EYES	CRUSTY DEPOSITS NOSE	CRUSTY DEPOSITS MOUTH	COLOR MUCOUS MEMBRANES	COLOR EYES	COLOR SKIN	EYE PROMINENCE	MUSCLE TONE
59866	2	2	2	1	1	1	1	1
59867	2	2	2	1	1	1	1	1
59869	2	2	2	1	1	1	1	1
59870	2	2	2	1	1	1	1	1
59881	2	2	2	1	1	1	1	1
59884	2	2	2	1	1	1	1	1
59885	2	2	2	1	1	1	1	1
59891	2	2	2	1	1	1	1	1
59892	2	2	2	1	1	1	1	1
59901	2	2	2	1	1	1	1	1
59914	2	2	2	1	1	1	1	1
59915	2	2	2	1	1	1	1	1

OBSERVATION SCORE, UNLESS STATED OTHERWISE

TABLE I10 (HANDLING OBSERVATIONS - DAY 7)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS PAGE 4

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL FUNCTIONAL OBSERVATIONAL BATTERY DATA

HANDLING OBSERVATIONS

DOSE GROUP: 2

DOSE LEVEL: 200 MG/KG SEX: MALES

TEST PERIOD: DAY 7

ANIMAL NUMBER	EASE OF REMOVAL FROM CAGE	EASE OF HANDLING ANIMAL IN HAND	LACRIMATION	CHROMODACRYORRHEA	SALIVATION
59865	1	1	1	1	1
59873	1	2	1	1	1
59875	1	2	1	1	1
59878	2	1	1	1	1
59879	1	1	1	1	1
59880	1	1	1	1	1
59882	1	1	1	1	1
59889	1	1	1	1	1
59893	1	1	1	1	1
59897	1	1	1	1	1
59911	1	1	1	1	1
59913	1	1	1	1	1

OBSERVATION SCORE, UNLESS STATED OTHERWISE

TABLE I10 (HANDLING OBSERVATIONS - DAY 7)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL FUNCTIONAL OBSERVATIONAL BATTERY DATA

HANDLING OBSERVATIONS

DOSE GROUP: 2
DOSE LEVEL: 200 MG/KG SEX: MALES
TEST PERIOD: DAY 7

ANIMAL NUMBER	PILOERECTION	FUR APPEARANCE	PALPEBRAL CLOSURE	RESPIRATORY RATE	RESPIRATORY CHARACTER	RED DEPOSITS EYES	RED DEPOSITS NOSE	RED DEPOSITS MOUTH
59865	1	1	1	1	1	2	2	2
59873	1	1	1	1	1	2	2	2
59875	1	1	1	1	1	2	2	2
59878	1	1	1	1	1	2	2	2
59879	1	1	1	1	1	2	2	2
59880	1	1	1	1	1	2	2	2
59882	1	1	1	1	1	2	2	2
59889	1	1	1	1	1	2	2	2
59893	1	1	1	1	1	2	2	2
59897	1	1	1	1	1	2	2	2
59911	1	1	1	1	1	2	2	2
59913	1	1	1	1	1	2	2	2

OBSERVATION SCORE, UNLESS STATED OTHERWISE

HANDLING OBSERVATIONS

DOSE GROUP: 2
DOSE LEVEL: 200 MG/KG SEX: MALES
TEST PERIOD: DAY 7

ANIMAL NUMBER	CRUSTY DEPOSITS EYES	CRUSTY DEPOSITS NOSE	CRUSTY DEPOSITS MOUTH	COLOR MUCOUS MEMBRANES	COLOR EYES	COLOR SKIN	EYE PROMINENCE	MUSCLE TONE
59865	2	2	2	1	1	1	1	1
59873	2	2	2	1	1	1	1	1
59875	2	2	2	1	1	1	1	1
59878	2	2	2	1	1	1	1	1
59879	2	2	2	1	1	1	1	1
59880	2	2	2	1	1	1	1	1
59882	2	2	2	1	1	1	1	1
59889	2	2	2	1	1	1	1	1
59893	2	2	2	1	1	1	1	1
59897	2	2	2	1	1	1	1	1
59911	2	2	2	1	1	1	1	1
59913	2	2	2	1	1	1	1	1

OBSERVATION SCORE, UNLESS STATED OTHERWISE

TABLE I10 (HANDLING OBSERVATIONS - DAY 7)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS PAGE 7

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL FUNCTIONAL OBSERVATIONAL BATTERY DATA

HANDLING OBSERVATIONS

DOSE GROUP: 3

DOSE LEVEL: 700 MG/KG SEX: MALES

TEST PERIOD: DAY 7

ANIMAL NUMBER	EASE OF REMOVAL FROM CAGE	EASE OF HANDLING ANIMAL IN HAND	LACRIMATION	CHROMODACRYORRHEA	SALIVATION
59874	1	1	1	1	1
59894	1	1	1	1	1
59895	1	1	1	1	1
59896	1	2	1	1	1
59899	1	1	1	1	1
59902	1	1	1	1	1
59903	1	1	1	1	1
59904	1	1	1	1	1
59905	1	1	1	1	1
59909	1	1	1	1	1
59910	1	1	1	1	1
59916	1	1	1	1	1

OBSERVATION SCORE, UNLESS STATED OTHERWISE

HANDLING OBSERVATIONS

DOSE GROUP: 3
DOSE LEVEL: 700 MG/KG SEX: MALES
TEST PERIOD: DAY 7

ANIMAL NUMBER	PILOERECTION	FUR APPEARANCE	PALPEBRAL CLOSURE	RESPIRATORY RATE	RESPIRATORY CHARACTER	RED DEPOSITS EYES	RED DEPOSITS NOSE	RED DEPOSITS MOUTH
59874	1	1	1	1	1	2	2	2
59894	1	1	1	1	1	2	2	2
59895	1	1	1	1	1	2	2	2
59896	1	1	1	1	1	2	2	2
59899	1	1	1	1	1	2	2	2
59902	1	1	1	1	1	2	2	2
59903	1	1	1	1	1	2	2	2
59904	1	1	1	1	1	2	2	2
59905	1	1	1	1	1	2	2	2
59909	1	1	1	1	1	2	2	2
59910	1	1	1	1	1	2	2	2
59916	1	1	1	1	1	2	2	2

OBSERVATION SCORE, UNLESS STATED OTHERWISE

HANDLING OBSERVATIONS

DOSE GROUP: 3
DOSE LEVEL: 700 MG/KG SEX: MALES
TEST PERIOD: DAY 7

ANIMAL NUMBER	CRUSTY DEPOSITS EYES	CRUSTY DEPOSITS NOSE	CRUSTY DEPOSITS MOUTH	COLOR MUCOUS MEMBRANES	COLOR EYES	COLOR SKIN	EYE PROMINENCE	MUSCLE TONE
59874	2	2	2	1	1	1	1	1
59894	2	2	2	1	1	1	1	1
59895	2	2	2	1	1	1	1	1
59896	2	2	2	1	1	1	1	1
59899	2	2	2	1	1	1	1	1
59902	2	2	2	1	1	1	1	1
59903	2	2	2	1	1	1	1	1
59904	2	2	2	1	1	1	1	1
59905	2	2	2	1	1	1	1	1
59909	2	2	2	1	1	1	1	1
59910	2	2	2	1	1	1	1	1
59916	2	2	2	1	1	1	1	1

OBSERVATION SCORE, UNLESS STATED OTHERWISE

HANDLING OBSERVATIONS

DOSE GROUP: 4
DOSE LEVEL: 2000 MG/KG SEX: MALES
TEST PERIOD: DAY 7

ANIMAL NUMBER	EASE OF REMOVAL FROM CAGE	EASE OF HANDLING ANIMAL IN HAND	LACRIMATION	CHROMODACRYORRHEA	SALIVATION
59876	1	1	1	1	1
59883	1	1	1	1	1
59886	1	1	1	1	1
59887	1	1	1	1	1
59890	1	1	1	1	1
59898	1	1	1	1	1
59900	1	1	1	1	1
59906	1	1	1	1	1
59907	1	1	1	1	1
59908	1	1	1	1	1
59912	1	1	1	1	1
59917	1	1	1	1	1

OBSERVATION SCORE, UNLESS STATED OTHERWISE

HANDLING OBSERVATIONS

DOSE GROUP: 4
DOSE LEVEL: 2000 MG/KG SEX: MALES
TEST PERIOD: DAY 7

ANIMAL NUMBER	PILOERECTION	FUR APPEARANCE	PALPEBRAL CLOSURE	RESPIRATORY RATE	RESPIRATORY CHARACTER	RED DEPOSITS EYES	RED DEPOSITS NOSE	RED DEPOSITS MOUTH
59876	1	1	1	1	1	2	2	2
59883	1	1	1	1	1	2	2	2
59886	1	1	1	1	1	2	2	2
59887	1	1	1	1	1	2	2	2
59890	1	1	1	1	1	2	2	2
59898	1	1	1	1	1	2	2	2
59900	1	1	1	1	1	2	2	2
59906	1	1	1	1	1	2	2	2
59907	1	1	1	1	1	2	2	2
59908	1	1	1	1	1	2	2	2
59912	1	1	1	1	1	2	2	2
59917	1	1	1	1	1	2	2	2

OBSERVATION SCORE, UNLESS STATED OTHERWISE

HANDLING OBSERVATIONS

DOSE GROUP: 4
DOSE LEVEL: 2000 MG/KG SEX: MALES
TEST PERIOD: DAY 7

ANIMAL NUMBER	CRUSTY DEPOSITS EYES	CRUSTY DEPOSITS NOSE	CRUSTY DEPOSITS MOUTH	COLOR MUCOUS MEMBRANES	COLOR EYES	COLOR SKIN	EYE PROMINENCE	MUSCLE TONE
59876	2	2	2	1	1	1	1	1
59883	2	2	2	1	1-A	1	1	1
59886	2	2	2	1	1	1	1	1
59887	2	2	2	1	1	1	1	1
59890	2	2	2	1	1	1	1	1
59898	2	2	2	1	1	1	1	1
59900	2	2	2	1	1	1	1	1
59906	2	2	2	1	1	1	1	1
59907	2	2	2	1	1	1	1	1
59908	2	2	2	1	1	1	1	1
59912	2	2	2	1	1	1	1	1
59917	2	2	2	1	1	1	1	1

OBSERVATION SCORE, UNLESS STATED OTHERWISE
A = UNILATERAL

TABLE I10 (HANDLING OBSERVATIONS - DAY 7)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL FUNCTIONAL OBSERVATIONAL BATTERY DATA

HANDLING OBSERVATIONS

DOSE GROUP: 1
DOSE LEVEL: 0 MG/KG SEX: FEMALES
TEST PERIOD: DAY 7

ANIMAL NUMBER	EASE OF REMOVAL FROM CAGE	EASE OF HANDLING ANIMAL IN HAND	LACRIMATION	CHROMODACRYORRHEA	SALIVATION
59919	1	1	1	1	1
59920	2	1	1	1	1
59923	1	1	1	1	1
59924	1	1	1	1	1
59933	1	1	1	1	1
59939	1	1	1	1	1
59941	1	1	1	1	1
59942	1	2	1	1	1
59950	1	1	1	1	1
59956	1	1	1	1	1
59969	1	1	1	1	1
59970	1	2	1	1	1

OBSERVATION SCORE, UNLESS STATED OTHERWISE

HANDLING OBSERVATIONS

DOSE GROUP: 1
DOSE LEVEL: 0 MG/KG SEX: FEMALES
TEST PERIOD: DAY 7

ANIMAL NUMBER	PILOERECTION	FUR APPEARANCE	PALPEBRAL CLOSURE	RESPIRATORY RATE	RESPIRATORY CHARACTER	RED DEPOSITS EYES	RED DEPOSITS NOSE	RED DEPOSITS MOUTH
59919	1	1	1	1	1	2	2	2
59920	1	1	1	1	1	2	2	2
59923	1	1	1	1	1	2	2	2
59924	1	1	1	1	1	2	2	2
59933	1	1	1	1	1	2	2	2
59939	1	1	1	1	1	2	2	2
59941	1	1	1	1	1	2	2	2
59942	1	1	1	1	1	2	2	2
59950	1	1	1	1	1	2	2	2
59956	1	1	1	1	1	2	2	2
59969	1	1	1	1	1	2	2	2
59970	1	1	1	1	1	2	2	2

OBSERVATION SCORE, UNLESS STATED OTHERWISE

HANDLING OBSERVATIONS

DOSE GROUP: 1
DOSE LEVEL: 0 MG/KG SEX: FEMALES
TEST PERIOD: DAY 7

ANIMAL NUMBER	CRUSTY DEPOSITS EYES	CRUSTY DEPOSITS NOSE	CRUSTY DEPOSITS MOUTH	COLOR MUCOUS MEMBRANES	COLOR EYES	COLOR SKIN	EYE PROMINENCE	MUSCLE TONE
59919	2	2	2	1	1	1	1	1
59920	2	2	2	1	1	1	1	1
59923	2	2	2	1	1	1	1	1
59924	2	2	2	1	1	1	1	1
59933	2	2	2	1	1	1	1	1
59939	2	2	2	1	1	1	1	1
59941	2	2	2	1	1	1	1	1
59942	2	2	2	1	1	1	1	1
59950	2	2	2	1	1	1	1	1
59956	2	2	2	1	1	1	1	1
59969	2	2	2	1	1	1	1	1
59970	2	2	2	1	1	1	1	1

OBSERVATION SCORE, UNLESS STATED OTHERWISE

HANDLING OBSERVATIONS

DOSE GROUP: 2
DOSE LEVEL: 200 MG/KG SEX: FEMALES
TEST PERIOD: DAY 7

ANIMAL NUMBER	EASE OF REMOVAL FROM CAGE	EASE OF HANDLING ANIMAL IN HAND	LACRIMATION	CHROMODACRYORRHEA	SALIVATION
59922	1	1	1	1	1
59926	1	1	1	1	1
59927	1	1	1	1	1
59936	1	1	1	1	1
59937	1	1	1	1	1
59949	1	1	1	1	1
59952	1	1	1	1	1
59954	2	1	1	1	1
59958	1	2	1	1	1
59962	1	1	1	1	1
59967	1	1	1	1	1
59968	1	1	1	1	1

OBSERVATION SCORE, UNLESS STATED OTHERWISE

HANDLING OBSERVATIONS

DOSE GROUP: 2
DOSE LEVEL: 200 MG/KG SEX: FEMALES
TEST PERIOD: DAY 7

ANIMAL NUMBER	PILOERECTION	FUR APPEARANCE	PALPEBRAL CLOSURE	RESPIRATORY RATE	RESPIRATORY CHARACTER	RED DEPOSITS EYES	RED DEPOSITS NOSE	RED DEPOSITS MOUTH
59922	1	1	1	1	1	2	2	2
59926	1	1	1	1	1	2	2	2
59927	1	1	1	1	1	2	2	2
59936	1	1	1	1	1	2	2	2
59937	1	1	1	1	1	2	2	2
59949	1	1	1	1	1	2	2	2
59952	1	1	1	1	1	2	2	2
59954	1	1	1	1	1	2	2	2
59958	1	1	1	1	1	2	2	2
59962	1	1	1	1	1	2	2	2
59967	1	1	1	1	1	2	2	2
59968	1	1	1	1	1	2	2	2

OBSERVATION SCORE, UNLESS STATED OTHERWISE

TABLE I10 (HANDLING OBSERVATIONS - DAY 7)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL FUNCTIONAL OBSERVATIONAL BATTERY DATA

HANDLING OBSERVATIONS

DOSE GROUP: 2

DOSE LEVEL: 200 MG/KG SEX: FEMALES

TEST PERIOD: DAY 7

ANIMAL NUMBER	CRUSTY DEPOSITS EYES	CRUSTY DEPOSITS NOSE	CRUSTY DEPOSITS MOUTH	COLOR MUCOUS MEMBRANES	COLOR EYES	COLOR SKIN	EYE PROMINENCE	MUSCLE TONE
59922	2	2	2	1	1	1	1	1
59926	2	2	2	1	1	1	1	1
59927	2	2	2	1	1	1	1	1
59936	2	2	2	1	1	1	1	1
59937	2	2	2	1	1	1	1	1
59949	2	2	2	1	1	1	1	1
59952	2	2	2	1	1	1	1	1
59954	2	2	2	1	1	1	1	1
59958	2	2	2	1	1	1	1	1
59962	2	2	2	1	1	1	1	1
59967	2	2	2	1	1	1	1	1
59968	2	2	2	1	1	1	1	1

OBSERVATION SCORE, UNLESS STATED OTHERWISE

HANDLING OBSERVATIONS

DOSE GROUP: 3
DOSE LEVEL: 700 MG/KG SEX: FEMALES
TEST PERIOD: DAY 7

ANIMAL NUMBER	EASE OF REMOVAL FROM CAGE	EASE OF HANDLING ANIMAL IN HAND	LACRIMATION	CHROMODACRYORRHEA	SALIVATION
59918	1	2*	1	1	1
59925	1	1	1	1	1
59930	1	1	1	1	1
59931	1	1	1	1	1
59932	1	1	1	1	1
59935	1	2	1	1	1
59940	1	1	1	1	1
59944	1	1	1	1	1
59945	1	2*	1	1	1
59948	2	1	1	1	1
59959	1	2	1	1	1
59963	1	1	1	1	1

OBSERVATION SCORE, UNLESS STATED OTHERWISE
* = ANIMAL VOCALIZED

HANDLING OBSERVATIONS

DOSE GROUP: 3
DOSE LEVEL: 700 MG/KG SEX: FEMALES
TEST PERIOD: DAY 7

ANIMAL NUMBER	PILOERECTION	FUR APPEARANCE	PALPEBRAL CLOSURE	RESPIRATORY RATE	RESPIRATORY CHARACTER	RED DEPOSITS EYES	RED DEPOSITS NOSE	RED DEPOSITS MOUTH
59918	1	1	1	1	1	2	2	2
59925	1	1	1	1	1	2	2	2
59930	1	1	1	1	1	2	2	2
59931	1	1	1	1	1	2	2	2
59932	1	1	1	1	1	2	2	2
59935	1	1	1	1	1	2	2	2
59940	1	1	1	1	1	2	2	2
59944	1	1	1	1	1	2	2	2
59945	1	1	1	1	1	2	2	2
59948	1	1	1	1	1	2	2	2
59959	1	1	1	1	1	2	2	2
59963	1	1	1	1	1	2	2	2

OBSERVATION SCORE, UNLESS STATED OTHERWISE

HANDLING OBSERVATIONS

DOSE GROUP: 3
DOSE LEVEL: 700 MG/KG SEX: FEMALES
TEST PERIOD: DAY 7

ANIMAL NUMBER	CRUSTY DEPOSITS EYES	CRUSTY DEPOSITS NOSE	CRUSTY DEPOSITS MOUTH	COLOR MUCOUS MEMBRANES	COLOR EYES	COLOR SKIN	EYE PROMINENCE	MUSCLE TONE
59918	2	2	2	1	1	1	1	1
59925	2	2	2	1	1	1	1	1
59930	2	2	2	1	1	1	1	1
59931	2	2	2	1	1	1	1	1
59932	2	2	2	1	1	1	1	1
59935	2	2	2	1	1	1	1	1
59940	2	2	2	1	1	1	1	1
59944	2	2	2	1	1	1	1	1
59945	2	2	2	1	1	1	1	1
59948	2	2	2	1	1	1	1	1
59959	2	2	2	1	1	1	1	1
59963	2	2	2	1	1	1	1	1

OBSERVATION SCORE, UNLESS STATED OTHERWISE

HANDLING OBSERVATIONS

DOSE GROUP: 4
DOSE LEVEL: 2000 MG/KG SEX: FEMALES
TEST PERIOD: DAY 7

ANIMAL NUMBER	EASE OF REMOVAL FROM CAGE	EASE OF HANDLING ANIMAL IN HAND	LACRIMATION	CHROMODACRYORRHEA	SALIVATION
59921	1	1	1	1	1
59928	1	1	1	1	1
59929	2	1	1	1	1
59934	1	2	1	1	1
59938	1	1	1	1	1
59943	1	1	1	1	1
59946	1	1	1	1	1
59947	1	1	1	1	1
59951	1	1	1	1	1
59955	1	1	1	1	1
59964	1	2	1	1	1
59966	1	1	1	1	1

OBSERVATION SCORE, UNLESS STATED OTHERWISE

TABLE I10 (HANDLING OBSERVATIONS - DAY 7)

HANDLING OBSERVATIONS

DOSE GROUP: 4
DOSE LEVEL: 2000 MG/KG SEX: FEMALES
TEST PERIOD: DAY 7

ANIMAL NUMBER	PILOERECTION	FUR APPEARANCE	PALPEBRAL CLOSURE	RESPIRATORY RATE	RESPIRATORY CHARACTER	RED DEPOSITS EYES	RED DEPOSITS NOSE	RED DEPOSITS MOUTH
59921	1	1	1	1	1	2	2	2
59928	1	1	1	1	1	2	2	2
59929	1	1	1	1	1	2	2	2
59934	1	1	1	1	1	2	2	2
59938	1	1	1	1	1	2	2	2
59943	1	1	1	1	1	2	2	2
59946	1	1	1	1	1	2	2	2
59947	1	1	1	1	1	2	2	2
59951	1	1	1	1	1	2	2	2
59955	1	1	1	1	1	2	2	2
59964	1	1	1	1	1	2	2	2
59966	1	1	1	1	1	2	2	2

OBSERVATION SCORE, UNLESS STATED OTHERWISE

HANDLING OBSERVATIONS

DOSE GROUP: 4
DOSE LEVEL: 2000 MG/KG SEX: FEMALES
TEST PERIOD: DAY 7

ANIMAL NUMBER	CRUSTY DEPOSITS EYES	CRUSTY DEPOSITS NOSE	CRUSTY DEPOSITS MOUTH	COLOR MUCOUS MEMBRANES	COLOR EYES	COLOR SKIN	EYE PROMINENCE	MUSCLE TONE
59921	2	2	2	1	1	1	1	1
59928	2	2	2	1	1	1	1	1
59929	2	2	2	1	1	1	1	1
59934	2	2	2	1	1	1	1	1
59938	2	2	2	1	1	1	1	1
59943	2	2	2	1	1	1	1	1
59946	2	2	2	1	1	1	1	1
59947	2	2	2	1	1	1	1	1
59951	2	2	2	1	1	1	1	1
59955	2	2	2	1	1	1	1	1
59964	2	2	2	1	1	1	1	1
59966	2	2	2	1	1	1	1	1

OBSERVATION SCORE, UNLESS STATED OTHERWISE

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TABLE I11 (HANDLING OBSERVATIONS - DAY 14)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL FUNCTIONAL OBSERVATIONAL BATTERY DATA

HANDLING OBSERVATIONS

DOSE GROUP: 1
DOSE LEVEL: 0 MG/KG SEX: MALES
TEST PERIOD: DAY 14

ANIMAL NUMBER	EASE OF REMOVAL FROM CAGE	EASE OF HANDLING ANIMAL IN HAND	LACRIMATION	CHROMODACRYORRHEA	SALIVATION
59866	1	1	1	1	1
59867	1	1	1	1	1
59869	1	1	1	1	1
59870	1	2*	1	1	1
59881	1	1	1	1	1
59884	1	2*	1	1	1
59885	2	1	1	1	1
59891	1	1	1	1	1
59892	1	2*	1	1	1
59901	1	1	1	1	1
59914	1	2*	1	1	1
59915	1	1	1	1	1

OBSERVATION SCORE, UNLESS STATED OTHERWISE
* = ANIMAL VOCALIZED

TABLE I11 (HANDLING OBSERVATIONS - DAY 14)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL FUNCTIONAL OBSERVATIONAL BATTERY DATA

HANDLING OBSERVATIONS

DOSE GROUP: 1
DOSE LEVEL: 0 MG/KG SEX: MALES
TEST PERIOD: DAY 14

ANIMAL NUMBER	PILOERECTION	FUR APPEARANCE	PALPEBRAL CLOSURE	RESPIRATORY RATE	RESPIRATORY CHARACTER	RED DEPOSITS EYES	RED DEPOSITS NOSE	RED DEPOSITS MOUTH
59866	1	1	1	1	1	1	2	2
59867	1	1	1	1	1	2	2	2
59869	1	1	1	1	1	2	2	2
59870	1	1	1	1	1	2	2	2
59881	1	1	1	1	1	2	2	2
59884	1	1	1	1	1	2	2	2
59885	1	1	1	1	1	2	2	2
59891	1	1	1	1	1	1	2	2
59892	1	1	1	1	1	2	2	2
59901	1	1	1	1	1	2	2	2
59914	1	1	1	1	1	2	2	2
59915	1	1	1	1	1	2	2	2

OBSERVATION SCORE, UNLESS STATED OTHERWISE

TABLE I11 (HANDLING OBSERVATIONS - DAY 14)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL FUNCTIONAL OBSERVATIONAL BATTERY DATA

HANDLING OBSERVATIONS

DOSE GROUP: 1

DOSE LEVEL: 0 MG/KG SEX: MALES

TEST PERIOD: DAY 14

ANIMAL NUMBER	CRUSTY DEPOSITS EYES	CRUSTY DEPOSITS NOSE	CRUSTY DEPOSITS MOUTH	COLOR MUCOUS MEMBRANES	COLOR EYES	COLOR SKIN	EYE PROMINENCE	MUSCLE TONE
59866	1	2	2	1	1	1	1	1
59867	2	2	2	1	1	1	1	1
59869	2	2	2	1	1	1	1	1
59870	2	2	2	1	1	1	1	1
59881	2	2	2	1	1	1	1	1
59884	2	2	2	1	1	1	1	1
59885	2	2	2	1	1	1	1	1
59891	1	2	2	1	1	1	1	1
59892	2	2	2	1	1	1	1	1
59901	2	2	2	1	1	1	1	1
59914	2	2	2	1	1	1	1	1
59915	2	2	2	1	1	1	1	1

OBSERVATION SCORE, UNLESS STATED OTHERWISE

HANDLING OBSERVATIONS

DOSE GROUP: 2
DOSE LEVEL: 200 MG/KG SEX: MALES
TEST PERIOD: DAY 14

ANIMAL NUMBER	EASE OF REMOVAL FROM CAGE	EASE OF HANDLING ANIMAL IN HAND	LACRIMATION	CHROMODACRYORRHEA	SALIVATION
59865	1	1	1	1	1
59873	2	1	1	1	1
59875	1	1	1	1	1
59878	1	1	1	1	1
59879	1	2*	1	1	1
59880	1	1	1	1	1
59882	1	1	1	1	1
59889	1	1	1	1	1
59893	1	1	1	1	1
59897	1	1	1	1	1
59911	1	1	1	1	1
59913	1	1	1	1	1

OBSERVATION SCORE, UNLESS STATED OTHERWISE
* = ANIMAL VOCALIZED

TABLE I11 (HANDLING OBSERVATIONS - DAY 14)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL FUNCTIONAL OBSERVATIONAL BATTERY DATA

HANDLING OBSERVATIONS

DOSE GROUP: 2
DOSE LEVEL: 200 MG/KG SEX: MALES
TEST PERIOD: DAY 14

ANIMAL NUMBER	PILOERECTION	FUR APPEARANCE	PALPEBRAL CLOSURE	RESPIRATORY RATE	RESPIRATORY CHARACTER	RED DEPOSITS EYES	RED DEPOSITS NOSE	RED DEPOSITS MOUTH
59865	1	1	1	1	1	2	2	2
59873	1	1	1	1	1	2	2	2
59875	1	1	1	1	1	2	2	2
59878	1	1	1	1	1	2	2	2
59879	1	1	1	1	1	2	2	2
59880	1	1	1	1	1	2	2	2
59882	1	1	1	1	1	2	2	2
59889	1	1	1	1	1	2	2	2
59893	1	1	1	1	1	2	2	2
59897	1	1	1	1	1	2	2	2
59911	1	1	1	1	1	2	2	2
59913	1	1	1	1	1	2	2	2

OBSERVATION SCORE, UNLESS STATED OTHERWISE

TABLE I11 (HANDLING OBSERVATIONS - DAY 14)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL FUNCTIONAL OBSERVATIONAL BATTERY DATA

HANDLING OBSERVATIONS

DOSE GROUP: 2
DOSE LEVEL: 200 MG/KG SEX: MALES
TEST PERIOD: DAY 14

ANIMAL NUMBER	CRUSTY DEPOSITS EYES	CRUSTY DEPOSITS NOSE	CRUSTY DEPOSITS MOUTH	COLOR MUCOUS MEMBRANES	COLOR EYES	COLOR SKIN	EYE PROMINENCE	MUSCLE TONE
59865	2	2	2	1	1	1	1	1
59873	2	2	2	1	1	1	1	1
59875	2	2	2	1	1	1	1	1
59878	2	2	2	1	1	1	1	1
59879	2	2	2	1	1	1	1	1
59880	2	2	2	1	1	1	1	1
59882	2	2	2	1	1	1	1	1
59889	2	2	2	1	1	1	1	1
59893	2	2	2	1	1	1	1	1
59897	2	2	2	1	1	1	1	1
59911	2	2	2	1	1	1	1	1
59913	2	2	2	1	1	1	1	1

OBSERVATION SCORE, UNLESS STATED OTHERWISE

TABLE I11 (HANDLING OBSERVATIONS - DAY 14)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL FUNCTIONAL OBSERVATIONAL BATTERY DATA

HANDLING OBSERVATIONS

DOSE GROUP: 3
DOSE LEVEL: 700 MG/KG SEX: MALES
TEST PERIOD: DAY 14

ANIMAL NUMBER	EASE OF REMOVAL FROM CAGE	EASE OF HANDLING ANIMAL IN HAND	LACRIMATION	CHROMODACRYORRHEA	SALIVATION
59874	1	2*	1	1	1
59894	1	1	1	1	1
59895	1	1	1	1	1
59896	1	1	1	1	1
59899	1	2*	1	1	1
59902	1	1	1	1	1
59903	2	1	1	1	1
59904	1	1	1	1	1
59905	1	1	1	1	1
59909	2	1	1	1	1
59910	1	1	1	1	1
59916	1	1	1	1	1

OBSERVATION SCORE, UNLESS STATED OTHERWISE
* = ANIMAL VOCALIZED

TABLE I11 (HANDLING OBSERVATIONS - DAY 14)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL FUNCTIONAL OBSERVATIONAL BATTERY DATA

HANDLING OBSERVATIONS

DOSE GROUP: 3
DOSE LEVEL: 700 MG/KG SEX: MALES
TEST PERIOD: DAY 14

ANIMAL NUMBER	PILOERECTION	FUR APPEARANCE	PALPEBRAL CLOSURE	RESPIRATORY RATE	RESPIRATORY CHARACTER	RED DEPOSITS EYES	RED DEPOSITS NOSE	RED DEPOSITS MOUTH
59874	1	1	1	1	1	2	2	2
59894	1	1	1	1	1	2	2	2
59895	1	1	1	1	1	2	2	2
59896	1	1	1	1	1	2	2	2
59899	1	1	1	1	1	2	2	2
59902	1	1	1	1	1	2	2	2
59903	1	1	1	1	1	2	2	2
59904	1	1	1	1	1	2	2	2
59905	1	1	1	1	1	2	2	2
59909	1	1	1	1	1	2	2	2
59910	1	1	1	1	1	2	2	2
59916	1	1	1	1	1	2	2	2

OBSERVATION SCORE, UNLESS STATED OTHERWISE

TABLE I11 (HANDLING OBSERVATIONS - DAY 14)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL FUNCTIONAL OBSERVATIONAL BATTERY DATA

HANDLING OBSERVATIONS

DOSE GROUP: 3

DOSE LEVEL: 700 MG/KG SEX: MALES

TEST PERIOD: DAY 14

ANIMAL NUMBER	CRUSTY DEPOSITS EYES	CRUSTY DEPOSITS NOSE	CRUSTY DEPOSITS MOUTH	COLOR MUCOUS MEMBRANES	COLOR EYES	COLOR SKIN	EYE PROMINENCE	MUSCLE TONE
59874	2	2	2	1	1	1	1	1
59894	2	2	2	1	1	1	1	1
59895	2	2	2	1	1	1	1	1
59896	2	2	2	1	1	1	1	1
59899	2	2	2	1	1	1	1	1
59902	2	2	2	1	1	1	1	1
59903	2	2	2	1	1	1	1	1
59904	2	2	2	1	1	1	1	1
59905	2	2	2	1	1	1	1	1
59909	2	2	2	1	1	1	1	1
59910	2	2	2	1	1	1	1	1
59916	2	2	2	1	1	1	1	1

OBSERVATION SCORE, UNLESS STATED OTHERWISE

TABLE I11 (HANDLING OBSERVATIONS - DAY 14)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL FUNCTIONAL OBSERVATIONAL BATTERY DATA

HANDLING OBSERVATIONS

DOSE GROUP: 4
DOSE LEVEL: 2000 MG/KG SEX: MALES
TEST PERIOD: DAY 14

ANIMAL NUMBER	EASE OF REMOVAL FROM CAGE	EASE OF HANDLING ANIMAL IN HAND	LACRIMATION	CHROMODACRYORRHEA	SALIVATION
59876	1	1	1	1	1
59883	1	1	1	1	1
59886	1	1	1	1	1
59887	1	1	1	1	1
59890	1	1	1	1	1
59898	1	1	1	1	1
59900	1	1	1	1	1
59906	1	1	1	1	1
59907	1	1	1	1	1
59908	1	1	1	1	1
59912	1	1	1	1	1
59917	1	1	1	1	1

OBSERVATION SCORE, UNLESS STATED OTHERWISE

TABLE I11 (HANDLING OBSERVATIONS - DAY 14)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL FUNCTIONAL OBSERVATIONAL BATTERY DATA

HANDLING OBSERVATIONS

DOSE GROUP: 4

DOSE LEVEL: 2000 MG/KG SEX: MALES

TEST PERIOD: DAY 14

ANIMAL NUMBER	PILOERECTION	FUR APPEARANCE	PALPEBRAL CLOSURE	RESPIRATORY RATE	RESPIRATORY CHARACTER	RED DEPOSITS EYES	RED DEPOSITS NOSE	RED DEPOSITS MOUTH
59876	1	1	1	1	1	2	2	2
59883	1	1	1	1	1	2	2	2
59886	1	1	1	1	1	1	2	2
59887	1	1	1	1	1	2	2	2
59890	1	1	1	1	1	2	2	2
59898	1	1	1	1	1	2	2	2
59900	1	1	1	1	1	2	2	2
59906	1	1	1	1	1	2	2	2
59907	1	1	1	1	1	2	2	2
59908	1	1	1	1	1	2	2	2
59912	1	1	1	1	1	2	2	2
59917	1	1	1	1	1	2	2	2

OBSERVATION SCORE, UNLESS STATED OTHERWISE

HANDLING OBSERVATIONS

DOSE GROUP: 4
DOSE LEVEL: 2000 MG/KG SEX: MALES
TEST PERIOD: DAY 14

ANIMAL NUMBER	CRUSTY DEPOSITS EYES	CRUSTY DEPOSITS NOSE	CRUSTY DEPOSITS MOUTH	COLOR MUCOUS MEMBRANES	COLOR EYES	COLOR SKIN	EYE PROMINENCE	MUSCLE TONE
59876	2	2	2	1	1	1	1	1
59883	2	2	2	1	1	1	1	1
59886	2	2	2	1	1	1	1	1
59887	2	2	2	1	1	1	1	1
59890	2	2	2	1	1	1	1	1
59898	2	2	2	1	1	1	1	1
59900	2	2	2	1	1	1	1	1
59906	2	2	2	1	1	1	1	1
59907	2	2	2	1	1	1	1	1
59908	2	2	2	1	1	1	1	1
59912	2	2	2	1	1	1	1	1
59917	2	2	2	1	1	1	1	1

OBSERVATION SCORE, UNLESS STATED OTHERWISE

HANDLING OBSERVATIONS

DOSE GROUP: 1
DOSE LEVEL: 0 MG/KG SEX: FEMALES
TEST PERIOD: DAY 14

ANIMAL NUMBER	EASE OF REMOVAL FROM CAGE	EASE OF HANDLING ANIMAL IN HAND	LACRIMATION	CHROMODACRYORRHEA	SALIVATION
59919	1	1	1	1	1
59920	1	1	1	1	1
59923	1	2*	1	1	1
59924	1	1	1	1	1
59933	1	2*	1	1	1
59939	1	2*	1	1	1
59941	1	1	1	1	1
59942	2	1	1	1	1
59950	1	2*	1	1	1
59956	1	1	1	1	1
59969	1	1	1	1	1
59970	1	1	1	1	1

OBSERVATION SCORE, UNLESS STATED OTHERWISE
* = ANIMAL VOCALIZED

TABLE I11 (HANDLING OBSERVATIONS - DAY 14)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL FUNCTIONAL OBSERVATIONAL BATTERY DATA

HANDLING OBSERVATIONS

DOSE GROUP: 1
DOSE LEVEL: 0 MG/KG SEX: FEMALES
TEST PERIOD: DAY 14

ANIMAL NUMBER	PILOERECTION	FUR APPEARANCE	PALPEBRAL CLOSURE	RESPIRATORY RATE	RESPIRATORY CHARACTER	RED DEPOSITS EYES	RED DEPOSITS NOSE	RED DEPOSITS MOUTH
59919	1	1	1	1	1	2	2	2
59920	1	1	1	1	1	2	2	2
59923	1	1	1	1	1	2	2	2
59924	1	1	1	1	1	2	2	2
59933	1	1	1	1	1	2	2	2
59939	1	1	1	1	1	2	2	2
59941	1	1	1	1	1	2	2	2
59942	1	1	1	1	1	2	2	2
59950	1	1	1	1	1	2	2	2
59956	1	1	1	1	1	2	2	2
59969	1	1	1	1	1	2	2	2
59970	1	1	1	1	1	2	2	2

OBSERVATION SCORE, UNLESS STATED OTHERWISE

HANDLING OBSERVATIONS

DOSE GROUP: 1
DOSE LEVEL: 0 MG/KG SEX: FEMALES
TEST PERIOD: DAY 14

ANIMAL NUMBER	CRUSTY DEPOSITS EYES	CRUSTY DEPOSITS NOSE	CRUSTY DEPOSITS MOUTH	COLOR MUCOUS MEMBRANES	COLOR EYES	COLOR SKIN	EYE PROMINENCE	MUSCLE TONE
59919	2	2	2	1	1	1	1	1
59920	2	2	2	1	1	1	1	1
59923	2	2	2	1	1	1	1	1
59924	2	2	2	1	1	1	1	1
59933	2	2	2	1	1	1	1	1
59939	2	2	2	1	1	1	1	1
59941	2	2	2	1	1	1	1	1
59942	2	2	2	1	1	1	1	1
59950	2	2	2	1	1	1	1	1
59956	2	2	2	1	1	1	1	1
59969	2	2	2	1	1	1	1	1
59970	2	2	2	1	1	1	1	1

OBSERVATION SCORE, UNLESS STATED OTHERWISE

HANDLING OBSERVATIONS

DOSE GROUP: 2
DOSE LEVEL: 200 MG/KG SEX: FEMALES
TEST PERIOD: DAY 14

ANIMAL NUMBER	EASE OF REMOVAL FROM CAGE	EASE OF HANDLING ANIMAL IN HAND	LACRIMATION	CHROMODACRYORRHEA	SALIVATION
59922	1	1	1	1	1
59926	1	1	1	1	1
59927	1	1	1	1	1
59936	1	1	1	1	1
59937	1	1	1	1	1
59949	1	1	1	1	1
59952	1	1	1	1	1
59954	1	1	1	1	1
59958	2	2*	1	1	1
59962	1	2*	1	1	1
59967	1	2*	1	1	1
59968	1	1	1	1	1

OBSERVATION SCORE, UNLESS STATED OTHERWISE
* = ANIMAL VOCALIZED

HANDLING OBSERVATIONS

DOSE GROUP: 2
DOSE LEVEL: 200 MG/KG SEX: FEMALES
TEST PERIOD: DAY 14

ANIMAL NUMBER	PILOERECTION	FUR APPEARANCE	PALPEBRAL CLOSURE	RESPIRATORY RATE	RESPIRATORY CHARACTER	RED DEPOSITS EYES	RED DEPOSITS NOSE	RED DEPOSITS MOUTH
59922	1	1	1	1	1	2	2	2
59926	1	1	1	1	1	2	2	2
59927	1	1	1	1	1	2	2	2
59936	1	1	1	1	1	2	2	2
59937	1	1	1	1	1	2	2	2
59949	1	1	1	1	1	2	2	2
59952	1	1	1	1	1	2	2	2
59954	1	1	1	1	1	2	2	2
59958	1	1	1	1	1	2	2	2
59962	1	1	1	1	1	2	2	2
59967	1	1	1	1	1	2	2	2
59968	1	1	1	1	1	2	2	2

OBSERVATION SCORE, UNLESS STATED OTHERWISE

TABLE I11 (HANDLING OBSERVATIONS - DAY 14)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL FUNCTIONAL OBSERVATIONAL BATTERY DATA

HANDLING OBSERVATIONS

DOSE GROUP: 2

DOSE LEVEL: 200 MG/KG SEX: FEMALES

TEST PERIOD: DAY 14

ANIMAL NUMBER	CRUSTY DEPOSITS EYES	CRUSTY DEPOSITS NOSE	CRUSTY DEPOSITS MOUTH	COLOR MUCOUS MEMBRANES	COLOR EYES	COLOR SKIN	EYE PROMINENCE	MUSCLE TONE
59922	2	2	2	1	1	1	1	1
59926	2	2	2	1	1	1	1	1
59927	2	2	2	1	1	1	1	1
59936	2	2	2	1	1	1	1	1
59937	2	2	2	1	1	1	1	1
59949	2	2	2	1	1	1	1	1
59952	2	2	2	1	1	1	1	1
59954	2	2	2	1	1	1	1	1
59958	2	2	2	1	1	1	1	1
59962	2	2	2	1	1	1	1	1
59967	2	2	2	1	1	1	1	1
59968	2	2	2	1	1	1	1	1

OBSERVATION SCORE, UNLESS STATED OTHERWISE

HANDLING OBSERVATIONS

DOSE GROUP: 3
DOSE LEVEL: 700 MG/KG SEX: FEMALES
TEST PERIOD: DAY 14

ANIMAL NUMBER	EASE OF REMOVAL FROM CAGE	EASE OF HANDLING ANIMAL IN HAND	LACRIMATION	CHROMODACRYORRHEA	SALIVATION
59918	1	1	1	1	1
59925	1	1	1	1	1
59930	2	1	1	1	1
59931	1	1	1	1	1
59932	1	1	1	1	1
59935	1	1	1	1	1
59940	1	1	1	1	1
59944	1	2*	1	1	1
59945	1	2*	1	1	1
59948	1	1	1	1	1
59959	2	1	1	1	1
59963	1	1	1	1	1

OBSERVATION SCORE, UNLESS STATED OTHERWISE
* = ANIMAL VOCALIZED

TABLE I11 (HANDLING OBSERVATIONS - DAY 14)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL FUNCTIONAL OBSERVATIONAL BATTERY DATA

HANDLING OBSERVATIONS

DOSE GROUP: 3
DOSE LEVEL: 700 MG/KG SEX: FEMALES
TEST PERIOD: DAY 14

ANIMAL NUMBER	PILOERECTION	FUR APPEARANCE	PALPEBRAL CLOSURE	RESPIRATORY RATE	RESPIRATORY CHARACTER	RED DEPOSITS EYES	RED DEPOSITS NOSE	RED DEPOSITS MOUTH
59918	1	1	1	1	1	2	2	2
59925	1	1	1	1	1	2	2	2
59930	1	1	1	1	1	2	2	2
59931	1	1	1	1	1	2	2	2
59932	1	1	1	1	1	2	2	2
59935	1	1	1	1	1	2	2	2
59940	1	1	1	1	1	2	2	2
59944	1	1	1	1	1	2	2	2
59945	1	1	1	1	1	2	2	2
59948	1	1	1	1	1	2	2	2
59959	1	1	1	1	1	2	2	2
59963	1	1	1	1	1	2	2	2

OBSERVATION SCORE, UNLESS STATED OTHERWISE

TABLE I11 (HANDLING OBSERVATIONS - DAY 14)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL FUNCTIONAL OBSERVATIONAL BATTERY DATA

HANDLING OBSERVATIONS

DOSE GROUP: 3

DOSE LEVEL: 700 MG/KG SEX: FEMALES

TEST PERIOD: DAY 14

ANIMAL NUMBER	CRUSTY DEPOSITS EYES	CRUSTY DEPOSITS NOSE	CRUSTY DEPOSITS MOUTH	COLOR MUCOUS MEMBRANES	COLOR EYES	COLOR SKIN	EYE PROMINENCE	MUSCLE TONE
59918	2	2	2	1	1	1	1	1
59925	2	2	2	1	1	1	1	1
59930	2	2	2	1	1	1	1	1
59931	2	2	2	1	1	1	1	1
59932	2	2	2	1	1	1	1	1
59935	2	2	2	1	1	1	1	1
59940	2	2	2	1	1	1	1	1
59944	2	2	2	1	1	1	1	1
59945	2	2	2	1	1	1	1	1
59948	2	2	2	1	1	1	1	1
59959	2	2	2	1	1	1	1	1
59963	2	2	2	1	1	1	1	1

OBSERVATION SCORE, UNLESS STATED OTHERWISE

HANDLING OBSERVATIONS

DOSE GROUP: 4
DOSE LEVEL: 2000 MG/KG SEX: FEMALES
TEST PERIOD: DAY 14

ANIMAL NUMBER	EASE OF REMOVAL FROM CAGE	EASE OF HANDLING ANIMAL IN HAND	LACRIMATION	CHROMODACRYORRHEA	SALIVATION
59921	1	2*	1	1	1
59928	1	1	1	1	1
59929	1	1	1	1	1
59934	2	1	1	1	1
59938	1	1	1	1	1
59943	1	1	1	1	1
59946	1	1	1	1	1
59947	1	1	1	1	1
59951	1	2*	1	1	1
59955	1	1	1	1	1
59964	1	2	1	1	1
59966	5	2*	1	1	1

OBSERVATION SCORE, UNLESS STATED OTHERWISE
* = ANIMAL VOCALIZED

HANDLING OBSERVATIONS

DOSE GROUP: 4
DOSE LEVEL: 2000 MG/KG SEX: FEMALES
TEST PERIOD: DAY 14

ANIMAL NUMBER	PILOERECTION	FUR APPEARANCE	PALPEBRAL CLOSURE	RESPIRATORY RATE	RESPIRATORY CHARACTER	RED DEPOSITS EYES	RED DEPOSITS NOSE	RED DEPOSITS MOUTH
59921	1	1	1	1	1	2	2	2
59928	1	1	1	1	1	2	2	2
59929	1	1	1	1	1	2	2	2
59934	1	1	1	1	1	2	2	2
59938	1	1	1	1	1	2	2	2
59943	1	1	1	1	1	2	2	2
59946	1	1	1	1	1	2	2	2
59947	1	1	1	1	1	2	2	2
59951	1	1	1	1	1	2	2	2
59955	1	1	1	1	1	2	2	2
59964	1	1	1	1	1	2	2	2
59966	1	1	1	1	1	2	2	2

OBSERVATION SCORE, UNLESS STATED OTHERWISE

HANDLING OBSERVATIONS

DOSE GROUP: 4
DOSE LEVEL: 2000 MG/KG SEX: FEMALES
TEST PERIOD: DAY 14

ANIMAL NUMBER	CRUSTY DEPOSITS EYES	CRUSTY DEPOSITS NOSE	CRUSTY DEPOSITS MOUTH	COLOR MUCOUS MEMBRANES	COLOR EYES	COLOR SKIN	EYE PROMINENCE	MUSCLE TONE
59921	2	2	2	1	1	1	1	1
59928	2	2	2	1	1	1	1	1
59929	2	2	2	1	1	1	1	1
59934	2	2	2	1	1	1	1	1
59938	2	2	2	1	1	1	1	1
59943	2	2	2	1	1	1	1	1
59946	2	2	2	1	1	1	1	1
59947	2	2	2	1	1	1	1	1
59951	2	2	2	1	1	1	1	1
59955	2	2	2	1	1	1	1	1
59964	2	2	2	1	1	1	1	1
59966	2	2	2	1	1	1	1	1

OBSERVATION SCORE, UNLESS STATED OTHERWISE

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TABLE I12 (OPEN FIELD OBSERVATIONS - PRETEST)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL FUNCTIONAL OBSERVATIONAL BATTERY DATA

OPEN FIELD OBSERVATIONS

DOSE GROUP: 1

DOSE LEVEL: 0 MG/KG SEX: MALES

TEST PERIOD: PRETEST

ANIMAL NUMBER	TIME TO 1ST STEP (seconds)	MOBILITY	GAIT	CONVULSIONS CLONIC	CONVULSIONS TONIC	TREMORS	GAIT SCORE	AROUSAL
59866	0.3	1	1	1	1	1	1	3
59867	0.4	1	1	1	1	1	1	3
59869	0.3	1	1	1	1	1	1	3
59870	0.3	1	1	1	1	1	1	3
59881	0.3	1	1	1	1	1	1	3
59884	0.3	1	1	1	1	1	1	3
59885	0.4	1	1	1	1	1	1	3
59891	0.3	1	1	1	1	1	1	3
59892	0.3	1	1	1	1	1	1	3
59901	0.3	1	1	1	1	1	1	3
59914	0.4	1	1	1	1	1	1	3
59915	0.4	1	1	1	1	1	1	3
MEAN	0.3							
S.D.	0.05							
N	12							

OBSERVATION SCORE, UNLESS STATED OTHERWISE

TABLE I12 (OPEN FIELD OBSERVATIONS - PRETEST)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL FUNCTIONAL OBSERVATIONAL BATTERY DATA

OPEN FIELD OBSERVATIONS

DOSE GROUP: 1
DOSE LEVEL: 0 MG/KG SEX: MALES
TEST PERIOD: PRETEST

ANIMAL NUMBER	BIZARRE/STEREO-TYPIC BEHAVIOR	REARING (counts)	BACKING (counts)	GROOMING (counts)	URINATION (counts)	DEFECATION (counts)
59866	1	4.0	0.0	0.0	1.0	2.0
59867	1	11.0	0.0	0.0	0.0	2.0
59869	1	5.0	0.0	0.0	2.0	3.0
59870	1	4.0	0.0	1.0	0.0	0.0
59881	1	4.0	0.0	0.0	0.0	2.0
59884	1	5.0	0.0	0.0	2.0	1.0
59885	1	5.0	0.0	1.0	3.0	2.0
59891	1	10.0	0.0	0.0	2.0	0.0
59892	1	3.0	0.0	0.0	2.0	0.0
59901	1	2.0	0.0	0.0	0.0	1.0
59914	1	7.0	0.0	2.0	1.0	2.0
59915	1	4.0	0.0	2.0	0.0	0.0
MEAN		5.3	0.0	0.5	1.1	1.3
S.D.		2.71	0.00	0.80	1.08	1.06
N		12	12	12	12	12

OBSERVATION SCORE, UNLESS STATED OTHERWISE

TABLE I12 (OPEN FIELD OBSERVATIONS - PRETEST)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL FUNCTIONAL OBSERVATIONAL BATTERY DATA

OPEN FIELD OBSERVATIONS

DOSE GROUP: 2
DOSE LEVEL: 200 MG/KG SEX: MALES
TEST PERIOD: PRETEST

ANIMAL NUMBER	TIME TO 1ST STEP (seconds)	MOBILITY	GAIT	CONVULSIONS CLONIC	CONVULSIONS TONIC	TREMORS	GAIT SCORE	AROUSAL
59865	0.3	1	1	1	1	1	1	3
59873	0.3	1	1	1	1	1	1	3
59875	0.5	1	1	1	1	1	1	3
59878	0.4	1	1	1	1	1	1	3
59879	0.4	1	1	1	1	1	1	3
59880	0.3	1	1	1	1	1	1	3
59882	0.4	1	1	1	1	1	1	3
59889	0.3	1	1	1	1	1	1	3
59893	0.3	1	1	1	1	1	1	3
59897	0.4	1	1	1	1	1	1	3
59911	0.4	1	1	1	1	1	1	3
59913	0.3	1	1	1	1	1	1	3
MEAN	0.4							
S.D.	0.07							
N	12							

OBSERVATION SCORE, UNLESS STATED OTHERWISE

TABLE I12 (OPEN FIELD OBSERVATIONS - PRETEST)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL FUNCTIONAL OBSERVATIONAL BATTERY DATA

OPEN FIELD OBSERVATIONS

DOSE GROUP: 2
DOSE LEVEL: 200 MG/KG SEX: MALES
TEST PERIOD: PRETEST

ANIMAL NUMBER	BIZARRE/STEREO-TYPIC BEHAVIOR	REARING (counts)	BACKING (counts)	GROOMING (counts)	URINATION (counts)	DEFECATION (counts)
59865	1	3.0	0.0	2.0	0.0	0.0
59873	1	4.0	0.0	1.0	3.0	5.0
59875	1	3.0	0.0	0.0	0.0	1.0
59878	1	5.0	0.0	1.0	1.0	0.0
59879	1	4.0	0.0	0.0	2.0	1.0
59880	1	3.0	0.0	0.0	0.0	0.0
59882	1	4.0	0.0	0.0	1.0	2.0
59889	1	10.0	0.0	0.0	3.0	0.0
59893	1	5.0	0.0	0.0	1.0	0.0
59897	1	5.0	0.0	0.0	0.0	2.0
59911	1	2.0	0.0	0.0	0.0	3.0
59913	1	9.0	0.0	1.0	0.0	0.0
MEAN		4.8	0.0	0.4	0.9	1.2
S.D.		2.42	0.00	0.67	1.16	1.59
N		12	12	12	12	12

OBSERVATION SCORE, UNLESS STATED OTHERWISE

TABLE I12 (OPEN FIELD OBSERVATIONS - PRETEST)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL FUNCTIONAL OBSERVATIONAL BATTERY DATA

OPEN FIELD OBSERVATIONS

DOSE GROUP: 3

DOSE LEVEL: 700 MG/KG SEX: MALES

TEST PERIOD: PRETEST

ANIMAL NUMBER	TIME TO 1ST STEP (seconds)	MOBILITY	GAIT	CONVULSIONS CLONIC	CONVULSIONS TONIC	TREMORS	GAIT SCORE	AROUSAL
59874	0.3	1	1	1	1	1	1	3
59894	0.3	1	1	1	1	1	1	3
59895	0.3	1	1	1	1	1	1	3
59896	0.4	1	1	1	1	1	1	3
59899	0.4	1	1	1	1	1	1	3
59902	0.3	1	1	1	1	1	1	3
59903	0.3	1	1	1	1	1	1	3
59904	0.3	1	1	1	1	1	1	3
59905	0.3	1	1	1	1	1	1	3
59909	0.3	1	1	1	1	1	1	3
59910	0.3	1	1	1	1	1	1	3
59916	0.5	1	1	1	1	1	1	3
MEAN	0.3							
S.D.	0.07							
N	12							

OBSERVATION SCORE, UNLESS STATED OTHERWISE

TABLE I12 (OPEN FIELD OBSERVATIONS - PRETEST)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL FUNCTIONAL OBSERVATIONAL BATTERY DATA

OPEN FIELD OBSERVATIONS

DOSE GROUP: 3

DOSE LEVEL: 700 MG/KG SEX: MALES

TEST PERIOD: PRETEST

ANIMAL NUMBER	BIZARRE/STEREO-TYPIC BEHAVIOR	REARING (counts)	BACKING (counts)	GROOMING (counts)	URINATION (counts)	DEFECATION (counts)
59874	1	7.0	0.0	0.0	1.0	2.0
59894	1	6.0	0.0	0.0	0.0	0.0
59895	1	4.0	0.0	2.0	0.0	0.0
59896	1	7.0	0.0	1.0	3.0	1.0
59899	1	3.0	0.0	0.0	2.0	4.0
59902	1	4.0	0.0	0.0	1.0	1.0
59903	1	7.0	0.0	0.0	1.0	0.0
59904	1	7.0	0.0	0.0	2.0	0.0
59905	1	5.0	0.0	0.0	0.0	0.0
59909	1	4.0	0.0	0.0	0.0	2.0
59910	1	5.0	0.0	0.0	1.0	0.0
59916	1	6.0	0.0	0.0	1.0	1.0
MEAN		5.4	0.0	0.3	1.0	0.9
S.D.		1.44	0.00	0.62	0.95	1.24
N		12	12	12	12	12

OBSERVATION SCORE, UNLESS STATED OTHERWISE

TABLE I12 (OPEN FIELD OBSERVATIONS - PRETEST)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL FUNCTIONAL OBSERVATIONAL BATTERY DATA

OPEN FIELD OBSERVATIONS

DOSE GROUP: 4
DOSE LEVEL: 2000 MG/KG SEX: MALES
TEST PERIOD: PRETEST

ANIMAL NUMBER	TIME TO 1ST STEP (seconds)	MOBILITY	GAIT	CONVULSIONS CLONIC	CONVULSIONS TONIC	TREMORS	GAIT SCORE	AROUSAL
59876	0.4	1	1	1	1	1	1	3
59883	0.3	1	1	1	1	1	1	3
59886	0.4	1	1	1	1	1	1	3
59887	0.4	1	1	1	1	1	1	3
59890	0.3	1	1	1	1	1	1	3
59898	0.3	1	1	1	1	1	1	3
59900	0.3	1	1	1	1	1	1	3
59906	0.3	1	1	1	1	1	1	3
59907	0.5	1	1	1	1	1	1	3
59908	0.3	1	1	1	1	1	1	3
59912	0.4	1	1	1	1	1	1	3
59917	0.3	1	1	1	1	1	1	3
MEAN	0.4							
S.D.	0.07							
N	12							

OBSERVATION SCORE, UNLESS STATED OTHERWISE

OPEN FIELD OBSERVATIONS

DOSE GROUP: 4
DOSE LEVEL: 2000 MG/KG SEX: MALES
TEST PERIOD: PRETEST

ANIMAL NUMBER	BIZARRE/STEREO-TYPIC BEHAVIOR	REARING (counts)	BACKING (counts)	GROOMING (counts)	URINATION (counts)	DEFECATION (counts)
59876	1	4.0	0.0	1.0	1.0	4.0
59883	1	3.0	0.0	0.0	0.0	0.0
59886	1	6.0	0.0	0.0	0.0	0.0
59887	1	8.0	0.0	0.0	0.0	0.0
59890	1	7.0	0.0	0.0	3.0	4.0
59898	1	6.0	0.0	0.0	0.0	0.0
59900	1	10.0	0.0	0.0	1.0	0.0
59906	1	3.0	0.0	0.0	2.0	5.0
59907	1	6.0	0.0	0.0	1.0	2.0
59908	1	8.0	0.0	0.0	0.0	0.0
59912	1	7.0	0.0	0.0	2.0	0.0
59917	1	8.0	0.0	0.0	1.0	2.0
MEAN		6.3	0.0	0.1	0.9	1.4
S.D.		2.15	0.00	0.29	1.00	1.93
N		12	12	12	12	12

OBSERVATION SCORE, UNLESS STATED OTHERWISE

TABLE I12 (OPEN FIELD OBSERVATIONS - PRETEST)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL FUNCTIONAL OBSERVATIONAL BATTERY DATA

OPEN FIELD OBSERVATIONS

DOSE GROUP: 1
DOSE LEVEL: 0 MG/KG SEX: FEMALES
TEST PERIOD: PRETEST

ANIMAL NUMBER	TIME TO 1ST STEP (seconds)	MOBILITY	GAIT	CONVULSIONS CLONIC	CONVULSIONS TONIC	TREMORS	GAIT SCORE	AROUSAL
59919	0.4	1	1	1	1	1	1	3
59920	0.3	1	1	1	1	1	1	3
59923	0.4	1	1	1	1	1	1	3
59924	0.2	1	1	1	1	1	1	3
59933	0.4	1	1	1	1	1	1	3
59939	0.3	1	1	1	1	1	1	3
59941	0.3	1	1	1	1	1	1	3
59942	0.3	1	1	1	1	1	1	3
59950	0.3	1	1	1	1	1	1	3
59956	0.4	1	1	1	1	1	1	3
59969	0.5	1	1	1	1	1	1	3
59970	0.3	1	1	1	1	1	1	3
MEAN	0.3							
S.D.	0.08							
N	12							

OBSERVATION SCORE, UNLESS STATED OTHERWISE

OPEN FIELD OBSERVATIONS

DOSE GROUP: 1
DOSE LEVEL: 0 MG/KG SEX: FEMALES
TEST PERIOD: PRETEST

ANIMAL NUMBER	BIZARRE/STEREO-TYPIC BEHAVIOR	REARING (counts)	BACKING (counts)	GROOMING (counts)	URINATION (counts)	DEFECATION (counts)
59919	1	6.0	0.0	0.0	0.0	0.0
59920	1	10.0	0.0	1.0	1.0	0.0
59923	1	5.0	0.0	1.0	3.0	0.0
59924	1	9.0	0.0	0.0	3.0	0.0
59933	1	5.0	0.0	0.0	0.0	0.0
59939	1	5.0	0.0	0.0	2.0	0.0
59941	1	6.0	0.0	1.0	0.0	0.0
59942	1	6.0	0.0	0.0	0.0	0.0
59950	1	5.0	0.0	0.0	0.0	2.0
59956	1	2.0	0.0	0.0	2.0	4.0
59969	1	9.0	0.0	1.0	0.0	0.0
59970	1	3.0	0.0	0.0	2.0	0.0
MEAN		5.9	0.0	0.3	1.1	0.5
S.D.		2.39	0.00	0.49	1.24	1.24
N		12	12	12	12	12

OBSERVATION SCORE, UNLESS STATED OTHERWISE

OPEN FIELD OBSERVATIONS

DOSE GROUP: 2
DOSE LEVEL: 200 MG/KG SEX: FEMALES
TEST PERIOD: PRETEST

ANIMAL NUMBER	TIME TO 1ST STEP (seconds)	MOBILITY	GAIT	CONVULSIONS CLONIC	CONVULSIONS TONIC	TREMORS	GAIT SCORE	AROUSAL
59922	0.3	1	1	1	1	1	1	3
59926	0.3	1	1	1	1	1	1	3
59927	0.4	1	1	1	1	1	1	3
59936	0.3	1	1	1	1	1	1	3
59937	0.2	1	1	1	1	1	1	3
59949	0.3	1	1	1	1	1	1	3
59952	0.4	1	1	1	1	1	1	3
59954	0.3	1	1	1	1	1	1	3
59958	0.3	1	1	1	1	1	1	3
59962	0.3	1	1	1	1	1	1	3
59967	0.3	1	1	1	1	1	1	3
59968	0.3	1	1	1	1	1	1	3
MEAN	0.3							
S.D.	0.05							
N	12							

OBSERVATION SCORE, UNLESS STATED OTHERWISE

OPEN FIELD OBSERVATIONS

DOSE GROUP: 2
DOSE LEVEL: 200 MG/KG SEX: FEMALES
TEST PERIOD: PRETEST

ANIMAL NUMBER	BIZARRE/STEREO-TYPIC BEHAVIOR	REARING (counts)	BACKING (counts)	GROOMING (counts)	URINATION (counts)	DEFECATION (counts)
59922	1	12.0	0.0	2.0	1.0	0.0
59926	1	4.0	0.0	0.0	1.0	4.0
59927	1	4.0	0.0	2.0	0.0	0.0
59936	1	6.0	0.0	0.0	1.0	2.0
59937	1	8.0	0.0	0.0	1.0	0.0
59949	1	5.0	0.0	0.0	0.0	0.0
59952	1	9.0	0.0	0.0	2.0	0.0
59954	1	5.0	0.0	0.0	0.0	1.0
59958	1	7.0	0.0	1.0	2.0	0.0
59962	1	7.0	0.0	1.0	0.0	0.0
59967	1	5.0	0.0	0.0	2.0	0.0
59968	1	6.0	0.0	2.0	0.0	1.0
MEAN		6.5	0.0	0.7	0.8	0.7
S.D.		2.32	0.00	0.89	0.83	1.23
N		12	12	12	12	12

OBSERVATION SCORE, UNLESS STATED OTHERWISE

OPEN FIELD OBSERVATIONS

DOSE GROUP: 3
DOSE LEVEL: 700 MG/KG SEX: FEMALES
TEST PERIOD: PRETEST

ANIMAL NUMBER	TIME TO 1ST STEP (seconds)	MOBILITY	GAIT	CONVULSIONS CLONIC	CONVULSIONS TONIC	TREMORS	GAIT SCORE	AROUSAL
59918	0.3	1	1	1	1	1	1	3
59925	0.3	1	1	1	1	1	1	3
59930	0.3	1	1	1	1	1	1	3
59931	0.3	1	1	1	1	1	1	3
59932	0.3	1	1	1	1	1	1	3
59935	0.4	1	1	1	1	1	1	3
59940	0.4	1	1	1	1	1	1	3
59944	0.4	1	1	1	1	1	1	3
59945	0.4	1	1	1	1	1	1	3
59948	0.3	1	1	1	1	1	1	3
59959	0.3	1	1	1	1	1	1	3
59963	0.3	1	1	1	1	1	1	3
MEAN	0.3							
S.D.	0.05							
N	12							

OBSERVATION SCORE, UNLESS STATED OTHERWISE

OPEN FIELD OBSERVATIONS

DOSE GROUP: 3
DOSE LEVEL: 700 MG/KG SEX: FEMALES
TEST PERIOD: PRETEST

ANIMAL NUMBER	BIZARRE/STEREO-TYPIC BEHAVIOR	REARING (counts)	BACKING (counts)	GROOMING (counts)	URINATION (counts)	DEFECATION (counts)
59918	1	16.0	0.0	1.0	0.0	0.0
59925	1	2.0	0.0	0.0	3.0	2.0
59930	1	6.0	0.0	1.0	0.0	0.0
59931	1	4.0	0.0	0.0	2.0	3.0
59932	1	5.0	0.0	0.0	0.0	0.0
59935	1	7.0	0.0	0.0	2.0	0.0
59940	1	4.0	0.0	0.0	1.0	0.0
59944	1	5.0	0.0	0.0	0.0	0.0
59945	1	4.0	0.0	0.0	1.0	1.0
59948	1	4.0	0.0	1.0	0.0	0.0
59959	1	3.0	0.0	1.0	0.0	1.0
59963	1	8.0	0.0	0.0	0.0	0.0
MEAN		5.7	0.0	0.3	0.8	0.6
S.D.		3.65	0.00	0.49	1.06	1.00
N		12	12	12	12	12

OBSERVATION SCORE, UNLESS STATED OTHERWISE

OPEN FIELD OBSERVATIONS

DOSE GROUP: 4
DOSE LEVEL: 2000 MG/KG SEX: FEMALES
TEST PERIOD: PRETEST

ANIMAL NUMBER	TIME TO 1ST STEP (seconds)	MOBILITY	GAIT	CONVULSIONS CLONIC	CONVULSIONS TONIC	TREMORS	GAIT SCORE	AROUSAL
59921	0.3	1	1	1	1	1	1	3
59928	0.3	1	1	1	1	1	1	3
59929	0.3	1	1	1	1	1	1	3
59934	0.4	1	1	1	1	1	1	3
59938	0.2	1	1	1	1	1	1	3
59943	0.4	1	1	1	1	1	1	3
59946	0.4	1	1	1	1	1	1	3
59947	0.3	1	1	1	1	1	1	3
59951	0.3	1	1	1	1	1	1	3
59955	0.4	1	1	1	1	1	1	3
59964	0.3	1	1	1	1	1	1	3
59966	0.3	1	1	1	1	1	1	3
MEAN	0.3							
S.D.	0.06							
N	12							

OBSERVATION SCORE, UNLESS STATED OTHERWISE

OPEN FIELD OBSERVATIONS

DOSE GROUP: 4
DOSE LEVEL: 2000 MG/KG SEX: FEMALES
TEST PERIOD: PRETEST

ANIMAL NUMBER	BIZARRE/STEREO-TYPIC BEHAVIOR	REARING (counts)	BACKING (counts)	GROOMING (counts)	URINATION (counts)	DEFECATION (counts)
59921	1	2.0	0.0	0.0	3.0	1.0
59928	1	12.0	0.0	0.0	0.0	0.0
59929	1	1.0	0.0	0.0	1.0	0.0
59934	1	9.0	0.0	0.0	0.0	0.0
59938	1	9.0	0.0	0.0	0.0	1.0
59943	1	2.0	0.0	0.0	1.0	2.0
59946	1	4.0	0.0	0.0	0.0	1.0
59947	1	7.0	0.0	0.0	0.0	0.0
59951	1	1.0	0.0	0.0	2.0	0.0
59955	1	9.0	0.0	1.0	2.0	0.0
59964	1	7.0	0.0	0.0	0.0	0.0
59966	1	4.0	0.0	0.0	0.0	0.0
MEAN		5.6	0.0	0.1	0.8	0.4
S.D.		3.73	0.00	0.29	1.06	0.67
N		12	12	12	12	12

OBSERVATION SCORE, UNLESS STATED OTHERWISE

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TABLE I13 (OPEN FIELD OBSERVATIONS - DAY 0)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL FUNCTIONAL OBSERVATIONAL BATTERY DATA

OPEN FIELD OBSERVATIONS

DOSE GROUP: 1

DOSE LEVEL: 0 MG/KG SEX: MALES

TEST PERIOD: DAY 0

ANIMAL NUMBER	TIME TO 1ST STEP (seconds)	MOBILITY	GAIT	CONVULSIONS CLONIC	CONVULSIONS TONIC	TREMORS	GAIT SCORE	AROUSAL
59866	0.3	1	1	1	1	1	1	3
59867	0.3	1	1	1	1	1	1	3
59869	0.4	1	1	1	1	1	1	3
59870	0.3	1	1	1	1	1	1	3
59881	0.3	1	1	1	1	1	1	3
59884	0.2	1	1	1	1	1	1	3
59885	0.3	1	1	1	1	1	1	3
59891	0.3	1	1	1	1	1	1	3
59892	0.3	1	1	1	1	1	1	3
59901	0.4	1	1	1	1	1	1	3
59914	0.3	1	1	1	1	1	1	3
59915	0.2	1	1	1	1	1	1	3
MEAN	0.3							
S.D.	0.06							
N	12							

OBSERVATION SCORE, UNLESS STATED OTHERWISE

TABLE I13 (OPEN FIELD OBSERVATIONS - DAY 0)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL FUNCTIONAL OBSERVATIONAL BATTERY DATA

OPEN FIELD OBSERVATIONS

DOSE GROUP: 1

DOSE LEVEL: 0 MG/KG SEX: MALES

TEST PERIOD: DAY 0

ANIMAL NUMBER	BIZARRE/STEREO-TYPIC BEHAVIOR	REARING (counts)	BACKING (counts)	GROOMING (counts)	URINATION (counts)	DEFECATION (counts)
59866	1	3.0	0.0	0.0	1.0	0.0
59867	1	2.0	0.0	0.0	1.0	4.0
59869	1	1.0	0.0	0.0	3.0	3.0
59870	1	5.0	0.0	0.0	3.0	3.0
59881	1	8.0	0.0	0.0	0.0	0.0
59884	1	3.0	0.0	0.0	0.0	1.0
59885	1	0.0	0.0	0.0	1.0	3.0
59891	1	7.0	0.0	0.0	1.0	3.0
59892	1	2.0	0.0	0.0	0.0	0.0
59901	1	3.0	0.0	0.0	2.0	3.0
59914	1	4.0	0.0	0.0	1.0	3.0
59915	1	2.0	0.0	1.0	0.0	0.0
MEAN		3.3	0.0	0.1	1.1	1.9
S.D.		2.35	0.00	0.29	1.08	1.56
N		12	12	12	12	12

OBSERVATION SCORE, UNLESS STATED OTHERWISE

TABLE I13 (OPEN FIELD OBSERVATIONS - DAY 0)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL FUNCTIONAL OBSERVATIONAL BATTERY DATA

OPEN FIELD OBSERVATIONS

DOSE GROUP: 2
DOSE LEVEL: 200 MG/KG SEX: MALES
TEST PERIOD: DAY 0

ANIMAL NUMBER	TIME TO 1ST STEP (seconds)	MOBILITY	GAIT	CONVULSIONS CLONIC	CONVULSIONS TONIC	TREMORS	GAIT SCORE	AROUSAL
59865	0.3	1	1	1	1	1	1	3
59873	0.3	1	1	1	1	1	1	3
59875	0.2	1	1	1	1	1	1	3
59878	0.3	1	1	1	1	1	1	3
59879	0.4	1	1	1	1	1	1	3
59880	0.3	1	1	1	1	1	1	3
59882	0.3	1	1	1	1	1	1	3
59889	0.4	1	1	1	1	1	1	3
59893	0.3	1	1	1	1	1	1	3
59897	0.3	1	1	1	1	1	1	3
59911	0.3	1	1	1	1	1	1	3
59913	0.2	1	1	1	1	1	1	3
MEAN	0.3							
S.D.	0.06							
N	12							

OBSERVATION SCORE, UNLESS STATED OTHERWISE

TABLE I13 (OPEN FIELD OBSERVATIONS - DAY 0)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL FUNCTIONAL OBSERVATIONAL BATTERY DATA

OPEN FIELD OBSERVATIONS

DOSE GROUP: 2

DOSE LEVEL: 200 MG/KG SEX: MALES

TEST PERIOD: DAY 0

ANIMAL NUMBER	BIZARRE/STEREO-TYPIC BEHAVIOR	REARING (counts)	BACKING (counts)	GROOMING (counts)	URINATION (counts)	DEFECATION (counts)
59865	1	0.0	0.0	0.0	0.0	0.0
59873	1	2.0	0.0	0.0	0.0	0.0
59875	1	1.0	0.0	0.0	0.0	2.0
59878	1	1.0	0.0	0.0	1.0	0.0
59879	1	2.0	0.0	0.0	2.0	1.0
59880	1	0.0	0.0	0.0	2.0	0.0
59882	1	0.0	0.0	0.0	1.0	1.0
59889	1	5.0	0.0	0.0	1.0	0.0
59893	1	4.0	0.0	0.0	1.0	0.0
59897	1	1.0	0.0	0.0	0.0	0.0
59911	1	2.0	0.0	0.0	2.0	0.0
59913	1	6.0	0.0	0.0	0.0	0.0
MEAN		2.0	0.0	0.0	0.8	0.3
S.D.		2.00	0.00	0.00	0.83	0.65
N		12	12	12	12	12

OBSERVATION SCORE, UNLESS STATED OTHERWISE

TABLE I13 (OPEN FIELD OBSERVATIONS - DAY 0)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL FUNCTIONAL OBSERVATIONAL BATTERY DATA

OPEN FIELD OBSERVATIONS

DOSE GROUP: 3
DOSE LEVEL: 700 MG/KG SEX: MALES
TEST PERIOD: DAY 0

ANIMAL NUMBER	TIME TO 1ST STEP (seconds)	MOBILITY	GAIT	CONVULSIONS CLONIC	CONVULSIONS TONIC	TREMORS	GAIT SCORE	AROUSAL
59874	0.4	1	1	1	1	1	1	3
59894	0.3	1	1	1	1	1	1	3
59895	0.3	1	1	1	1	1	1	3
59896	0.2	1	1	1	1	1	1	3
59899	0.3	1	1	1	1	1	1	3
59902	0.3	1	1	1	1	1	1	3
59903	0.2	1	1	1	1	1	1	3
59904	0.4	1	1	1	1	1	1	3
59905	0.5	1	1	1	1	1	1	3
59909	0.2	1	1	1	1	1	1	3
59910	0.3	1	1	1	1	1	1	3
59916	0.4	1	1	1	1	1	1	3
MEAN	0.3							
S.D.	0.09							
N	12							

OBSERVATION SCORE, UNLESS STATED OTHERWISE

TABLE I13 (OPEN FIELD OBSERVATIONS - DAY 0)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL FUNCTIONAL OBSERVATIONAL BATTERY DATA

OPEN FIELD OBSERVATIONS

DOSE GROUP: 3

DOSE LEVEL: 700 MG/KG SEX: MALES

TEST PERIOD: DAY 0

ANIMAL NUMBER	BIZARRE/STEREO-TYPIC BEHAVIOR	REARING (counts)	BACKING (counts)	GROOMING (counts)	URINATION (counts)	DEFECATION (counts)
59874	1	0.0	0.0	0.0	2.0	2.0
59894	1	2.0	0.0	0.0	0.0	0.0
59895	1	0.0	0.0	0.0	0.0	0.0
59896	1	1.0	0.0	0.0	1.0	5.0
59899	1	3.0	0.0	0.0	4.0	1.0
59902	1	4.0	0.0	0.0	3.0	4.0
59903	1	7.0	0.0	0.0	1.0	0.0
59904	1	3.0	0.0	0.0	0.0	1.0
59905	1	2.0	0.0	0.0	0.0	0.0
59909	1	4.0	0.0	0.0	0.0	2.0
59910	1	3.0	0.0	0.0	3.0	2.0
59916	1	4.0	0.0	0.0	2.0	1.0
MEAN		2.8	0.0	0.0	1.3	1.5
S.D.		1.96	0.00	0.00	1.44	1.62
N		12	12	12	12	12

OBSERVATION SCORE, UNLESS STATED OTHERWISE

TABLE I13 (OPEN FIELD OBSERVATIONS - DAY 0)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL FUNCTIONAL OBSERVATIONAL BATTERY DATA

OPEN FIELD OBSERVATIONS

DOSE GROUP: 4

DOSE LEVEL: 2000 MG/KG SEX: MALES

TEST PERIOD: DAY 0

ANIMAL NUMBER	TIME TO 1ST STEP (seconds)	MOBILITY	GAIT	CONVULSIONS CLONIC	CONVULSIONS TONIC	TREMORS	GAIT SCORE	AROUSAL
59876	0.2	1	1	1	1	1	1	3
59883	0.2	1	1	1	1	1	1	3
59886	0.3	1	1	1	1	1	1	3
59887	0.3	1	1	1	1	1	1	3
59890	0.3	1	1	1	1	1	1	3
59898	0.2	1	1	1	1	1	1	3
59900	0.4	1	1	1	1	1	1	3
59906	0.4	1	1	1	1	1	1	3
59907	0.3	1	1	1	1	1	1	3
59908	0.3	1	1	1	1	1	1	3
59912	0.4	1	1	1	1	1	1	3
59917	0.2	1	1	1	1	1	1	3
MEAN	0.3							
S.D.	0.08							
N	12							

OBSERVATION SCORE, UNLESS STATED OTHERWISE

TABLE I13 (OPEN FIELD OBSERVATIONS - DAY 0)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL FUNCTIONAL OBSERVATIONAL BATTERY DATA

OPEN FIELD OBSERVATIONS

DOSE GROUP: 4

DOSE LEVEL: 2000 MG/KG SEX: MALES

TEST PERIOD: DAY 0

ANIMAL NUMBER	BIZARRE/STEREO-TYPIC BEHAVIOR	REARING (counts)	BACKING (counts)	GROOMING (counts)	URINATION (counts)	DEFECATION (counts)
59876	1	3.0	0.0	0.0	1.0	6.0
59883	1	3.0	0.0	0.0	1.0	2.0
59886	1	2.0	0.0	0.0	2.0	3.0
59887	1	4.0	0.0	1.0	0.0	0.0
59890	1	2.0	0.0	0.0	3.0	1.0
59898	1	2.0	0.0	0.0	0.0	0.0
59900	1	5.0	0.0	0.0	2.0	4.0
59906	1	2.0	0.0	0.0	3.0	3.0
59907	1	3.0	0.0	0.0	1.0	0.0
59908	1	1.0	0.0	0.0	2.0	0.0
59912	1	2.0	0.0	0.0	2.0	0.0
59917	1	7.0	0.0	0.0	3.0	0.0
MEAN		3.0	0.0	0.1	1.7	1.6
S.D.		1.65	0.00	0.29	1.07	2.02
N		12	12	12	12	12

OBSERVATION SCORE, UNLESS STATED OTHERWISE

OPEN FIELD OBSERVATIONS

DOSE GROUP: 1
DOSE LEVEL: 0 MG/KG SEX: FEMALES
TEST PERIOD: DAY 0

ANIMAL NUMBER	TIME TO 1ST STEP (seconds)	MOBILITY	GAIT	CONVULSIONS CLONIC	CONVULSIONS TONIC	TREMORS	GAIT SCORE	AROUSAL
59919	0.4	1	1	1	1	1	1	3
59920	0.5	1	1	1	1	1	1	3
59923	0.2	1	1	1	1	1	1	3
59924	0.3	1	1	1	1	1	1	3
59933	0.3	1	1	1	1	1	1	3
59939	0.3	1	1	1	1	1	1	3
59941	0.3	1	1	1	1	1	1	3
59942	0.2	1	1	1	1	1	1	3
59950	0.3	1	1	1	1	1	1	3
59956	0.3	1	1	1	1	1	1	3
59969	0.3	1	1	1	1	1	1	3
59970	0.2	1	1	1	1	1	1	3
MEAN	0.3							
S.D.	0.09							
N	12							

OBSERVATION SCORE, UNLESS STATED OTHERWISE

OPEN FIELD OBSERVATIONS

DOSE GROUP: 1
DOSE LEVEL: 0 MG/KG SEX: FEMALES
TEST PERIOD: DAY 0

ANIMAL NUMBER	BIZARRE/STEREO-TYPIC BEHAVIOR	REARING (counts)	BACKING (counts)	GROOMING (counts)	URINATION (counts)	DEFECATION (counts)
59919	1	4.0	0.0	0.0	2.0	0.0
59920	1	5.0	0.0	0.0	2.0	3.0
59923	1	3.0	0.0	0.0	0.0	0.0
59924	1	5.0	0.0	0.0	1.0	0.0
59933	1	0.0	0.0	0.0	1.0	2.0
59939	1	3.0	0.0	0.0	2.0	2.0
59941	1	7.0	0.0	0.0	0.0	0.0
59942	1	9.0	0.0	0.0	0.0	0.0
59950	1	2.0	0.0	0.0	0.0	2.0
59956	1	1.0	0.0	0.0	1.0	2.0
59969	1	6.0	0.0	0.0	0.0	0.0
59970	1	3.0	0.0	0.0	0.0	0.0
MEAN		4.0	0.0	0.0	0.8	0.9
S.D.		2.56	0.00	0.00	0.87	1.16
N		12	12	12	12	12

OBSERVATION SCORE, UNLESS STATED OTHERWISE

TABLE I13 (OPEN FIELD OBSERVATIONS - DAY 0)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL FUNCTIONAL OBSERVATIONAL BATTERY DATA

OPEN FIELD OBSERVATIONS

DOSE GROUP: 2
DOSE LEVEL: 200 MG/KG SEX: FEMALES
TEST PERIOD: DAY 0

ANIMAL NUMBER	TIME TO 1ST STEP (seconds)	MOBILITY	GAIT	CONVULSIONS CLONIC	CONVULSIONS TONIC	TREMORS	GAIT SCORE	AROUSAL
59922	0.3	1	1	1	1	1	1	3
59926	0.3	1	1	1	1	1	1	3
59927	0.2	1	1	1	1	1	1	3
59936	0.3	1	1	1	1	1	1	3
59937	0.2	1	1	1	1	1	1	3
59949	0.2	1	1	1	1	1	1	3
59952	0.3	1	1	1	1	1	1	3
59954	0.3	1	1	1	1	1	1	3
59958	0.2	1	1	1	1	1	1	3
59962	0.3	1	1	1	1	1	1	3
59967	0.3	1	1	1	1	1	1	3
59968	0.3	1	1	1	1	1	1	3
MEAN	0.3							
S.D.	0.05							
N	12							

OBSERVATION SCORE, UNLESS STATED OTHERWISE

OPEN FIELD OBSERVATIONS

DOSE GROUP: 2
DOSE LEVEL: 200 MG/KG SEX: FEMALES
TEST PERIOD: DAY 0

ANIMAL NUMBER	BIZARRE/STEREO-TYPIC BEHAVIOR	REARING (counts)	BACKING (counts)	GROOMING (counts)	URINATION (counts)	DEFECATION (counts)
59922	1	8.0	0.0	0.0	0.0	0.0
59926	1	4.0	0.0	0.0	1.0	2.0
59927	1	3.0	0.0	0.0	0.0	0.0
59936	1	6.0	0.0	0.0	2.0	0.0
59937	1	4.0	0.0	0.0	0.0	0.0
59949	1	9.0	0.0	0.0	0.0	3.0
59952	1	6.0	0.0	0.0	0.0	0.0
59954	1	4.0	0.0	0.0	2.0	0.0
59958	1	8.0	0.0	1.0	0.0	0.0
59962	1	3.0	0.0	0.0	0.0	0.0
59967	1	4.0	0.0	0.0	0.0	0.0
59968	1	1.0	0.0	0.0	1.0	4.0
MEAN		5.0	0.0	0.1	0.5	0.8
S.D.		2.41	0.00	0.29	0.80	1.42
N		12	12	12	12	12

OBSERVATION SCORE, UNLESS STATED OTHERWISE

OPEN FIELD OBSERVATIONS

DOSE GROUP: 3
DOSE LEVEL: 700 MG/KG SEX: FEMALES
TEST PERIOD: DAY 0

ANIMAL NUMBER	TIME TO 1ST STEP (seconds)	MOBILITY	GAIT	CONVULSIONS CLONIC	CONVULSIONS TONIC	TREMORS	GAIT SCORE	AROUSAL
59918	0.3	1	1	1	1	1	1	3
59925	0.3	1	1	1	1	1	1	3
59930	0.2	1	1	1	1	1	1	3
59931	0.3	1	1	1	1	1	1	3
59932	0.3	1	1	1	1	1	1	3
59935	0.3	1	1	1	1	1	1	3
59940	0.4	1	1	1	1	1	1	3
59944	0.4	1	1	1	1	1	1	3
59945	0.3	1	1	1	1	1	1	3
59948	0.3	1	1	1	1	1	1	3
59959	0.3	1	1	1	1	1	1	3
59963	0.4	1	1	1	1	1	1	3
MEAN	0.3							
S.D.	0.06							
N	12							

OBSERVATION SCORE, UNLESS STATED OTHERWISE

OPEN FIELD OBSERVATIONS

DOSE GROUP: 3
DOSE LEVEL: 700 MG/KG SEX: FEMALES
TEST PERIOD: DAY 0

ANIMAL NUMBER	BIZARRE/STEREO-TYPIC BEHAVIOR	REARING (counts)	BACKING (counts)	GROOMING (counts)	URINATION (counts)	DEFECATION (counts)
59918	1	8.0	0.0	2.0	0.0	0.0
59925	1	6.0	0.0	0.0	2.0	0.0
59930	1	2.0	0.0	0.0	0.0	0.0
59931	1	6.0	0.0	0.0	0.0	0.0
59932	1	4.0	0.0	0.0	0.0	0.0
59935	1	8.0	0.0	0.0	0.0	0.0
59940	1	2.0	0.0	1.0	1.0	0.0
59944	1	2.0	0.0	0.0	0.0	0.0
59945	1	1.0	0.0	0.0	1.0	5.0
59948	1	3.0	0.0	0.0	0.0	0.0
59959	1	5.0	0.0	0.0	0.0	0.0
59963	1	5.0	0.0	0.0	0.0	0.0
MEAN		4.3	0.0	0.3	0.3	0.4
S.D.		2.39	0.00	0.62	0.65	1.44
N		12	12	12	12	12

OBSERVATION SCORE, UNLESS STATED OTHERWISE

TABLE I13 (OPEN FIELD OBSERVATIONS - DAY 0)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL FUNCTIONAL OBSERVATIONAL BATTERY DATA

OPEN FIELD OBSERVATIONS

DOSE GROUP: 4

DOSE LEVEL: 2000 MG/KG SEX: FEMALES

TEST PERIOD: DAY 0

ANIMAL NUMBER	TIME TO 1ST STEP (seconds)	MOBILITY	GAIT	CONVULSIONS CLONIC	CONVULSIONS TONIC	TREMORS	GAIT SCORE	AROUSAL
59921	0.4	1	1	1	1	1	1	3
59928	0.3	1	1	1	1	1	1	3
59929	0.3	1	1	1	1	1	1	3
59934	0.2	1	1	1	1	1	1	3
59938	0.3	1	1	1	1	1	1	3
59943	0.4	1	1	1	1	1	1	3
59946	0.4	1	1	1	1	1	1	3
59947	0.4	1	1	1	1	1	1	3
59951	0.3	1	1	1	1	1	1	3
59955	0.3	1	1	1	1	1	1	3
59964	0.3	1	1	1	1	1	1	3
59966	0.2	1	1	1	1	1	1	3
MEAN	0.3							
S.D.	0.07							
N	12							

OBSERVATION SCORE, UNLESS STATED OTHERWISE

OPEN FIELD OBSERVATIONS

DOSE GROUP: 4
DOSE LEVEL: 2000 MG/KG SEX: FEMALES
TEST PERIOD: DAY 0

ANIMAL NUMBER	BIZARRE/STEREO-TYPIC BEHAVIOR	REARING (counts)	BACKING (counts)	GROOMING (counts)	URINATION (counts)	DEFECATION (counts)
59921	1	0.0	0.0	0.0	1.0	4.0
59928	1	7.0	0.0	0.0	0.0	0.0
59929	1	1.0	0.0	0.0	0.0	0.0
59934	1	2.0	0.0	0.0	0.0	0.0
59938	1	3.0	0.0	0.0	0.0	0.0
59943	1	4.0	0.0	0.0	3.0	0.0
59946	1	3.0	0.0	0.0	3.0	0.0
59947	1	3.0	0.0	0.0	0.0	0.0
59951	1	3.0	0.0	0.0	0.0	0.0
59955	1	1.0	0.0	0.0	0.0	0.0
59964	1	0.0	0.0	0.0	2.0	6.0
59966	1	2.0	0.0	0.0	0.0	0.0
MEAN		2.4	0.0	0.0	0.8	0.8
S.D.		1.93	0.00	0.00	1.22	1.99
N		12	12	12	12	12

OBSERVATION SCORE, UNLESS STATED OTHERWISE

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TABLE I14 (OPEN FIELD OBSERVATIONS - DAY 7)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL FUNCTIONAL OBSERVATIONAL BATTERY DATA

OPEN FIELD OBSERVATIONS

DOSE GROUP: 1

DOSE LEVEL: 0 MG/KG SEX: MALES

TEST PERIOD: DAY 7

ANIMAL NUMBER	TIME TO 1ST STEP (seconds)	MOBILITY	GAIT	CONVULSIONS CLONIC	CONVULSIONS TONIC	TREMORS	GAIT SCORE	AROUSAL
59866	0.5	1	1	1	1	1	1	3
59867	0.4	1	1	1	1	1	1	3
59869	0.5	1	1	1	1	1	1	3
59870	0.4	1	1	1	1	1	1	3
59881	0.4	1	1	1	1	1	1	3
59884	0.3	1	1	1	1	1	1	3
59885	0.4	1	1	1	1	1	1	3
59891	0.4	1	1	1	1	1	1	3
59892	0.5	1	1	1	1	1	1	3
59901	0.6	1	1	1	1	1	1	3
59914	0.5	1	1	1	1	1	1	3
59915	0.4	1	1	1	1	1	1	3
MEAN	0.4							
S.D.	0.08							
N	12							

OBSERVATION SCORE, UNLESS STATED OTHERWISE

TABLE I14 (OPEN FIELD OBSERVATIONS - DAY 7)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL FUNCTIONAL OBSERVATIONAL BATTERY DATA

OPEN FIELD OBSERVATIONS

DOSE GROUP: 1
DOSE LEVEL: 0 MG/KG SEX: MALES
TEST PERIOD: DAY 7

ANIMAL NUMBER	BIZARRE/STEREO-TYPIC BEHAVIOR	REARING (counts)	BACKING (counts)	GROOMING (counts)	URINATION (counts)	DEFECATION (counts)
59866	1	3.0	0.0	0.0	0.0	0.0
59867	1	3.0	0.0	0.0	1.0	1.0
59869	1	1.0	0.0	0.0	1.0	1.0
59870	1	2.0	0.0	0.0	1.0	1.0
59881	1	11.0	0.0	0.0	0.0	1.0
59884	1	5.0	0.0	0.0	1.0	0.0
59885	1	1.0	0.0	0.0	1.0	0.0
59891	1	3.0	0.0	0.0	1.0	2.0
59892	1	6.0	0.0	0.0	0.0	0.0
59901	1	0.0	0.0	0.0	0.0	1.0
59914	1	1.0	0.0	0.0	0.0	0.0
59915	1	2.0	0.0	0.0	0.0	0.0
MEAN		3.2	0.0	0.0	0.5	0.6
S.D.		3.01	0.00	0.00	0.52	0.67
N		12	12	12	12	12

OBSERVATION SCORE, UNLESS STATED OTHERWISE

TABLE I14 (OPEN FIELD OBSERVATIONS - DAY 7)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL FUNCTIONAL OBSERVATIONAL BATTERY DATA

OPEN FIELD OBSERVATIONS

DOSE GROUP: 2
DOSE LEVEL: 200 MG/KG SEX: MALES
TEST PERIOD: DAY 7

ANIMAL NUMBER	TIME TO 1ST STEP (seconds)	MOBILITY	GAIT	CONVULSIONS CLONIC	CONVULSIONS TONIC	TREMORS	GAIT SCORE	AROUSAL
59865	0.4	1	1	1	1	1	1	3
59873	0.3	1	1	1	1	1	1	3
59875	0.3	1	1	1	1	1	1	3
59878	2.0	1	1	1	1	1	1	3
59879	0.3	1	1	1	1	1	1	3
59880	0.7	1	1	1	1	1	1	3
59882	0.4	1	1	1	1	1	1	3
59889	0.6	1	1	1	1	1	1	3
59893	0.4	1	1	1	1	1	1	3
59897	0.4	1	1	1	1	1	1	3
59911	0.4	1	1	1	1	1	1	3
59913	0.6	1	1	1	1	1	1	3
MEAN	0.6							
S.D.	0.47							
N	12							

OBSERVATION SCORE, UNLESS STATED OTHERWISE

TABLE I14 (OPEN FIELD OBSERVATIONS - DAY 7)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL FUNCTIONAL OBSERVATIONAL BATTERY DATA

OPEN FIELD OBSERVATIONS

DOSE GROUP: 2

DOSE LEVEL: 200 MG/KG SEX: MALES

TEST PERIOD: DAY 7

ANIMAL NUMBER	BIZARRE/STEREO-TYPIC BEHAVIOR	REARING (counts)	BACKING (counts)	GROOMING (counts)	URINATION (counts)	DEFECATION (counts)
59865	1	7.0	0.0	0.0	1.0	0.0
59873	1	2.0	0.0	0.0	0.0	2.0
59875	1	2.0	0.0	0.0	1.0	2.0
59878	1	2.0	0.0	0.0	0.0	0.0
59879	1	0.0	0.0	0.0	1.0	1.0
59880	1	0.0	0.0	0.0	0.0	0.0
59882	1	0.0	0.0	0.0	2.0	1.0
59889	1	8.0	0.0	1.0	0.0	0.0
59893	1	0.0	0.0	0.0	0.0	1.0
59897	1	2.0	0.0	0.0	0.0	0.0
59911	1	1.0	0.0	0.0	1.0	1.0
59913	1	9.0	0.0	1.0	0.0	0.0
MEAN		2.8	0.0	0.2	0.5	0.7
S.D.		3.31	0.00	0.39	0.67	0.78
N		12	12	12	12	12

OBSERVATION SCORE, UNLESS STATED OTHERWISE

TABLE I14 (OPEN FIELD OBSERVATIONS - DAY 7)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL FUNCTIONAL OBSERVATIONAL BATTERY DATA

OPEN FIELD OBSERVATIONS

DOSE GROUP: 3

DOSE LEVEL: 700 MG/KG SEX: MALES

TEST PERIOD: DAY 7

ANIMAL NUMBER	TIME TO 1ST STEP (seconds)	MOBILITY	GAIT	CONVULSIONS CLONIC	CONVULSIONS TONIC	TREMORS	GAIT SCORE	AROUSAL
59874	0.5	1	1	1	1	1	1	3
59894	0.4	1	1	1	1	1	1	3
59895	0.5	1	1	1	1	1	1	3
59896	0.3	1	1	1	1	1	1	3
59899	0.7	1	1	1	1	1	1	3
59902	0.5	1	1	1	1	1	1	3
59903	0.3	1	1	1	1	1	1	3
59904	0.6	1	1	1	1	1	1	3
59905	0.7	1	1	1	1	1	1	3
59909	0.3	1	1	1	1	1	1	3
59910	0.6	1	1	1	1	1	1	3
59916	0.5	1	1	1	1	1	1	3
MEAN	0.5							
S.D.	0.14							
N	12							

OBSERVATION SCORE, UNLESS STATED OTHERWISE

TABLE I14 (OPEN FIELD OBSERVATIONS - DAY 7)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL FUNCTIONAL OBSERVATIONAL BATTERY DATA

OPEN FIELD OBSERVATIONS

DOSE GROUP: 3

DOSE LEVEL: 700 MG/KG SEX: MALES

TEST PERIOD: DAY 7

ANIMAL NUMBER	BIZARRE/STEREO-TYPIC BEHAVIOR	REARING (counts)	BACKING (counts)	GROOMING (counts)	URINATION (counts)	DEFECATION (counts)
59874	1	1.0	0.0	0.0	0.0	4.0
59894	1	6.0	0.0	0.0	0.0	0.0
59895	1	2.0	0.0	0.0	0.0	1.0
59896	1	3.0	0.0	0.0	0.0	2.0
59899	1	0.0	0.0	0.0	1.0	3.0
59902	1	1.0	0.0	0.0	0.0	2.0
59903	1	1.0	0.0	0.0	1.0	2.0
59904	1	7.0	0.0	0.0	0.0	4.0
59905	1	1.0	0.0	0.0	0.0	0.0
59909	1	2.0	0.0	0.0	0.0	0.0
59910	1	0.0	0.0	0.0	1.0	4.0
59916	1	7.0	0.0	0.0	0.0	0.0
MEAN		2.6	0.0	0.0	0.3	1.8
S.D.		2.61	0.00	0.00	0.45	1.64
N		12	12	12	12	12

OBSERVATION SCORE, UNLESS STATED OTHERWISE

TABLE I14 (OPEN FIELD OBSERVATIONS - DAY 7)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL FUNCTIONAL OBSERVATIONAL BATTERY DATA

OPEN FIELD OBSERVATIONS

DOSE GROUP: 4

DOSE LEVEL: 2000 MG/KG SEX: MALES

TEST PERIOD: DAY 7

ANIMAL NUMBER	TIME TO 1ST STEP (seconds)	MOBILITY	GAIT	CONVULSIONS CLONIC	CONVULSIONS TONIC	TREMORS	GAIT SCORE	AROUSAL
59876	0.3	1	1	1	1	1	1	3
59883	0.3	1	1	1	1	1	1	3
59886	0.6	1	1	1	1	1	1	3
59887	0.5	1	1	1	1	1	1	3
59890	0.5	1	1	1	1	1	1	3
59898	0.6	1	1	1	1	1	1	3
59900	0.4	1	1	1	1	1	1	3
59906	0.4	1	1	1	1	1	1	3
59907	0.6	1	1	1	1	1	1	3
59908	0.5	1	1	1	1	1	1	3
59912	0.4	1	1	1	1	1	1	3
59917	0.4	1	1	1	1	1	1	3
MEAN	0.5							
S.D.	0.11							
N	12							

OBSERVATION SCORE, UNLESS STATED OTHERWISE

TABLE I14 (OPEN FIELD OBSERVATIONS - DAY 7)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL FUNCTIONAL OBSERVATIONAL BATTERY DATA

OPEN FIELD OBSERVATIONS

DOSE GROUP: 4

DOSE LEVEL: 2000 MG/KG SEX: MALES

TEST PERIOD: DAY 7

ANIMAL NUMBER	BIZARRE/STEREO-TYPIC BEHAVIOR	REARING (counts)	BACKING (counts)	GROOMING (counts)	URINATION (counts)	DEFECATION (counts)
59876	1	0.0	0.0	1.0	1.0	4.0
59883	1	5.0	0.0	0.0	1.0	3.0
59886	1	0.0	0.0	0.0	1.0	2.0
59887	1	6.0	0.0	0.0	0.0	0.0
59890	1	2.0	0.0	0.0	0.0	1.0
59898	1	5.0	0.0	0.0	0.0	0.0
59900	1	1.0	0.0	0.0	1.0	1.0
59906	1	4.0	0.0	0.0	0.0	0.0
59907	1	2.0	0.0	0.0	1.0	4.0
59908	1	5.0	0.0	0.0	0.0	2.0
59912	1	4.0	0.0	1.0	2.0	2.0
59917	1	2.0	0.0	0.0	0.0	0.0
MEAN		3.0	0.0	0.2	0.6	1.6
S.D.		2.09	0.00	0.39	0.67	1.51
N		12	12	12	12	12

OBSERVATION SCORE, UNLESS STATED OTHERWISE

TABLE I14 (OPEN FIELD OBSERVATIONS - DAY 7)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS PAGE 9

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL FUNCTIONAL OBSERVATIONAL BATTERY DATA

OPEN FIELD OBSERVATIONS

DOSE GROUP: 1

DOSE LEVEL: 0 MG/KG SEX: FEMALES

TEST PERIOD: DAY 7

ANIMAL NUMBER	TIME TO 1ST STEP (seconds)	MOBILITY	GAIT	CONVULSIONS CLONIC	CONVULSIONS TONIC	TREMORS	GAIT SCORE	AROUSAL
59919	0.4	1	1	1	1	1	1	3
59920	0.4	1	1	1	1	1	1	3
59923	0.3	1	1	1	1	1	1	3
59924	0.6	1	1	1	1	1	1	3
59933	0.4	1	1	1	1	1	1	3
59939	0.4	1	1	1	1	1	1	3
59941	0.5	1	1	1	1	1	1	3
59942	0.7	1	1	1	1	1	1	3
59950	0.5	1	1	1	1	1	1	3
59956	0.4	1	1	1	1	1	1	3
59969	0.5	1	1	1	1	1	1	3
59970	0.3	1	1	1	1	1	1	3
MEAN	0.5							
S.D.	0.12							
N	12							

OBSERVATION SCORE, UNLESS STATED OTHERWISE

OPEN FIELD OBSERVATIONS

DOSE GROUP: 1
DOSE LEVEL: 0 MG/KG SEX: FEMALES
TEST PERIOD: DAY 7

ANIMAL NUMBER	BIZARRE/STEREO-TYPIC BEHAVIOR	REARING (counts)	BACKING (counts)	GROOMING (counts)	URINATION (counts)	DEFECATION (counts)
59919	1	9.0	0.0	0.0	0.0	0.0
59920	1	7.0	0.0	0.0	0.0	0.0
59923	1	11.0	0.0	1.0	0.0	0.0
59924	1	10.0	0.0	0.0	1.0	0.0
59933	1	0.0	0.0	0.0	1.0	6.0
59939	1	0.0	0.0	0.0	1.0	1.0
59941	1	3.0	0.0	0.0	0.0	0.0
59942	1	13.0	0.0	0.0	1.0	0.0
59950	1	1.0	0.0	0.0	1.0	0.0
59956	1	1.0	0.0	0.0	1.0	1.0
59969	1	11.0	0.0	0.0	0.0	0.0
59970	1	5.0	0.0	1.0	0.0	0.0
MEAN		5.9	0.0	0.2	0.5	0.7
S.D.		4.83	0.00	0.39	0.52	1.72
N		12	12	12	12	12

OBSERVATION SCORE, UNLESS STATED OTHERWISE

OPEN FIELD OBSERVATIONS

DOSE GROUP: 2
DOSE LEVEL: 200 MG/KG SEX: FEMALES
TEST PERIOD: DAY 7

ANIMAL NUMBER	TIME TO 1ST STEP (seconds)	MOBILITY	GAIT	CONVULSIONS CLONIC	CONVULSIONS TONIC	TREMORS	GAIT SCORE	AROUSAL
59922	0.4	1	1	1	1	1	1	3
59926	0.4	1	1	1	1	1	1	3
59927	0.3	1	1	1	1	1	1	3
59936	0.5	1	1	1	1	1	1	3
59937	0.5	1	1	1	1	1	1	3
59949	0.3	1	1	1	1	1	1	3
59952	0.5	1	1	1	1	1	1	3
59954	0.4	1	1	1	1	1	1	3
59958	0.5	1	1	1	1	1	1	3
59962	0.5	1	1	1	1	1	1	3
59967	0.5	1	1	1	1	1	1	3
59968	0.5	1	1	1	1	1	1	3
MEAN	0.4							
S.D.	0.08							
N	12							

OBSERVATION SCORE, UNLESS STATED OTHERWISE

OPEN FIELD OBSERVATIONS

DOSE GROUP: 2
DOSE LEVEL: 200 MG/KG SEX: FEMALES
TEST PERIOD: DAY 7

ANIMAL NUMBER	BIZARRE/STEREO-TYPIC BEHAVIOR	REARING (counts)	BACKING (counts)	GROOMING (counts)	URINATION (counts)	DEFECATION (counts)
59922	1	4.0	0.0	0.0	0.0	0.0
59926	1	3.0	0.0	0.0	0.0	0.0
59927	1	1.0	0.0	0.0	0.0	0.0
59936	1	9.0	0.0	0.0	0.0	0.0
59937	1	5.0	0.0	1.0	0.0	0.0
59949	1	9.0	0.0	0.0	0.0	0.0
59952	1	4.0	0.0	0.0	0.0	0.0
59954	1	2.0	0.0	0.0	1.0	1.0
59958	1	0.0	0.0	0.0	0.0	0.0
59962	1	4.0	0.0	0.0	0.0	0.0
59967	1	9.0	0.0	0.0	0.0	0.0
59968	1	0.0	0.0	0.0	0.0	1.0
MEAN		4.2	0.0	0.1	0.1	0.2
S.D.		3.33	0.00	0.29	0.29	0.39
N		12	12	12	12	12

OBSERVATION SCORE, UNLESS STATED OTHERWISE

OPEN FIELD OBSERVATIONS

DOSE GROUP: 3
DOSE LEVEL: 700 MG/KG SEX: FEMALES
TEST PERIOD: DAY 7

ANIMAL NUMBER	TIME TO 1ST STEP (seconds)	MOBILITY	GAIT	CONVULSIONS CLONIC	CONVULSIONS TONIC	TREMORS	GAIT SCORE	AROUSAL
59918	0.4	1	1	1	1	1	1	3
59925	0.7	1	1	1	1	1	1	3
59930	0.5	1	1	1	1	1	1	3
59931	0.6	1	1	1	1	1	1	3
59932	0.5	1	1	1	1	1	1	3
59935	0.3	1	1	1	1	1	1	3
59940	0.5	1	1	1	1	1	1	3
59944	0.4	1	1	1	1	1	1	3
59945	0.6	1	1	1	1	1	1	3
59948	0.5	1	1	1	1	1	1	3
59959	0.8	1	1	1	1	1	1	3
59963	0.4	1	1	1	1	1	1	3
MEAN	0.5							
S.D.	0.14							
N	12							

OBSERVATION SCORE, UNLESS STATED OTHERWISE

OPEN FIELD OBSERVATIONS

DOSE GROUP: 3
DOSE LEVEL: 700 MG/KG SEX: FEMALES
TEST PERIOD: DAY 7

ANIMAL NUMBER	BIZARRE/STEREO-TYPIC BEHAVIOR	REARING (counts)	BACKING (counts)	GROOMING (counts)	URINATION (counts)	DEFECATION (counts)
59918	1	9.0	0.0	0.0	0.0	0.0
59925	1	1.0	0.0	0.0	0.0	2.0
59930	1	9.0	0.0	0.0	0.0	0.0
59931	1	6.0	0.0	0.0	1.0	0.0
59932	1	6.0	0.0	0.0	0.0	0.0
59935	1	10.0	0.0	0.0	0.0	0.0
59940	1	2.0	0.0	0.0	1.0	1.0
59944	1	4.0	0.0	0.0	0.0	0.0
59945	1	1.0	0.0	0.0	0.0	4.0
59948	1	4.0	0.0	0.0	0.0	0.0
59959	1	6.0	0.0	0.0	0.0	0.0
59963	1	9.0	0.0	0.0	0.0	0.0
MEAN		5.6	0.0	0.0	0.2	0.6
S.D.		3.23	0.00	0.00	0.39	1.24
N		12	12	12	12	12

OBSERVATION SCORE, UNLESS STATED OTHERWISE

TABLE I14 (OPEN FIELD OBSERVATIONS - DAY 7)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL FUNCTIONAL OBSERVATIONAL BATTERY DATA

OPEN FIELD OBSERVATIONS

DOSE GROUP: 4

DOSE LEVEL: 2000 MG/KG SEX: FEMALES

TEST PERIOD: DAY 7

ANIMAL NUMBER	TIME TO 1ST STEP (seconds)	MOBILITY	GAIT	CONVULSIONS CLONIC	CONVULSIONS TONIC	TREMORS	GAIT SCORE	AROUSAL
59921	0.6	1	1	1	1	1	1	3
59928	0.4	1	1	1	1	1	1	3
59929	0.5	1	1	1	1	1	1	3
59934	0.2	1	1	1	1	1	1	3
59938	0.4	1	1	1	1	1	1	3
59943	0.7	1	1	1	1	1	1	3
59946	0.3	1	1	1	1	1	1	3
59947	0.7	1	1	1	1	1	1	3
59951	0.4	1	1	1	1	1	1	3
59955	0.4	1	1	1	1	1	1	3
59964	0.3	1	1	1	1	1	1	3
59966	1.3	1	1	1	1	1	1	3
MEAN	0.5							
S.D.	0.29							
N	12							

OBSERVATION SCORE, UNLESS STATED OTHERWISE

OPEN FIELD OBSERVATIONS

DOSE GROUP: 4
DOSE LEVEL: 2000 MG/KG SEX: FEMALES
TEST PERIOD: DAY 7

ANIMAL NUMBER	BIZARRE/STEREO-TYPIC BEHAVIOR	REARING (counts)	BACKING (counts)	GROOMING (counts)	URINATION (counts)	DEFECATION (counts)
59921	1	0.0	0.0	0.0	3.0	3.0
59928	1	7.0	0.0	0.0	0.0	0.0
59929	1	3.0	0.0	0.0	0.0	0.0
59934	1	8.0	0.0	0.0	0.0	0.0
59938	1	1.0	0.0	0.0	1.0	0.0
59943	1	12.0	0.0	1.0	1.0	0.0
59946	1	2.0	0.0	0.0	0.0	0.0
59947	1	0.0	0.0	0.0	0.0	0.0
59951	1	2.0	0.0	0.0	0.0	0.0
59955	1	0.0	0.0	0.0	0.0	0.0
59964	1	6.0	0.0	0.0	0.0	0.0
59966	1	9.0	0.0	0.0	0.0	0.0
MEAN		4.2	0.0	0.1	0.4	0.3
S.D.		4.09	0.00	0.29	0.90	0.87
N		12	12	12	12	12

OBSERVATION SCORE, UNLESS STATED OTHERWISE

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TABLE I15 (OPEN FIELD OBSERVATIONS - DAY 14)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL FUNCTIONAL OBSERVATIONAL BATTERY DATA

OPEN FIELD OBSERVATIONS

DOSE GROUP: 1

DOSE LEVEL: 0 MG/KG SEX: MALES

TEST PERIOD: DAY 14

ANIMAL NUMBER	TIME TO 1ST STEP (seconds)	MOBILITY	GAIT	CONVULSIONS CLONIC	CONVULSIONS TONIC	TREMORS	GAIT SCORE	AROUSAL
59866	0.4	1	1	1	1	1	1	3
59867	0.4	1	1	1	1	1	1	3
59869	0.3	1	1	1	1	1	1	3
59870	0.3	1	1	1	1	1	1	3
59881	0.4	1	1	1	1	1	1	3
59884	0.3	1	1	1	1	1	1	3
59885	0.3	1	1	1	1	1	1	3
59891	0.4	1	1	1	1	1	1	3
59892	0.5	1	1	1	1	1	1	3
59901	0.3	1	1	1	1	1	1	3
59914	0.3	1	1	1	1	1	1	3
59915	0.4	1	1	1	1	1	1	3
MEAN	0.4							
S.D.	0.07							
N	12							

OBSERVATION SCORE, UNLESS STATED OTHERWISE

TABLE I15 (OPEN FIELD OBSERVATIONS - DAY 14)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL FUNCTIONAL OBSERVATIONAL BATTERY DATA

OPEN FIELD OBSERVATIONS

DOSE GROUP: 1

DOSE LEVEL: 0 MG/KG SEX: MALES

TEST PERIOD: DAY 14

ANIMAL NUMBER	BIZARRE/STEREO-TYPIC BEHAVIOR	REARING (counts)	BACKING (counts)	GROOMING (counts)	URINATION (counts)	DEFECATION (counts)
59866	1	4.0	0.0	0.0	0.0	0.0
59867	1	5.0	0.0	0.0	0.0	0.0
59869	1	1.0	0.0	0.0	0.0	2.0
59870	1	1.0	0.0	0.0	1.0	1.0
59881	1	10.0	0.0	0.0	0.0	0.0
59884	1	5.0	0.0	0.0	0.0	0.0
59885	1	2.0	0.0	0.0	0.0	0.0
59891	1	4.0	0.0	0.0	2.0	1.0
59892	1	12.0	0.0	1.0	0.0	0.0
59901	1	3.0	0.0	0.0	0.0	0.0
59914	1	2.0	0.0	0.0	0.0	0.0
59915	1	5.0	0.0	0.0	0.0	0.0
MEAN		4.5	0.0	0.1	0.3	0.3
S.D.		3.40	0.00	0.29	0.62	0.65
N		12	12	12	12	12

OBSERVATION SCORE, UNLESS STATED OTHERWISE

TABLE I15 (OPEN FIELD OBSERVATIONS - DAY 14)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL FUNCTIONAL OBSERVATIONAL BATTERY DATA

OPEN FIELD OBSERVATIONS

DOSE GROUP: 2
DOSE LEVEL: 200 MG/KG SEX: MALES
TEST PERIOD: DAY 14

ANIMAL NUMBER	TIME TO 1ST STEP (seconds)	MOBILITY	GAIT	CONVULSIONS CLONIC	CONVULSIONS TONIC	TREMORS	GAIT SCORE	AROUSAL
59865	0.4	1	1	1	1	1	1	3
59873	0.4	1	1	1	1	1	1	3
59875	0.3	1	1	1	1	1	1	3
59878	0.4	1	1	1	1	1	1	3
59879	0.3	1	1	1	1	1	1	3
59880	0.2	1	1	1	1	1	1	3
59882	0.3	1	1	1	1	1	1	3
59889	0.3	1	1	1	1	1	1	3
59893	0.4	1	1	1	1	1	1	3
59897	0.4	1	1	1	1	1	1	3
59911	0.3	1	1	1	1	1	1	3
59913	0.3	1	1	1	1	1	1	3
MEAN	0.3							
S.D.	0.07							
N	12							

OBSERVATION SCORE, UNLESS STATED OTHERWISE

TABLE I15 (OPEN FIELD OBSERVATIONS - DAY 14)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL FUNCTIONAL OBSERVATIONAL BATTERY DATA

OPEN FIELD OBSERVATIONS

DOSE GROUP: 2

DOSE LEVEL: 200 MG/KG SEX: MALES

TEST PERIOD: DAY 14

ANIMAL NUMBER	BIZARRE/STEREO-TYPIC BEHAVIOR	REARING (counts)	BACKING (counts)	GROOMING (counts)	URINATION (counts)	DEFECATION (counts)
59865	1	11.0	0.0	0.0	1.0	0.0
59873	1	2.0	0.0	0.0	0.0	0.0
59875	1	5.0	5.0	5.0	0.0	0.0
59878	1	6.0	0.0	0.0	0.0	0.0
59879	1	5.0	0.0	0.0	1.0	1.0
59880	1	1.0	0.0	0.0	1.0	0.0
59882	1	0.0	0.0	0.0	2.0	3.0
59889	1	7.0	0.0	0.0	2.0	23.0
59893	1	0.0	0.0	0.0	1.0	2.0
59897	1	2.0	0.0	0.0	0.0	1.0
59911	1	3.0	0.0	0.0	0.0	0.0
59913	1	12.0	0.0	0.0	0.0	0.0
MEAN		4.5	0.4	0.4	0.7	2.5
S.D.		3.99	1.44	1.44	0.78	6.53
N		12	12	12	12	12

OBSERVATION SCORE, UNLESS STATED OTHERWISE

TABLE I15 (OPEN FIELD OBSERVATIONS - DAY 14)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL FUNCTIONAL OBSERVATIONAL BATTERY DATA

OPEN FIELD OBSERVATIONS

DOSE GROUP: 3

DOSE LEVEL: 700 MG/KG SEX: MALES

TEST PERIOD: DAY 14

ANIMAL NUMBER	TIME TO 1ST STEP (seconds)	MOBILITY	GAIT	CONVULSIONS CLONIC	CONVULSIONS TONIC	TREMORS	GAIT SCORE	AROUSAL
59874	0.3	1	1	1	1	1	1	3
59894	0.4	1	1	1	1	1	1	3
59895	0.3	1	1	1	1	1	1	3
59896	0.3	1	1	1	1	1	1	3
59899	0.3	1	1	1	1	1	1	3
59902	0.3	1	1	1	1	1	1	3
59903	0.3	1	1	1	1	1	1	3
59904	0.4	1	1	1	1	1	1	3
59905	0.3	1	1	1	1	1	3	3
59909	0.3	1	1	1	1	1	1	3
59910	0.5	1	1	1	1	1	1	3
59916	0.3	1	1	1	1	1	1	3
MEAN	0.3							
S.D.	0.07							
N	12							

OBSERVATION SCORE, UNLESS STATED OTHERWISE

TABLE I15 (OPEN FIELD OBSERVATIONS - DAY 14)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL FUNCTIONAL OBSERVATIONAL BATTERY DATA

OPEN FIELD OBSERVATIONS

DOSE GROUP: 3

DOSE LEVEL: 700 MG/KG SEX: MALES

TEST PERIOD: DAY 14

ANIMAL NUMBER	BIZARRE/STEREO-TYPIC BEHAVIOR	REARING (counts)	BACKING (counts)	GROOMING (counts)	URINATION (counts)	DEFECATION (counts)
59874	1	6.0	0.0	0.0	0.0	0.0
59894	1	7.0	0.0	0.0	0.0	0.0
59895	1	1.0	0.0	0.0	1.0	2.0
59896	1	4.0	0.0	0.0	0.0	0.0
59899	1	0.0	0.0	0.0	2.0	2.0
59902	1	0.0	0.0	0.0	1.0	3.0
59903	1	5.0	0.0	0.0	0.0	0.0
59904	1	1.0	0.0	0.0	1.0	0.0
59905	1	5.0	0.0	0.0	1.0	0.0
59909	1	3.0	0.0	0.0	0.0	0.0
59910	1	1.0	0.0	0.0	1.0	0.0
59916	1	5.0	0.0	0.0	0.0	0.0
MEAN		3.2	0.0	0.0	0.6	0.6
S.D.		2.48	0.00	0.00	0.67	1.08
N		12	12	12	12	12

OBSERVATION SCORE, UNLESS STATED OTHERWISE

TABLE I15 (OPEN FIELD OBSERVATIONS - DAY 14)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL FUNCTIONAL OBSERVATIONAL BATTERY DATA

OPEN FIELD OBSERVATIONS

DOSE GROUP: 4
DOSE LEVEL: 2000 MG/KG SEX: MALES
TEST PERIOD: DAY 14

ANIMAL NUMBER	TIME TO 1ST STEP (seconds)	MOBILITY	GAIT	CONVULSIONS CLONIC	CONVULSIONS TONIC	TREMORS	GAIT SCORE	AROUSAL
59876	0.3	1	1	1	1	1	1	3
59883	0.3	1	1	1	1	1	1	3
59886	0.8	1	1	1	1	1	1	3
59887	0.3	1	1	1	1	1	1	3
59890	0.3	1	1	1	1	1	1	3
59898	0.3	1	1	1	1	1	1	3
59900	0.4	1	1	1	1	1	1	3
59906	0.3	1	1	1	1	1	1	3
59907	0.3	1	1	1	1	1	1	3
59908	0.3	1	1	1	1	1	1	3
59912	0.3	1	1	1	1	1	1	3
59917	0.3	1	1	1	1	1	1	3
MEAN	0.4							
S.D.	0.14							
N	12							

OBSERVATION SCORE, UNLESS STATED OTHERWISE

OPEN FIELD OBSERVATIONS

DOSE GROUP: 4
DOSE LEVEL: 2000 MG/KG SEX: MALES
TEST PERIOD: DAY 14

ANIMAL NUMBER	BIZARRE/STEREO-TYPIC BEHAVIOR	REARING (counts)	BACKING (counts)	GROOMING (counts)	URINATION (counts)	DEFECATION (counts)
59876	1	1.0	0.0	0.0	0.0	0.0
59883	1	1.0	0.0	0.0	0.0	1.0
59886	1	4.0	0.0	0.0	1.0	0.0
59887	1	9.0	0.0	0.0	0.0	0.0
59890	1	5.0	0.0	0.0	0.0	0.0
59898	1	6.0	0.0	0.0	0.0	0.0
59900	1	4.0	0.0	0.0	1.0	1.0
59906	1	4.0	0.0	0.0	1.0	1.0
59907	1	2.0	0.0	0.0	1.0	1.0
59908	1	5.0	0.0	0.0	0.0	0.0
59912	1	3.0	0.0	0.0	1.0	0.0
59917	1	7.0	0.0	0.0	0.0	0.0
MEAN		4.3	0.0	0.0	0.4	0.3
S.D.		2.38	0.00	0.00	0.51	0.49
N		12	12	12	12	12

OBSERVATION SCORE, UNLESS STATED OTHERWISE

OPEN FIELD OBSERVATIONS

DOSE GROUP: 1
DOSE LEVEL: 0 MG/KG SEX: FEMALES
TEST PERIOD: DAY 14

ANIMAL NUMBER	TIME TO 1ST STEP (seconds)	MOBILITY	GAIT	CONVULSIONS CLONIC	CONVULSIONS TONIC	TREMORS	GAIT SCORE	AROUSAL
59919	0.3	1	1	1	1	1	1	3
59920	0.3	1	1	1	1	1	1	3
59923	0.3	1	1	1	1	1	1	3
59924	0.4	1	1	1	1	1	1	3
59933	0.3	1	1	1	1	1	1	3
59939	0.3	1	1	1	1	1	1	3
59941	0.3	1	1	1	1	1	1	3
59942	0.4	1	1	1	1	1	1	3
59950	0.2	1	1	1	1	1	1	3
59956	0.3	1	1	1	1	1	1	3
59969	0.3	1	1	1	1	1	1	3
59970	0.3	1	1	1	1	1	1	3
MEAN	0.3							
S.D.	0.05							
N	12							

OBSERVATION SCORE, UNLESS STATED OTHERWISE

OPEN FIELD OBSERVATIONS

DOSE GROUP: 1
DOSE LEVEL: 0 MG/KG SEX: FEMALES
TEST PERIOD: DAY 14

ANIMAL NUMBER	BIZARRE/STEREO-TYPIC BEHAVIOR	REARING (counts)	BACKING (counts)	GROOMING (counts)	URINATION (counts)	DEFECATION (counts)
59919	1	13.0	0.0	0.0	0.0	0.0
59920	1	10.0	0.0	0.0	1.0	0.0
59923	1	15.0	0.0	0.0	0.0	0.0
59924	1	7.0	0.0	0.0	0.0	0.0
59933	1	0.0	0.0	0.0	1.0	1.0
59939	1	4.0	0.0	0.0	0.0	0.0
59941	1	1.0	0.0	0.0	0.0	0.0
59942	1	11.0	0.0	0.0	0.0	0.0
59950	1	2.0	0.0	0.0	0.0	0.0
59956	1	1.0	0.0	0.0	0.0	0.0
59969	1	12.0	0.0	0.0	0.0	0.0
59970	1	6.0	0.0	0.0	1.0	0.0
MEAN		6.8	0.0	0.0	0.3	0.1
S.D.		5.27	0.00	0.00	0.45	0.29
N		12	12	12	12	12

OBSERVATION SCORE, UNLESS STATED OTHERWISE

TABLE I15 (OPEN FIELD OBSERVATIONS - DAY 14)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL FUNCTIONAL OBSERVATIONAL BATTERY DATA

OPEN FIELD OBSERVATIONS

DOSE GROUP: 2
DOSE LEVEL: 200 MG/KG SEX: FEMALES
TEST PERIOD: DAY 14

ANIMAL NUMBER	TIME TO 1ST STEP (seconds)	MOBILITY	GAIT	CONVULSIONS CLONIC	CONVULSIONS TONIC	TREMORS	GAIT SCORE	AROUSAL
59922	0.3	1	1	1	1	1	1	3
59926	0.3	1	1	1	1	1	1	3
59927	0.3	1	1	1	1	1	1	3
59936	0.3	1	1	1	1	1	1	3
59937	0.4	1	1	1	1	1	1	3
59949	0.3	1	1	1	1	1	1	3
59952	0.3	1	1	1	1	1	1	3
59954	0.3	1	1	1	1	1	1	3
59958	0.3	1	1	1	1	1	1	3
59962	0.3	1	1	1	1	1	1	3
59967	0.3	1	1	1	1	1	1	3
59968	0.2	1	1	1	1	1	1	3
MEAN	0.3							
S.D.	0.04							
N	12							

OBSERVATION SCORE, UNLESS STATED OTHERWISE

OPEN FIELD OBSERVATIONS

DOSE GROUP: 2
DOSE LEVEL: 200 MG/KG SEX: FEMALES
TEST PERIOD: DAY 14

ANIMAL NUMBER	BIZARRE/STEREO-TYPIC BEHAVIOR	REARING (counts)	BACKING (counts)	GROOMING (counts)	URINATION (counts)	DEFECATION (counts)
59922	1	7.0	0.0	0.0	0.0	0.0
59926	1	2.0	0.0	0.0	0.0	0.0
59927	1	12.0	0.0	0.0	0.0	0.0
59936	1	6.0	0.0	0.0	0.0	0.0
59937	1	10.0	0.0	1.0	0.0	0.0
59949	1	11.0	0.0	0.0	0.0	0.0
59952	1	10.0	0.0	1.0	0.0	0.0
59954	1	10.0	0.0	0.0	0.0	0.0
59958	1	13.0	0.0	1.0	0.0	0.0
59962	1	7.0	0.0	0.0	0.0	0.0
59967	1	14.0	0.0	0.0	0.0	0.0
59968	1	4.0	0.0	0.0	0.0	0.0
MEAN		8.8	0.0	0.3	0.0	0.0
S.D.		3.66	0.00	0.45	0.00	0.00
N		12	12	12	12	12

OBSERVATION SCORE, UNLESS STATED OTHERWISE

OPEN FIELD OBSERVATIONS

DOSE GROUP: 3
DOSE LEVEL: 700 MG/KG SEX: FEMALES
TEST PERIOD: DAY 14

ANIMAL NUMBER	TIME TO 1ST STEP (seconds)	MOBILITY	GAIT	CONVULSIONS CLONIC	CONVULSIONS TONIC	TREMORS	GAIT SCORE	AROUSAL
59918	0.3	1	1	1	1	1	1	3
59925	0.7	1	1	1	1	1	1	3
59930	0.4	1	1	1	1	1	1	3
59931	0.3	1	1	1	1	1	1	3
59932	0.3	1	1	1	1	1	1	3
59935	0.3	1	1	1	1	1	1	3
59940	0.4	1	1	1	1	1	1	3
59944	0.3	1	1	1	1	1	1	3
59945	0.3	1	1	1	1	1	1	3
59948	0.3	1	1	1	1	1	1	3
59959	0.3	1	1	1	1	1	1	3
59963	0.3	1	1	1	1	1	1	3
MEAN	0.4							
S.D.	0.12							
N	12							

OBSERVATION SCORE, UNLESS STATED OTHERWISE

OPEN FIELD OBSERVATIONS

DOSE GROUP: 3
DOSE LEVEL: 700 MG/KG SEX: FEMALES
TEST PERIOD: DAY 14

ANIMAL NUMBER	BIZARRE/STEREO-TYPIC BEHAVIOR	REARING (counts)	BACKING (counts)	GROOMING (counts)	URINATION (counts)	DEFECATION (counts)
59918	1	16.0	0.0	0.0	0.0	0.0
59925	1	3.0	0.0	0.0	2.0	0.0
59930	1	7.0	0.0	0.0	0.0	0.0
59931	1	8.0	0.0	0.0	0.0	0.0
59932	1	7.0	0.0	1.0	1.0	0.0
59935	1	10.0	0.0	0.0	0.0	0.0
59940	1	10.0	0.0	1.0	0.0	0.0
59944	1	1.0	0.0	0.0	0.0	0.0
59945	1	1.0	0.0	0.0	0.0	1.0
59948	1	6.0	0.0	0.0	0.0	0.0
59959	1	2.0	0.0	0.0	0.0	0.0
59963	1	11.0	0.0	0.0	0.0	0.0
MEAN		6.8	0.0	0.2	0.3	0.1
S.D.		4.57	0.00	0.39	0.62	0.29
N		12	12	12	12	12

OBSERVATION SCORE, UNLESS STATED OTHERWISE

OPEN FIELD OBSERVATIONS

DOSE GROUP: 4
DOSE LEVEL: 2000 MG/KG SEX: FEMALES
TEST PERIOD: DAY 14

ANIMAL NUMBER	TIME TO 1ST STEP (seconds)	MOBILITY	GAIT	CONVULSIONS CLONIC	CONVULSIONS TONIC	TREMORS	GAIT SCORE	AROUSAL
59921	0.3	1	1	1	1	1	3	3
59928	0.3	1	1	1	1	1	1	3
59929	0.3	1	1	1	1	1	1	3
59934	0.3	1	1	1	1	1	1	3
59938	0.3	1	1	1	1	1	1	3
59943	0.3	1	1	1	1	1	1	3
59946	0.3	1	1	1	1	1	1	3
59947	0.3	1	1	1	1	1	1	3
59951	0.3	1	1	1	1	1	1	3
59955	0.3	1	1	1	1	1	1	3
59964	0.3	1	1	1	1	1	1	3
59966	0.3	1	1	1	1	1	1	3
MEAN	0.3							
S.D.	0.00							
N	12							

OBSERVATION SCORE, UNLESS STATED OTHERWISE

OPEN FIELD OBSERVATIONS

DOSE GROUP: 4
DOSE LEVEL: 2000 MG/KG SEX: FEMALES
TEST PERIOD: DAY 14

ANIMAL NUMBER	BIZARRE/STEREO-TYPIC BEHAVIOR	REARING (counts)	BACKING (counts)	GROOMING (counts)	URINATION (counts)	DEFECATION (counts)
59921	1	0.0	0.0	0.0	1.0	2.0
59928	1	5.0	0.0	0.0	0.0	0.0
59929	1	5.0	0.0	0.0	0.0	0.0
59934	1	2.0	0.0	0.0	0.0	0.0
59938	1	4.0	0.0	0.0	2.0	3.0
59943	1	17.0	0.0	0.0	0.0	0.0
59946	1	7.0	0.0	0.0	0.0	0.0
59947	1	8.0	0.0	0.0	0.0	0.0
59951	1	5.0	0.0	0.0	0.0	0.0
59955	1	7.0	0.0	0.0	0.0	0.0
59964	1	8.0	0.0	0.0	0.0	0.0
59966	1	5.0	0.0	0.0	0.0	0.0
MEAN		6.1	0.0	0.0	0.3	0.4
S.D.		4.17	0.00	0.00	0.62	1.00
N		12	12	12	12	12

OBSERVATION SCORE, UNLESS STATED OTHERWISE

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R:01/13/2010

TABLE I16 (SENSORY OBSERVATIONS - PRETEST)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL FUNCTIONAL OBSERVATIONAL BATTERY DATA

SENSORY OBSERVATIONS

DOSE GROUP: 1
DOSE LEVEL: 0 MG/KG SEX: MALES
TEST PERIOD: PRETEST

ANIMAL NUMBER	APPROACH RESPONSE	TOUCH RESPONSE	STARTLE RESPONSE	TAIL PINCH RESPONSE	OLFACTORY ORIENTATION
59866	2	2	2	2	2
59867	2	2	2	2	2
59869	2	2	2	2	2
59870	2	2	2	2	2
59881	2	2	2	2	2
59884	2	2	2	2	2
59885	2	2	2	2	2
59891	2	2	2	2	2
59892	2	2	2	2	2
59901	2	2	2	2	2
59914	2	2	2	2	2
59915	2	2	2	2	2

OBSERVATION SCORE, UNLESS STATED OTHERWISE

SENSORY OBSERVATIONS

DOSE GROUP: 1
DOSE LEVEL: 0 MG/KG SEX: MALES
TEST PERIOD: PRETEST

ANIMAL NUMBER	PUPIL RESPONSE	EYEBLINK RESPONSE	FORELIMB EXTENSION	HINDLIMB EXTENSION	AIR RIGHTING REFLEX
59866	2	2	2	2	1
59867	2	2	2	2	1
59869	2	2	2	2	1
59870	2	2	2	2	1
59881	2	2	2	2	1
59884	2	2	2	2	1
59885	2	2	2	2	1
59891	2	2	2	2	1
59892	2	2	2	2	1
59901	2	2	2	2	1
59914	2	2	2	2	1
59915	2	2	2	2	1

OBSERVATION SCORE, UNLESS STATED OTHERWISE

TABLE I16 (SENSORY OBSERVATIONS - PRETEST)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL FUNCTIONAL OBSERVATIONAL BATTERY DATA

SENSORY OBSERVATIONS

DOSE GROUP: 2
DOSE LEVEL: 200 MG/KG SEX: MALES
TEST PERIOD: PRETEST

ANIMAL NUMBER	APPROACH RESPONSE	TOUCH RESPONSE	STARTLE RESPONSE	TAIL PINCH RESPONSE	OLFACTORY ORIENTATION
59865	2	2	2	2	2
59873	2	2	2	2	2
59875	2	2	3	2	2
59878	2	2	2	2	2
59879	2	2	2	2	2
59880	2	2	2	2	2
59882	2	2	2	2	2
59889	2	2	2	2	2
59893	2	2	2	2	2
59897	2	2	3	2	2
59911	2	2	2	2	2
59913	2	2	2	2	2

OBSERVATION SCORE, UNLESS STATED OTHERWISE

TABLE I16 (SENSORY OBSERVATIONS - PRETEST)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL FUNCTIONAL OBSERVATIONAL BATTERY DATA

SENSORY OBSERVATIONS

DOSE GROUP: 2
DOSE LEVEL: 200 MG/KG SEX: MALES
TEST PERIOD: PRETEST

ANIMAL NUMBER	PUPIL RESPONSE	EYEBLINK RESPONSE	FORELIMB EXTENSION	HINDLIMB EXTENSION	AIR RIGHTING REFLEX
59865	2	2	2	2	1
59873	2	2	2	2	1
59875	2	2	2	2	1
59878	2	2	2	2	1
59879	2	2	2	2	1
59880	2	2	2	2	1
59882	2	2	2	2	1
59889	2	2	2	2	1
59893	2	2	2	2	1
59897	2	2	2	2	1
59911	2	2	2	1	1
59913	2	2	2	2	1

OBSERVATION SCORE, UNLESS STATED OTHERWISE

SENSORY OBSERVATIONS

DOSE GROUP: 3
DOSE LEVEL: 700 MG/KG SEX: MALES
TEST PERIOD: PRETEST

ANIMAL NUMBER	APPROACH RESPONSE	TOUCH RESPONSE	STARTLE RESPONSE	TAIL PINCH RESPONSE	OLFACTORY ORIENTATION
59874	2	2	2	2	2
59894	2	2	2	2	2
59895	2	2	2	2	2
59896	2	2	2	2	2
59899	2	2	2	2	2
59902	2	2	2	2	2
59903	2	2	2	3	2
59904	2	2	2	2	2
59905	2	2	2	2	2
59909	2	2	2	2	2
59910	2	2	2	2	2
59916	2	2	2	2	2

OBSERVATION SCORE, UNLESS STATED OTHERWISE

SENSORY OBSERVATIONS

DOSE GROUP: 3
DOSE LEVEL: 700 MG/KG SEX: MALES
TEST PERIOD: PRETEST

ANIMAL NUMBER	PUPIL RESPONSE	EYEBLINK RESPONSE	FORELIMB EXTENSION	HINDLIMB EXTENSION	AIR RIGHTING REFLEX
59874	2	2	2	2	1
59894	2	2	2	2	1
59895	2	2	2	2	1
59896	2	2	2	2	1
59899	2	2	2	2	1
59902	2	2	2	2	1
59903	2	2	2	2	1
59904	2	2	2	2	1
59905	2	2	2	2	1
59909	2	2	2	2	1
59910	2	2	2	2	1
59916	2	2	2	2	1

OBSERVATION SCORE, UNLESS STATED OTHERWISE

SENSORY OBSERVATIONS

DOSE GROUP: 4
DOSE LEVEL: 2000 MG/KG SEX: MALES
TEST PERIOD: PRETEST

ANIMAL NUMBER	APPROACH RESPONSE	TOUCH RESPONSE	STARTLE RESPONSE	TAIL PINCH RESPONSE	OLFACTORY ORIENTATION
59876	2	2	2	2	2
59883	2	2	2	2	2
59886	2	2	2	2	2
59887	2	2	2	2	2
59890	2	2	2	2	2
59898	2	2	2	2	2
59900	2	2	2	2	2
59906	2	2	2	2	2
59907	2	2	2	2	2
59908	2	2	2	2	2
59912	2	2	2	2	2
59917	2	2	2	2	2

OBSERVATION SCORE, UNLESS STATED OTHERWISE

SENSORY OBSERVATIONS

DOSE GROUP: 4
DOSE LEVEL: 2000 MG/KG SEX: MALES
TEST PERIOD: PRETEST

ANIMAL NUMBER	PUPIL RESPONSE	EYEBLINK RESPONSE	FORELIMB EXTENSION	HINDLIMB EXTENSION	AIR RIGHTING REFLEX
59876	2	2	2	2	1
59883	2	2	2	2	1
59886	2	2	2	2	1
59887	2	2	2	2	1
59890	2	2	2	2	1
59898	2	2	2	2	1
59900	2	2	2	2	1
59906	2	2	2	2	1
59907	2	2	2	2	1
59908	2	2	2	2	1
59912	2	2	2	2	1
59917	2	2	2	2	1

OBSERVATION SCORE, UNLESS STATED OTHERWISE

SENSORY OBSERVATIONS

DOSE GROUP: 1
DOSE LEVEL: 0 MG/KG SEX: FEMALES
TEST PERIOD: PRETEST

ANIMAL NUMBER	APPROACH RESPONSE	TOUCH RESPONSE	STARTLE RESPONSE	TAIL PINCH RESPONSE	OLFACTORY ORIENTATION
59919	2	2	2	2	2
59920	2	2	2	2	2
59923	2	2	2	3	2
59924	2	2	2	2	2
59933	2	2	2	2	2
59939	2	2	2	2	2
59941	2	2	2	2	2
59942	2	2	2	2	2
59950	2	2	2	2	2
59956	2	2	2	2	2
59969	2	2	2	3*	2
59970	2	2	2	2	2

OBSERVATION SCORE, UNLESS STATED OTHERWISE
* = ANIMAL VOCALIZED

SENSORY OBSERVATIONS

DOSE GROUP: 1
DOSE LEVEL: 0 MG/KG SEX: FEMALES
TEST PERIOD: PRETEST

ANIMAL NUMBER	PUPIL RESPONSE	EYEBLINK RESPONSE	FORELIMB EXTENSION	HINDLIMB EXTENSION	AIR RIGHTING REFLEX
59919	2	2	2	2	1
59920	2	2	2	2	1
59923	2	2	2	2	1
59924	2	2	2	2	1
59933	2	2	2	2	1
59939	2	2	2	2	1
59941	2	2	2	2	1
59942	2	2	2	2	1
59950	2	2	2	2	1
59956	2	2	2	2	1
59969	2	2	2	2	1
59970	2	2	2	2	1

OBSERVATION SCORE, UNLESS STATED OTHERWISE

SENSORY OBSERVATIONS

DOSE GROUP: 2
DOSE LEVEL: 200 MG/KG SEX: FEMALES
TEST PERIOD: PRETEST

ANIMAL NUMBER	APPROACH RESPONSE	TOUCH RESPONSE	STARTLE RESPONSE	TAIL PINCH RESPONSE	OLFACTORY ORIENTATION
59922	2	2	2	3*	2
59926	2	2	2	2	2
59927	2	2	2	2	2
59936	2	2	2	2	2
59937	2	2	2	2	2
59949	2	2	2	2	2
59952	3	3	2	2	2
59954	2	2	2	2	2
59958	2	2	2	3*	2
59962	2	2	2	2	2
59967	2	2	2	2	2
59968	2	2	2	2	2

OBSERVATION SCORE, UNLESS STATED OTHERWISE
* = ANIMAL VOCALIZED

TABLE I16 (SENSORY OBSERVATIONS - PRETEST)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL FUNCTIONAL OBSERVATIONAL BATTERY DATA

SENSORY OBSERVATIONS

DOSE GROUP: 2

DOSE LEVEL: 200 MG/KG SEX: FEMALES

TEST PERIOD: PRETEST

ANIMAL NUMBER	PUPIL RESPONSE	EYEBLINK RESPONSE	FORELIMB EXTENSION	HINDLIMB EXTENSION	AIR RIGHTING REFLEX
59922	2	2	2	2	1
59926	2	2	2	2	1
59927	2	2	2	2	1
59936	2	2	2	2	1
59937	2	2	2	2	1
59949	2	2	2	2	1
59952	2	2	2	2	1
59954	2	2	2	2	1
59958	2	2	2	2	1
59962	2	2	2	1	1
59967	2	2	2	2	1
59968	2	2	2	2	1

OBSERVATION SCORE, UNLESS STATED OTHERWISE

SENSORY OBSERVATIONS

DOSE GROUP: 3
DOSE LEVEL: 700 MG/KG SEX: FEMALES
TEST PERIOD: PRETEST

ANIMAL NUMBER	APPROACH RESPONSE	TOUCH RESPONSE	STARTLE RESPONSE	TAIL PINCH RESPONSE	OLFACTORY ORIENTATION
59918	2	2	2	2	2
59925	2	2	2	2	2
59930	2	2	2	2	2
59931	2	2	3*	3*	2
59932	2	2	2	2	2
59935	2	2	2	2	2
59940	2	2	2	2	2
59944	2	2	2	2	2
59945	2	2	2	2	2
59948	2	2	2	2	2
59959	2	2	2	2	2
59963	2	2	2	2	2

OBSERVATION SCORE, UNLESS STATED OTHERWISE
* = ANIMAL VOCALIZED

SENSORY OBSERVATIONS

DOSE GROUP: 3
DOSE LEVEL: 700 MG/KG SEX: FEMALES
TEST PERIOD: PRETEST

ANIMAL NUMBER	PUPIL RESPONSE	EYEBLINK RESPONSE	FORELIMB EXTENSION	HINDLIMB EXTENSION	AIR RIGHTING REFLEX
59918	2	2	2	2	1
59925	2	2	2	2	1
59930	2	2	2	2	1
59931	2	2	2	2	1
59932	2	2	2	2	1
59935	2	2	2	2	1
59940	2	2	2	2	1
59944	2	2	2	2	1
59945	2	2	2	2	1
59948	2	2	2	2	1
59959	2	2	2	2	1
59963	2	2	2	2	1

OBSERVATION SCORE, UNLESS STATED OTHERWISE

SENSORY OBSERVATIONS

DOSE GROUP: 4
DOSE LEVEL: 2000 MG/KG SEX: FEMALES
TEST PERIOD: PRETEST

ANIMAL NUMBER	APPROACH RESPONSE	TOUCH RESPONSE	STARTLE RESPONSE	TAIL PINCH RESPONSE	OLFACTORY ORIENTATION
59921	2	2	2	2	2
59928	2	2	2	3*	2
59929	2	2	2	2	2
59934	2	2	2	2	2
59938	2	2	2	2	2
59943	2	2	2	2	2
59946	2	2	2	2	2
59947	2	2	2	2	2
59951	2	2	2	2	2
59955	2	2	3	2	2
59964	2	2	2	2	2
59966	2	2	2	2	2

OBSERVATION SCORE, UNLESS STATED OTHERWISE
* = ANIMAL VOCALIZED

SENSORY OBSERVATIONS

DOSE GROUP: 4
DOSE LEVEL: 2000 MG/KG SEX: FEMALES
TEST PERIOD: PRETEST

ANIMAL NUMBER	PUPIL RESPONSE	EYEBLINK RESPONSE	FORELIMB EXTENSION	HINDLIMB EXTENSION	AIR RIGHTING REFLEX
59921	2	2	2	2	1
59928	2	2	2	2	1
59929	2	2	2	2	1
59934	2	2	2	2	1
59938	2	2	2	2	1
59943	2	2	2	2	1
59946	2	2	2	2	1
59947	2-A	2	2	2	1
59951	2	2	2	2	1
59955	2	2	2	2	1
59964	2	2	2	2	1
59966	2	2	2	2	1

OBSERVATION SCORE, UNLESS STATED OTHERWISE
A = UNILATERAL

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R:01/15/2010

TABLE I17 (SENSORY OBSERVATIONS - DAY 0)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL FUNCTIONAL OBSERVATIONAL BATTERY DATA

SENSORY OBSERVATIONS

DOSE GROUP: 1

DOSE LEVEL: 0 MG/KG SEX: MALES

TEST PERIOD: DAY 0

ANIMAL NUMBER	APPROACH RESPONSE	TOUCH RESPONSE	STARTLE RESPONSE	TAIL PINCH RESPONSE	OLFACTORY ORIENTATION
59866	2	2	2	2	2
59867	2	2	2	2	2
59869	2	2	2	2	2
59870	2	2	2	2	2
59881	2	2	2	2	2
59884	2	2	2	2	2
59885	2	2	2	2	2
59891	2	2	2	2	2
59892	2	2	2	2	2
59901	2	2	2	2	2
59914	2	2	2	2	2
59915	2	2	2	2	2

OBSERVATION SCORE, UNLESS STATED OTHERWISE

TABLE I17 (SENSORY OBSERVATIONS - DAY 0)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS PAGE 2

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL FUNCTIONAL OBSERVATIONAL BATTERY DATA

SENSORY OBSERVATIONS

DOSE GROUP: 1

DOSE LEVEL: 0 MG/KG SEX: MALES

TEST PERIOD: DAY 0

ANIMAL NUMBER	PUPIL RESPONSE	EYEBLINK RESPONSE	FORELIMB EXTENSION	HINDLIMB EXTENSION	AIR RIGHTING REFLEX
59866	2	2	2	2	1
59867	2	2	2	2	1
59869	2	2	2	2	1
59870	2	2	2	2	1
59881	2	2	2	2	1
59884	2	2	2	2	1
59885	2	2	2	2	1
59891	2	2	2	2	1
59892	2	2	2	2	1
59901	2	2	2	2	1
59914	2	2	2	2	1
59915	2	2	2	2	1

OBSERVATION SCORE, UNLESS STATED OTHERWISE

TABLE I17 (SENSORY OBSERVATIONS - DAY 0)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL FUNCTIONAL OBSERVATIONAL BATTERY DATA

SENSORY OBSERVATIONS

DOSE GROUP: 2
DOSE LEVEL: 200 MG/KG SEX: MALES
TEST PERIOD: DAY 0

ANIMAL NUMBER	APPROACH RESPONSE	TOUCH RESPONSE	STARTLE RESPONSE	TAIL PINCH RESPONSE	OLFACTORY ORIENTATION
59865	2	2	2	2	2
59873	2	2	2	2	2
59875	2	2	2	2	2
59878	2	2	2	2	2
59879	2	2	2	2	2
59880	2	2	2	2	2
59882	2	2	2	2	2
59889	2	2	2	2	2
59893	2	2	2	2	2
59897	2	2	2	3*	2
59911	2	2	2	2	2
59913	2	2	2	2	2

OBSERVATION SCORE, UNLESS STATED OTHERWISE
* = ANIMAL VOCALIZED

TABLE I17 (SENSORY OBSERVATIONS - DAY 0)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS PAGE 4

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL FUNCTIONAL OBSERVATIONAL BATTERY DATA

SENSORY OBSERVATIONS

DOSE GROUP: 2

DOSE LEVEL: 200 MG/KG SEX: MALES

TEST PERIOD: DAY 0

ANIMAL NUMBER	PUPIL RESPONSE	EYEBLINK RESPONSE	FORELIMB EXTENSION	HINDLIMB EXTENSION	AIR RIGHTING REFLEX
59865	2	2	2	2	1
59873	2	2	2	2	1
59875	2	2	2	2	1
59878	2	2	2	2	1
59879	2	2	2	2	1
59880	2	2	2	2	1
59882	2	2	2	2	1
59889	2	2	2	2	1
59893	2	2	2	2	1
59897	2	2	2	2	1
59911	2	2	2	2	1
59913	2	2	2	2	1

OBSERVATION SCORE, UNLESS STATED OTHERWISE

SENSORY OBSERVATIONS

DOSE GROUP: 3
DOSE LEVEL: 700 MG/KG SEX: MALES
TEST PERIOD: DAY 0

ANIMAL NUMBER	APPROACH RESPONSE	TOUCH RESPONSE	STARTLE RESPONSE	TAIL PINCH RESPONSE	OLFACTORY ORIENTATION
59874	2	2	2	2	2
59894	2	2	2	2	2
59895	2	2	2	2	2
59896	2	2	2	2	2
59899	2	2	2	2	2
59902	2	2	2	2	2
59903	2	2	2	2	2
59904	2	2	2	2	2
59905	2	2	2	2	2
59909	2	2	2	2	2
59910	2	2	2	2	2
59916	2	2	2	2	2

OBSERVATION SCORE, UNLESS STATED OTHERWISE

TABLE I17 (SENSORY OBSERVATIONS - DAY 0)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL FUNCTIONAL OBSERVATIONAL BATTERY DATA

SENSORY OBSERVATIONS

DOSE GROUP: 3

DOSE LEVEL: 700 MG/KG SEX: MALES

TEST PERIOD: DAY 0

ANIMAL NUMBER	PUPIL RESPONSE	EYEBLINK RESPONSE	FORELIMB EXTENSION	HINDLIMB EXTENSION	AIR RIGHTING REFLEX
59874	2	2	2	2	1
59894	2	2	2	2	1
59895	2	2	2	2	1
59896	2	2	2	2	1
59899	2	2	2	2	1
59902	2	2	2	2	1
59903	2	2	2	2	1
59904	2	2	2	2	1
59905	2	2	2	2	1
59909	2	2	2	2	1
59910	2	2	2	2	1
59916	2	2	2	2	1

OBSERVATION SCORE, UNLESS STATED OTHERWISE

TABLE I17 (SENSORY OBSERVATIONS - DAY 0)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL FUNCTIONAL OBSERVATIONAL BATTERY DATA

SENSORY OBSERVATIONS

DOSE GROUP: 4

DOSE LEVEL: 2000 MG/KG SEX: MALES

TEST PERIOD: DAY 0

ANIMAL NUMBER	APPROACH RESPONSE	TOUCH RESPONSE	STARTLE RESPONSE	TAIL PINCH RESPONSE	OLFACTORY ORIENTATION
59876	2	2	2	2	2
59883	2	2	2	2	2
59886	2	2	2	2	2
59887	2	2	2	3*	2
59890	2	2	2	2	2
59898	2	2	2	2	2
59900	2	2	2	2	2
59906	2	2	2	2	2
59907	2	2	2	2	2
59908	2	2	2	2	2
59912	2	2	2	2	2
59917	2	2	2	2	2

OBSERVATION SCORE, UNLESS STATED OTHERWISE

* = ANIMAL VOCALIZED

TABLE I17 (SENSORY OBSERVATIONS - DAY 0)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL FUNCTIONAL OBSERVATIONAL BATTERY DATA

SENSORY OBSERVATIONS

DOSE GROUP: 4

DOSE LEVEL: 2000 MG/KG SEX: MALES

TEST PERIOD: DAY 0

ANIMAL NUMBER	PUPIL RESPONSE	EYEBLINK RESPONSE	FORELIMB EXTENSION	HINDLIMB EXTENSION	AIR RIGHTING REFLEX
59876	2	2	2	2	1
59883	2	2	2	2	1
59886	2	2	2	2	1
59887	2	2	2	2	1
59890	2	2	2	2	1
59898	2	2	2	2	1
59900	2	2	2	2	1
59906	2	2	2	2	1
59907	2	2	2	2	1
59908	2	2	2	2	1
59912	2	2	2	2	1
59917	2	2	2	2	1

OBSERVATION SCORE, UNLESS STATED OTHERWISE

SENSORY OBSERVATIONS

DOSE GROUP: 1
DOSE LEVEL: 0 MG/KG SEX: FEMALES
TEST PERIOD: DAY 0

ANIMAL NUMBER	APPROACH RESPONSE	TOUCH RESPONSE	STARTLE RESPONSE	TAIL PINCH RESPONSE	OLFACTORY ORIENTATION
59919	2	2	2	3	2
59920	2	2	2	2	2
59923	2	2	2	2	2
59924	2	2	2	2	2
59933	2	2	2	2	2
59939	2	2	2	2	2
59941	2	2	2	2	2
59942	2	2	2	2	2
59950	2	2	2	3*	2
59956	2	2	2	2	2
59969	2	2	2	2	2
59970	2	2	2	2	2

OBSERVATION SCORE, UNLESS STATED OTHERWISE
* = ANIMAL VOCALIZED

TABLE I17 (SENSORY OBSERVATIONS - DAY 0)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL FUNCTIONAL OBSERVATIONAL BATTERY DATA

SENSORY OBSERVATIONS

DOSE GROUP: 1

DOSE LEVEL: 0 MG/KG SEX: FEMALES

TEST PERIOD: DAY 0

ANIMAL NUMBER	PUPIL RESPONSE	EYEBLINK RESPONSE	FORELIMB EXTENSION	HINDLIMB EXTENSION	AIR RIGHTING REFLEX
59919	2	2	2	2	1
59920	2	2	2	2	1
59923	2	2	2	2	1
59924	2	2	2	2	1
59933	2	2	2	2	1
59939	2	2	2	2	1
59941	2	2	2	2	1
59942	2	2	2	2	1
59950	2	2	2	2	1
59956	2	2	2	2	1
59969	2	2	2	2	1
59970	2	2	2	2	1

OBSERVATION SCORE, UNLESS STATED OTHERWISE

SENSORY OBSERVATIONS

DOSE GROUP: 2
DOSE LEVEL: 200 MG/KG SEX: FEMALES
TEST PERIOD: DAY 0

ANIMAL NUMBER	APPROACH RESPONSE	TOUCH RESPONSE	STARTLE RESPONSE	TAIL PINCH RESPONSE	OLFACTORY ORIENTATION
59922	2	2	2	2	2
59926	2	2	2	2	2
59927	2	2	2	2	2
59936	2	2	2	2	2
59937	2	2	2	2	2
59949	2	2	2	2	2
59952	2	2	2	2	2
59954	2	2	2	3	2
59958	2	2	2	2	2
59962	2	2	2	2	2
59967	2	2	2	2	2
59968	2	2	2	2	2

OBSERVATION SCORE, UNLESS STATED OTHERWISE

SENSORY OBSERVATIONS

DOSE GROUP: 2
DOSE LEVEL: 200 MG/KG SEX: FEMALES
TEST PERIOD: DAY 0

ANIMAL NUMBER	PUPIL RESPONSE	EYEBLINK RESPONSE	FORELIMB EXTENSION	HINDLIMB EXTENSION	AIR RIGHTING REFLEX
59922	2	2	2	2	1
59926	2	2	2	2	1
59927	2	2	2	2	1
59936	2	2	2	2	1
59937	2	2	2	2	1
59949	2	2	2	2	1
59952	2	2	2	2	1
59954	2	2	2	2	1
59958	2	2	2	2	1
59962	2	2	2	2	1
59967	2	2	2	2	1
59968	2	2	2	2	1

OBSERVATION SCORE, UNLESS STATED OTHERWISE

SENSORY OBSERVATIONS

DOSE GROUP: 3
DOSE LEVEL: 700 MG/KG SEX: FEMALES
TEST PERIOD: DAY 0

ANIMAL NUMBER	APPROACH RESPONSE	TOUCH RESPONSE	STARTLE RESPONSE	TAIL PINCH RESPONSE	OLFACTORY ORIENTATION
59918	2	2	2	3	2
59925	2	2	2	2	2
59930	2	2	2	2	2
59931	2	2	2	3	2
59932	2	2	2	2	2
59935	2	2	2	2	2
59940	2	2	2	2	2
59944	2	2	2	2	2
59945	2	2	2	2	2
59948	2	2	2	2	2
59959	2	2	2	2	2
59963	2	2	2	2	2

OBSERVATION SCORE, UNLESS STATED OTHERWISE

SENSORY OBSERVATIONS

DOSE GROUP: 3
DOSE LEVEL: 700 MG/KG SEX: FEMALES
TEST PERIOD: DAY 0

ANIMAL NUMBER	PUPIL RESPONSE	EYEBLINK RESPONSE	FORELIMB EXTENSION	HINDLIMB EXTENSION	AIR RIGHTING REFLEX
59918	2	2	2	2	1
59925	2	2	2	2	1
59930	2	2	2	2	1
59931	2	2	2	2	1
59932	2	2	2	2	1
59935	2	2	2	2	1
59940	2	2	2	2	1
59944	2	2	2	2	1
59945	2	2	2	2	1
59948	2	2	2	2	1
59959	2	2	2	2	1
59963	2	2	2	2	1

OBSERVATION SCORE, UNLESS STATED OTHERWISE

TABLE I17 (SENSORY OBSERVATIONS - DAY 0)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL FUNCTIONAL OBSERVATIONAL BATTERY DATA

SENSORY OBSERVATIONS

DOSE GROUP: 4

DOSE LEVEL: 2000 MG/KG SEX: FEMALES

TEST PERIOD: DAY 0

ANIMAL NUMBER	APPROACH RESPONSE	TOUCH RESPONSE	STARTLE RESPONSE	TAIL PINCH RESPONSE	OLFACTORY ORIENTATION
59921	2	2	2	3*	2
59928	2	2	2	2	2
59929	2	2	2	2	2
59934	2	2	2	2	2
59938	2	2	2	2	2
59943	2	2	2	2	2
59946	2	2	2	2	2
59947	2	2	2	2	2
59951	2	2	2	2	2
59955	2	2	2	2	2
59964	2	2	2	2	2
59966	2	2	2	2	2

OBSERVATION SCORE, UNLESS STATED OTHERWISE

* = ANIMAL VOCALIZED

SENSORY OBSERVATIONS

DOSE GROUP: 4
DOSE LEVEL: 2000 MG/KG SEX: FEMALES
TEST PERIOD: DAY 0

ANIMAL NUMBER	PUPIL RESPONSE	EYEBLINK RESPONSE	FORELIMB EXTENSION	HINDLIMB EXTENSION	AIR RIGHTING REFLEX
59921	2	2	2	2	1
59928	2	2	2	2	1
59929	2	2	2	2	1
59934	2	2	2	2	1
59938	2	2	2	2	1
59943	2	2	2	2	1
59946	2	2	2	2	1
59947	2-A	2	2	2	1
59951	2	2	2	2	1
59955	2	2	2	2	1
59964	2	2	2	2	1
59966	2	2	2	2	1

OBSERVATION SCORE, UNLESS STATED OTHERWISE
A = UNILATERAL

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TABLE I18 (SENSORY OBSERVATIONS - DAY 7)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL FUNCTIONAL OBSERVATIONAL BATTERY DATA

SENSORY OBSERVATIONS

DOSE GROUP: 1

DOSE LEVEL: 0 MG/KG SEX: MALES

TEST PERIOD: DAY 7

ANIMAL NUMBER	APPROACH RESPONSE	TOUCH RESPONSE	STARTLE RESPONSE	TAIL PINCH RESPONSE	OLFACTORY ORIENTATION
59866	2	2	2	2	2
59867	2	2	2	3*	2
59869	2	2	2	3*	2
59870	2	2	2	2	2
59881	2	2	2	2	2
59884	2	2	2	2	2
59885	2	2	2	2	2
59891	2	2	2	3*	2
59892	2	2	2	2	2
59901	2	2	2	2	2
59914	2	2	2	3*	2
59915	2	2	2	2	2

OBSERVATION SCORE, UNLESS STATED OTHERWISE

* = ANIMAL VOCALIZED

TABLE I18 (SENSORY OBSERVATIONS - DAY 7)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS PAGE 2

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL FUNCTIONAL OBSERVATIONAL BATTERY DATA

SENSORY OBSERVATIONS

DOSE GROUP: 1

DOSE LEVEL: 0 MG/KG SEX: MALES

TEST PERIOD: DAY 7

ANIMAL NUMBER	PUPIL RESPONSE	EYEBLINK RESPONSE	FORELIMB EXTENSION	HINDLIMB EXTENSION	AIR RIGHTING REFLEX
59866	2	2	2	2	1
59867	2	2	2	2	1
59869	2	2	2	2	1
59870	2	2	2	2	1
59881	2	2	2	2	1
59884	2	2	2	2	1
59885	2	2	2	2	1
59891	2	2	2	2	1
59892	2	2	2	2	1
59901	2	2	2	2	1
59914	2	2	2	2	1
59915	2	2	2	2	1

OBSERVATION SCORE, UNLESS STATED OTHERWISE

SENSORY OBSERVATIONS

DOSE GROUP: 2
DOSE LEVEL: 200 MG/KG SEX: MALES
TEST PERIOD: DAY 7

ANIMAL NUMBER	APPROACH RESPONSE	TOUCH RESPONSE	STARTLE RESPONSE	TAIL PINCH RESPONSE	OLFACTORY ORIENTATION
59865	2	2	2	3	2
59873	2	2	2	2	2
59875	2	2	2	2	2
59878	2	2	2	3*	2
59879	2	2	2	2	2
59880	2	2	2	2	2
59882	2	2	2	2	2
59889	2	2	2	2	2
59893	2	2	2	2	2
59897	2	2	2	3*	2
59911	2	2	2	3*	2
59913	2	2	2	2	2

OBSERVATION SCORE, UNLESS STATED OTHERWISE
* = ANIMAL VOCALIZED

TABLE I18 (SENSORY OBSERVATIONS - DAY 7)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS PAGE 4

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL FUNCTIONAL OBSERVATIONAL BATTERY DATA

SENSORY OBSERVATIONS

DOSE GROUP: 2

DOSE LEVEL: 200 MG/KG SEX: MALES

TEST PERIOD: DAY 7

ANIMAL NUMBER	PUPIL RESPONSE	EYEBLINK RESPONSE	FORELIMB EXTENSION	HINDLIMB EXTENSION	AIR RIGHTING REFLEX
59865	2	2	2	2	1
59873	2	2	2	2	1
59875	2	2	2	2	1
59878	2	2	2	2	1
59879	2	2	2	2	1
59880	2	2	2	2	1
59882	2	2	2	2	1
59889	2	2	2	2	1
59893	2	2	2	2	1
59897	2	2	2	2	1
59911	2	2	2	2	1
59913	2	2	2	2	1

OBSERVATION SCORE, UNLESS STATED OTHERWISE

SENSORY OBSERVATIONS

DOSE GROUP: 3
DOSE LEVEL: 700 MG/KG SEX: MALES
TEST PERIOD: DAY 7

ANIMAL NUMBER	APPROACH RESPONSE	TOUCH RESPONSE	STARTLE RESPONSE	TAIL PINCH RESPONSE	OLFACTORY ORIENTATION
59874	2	2	2	2	2
59894	2	2	2	2	2
59895	2	2	2	3*	2
59896	2	2	2	2	2
59899	2	2	2	2	2
59902	2	2	2	3*	2
59903	2	2	2	2	2
59904	2	2	2	3*	2
59905	2	2	2	2	2
59909	2	2	2	2	2
59910	2	2	2	2	2
59916	2	2	2	2	2

OBSERVATION SCORE, UNLESS STATED OTHERWISE
* = ANIMAL VOCALIZED

SENSORY OBSERVATIONS

DOSE GROUP: 3
DOSE LEVEL: 700 MG/KG SEX: MALES
TEST PERIOD: DAY 7

ANIMAL NUMBER	PUPIL RESPONSE	EYEBLINK RESPONSE	FORELIMB EXTENSION	HINDLIMB EXTENSION	AIR RIGHTING REFLEX
59874	2	2	2	2	1
59894	2	2	2	2	1
59895	2	2	2	2	1
59896	2	2	2	2	1
59899	2	2	2	2	1
59902	2	2	2	2	1
59903	2	2	2	2	2
59904	2	2	2	2	1
59905	2	2	2	2	1
59909	2	2	2	2	1
59910	2	2	2	2	1
59916	2	2	2	2	1

OBSERVATION SCORE, UNLESS STATED OTHERWISE

TABLE I18 (SENSORY OBSERVATIONS - DAY 7)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL FUNCTIONAL OBSERVATIONAL BATTERY DATA

SENSORY OBSERVATIONS

DOSE GROUP: 4

DOSE LEVEL: 2000 MG/KG SEX: MALES

TEST PERIOD: DAY 7

ANIMAL NUMBER	APPROACH RESPONSE	TOUCH RESPONSE	STARTLE RESPONSE	TAIL PINCH RESPONSE	OLFACTORY ORIENTATION
59876	2	2	2	2	2
59883	2	2	2	2	2
59886	2	2	2	2	2
59887	2	2	2	2	2
59890	2	2	2	3*	2
59898	2	2	2	2	2
59900	2	2	2	2	2
59906	2	2	2	3*	2
59907	2	2	2	2	2
59908	2	2	2	2	2
59912	2	2	2	2	2
59917	2	2	2	3*	2

OBSERVATION SCORE, UNLESS STATED OTHERWISE

* = ANIMAL VOCALIZED

TABLE I18 (SENSORY OBSERVATIONS - DAY 7)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL FUNCTIONAL OBSERVATIONAL BATTERY DATA

SENSORY OBSERVATIONS

DOSE GROUP: 4

DOSE LEVEL: 2000 MG/KG SEX: MALES

TEST PERIOD: DAY 7

ANIMAL NUMBER	PUPIL RESPONSE	EYEBLINK RESPONSE	FORELIMB EXTENSION	HINDLIMB EXTENSION	AIR RIGHTING REFLEX
59876	2	2	2	2	1
59883	2	2	2	2	1
59886	2	2	2	2	1
59887	2	2	2	2	1
59890	2	2	2	2	1
59898	2	2	2	2	1
59900	2	2	2	2	1
59906	2	2	2	2	1
59907	2	2	2	2	1
59908	2	2	2	2	1
59912	2	2	2	2	1
59917	2	2	2	2	1

OBSERVATION SCORE, UNLESS STATED OTHERWISE

TABLE I18 (SENSORY OBSERVATIONS - DAY 7)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL FUNCTIONAL OBSERVATIONAL BATTERY DATA

SENSORY OBSERVATIONS

DOSE GROUP: 1

DOSE LEVEL: 0 MG/KG SEX: FEMALES

TEST PERIOD: DAY 7

ANIMAL NUMBER	APPROACH RESPONSE	TOUCH RESPONSE	STARTLE RESPONSE	TAIL PINCH RESPONSE	OLFACTORY ORIENTATION
59919	2	2	2	3*	2
59920	2	2	2	3*	2
59923	2	2	2	2	2
59924	2	2	2	2	2
59933	2	2	2	2	2
59939	2	2	2	3*	2
59941	2	2	2	3*	2
59942	2	2	2	2	2
59950	2	2	2	3*	2
59956	2	2	2	2	2
59969	2	2	2	2	2
59970	2	2	2	2	2

OBSERVATION SCORE, UNLESS STATED OTHERWISE

* = ANIMAL VOCALIZED

SENSORY OBSERVATIONS

DOSE GROUP: 1
DOSE LEVEL: 0 MG/KG SEX: FEMALES
TEST PERIOD: DAY 7

ANIMAL NUMBER	PUPIL RESPONSE	EYEBLINK RESPONSE	FORELIMB EXTENSION	HINDLIMB EXTENSION	AIR RIGHTING REFLEX
59919	2	2	2	2	1
59920	2	2	2	2	1
59923	2	2	2	2	1
59924	2	2	2	2	1
59933	2	2	2	2	1
59939	2	2	2	2	1
59941	2	2	2	2	1
59942	2	2	2	2	1
59950	2	2	2	2	1
59956	2	2	2	2	1
59969	2	2	2	2	1
59970	2	2	2	2	1

OBSERVATION SCORE, UNLESS STATED OTHERWISE

SENSORY OBSERVATIONS

DOSE GROUP: 2
DOSE LEVEL: 200 MG/KG SEX: FEMALES
TEST PERIOD: DAY 7

ANIMAL NUMBER	APPROACH RESPONSE	TOUCH RESPONSE	STARTLE RESPONSE	TAIL PINCH RESPONSE	OLFACTORY ORIENTATION
59922	2	2	2	3*	2
59926	2	2	2	3*	2
59927	2	2	2	2	2
59936	2	2	2	3*	2
59937	2	2	2	2	2
59949	2	2	2	3*	2
59952	2	2	2	2	2
59954	2	2	2	2	2
59958	2	2	2	2	2
59962	2	2	2	3*	2
59967	2	2	2	3*	2
59968	2	2	2	2	2

OBSERVATION SCORE, UNLESS STATED OTHERWISE
* = ANIMAL VOCALIZED

SENSORY OBSERVATIONS

DOSE GROUP: 2
DOSE LEVEL: 200 MG/KG SEX: FEMALES
TEST PERIOD: DAY 7

ANIMAL NUMBER	PUPIL RESPONSE	EYEBLINK RESPONSE	FORELIMB EXTENSION	HINDLIMB EXTENSION	AIR RIGHTING REFLEX
59922	2	2	2	2	1
59926	2	2	2	2	1
59927	2	2	2	2	1
59936	1	2	2	2	1
59937	2	2	2	2	1
59949	2	2	2	2	1
59952	2	2	2	2	1
59954	2	2	2	2	1
59958	2	2	2	2	1
59962	2	2	2	2	1
59967	2	2	2	2	1
59968	2	2	2	2	1

OBSERVATION SCORE, UNLESS STATED OTHERWISE

SENSORY OBSERVATIONS

DOSE GROUP: 3
DOSE LEVEL: 700 MG/KG SEX: FEMALES
TEST PERIOD: DAY 7

ANIMAL NUMBER	APPROACH RESPONSE	TOUCH RESPONSE	STARTLE RESPONSE	TAIL PINCH RESPONSE	OLFACTORY ORIENTATION
59918	2	2	2	3*	2
59925	2	2	2	2	2
59930	2	2	2	2	2
59931	2	3	2	3*	2
59932	2	2	2	3*	2
59935	2	2	2	2	2
59940	2	2	2	3*	2
59944	2	2	2	3*	2
59945	2	2	2	3*	2
59948	2	2	2	3*	2
59959	2	2	2	2	2
59963	2	2	2	2	2

OBSERVATION SCORE, UNLESS STATED OTHERWISE
* = ANIMAL VOCALIZED

SENSORY OBSERVATIONS

DOSE GROUP: 3
DOSE LEVEL: 700 MG/KG SEX: FEMALES
TEST PERIOD: DAY 7

ANIMAL NUMBER	PUPIL RESPONSE	EYEBLINK RESPONSE	FORELIMB EXTENSION	HINDLIMB EXTENSION	AIR RIGHTING REFLEX
59918	2	2	2	2	1
59925	2	2	2	2	1
59930	2	2	2	2	1
59931	2	2	2	2	1
59932	2	2	2	2	1
59935	2	2	2	2	1
59940	2	2	2	2	1
59944	2	2	2	2	1
59945	2	2	2	2	1
59948	2	2	2	2	1
59959	2	2	2	2	1
59963	2	2	2	2	1

OBSERVATION SCORE, UNLESS STATED OTHERWISE

SENSORY OBSERVATIONS

DOSE GROUP: 4
DOSE LEVEL: 2000 MG/KG SEX: FEMALES
TEST PERIOD: DAY 7

ANIMAL NUMBER	APPROACH RESPONSE	TOUCH RESPONSE	STARTLE RESPONSE	TAIL PINCH RESPONSE	OLFACTORY ORIENTATION
59921	2	2	2	3*	2
59928	2	2	2	2	2
59929	2	2	2	2	2
59934	2	2	2	3*	2
59938	2	2	2	2	2
59943	2	2	2	3*	2
59946	2	2	2	3*	2
59947	2	2	2	2	2
59951	2	2	2	3*	2
59955	2	2	2	2	2
59964	2	2	2	2	2
59966	2	2	3	2	2

OBSERVATION SCORE, UNLESS STATED OTHERWISE
* = ANIMAL VOCALIZED

SENSORY OBSERVATIONS

DOSE GROUP: 4
DOSE LEVEL: 2000 MG/KG SEX: FEMALES
TEST PERIOD: DAY 7

ANIMAL NUMBER	PUPIL RESPONSE	EYEBLINK RESPONSE	FORELIMB EXTENSION	HINDLIMB EXTENSION	AIR RIGHTING REFLEX
59921	2	2	2	2	1
59928	2	2	2	2	1
59929	2	2	2	2	1
59934	2	2	2	2	1
59938	2	2	2	2	1
59943	2	2	2	2	1
59946	2	2	2	2	1
59947	2-A	2	2	2	1
59951	2	2	2	2	1
59955	2	2	2	2	1
59964	2	2	2	2	1
59966	2	2	2	2	1

OBSERVATION SCORE, UNLESS STATED OTHERWISE
A = UNILATERAL

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TABLE I19 (SENSORY OBSERVATIONS - DAY 14)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL FUNCTIONAL OBSERVATIONAL BATTERY DATA

SENSORY OBSERVATIONS

DOSE GROUP: 1
DOSE LEVEL: 0 MG/KG SEX: MALES
TEST PERIOD: DAY 14

ANIMAL NUMBER	APPROACH RESPONSE	TOUCH RESPONSE	STARTLE RESPONSE	TAIL PINCH RESPONSE	OLFACTORY ORIENTATION
59866	2	2	2	2	2
59867	2	2	2	2	2
59869	2	2	2	2	2
59870	2	2	2	2	2
59881	2	2	2	2	2
59884	2	2	2	2	2
59885	1	1	2	1	2
59891	2	2	2	2	2
59892	2	2	2	2	2
59901	2	2	2	2	2
59914	2	2	2	2	2
59915	2	2	2	2	2

OBSERVATION SCORE, UNLESS STATED OTHERWISE

TABLE I19 (SENSORY OBSERVATIONS - DAY 14)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL FUNCTIONAL OBSERVATIONAL BATTERY DATA

SENSORY OBSERVATIONS

DOSE GROUP: 1

DOSE LEVEL: 0 MG/KG SEX: MALES

TEST PERIOD: DAY 14

ANIMAL NUMBER	PUPIL RESPONSE	EYEBLINK RESPONSE	FORELIMB EXTENSION	HINDLIMB EXTENSION	AIR RIGHTING REFLEX
59866	2	2	2	2	1
59867	2	2	2	2	1
59869	2	2	1	2	1
59870	2	2	2	2	1
59881	2	2	2	2	1
59884	2	2	2	2	1
59885	2	2	2	2	1
59891	2	2	2	2	1
59892	2	2	2	1	1
59901	2	2	2	2	1
59914	2	2	2	2	1
59915	2	2	2	2	1

OBSERVATION SCORE, UNLESS STATED OTHERWISE

SENSORY OBSERVATIONS

DOSE GROUP: 2
DOSE LEVEL: 200 MG/KG SEX: MALES
TEST PERIOD: DAY 14

ANIMAL NUMBER	APPROACH RESPONSE	TOUCH RESPONSE	STARTLE RESPONSE	TAIL PINCH RESPONSE	OLFACTORY ORIENTATION
59865	2	2	2	2	2
59873	2	2	2	2	2
59875	2	2	2	2	2
59878	2	2	2	3	2
59879	2	2	2	2	2
59880	2	2	2	2	2
59882	2	2	2	2	2
59889	2	2	2	2	2
59893	2	2	2	2	2
59897	2	2	2	2	2
59911	2	2	2	2	2
59913	2	2	2	2	2

OBSERVATION SCORE, UNLESS STATED OTHERWISE

TABLE I19 (SENSORY OBSERVATIONS - DAY 14)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL FUNCTIONAL OBSERVATIONAL BATTERY DATA

SENSORY OBSERVATIONS

DOSE GROUP: 2

DOSE LEVEL: 200 MG/KG SEX: MALES

TEST PERIOD: DAY 14

ANIMAL NUMBER	PUPIL RESPONSE	EYEBLINK RESPONSE	FORELIMB EXTENSION	HINDLIMB EXTENSION	AIR RIGHTING REFLEX
59865	2	2	2	2	1
59873	2	2	2	2	1
59875	2	2	2	2	1
59878	2	2	2	2	1
59879	2	2	2	2	1
59880	2	2	2	2	1
59882	2	2	2	2	1
59889	2	2	2	2	1
59893	2	2	2	2	1
59897	2	2	2	2	1
59911	2	2	2	2	1
59913	2	2	2	2	1

OBSERVATION SCORE, UNLESS STATED OTHERWISE

SENSORY OBSERVATIONS

DOSE GROUP: 3
DOSE LEVEL: 700 MG/KG SEX: MALES
TEST PERIOD: DAY 14

ANIMAL NUMBER	APPROACH RESPONSE	TOUCH RESPONSE	STARTLE RESPONSE	TAIL PINCH RESPONSE	OLFACTORY ORIENTATION
59874	2	2	2	2	2
59894	2	2	2	2	2
59895	2	2	2	2	2
59896	2	1	2	2	2
59899	2	2	2	2	2
59902	2	2	3	2	2
59903	2	2	2	2	2
59904	2	2	2	2	2
59905	2	2	2	2	2
59909	2	2	2	2	2
59910	2	2	2	2	2
59916	2	2	2	2	2

OBSERVATION SCORE, UNLESS STATED OTHERWISE

TABLE I19 (SENSORY OBSERVATIONS - DAY 14)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL FUNCTIONAL OBSERVATIONAL BATTERY DATA

SENSORY OBSERVATIONS

DOSE GROUP: 3

DOSE LEVEL: 700 MG/KG SEX: MALES

TEST PERIOD: DAY 14

ANIMAL NUMBER	PUPIL RESPONSE	EYEBLINK RESPONSE	FORELIMB EXTENSION	HINDLIMB EXTENSION	AIR RIGHTING REFLEX
59874	2	2	2	2	1
59894	2	2	2	2	1
59895	2	2	2	2	1
59896	2	2	2	2	1
59899	2	2	2	2	1
59902	2	2	2	2	1
59903	2	2	2	2	1
59904	2	2	2	2	1
59905	2	2	2	2	1
59909	2	2	2	2	1
59910	2	2	2	2	1
59916	2	2	2	2	1

OBSERVATION SCORE, UNLESS STATED OTHERWISE

SENSORY OBSERVATIONS

DOSE GROUP: 4
DOSE LEVEL: 2000 MG/KG SEX: MALES
TEST PERIOD: DAY 14

ANIMAL NUMBER	APPROACH RESPONSE	TOUCH RESPONSE	STARTLE RESPONSE	TAIL PINCH RESPONSE	OLFACTORY ORIENTATION
59876	2	2	2	2	2
59883	2	2	2	2	2
59886	2	2	2	2	2
59887	2	2	2	3*	2
59890	2	2	2	2	2
59898	2	2	2	2	2
59900	2	2	2	2	2
59906	2	2	2	2	2
59907	2	2	2	2	2
59908	2	2	2	2	2
59912	2	2	2	2	2
59917	2	2	2	2	2

OBSERVATION SCORE, UNLESS STATED OTHERWISE
* = ANIMAL VOCALIZED

SENSORY OBSERVATIONS

DOSE GROUP: 4
DOSE LEVEL: 2000 MG/KG SEX: MALES
TEST PERIOD: DAY 14

ANIMAL NUMBER	PUPIL RESPONSE	EYEBLINK RESPONSE	FORELIMB EXTENSION	HINDLIMB EXTENSION	AIR RIGHTING REFLEX
59876	2	2	2	2	1
59883	2	2	2	2	1
59886	2	2	2	2	1
59887	2	2	2	2	1
59890	2	2	2	2	1
59898	2	2	2	2	1
59900	2	2	2	2	1
59906	2	2	2	2	1
59907	2	2	2	2	1
59908	2	2	2	2	1
59912	2	2	2	2	1
59917	2	2	2	2	1

OBSERVATION SCORE, UNLESS STATED OTHERWISE

SENSORY OBSERVATIONS

DOSE GROUP: 1
DOSE LEVEL: 0 MG/KG SEX: FEMALES
TEST PERIOD: DAY 14

ANIMAL NUMBER	APPROACH RESPONSE	TOUCH RESPONSE	STARTLE RESPONSE	TAIL PINCH RESPONSE	OLFACTORY ORIENTATION
59919	2	2	2	2	2
59920	2	2	2	3*	2
59923	2	2	2	2	2
59924	2	2	2	2	2
59933	2	2	2	1	2
59939	2	2	2	2	2
59941	2	2	2	2	2
59942	2	2	2	2	2
59950	2	2	2	2	2
59956	2	2	2	2	2
59969	2	2	2	2	2
59970	2	2	3	2	2

OBSERVATION SCORE, UNLESS STATED OTHERWISE
* = ANIMAL VOCALIZED

SENSORY OBSERVATIONS

DOSE GROUP: 1
DOSE LEVEL: 0 MG/KG SEX: FEMALES
TEST PERIOD: DAY 14

ANIMAL NUMBER	PUPIL RESPONSE	EYEBLINK RESPONSE	FORELIMB EXTENSION	HINDLIMB EXTENSION	AIR RIGHTING REFLEX
59919	2	2	2	2	1
59920	2	2	2	2	1
59923	2	2	2	2	1
59924	2	2	2	2	1
59933	2	2	2	2	1
59939	2	2	2	2	1
59941	2	2	1	2	1
59942	2	2	2	2	1
59950	2	2	2	2	1
59956	2	2	2	2	1
59969	2	2	2	2	1
59970	2	2	2	2	1

OBSERVATION SCORE, UNLESS STATED OTHERWISE

SENSORY OBSERVATIONS

DOSE GROUP: 2
DOSE LEVEL: 200 MG/KG SEX: FEMALES
TEST PERIOD: DAY 14

ANIMAL NUMBER	APPROACH RESPONSE	TOUCH RESPONSE	STARTLE RESPONSE	TAIL PINCH RESPONSE	OLFACTORY ORIENTATION
59922	2	2	3*	3*	2
59926	2	2	2	2	2
59927	2	2	2	2	2
59936	2	2	2	2	2
59937	2	2	2	3	2
59949	2	2	2	3	2
59952	2	2	2	2	2
59954	2	2	2	2	2
59958	3	3*	2	2	2
59962	2	2	2	2	2
59967	2	2	2	2	2
59968	2	2	2	3*	2

OBSERVATION SCORE, UNLESS STATED OTHERWISE
* = ANIMAL VOCALIZED

SENSORY OBSERVATIONS

DOSE GROUP: 2
DOSE LEVEL: 200 MG/KG SEX: FEMALES
TEST PERIOD: DAY 14

ANIMAL NUMBER	PUPIL RESPONSE	EYEBLINK RESPONSE	FORELIMB EXTENSION	HINDLIMB EXTENSION	AIR RIGHTING REFLEX
59922	2	2	2	1	1
59926	2	2	2	2	1
59927	2	2	2	2	1
59936	2	2	2	2	1
59937	2	2	2	2	1
59949	2	2	2	2	1
59952	2	2	2	2	1
59954	2	2	2	2	1
59958	2	2	2	2	1
59962	2	2	2	2	1
59967	2	2	2	2	1
59968	2	2	2	2	1

OBSERVATION SCORE, UNLESS STATED OTHERWISE

SENSORY OBSERVATIONS

DOSE GROUP: 3
DOSE LEVEL: 700 MG/KG SEX: FEMALES
TEST PERIOD: DAY 14

ANIMAL NUMBER	APPROACH RESPONSE	TOUCH RESPONSE	STARTLE RESPONSE	TAIL PINCH RESPONSE	OLFACTORY ORIENTATION
59918	2	2	2	2	2
59925	2	2	2	2	2
59930	2	2	2	2	2
59931	2	2	2	3*	2
59932	2	2	2	2	2
59935	2	2	2	2	2
59940	2	2	2	2	2
59944	2	2	2	3*	2
59945	2	2	2	2	2
59948	2	2	2	2	2
59959	2	2	2	2	2
59963	2	2	2	2	2

OBSERVATION SCORE, UNLESS STATED OTHERWISE
* = ANIMAL VOCALIZED

TABLE I19 (SENSORY OBSERVATIONS - DAY 14)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL FUNCTIONAL OBSERVATIONAL BATTERY DATA

SENSORY OBSERVATIONS

DOSE GROUP: 3

DOSE LEVEL: 700 MG/KG SEX: FEMALES

TEST PERIOD: DAY 14

ANIMAL NUMBER	PUPIL RESPONSE	EYEBLINK RESPONSE	FORELIMB EXTENSION	HINDLIMB EXTENSION	AIR RIGHTING REFLEX
59918	2	2	2	2	1
59925	2	2	2	2	1
59930	2	2	2	2	1
59931	2	2	2	2	1
59932	2	2	2	2	1
59935	2	2	2	2	1
59940	2	2	2	2	1
59944	2	2	2	2	1
59945	2	2	2	2	1
59948	2	2	2	2	1
59959	2	2	2	2	1
59963	2	2	2	2	1

OBSERVATION SCORE, UNLESS STATED OTHERWISE

SENSORY OBSERVATIONS

DOSE GROUP: 4
DOSE LEVEL: 2000 MG/KG SEX: FEMALES
TEST PERIOD: DAY 14

ANIMAL NUMBER	APPROACH RESPONSE	TOUCH RESPONSE	STARTLE RESPONSE	TAIL PINCH RESPONSE	OLFACTORY ORIENTATION
59921	2	2	2	2	2
59928	2	2	2	2	2
59929	2	2	2	2	2
59934	2	2	2	3*	2
59938	2	2	2	2	2
59943	2	2	2	2	2
59946	2	2	2	2	2
59947	2	2	2	2	2
59951	2	2	2	2	2
59955	2	2	2	3*	2
59964	2	2	2	3	2
59966	2	2	2	2	2

OBSERVATION SCORE, UNLESS STATED OTHERWISE
* = ANIMAL VOCALIZED

SENSORY OBSERVATIONS

DOSE GROUP: 4
DOSE LEVEL: 2000 MG/KG SEX: FEMALES
TEST PERIOD: DAY 14

ANIMAL NUMBER	PUPIL RESPONSE	EYEBLINK RESPONSE	FORELIMB EXTENSION	HINDLIMB EXTENSION	AIR RIGHTING REFLEX
59921	2	2	2	2	1
59928	2	2	2	2	1
59929	2	2	2	2	1
59934	2	2	2	2	1
59938	2	2	2	2	1
59943	2	2	2	2	1
59946	2	2	2	2	1
59947	2-A	2	2	1	1
59951	2	2	2	2	1
59955	2	2	2	2	1
59964	2	2	2	2	1
59966	2	2	2	2	1

OBSERVATION SCORE, UNLESS STATED OTHERWISE
A = UNILATERAL

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TABLE I20 (NEUROMUSCULAR OBSERVATIONS - PRETEST)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL FUNCTIONAL OBSERVATIONAL BATTERY DATA

NEUROMUSCULAR OBSERVATIONS

DOSE GROUP: 1

DOSE LEVEL: 0 MG/KG SEX: MALES

TEST PERIOD: PRETEST

ANIMAL NUMBER	HINDLIMB EXTENSOR STRENGTH	FORELIMB GRIP STRENGTH (grams) 1	2	3	MEAN	S.D.	HINDLIMB GRIP STRENGTH (grams) 1	2	3	MEAN	S.D.
59866	3	260.	240.	195.	232.	33.3	110.	110.	55.	92.	31.8
59867	3	315.	345.	295.	318.	25.2	80.	60.	50.	63.	15.3
59869	3	350.	330.	285.	322.	33.3	70.	105.	60.	78.	23.6
59870	3	235.	190.	455.	293.	141.8	140.	145.	135.	140.	5.0
59881	3	270.	335.	380.	328.	55.3	90.	110.	60.	87.	25.2
59884	3	440.	465.	335.	413.	69.0	165.	125.	110.	133.	28.4
59885	3	450.	380.	325.	385.	62.6	80.	85.	145.	103.	36.2
59891	3	155.	485.	485.	375.	190.5	150.	110.	95.	118.	28.4
59892	3	280.	335.	305.	307.	27.5	145.	70.	115.	110.	37.7
59901	3	255.	260.	145.	220.	65.0	35.	105.	70.	70.	35.0
59914	3	365.	365.	355.	362.	5.8	130.	110.	150.	130.	20.0
59915	3	390.	400.	465.	418.	40.7	50.	110.	120.	93.	37.9
MEAN					331.1					101.4	
S.D.					63.61					25.29	
N					12					12	

OBSERVATION SCORE, UNLESS STATED OTHERWISE

NEUROMUSCULAR OBSERVATIONS

DOSE GROUP: 1
DOSE LEVEL: 0 MG/KG SEX: MALES
TEST PERIOD: PRETEST

ANIMAL NUMBER	ROTAROD PERFORMANCE (seconds)	HINDLIMB FOOTSPLAY (mm) 1	2	MEAN	S.D.
59866	24.0	18.	14.	16.	2.8
59867	120.0	56.	66.	61.	7.1
59869	120.0	18.	14.	16.	2.8
59870	120.0	32.	28.	30.	2.8
59881	12.0	9.	6.	8.	2.1
59884	49.0	69.	62.	66.	4.9
59885	87.0	25.	24.	25.	0.7
59891	33.0	53.	51.	52.	1.4
59892	33.0	21.	20.	21.	0.7
59901	27.0	47.	25.	36.	15.6
59914	25.0	19.	30.	25.	7.8
59915	34.0	35.	27.	31.	5.7
MEAN	57.0			32.3	
S.D.	42.20			18.40	
N	12			12	

TABLE I20 (NEUROMUSCULAR OBSERVATIONS - PRETEST)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL FUNCTIONAL OBSERVATIONAL BATTERY DATA

NEUROMUSCULAR OBSERVATIONS

DOSE GROUP: 2
DOSE LEVEL: 200 MG/KG SEX: MALES
TEST PERIOD: PRETEST

ANIMAL NUMBER	HINDLIMB EXTENSOR STRENGTH	FORELIMB GRIP STRENGTH (grams) 1	2	3	MEAN	S.D.	HINDLIMB GRIP STRENGTH (grams) 1	2	3	MEAN	S.D.
59865	3	395.	225.	270.	297.	88.1	75.	65.	40.	60.	18.0
59873	3	320.	390.	290.	333.	51.3	185.	165.	150.	167.	17.6
59875	3	445.	470.	390.	435.	40.9	100.	150.	110.	120.	26.5
59878	2	295.	385.	210.	297.	87.5	95.	60.	85.	80.	18.0
59879	3	120.	380.	380.	293.	150.1	85.	70.	55.	70.	15.0
59880	2	400.	395.	305.	367.	53.5	100.	60.	155.	105.	47.7
59882	3	215.	350.	390.	318.	91.7	100.	70.	115.	95.	22.9
59889	3	400.	320.	420.	380.	52.9	130.	95.	90.	105.	21.8
59893	3	155.	435.	205.	265.	149.3	90.	70.	140.	100.	36.1
59897	3	285.	400.	350.	345.	57.7	85.	100.	90.	92.	7.6
59911	2	105.	230.	355.	230.	125.0	75.	95.	70.	80.	13.2
59913	3	365.	370.	425.	387.	33.3	125.	110.	165.	133.	28.4
MEAN					328.9					100.6	
S.D.					57.43					29.25	
N					12					12	

OBSERVATION SCORE, UNLESS STATED OTHERWISE

NEUROMUSCULAR OBSERVATIONS

DOSE GROUP: 2
DOSE LEVEL: 200 MG/KG SEX: MALES
TEST PERIOD: PRETEST

ANIMAL NUMBER	ROTAROD PERFORMANCE (seconds)	HINDLIMB FOOTSPLAY (mm) 1	2	MEAN	S.D.
59865	120.0	56.	52.	54.	2.8
59873	120.0	37.	31.	34.	4.2
59875	120.0	64.	70.	67.	4.2
59878	120.0	51.	38.	45.	9.2
59879	8.0	28.	30.	29.	1.4
59880	120.0	31.	34.	33.	2.1
59882	120.0	70.	57.	64.	9.2
59889	28.0	16.	21.	19.	3.5
59893	25.0	12.	17.	15.	3.5
59897	15.0	45.	30.	38.	10.6
59911	116.0	21.	31.	26.	7.1
59913	10.0	31.	28.	30.	2.1
MEAN	76.8			37.8	
S.D.	52.93			16.63	
N	12			12	

TABLE I20 (NEUROMUSCULAR OBSERVATIONS - PRETEST)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL FUNCTIONAL OBSERVATIONAL BATTERY DATA

NEUROMUSCULAR OBSERVATIONS

DOSE GROUP: 3

DOSE LEVEL: 700 MG/KG SEX: MALES

TEST PERIOD: PRETEST

ANIMAL NUMBER	HINDLIMB EXTENSOR STRENGTH	FORELIMB GRIP STRENGTH (grams) 1	2	3	MEAN	S.D.	HINDLIMB GRIP STRENGTH (grams) 1	2	3	MEAN	S.D.
59874	3	310.	280.	240.	277.	35.1	85.	60.	45.	63.	20.2
59894	3	275.	290.	300.	288.	12.6	30.	90.	100.	73.	37.9
59895	3	190.	440.	385.	338.	131.4	135.	90.	170.	132.	40.1
59896	3	385.	525.	370.	427.	85.5	155.	240.	180.	192.	43.7
59899	3	205.	400.	425.	343.	120.5	80.	75.	115.	90.	21.8
59902	3	320.	215.	165.	233.	79.1	75.	55.	70.	67.	10.4
59903	3	515.	395.	405.	438.	66.6	195.	155.	215.	188.	30.6
59904	2	350.	420.	305.	358.	58.0	95.	135.	110.	113.	20.2
59905	2	330.	380.	255.	322.	62.9	45.	65.	55.	55.	10.0
59909	3	365.	255.	100.	240.	133.1	75.	40.	80.	65.	21.8
59910	3	280.	335.	210.	275.	62.6	70.	150.	90.	103.	41.6
59916	3	350.	335.	360.	348.	12.6	100.	90.	110.	100.	10.0
MEAN					323.9					103.4	
S.D.					65.46					46.52	
N					12					12	

OBSERVATION SCORE, UNLESS STATED OTHERWISE

NEUROMUSCULAR OBSERVATIONS

DOSE GROUP: 3
DOSE LEVEL: 700 MG/KG SEX: MALES
TEST PERIOD: PRETEST

ANIMAL NUMBER	ROTAROD PERFORMANCE (seconds)	HINDLIMB FOOTSPLAY (mm) 1	2	MEAN	S.D.
59874	1.0	7.	7.	7.	0.0
59894	14.0	19.	21.	20.	1.4
59895	22.0	61.	59.	60.	1.4
59896	120.0	55.	49.	52.	4.2
59899	120.0	24.	15.	20.	6.4
59902	120.0	61.	64.	63.	2.1
59903	120.0	45.	38.	42.	4.9
59904	120.0	69.	69.	69.	0.0
59905	120.0	10.	6.	8.	2.8
59909	91.0	60.	53.	57.	4.9
59910	17.0	11.	15.	13.	2.8
59916	10.0	25.	21.	23.	2.8
MEAN	72.9			36.2	
S.D.	53.89			23.28	
N	12			12	

NEUROMUSCULAR OBSERVATIONS

DOSE GROUP: 4
DOSE LEVEL: 2000 MG/KG SEX: MALES
TEST PERIOD: PRETEST

ANIMAL NUMBER	HINDLIMB EXTENSOR STRENGTH	FORELIMB GRIP STRENGTH (grams) 1	2	3	MEAN	S.D.	HINDLIMB GRIP STRENGTH (grams) 1	2	3	MEAN	S.D.
59876	3	400.	405.	425.	410.	13.2	180.	95.	165.	147.	45.4
59883	3	360.	320.	260.	313.	50.3	125.	145.	60.	110.	44.4
59886	2	220.	270.	210.	233.	32.1	40.	35.	55.	43.	10.4
59887	2	255.	240.	150.	215.	56.8	85.	60.	80.	75.	13.2
59890	3	405.	415.	330.	383.	46.5	85.	85.	70.	80.	8.7
59898	3	505.	445.	395.	448.	55.1	125.	105.	85.	105.	20.0
59900	3	175.	245.	455.	292.	145.7	165.	40.	45.	83.	70.8
59906	3	510.	380.	395.	428.	71.1	135.	90.	100.	108.	23.6
59907	2	385.	380.	255.	340.	73.7	105.	65.	50.	73.	28.4
59908	3	105.	200.	235.	180.	67.3	95.	80.	115.	97.	17.6
59912	3	355.	360.	310.	342.	27.5	80.	35.	75.	63.	24.7
59917	3	425.	190.	385.	333.	125.7	225.	120.	105.	150.	65.4
MEAN					326.4					94.5	
S.D.					85.12					31.92	
N					12					12	

OBSERVATION SCORE, UNLESS STATED OTHERWISE

NEUROMUSCULAR OBSERVATIONS

DOSE GROUP: 4
DOSE LEVEL: 2000 MG/KG SEX: MALES
TEST PERIOD: PRETEST

ANIMAL NUMBER	ROTAROD PERFORMANCE (seconds)	HINDLIMB FOOTSPLAY (mm) 1	2	MEAN	S.D.
59876	40.0	55.	52.	54.	2.1
59883	26.0	49.	45.	47.	2.8
59886	62.0	29.	34.	32.	3.5
59887	12.0	5.	5.	5.	0.0
59890	120.0	52.	57.	55.	3.5
59898	120.0	33.	26.	30.	4.9
59900	13.0	28.	24.	26.	2.8
59906	8.0	15.	18.	17.	2.1
59907	12.0	21.	14.	18.	4.9
59908	6.0	12.	14.	13.	1.4
59912	120.0	26.	16.	21.	7.1
59917	120.0	26.	60.	43.	24.0
MEAN	54.9			30.1	
S.D.	50.53			16.48	
N	12			12	

NEUROMUSCULAR OBSERVATIONS

DOSE GROUP: 1
DOSE LEVEL: 0 MG/KG SEX: FEMALES
TEST PERIOD: PRETEST

ANIMAL NUMBER	HINDLIMB EXTENSOR STRENGTH	FORELIMB GRIP STRENGTH (grams) 1	2	3	MEAN	S.D.	HINDLIMB GRIP STRENGTH (grams) 1	2	3	MEAN	S.D.
59919	3	235.	390.	330.	318.	78.2	50.	105.	55.	70.	30.4
59920	3	350.	375.	410.	378.	30.1	95.	80.	100.	92.	10.4
59923	3	500.	470.	450.	473.	25.2	185.	165.	185.	178.	11.5
59924	3	385.	355.	435.	392.	40.4	145.	60.	80.	95.	44.4
59933	3	485.	480.	285.	417.	114.1	155.	125.	120.	133.	18.9
59939	3	355.	450.	430.	412.	50.1	45.	100.	60.	68.	28.4
59941	3	225.	195.	275.	232.	40.4	75.	125.	70.	90.	30.4
59942	3	540.	560.	325.	475.	130.3	125.	65.	150.	113.	43.7
59950	3	535.	455.	455.	482.	46.2	150.	110.	110.	123.	23.1
59956	3	295.	315.	315.	308.	11.5	115.	130.	110.	118.	10.4
59969	3	495.	350.	460.	435.	75.7	80.	90.	80.	83.	5.8
59970	3	385.	375.	385.	382.	5.8	170.	200.	195.	188.	16.1
MEAN					392.0					112.6	
S.D.					75.59					38.66	
N					12					12	

OBSERVATION SCORE, UNLESS STATED OTHERWISE

NEUROMUSCULAR OBSERVATIONS

DOSE GROUP: 1
DOSE LEVEL: 0 MG/KG SEX: FEMALES
TEST PERIOD: PRETEST

ANIMAL NUMBER	ROTAROD PERFORMANCE (seconds)	HINDLIMB FOOTSPLAY (mm) 1	2	MEAN	S.D.
59919	43.0	29.	34.	32.	3.5
59920	120.0	25.	25.	25.	0.0
59923	11.0	50.	56.	53.	4.2
59924	13.0	32.	41.	37.	6.4
59933	120.0	56.	51.	54.	3.5
59939	12.0	30.	35.	33.	3.5
59941	25.0	42.	40.	41.	1.4
59942	120.0	51.	55.	53.	2.8
59950	20.0	12.	10.	11.	1.4
59956	107.0	35.	34.	35.	0.7
59969	14.0	28.	39.	34.	7.8
59970	24.0	33.	30.	32.	2.1
MEAN	52.4			36.7	
S.D.	48.39			12.49	
N	12			12	

NEUROMUSCULAR OBSERVATIONS

DOSE GROUP: 2
DOSE LEVEL: 200 MG/KG SEX: FEMALES
TEST PERIOD: PRETEST

ANIMAL NUMBER	HINDLIMB EXTENSOR STRENGTH	FORELIMB GRIP STRENGTH (grams) 1	2	3	MEAN	S.D.	HINDLIMB GRIP STRENGTH (grams) 1	2	3	MEAN	S.D.
59922	3	170.	345.	325.	280.	95.8	45.	115.	70.	77.	35.5
59926	3	340.	225.	210.	258.	71.1	95.	75.	70.	80.	13.2
59927	3	495.	355.	220.	357.	137.5	80.	95.	90.	88.	7.6
59936	3	345.	310.	440.	365.	67.3	45.	55.	75.	58.	15.3
59937	3	380.	160.	290.	277.	110.6	95.	150.	170.	138.	38.8
59949	3	405.	415.	370.	397.	23.6	75.	65.	110.	83.	23.6
59952	3	350.	325.	335.	337.	12.6	70.	85.	90.	82.	10.4
59954	3	435.	240.	445.	373.	115.6	150.	145.	55.	117.	53.5
59958	3	395.	265.	320.	327.	65.3	165.	180.	190.	178.	12.6
59962	3	295.	355.	315.	322.	30.6	90.	35.	90.	72.	31.8
59967	1	435.	420.	405.	420.	15.0	95.	145.	110.	117.	25.7
59968	3	355.	185.	265.	268.	85.0	100.	75.	50.	75.	25.0
MEAN					331.8					97.1	
S.D.					52.93					34.20	
N					12					12	

OBSERVATION SCORE, UNLESS STATED OTHERWISE

NEUROMUSCULAR OBSERVATIONS

DOSE GROUP: 2
DOSE LEVEL: 200 MG/KG SEX: FEMALES
TEST PERIOD: PRETEST

ANIMAL NUMBER	ROTAROD PERFORMANCE (seconds)	HINDLIMB FOOTSPLAY (mm) 1	2	MEAN	S.D.
59922	4.0	27.	27.	27.	0.0
59926	120.0	25.	18.	22.	4.9
59927	8.0	52.	46.	49.	4.2
59936	120.0	19.	19.	19.	0.0
59937	9.0	3.	11.	7.	5.7
59949	19.0	30.	29.	30.	0.7
59952	21.0	14.	8.	11.	4.2
59954	9.0	25.	24.	25.	0.7
59958	120.0	39.	31.	35.	5.7
59962	47.0	25.	21.	23.	2.8
59967	7.0	3.	3.	3.	0.0
59968	120.0	33.	36.	35.	2.1
MEAN	50.3			23.8	
S.D.	52.66			12.94	
N	12			12	

NEUROMUSCULAR OBSERVATIONS

DOSE GROUP: 3
DOSE LEVEL: 700 MG/KG SEX: FEMALES
TEST PERIOD: PRETEST

ANIMAL NUMBER	HINDLIMB EXTENSOR STRENGTH	FORELIMB GRIP STRENGTH (grams) 1	2	3	MEAN	S.D.	HINDLIMB GRIP STRENGTH (grams) 1	2	3	MEAN	S.D.
59918	3	120.	120.	185.	142.	37.5	30.	55.	80.	55.	25.0
59925	3	175.	245.	235.	218.	37.9	120.	175.	150.	148.	27.5
59930	3	215.	355.	280.	283.	70.1	155.	105.	110.	123.	27.5
59931	3	360.	480.	330.	390.	79.4	100.	110.	150.	120.	26.5
59932	3	240.	300.	365.	302.	62.5	145.	65.	100.	103.	40.1
59935	3	335.	525.	400.	420.	96.6	105.	100.	135.	113.	18.9
59940	3	440.	270.	345.	352.	85.2	120.	185.	140.	148.	33.3
59944	3	180.	325.	330.	278.	85.2	130.	155.	65.	117.	46.5
59945	3	355.	425.	340.	373.	45.4	215.	140.	150.	168.	40.7
59948	3	150.	285.	395.	277.	122.7	130.	105.	140.	125.	18.0
59959	3	410.	450.	415.	425.	21.8	150.	70.	175.	132.	54.8
59963	3	150.	350.	235.	245.	100.4	100.	105.	80.	95.	13.2
MEAN					308.8					120.6	
S.D.					85.95					28.99	
N					12					12	

OBSERVATION SCORE, UNLESS STATED OTHERWISE

NEUROMUSCULAR OBSERVATIONS

DOSE GROUP: 3
DOSE LEVEL: 700 MG/KG SEX: FEMALES
TEST PERIOD: PRETEST

ANIMAL NUMBER	ROTAROD PERFORMANCE (seconds)	HINDLIMB FOOTSPLAY (mm) 1	2	MEAN	S.D.
59918	11.0	7.	9.	8.	1.4
59925	10.0	45.	37.	41.	5.7
59930	120.0	42.	36.	39.	4.2
59931	120.0	36.	31.	34.	3.5
59932	81.0	36.	37.	37.	0.7
59935	12.0	35.	33.	34.	1.4
59940	120.0	53.	36.	45.	12.0
59944	10.0	35.	35.	35.	0.0
59945	96.0	20.	23.	22.	2.1
59948	7.0	17.	16.	17.	0.7
59959	11.0	40.	35.	38.	3.5
59963	16.0	11.	8.	10.	2.1
MEAN	51.2			30.0	
S.D.	50.86			12.48	
N	12			12	

NEUROMUSCULAR OBSERVATIONS

DOSE GROUP: 4
DOSE LEVEL: 2000 MG/KG SEX: FEMALES
TEST PERIOD: PRETEST

ANIMAL NUMBER	HINDLIMB EXTENSOR STRENGTH	FORELIMB GRIP STRENGTH (grams) 1	2	3	MEAN	S.D.	HINDLIMB GRIP STRENGTH (grams) 1	2	3	MEAN	S.D.
59921	3	410.	365.	275.	350.	68.7	65.	75.	85.	75.	10.0
59928	3	150.	260.	450.	287.	151.8	85.	95.	55.	78.	20.8
59929	3	310.	160.	235.	235.	75.0	285.	120.	185.	197.	83.1
59934	3	520.	400.	355.	425.	85.3	115.	60.	115.	97.	31.8
59938	3	215.	455.	390.	353.	124.1	175.	90.	90.	118.	49.1
59943	3	380.	200.	215.	265.	99.9	120.	150.	160.	143.	20.8
59946	3	390.	200.	350.	313.	100.2	105.	110.	120.	112.	7.6
59947	3	245.	245.	230.	240.	8.7	80.	90.	130.	100.	26.5
59951	3	310.	395.	420.	375.	57.7	185.	160.	140.	162.	22.5
59955	3	410.	295.	430.	378.	72.9	110.	160.	100.	123.	32.1
59964	3	530.	490.	470.	497.	30.6	115.	185.	120.	140.	39.1
59966	3	430.	325.	400.	385.	54.1	75.	145.	145.	122.	40.4
MEAN					341.9					122.3	
S.D.					78.03					34.85	
N					12					12	

OBSERVATION SCORE, UNLESS STATED OTHERWISE

NEUROMUSCULAR OBSERVATIONS

DOSE GROUP: 4
DOSE LEVEL: 2000 MG/KG SEX: FEMALES
TEST PERIOD: PRETEST

ANIMAL NUMBER	ROTAROD PERFORMANCE (seconds)	HINDLIMB FOOTSPLAY (mm) 1	2	MEAN	S.D.
59921	120.0	66.	69.	68.	2.1
59928	20.0	17.	23.	20.	4.2
59929	20.0	48.	48.	48.	0.0
59934	120.0	51.	48.	50.	2.1
59938	120.0	50.	49.	50.	0.7
59943	120.0	44.	36.	40.	5.7
59946	8.0	34.	26.	30.	5.7
59947	120.0	31.	36.	34.	3.5
59951	120.0	43.	32.	38.	7.8
59955	30.0	17.	11.	14.	4.2
59964	9.0	45.	42.	44.	2.1
59966	13.0	36.	30.	33.	4.2
MEAN	68.3			39.1	
S.D.	54.26			14.52	
N	12			12	

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TABLE I21 (NEUROMUSCULAR OBSERVATIONS - DAY 0)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL FUNCTIONAL OBSERVATIONAL BATTERY DATA

NEUROMUSCULAR OBSERVATIONS

DOSE GROUP: 1

DOSE LEVEL: 0 MG/KG SEX: MALES

TEST PERIOD: DAY 0

ANIMAL NUMBER	HINDLIMB EXTENSOR STRENGTH	FORELIMB GRIP STRENGTH (grams) 1	2	3	MEAN	S.D.	HINDLIMB GRIP STRENGTH (grams) 1	2	3	MEAN	S.D.
59866	3	565.	475.	445.	495.	62.4	115.	105.	165.	128.	32.1
59867	3	300.	345.	245.	297.	50.1	90.	115.	85.	97.	16.1
59869	3	490.	455.	470.	472.	17.6	50.	85.	110.	82.	30.1
59870	3	615.	530.	505.	550.	57.7	125.	100.	160.	128.	30.1
59881	3	315.	315.	350.	327.	20.2	150.	90.	85.	108.	36.2
59884	3	490.	440.	385.	438.	52.5	125.	110.	105.	113.	10.4
59885	3	255.	510.	425.	397.	129.8	160.	140.	165.	155.	13.2
59891	3	650.	505.	575.	577.	72.5	160.	180.	150.	163.	15.3
59892	3	425.	400.	270.	365.	83.2	85.	135.	120.	113.	25.7
59901	3	185.	430.	270.	295.	124.4	105.	125.	95.	108.	15.3
59914	3	425.	440.	340.	402.	53.9	115.	120.	140.	125.	13.2
59915	3	225.	410.	360.	332.	95.7	100.	105.	100.	102.	2.9
MEAN					412.3					118.5	
S.D.					95.59					23.13	
N					12					12	

OBSERVATION SCORE, UNLESS STATED OTHERWISE

NEUROMUSCULAR OBSERVATIONS

DOSE GROUP: 1
DOSE LEVEL: 0 MG/KG SEX: MALES
TEST PERIOD: DAY 0

ANIMAL NUMBER	ROTAROD PERFORMANCE (seconds)	HINDLIMB FOOTSPLAY (mm) 1	2	MEAN	S.D.
59866	120.0	41.	43.	42.	1.4
59867	120.0	57.	50.	54.	4.9
59869	120.0	18.	21.	20.	2.1
59870	120.0	20.	15.	18.	3.5
59881	1.0	6.	5.	6.	0.7
59884	21.0	25.	26.	26.	0.7
59885	120.0	16.	9.	13.	4.9
59891	22.0	43.	42.	43.	0.7
59892	120.0	21.	19.	20.	1.4
59901	120.0	47.	48.	48.	0.7
59914	120.0	30.	30.	30.	0.0
59915	120.0	8.	13.	11.	3.5
MEAN	93.7			27.6	
S.D.	47.91			15.75	
N	12			12	

TABLE I21 (NEUROMUSCULAR OBSERVATIONS - DAY 0)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL FUNCTIONAL OBSERVATIONAL BATTERY DATA

NEUROMUSCULAR OBSERVATIONS

DOSE GROUP: 2

DOSE LEVEL: 200 MG/KG SEX: MALES

TEST PERIOD: DAY 0

ANIMAL NUMBER	HINDLIMB EXTENSOR STRENGTH	FORELIMB GRIP STRENGTH (grams) 1	2	3	MEAN	S.D.	HINDLIMB GRIP STRENGTH (grams) 1	2	3	MEAN	S.D.
59865	3	395.	235.	210.	280.	100.4	90.	85.	55.	77.	18.9
59873	3	325.	410.	295.	343.	59.7	100.	155.	140.	132.	28.4
59875	3	385.	405.	435.	408.	25.2	135.	120.	95.	117.	20.2
59878	3	415.	305.	355.	358.	55.1	145.	160.	155.	153.	7.6
59879	3	525.	320.	490.	445.	109.7	160.	125.	180.	155.	27.8
59880	3	590.	425.	375.	463.	112.5	185.	80.	170.	145.	56.8
59882	3	450.	230.	450.	377.	127.0	120.	145.	180.	148.	30.1
59889	3	425.	510.	505.	480.	47.7	110.	170.	115.	132.	33.3
59893	3	480.	520.	470.	490.	26.5	170.	185.	120.	158.	34.0
59897	3	335.	595.	530.	487.	135.3	120.	155.	130.	135.	18.0
59911	3	480.	550.	290.	440.	134.5	130.	200.	145.	158.	36.9
59913	3	265.	345.	390.	333.	63.3	110.	100.	125.	112.	12.6
MEAN					408.7					135.2	
S.D.					69.58					23.90	
N					12					12	

OBSERVATION SCORE, UNLESS STATED OTHERWISE

NEUROMUSCULAR OBSERVATIONS

DOSE GROUP: 2
DOSE LEVEL: 200 MG/KG SEX: MALES
TEST PERIOD: DAY 0

ANIMAL NUMBER	ROTAROD PERFORMANCE (seconds)	HINDLIMB FOOTSPLAY (mm) 1	2	MEAN	S.D.
59865	120.0	57.	41.	49.	11.3
59873	120.0	18.	19.	19.	0.7
59875	120.0	14.	15.	15.	0.7
59878	120.0	15.	20.	18.	3.5
59879	120.0	45.	51.	48.	4.2
59880	76.0	49.	40.	45.	6.4
59882	120.0	74.	65.	70.	6.4
59889	120.0	28.	28.	28.	0.0
59893	95.0	11.	15.	13.	2.8
59897	120.0	52.	56.	54.	2.8
59911	120.0	34.	29.	32.	3.5
59913	12.0	35.	26.	31.	6.4
MEAN	105.3			35.2	
S.D.	32.49			17.97	
N	12			12	

TABLE I21 (NEUROMUSCULAR OBSERVATIONS - DAY 0)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL FUNCTIONAL OBSERVATIONAL BATTERY DATA

NEUROMUSCULAR OBSERVATIONS

DOSE GROUP: 3

DOSE LEVEL: 700 MG/KG SEX: MALES

TEST PERIOD: DAY 0

ANIMAL NUMBER	HINDLIMB EXTENSOR STRENGTH	FORELIMB GRIP STRENGTH (grams) 1	2	3	MEAN	S.D.	HINDLIMB GRIP STRENGTH (grams) 1	2	3	MEAN	S.D.
59874	3	395.	305.	395.	365.	52.0	120.	75.	90.	95.	22.9
59894	3	255.	380.	265.	300.	69.5	210.	165.	145.	173.	33.3
59895	2	475.	575.	530.	527.	50.1	155.	140.	160.	152.	10.4
59896	3	385.	410.	350.	382.	30.1	120.	150.	110.	127.	20.8
59899	3	210.	420.	325.	318.	105.2	140.	85.	125.	117.	28.4
59902	3	485.	395.	375.	418.	58.6	120.	100.	115.	112.	10.4
59903	3	320.	375.	335.	343.	28.4	100.	95.	125.	107.	16.1
59904	3	520.	375.	375.	423.	83.7	165.	185.	125.	158.	30.6
59905	2	465.	390.	400.	418.	40.7	100.	100.	145.	115.	26.0
59909	2	280.	230.	340.	283.	55.1	90.	95.	110.	98.	10.4
59910	3	200.	380.	400.	327.	110.2	200.	135.	130.	155.	39.1
59916	3	360.	390.	265.	338.	65.3	145.	185.	95.	142.	45.1
MEAN					370.2					129.3	
S.D.					68.10					25.91	
N					12					12	

OBSERVATION SCORE, UNLESS STATED OTHERWISE

TABLE I21 (NEUROMUSCULAR OBSERVATIONS - DAY 0)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL FUNCTIONAL OBSERVATIONAL BATTERY DATA

NEUROMUSCULAR OBSERVATIONS

DOSE GROUP: 3
DOSE LEVEL: 700 MG/KG SEX: MALES
TEST PERIOD: DAY 0

ANIMAL NUMBER	ROTAROD PERFORMANCE (seconds)	HINDLIMB FOOTSPLAY (mm) 1	2	MEAN	S.D.
59874	8.0	9.	19.	14.	7.1
59894	120.0	23.	19.	21.	2.8
59895	12.0	31.	41.	36.	7.1
59896	120.0	40.	35.	38.	3.5
59899	120.0	38.	29.	34.	6.4
59902	120.0	72.	74.	73.	1.4
59903	43.0	20.	21.	21.	0.7
59904	120.0	63.	72.	68.	6.4
59905	106.0	5.	3.	4.	1.4
59909	50.0	32.	22.	27.	7.1
59910	120.0	17.	23.	20.	4.2
59916	17.0	16.	15.	16.	0.7
MEAN	79.7			31.0	
S.D.	48.92			20.88	
N	12			12	

TABLE I21 (NEUROMUSCULAR OBSERVATIONS - DAY 0)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL FUNCTIONAL OBSERVATIONAL BATTERY DATA

NEUROMUSCULAR OBSERVATIONS

DOSE GROUP: 4

DOSE LEVEL: 2000 MG/KG SEX: MALES

TEST PERIOD: DAY 0

ANIMAL NUMBER	HINDLIMB EXTENSOR STRENGTH	FORELIMB GRIP STRENGTH (grams) 1	2	3	MEAN	S.D.	HINDLIMB GRIP STRENGTH (grams) 1	2	3	MEAN	S.D.
59876	3	445.	430.	355.	410.	48.2	225.	150.	150.	175.	43.3
59883	3	295.	185.	310.	263.	68.3	165.	125.	150.	147.	20.2
59886	3	195.	425.	410.	343.	128.7	85.	110.	105.	100.	13.2
59887	2	320.	270.	395.	328.	62.9	110.	60.	125.	98.	34.0
59890	3	430.	410.	445.	428.	17.6	130.	110.	185.	142.	38.8
59898	3	495.	605.	420.	507.	93.1	190.	205.	115.	170.	48.2
59900	3	530.	525.	470.	508.	33.3	240.	125.	135.	167.	63.7
59906	3	275.	390.	250.	305.	74.7	155.	135.	155.	148.	11.5
59907	3	375.	360.	320.	352.	28.4	130.	155.	85.	123.	35.5
59908	3	280.	405.	250.	312.	82.2	135.	110.	120.	122.	12.6
59912	3	370.	315.	305.	330.	35.0	155.	90.	140.	128.	34.0
59917	3	210.	355.	475.	347.	132.7	175.	140.	210.	175.	35.0
MEAN					369.4					141.3	
S.D.					77.90					27.47	
N					12					12	

OBSERVATION SCORE, UNLESS STATED OTHERWISE

NEUROMUSCULAR OBSERVATIONS

DOSE GROUP: 4
DOSE LEVEL: 2000 MG/KG SEX: MALES
TEST PERIOD: DAY 0

ANIMAL NUMBER	ROTAROD PERFORMANCE (seconds)	HINDLIMB FOOTSPLAY (mm) 1	2	MEAN	S.D.
59876	120.0	50.	55.	53.	3.5
59883	120.0	42.	14.	28.	19.8
59886	36.0	31.	42.	37.	7.8
59887	8.0	5.	7.	6.	1.4
59890	120.0	41.	26.	34.	10.6
59898	120.0	7.	4.	6.	2.1
59900	120.0	42.	38.	40.	2.8
59906	120.0	26.	21.	24.	3.5
59907	19.0	10.	14.	12.	2.8
59908	120.0	23.	21.	22.	1.4
59912	120.0	23.	17.	20.	4.2
59917	120.0	44.	39.	42.	3.5
MEAN	95.3			27.0	
S.D.	45.18			14.80	
N	12			12	

TABLE I21 (NEUROMUSCULAR OBSERVATIONS - DAY 0)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL FUNCTIONAL OBSERVATIONAL BATTERY DATA

NEUROMUSCULAR OBSERVATIONS

DOSE GROUP: 1

DOSE LEVEL: 0 MG/KG SEX: FEMALES

TEST PERIOD: DAY 0

ANIMAL NUMBER	HINDLIMB EXTENSOR STRENGTH	FORELIMB GRIP STRENGTH (grams) 1	2	3	MEAN	S.D.	HINDLIMB GRIP STRENGTH (grams) 1	2	3	MEAN	S.D.
59919	3	440.	385.	350.	392.	45.4	110.	160.	120.	130.	26.5
59920	3	475.	555.	570.	533.	51.1	160.	145.	80.	128.	42.5
59923	3	285.	410.	350.	348.	62.5	125.	140.	115.	127.	12.6
59924	3	595.	410.	540.	515.	95.0	110.	70.	105.	95.	21.8
59933	3	585.	650.	310.	515.	180.5	165.	160.	95.	140.	39.1
59939	3	385.	410.	400.	398.	12.6	135.	125.	95.	118.	20.8
59941	3	575.	535.	455.	522.	61.1	95.	145.	240.	160.	73.7
59942	3	555.	280.	380.	405.	139.2	130.	115.	145.	130.	15.0
59950	3	345.	390.	380.	372.	23.6	95.	40.	45.	60.	30.4
59956	3	430.	375.	365.	390.	35.0	150.	130.	135.	138.	10.4
59969	3	505.	235.	535.	425.	165.2	210.	135.	150.	165.	39.7
59970	3	425.	485.	415.	442.	37.9	75.	155.	130.	120.	40.9
MEAN					438.1					125.9	
S.D.					65.84					27.75	
N					12					12	

OBSERVATION SCORE, UNLESS STATED OTHERWISE

TABLE I21 (NEUROMUSCULAR OBSERVATIONS - DAY 0)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL FUNCTIONAL OBSERVATIONAL BATTERY DATA

NEUROMUSCULAR OBSERVATIONS

DOSE GROUP: 1
DOSE LEVEL: 0 MG/KG SEX: FEMALES
TEST PERIOD: DAY 0

ANIMAL NUMBER	ROTAROD PERFORMANCE (seconds)	HINDLIMB FOOTSPLAY (mm) 1	2	MEAN	S.D.
59919	12.0	28.	28.	28.	0.0
59920	120.0	40.	40.	40.	0.0
59923	24.0	62.	53.	58.	6.4
59924	14.0	40.	33.	37.	4.9
59933	120.0	58.	66.	62.	5.7
59939	120.0	16.	15.	16.	0.7
59941	120.0	54.	57.	56.	2.1
59942	120.0	33.	35.	34.	1.4
59950	120.0	25.	29.	27.	2.8
59956	120.0	44.	49.	47.	3.5
59969	21.0	56.	44.	50.	8.5
59970	120.0	18.	16.	17.	1.4
MEAN	85.9			39.3	
S.D.	50.43			15.58	
N	12			12	

NEUROMUSCULAR OBSERVATIONS

DOSE GROUP: 2
DOSE LEVEL: 200 MG/KG SEX: FEMALES
TEST PERIOD: DAY 0

ANIMAL NUMBER	HINDLIMB EXTENSOR STRENGTH	FORELIMB GRIP STRENGTH (grams) 1	2	3	MEAN	S.D.	HINDLIMB GRIP STRENGTH (grams) 1	2	3	MEAN	S.D.
59922	3	380.	125.	330.	278.	135.1	120.	105.	80.	102.	20.2
59926	3	340.	385.	435.	387.	47.5	170.	120.	165.	152.	27.5
59927	3	565.	240.	415.	407.	162.7	90.	105.	140.	112.	25.7
59936	3	275.	425.	230.	310.	102.1	185.	90.	150.	142.	48.0
59937	3	385.	375.	335.	365.	26.5	110.	75.	110.	98.	20.2
59949	3	570.	440.	515.	508.	65.3	180.	165.	100.	148.	42.5
59952	3	345.	305.	310.	320.	21.8	95.	125.	120.	113.	16.1
59954	3	500.	505.	545.	517.	24.7	170.	145.	130.	148.	20.2
59958	3	200.	535.	295.	343.	172.7	130.	165.	145.	147.	17.6
59962	3	205.	340.	330.	292.	75.2	105.	130.	115.	117.	12.6
59967	2	515.	335.	420.	423.	90.0	190.	95.	140.	142.	47.5
59968	3	275.	485.	520.	427.	132.5	110.	110.	95.	105.	8.7
MEAN					381.4					127.2	
S.D.					78.74					20.95	
N					12					12	

OBSERVATION SCORE, UNLESS STATED OTHERWISE

NEUROMUSCULAR OBSERVATIONS

DOSE GROUP: 2
DOSE LEVEL: 200 MG/KG SEX: FEMALES
TEST PERIOD: DAY 0

ANIMAL NUMBER	ROTAROD PERFORMANCE (seconds)	HINDLIMB FOOTSPLAY (mm) 1	2	MEAN	S.D.
59922	3.0	17.	15.	16.	1.4
59926	120.0	41.	39.	40.	1.4
59927	49.0	30.	23.	27.	4.9
59936	18.0	10.	12.	11.	1.4
59937	3.0	44.	50.	47.	4.2
59949	22.0	33.	26.	30.	4.9
59952	7.0	20.	24.	22.	2.8
59954	17.0	29.	26.	28.	2.1
59958	42.0	10.	14.	12.	2.8
59962	8.0	7.	10.	9.	2.1
59967	23.0	3.	6.	5.	2.1
59968	120.0	37.	29.	33.	5.7
MEAN	36.0			23.3	
S.D.	41.75			13.10	
N	12			12	

NEUROMUSCULAR OBSERVATIONS

DOSE GROUP: 3
DOSE LEVEL: 700 MG/KG SEX: FEMALES
TEST PERIOD: DAY 0

ANIMAL NUMBER	HINDLIMB EXTENSOR STRENGTH	FORELIMB GRIP STRENGTH (grams) 1	2	3	MEAN	S.D.	HINDLIMB GRIP STRENGTH (grams) 1	2	3	MEAN	S.D.
59918	3	195.	265.	215.	225.	36.1	125.	125.	115.	122.	5.8
59925	3	280.	225.	310.	272.	43.1	125.	140.	130.	132.	7.6
59930	2	415.	460.	340.	405.	60.6	135.	115.	130.	127.	10.4
59931	3	285.	295.	310.	297.	12.6	115.	145.	130.	130.	15.0
59932	3	290.	335.	255.	293.	40.1	50.	105.	140.	98.	45.4
59935	3	305.	345.	225.	292.	61.1	115.	140.	100.	118.	20.2
59940	3	220.	250.	375.	282.	82.2	165.	155.	190.	170.	18.0
59944	3	275.	150.	300.	242.	80.4	75.	120.	60.	85.	31.2
59945	3	635.	575.	525.	578.	55.1	200.	110.	155.	155.	45.0
59948	3	460.	255.	385.	367.	103.7	120.	180.	140.	147.	30.6
59959	3	360.	460.	490.	437.	68.1	120.	135.	110.	122.	12.6
59963	3	170.	275.	270.	238.	59.2	120.	160.	100.	127.	30.6
MEAN					327.3					127.8	
S.D.					102.98					22.95	
N					12					12	

OBSERVATION SCORE, UNLESS STATED OTHERWISE

NEUROMUSCULAR OBSERVATIONS

DOSE GROUP: 3
DOSE LEVEL: 700 MG/KG SEX: FEMALES
TEST PERIOD: DAY 0

ANIMAL NUMBER	ROTAROD PERFORMANCE (seconds)	HINDLIMB FOOTSPLAY (mm) 1	2	MEAN	S.D.
59918	120.0	7.	9.	8.	1.4
59925	7.0	40.	35.	38.	3.5
59930	120.0	41.	23.	32.	12.7
59931	120.0	11.	16.	14.	3.5
59932	120.0	34.	35.	35.	0.7
59935	36.0	15.	32.	24.	12.0
59940	120.0	43.	50.	47.	4.9
59944	30.0	20.	12.	16.	5.7
59945	120.0	54.	42.	48.	8.5
59948	14.0	2.	1.	2.	0.7
59959	120.0	55.	50.	53.	3.5
59963	31.0	12.	12.	12.	0.0
MEAN	79.8			27.4	
S.D.	50.20			17.15	
N	12			12	

TABLE I21 (NEUROMUSCULAR OBSERVATIONS - DAY 0)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL FUNCTIONAL OBSERVATIONAL BATTERY DATA

NEUROMUSCULAR OBSERVATIONS

DOSE GROUP: 4

DOSE LEVEL: 2000 MG/KG SEX: FEMALES

TEST PERIOD: DAY 0

ANIMAL NUMBER	HINDLIMB EXTENSOR STRENGTH	FORELIMB GRIP STRENGTH (grams) 1	2	3	MEAN	S.D.	HINDLIMB GRIP STRENGTH (grams) 1	2	3	MEAN	S.D.
59921	3	430.	525.	485.	480.	47.7	155.	105.	145.	135.	26.5
59928	3	455.	435.	460.	450.	13.2	150.	90.	195.	145.	52.7
59929	3	300.	285.	270.	285.	15.0	100.	125.	125.	117.	14.4
59934	3	395.	390.	450.	412.	33.3	115.	125.	120.	120.	5.0
59938	3	515.	290.	420.	408.	113.0	155.	175.	270.	200.	61.4
59943	3	205.	240.	260.	235.	27.8	100.	110.	140.	117.	20.8
59946	3	445.	510.	325.	427.	93.9	200.	160.	130.	163.	35.1
59947	3	390.	355.	360.	368.	18.9	160.	200.	175.	178.	20.2
59951	3	270.	495.	405.	390.	113.2	150.	85.	145.	127.	36.2
59955	3	500.	395.	515.	470.	65.4	95.	110.	100.	102.	7.6
59964	3	285.	480.	500.	422.	118.8	125.	170.	120.	138.	27.5
59966	3	480.	485.	230.	398.	145.8	135.	80.	175.	130.	47.7
MEAN					395.4					139.3	
S.D.					71.70					28.27	
N					12					12	

OBSERVATION SCORE, UNLESS STATED OTHERWISE

NEUROMUSCULAR OBSERVATIONS

DOSE GROUP: 4
DOSE LEVEL: 2000 MG/KG SEX: FEMALES
TEST PERIOD: DAY 0

ANIMAL NUMBER	ROTAROD PERFORMANCE (seconds)	HINDLIMB FOOTSPLAY (mm) 1	2	MEAN	S.D.
59921	120.0	63.	59.	61.	2.8
59928	120.0	38.	37.	38.	0.7
59929	26.0	22.	24.	23.	1.4
59934	120.0	40.	29.	35.	7.8
59938	120.0	40.	38.	39.	1.4
59943	120.0	35.	23.	29.	8.5
59946	24.0	23.	23.	23.	0.0
59947	19.0	15.	14.	15.	0.7
59951	120.0	49.	42.	46.	4.9
59955	8.0	20.	17.	19.	2.1
59964	120.0	18.	16.	17.	1.4
59966	8.0	14.	13.	14.	0.7
MEAN	77.1			29.9	
S.D.	53.29			14.32	
N	12			12	

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TABLE I22 (NEUROMUSCULAR OBSERVATIONS - DAY 7)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL FUNCTIONAL OBSERVATIONAL BATTERY DATA

NEUROMUSCULAR OBSERVATIONS

DOSE GROUP: 1

DOSE LEVEL: 0 MG/KG SEX: MALES

TEST PERIOD: DAY 7

ANIMAL NUMBER	HINDLIMB EXTENSOR STRENGTH	FORELIMB GRIP STRENGTH (grams) 1	2	3	MEAN	S.D.	HINDLIMB GRIP STRENGTH (grams) 1	2	3	MEAN	S.D.
59866	3	515.	300.	455.	423.	110.9	120.	140.	115.	125.	13.2
59867	3	365.	180.	485.	343.	153.7	150.	85.	100.	112.	34.0
59869	3	400.	495.	475.	457.	50.1	170.	150.	120.	147.	25.2
59870	3	600.	485.	710.	598.	112.5	175.	165.	145.	162.	15.3
59881	3	490.	430.	520.	480.	45.8	110.	160.	150.	140.	26.5
59884	3	455.	400.	380.	412.	38.8	165.	110.	160.	145.	30.4
59885	3	295.	520.	255.	357.	142.9	125.	245.	180.	183.	60.1
59891	3	715.	655.	830.	733.	88.9	235.	260.	240.	245.	13.2
59892	3	400.	360.	535.	432.	91.7	95.	95.	205.	132.	63.5
59901	3	530.	350.	335.	405.	108.5	195.	185.	120.	167.	40.7
59914	3	410.	345.	385.	380.	32.8	155.	135.	135.	142.	11.5
59915	3	205.	170.	405.	260.	126.8	115.	130.	120.	122.	7.6
MEAN					440.0					151.8	
S.D.					123.35					35.52	
N					12					12	

OBSERVATION SCORE, UNLESS STATED OTHERWISE

TABLE I22 (NEUROMUSCULAR OBSERVATIONS - DAY 7)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL FUNCTIONAL OBSERVATIONAL BATTERY DATA

NEUROMUSCULAR OBSERVATIONS

DOSE GROUP: 1
DOSE LEVEL: 0 MG/KG SEX: MALES
TEST PERIOD: DAY 7

ANIMAL NUMBER	ROTAROD PERFORMANCE (seconds)	HINDLIMB FOOTSPLAY (mm) 1	2	MEAN	S.D.
59866	120.0	31.	24.	28.	4.9
59867	120.0	34.	33.	34.	0.7
59869	120.0	38.	43.	41.	3.5
59870	120.0	38.	26.	32.	8.5
59881	2.0	21.	16.	19.	3.5
59884	27.0	34.	34.	34.	0.0
59885	120.0	31.	24.	28.	4.9
59891	120.0	59.	65.	62.	4.2
59892	120.0	23.	27.	25.	2.8
59901	120.0	74.	72.	73.	1.4
59914	120.0	36.	35.	36.	0.7
59915	120.0	16.	15.	16.	0.7
MEAN	102.4			35.7	
S.D.	41.41			16.60	
N	12			12	

TABLE I22 (NEUROMUSCULAR OBSERVATIONS - DAY 7)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL FUNCTIONAL OBSERVATIONAL BATTERY DATA

NEUROMUSCULAR OBSERVATIONS

DOSE GROUP: 2
DOSE LEVEL: 200 MG/KG SEX: MALES
TEST PERIOD: DAY 7

ANIMAL NUMBER	HINDLIMB EXTENSOR STRENGTH	FORELIMB GRIP STRENGTH (grams) 1	2	3	MEAN	S.D.	HINDLIMB GRIP STRENGTH (grams) 1	2	3	MEAN	S.D.
59865	3	215.	335.	295.	282.	61.1	150.	130.	135.	138.	10.4
59873	3	360.	335.	290.	328.	35.5	160.	130.	140.	143.	15.3
59875	3	360.	295.	400.	352.	53.0	120.	95.	130.	115.	18.0
59878	3	385.	260.	295.	313.	64.5	125.	130.	160.	138.	18.9
59879	3	585.	315.	585.	495.	155.9	190.	175.	145.	170.	22.9
59880	3	590.	485.	480.	518.	62.1	185.	150.	110.	148.	37.5
59882	3	610.	475.	615.	567.	79.4	150.	280.	115.	182.	86.9
59889	3	355.	245.	535.	378.	146.4	135.	145.	175.	152.	20.8
59893	3	680.	505.	625.	603.	89.5	210.	150.	185.	182.	30.1
59897	3	630.	505.	585.	573.	63.3	150.	210.	170.	177.	30.6
59911	3	540.	560.	510.	537.	25.2	195.	205.	185.	195.	10.0
59913	3	305.	280.	220.	268.	43.7	205.	100.	85.	130.	65.4
MEAN					434.5					155.8	
S.D.					125.54					24.80	
N					12					12	

OBSERVATION SCORE, UNLESS STATED OTHERWISE

TABLE I22 (NEUROMUSCULAR OBSERVATIONS - DAY 7)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL FUNCTIONAL OBSERVATIONAL BATTERY DATA

NEUROMUSCULAR OBSERVATIONS

DOSE GROUP: 2
DOSE LEVEL: 200 MG/KG SEX: MALES
TEST PERIOD: DAY 7

ANIMAL NUMBER	ROTAROD PERFORMANCE (seconds)	HINDLIMB FOOTSPLAY (mm) 1	2	MEAN	S.D.
59865	80.0	52.	41.	47.	7.8
59873	120.0	33.	34.	34.	0.7
59875	120.0	41.	38.	40.	2.1
59878	120.0	39.	28.	34.	7.8
59879	120.0	48.	42.	45.	4.2
59880	104.0	58.	43.	51.	10.6
59882	120.0	84.	88.	86.	2.8
59889	120.0	45.	34.	40.	7.8
59893	120.0	45.	39.	42.	4.2
59897	120.0	64.	56.	60.	5.7
59911	120.0	44.	53.	49.	6.4
59913	120.0	27.	26.	27.	0.7
MEAN	115.3			46.3	
S.D.	12.04			15.28	
N	12			12	

TABLE I22 (NEUROMUSCULAR OBSERVATIONS - DAY 7)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL FUNCTIONAL OBSERVATIONAL BATTERY DATA

NEUROMUSCULAR OBSERVATIONS

DOSE GROUP: 3

DOSE LEVEL: 700 MG/KG SEX: MALES

TEST PERIOD: DAY 7

ANIMAL NUMBER	HINDLIMB EXTENSOR STRENGTH	FORELIMB GRIP STRENGTH (grams) 1	2	3	MEAN	S.D.	HINDLIMB GRIP STRENGTH (grams) 1	2	3	MEAN	S.D.
59874	3	225.	300.	360.	295.	67.6	95.	65.	90.	83.	16.1
59894	3	385.	465.	340.	397.	63.3	215.	170.	130.	172.	42.5
59895	3	680.	705.	480.	622.	123.3	215.	180.	215.	203.	20.2
59896	3	375.	335.	330.	347.	24.7	135.	110.	130.	125.	13.2
59899	3	610.	345.	365.	440.	147.6	175.	155.	290.	207.	72.9
59902	3	540.	415.	425.	460.	69.5	105.	95.	90.	97.	7.6
59903	3	425.	360.	235.	340.	96.6	190.	130.	135.	152.	33.3
59904	3	635.	455.	435.	508.	110.2	175.	195.	165.	178.	15.3
59905	3	400.	330.	270.	333.	65.1	70.	85.	100.	85.	15.0
59909	3	190.	280.	370.	280.	90.0	105.	80.	105.	97.	14.4
59910	3	520.	540.	400.	487.	75.7	175.	210.	240.	208.	32.5
59916	3	465.	375.	410.	417.	45.4	175.	185.	235.	198.	32.1
MEAN					410.5					150.4	
S.D.					99.55					50.41	
N					12					12	

OBSERVATION SCORE, UNLESS STATED OTHERWISE

NEUROMUSCULAR OBSERVATIONS

DOSE GROUP: 3
DOSE LEVEL: 700 MG/KG SEX: MALES
TEST PERIOD: DAY 7

ANIMAL NUMBER	ROTAROD PERFORMANCE (seconds)	HINDLIMB FOOTSPLAY (mm) 1	2	MEAN	S.D.
59874	112.0	37.	43.	40.	4.2
59894	91.0	42.	37.	40.	3.5
59895	42.0	77.	78.	78.	0.7
59896	120.0	52.	57.	55.	3.5
59899	120.0	44.	41.	43.	2.1
59902	120.0	69.	70.	70.	0.7
59903	120.0	58.	52.	55.	4.2
59904	120.0	47.	47.	47.	0.0
59905	120.0	17.	19.	18.	1.4
59909	120.0	59.	51.	55.	5.7
59910	120.0	55.	68.	62.	9.2
59916	120.0	36.	31.	34.	3.5
MEAN	110.4			49.8	
S.D.	23.13			16.35	
N	12			12	

NEUROMUSCULAR OBSERVATIONS

DOSE GROUP: 4
DOSE LEVEL: 2000 MG/KG SEX: MALES
TEST PERIOD: DAY 7

ANIMAL NUMBER	HINDLIMB EXTENSOR STRENGTH	FORELIMB GRIP STRENGTH (grams) 1	2	3	MEAN	S.D.	HINDLIMB GRIP STRENGTH (grams) 1	2	3	MEAN	S.D.
59876	3	370.	415.	355.	380.	31.2	230.	170.	115.	172.	57.5
59883	3	295.	360.	405.	353.	55.3	175.	145.	165.	162.	15.3
59886	3	710.	615.	635.	653.	50.1	155.	180.	200.	178.	22.5
59887	3	365.	365.	240.	323.	72.2	100.	120.	100.	107.	11.5
59890	3	440.	425.	350.	405.	48.2	180.	170.	165.	172.	7.6
59898	3	710.	615.	510.	612.	100.0	255.	260.	160.	225.	56.3
59900	3	630.	620.	615.	622.	7.6	200.	190.	160.	183.	20.8
59906	3	345.	205.	325.	292.	75.7	145.	160.	95.	133.	34.0
59907	3	380.	345.	270.	332.	56.2	85.	95.	120.	100.	18.0
59908	3	435.	480.	515.	477.	40.1	185.	130.	170.	162.	28.4
59912	3	370.	290.	125.	262.	124.9	95.	115.	90.	100.	13.2
59917	3	585.	600.	590.	592.	7.6	230.	235.	220.	228.	7.6
MEAN					441.9					160.2	
S.D.					142.65					43.42	
N					12					12	

OBSERVATION SCORE, UNLESS STATED OTHERWISE

NEUROMUSCULAR OBSERVATIONS

DOSE GROUP: 4
DOSE LEVEL: 2000 MG/KG SEX: MALES
TEST PERIOD: DAY 7

ANIMAL NUMBER	ROTAROD PERFORMANCE (seconds)	HINDLIMB FOOTSPLAY (mm) 1	2	MEAN	S.D.
59876	120.0	55.	67.	61.	8.5
59883	120.0	47.	51.	49.	2.8
59886	120.0	48.	58.	53.	7.1
59887	120.0	38.	34.	36.	2.8
59890	120.0	38.	31.	35.	4.9
59898	120.0	29.	25.	27.	2.8
59900	120.0	26.	28.	27.	1.4
59906	120.0	40.	42.	41.	1.4
59907	120.0	40.	39.	40.	0.7
59908	120.0	49.	40.	45.	6.4
59912	120.0	36.	31.	34.	3.5
59917	120.0	69.	63.	66.	4.2
MEAN	120.0			42.8	
S.D.	0.00			12.47	
N	12			12	

TABLE I22 (NEUROMUSCULAR OBSERVATIONS - DAY 7)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL FUNCTIONAL OBSERVATIONAL BATTERY DATA

NEUROMUSCULAR OBSERVATIONS

DOSE GROUP: 1

DOSE LEVEL: 0 MG/KG SEX: FEMALES

TEST PERIOD: DAY 7

ANIMAL NUMBER	HINDLIMB EXTENSOR STRENGTH	FORELIMB GRIP STRENGTH (grams) 1	2	3	MEAN	S.D.	HINDLIMB GRIP STRENGTH (grams) 1	2	3	MEAN	S.D.
59919	3	280.	375.	205.	287.	85.2	165.	85.	125.	125.	40.0
59920	3	605.	610.	595.	603.	7.6	120.	150.	160.	143.	20.8
59923	3	190.	435.	435.	353.	141.5	185.	155.	120.	153.	32.5
59924	3	605.	465.	350.	473.	127.7	135.	150.	160.	148.	12.6
59933	3	640.	535.	475.	550.	83.5	95.	135.	105.	112.	20.8
59939	3	375.	260.	220.	285.	80.5	150.	100.	105.	118.	27.5
59941	3	485.	500.	295.	427.	114.3	110.	200.	155.	155.	45.0
59942	3	595.	460.	435.	497.	86.1	230.	165.	175.	190.	35.0
59950	3	470.	305.	340.	372.	86.9	70.	95.	85.	83.	12.6
59956	3	335.	135.	195.	222.	102.6	115.	105.	115.	112.	5.8
59969	3	570.	410.	455.	478.	82.5	340.	265.	255.	287.	46.5
59970	3	575.	580.	545.	567.	18.9	175.	165.	175.	172.	5.8
MEAN					426.2					149.8	
S.D.					122.70					52.19	
N					12					12	

OBSERVATION SCORE, UNLESS STATED OTHERWISE

TABLE I22 (NEUROMUSCULAR OBSERVATIONS - DAY 7)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL FUNCTIONAL OBSERVATIONAL BATTERY DATA

NEUROMUSCULAR OBSERVATIONS

DOSE GROUP: 1
DOSE LEVEL: 0 MG/KG SEX: FEMALES
TEST PERIOD: DAY 7

ANIMAL NUMBER	ROTAROD PERFORMANCE (seconds)	HINDLIMB FOOTSPLAY (mm) 1	2	MEAN	S.D.
59919	7.0	47.	48.	48.	0.7
59920	83.0	39.	47.	43.	5.7
59923	11.0	39.	57.	48.	12.7
59924	120.0	34.	34.	34.	0.0
59933	15.0	50.	38.	44.	8.5
59939	120.0	22.	20.	21.	1.4
59941	120.0	40.	31.	36.	6.4
59942	120.0	61.	57.	59.	2.8
59950	120.0	27.	37.	32.	7.1
59956	120.0	47.	55.	51.	5.7
59969	120.0	53.	51.	52.	1.4
59970	120.0	25.	20.	23.	3.5
MEAN	89.7			40.9	
S.D.	48.62			11.81	
N	12			12	

NEUROMUSCULAR OBSERVATIONS

DOSE GROUP: 2
DOSE LEVEL: 200 MG/KG SEX: FEMALES
TEST PERIOD: DAY 7

ANIMAL NUMBER	HINDLIMB EXTENSOR STRENGTH	FORELIMB GRIP STRENGTH (grams) 1	2	3	MEAN	S.D.	HINDLIMB GRIP STRENGTH (grams) 1	2	3	MEAN	S.D.
59922	3	430.	260.	345.	345.	85.0	230.	180.	155.	188.	38.2
59926	3	510.	395.	460.	455.	57.7	140.	235.	155.	177.	51.1
59927	3	360.	310.	210.	293.	76.4	115.	110.	120.	115.	5.0
59936	3	515.	290.	235.	347.	148.4	135.	130.	175.	147.	24.7
59937	3	340.	265.	365.	323.	52.0	125.	165.	140.	143.	20.2
59949	3	490.	335.	395.	407.	78.2	180.	135.	90.	135.	45.0
59952	3	480.	375.	330.	395.	77.0	130.	165.	140.	145.	18.0
59954	3	530.	360.	510.	467.	92.9	190.	250.	190.	210.	34.6
59958	3	215.	270.	315.	267.	50.1	275.	145.	205.	208.	65.1
59962	3	345.	280.	430.	352.	75.2	140.	115.	100.	118.	20.2
59967	3	660.	470.	475.	535.	108.3	150.	245.	210.	202.	48.0
59968	3	305.	425.	390.	373.	61.7	145.	95.	105.	115.	26.5
MEAN					379.9					158.6	
S.D.					76.82					36.60	
N					12					12	

OBSERVATION SCORE, UNLESS STATED OTHERWISE

NEUROMUSCULAR OBSERVATIONS

DOSE GROUP: 2
DOSE LEVEL: 200 MG/KG SEX: FEMALES
TEST PERIOD: DAY 7

ANIMAL NUMBER	ROTAROD PERFORMANCE (seconds)	HINDLIMB FOOTSPLAY (mm) 1	2	MEAN	S.D.
59922	45.0	17.	17.	17.	0.0
59926	120.0	52.	44.	48.	5.7
59927	120.0	51.	58.	55.	4.9
59936	32.0	20.	20.	20.	0.0
59937	31.0	18.	24.	21.	4.2
59949	34.0	51.	35.	43.	11.3
59952	66.0	28.	24.	26.	2.8
59954	120.0	23.	20.	22.	2.1
59958	120.0	15.	24.	20.	6.4
59962	120.0	15.	25.	20.	7.1
59967	120.0	19.	22.	21.	2.1
59968	120.0	33.	25.	29.	5.7
MEAN	87.3			28.5	
S.D.	41.34			12.80	
N	12			12	

NEUROMUSCULAR OBSERVATIONS

DOSE GROUP: 3
DOSE LEVEL: 700 MG/KG SEX: FEMALES
TEST PERIOD: DAY 7

ANIMAL NUMBER	HINDLIMB EXTENSOR STRENGTH	FORELIMB GRIP STRENGTH (grams) 1	2	3	MEAN	S.D.	HINDLIMB GRIP STRENGTH (grams) 1	2	3	MEAN	S.D.
59918	3	295.	215.	260.	257.	40.1	120.	205.	165.	163.	42.5
59925	3	690.	465.	525.	560.	116.5	195.	140.	240.	192.	50.1
59930	3	535.	450.	400.	462.	68.3	100.	115.	110.	108.	7.6
59931	3	440.	510.	520.	490.	43.6	185.	245.	160.	197.	43.7
59932	3	310.	345.	320.	325.	18.0	170.	145.	145.	153.	14.4
59935	3	320.	165.	455.	313.	145.1	155.	120.	170.	148.	25.7
59940	3	445.	515.	440.	467.	41.9	140.	75.	165.	127.	46.5
59944	3	340.	370.	425.	378.	43.1	235.	180.	110.	175.	62.6
59945	3	290.	590.	470.	450.	151.0	175.	215.	195.	195.	20.0
59948	3	230.	410.	285.	308.	92.2	125.	155.	115.	132.	20.8
59959	3	140.	120.	480.	247.	202.3	125.	165.	110.	133.	28.4
59963	3	300.	190.	260.	250.	55.7	170.	120.	135.	142.	25.7
MEAN					375.6					155.4	
S.D.					106.97					29.27	
N					12					12	

OBSERVATION SCORE, UNLESS STATED OTHERWISE

NEUROMUSCULAR OBSERVATIONS

DOSE GROUP: 3
DOSE LEVEL: 700 MG/KG SEX: FEMALES
TEST PERIOD: DAY 7

ANIMAL NUMBER	ROTAROD PERFORMANCE (seconds)	HINDLIMB FOOTSPLAY (mm) 1	2	MEAN	S.D.
59918	120.0	11.	10.	11.	0.7
59925	7.0	45.	43.	44.	1.4
59930	120.0	61.	38.	50.	16.3
59931	39.0	21.	20.	21.	0.7
59932	25.0	27.	26.	27.	0.7
59935	31.0	37.	28.	33.	6.4
59940	15.0	27.	19.	23.	5.7
59944	111.0	20.	16.	18.	2.8
59945	70.0	45.	50.	48.	3.5
59948	120.0	18.	15.	17.	2.1
59959	57.0	35.	32.	34.	2.1
59963	44.0	12.	12.	12.	0.0
MEAN	63.3			28.2	
S.D.	43.67			13.62	
N	12			12	

NEUROMUSCULAR OBSERVATIONS

DOSE GROUP: 4
DOSE LEVEL: 2000 MG/KG SEX: FEMALES
TEST PERIOD: DAY 7

ANIMAL NUMBER	HINDLIMB EXTENSOR STRENGTH	FORELIMB GRIP STRENGTH (grams) 1	2	3	MEAN	S.D.	HINDLIMB GRIP STRENGTH (grams) 1	2	3	MEAN	S.D.
59921	3	285.	275.	315.	292.	20.8	170.	145.	100.	138.	35.5
59928	3	440.	440.	425.	435.	8.7	90.	140.	205.	145.	57.7
59929	3	305.	390.	310.	335.	47.7	165.	165.	135.	155.	17.3
59934	3	335.	445.	425.	402.	58.6	130.	85.	140.	118.	29.3
59938	3	400.	400.	500.	433.	57.7	235.	165.	210.	203.	35.5
59943	3	475.	500.	535.	503.	30.1	170.	225.	145.	180.	40.9
59946	3	510.	355.	225.	363.	142.7	195.	125.	185.	168.	37.9
59947	3	445.	345.	330.	373.	62.5	165.	170.	145.	160.	13.2
59951	3	570.	285.	235.	363.	180.7	200.	140.	125.	155.	39.7
59955	3	405.	605.	280.	430.	163.9	130.	180.	145.	152.	25.7
59964	3	430.	510.	415.	452.	51.1	175.	120.	155.	150.	27.8
59966	3	190.	140.	315.	215.	90.1	80.	110.	90.	93.	15.3
MEAN					383.0					151.4	
S.D.					77.84					27.97	
N					12					12	

OBSERVATION SCORE, UNLESS STATED OTHERWISE

NEUROMUSCULAR OBSERVATIONS

DOSE GROUP: 4
DOSE LEVEL: 2000 MG/KG SEX: FEMALES
TEST PERIOD: DAY 7

ANIMAL NUMBER	ROTAROD PERFORMANCE (seconds)	HINDLIMB FOOTSPLAY (mm) 1	2	MEAN	S.D.
59921	120.0	49.	40.	45.	6.4
59928	11.0	35.	27.	31.	5.7
59929	47.0	16.	22.	19.	4.2
59934	120.0	16.	10.	13.	4.2
59938	120.0	37.	27.	32.	7.1
59943	120.0	50.	45.	48.	3.5
59946	120.0	46.	48.	47.	1.4
59947	39.0	36.	27.	32.	6.4
59951	7.0	19.	20.	20.	0.7
59955	87.0	45.	31.	38.	9.9
59964	120.0	47.	28.	38.	13.4
59966	9.0	45.	39.	42.	4.2
MEAN	76.7			33.8	
S.D.	49.92			11.52	
N	12			12	

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TABLE I23 (NEUROMUSCULAR OBSERVATIONS - DAY 14)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL FUNCTIONAL OBSERVATIONAL BATTERY DATA

NEUROMUSCULAR OBSERVATIONS

DOSE GROUP: 1

DOSE LEVEL: 0 MG/KG SEX: MALES

TEST PERIOD: DAY 14

ANIMAL NUMBER	HINDLIMB EXTENSOR STRENGTH	FORELIMB GRIP STRENGTH (grams) 1	2	3	MEAN	S.D.	HINDLIMB GRIP STRENGTH (grams) 1	2	3	MEAN	S.D.
59866	3	745.	540.	690.	658.	106.1	280.	225.	225.	243.	31.8
59867	3	245.	270.	365.	293.	63.3	205.	215.	205.	208.	5.8
59869	3	725.	815.	560.	700.	129.3	260.	325.	275.	287.	34.0
59870	3	615.	770.	775.	720.	91.0	195.	160.	190.	182.	18.9
59881	3	695.	355.	855.	635.	255.3	315.	225.	205.	248.	58.6
59884	3	475.	515.	495.	495.	20.0	190.	175.	255.	207.	42.5
59885	3	525.	440.	495.	487.	43.1	225.	130.	185.	180.	47.7
59891	3	745.	895.	770.	803.	80.4	300.	270.	195.	255.	54.1
59892	3	345.	570.	500.	472.	115.1	135.	115.	165.	138.	25.2
59901	3	625.	580.	595.	600.	22.9	270.	180.	190.	213.	49.3
59914	3	385.	280.	400.	355.	65.4	200.	150.	115.	155.	42.7
59915	3	270.	365.	425.	353.	78.2	170.	215.	195.	193.	22.5
MEAN					547.6					209.1	
S.D.					163.12					43.36	
N					12					12	

OBSERVATION SCORE, UNLESS STATED OTHERWISE

NEUROMUSCULAR OBSERVATIONS

DOSE GROUP: 1
DOSE LEVEL: 0 MG/KG SEX: MALES
TEST PERIOD: DAY 14

ANIMAL NUMBER	ROTAROD PERFORMANCE (seconds)	HINDLIMB FOOTSPLAY (mm) 1	2	MEAN	S.D.
59866	64.0	53.	38.	46.	10.6
59867	55.0	79.	86.	83.	4.9
59869	39.0	33.	46.	40.	9.2
59870	120.0	43.	40.	42.	2.1
59881	0.0	21.	22.	22.	0.7
59884	17.0	43.	44.	44.	0.7
59885	120.0	39.	34.	37.	3.5
59891	120.0	48.	58.	53.	7.1
59892	120.0	30.	33.	32.	2.1
59901	3.0	41.	37.	39.	2.8
59914	120.0	43.	40.	42.	2.1
59915	105.0	16.	20.	18.	2.8
MEAN	73.6			41.5	
S.D.	49.54			16.33	
N	12			12	

TABLE I23 (NEUROMUSCULAR OBSERVATIONS - DAY 14)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL FUNCTIONAL OBSERVATIONAL BATTERY DATA

NEUROMUSCULAR OBSERVATIONS

DOSE GROUP: 2

DOSE LEVEL: 200 MG/KG SEX: MALES

TEST PERIOD: DAY 14

ANIMAL NUMBER	HINDLIMB EXTENSOR STRENGTH	FORELIMB GRIP STRENGTH (grams) 1	2	3	MEAN	S.D.	HINDLIMB GRIP STRENGTH (grams) 1	2	3	MEAN	S.D.
59865	3	270.	285.	440.	332.	94.1	200.	170.	220.	197.	25.2
59873	3	505.	475.	425.	468.	40.4	175.	165.	210.	183.	23.6
59875	3	610.	595.	560.	588.	25.7	155.	145.	145.	148.	5.8
59878	3	620.	620.	505.	582.	66.4	215.	260.	290.	255.	37.7
59879	3	615.	515.	570.	567.	50.1	175.	220.	160.	185.	31.2
59880	3	440.	390.	470.	433.	40.4	210.	230.	185.	208.	22.5
59882	3	420.	825.	680.	642.	205.2	265.	215.	215.	232.	28.9
59889	3	300.	395.	495.	397.	97.5	235.	195.	150.	193.	42.5
59893	3	670.	480.	615.	588.	97.8	215.	150.	245.	203.	48.6
59897	3	320.	650.	485.	485.	165.0	290.	330.	290.	303.	23.1
59911	3	335.	710.	390.	478.	202.5	290.	170.	240.	233.	60.3
59913	3	520.	345.	305.	390.	114.3	260.	200.	180.	213.	41.6
MEAN					495.8					212.8	
S.D.					97.15					39.67	
N					12					12	

OBSERVATION SCORE, UNLESS STATED OTHERWISE

NEUROMUSCULAR OBSERVATIONS

DOSE GROUP: 2
DOSE LEVEL: 200 MG/KG SEX: MALES
TEST PERIOD: DAY 14

ANIMAL NUMBER	ROTAROD PERFORMANCE (seconds)	HINDLIMB FOOTSPLAY (mm) 1	2	MEAN	S.D.
59865	92.0	30.	26.	28.	2.8
59873	120.0	62.	59.	61.	2.1
59875	120.0	65.	64.	65.	0.7
59878	80.0	65.	44.	55.	14.8
59879	120.0	37.	33.	35.	2.8
59880	120.0	44.	41.	43.	2.1
59882	120.0	31.	27.	29.	2.8
59889	49.0	49.	52.	51.	2.1
59893	120.0	37.	29.	33.	5.7
59897	120.0	55.	44.	50.	7.8
59911	120.0	53.	47.	50.	4.2
59913	120.0	32.	28.	30.	2.8
MEAN	108.4			44.2	
S.D.	22.99			12.97	
N	12			12	

NEUROMUSCULAR OBSERVATIONS

DOSE GROUP: 3
DOSE LEVEL: 700 MG/KG SEX: MALES
TEST PERIOD: DAY 14

ANIMAL NUMBER	HINDLIMB EXTENSOR STRENGTH	FORELIMB GRIP STRENGTH (grams) 1	2	3	MEAN	S.D.	HINDLIMB GRIP STRENGTH (grams) 1	2	3	MEAN	S.D.
59874	3	200.	440.	370.	337.	123.4	160.	150.	120.	143.	20.8
59894	3	465.	535.	450.	483.	45.4	215.	170.	195.	193.	22.5
59895	3	750.	685.	675.	703.	40.7	175.	265.	230.	223.	45.4
59896	3	305.	405.	335.	348.	51.3	170.	145.	185.	167.	20.2
59899	3	505.	570.	235.	437.	177.6	220.	195.	195.	203.	14.4
59902	3	620.	370.	380.	457.	141.5	105.	115.	120.	113.	7.6
59903	3	440.	545.	370.	452.	88.1	245.	210.	225.	227.	17.6
59904	3	465.	235.	495.	398.	142.2	305.	240.	205.	250.	50.7
59905	3	465.	260.	435.	387.	110.7	225.	135.	120.	160.	56.8
59909	3	350.	545.	515.	470.	105.0	125.	240.	160.	175.	58.9
59910	3	560.	400.	545.	502.	88.4	155.	175.	190.	173.	17.6
59916	3	420.	360.	525.	435.	83.5	115.	160.	165.	147.	27.5
MEAN					450.8					181.2	
S.D.					94.62					39.58	
N					12					12	

OBSERVATION SCORE, UNLESS STATED OTHERWISE

NEUROMUSCULAR OBSERVATIONS

DOSE GROUP: 3
DOSE LEVEL: 700 MG/KG SEX: MALES
TEST PERIOD: DAY 14

ANIMAL NUMBER	ROTAROD PERFORMANCE (seconds)	HINDLIMB FOOTSPLAY (mm) 1	2	MEAN	S.D.
59874	64.0	33.	30.	32.	2.1
59894	120.0	35.	29.	32.	4.2
59895	34.0	78.	77.	78.	0.7
59896	120.0	55.	43.	49.	8.5
59899	120.0	63.	63.	63.	0.0
59902	120.0	34.	29.	32.	3.5
59903	120.0	59.	45.	52.	9.9
59904	75.0	55.	67.	61.	8.5
59905	56.0	11.	10.	11.	0.7
59909	120.0	80.	80.	80.	0.0
59910	110.0	53.	60.	57.	4.9
59916	120.0	23.	23.	23.	0.0
MEAN	98.3			47.5	
S.D.	31.73			21.69	
N	12			12	

TABLE I23 (NEUROMUSCULAR OBSERVATIONS - DAY 14)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL FUNCTIONAL OBSERVATIONAL BATTERY DATA

NEUROMUSCULAR OBSERVATIONS

DOSE GROUP: 4

DOSE LEVEL: 2000 MG/KG SEX: MALES

TEST PERIOD: DAY 14

ANIMAL NUMBER	HINDLIMB EXTENSOR STRENGTH	FORELIMB GRIP STRENGTH (grams) 1	2	3	MEAN	S.D.	HINDLIMB GRIP STRENGTH (grams) 1	2	3	MEAN	S.D.
59876	3	375.	530.	560.	488.	99.3	355.	270.	240.	288.	59.7
59883	3	570.	510.	385.	488.	94.4	300.	285.	335.	307.	25.7
59886	3	480.	580.	530.	530.	50.0	195.	205.	170.	190.	18.0
59887	3	440.	340.	395.	392.	50.1	175.	180.	205.	187.	16.1
59890	3	580.	415.	465.	487.	84.6	170.	85.	160.	138.	46.5
59898	3	635.	680.	385.	567.	158.9	205.	295.	290.	263.	50.6
59900	3	640.	575.	725.	647.	75.2	110.	230.	220.	187.	66.6
59906	3	405.	610.	425.	480.	113.0	195.	250.	250.	232.	31.8
59907	3	585.	395.	455.	478.	97.1	185.	165.	135.	162.	25.2
59908	3	315.	445.	625.	462.	155.7	210.	215.	175.	200.	21.8
59912	3	660.	470.	235.	455.	212.9	130.	155.	155.	147.	14.4
59917	3	395.	620.	445.	487.	118.1	275.	200.	255.	243.	38.8
MEAN					496.8					212.0	
S.D.					62.90					54.64	
N					12					12	

OBSERVATION SCORE, UNLESS STATED OTHERWISE

NEUROMUSCULAR OBSERVATIONS

DOSE GROUP: 4
DOSE LEVEL: 2000 MG/KG SEX: MALES
TEST PERIOD: DAY 14

ANIMAL NUMBER	ROTAROD PERFORMANCE (seconds)	HINDLIMB FOOTSPLAY (mm) 1	2	MEAN	S.D.
59876	56.0	61.	51.	56.	7.1
59883	76.0	73.	71.	72.	1.4
59886	117.0	41.	47.	44.	4.2
59887	120.0	43.	48.	46.	3.5
59890	2.0	43.	52.	48.	6.4
59898	120.0	18.	20.	19.	1.4
59900	120.0	35.	28.	32.	4.9
59906	120.0	18.	15.	17.	2.1
59907	120.0	23.	21.	22.	1.4
59908	120.0	60.	53.	57.	4.9
59912	120.0	55.	45.	50.	7.1
59917	120.0	74.	69.	72.	3.5
MEAN	100.9			44.6	
S.D.	37.65			18.87	
N	12			12	

NEUROMUSCULAR OBSERVATIONS

DOSE GROUP: 1
DOSE LEVEL: 0 MG/KG SEX: FEMALES
TEST PERIOD: DAY 14

ANIMAL NUMBER	HINDLIMB EXTENSOR STRENGTH	FORELIMB GRIP STRENGTH (grams) 1	2	3	MEAN	S.D.	HINDLIMB GRIP STRENGTH (grams) 1	2	3	MEAN	S.D.
59919	3	310.	280.	400.	330.	62.4	165.	190.	195.	183.	16.1
59920	3	470.	490.	415.	458.	38.8	165.	255.	155.	192.	55.1
59923	3	365.	525.	615.	502.	126.6	235.	275.	195.	235.	40.0
59924	3	460.	590.	445.	498.	79.7	175.	165.	120.	153.	29.3
59933	3	920.	615.	625.	720.	173.3	240.	120.	195.	185.	60.6
59939	3	635.	435.	470.	513.	106.8	160.	150.	150.	153.	5.8
59941	3	315.	590.	250.	385.	180.5	145.	200.	155.	167.	29.3
59942	3	695.	530.	630.	618.	83.1	215.	205.	150.	190.	35.0
59950	3	395.	215.	320.	310.	90.4	225.	70.	120.	138.	79.1
59956	3	245.	415.	300.	320.	86.7	180.	130.	150.	153.	25.2
59969	3	760.	725.	575.	687.	98.3	270.	280.	235.	262.	23.6
59970	3	470.	440.	490.	467.	25.2	205.	165.	165.	178.	23.1
MEAN					484.0					182.4	
S.D.					137.47					35.78	
N					12					12	

OBSERVATION SCORE, UNLESS STATED OTHERWISE

NEUROMUSCULAR OBSERVATIONS

DOSE GROUP: 1
DOSE LEVEL: 0 MG/KG SEX: FEMALES
TEST PERIOD: DAY 14

ANIMAL NUMBER	ROTAROD PERFORMANCE (seconds)	HINDLIMB FOOTSPLAY (mm) 1	2	MEAN	S.D.
59919	6.0	37.	50.	44.	9.2
59920	25.0	45.	50.	48.	3.5
59923	19.0	57.	49.	53.	5.7
59924	22.0	54.	50.	52.	2.8
59933	120.0	55.	51.	53.	2.8
59939	120.0	35.	24.	30.	7.8
59941	120.0	38.	50.	44.	8.5
59942	120.0	46.	45.	46.	0.7
59950	27.0	21.	16.	19.	3.5
59956	96.0	56.	35.	46.	14.8
59969	120.0	42.	36.	39.	4.2
59970	120.0	34.	28.	31.	4.2
MEAN	76.3			42.1	
S.D.	50.53			10.54	
N	12			12	

NEUROMUSCULAR OBSERVATIONS

DOSE GROUP: 2
DOSE LEVEL: 200 MG/KG SEX: FEMALES
TEST PERIOD: DAY 14

ANIMAL NUMBER	HINDLIMB EXTENSOR STRENGTH	FORELIMB GRIP STRENGTH (grams) 1	2	3	MEAN	S.D.	HINDLIMB GRIP STRENGTH (grams) 1	2	3	MEAN	S.D.
59922	3	275.	225.	335.	278.	55.1	195.	160.	135.	163.	30.1
59926	3	435.	605.	250.	430.	177.6	215.	250.	180.	215.	35.0
59927	3	440.	220.	280.	313.	113.7	175.	165.	150.	163.	12.6
59936	3	475.	245.	325.	348.	116.8	235.	230.	105.	190.	73.7
59937	3	335.	315.	210.	287.	67.1	195.	225.	210.	210.	15.0
59949	3	360.	480.	325.	388.	81.3	130.	155.	105.	130.	25.0
59952	3	385.	215.	285.	295.	85.4	280.	210.	235.	242.	35.5
59954	3	680.	535.	450.	555.	116.3	160.	230.	120.	170.	55.7
59958	3	410.	355.	375.	380.	27.8	230.	130.	265.	208.	70.1
59962	3	285.	625.	320.	410.	187.0	185.	160.	115.	153.	35.5
59967	3	580.	240.	490.	437.	176.2	155.	185.	245.	195.	45.8
59968	3	570.	530.	560.	553.	20.8	160.	125.	190.	158.	32.5
MEAN					389.5					183.1	
S.D.					94.38					32.13	
N					12					12	

OBSERVATION SCORE, UNLESS STATED OTHERWISE

NEUROMUSCULAR OBSERVATIONS

DOSE GROUP: 2
DOSE LEVEL: 200 MG/KG SEX: FEMALES
TEST PERIOD: DAY 14

ANIMAL NUMBER	ROTAROD PERFORMANCE (seconds)	HINDLIMB FOOTSPLAY (mm) 1	2	MEAN	S.D.
59922	2.0	12.	16.	14.	2.8
59926	120.0	38.	32.	35.	4.2
59927	120.0	48.	39.	44.	6.4
59936	120.0	34.	28.	31.	4.2
59937	19.0	62.	57.	60.	3.5
59949	120.0	40.	34.	37.	4.2
59952	120.0	25.	24.	25.	0.7
59954	120.0	67.	52.	60.	10.6
59958	120.0	15.	13.	14.	1.4
59962	120.0	46.	31.	39.	10.6
59967	120.0	20.	17.	19.	2.1
59968	120.0	62.	56.	59.	4.2
MEAN	101.8			36.4	
S.D.	42.78			16.94	
N	12			12	

NEUROMUSCULAR OBSERVATIONS

DOSE GROUP: 3
DOSE LEVEL: 700 MG/KG SEX: FEMALES
TEST PERIOD: DAY 14

ANIMAL NUMBER	HINDLIMB EXTENSOR STRENGTH	FORELIMB GRIP STRENGTH (grams) 1	2	3	MEAN	S.D.	HINDLIMB GRIP STRENGTH (grams) 1	2	3	MEAN	S.D.
59918	3	315.	205.	355.	292.	77.7	170.	185.	235.	197.	34.0
59925	3	510.	450.	470.	477.	30.6	200.	160.	140.	167.	30.6
59930	3	295.	540.	345.	393.	129.5	255.	215.	115.	195.	72.1
59931	3	475.	210.	415.	367.	139.0	200.	145.	150.	165.	30.4
59932	3	335.	305.	230.	290.	54.1	100.	165.	115.	127.	34.0
59935	3	420.	475.	535.	477.	57.5	160.	140.	160.	153.	11.5
59940	3	605.	320.	465.	463.	142.5	230.	165.	250.	215.	44.4
59944	3	465.	225.	555.	415.	170.6	285.	225.	265.	258.	30.6
59945	3	705.	650.	620.	658.	43.1	230.	210.	185.	208.	22.5
59948	3	300.	390.	385.	358.	50.6	185.	175.	160.	173.	12.6
59959	3	620.	390.	450.	487.	119.3	155.	245.	105.	168.	70.9
59963	3	260.	345.	555.	387.	151.8	125.	120.	195.	147.	41.9
MEAN					422.0					181.1	
S.D.					100.55					35.43	
N					12					12	

OBSERVATION SCORE, UNLESS STATED OTHERWISE

NEUROMUSCULAR OBSERVATIONS

DOSE GROUP: 3
DOSE LEVEL: 700 MG/KG SEX: FEMALES
TEST PERIOD: DAY 14

ANIMAL NUMBER	ROTAROD PERFORMANCE (seconds)	HINDLIMB FOOTSPLAY (mm) 1	2	MEAN	S.D.
59918	120.0	88.	78.	83.	7.1
59925	94.0	33.	38.	36.	3.5
59930	31.0	38.	24.	31.	9.9
59931	27.0	31.	32.	32.	0.7
59932	120.0	34.	30.	32.	2.8
59935	38.0	37.	41.	39.	2.8
59940	120.0	38.	37.	38.	0.7
59944	109.0	12.	20.	16.	5.7
59945	30.0	35.	34.	35.	0.7
59948	120.0	30.	22.	26.	5.7
59959	120.0	62.	52.	57.	7.1
59963	28.0	53.	48.	51.	3.5
MEAN	79.8			39.7	
S.D.	43.92			17.28	
N	12			12	

NEUROMUSCULAR OBSERVATIONS

DOSE GROUP: 4
DOSE LEVEL: 2000 MG/KG SEX: FEMALES
TEST PERIOD: DAY 14

ANIMAL NUMBER	HINDLIMB EXTENSOR STRENGTH	FORELIMB GRIP STRENGTH (grams) 1	2	3	MEAN	S.D.	HINDLIMB GRIP STRENGTH (grams) 1	2	3	MEAN	S.D.
59921	3	190.	455.	435.	360.	147.6	110.	175.	105.	130.	39.1
59928	3	750.	580.	315.	548.	219.2	175.	125.	205.	168.	40.4
59929	3	460.	480.	450.	463.	15.3	175.	180.	225.	193.	27.5
59934	3	330.	315.	345.	330.	15.0	135.	140.	170.	148.	18.9
59938	3	470.	610.	205.	428.	205.7	235.	150.	210.	198.	43.7
59943	3	320.	390.	260.	323.	65.1	135.	160.	175.	157.	20.2
59946	3	410.	500.	270.	393.	115.9	160.	110.	185.	152.	38.2
59947	3	315.	250.	345.	303.	48.6	150.	175.	150.	158.	14.4
59951	3	570.	485.	520.	525.	42.7	145.	145.	145.	145.	0.0
59955	3	310.	635.	285.	410.	195.3	120.	105.	205.	143.	53.9
59964	3	295.	305.	415.	338.	66.6	135.	195.	175.	168.	30.6
59966	3	275.	175.	120.	190.	78.6	110.	150.	165.	142.	28.4
MEAN					384.3					158.5	
S.D.					99.65					20.43	
N					12					12	

OBSERVATION SCORE, UNLESS STATED OTHERWISE

NEUROMUSCULAR OBSERVATIONS

DOSE GROUP: 4
DOSE LEVEL: 2000 MG/KG SEX: FEMALES
TEST PERIOD: DAY 14

ANIMAL NUMBER	ROTAROD PERFORMANCE (seconds)	HINDLIMB FOOTSPLAY (mm) 1	2	MEAN	S.D.
59921	120.0	51.	47.	49.	2.8
59928	120.0	64.	51.	58.	9.2
59929	120.0	47.	31.	39.	11.3
59934	14.0	26.	25.	26.	0.7
59938	120.0	43.	34.	39.	6.4
59943	120.0	44.	45.	45.	0.7
59946	41.0	41.	39.	40.	1.4
59947	6.0	28.	30.	29.	1.4
59951	120.0	23.	18.	21.	3.5
59955	120.0	43.	37.	40.	4.2
59964	120.0	57.	49.	53.	5.7
59966	3.0	30.	27.	29.	2.1
MEAN	85.3			39.0	
S.D.	52.00			11.23	
N	12			12	

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01/13/2010
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TABLE I24 (PHYSIOLOGICAL OBSERVATIONS - PRETEST)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL FUNCTIONAL OBSERVATIONAL BATTERY DATA

PHYSIOLOGICAL OBSERVATIONS

DOSE GROUP: 1
DOSE LEVEL: 0 MG/KG SEX: MALES
TEST PERIOD: PRETEST

ANIMAL NUMBER	CATALEPSY (seconds)	BODY TEMPERATURE (degrees C)	BODY WEIGHT (grams)
59866	0.4	38.4	113.5
59867	0.3	38.7	128.2
59869	0.4	37.6	127.2
59870	0.3	37.8	127.7
59881	0.3	37.9	122.6
59884	0.3	37.5	94.7
59885	0.3	37.7	104.0
59891	0.4	37.4	146.7
59892	0.3	38.0	130.9
59901	0.3	37.9	126.5
59914	0.4	37.7	100.0
59915	0.4	36.5	101.0
MEAN	0.3	37.8	118.6
S.D.	0.05	0.54	15.77
N	12	12	12

PHYSIOLOGICAL OBSERVATIONS

DOSE GROUP: 2
DOSE LEVEL: 200 MG/KG SEX: MALES
TEST PERIOD: PRETEST

ANIMAL NUMBER	CATALEPSY (seconds)	BODY TEMPERATURE (degrees C)	BODY WEIGHT (grams)
59865	0.3	37.6	135.4
59873	0.2	36.8	92.8
59875	0.3	37.8	104.2
59878	0.3	37.3	105.7
59879	0.4	37.4	110.7
59880	0.3	38.0	135.3
59882	0.5	38.4	134.6
59889	0.3	37.2	128.5
59893	0.4	37.0	127.5
59897	0.4	37.8	102.9
59911	0.3	38.0	135.1
59913	0.3	37.3	107.9
MEAN	0.3	37.5	118.4
S.D.	0.08	0.47	15.75
N	12	12	12

PHYSIOLOGICAL OBSERVATIONS

DOSE GROUP: 3
DOSE LEVEL: 700 MG/KG SEX: MALES
TEST PERIOD: PRETEST

ANIMAL NUMBER	CATALEPSY (seconds)	BODY TEMPERATURE (degrees C)	BODY WEIGHT (grams)
59874	0.3	38.1	120.5
59894	0.3	38.0	146.0
59895	0.3	37.7	133.2
59896	0.4	37.0	106.7
59899	0.3	37.9	111.9
59902	0.4	37.3	112.0
59903	0.3	37.1	106.6
59904	0.5	37.7	119.7
59905	0.6	37.7	111.6
59909	0.4	36.8	95.9
59910	0.2	37.9	110.5
59916	0.4	37.5	137.1
MEAN	0.4	37.6	117.6
S.D.	0.11	0.42	14.47
N	12	12	12

PHYSIOLOGICAL OBSERVATIONS

DOSE GROUP: 4
DOSE LEVEL: 2000 MG/KG SEX: MALES
TEST PERIOD: PRETEST

ANIMAL NUMBER	CATALEPSY (seconds)	BODY TEMPERATURE (degrees C)	BODY WEIGHT (grams)
59876	0.3	36.8	107.5
59883	0.3	36.6	92.6
59886	0.4	37.8	128.5
59887	0.4	37.9	99.5
59890	0.5	37.8	127.4
59898	0.4	37.5	117.7
59900	0.3	37.4	128.5
59906	0.3	38.2	142.9
59907	0.4	38.0	115.5
59908	0.3	37.5	131.2
59912	0.3	37.7	99.9
59917	0.3	38.0	121.3
MEAN	0.4	37.6	117.7
S.D.	0.07	0.48	15.21
N	12	12	12

PHYSIOLOGICAL OBSERVATIONS

DOSE GROUP: 1
DOSE LEVEL: 0 MG/KG SEX: FEMALES
TEST PERIOD: PRETEST

ANIMAL NUMBER	CATALEPSY (seconds)	BODY TEMPERATURE (degrees C)	BODY WEIGHT (grams)
59919	0.4	38.1	116.8
59920	0.4	38.6	115.3
59923	0.4	37.7	112.9
59924	0.3	37.4	129.5
59933	0.4	38.1	102.1
59939	0.3	37.7	116.4
59941	0.4	37.4	113.2
59942	0.7	37.5	110.7
59950	0.4	37.7	109.3
59956	0.3	37.8	86.9
59969	0.4	37.7	114.9
59970	0.8	37.3	108.6
MEAN	0.4	37.8	111.4
S.D.	0.16	0.37	10.06
N	12	12	12

PHYSIOLOGICAL OBSERVATIONS

DOSE GROUP: 2
DOSE LEVEL: 200 MG/KG SEX: FEMALES
TEST PERIOD: PRETEST

ANIMAL NUMBER	CATALEPSY (seconds)	BODY TEMPERATURE (degrees C)	BODY WEIGHT (grams)
59922	0.3	37.6	113.6
59926	0.4	38.0	98.7
59927	0.3	36.8	110.4
59936	0.3	38.1	123.4
59937	0.4	38.0	113.4
59949	0.4	37.5	113.1
59952	0.3	38.1	101.4
59954	0.3	37.6	125.3
59958	0.3	37.0	102.7
59962	0.3	37.8	107.8
59967	0.3	37.7	114.8
59968	0.3	38.2	103.9
MEAN	0.3	37.7	110.7
S.D.	0.05	0.44	8.32
N	12	12	12

PHYSIOLOGICAL OBSERVATIONS

DOSE GROUP: 3
DOSE LEVEL: 700 MG/KG SEX: FEMALES
TEST PERIOD: PRETEST

ANIMAL NUMBER	CATALEPSY (seconds)	BODY TEMPERATURE (degrees C)	BODY WEIGHT (grams)
59918	0.4	38.7	131.2
59925	0.3	37.3	121.9
59930	0.3	38.3	97.7
59931	0.3	38.3	129.9
59932	0.3	37.6	111.9
59935	0.3	37.4	107.6
59940	0.5	38.1	114.7
59944	0.6	37.8	119.7
59945	0.3	38.0	111.1
59948	0.4	38.0	84.4
59959	0.3	36.7	93.9
59963	0.3	38.0	117.2
MEAN	0.4	37.8	111.8
S.D.	0.10	0.54	14.12
N	12	12	12

PHYSIOLOGICAL OBSERVATIONS

DOSE GROUP: 4
DOSE LEVEL: 2000 MG/KG SEX: FEMALES
TEST PERIOD: PRETEST

ANIMAL NUMBER	CATALEPSY (seconds)	BODY TEMPERATURE (degrees C)	BODY WEIGHT (grams)
59921	0.5	38.1	94.9
59928	0.3	38.1	140.7
59929	0.3	37.9	113.8
59934	0.4	37.7	108.2
59938	0.3	37.7	113.6
59943	0.3	37.9	99.2
59946	0.3	37.5	117.8
59947	0.3	38.0	112.4
59951	0.4	38.1	114.5
59955	0.3	38.0	109.6
59964	0.4	36.9	106.1
59966	0.3	37.0	112.2
MEAN	0.3	37.7	111.9
S.D.	0.07	0.41	11.20
N	12	12	12

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TABLE I25 (PHYSIOLOGICAL OBSERVATIONS - DAY 0)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL FUNCTIONAL OBSERVATIONAL BATTERY DATA

PHYSIOLOGICAL OBSERVATIONS

DOSE GROUP: 1
DOSE LEVEL: 0 MG/KG SEX: MALES
TEST PERIOD: DAY 0

ANIMAL NUMBER	CATALEPSY (seconds)	BODY TEMPERATURE (degrees C)	BODY WEIGHT (grams)
59866	0.3	39.2	175.3
59867	0.3	39.0	188.9
59869	0.3	38.1	203.2
59870	0.3	38.2	207.4
59881	0.4	38.3	202.2
59884	0.3	38.2	153.7
59885	0.6	38.4	172.8
59891	0.9	37.4	217.8
59892	0.3	38.4	202.3
59901	0.4	38.4	195.8
59914	0.3	38.1	165.0
59915	0.7	37.9	174.8
MEAN	0.4	38.3	188.3
S.D.	0.20	0.47	19.62
N	12	12	12

PHYSIOLOGICAL OBSERVATIONS

DOSE GROUP: 2
DOSE LEVEL: 200 MG/KG SEX: MALES
TEST PERIOD: DAY 0

ANIMAL NUMBER	CATALEPSY (seconds)	BODY TEMPERATURE (degrees C)	BODY WEIGHT (grams)
59865	0.3	38.3	213.7
59873	0.4	38.4	153.0
59875	0.3	38.0	165.7
59878	0.3	38.1	183.5
59879	0.5	38.0	177.2
59880	1.1	38.1	199.6
59882	0.3	39.1	205.2
59889	0.6	38.0	208.7
59893	0.5	37.8	201.3
59897	0.4	38.1	158.7
59911	0.4	38.4	210.7
59913	0.3	38.2	175.3
MEAN	0.5	38.2	187.7
S.D.	0.23	0.33	21.51
N	12	12	12

PHYSIOLOGICAL OBSERVATIONS

DOSE GROUP: 3
DOSE LEVEL: 700 MG/KG SEX: MALES
TEST PERIOD: DAY 0

ANIMAL NUMBER	CATALEPSY (seconds)	BODY TEMPERATURE (degrees C)	BODY WEIGHT (grams)
59874	1.1	38.7	195.0
59894	0.3	39.1	220.1
59895	0.3	38.5	206.6
59896	0.6	39.3	190.1
59899	0.5	38.9	171.9
59902	0.4	38.6	183.0
59903	0.3	38.2	170.9
59904	0.6	38.0	182.8
59905	0.3	37.8	188.8
59909	0.6	38.5	163.0
59910	0.4	39.2	188.8
59916	0.4	39.2	192.2
MEAN	0.5	38.7	187.8
S.D.	0.23	0.49	15.60
N	12	12	12

PHYSIOLOGICAL OBSERVATIONS

DOSE GROUP: 4
DOSE LEVEL: 2000 MG/KG SEX: MALES
TEST PERIOD: DAY 0

ANIMAL NUMBER	CATALEPSY (seconds)	BODY TEMPERATURE (degrees C)	BODY WEIGHT (grams)
59876	0.3	38.5	173.0
59883	0.5	39.2	152.3
59886	0.5	39.0	207.1
59887	0.4	38.5	163.5
59890	1.6	39.4	195.1
59898	0.4	37.8	194.1
59900	0.5	38.7	210.7
59906	0.3	39.1	205.3
59907	0.4	39.3	176.2
59908	0.3	38.6	205.1
59912	0.4	38.0	159.9
59917	0.3	39.2	191.7
MEAN	0.5	38.8	186.2
S.D.	0.36	0.52	20.36
N	12	12	12

PHYSIOLOGICAL OBSERVATIONS

DOSE GROUP: 1
DOSE LEVEL: 0 MG/KG SEX: FEMALES
TEST PERIOD: DAY 0

ANIMAL NUMBER	CATALEPSY (seconds)	BODY TEMPERATURE (degrees C)	BODY WEIGHT (grams)
59919	0.4	39.0	160.7
59920	0.3	38.1	148.5
59923	0.6	38.7	175.3
59924	0.3	38.1	165.0
59933	0.4	38.9	141.9
59939	0.4	38.5	140.8
59941	0.4	37.9	152.4
59942	0.5	38.8	154.7
59950	0.3	38.4	151.9
59956	0.4	38.4	123.7
59969	0.7	38.4	151.3
59970	0.5	38.3	151.5
MEAN	0.4	38.5	151.5
S.D.	0.12	0.34	12.91
N	12	12	12

PHYSIOLOGICAL OBSERVATIONS

DOSE GROUP: 2
DOSE LEVEL: 200 MG/KG SEX: FEMALES
TEST PERIOD: DAY 0

ANIMAL NUMBER	CATALEPSY (seconds)	BODY TEMPERATURE (degrees C)	BODY WEIGHT (grams)
59922	1.7	38.0	150.0
59926	0.3	38.1	139.1
59927	0.4	37.9	150.8
59936	0.3	38.0	167.8
59937	0.3	38.6	140.1
59949	0.3	38.6	155.3
59952	0.4	38.4	139.1
59954	0.3	38.5	160.3
59958	0.3	38.2	148.5
59962	0.3	38.1	152.3
59967	0.3	38.2	163.6
59968	0.3	38.9	141.7
MEAN	0.4	38.3	150.7
S.D.	0.40	0.31	9.74
N	12	12	12

PHYSIOLOGICAL OBSERVATIONS

DOSE GROUP: 3
DOSE LEVEL: 700 MG/KG SEX: FEMALES
TEST PERIOD: DAY 0

ANIMAL NUMBER	CATALEPSY (seconds)	BODY TEMPERATURE (degrees C)	BODY WEIGHT (grams)
59918	0.3	39.7	167.1
59925	0.3	39.3	151.7
59930	0.4	38.4	151.3
59931	0.3	38.5	173.5
59932	0.3	39.2	141.7
59935	0.3	38.9	155.7
59940	0.3	39.1	153.9
59944	0.5	39.1	154.6
59945	0.5	39.5	159.2
59948	0.4	38.0	127.6
59959	0.4	38.9	141.8
59963	0.3	37.9	157.3
MEAN	0.4	38.9	153.0
S.D.	0.08	0.57	12.02
N	12	12	12

PHYSIOLOGICAL OBSERVATIONS

DOSE GROUP: 4
DOSE LEVEL: 2000 MG/KG SEX: FEMALES
TEST PERIOD: DAY 0

ANIMAL NUMBER	CATALEPSY (seconds)	BODY TEMPERATURE (degrees C)	BODY WEIGHT (grams)
59921	0.4	38.8	123.7
59928	0.2	38.1	179.6
59929	0.3	39.4	155.6
59934	0.4	38.3	154.3
59938	0.4	39.1	144.3
59943	0.4	38.7	154.0
59946	0.2	39.2	153.1
59947	0.4	37.7	160.0
59951	0.4	39.0	149.1
59955	0.3	39.8	147.6
59964	0.3	37.7	154.7
59966	0.4	37.9	160.2
MEAN	0.3	38.6	153.0
S.D.	0.08	0.70	12.79
N	12	12	12

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TABLE I26 (PHYSIOLOGICAL OBSERVATIONS - DAY 7)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL FUNCTIONAL OBSERVATIONAL BATTERY DATA

PHYSIOLOGICAL OBSERVATIONS

DOSE GROUP: 1
DOSE LEVEL: 0 MG/KG SEX: MALES
TEST PERIOD: DAY 7

ANIMAL NUMBER	CATALEPSY (seconds)	BODY TEMPERATURE (degrees C)	BODY WEIGHT (grams)
59866	0.3	38.7	228.4
59867	0.3	37.7	237.9
59869	0.6	38.1	267.4
59870	0.3	38.1	267.1
59881	1.0	38.0	257.2
59884	0.3	37.8	194.8
59885	0.3	38.1	229.4
59891	0.4	37.8	266.9
59892	0.3	38.4	253.8
59901	0.3	38.2	245.0
59914	0.4	38.2	210.9
59915	0.4	38.0	223.2
MEAN	0.4	38.1	240.2
S.D.	0.21	0.27	23.63
N	12	12	12

PHYSIOLOGICAL OBSERVATIONS

DOSE GROUP: 2
DOSE LEVEL: 200 MG/KG SEX: MALES
TEST PERIOD: DAY 7

ANIMAL NUMBER	CATALEPSY (seconds)	BODY TEMPERATURE (degrees C)	BODY WEIGHT (grams)
59865	0.3	38.3	271.7
59873	0.5	38.5	200.6
59875	0.3	38.6	206.6
59878	1.1	38.0	242.6
59879	0.4	37.9	229.1
59880	1.7	37.0	248.7
59882	0.5	38.3	253.4
59889	0.4	37.6	263.6
59893	0.3	37.6	262.0
59897	0.5	38.3	199.0
59911	0.3	38.6	277.2
59913	0.3	38.4	222.8
MEAN	0.6	38.1	239.8
S.D.	0.43	0.49	27.72
N	12	12	12

TABLE I26 (PHYSIOLOGICAL OBSERVATIONS - DAY 7)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL FUNCTIONAL OBSERVATIONAL BATTERY DATA

PHYSIOLOGICAL OBSERVATIONS

DOSE GROUP: 3
DOSE LEVEL: 700 MG/KG SEX: MALES
TEST PERIOD: DAY 7

ANIMAL NUMBER	CATALEPSY (seconds)	BODY TEMPERATURE (degrees C)	BODY WEIGHT (grams)
59874	1.0	38.1	244.4
59894	0.3	37.9	274.9
59895	0.3	37.5	258.5
59896	0.4	38.0	253.8
59899	0.4	38.3	219.7
59902	1.1	37.9	229.7
59903	0.4	38.7	215.3
59904	0.4	38.0	236.1
59905	0.4	38.1	236.1
59909	0.3	38.0	211.7
59910	0.5	38.1	252.0
59916	0.3	38.4	235.9
MEAN	0.5	38.1	239.0
S.D.	0.27	0.29	18.78
N	12	12	12

PHYSIOLOGICAL OBSERVATIONS

DOSE GROUP: 4
DOSE LEVEL: 2000 MG/KG SEX: MALES
TEST PERIOD: DAY 7

ANIMAL NUMBER	CATALEPSY (seconds)	BODY TEMPERATURE (degrees C)	BODY WEIGHT (grams)
59876	0.3	38.1	222.1
59883	2.6	38.6	192.8
59886	0.4	38.0	261.4
59887	0.3	38.0	203.0
59890	0.6	38.5	256.2
59898	0.3	38.0	244.8
59900	0.2	38.2	266.7
59906	0.3	38.4	249.8
59907	0.4	38.2	222.9
59908	1.8	38.6	253.5
59912	0.4	38.0	193.7
59917	0.7	38.2	242.7
MEAN	0.7	38.2	234.1
S.D.	0.74	0.23	26.43
N	12	12	12

PHYSIOLOGICAL OBSERVATIONS

DOSE GROUP: 1
DOSE LEVEL: 0 MG/KG SEX: FEMALES
TEST PERIOD: DAY 7

ANIMAL NUMBER	CATALEPSY (seconds)	BODY TEMPERATURE (degrees C)	BODY WEIGHT (grams)
59919	0.4	38.8	183.6
59920	0.3	38.6	169.4
59923	0.4	37.9	201.0
59924	0.3	38.5	174.0
59933	0.3	38.6	167.6
59939	0.3	38.2	155.9
59941	0.6	37.4	180.5
59942	0.3	38.6	180.6
59950	0.3	38.0	173.0
59956	0.5	38.4	142.4
59969	0.5	38.6	173.2
59970	0.3	38.1	178.3
MEAN	0.4	38.3	173.3
S.D.	0.11	0.40	14.49
N	12	12	12

PHYSIOLOGICAL OBSERVATIONS

DOSE GROUP: 2
DOSE LEVEL: 200 MG/KG SEX: FEMALES
TEST PERIOD: DAY 7

ANIMAL NUMBER	CATALEPSY (seconds)	BODY TEMPERATURE (degrees C)	BODY WEIGHT (grams)
59922	0.2	37.9	173.3
59926	0.3	38.0	155.7
59927	0.4	38.0	170.4
59936	0.3	38.0	191.7
59937	0.3	38.7	166.7
59949	0.3	38.4	174.8
59952	0.3	38.2	156.2
59954	0.5	38.3	190.4
59958	0.3	38.8	171.0
59962	0.3	38.4	167.8
59967	0.4	38.8	176.9
59968	0.3	38.5	162.3
MEAN	0.3	38.3	171.4
S.D.	0.08	0.32	11.34
N	12	12	12

PHYSIOLOGICAL OBSERVATIONS

DOSE GROUP: 3
DOSE LEVEL: 700 MG/KG SEX: FEMALES
TEST PERIOD: DAY 7

ANIMAL NUMBER	CATALEPSY (seconds)	BODY TEMPERATURE (degrees C)	BODY WEIGHT (grams)
59918	0.3	39.4	189.3
59925	0.3	38.3	171.0
59930	0.4	39.0	177.8
59931	0.3	37.9	183.8
59932	0.3	38.1	160.7
59935	0.3	38.1	175.8
59940	0.4	38.0	175.6
59944	0.3	38.0	168.1
59945	0.4	38.1	183.1
59948	0.4	38.3	149.4
59959	0.3	38.0	163.1
59963	0.3	38.7	170.2
MEAN	0.3	38.3	172.3
S.D.	0.05	0.47	11.11
N	12	12	12

PHYSIOLOGICAL OBSERVATIONS

DOSE GROUP: 4
DOSE LEVEL: 2000 MG/KG SEX: FEMALES
TEST PERIOD: DAY 7

ANIMAL NUMBER	CATALEPSY (seconds)	BODY TEMPERATURE (degrees C)	BODY WEIGHT (grams)
59921	0.3	38.7	144.7
59928	0.2	38.8	201.3
59929	0.3	37.9	179.5
59934	0.3	38.2	167.7
59938	0.3	38.7	160.9
59943	0.3	39.1	178.1
59946	0.3	38.2	170.0
59947	0.3	38.1	179.6
59951	0.3	37.7	169.8
59955	0.3	37.8	165.9
59964	0.3	38.1	175.5
59966	0.3	39.0	169.3
MEAN	0.3	38.4	171.9
S.D.	0.03	0.48	13.36
N	12	12	12

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TABLE I27 (PHYSIOLOGICAL OBSERVATIONS - DAY 14)

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL FUNCTIONAL OBSERVATIONAL BATTERY DATA

PHYSIOLOGICAL OBSERVATIONS

DOSE GROUP: 1
DOSE LEVEL: 0 MG/KG SEX: MALES
TEST PERIOD: DAY 14

ANIMAL NUMBER	CATALEPSY (seconds)	BODY TEMPERATURE (degrees C)	BODY WEIGHT (grams)
59866	0.4	37.8	275.5
59867	0.6	38.3	291.4
59869	0.5	37.9	326.8
59870	0.4	38.2	328.0
59881	0.3	38.5	302.4
59884	0.3	38.3	248.5
59885	0.3	38.0	284.2
59891	1.0	38.1	319.5
59892	0.3	38.1	292.1
59901	1.9	38.5	290.7
59914	0.3	38.2	269.5
59915	0.7	38.0	273.3
MEAN	0.6	38.2	291.8
S.D.	0.47	0.22	24.22
N	12	12	12

PHYSIOLOGICAL OBSERVATIONS

DOSE GROUP: 2
DOSE LEVEL: 200 MG/KG SEX: MALES
TEST PERIOD: DAY 14

ANIMAL NUMBER	CATALEPSY (seconds)	BODY TEMPERATURE (degrees C)	BODY WEIGHT (grams)
59865	0.4	38.4	332.2
59873	0.3	38.3	249.9
59875	0.3	38.6	247.2
59878	0.7	38.3	308.6
59879	0.5	38.4	278.9
59880	3.7	38.1	293.7
59882	2.6	38.8	297.3
59889	0.5	38.1	322.2
59893	0.4	38.0	316.4
59897	3.1	38.8	246.5
59911	0.5	38.9	333.1
59913	0.3	38.2	266.7
MEAN	1.1	38.4	291.1
S.D.	1.25	0.30	32.71
N	12	12	12

PHYSIOLOGICAL OBSERVATIONS

DOSE GROUP: 3
DOSE LEVEL: 700 MG/KG SEX: MALES
TEST PERIOD: DAY 14

ANIMAL NUMBER	CATALEPSY (seconds)	BODY TEMPERATURE (degrees C)	BODY WEIGHT (grams)
59874	0.4	37.7	292.4
59894	0.3	38.7	326.5
59895	2.1	37.6	307.1
59896	0.3	38.2	312.8
59899	3.0	38.5	266.9
59902	3.3	38.4	278.7
59903	0.3	38.5	264.4
59904	0.8	38.3	290.5
59905	0.4	38.4	291.8
59909	0.4	38.1	254.5
59910	3.0	38.3	323.1
59916	0.4	38.7	275.5
MEAN	1.2	38.3	290.3
S.D.	1.24	0.35	23.42
N	12	12	12

PHYSIOLOGICAL OBSERVATIONS

DOSE GROUP: 4
DOSE LEVEL: 2000 MG/KG SEX: MALES
TEST PERIOD: DAY 14

ANIMAL NUMBER	CATALEPSY (seconds)	BODY TEMPERATURE (degrees C)	BODY WEIGHT (grams)
59876	0.4	38.4	275.2
59883	0.8	38.4	243.1
59886	0.4	38.0	316.5
59887	0.3	38.6	240.2
59890	0.5	37.7	316.7
59898	0.4	38.0	304.1
59900	0.7	38.1	322.3
59906	0.4	38.2	292.1
59907	0.3	38.3	271.2
59908	1.0	38.4	301.8
59912	0.4	38.8	248.7
59917	0.5	38.4	301.9
MEAN	0.5	38.3	286.2
S.D.	0.22	0.30	29.73
N	12	12	12

PHYSIOLOGICAL OBSERVATIONS

DOSE GROUP: 1
DOSE LEVEL: 0 MG/KG SEX: FEMALES
TEST PERIOD: DAY 14

ANIMAL NUMBER	CATALEPSY (seconds)	BODY TEMPERATURE (degrees C)	BODY WEIGHT (grams)
59919	0.3	39.2	204.9
59920	0.3	38.1	187.7
59923	1.4	38.3	223.8
59924	0.4	38.4	200.3
59933	0.4	39.5	189.2
59939	0.4	38.8	164.2
59941	0.4	37.9	199.8
59942	0.5	38.7	208.1
59950	0.3	37.9	188.8
59956	0.4	38.7	156.9
59969	0.7	39.4	185.6
59970	0.4	38.3	196.1
MEAN	0.5	38.6	192.1
S.D.	0.31	0.55	18.25
N	12	12	12

PHYSIOLOGICAL OBSERVATIONS

DOSE GROUP: 2
DOSE LEVEL: 200 MG/KG SEX: FEMALES
TEST PERIOD: DAY 14

ANIMAL NUMBER	CATALEPSY (seconds)	BODY TEMPERATURE (degrees C)	BODY WEIGHT (grams)
59922	0.6	37.8	191.9
59926	0.4	39.3	184.4
59927	0.5	38.6	192.7
59936	0.3	37.8	221.6
59937	0.3	38.2	181.6
59949	0.3	39.1	198.4
59952	0.4	38.7	169.3
59954	0.4	39.0	212.2
59958	0.2	38.5	186.2
59962	0.3	38.5	190.3
59967	0.3	38.9	196.9
59968	0.6	39.1	175.0
MEAN	0.4	38.6	191.7
S.D.	0.13	0.50	14.63
N	12	12	12

PHYSIOLOGICAL OBSERVATIONS

DOSE GROUP: 3
DOSE LEVEL: 700 MG/KG SEX: FEMALES
TEST PERIOD: DAY 14

ANIMAL NUMBER	CATALEPSY (seconds)	BODY TEMPERATURE (degrees C)	BODY WEIGHT (grams)
59918	0.4	38.9	205.4
59925	0.8	38.9	195.1
59930	0.3	39.4	211.1
59931	0.3	38.8	203.5
59932	0.3	38.8	183.5
59935	0.3	38.6	204.4
59940	0.7	38.9	205.4
59944	0.4	38.3	191.9
59945	1.8	38.3	202.3
59948	0.3	38.5	160.7
59959	0.4	38.1	185.3
59963	0.5	38.9	189.3
MEAN	0.5	38.7	194.8
S.D.	0.43	0.36	13.93
N	12	12	12

PHYSIOLOGICAL OBSERVATIONS

DOSE GROUP: 4
DOSE LEVEL: 2000 MG/KG SEX: FEMALES
TEST PERIOD: DAY 14

ANIMAL NUMBER	CATALEPSY (seconds)	BODY TEMPERATURE (degrees C)	BODY WEIGHT (grams)
59921	0.3	38.9	159.5
59928	0.3	38.9	220.6
59929	0.3	38.7	192.1
59934	0.4	38.7	190.9
59938	0.4	39.0	177.4
59943	0.5	39.0	207.0
59946	0.4	38.2	185.0
59947	0.7	38.3	201.5
59951	0.6	38.7	187.9
59955	0.3	38.2	183.6
59964	0.3	38.7	193.1
59966	0.3	39.0	181.6
MEAN	0.4	38.7	190.0
S.D.	0.13	0.30	15.38
N	12	12	12

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FINAL REPORT

Contents:	Volume 4 of 4 Appendix L - Tables I28-I30
Study Title:	An Oral (Gavage) Acute Neurotoxicity Study of Tolclofos-Methyl in Rats
Study Number:	WIL-118043
Study Director:	Melissa J. Beck, PhD
Data Requirements:	OECD Guideline 424 U.S. EPA OPPTS Guideline 870.6200 JMAFF Notification No. 12 NohSan No. 8147
Study Initiation Date:	16 November 2009
Study Completion Date:	21 April 2010
Performing Laboratory:	WIL Research Laboratories, LLC 1407 George Road Ashland, OH 44805-8946
Sponsor:	Sumitomo Chemical Company, Ltd. 27-1, Shinkawa 2-chome Chuo-ku, Tokyo 104-8260, Japan

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APPENDIX L

Individual Animal Data [continued]

Tables I28-I30

ED_005427A_00022422-00985

TABLE I28

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL MOTOR ACTIVITY COUNTS

MALE GROUP: 0 MG/KG

TEST PERIOD: PRETEST

ANIMAL	0 TO 10 MINS TOTAL	0 TO 10 MINS AMB	11 TO 20 MINS TOTAL	11 TO 20 MINS AMB	21 TO 30 MINS TOTAL	21 TO 30 MINS AMB	31 TO 40 MINS TOTAL	31 TO 40 MINS AMB	41 TO 50 MINS TOTAL	41 TO 50 MINS AMB	51 TO 60 MINS TOTAL	51 TO 60 MINS AMB	COMBINED TOTAL	COMBINED AMB
59866	1260	340	795	127	397	34	150	5	366	1	340	4	3308	511
59867	1125	378	857	167	316	14	22	0	165	3	114	7	2599	569
59869	789	296	374	63	65	0	38	0	61	0	232	8	1559	367
59870	893	252	716	69	510	20	202	44	13	0	132	4	2466	389
59881	1155	355	406	72	199	1	137	0	78	0	5	0	1980	428
59884	593	169	249	9	163	5	410	18	172	2	142	8	1729	211
59885	923	277	573	153	308	42	193	10	190	28	577	29	2764	539
59891	1187	476	838	188	570	52	139	9	15	0	13	0	2762	725
59892	1113	322	815	157	178	6	286	0	965	3	178	3	3535	491
59901	1236	365	830	164	152	10	95	2	188	7	170	4	2671	552
59914	1110	311	930	181	799	134	281	61	58	0	49	1	3227	688
59915	877	254	413	76	184	6	663	137	159	1	471	11	2767	485
MEAN	1022.	316.	650.	119.	320.	27.	218.	24.	203.	4.	202.	7.	2614.	496.
S.D.	204.4	77.1	233.6	58.3	214.3	37.7	177.8	40.6	259.4	7.9	178.0	7.8	610.3	139.5
S.E.	59.0	22.3	67.4	16.8	61.9	10.9	51.3	11.7	74.9	2.3	51.4	2.3	176.2	40.3
N	12													

TABLE I28

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL MOTOR ACTIVITY COUNTS

MALE GROUP: 200 MG/KG

TEST PERIOD: PRETEST

ANIMAL	0 TO 10 MINS TOTAL	0 TO 10 MINS AMB	11 TO 20 MINS TOTAL	11 TO 20 MINS AMB	21 TO 30 MINS TOTAL	21 TO 30 MINS AMB	31 TO 40 MINS TOTAL	31 TO 40 MINS AMB	41 TO 50 MINS TOTAL	41 TO 50 MINS AMB	51 TO 60 MINS TOTAL	51 TO 60 MINS AMB	COMBINED TOTAL	COMBINED AMB
59865	1221	423	424	73	431	1	487	1	588	1	371	2	3522	501
59873	1284	377	767	132	270	29	112	1	677	25	212	17	3322	581
59875	551	172	345	35	379	13	8	0	5	0	14	0	1302	220
59878	1025	396	558	51	59	0	77	0	472	17	229	12	2420	476
59879	633	147	781	174	146	5	44	0	12	2	484	6	2100	334
59880	1018	296	551	73	160	0	76	3	123	12	182	18	2110	402
59882	1014	387	622	136	156	1	22	0	252	0	302	0	2368	524
59889	1054	265	409	63	385	79	9	0	34	2	245	0	2136	409
59893	1135	383	1037	308	740	181	507	116	187	4	79	0	3685	992
59897	1412	522	610	59	226	0	227	2	408	12	344	11	3227	606
59911	1538	552	1042	225	707	70	587	69	366	0	332	5	4572	921
59913	1056	264	714	145	586	151	357	78	157	0	71	0	2941	638
MEAN	1078.	349.	655.	123.	354.	44.	209.	23.	273.	6.	239.	6.	2809.	550.
S.D.	282.3	124.8	225.8	81.8	226.7	63.5	217.1	40.7	227.6	8.3	138.1	6.9	899.5	223.8
S.E.	81.5	36.0	65.2	23.6	65.5	18.3	62.7	11.8	65.7	2.4	39.9	2.0	259.7	64.6
N	12													

TABLE I28

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL MOTOR ACTIVITY COUNTS

MALE GROUP: 700 MG/KG

TEST PERIOD: PRETEST

ANIMAL	0 TO 10 MINS TOTAL	0 TO 10 MINS AMB	11 TO 20 MINS TOTAL	11 TO 20 MINS AMB	21 TO 30 MINS TOTAL	21 TO 30 MINS AMB	31 TO 40 MINS TOTAL	31 TO 40 MINS AMB	41 TO 50 MINS TOTAL	41 TO 50 MINS AMB	51 TO 60 MINS TOTAL	51 TO 60 MINS AMB	COMBINED TOTAL	COMBINED AMB
59874	805	247	169	6	83	0	102	1	325	87	562	86	2046	427
59894	1197	402	662	125	308	41	449	0	295	1	452	36	3363	605
59895	618	207	155	7	62	0	119	0	53	1	692	16	1699	231
59896	1153	367	554	115	240	2	87	5	263	18	56	8	2353	515
59899	969	327	339	12	50	0	237	5	51	0	338	3	1984	347
59902	722	172	677	100	176	11	90	0	244	14	262	16	2171	313
59903	919	248	237	2	859	0	138	0	133	1	474	12	2760	263
59904	1272	484	895	188	684	125	300	0	407	2	45	0	3603	799
59905	927	241	739	151	171	34	596	147	234	0	80	0	2747	573
59909	953	323	648	147	122	5	82	0	326	0	133	2	2264	477
59910	814	275	144	1	497	67	166	7	200	3	670	6	2491	359
59916	1226	345	607	128	163	3	618	5	331	0	426	23	3371	504
MEAN	965.	303.	486.	82.	285.	24.	249.	14.	239.	11.	349.	17.	2571.	451.
S.D.	209.6	88.7	262.0	70.6	260.8	38.4	199.2	41.9	112.1	24.8	234.2	24.1	609.6	162.3
S.E.	60.5	25.6	75.6	20.4	75.3	11.1	57.5	12.1	32.3	7.2	67.6	7.0	176.0	46.9
N	12													

TABLE I28

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS PAGE 4

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL MOTOR ACTIVITY COUNTS

MALE GROUP: 2000 MG/KG

TEST PERIOD: PRETEST

ANIMAL	0 TO 10 MINS TOTAL	0 TO 10 MINS AMB	11 TO 20 MINS TOTAL	11 TO 20 MINS AMB	21 TO 30 MINS TOTAL	21 TO 30 MINS AMB	31 TO 40 MINS TOTAL	31 TO 40 MINS AMB	41 TO 50 MINS TOTAL	41 TO 50 MINS AMB	51 TO 60 MINS TOTAL	51 TO 60 MINS AMB	COMBINED TOTAL	COMBINED AMB
59876	950	212	807	207	250	0	51	1	316	8	185	10	2559	438
59883	970	316	565	88	234	9	499	8	529	16	380	1	3177	438
59886	1120	412	915	234	378	47	124	0	108	0	347	17	2992	710
59887	1222	408	470	49	242	1	36	0	15	0	92	1	2077	459
59890	1476	482	462	44	676	180	109	23	160	0	220	7	3103	736
59898	1321	394	947	229	325	2	116	2	225	15	382	35	3316	677
59900	1000	278	535	77	85	2	146	3	679	30	242	2	2687	392
59906	848	212	458	114	115	0	411	0	310	4	484	4	2626	334
59907	1071	336	696	197	570	93	6	0	94	0	532	4	2969	630
59908	1121	306	678	231	473	77	58	0	341	1	719	0	3390	615
59912	760	186	467	13	328	5	528	14	353	3	525	3	2961	224
59917	1033	351	302	31	81	0	591	1	90	0	107	3	2204	386
MEAN	1074.	324.	609.	126.	313.	35.	223.	4.	268.	6.	351.	7.	2838.	503.
S.D.	198.1	91.5	201.1	87.0	187.9	56.3	217.2	7.3	195.1	9.4	191.0	9.9	415.7	164.8
S.E.	57.2	26.4	58.1	25.1	54.2	16.3	62.7	2.1	56.3	2.7	55.1	2.9	120.0	47.6
N	12													

TABLE I28

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL MOTOR ACTIVITY COUNTS

MALE GROUP: 0 MG/KG

TEST PERIOD: DAY 0

ANIMAL	0 TO 10 MINS TOTAL	0 TO 10 MINS AMB	11 TO 20 MINS TOTAL	11 TO 20 MINS AMB	21 TO 30 MINS TOTAL	21 TO 30 MINS AMB	31 TO 40 MINS TOTAL	31 TO 40 MINS AMB	41 TO 50 MINS TOTAL	41 TO 50 MINS AMB	51 TO 60 MINS TOTAL	51 TO 60 MINS AMB	COMBINED TOTAL	COMBINED AMB
59866	1296	397	666	104	133	4	4	0	161	4	102	0	2362	509
59867	1256	353	128	10	71	0	58	3	139	1	247	41	1899	408
59869	918	231	78	1	28	0	159	4	113	2	106	0	1402	238
59870	787	143	317	10	137	0	28	0	15	0	71	0	1355	153
59881	1643	549	436	41	90	0	59	1	120	4	59	3	2407	598
59884	1292	435	730	135	150	9	173	1	242	3	294	3	2881	586
59885	1073	301	557	27	22	1	6	0	505	140	217	14	2380	483
59891	999	332	261	79	198	0	17	0	175	2	60	1	1710	414
59892	1256	319	511	71	113	0	17	0	69	2	93	2	2059	394
59901	1137	288	395	76	48	0	46	0	105	3	834	151	2565	518
59914	1489	509	595	73	107	11	28	0	6	0	479	7	2704	600
59915	1073	316	651	62	123	0	331	3	269	0	318	3	2765	384
MEAN	1185.	348.	444.	57.	102.	2.	77.	1.	160.	13.	240.	19.	2207.	440.
S.D.	238.9	112.8	213.2	40.8	52.4	3.9	97.5	1.5	134.2	39.9	228.0	43.2	519.8	139.7
S.E.	69.0	32.6	61.5	11.8	15.1	1.1	28.1	0.4	38.7	11.5	65.8	12.5	150.1	40.3
N	12													

TABLE I28

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL MOTOR ACTIVITY COUNTS

MALE GROUP: 200 MG/KG

TEST PERIOD: DAY 0

ANIMAL	0 TO 10 MINS TOTAL	0 TO 10 MINS AMB	11 TO 20 MINS TOTAL	11 TO 20 MINS AMB	21 TO 30 MINS TOTAL	21 TO 30 MINS AMB	31 TO 40 MINS TOTAL	31 TO 40 MINS AMB	41 TO 50 MINS TOTAL	41 TO 50 MINS AMB	51 TO 60 MINS TOTAL	51 TO 60 MINS AMB	COMBINED TOTAL	COMBINED AMB
59865	987	198	35	0	199	1	116	0	127	1	145	0	1609	200
59873	1255	374	313	3	110	1	566	0	542	9	196	12	2982	399
59875	776	200	133	1	61	0	260	0	86	6	20	2	1336	209
59878	1323	456	395	15	127	8	40	0	53	0	213	5	2151	484
59879	625	118	638	118	67	0	90	1	36	0	60	5	1516	242
59880	695	164	237	0	79	3	20	0	81	0	70	0	1182	167
59882	473	170	15	0	30	0	122	5	64	0	55	0	759	175
59889	1095	263	413	58	80	28	55	11	52	0	249	42	1944	402
59893	1279	435	369	39	424	39	12	0	64	0	159	0	2307	513
59897	1747	613	672	94	46	0	76	0	167	0	72	0	2780	707
59911	1225	299	685	85	436	44	125	0	58	0	95	0	2624	428
59913	1178	453	792	169	371	32	23	0	1	0	149	26	2514	680
MEAN	1055.	312.	391.	49.	169.	13.	125.	1.	111.	1.	124.	8.	1975.	384.
S.D.	359.6	153.2	261.6	56.8	152.5	17.4	154.6	3.3	142.2	3.0	72.1	13.3	699.1	189.9
S.E.	103.8	44.2	75.5	16.4	44.0	5.0	44.6	1.0	41.1	0.9	20.8	3.8	201.8	54.8
N	12													

TABLE I28

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL MOTOR ACTIVITY COUNTS

MALE GROUP: 700 MG/KG

TEST PERIOD: DAY 0

ANIMAL	0 TO 10 MINS TOTAL	0 TO 10 MINS AMB	11 TO 20 MINS TOTAL	11 TO 20 MINS AMB	21 TO 30 MINS TOTAL	21 TO 30 MINS AMB	31 TO 40 MINS TOTAL	31 TO 40 MINS AMB	41 TO 50 MINS TOTAL	41 TO 50 MINS AMB	51 TO 60 MINS TOTAL	51 TO 60 MINS AMB	COMBINED TOTAL	COMBINED AMB
59874	878	237	152	37	35	0	133	5	3	0	48	2	1249	281
59894	1129	319	280	18	136	0	51	0	275	3	280	0	2151	340
59895	609	170	0	0	55	1	352	0	92	7	20	0	1128	178
59896	1060	303	278	40	41	0	103	11	211	0	227	0	1920	354
59899	604	193	282	2	116	1	75	0	60	5	61	0	1198	201
59902	437	113	11	0	190	6	0	0	23	0	78	1	739	120
59903	992	293	59	0	14	0	0	0	34	0	92	0	1191	293
59904	848	213	502	108	158	4	56	0	50	3	93	6	1707	334
59905	902	209	310	42	132	0	134	0	324	0	166	0	1968	251
59909	692	213	99	1	60	3	28	6	164	1	542	0	1585	224
59910	440	108	44	0	99	0	129	0	61	1	83	2	856	111
59916	708	173	61	2	148	0	329	4	307	10	652	0	2205	189
MEAN	775.	212.	173.	21.	99.	1.	116.	2.	134.	3.	195.	1.	1491.	240.
S.D.	229.7	68.2	155.4	32.4	56.4	2.0	115.3	3.6	117.5	3.3	203.6	1.8	499.8	83.0
S.E.	66.3	19.7	44.9	9.3	16.3	0.6	33.3	1.0	33.9	0.9	58.8	0.5	144.3	23.9
N	12													

TABLE I28

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL MOTOR ACTIVITY COUNTS

MALE GROUP: 2000 MG/KG

TEST PERIOD: DAY 0

ANIMAL	0 TO 10 MINS TOTAL	0 TO 10 MINS AMB	11 TO 20 MINS TOTAL	11 TO 20 MINS AMB	21 TO 30 MINS TOTAL	21 TO 30 MINS AMB	31 TO 40 MINS TOTAL	31 TO 40 MINS AMB	41 TO 50 MINS TOTAL	41 TO 50 MINS AMB	51 TO 60 MINS TOTAL	51 TO 60 MINS AMB	COMBINED TOTAL	COMBINED AMB
59876	798	246	26	0	87	0	293	0	305	40	9	0	1518	286
59883	857	303	113	3	212	0	584	1	252	9	322	80	2340	396
59886	744	227	107	9	221	28	7	3	133	14	27	2	1239	283
59887	1123	421	157	6	135	3	187	3	158	2	149	1	1909	436
59890	1035	257	184	10	34	0	36	0	183	1	112	20	1584	288
59898	1119	302	108	0	42	4	3	0	48	5	238	1	1558	312
59900	818	204	87	0	19	0	14	3	53	5	36	6	1027	218
59906	545	129	5	0	122	0	136	0	59	4	279	32	1146	165
59907	572	163	88	4	5	1	218	33	482	0	145	39	1510	240
59908	1036	267	440	74	406	82	81	3	15	0	441	2	2419	428
59912	1034	247	570	86	1	0	9	1	152	3	126	0	1892	337
59917	573	116	29	0	8	0	55	0	216	39	16	0	897	155
MEAN	855.	240.	160.	16.	108.	10.	135.	4.	171.	10.	158.	15.	1587.	295.
S.D.	215.6	83.5	171.7	30.2	121.9	24.1	170.5	9.3	131.9	14.3	136.8	24.5	483.6	93.2
S.E.	62.2	24.1	49.6	8.7	35.2	6.9	49.2	2.7	38.1	4.1	39.5	7.1	139.6	26.9
N	12													

TABLE I28

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL MOTOR ACTIVITY COUNTS

MALE GROUP: 0 MG/KG

TEST PERIOD: DAY 7

ANIMAL	0 TO 10 MINS TOTAL	0 TO 10 MINS AMB	11 TO 20 MINS TOTAL	11 TO 20 MINS AMB	21 TO 30 MINS TOTAL	21 TO 30 MINS AMB	31 TO 40 MINS TOTAL	31 TO 40 MINS AMB	41 TO 50 MINS TOTAL	41 TO 50 MINS AMB	51 TO 60 MINS TOTAL	51 TO 60 MINS AMB	COMBINED TOTAL	COMBINED AMB
59866	1361	390	732	125	464	57	21	0	37	0	11	0	2626	572
59867	1116	319	840	211	129	37	754	168	93	10	81	0	3013	745
59869	1149	323	555	153	165	28	0	0	22	0	166	2	2057	506
59870	1263	325	771	118	249	0	43	0	3	0	23	0	2352	443
59881	1837	643	970	159	79	0	6	0	19	0	47	0	2958	802
59884	1255	393	878	156	1009	257	736	137	396	0	126	0	4400	943
59885	972	229	253	16	11	0	181	1	149	0	113	0	1679	246
59891	1213	348	663	128	121	0	71	0	40	0	4	0	2112	476
59892	1412	431	303	32	8	0	139	3	47	0	100	3	2009	469
59901	1379	334	756	189	401	57	30	1	128	2	17	0	2711	583
59914	1609	509	1156	325	563	40	11	0	39	0	85	13	3463	887
59915	1387	437	878	167	809	157	809	175	131	6	487	52	4501	994
MEAN	1329.	390.	730.	148.	334.	53.	233.	40.	92.	2.	105.	6.	2823.	639.
S.D.	229.4	107.3	259.8	79.9	323.9	78.4	326.3	72.6	107.5	3.2	130.7	15.0	909.7	231.9
S.E.	66.2	31.0	75.0	23.1	93.5	22.6	94.2	21.0	31.0	0.9	37.7	4.3	262.6	66.9
N	12													

TABLE I28

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL MOTOR ACTIVITY COUNTS

MALE GROUP: 200 MG/KG

TEST PERIOD: DAY 7

ANIMAL	0 TO 10 MINS TOTAL	0 TO 10 MINS AMB	11 TO 20 MINS TOTAL	11 TO 20 MINS AMB	21 TO 30 MINS TOTAL	21 TO 30 MINS AMB	31 TO 40 MINS TOTAL	31 TO 40 MINS AMB	41 TO 50 MINS TOTAL	41 TO 50 MINS AMB	51 TO 60 MINS TOTAL	51 TO 60 MINS AMB	COMBINED TOTAL	COMBINED AMB
59865	1027	230	153	9	4	0	120	2	560	96	11	0	1875	337
59873	1325	429	567	61	88	0	15	0	29	2	45	1	2069	493
59875	948	223	498	0	96	0	122	2	90	0	108	0	1862	225
59878	1229	422	800	208	337	103	16	0	51	0	168	11	2601	744
59879	1483	380	655	142	72	0	48	0	49	0	75	0	2382	522
59880	1061	193	605	95	101	0	40	0	19	3	39	0	1865	291
59882	1035	311	716	132	40	4	40	2	284	38	714	128	2829	615
59889	827	192	559	108	213	45	147	0	144	42	403	89	2293	476
59893	1212	364	287	6	154	0	18	0	59	0	25	0	1755	370
59897	1652	585	1299	414	81	0	86	0	28	0	50	0	3196	999
59911	1525	362	880	158	709	48	607	53	114	5	3	0	3838	626
59913	2070	823	754	126	552	139	36	0	51	0	163	1	3626	1089
MEAN	1283.	376.	648.	122.	204.	28.	108.	5.	123.	16.	150.	19.	2516.	566.
S.D.	351.7	182.2	290.9	112.9	219.8	47.4	163.6	15.2	155.8	29.5	208.9	42.7	717.1	269.1
S.E.	101.5	52.6	84.0	32.6	63.5	13.7	47.2	4.4	45.0	8.5	60.3	12.3	207.0	77.7
N	12													

TABLE I28
AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS
INDIVIDUAL MOTOR ACTIVITY COUNTS

MALE GROUP: 700 MG/KG
TEST PERIOD: DAY 7

ANIMAL	0 TO 10 MINS TOTAL	0 TO 10 MINS AMB	11 TO 20 MINS TOTAL	11 TO 20 MINS AMB	21 TO 30 MINS TOTAL	21 TO 30 MINS AMB	31 TO 40 MINS TOTAL	31 TO 40 MINS AMB	41 TO 50 MINS TOTAL	41 TO 50 MINS AMB	51 TO 60 MINS TOTAL	51 TO 60 MINS AMB	COMBINED TOTAL	COMBINED AMB
59874	1366	458	947	254	634	134	218	48	19	0	28	0	3212	894
59894	1628	473	1183	277	621	98	195	52	30	0	0	0	3657	900
59895	921	261	807	145	305	32	42	0	31	0	13	0	2119	438
59896	1285	340	636	136	289	37	35	0	122	0	23	0	2390	513
59899	665	184	361	109	55	0	22	2	9	0	24	8	1136	303
59902	1085	247	337	12	40	0	41	0	126	0	133	0	1762	259
59903	1052	299	408	15	174	0	89	0	18	0	56	0	1797	314
59904	981	241	553	16	112	0	22	0	53	0	34	4	1755	261
59905	1357	384	639	103	97	0	50	0	154	0	70	0	2367	487
59909	1419	483	759	135	304	10	30	0	34	1	53	0	2599	629
59910	1044	313	622	52	573	99	175	0	203	4	11	0	2628	468
59916	1307	350	703	51	127	0	76	1	7	0	123	2	2343	404
MEAN	1176.	336.	663.	109.	278.	34.	83.	9.	67.	0.	47.	1.	2314.	489.
S.D.	264.0	97.9	245.0	88.2	220.2	48.5	71.6	19.4	66.2	1.2	42.8	2.5	681.5	220.2
S.E.	76.2	28.3	70.7	25.4	63.6	14.0	20.7	5.6	19.1	0.3	12.3	0.7	196.7	63.6
N	12													

TABLE I28

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL MOTOR ACTIVITY COUNTS

MALE GROUP: 2000 MG/KG

TEST PERIOD: DAY 7

ANIMAL	0 TO 10 MINS TOTAL	0 TO 10 MINS AMB	11 TO 20 MINS TOTAL	11 TO 20 MINS AMB	21 TO 30 MINS TOTAL	21 TO 30 MINS AMB	31 TO 40 MINS TOTAL	31 TO 40 MINS AMB	41 TO 50 MINS TOTAL	41 TO 50 MINS AMB	51 TO 60 MINS TOTAL	51 TO 60 MINS AMB	COMBINED TOTAL	COMBINED AMB
59876	1445	449	1099	313	622	191	38	2	111	12	4	0	3319	967
59883	1442	486	693	141	234	1	105	0	228	13	44	0	2746	641
59886	1131	322	691	133	282	24	40	0	52	0	36	4	2232	483
59887	1547	533	958	182	224	34	38	0	24	0	74	0	2865	749
59890	1236	317	796	161	355	21	221	30	11	0	46	0	2665	529
59898	1181	278	647	141	314	43	146	3	8	0	1	0	2297	465
59900	1345	313	137	23	504	73	17	0	15	0	17	0	2035	409
59906	1374	413	745	150	106	4	384	102	739	90	256	58	3604	817
59907	1735	563	885	245	492	138	666	101	137	0	140	0	4055	1047
59908	1482	504	799	144	312	26	106	0	25	0	76	5	2800	679
59912	1292	331	877	130	554	13	143	0	59	0	81	0	3006	474
59917	1678	527	988	234	596	80	94	0	17	0	37	5	3410	846
MEAN	1407.	420.	776.	166.	383.	54.	167.	20.	119.	10.	68.	6.	2920.	676.
S.D.	186.7	103.0	242.2	72.3	166.0	58.1	187.0	39.1	206.2	25.8	70.7	16.5	597.0	211.7
S.E.	53.9	29.7	69.9	20.9	47.9	16.8	54.0	11.3	59.5	7.4	20.4	4.8	172.3	61.1
N	12													

TABLE I28
AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS
INDIVIDUAL MOTOR ACTIVITY COUNTS

MALE GROUP: 0 MG/KG
TEST PERIOD: DAY 14

ANIMAL	0 TO 10 MINS TOTAL	0 TO 10 MINS AMB	11 TO 20 MINS TOTAL	11 TO 20 MINS AMB	21 TO 30 MINS TOTAL	21 TO 30 MINS AMB	31 TO 40 MINS TOTAL	31 TO 40 MINS AMB	41 TO 50 MINS TOTAL	41 TO 50 MINS AMB	51 TO 60 MINS TOTAL	51 TO 60 MINS AMB	COMBINED TOTAL	COMBINED AMB
59866	1306	381	746	124	516	94	46	0	10	0	10	0	2634	599
59867	1502	359	585	80	118	12	16	0	204	1	12	0	2437	452
59869	1198	292	597	98	340	20	7	0	15	0	55	4	2212	414
59870	1025	179	644	75	319	46	67	0	63	0	39	0	2157	300
59881	1400	433	811	199	278	30	40	0	86	0	29	0	2644	662
59884	1158	346	755	121	381	65	22	0	454	61	402	63	3172	656
59885	1021	227	571	73	664	153	117	4	18	0	50	4	2441	461
59891	1069	293	371	13	6	0	264	40	441	90	14	0	2165	436
59892	1273	369	1095	263	384	96	14	0	174	10	1	0	2941	738
59901	1610	406	901	145	266	35	7	0	681	112	558	87	4023	785
59914	943	243	801	165	480	90	13	0	1	0	20	0	2258	498
59915	1248	265	568	68	96	0	39	0	44	0	43	0	2038	333
MEAN	1229.	316.	704.	119.	321.	53.	54.	4.	183.	23.	103.	13.	2594.	528.
S.D.	203.5	78.2	189.1	67.3	187.0	47.0	73.2	11.5	223.6	40.7	180.1	29.4	563.4	157.3
S.E.	58.7	22.6	54.6	19.4	54.0	13.6	21.1	3.3	64.6	11.7	52.0	8.5	162.6	45.4
N	12													

TABLE I28

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL MOTOR ACTIVITY COUNTS

MALE GROUP: 200 MG/KG

TEST PERIOD: DAY 14

ANIMAL	0 TO 10 MINS TOTAL	0 TO 10 MINS AMB	11 TO 20 MINS TOTAL	11 TO 20 MINS AMB	21 TO 30 MINS TOTAL	21 TO 30 MINS AMB	31 TO 40 MINS TOTAL	31 TO 40 MINS AMB	41 TO 50 MINS TOTAL	41 TO 50 MINS AMB	51 TO 60 MINS TOTAL	51 TO 60 MINS AMB	COMBINED TOTAL	COMBINED AMB
59865	1336	272	488	89	29	0	14	0	58	0	48	0	1973	361
59873	1332	417	636	111	202	1	1	0	2	0	52	0	2225	529
59875	910	179	148	3	23	0	20	0	19	0	104	0	1224	182
59878	1369	395	618	116	79	8	16	0	73	0	43	0	2198	519
59879	877	150	33	0	33	0	13	0	44	0	59	0	1059	150
59880	895	190	21	0	43	1	46	0	23	0	75	0	1103	191
59882	659	231	2	0	9	0	28	0	8	0	1	0	707	231
59889	1023	257	339	20	485	110	34	4	129	4	115	0	2125	395
59893	1310	331	633	159	82	1	5	0	12	0	221	36	2263	527
59897	1715	601	923	189	77	0	165	0	0	0	49	0	2929	790
59911	1354	314	762	64	625	60	22	2	16	0	31	0	2810	440
59913	1652	604	259	62	164	0	232	44	215	72	581	176	3103	958
MEAN	1203.	328.	405.	68.	154.	15.	50.	4.	50.	6.	115.	18.	1977.	439.
S.D.	326.9	151.9	315.3	66.0	198.0	34.4	72.0	12.6	63.9	20.7	157.0	50.9	790.2	248.1
S.E.	94.4	43.9	91.0	19.1	57.2	9.9	20.8	3.6	18.5	6.0	45.3	14.7	228.1	71.6
N	12													

TABLE I28

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL MOTOR ACTIVITY COUNTS

MALE GROUP: 700 MG/KG

TEST PERIOD: DAY 14

ANIMAL	0 TO 10 MINS TOTAL	0 TO 10 MINS AMB	11 TO 20 MINS TOTAL	11 TO 20 MINS AMB	21 TO 30 MINS TOTAL	21 TO 30 MINS AMB	31 TO 40 MINS TOTAL	31 TO 40 MINS AMB	41 TO 50 MINS TOTAL	41 TO 50 MINS AMB	51 TO 60 MINS TOTAL	51 TO 60 MINS AMB	COMBINED TOTAL	COMBINED AMB
59874	1333	382	620	67	234	29	6	0	1	0	72	1	2266	479
59894	1738	406	656	69	153	27	50	0	79	0	76	4	2752	506
59895	991	230	517	94	137	2	4	0	51	0	2	0	1702	326
59896	1200	365	797	144	955	240	1158	235	445	9	11	0	4566	993
59899	1098	284	174	7	65	0	90	5	36	0	41	0	1504	296
59902	1135	232	257	4	18	1	0	0	11	0	63	0	1484	237
59903	1148	303	950	185	198	10	4	0	93	10	4	0	2397	508
59904	1019	225	324	60	85	0	112	0	17	0	74	0	1631	285
59905	1284	329	700	81	73	1	11	0	114	0	44	0	2226	411
59909	1279	375	1073	294	652	126	222	0	22	0	84	4	3332	799
59910	936	222	354	67	2	0	54	0	88	0	17	0	1451	289
59916	1069	205	262	14	70	1	35	0	18	0	21	0	1475	220
MEAN	1186.	297.	557.	91.	220.	36.	146.	20.	81.	2.	42.	1.	2232.	446.
S.D.	212.9	73.3	291.3	83.2	288.2	73.4	325.3	67.7	120.4	3.7	30.7	1.5	947.3	236.6
S.E.	61.5	21.1	84.1	24.0	83.2	21.2	93.9	19.5	34.8	1.1	8.9	0.4	273.5	68.3
N	12													

TABLE I28
AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS
INDIVIDUAL MOTOR ACTIVITY COUNTS

MALE GROUP: 2000 MG/KG
TEST PERIOD: DAY 14

ANIMAL	0 TO 10 MINS TOTAL	0 TO 10 MINS AMB	11 TO 20 MINS TOTAL	11 TO 20 MINS AMB	21 TO 30 MINS TOTAL	21 TO 30 MINS AMB	31 TO 40 MINS TOTAL	31 TO 40 MINS AMB	41 TO 50 MINS TOTAL	41 TO 50 MINS AMB	51 TO 60 MINS TOTAL	51 TO 60 MINS AMB	COMBINED TOTAL	COMBINED AMB
59876	1636	547	1194	324	612	158	0	0	166	4	7	0	3615	1033
59883	1194	374	1219	371	215	16	1	0	5	3	37	0	2671	764
59886	1129	274	725	77	511	74	190	4	31	0	35	0	2621	429
59887	1518	502	836	256	58	0	15	0	7	0	184	32	2618	790
59890	1455	351	736	112	295	8	21	0	6	0	0	0	2513	471
59898	1382	356	406	110	456	128	0	0	0	0	7	0	2251	594
59900	1427	357	644	81	19	0	14	0	18	0	6	0	2128	438
59906	1233	380	473	69	1	0	7	0	2	0	3	0	1719	449
59907	1390	315	787	172	232	20	111	19	168	0	47	0	2735	526
59908	1476	441	760	180	547	100	186	35	0	0	70	0	3039	756
59912	1080	292	341	51	9	1	32	0	49	2	23	3	1534	349
59917	1372	442	1013	217	343	18	22	0	80	2	4	0	2834	679
MEAN	1358.	386.	761.	168.	275.	44.	50.	5.	44.	1.	35.	3.	2523.	607.
S.D.	166.5	82.6	280.9	105.2	222.6	56.5	71.1	11.0	62.1	1.4	51.6	9.2	563.7	200.9
S.E.	48.1	23.9	81.1	30.4	64.3	16.3	20.5	3.2	17.9	0.4	14.9	2.7	162.7	58.0
N	12													

TABLE I28
AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS
INDIVIDUAL MOTOR ACTIVITY COUNTS

FEMALE GROUP: 0 MG/KG
TEST PERIOD: PRETEST

ANIMAL	0 TO 10 MINS TOTAL	0 TO 10 MINS AMB	11 TO 20 MINS TOTAL	11 TO 20 MINS AMB	21 TO 30 MINS TOTAL	21 TO 30 MINS AMB	31 TO 40 MINS TOTAL	31 TO 40 MINS AMB	41 TO 50 MINS TOTAL	41 TO 50 MINS AMB	51 TO 60 MINS TOTAL	51 TO 60 MINS AMB	COMBINED TOTAL	COMBINED AMB
59919	1457	531	825	255	228	4	309	60	453	18	169	0	3441	868
59920	1227	440	803	252	118	12	68	0	432	3	640	39	3288	746
59923	1080	306	735	113	242	5	196	24	720	172	419	27	3392	647
59924	1739	688	812	225	178	33	325	23	648	3	126	11	3828	983
59933	1298	381	701	104	282	7	246	13	446	29	335	23	3308	557
59939	974	296	679	182	46	0	277	1	173	2	150	3	2299	484
59941	1137	303	533	89	161	5	36	2	93	0	198	16	2158	415
59942	435	64	0	0	396	61	201	0	33	1	152	1	1217	127
59950	1007	296	227	18	176	0	145	4	454	2	454	0	2463	320
59956	606	165	360	12	350	47	138	5	144	4	62	4	1660	237
59969	1065	400	220	14	603	13	583	26	735	43	390	7	3596	503
59970	657	154	100	0	25	0	241	13	914	176	447	80	2384	423
MEAN	1057.	335.	500.	105.	234.	16.	230.	14.	437.	38.	295.	18.	2753.	526.
S.D.	366.7	170.7	302.4	100.6	160.3	20.3	142.7	17.4	282.6	65.0	176.6	23.2	835.4	252.3
S.E.	105.8	49.3	87.3	29.0	46.3	5.9	41.2	5.0	81.6	18.8	51.0	6.7	241.2	72.8
N	12													

TABLE I28

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL MOTOR ACTIVITY COUNTS

FEMALE GROUP: 200 MG/KG

TEST PERIOD: PRETEST

ANIMAL	0 TO 10 MINS TOTAL	0 TO 10 MINS AMB	11 TO 20 MINS TOTAL	11 TO 20 MINS AMB	21 TO 30 MINS TOTAL	21 TO 30 MINS AMB	31 TO 40 MINS TOTAL	31 TO 40 MINS AMB	41 TO 50 MINS TOTAL	41 TO 50 MINS AMB	51 TO 60 MINS TOTAL	51 TO 60 MINS AMB	COMBINED TOTAL	COMBINED AMB
59922	1342	435	940	326	75	6	221	12	259	37	79	5	2916	821
59926	863	240	584	59	108	28	198	18	313	17	276	6	2342	368
59927	851	260	142	15	145	1	324	0	198	8	289	7	1949	291
59936	881	266	216	2	91	0	400	0	255	2	244	7	2087	277
59937	1350	494	696	119	124	4	102	5	255	0	664	5	3191	627
59949	1486	654	715	180	332	30	6	0	132	2	1015	7	3686	873
59952	1199	438	401	58	409	10	311	5	329	3	497	6	3146	520
59954	996	315	273	29	289	1	344	1	126	9	123	33	2151	388
59958	1364	412	678	123	424	95	364	53	478	13	214	0	3522	696
59962	1545	685	481	103	61	3	141	2	236	0	654	9	3118	802
59967	1446	596	835	206	249	19	86	0	63	5	146	2	2825	828
59968	1003	356	355	6	358	8	244	1	724	28	626	97	3310	496
MEAN	1194.	429.	526.	102.	222.	17.	228.	8.	281.	10.	402.	15.	2854.	582.
S.D.	260.8	153.1	254.5	97.1	136.5	26.6	124.9	15.2	176.6	11.7	286.6	27.0	586.5	221.2
S.E.	75.3	44.2	73.5	28.0	39.4	7.7	36.1	4.4	51.0	3.4	82.7	7.8	169.3	63.8
N	12													

TABLE I28
AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS
INDIVIDUAL MOTOR ACTIVITY COUNTS

FEMALE GROUP: 700 MG/KG
TEST PERIOD: PRETEST

ANIMAL	0 TO 10 MINS TOTAL	0 TO 10 MINS AMB	11 TO 20 MINS TOTAL	11 TO 20 MINS AMB	21 TO 30 MINS TOTAL	21 TO 30 MINS AMB	31 TO 40 MINS TOTAL	31 TO 40 MINS AMB	41 TO 50 MINS TOTAL	41 TO 50 MINS AMB	51 TO 60 MINS TOTAL	51 TO 60 MINS AMB	COMBINED TOTAL	COMBINED AMB
59918	1507	595	796	264	1019	394	399	97	27	1	134	0	3882	1351
59925	1045	338	575	152	51	0	287	39	297	53	108	3	2363	585
59930	776	124	324	7	263	19	345	31	301	22	258	23	2267	226
59931	1307	444	961	241	346	11	88	0	9	0	8	0	2719	696
59932	1419	483	541	71	72	0	1007	6	247	10	485	11	3771	581
59935	1033	314	234	34	468	93	307	51	337	1	414	5	2793	498
59940	1033	337	506	67	376	79	105	0	70	0	307	2	2397	485
59944	1235	493	707	169	825	197	480	4	260	0	230	1	3737	864
59945	1177	334	518	81	362	5	532	8	592	43	532	38	3713	509
59948	1204	486	540	156	333	0	506	10	195	14	148	9	2926	675
59959	607	90	261	23	450	57	95	1	316	25	189	33	1918	229
59963	1138	374	933	316	445	133	99	0	153	0	8	0	2776	823
MEAN	1123.	368.	575.	132.	418.	82.	354.	21.	234.	14.	235.	10.	2939.	627.
S.D.	252.3	148.6	239.6	101.4	274.2	116.4	264.7	29.6	160.5	18.3	172.6	13.5	676.4	301.5
S.E.	72.8	42.9	69.2	29.3	79.1	33.6	76.4	8.5	46.3	5.3	49.8	3.9	195.3	87.0
N	12													

TABLE I28

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL MOTOR ACTIVITY COUNTS

FEMALE GROUP: 2000 MG/KG

TEST PERIOD: PRETEST

ANIMAL	0 TO 10 MINS TOTAL	0 TO 10 MINS AMB	11 TO 20 MINS TOTAL	11 TO 20 MINS AMB	21 TO 30 MINS TOTAL	21 TO 30 MINS AMB	31 TO 40 MINS TOTAL	31 TO 40 MINS AMB	41 TO 50 MINS TOTAL	41 TO 50 MINS AMB	51 TO 60 MINS TOTAL	51 TO 60 MINS AMB	COMBINED TOTAL	COMBINED AMB
59921	1171	397	832	247	432	3	227	0	303	4	79	13	3044	664
59928	1560	487	793	166	802	175	564	31	124	1	400	25	4243	885
59929	919	294	119	2	323	3	256	7	876	292	127	0	2620	598
59934	803	216	359	40	291	75	329	73	26	0	44	0	1852	404
59938	1114	481	657	245	226	56	84	0	93	1	200	1	2374	784
59943	970	257	653	88	663	118	625	96	150	1	495	5	3556	565
59946	585	197	403	66	378	90	23	0	72	0	530	0	1991	353
59947	1080	385	719	177	368	93	144	1	230	16	304	8	2845	680
59951	891	247	418	50	1407	23	671	23	434	37	378	4	4199	384
59955	1179	469	864	282	528	96	57	4	223	0	149	4	3000	855
59964	1408	611	442	106	41	0	25	0	251	5	84	1	2251	723
59966	1031	320	246	4	431	35	905	215	413	38	95	2	3121	614
MEAN	1059.	363.	542.	123.	491.	64.	326.	38.	266.	33.	240.	5.	2925.	626.
S.D.	261.1	129.4	243.5	98.2	349.4	54.0	295.6	64.3	230.7	82.8	173.3	7.3	780.3	177.2
S.E.	75.4	37.4	70.3	28.3	100.9	15.6	85.3	18.6	66.6	23.9	50.0	2.1	225.3	51.1
N	12													

TABLE I28

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL MOTOR ACTIVITY COUNTS

FEMALE GROUP: 0 MG/KG

TEST PERIOD: DAY 0

ANIMAL	0 TO 10 MINS TOTAL	0 TO 10 MINS AMB	11 TO 20 MINS TOTAL	11 TO 20 MINS AMB	21 TO 30 MINS TOTAL	21 TO 30 MINS AMB	31 TO 40 MINS TOTAL	31 TO 40 MINS AMB	41 TO 50 MINS TOTAL	41 TO 50 MINS AMB	51 TO 60 MINS TOTAL	51 TO 60 MINS AMB	COMBINED TOTAL	COMBINED AMB
59919	1735	563	588	126	90	0	1	0	41	0	233	0	2688	689
59920	1599	592	1064	344	135	7	47	4	92	6	167	0	3104	953
59923	1307	388	552	51	341	9	630	145	319	0	406	0	3555	593
59924	1506	506	159	50	51	1	852	225	62	0	57	0	2687	782
59933	1291	359	212	14	348	4	524	1	221	6	419	2	3015	386
59939	1835	723	1004	323	276	34	326	7	287	0	326	0	4054	1087
59941	1225	383	294	49	1013	350	803	207	125	1	143	0	3603	990
59942	1233	387	850	292	169	23	253	86	148	53	19	0	2672	841
59950	1359	433	508	189	4	0	127	2	341	9	258	0	2597	633
59956	759	181	570	79	169	2	125	1	197	0	833	9	2653	272
59969	1315	491	603	138	82	1	21	0	76	7	201	58	2298	695
59970	1294	428	368	8	85	1	96	9	294	4	306	5	2443	455
MEAN	1372.	453.	564.	139.	230.	36.	317.	57.	184.	7.	281.	6.	2947.	698.
S.D.	278.4	136.8	290.8	121.4	270.3	99.4	308.9	86.7	107.6	14.8	213.7	16.6	535.1	249.1
S.E.	80.4	39.5	83.9	35.0	78.0	28.7	89.2	25.0	31.1	4.3	61.7	4.8	154.5	71.9
N	12													

TABLE I28
AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS
INDIVIDUAL MOTOR ACTIVITY COUNTS

FEMALE GROUP: 200 MG/KG
TEST PERIOD: DAY 0

ANIMAL	0 TO 10 MINS TOTAL	0 TO 10 MINS AMB	11 TO 20 MINS TOTAL	11 TO 20 MINS AMB	21 TO 30 MINS TOTAL	21 TO 30 MINS AMB	31 TO 40 MINS TOTAL	31 TO 40 MINS AMB	41 TO 50 MINS TOTAL	41 TO 50 MINS AMB	51 TO 60 MINS TOTAL	51 TO 60 MINS AMB	COMBINED TOTAL	COMBINED AMB
59922	1388	535	634	104	671	178	103	1	105	1	355	9	3256	828
59926	1176	329	568	62	787	154	257	6	160	0	131	0	3079	551
59927	1274	383	497	144	99	1	65	1	108	2	207	5	2250	536
59936	774	223	68	0	78	0	41	0	162	0	294	40	1417	263
59937	1540	552	399	5	292	18	461	129	208	11	299	66	3199	781
59949	1667	772	1025	322	729	194	8	0	33	0	29	0	3491	1288
59952	1483	572	566	150	265	0	368	115	547	159	16	0	3245	996
59954	1025	294	216	3	37	0	26	0	155	1	313	4	1772	302
59958	1451	403	570	140	7	0	348	1	717	21	547	48	3640	613
59962	1703	778	892	280	57	0	108	1	58	0	414	107	3232	1166
59967	1720	730	433	101	78	0	148	4	193	2	165	2	2737	839
59968	972	215	201	3	350	1	187	18	305	0	68	0	2083	237
MEAN	1348.	482.	506.	110.	288.	46.	177.	23.	229.	16.	237.	23.	2783.	700.
S.D.	308.0	205.0	275.0	107.0	288.2	78.9	149.7	46.6	204.3	45.3	163.0	34.7	726.1	345.5
S.E.	88.9	59.2	79.4	30.9	83.2	22.8	43.2	13.5	59.0	13.1	47.0	10.0	209.6	99.7
N	12													

TABLE I28

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL MOTOR ACTIVITY COUNTS

FEMALE GROUP: 700 MG/KG

TEST PERIOD: DAY 0

ANIMAL	0 TO 10 MINS TOTAL	0 TO 10 MINS AMB	11 TO 20 MINS TOTAL	11 TO 20 MINS AMB	21 TO 30 MINS TOTAL	21 TO 30 MINS AMB	31 TO 40 MINS TOTAL	31 TO 40 MINS AMB	41 TO 50 MINS TOTAL	41 TO 50 MINS AMB	51 TO 60 MINS TOTAL	51 TO 60 MINS AMB	COMBINED TOTAL	COMBINED AMB
59918	1374	533	292	55	40	1	601	184	82	2	83	1	2472	776
59925	494	147	1	0	36	0	252	37	184	4	145	3	1112	191
59930	1217	389	657	145	175	35	20	0	32	0	158	4	2259	573
59931	1533	540	520	182	926	245	272	9	14	0	98	0	3363	976
59932	1132	404	550	150	660	178	249	91	12	0	28	1	2631	824
59935	921	316	243	0	34	0	86	1	21	0	105	1	1410	318
59940	1025	366	167	4	177	0	44	0	90	1	210	0	1713	371
59944	998	328	113	0	197	15	77	0	35	0	208	0	1628	343
59945	1035	282	147	1	170	0	178	2	106	0	120	3	1756	288
59948	1305	482	411	68	71	1	69	0	56	1	138	0	2050	552
59959	765	246	56	0	296	0	396	0	341	0	294	47	2148	293
59963	1572	548	692	158	140	0	47	0	200	5	42	1	2693	712
MEAN	1114.	382.	321.	64.	244.	40.	191.	27.	98.	1.	136.	5.	2103.	518.
S.D.	312.1	126.9	238.8	74.3	274.3	82.2	174.4	56.3	99.0	1.7	75.2	13.3	628.1	254.9
S.E.	90.1	36.6	68.9	21.5	79.2	23.7	50.3	16.2	28.6	0.5	21.7	3.8	181.3	73.6
N	12													

TABLE I28

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL MOTOR ACTIVITY COUNTS

FEMALE GROUP: 2000 MG/KG

TEST PERIOD: DAY 0

ANIMAL	0 TO 10 MINS TOTAL	0 TO 10 MINS AMB	11 TO 20 MINS TOTAL	11 TO 20 MINS AMB	21 TO 30 MINS TOTAL	21 TO 30 MINS AMB	31 TO 40 MINS TOTAL	31 TO 40 MINS AMB	41 TO 50 MINS TOTAL	41 TO 50 MINS AMB	51 TO 60 MINS TOTAL	51 TO 60 MINS AMB	COMBINED TOTAL	COMBINED AMB
59921	939	279	84	0	115	1	305	1	209	0	186	4	1838	285
59928	1673	545	1141	327	667	178	6	0	135	0	48	1	3670	1051
59929	750	231	55	3	34	0	126	0	86	1	0	0	1051	235
59934	1134	354	460	53	133	4	183	55	61	1	9	0	1980	467
59938	809	377	83	0	318	42	47	0	87	2	189	0	1533	421
59943	933	215	587	91	158	3	102	0	0	0	31	0	1811	309
59946	467	118	7	0	135	0	94	7	15	0	10	1	728	126
59947	1138	345	558	115	292	68	388	50	19	0	87	14	2482	592
59951	718	203	1	0	11	0	6	0	2	0	87	6	825	209
59955	884	335	403	152	9	0	135	3	2	0	0	0	1433	490
59964	1578	567	223	8	43	0	41	0	42	0	109	4	2036	579
59966	1240	247	289	30	146	0	31	2	57	7	73	1	1836	287
MEAN	1022.	318.	324.	65.	172.	25.	122.	10.	60.	1.	69.	3.	1769.	421.
S.D.	351.6	133.9	333.1	97.6	184.9	52.9	119.4	20.1	63.0	2.0	66.6	4.1	792.5	247.4
S.E.	101.5	38.7	96.2	28.2	53.4	15.3	34.5	5.8	18.2	0.6	19.2	1.2	228.8	71.4
N	12													

TABLE I28
AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS
INDIVIDUAL MOTOR ACTIVITY COUNTS

FEMALE GROUP: 0 MG/KG
TEST PERIOD: DAY 7

ANIMAL	0 TO 10 MINS TOTAL	0 TO 10 MINS AMB	11 TO 20 MINS TOTAL	11 TO 20 MINS AMB	21 TO 30 MINS TOTAL	21 TO 30 MINS AMB	31 TO 40 MINS TOTAL	31 TO 40 MINS AMB	41 TO 50 MINS TOTAL	41 TO 50 MINS AMB	51 TO 60 MINS TOTAL	51 TO 60 MINS AMB	COMBINED TOTAL	COMBINED AMB
59919	1888	683	942	267	855	232	467	132	39	0	153	4	4344	1318
59920	1509	566	268	3	504	168	50	0	55	2	41	0	2427	739
59923	1903	843	957	302	902	296	790	159	149	8	98	4	4799	1612
59924	1801	679	624	132	961	288	805	321	297	86	614	129	5102	1635
59933	1111	228	785	140	130	2	13	0	51	0	103	1	2193	371
59939	1919	709	1284	335	796	180	207	16	21	0	44	3	4271	1243
59941	1431	493	806	137	513	64	109	5	12	0	18	0	2889	699
59942	1287	441	453	114	677	198	662	88	152	28	18	0	3249	869
59950	1489	559	783	202	427	41	60	7	59	0	343	0	3161	809
59956	947	279	240	24	10	0	84	10	366	9	178	4	1825	326
59969	1217	403	906	254	373	85	264	0	16	0	794	177	3570	919
59970	1429	440	961	228	643	136	53	0	16	0	90	3	3192	807
MEAN	1494.	527.	751.	178.	566.	141.	297.	62.	103.	11.	208.	27.	3419.	946.
S.D.	326.3	182.3	306.8	104.7	299.4	103.4	303.1	99.3	117.7	25.0	251.3	59.7	1035.6	427.3
S.E.	94.2	52.6	88.6	30.2	86.4	29.9	87.5	28.7	34.0	7.2	72.5	17.2	299.0	123.4
N	12													

TABLE I28
AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS
INDIVIDUAL MOTOR ACTIVITY COUNTS

FEMALE GROUP: 200 MG/KG
TEST PERIOD: DAY 7

ANIMAL	0 TO 10 MINS TOTAL	0 TO 10 MINS AMB	11 TO 20 MINS TOTAL	11 TO 20 MINS AMB	21 TO 30 MINS TOTAL	21 TO 30 MINS AMB	31 TO 40 MINS TOTAL	31 TO 40 MINS AMB	41 TO 50 MINS TOTAL	41 TO 50 MINS AMB	51 TO 60 MINS TOTAL	51 TO 60 MINS AMB	COMBINED TOTAL	COMBINED AMB
59922	2021	761	885	246	1144	323	540	113	365	51	615	146	5570	1640
59926	1228	275	463	12	580	76	378	37	55	3	88	0	2792	403
59927	1345	469	798	145	555	125	28	2	13	0	32	0	2771	741
59936	1520	582	836	216	59	0	15	0	1	0	585	170	3016	968
59937	1591	574	1077	288	865	251	186	20	23	0	25	0	3767	1133
59949	1632	698	771	227	587	212	86	0	48	0	157	0	3281	1137
59952	1307	486	604	39	817	265	156	11	510	68	313	15	3707	884
59954	1186	392	498	97	56	0	55	1	28	0	48	0	1871	490
59958	1455	429	723	138	86	0	4	0	286	39	69	1	2623	607
59962	1570	572	869	213	302	73	429	104	13	0	372	127	3555	1089
59967	1875	665	1271	432	947	253	310	5	75	0	1024	274	5502	1629
59968	1246	288	530	74	97	3	42	0	418	3	41	0	2374	368
MEAN	1498.	516.	777.	177.	508.	132.	186.	24.	153.	14.	281.	61.	3402.	924.
S.D.	260.0	154.4	239.0	118.0	384.8	122.5	184.1	40.8	186.3	24.4	316.6	93.8	1140.2	429.8
S.E.	75.0	44.6	69.0	34.1	111.1	35.4	53.1	11.8	53.8	7.0	91.4	27.1	329.2	124.1
N	12													

TABLE I28
AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS
INDIVIDUAL MOTOR ACTIVITY COUNTS

FEMALE GROUP: 700 MG/KG
TEST PERIOD: DAY 7

ANIMAL	0 TO 10 MINS TOTAL	0 TO 10 MINS AMB	11 TO 20 MINS TOTAL	11 TO 20 MINS AMB	21 TO 30 MINS TOTAL	21 TO 30 MINS AMB	31 TO 40 MINS TOTAL	31 TO 40 MINS AMB	41 TO 50 MINS TOTAL	41 TO 50 MINS AMB	51 TO 60 MINS TOTAL	51 TO 60 MINS AMB	COMBINED TOTAL	COMBINED AMB
59918	1570	672	630	191	698	219	783	205	549	137	20	0	4250	1424
59925	1334	490	689	157	48	0	46	0	487	151	1	0	2605	798
59930	1195	308	754	158	811	186	198	13	46	0	873	236	3877	901
59931	1764	638	615	173	109	4	25	0	83	0	19	0	2615	815
59932	1417	442	804	220	784	204	721	207	598	128	175	49	4499	1250
59935	1329	435	255	5	36	0	793	255	1065	252	20	0	3498	947
59940	1291	380	738	202	42	0	52	0	302	47	60	0	2485	629
59944	1612	630	962	310	402	100	1163	410	163	0	8	0	4310	1450
59945	1563	379	912	152	727	95	812	107	412	28	205	13	4631	774
59948	1444	591	592	180	8	0	6	0	98	0	16	0	2164	771
59959	1064	281	641	66	459	96	493	50	88	4	32	1	2777	498
59963	1293	451	544	184	149	0	917	246	552	102	10	0	3465	983
MEAN	1406.	475.	678.	167.	356.	75.	501.	124.	370.	71.	120.	25.	3431.	937.
S.D.	195.9	131.5	184.1	75.3	327.3	87.6	414.9	137.1	302.1	82.5	246.5	68.0	879.3	298.1
S.E.	56.6	38.0	53.1	21.7	94.5	25.3	119.8	39.6	87.2	23.8	71.2	19.6	253.8	86.1
N	12													

TABLE I28
AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS
INDIVIDUAL MOTOR ACTIVITY COUNTS

FEMALE GROUP: 2000 MG/KG
TEST PERIOD: DAY 7

ANIMAL	0 TO 10 MINS TOTAL	0 TO 10 MINS AMB	11 TO 20 MINS TOTAL	11 TO 20 MINS AMB	21 TO 30 MINS TOTAL	21 TO 30 MINS AMB	31 TO 40 MINS TOTAL	31 TO 40 MINS AMB	41 TO 50 MINS TOTAL	41 TO 50 MINS AMB	51 TO 60 MINS TOTAL	51 TO 60 MINS AMB	COMBINED TOTAL	COMBINED AMB
59921	1971	716	1379	437	1281	410	453	26	72	0	116	2	5272	1591
59928	1383	343	286	12	115	4	408	100	1	0	2	0	2195	459
59929	1770	573	1089	266	1087	289	513	68	206	14	940	266	5605	1476
59934	1433	469	835	177	778	137	447	21	37	0	3	0	3533	804
59938	1598	648	1031	366	657	122	779	170	104	0	69	0	4238	1306
59943	1540	506	866	259	815	223	481	128	150	32	92	0	3944	1148
59946	1669	559	893	208	548	72	39	0	33	0	24	0	3206	839
59947	1427	478	1048	264	1009	255	538	147	87	26	164	2	4273	1172
59951	1396	412	965	221	788	238	635	109	15	0	107	0	3906	980
59955	1452	605	890	234	729	168	708	198	48	0	18	0	3845	1205
59964	1966	701	1220	426	486	167	281	72	482	168	622	91	5057	1625
59966	798	250	825	209	97	10	20	0	106	1	20	0	1866	470
MEAN	1534.	522.	944.	257.	699.	175.	442.	87.	112.	20.	181.	30.	3912.	1090.
S.D.	311.5	141.3	265.6	115.2	355.1	117.7	234.5	66.7	130.5	47.9	292.6	78.7	1130.0	392.6
S.E.	89.9	40.8	76.7	33.2	102.5	34.0	67.7	19.3	37.7	13.8	84.5	22.7	326.2	113.3
N	12													

TABLE I28

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL MOTOR ACTIVITY COUNTS

FEMALE GROUP: 0 MG/KG

TEST PERIOD: DAY 14

ANIMAL	0 TO 10 MINS TOTAL	0 TO 10 MINS AMB	11 TO 20 MINS TOTAL	11 TO 20 MINS AMB	21 TO 30 MINS TOTAL	21 TO 30 MINS AMB	31 TO 40 MINS TOTAL	31 TO 40 MINS AMB	41 TO 50 MINS TOTAL	41 TO 50 MINS AMB	51 TO 60 MINS TOTAL	51 TO 60 MINS AMB	COMBINED TOTAL	COMBINED AMB
59919	1932	552	1231	304	1076	243	1302	389	439	45	0	0	5980	1533
59920	1504	525	671	144	92	0	63	0	64	0	65	0	2459	669
59923	1544	489	795	185	699	156	667	145	220	42	624	200	4549	1217
59924	1923	757	696	163	86	2	1414	435	870	204	17	1	5006	1562
59933	1156	287	467	31	601	79	373	61	29	0	74	3	2700	461
59939	1540	535	814	170	880	265	225	16	180	4	42	3	3681	993
59941	1230	363	378	34	21	0	60	1	33	0	64	0	1786	398
59942	1358	445	450	68	33	0	37	0	329	102	77	1	2284	616
59950	1564	524	603	66	460	121	91	0	53	0	153	2	2924	713
59956	969	214	499	101	107	0	67	2	135	2	22	1	1799	320
59969	1570	619	1138	359	864	285	701	184	846	269	420	77	5539	1793
59970	1513	498	912	221	136	13	2	0	102	0	49	0	2714	732
MEAN	1484.	484.	721.	154.	421.	97.	417.	103.	275.	56.	134.	24.	3452.	917.
S.D.	281.0	145.0	270.8	103.5	388.2	114.0	500.7	157.5	299.1	91.0	190.4	59.6	1466.7	497.3
S.E.	81.1	41.9	78.2	29.9	112.1	32.9	144.5	45.5	86.4	26.3	55.0	17.2	423.4	143.6
N	12													

TABLE I28

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL MOTOR ACTIVITY COUNTS

FEMALE GROUP: 200 MG/KG

TEST PERIOD: DAY 14

ANIMAL	0 TO 10 MINS TOTAL	0 TO 10 MINS AMB	11 TO 20 MINS TOTAL	11 TO 20 MINS AMB	21 TO 30 MINS TOTAL	21 TO 30 MINS AMB	31 TO 40 MINS TOTAL	31 TO 40 MINS AMB	41 TO 50 MINS TOTAL	41 TO 50 MINS AMB	51 TO 60 MINS TOTAL	51 TO 60 MINS AMB	COMBINED TOTAL	COMBINED AMB
59922	2176	807	982	241	607	102	1109	344	644	94	37	0	5555	1588
59926	1156	292	757	152	307	21	83	0	63	2	464	73	2830	540
59927	1384	443	802	175	524	107	11	0	6	0	14	0	2741	725
59936	1526	485	840	221	93	0	74	0	45	0	6	0	2584	706
59937	1907	619	1024	247	921	216	139	2	51	3	173	2	4215	1089
59949	1679	633	904	271	77	8	164	47	999	343	77	0	3900	1302
59952	1696	591	898	214	579	117	477	115	8	1	133	35	3791	1073
59954	1192	439	465	71	139	1	25	0	66	0	19	0	1906	511
59958	1555	427	448	48	48	0	5	0	276	70	544	127	2876	672
59962	1485	481	562	87	138	0	66	5	859	230	948	258	4058	1061
59967	1726	642	312	71	4	0	874	235	27	0	173	0	3116	948
59968	1184	236	352	8	11	0	76	0	36	3	37	0	1696	247
MEAN	1556.	508.	696.	151.	287.	48.	259.	62.	257.	62.	219.	41.	3272.	872.
S.D.	307.1	159.4	253.7	90.0	299.3	71.0	367.8	113.8	363.2	112.0	289.6	79.1	1081.4	375.0
S.E.	88.7	46.0	73.2	26.0	86.4	20.5	106.2	32.8	104.9	32.3	83.6	22.8	312.2	108.3
N	12													

TABLE I28
AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS
INDIVIDUAL MOTOR ACTIVITY COUNTS

FEMALE GROUP: 700 MG/KG
TEST PERIOD: DAY 14

ANIMAL	0 TO 10 MINS TOTAL	0 TO 10 MINS AMB	11 TO 20 MINS TOTAL	11 TO 20 MINS AMB	21 TO 30 MINS TOTAL	21 TO 30 MINS AMB	31 TO 40 MINS TOTAL	31 TO 40 MINS AMB	41 TO 50 MINS TOTAL	41 TO 50 MINS AMB	51 TO 60 MINS TOTAL	51 TO 60 MINS AMB	COMBINED TOTAL	COMBINED AMB
59918	1750	682	1020	195	912	222	118	0	34	0	161	29	3995	1128
59925	1388	529	194	1	1	0	36	1	4	0	664	218	2287	749
59930	1144	304	933	270	572	128	162	27	302	39	28	0	3141	768
59931	1799	624	1039	285	100	2	592	169	520	70	206	9	4256	1159
59932	1223	409	750	165	554	152	159	10	21	0	205	2	2912	738
59935	1514	475	870	209	204	8	420	118	1070	345	1324	265	5402	1420
59940	1247	398	731	163	589	134	65	0	12	0	70	1	2714	696
59944	1700	677	927	282	1199	372	923	254	43	0	69	7	4861	1592
59945	1199	284	621	99	233	5	25	0	82	3	43	0	2203	391
59948	1045	359	24	0	71	0	32	0	3	0	1	0	1176	359
59959	921	162	294	19	68	1	0	0	7	0	504	100	1794	282
59963	1528	582	867	266	352	118	671	246	822	279	8	0	4248	1491
MEAN	1372.	457.	689.	163.	405.	95.	267.	69.	243.	61.	274.	53.	3249.	898.
S.D.	287.2	166.2	339.3	109.5	372.4	116.9	308.5	100.7	367.1	119.9	389.9	93.2	1302.0	453.2
S.E.	82.9	48.0	97.9	31.6	107.5	33.8	89.0	29.1	106.0	34.6	112.6	26.9	375.9	130.8
N	12													

TABLE I28
AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS
INDIVIDUAL MOTOR ACTIVITY COUNTS

FEMALE GROUP: 2000 MG/KG
TEST PERIOD: DAY 14

ANIMAL	0 TO 10 MINS TOTAL	0 TO 10 MINS AMB	11 TO 20 MINS TOTAL	11 TO 20 MINS AMB	21 TO 30 MINS TOTAL	21 TO 30 MINS AMB	31 TO 40 MINS TOTAL	31 TO 40 MINS AMB	41 TO 50 MINS TOTAL	41 TO 50 MINS AMB	51 TO 60 MINS TOTAL	51 TO 60 MINS AMB	COMBINED TOTAL	COMBINED AMB
59921	1652	469	927	255	55	0	44	0	640	162	1173	315	4491	1201
59928	1438	479	930	201	839	169	892	173	118	3	18	0	4235	1025
59929	1831	644	1504	352	981	94	37	0	96	0	508	87	4957	1177
59934	1438	490	560	136	275	6	209	0	674	143	501	98	3657	873
59938	1719	678	1229	288	571	131	91	1	12	0	1	0	3623	1098
59943	1077	273	854	154	998	243	363	58	643	142	419	84	4354	954
59946	969	334	437	110	311	84	3	0	234	46	233	6	2187	580
59947	1101	328	694	147	236	40	62	1	15	0	62	4	2170	520
59951	1589	505	959	249	618	232	180	40	40	0	14	0	3400	1026
59955	1418	603	190	17	61	0	34	2	47	0	29	2	1779	624
59964	1676	663	925	272	861	278	903	273	121	20	22	0	4508	1506
59966	1013	292	383	49	19	0	51	2	48	0	953	263	2467	606
MEAN	1410.	480.	799.	186.	485.	106.	239.	46.	224.	43.	328.	72.	3486.	933.
S.D.	300.6	147.1	369.7	101.1	371.6	103.4	323.6	87.5	265.3	65.5	397.7	109.2	1085.4	302.4
S.E.	86.8	42.5	106.7	29.2	107.3	29.8	93.4	25.3	76.6	18.9	114.8	31.5	313.3	87.3
N	12													

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TABLE I29

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

ANIMAL NO. 59866 GROUP 1: 0 MG/KG MALE SCHEDULED EUTH 12/18/09 DATE OF DEATH: 12/18/09

ORGAN WEIGHT	ABS.(G)					GRADE
			PERFUSED			
BRAIN	2.15	NO SIGNIFICANT				
BRAIN LENGTH(MM)	20.2	CHANGES OBSERVED	GROSS:BRAIN	SPINAL C.-CERV.	SPINAL C.-LUMB.	
BRAIN WIDTH(MM)	15.3					
FINAL BODY WT(G)	283.					

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT

TABLE I29

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS PAGE 2

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

ANIMAL NO. 59867 GROUP 1: 0 MG/KG MALE SCHEDULED EUTH 12/18/09 DATE OF DEATH: 12/18/09

						GRADE
ORGAN WEIGHT	ABS.(G)		PERFUSED			
BRAIN	2.17	NO SIGNIFICANT				
BRAIN LENGTH(MM)	21.4	CHANGES OBSERVED	GROSS:BRAIN	SPINAL C.-CERV.	SPINAL C.-LUMB.	
BRAIN WIDTH(MM)	15.1					
FINAL BODY WT(G)	300.					

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT

TABLE I29

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

ANIMAL NO. 59869 GROUP 1: 0 MG/KG MALE SCHEDULED EUTH 12/16/09 DATE OF DEATH: 12/16/09

ORGAN WEIGHT	ABS.(G)						GRADE
BRAIN	2.19	NO SIGNIFICANT		PERFUSED			
BRAIN LENGTH(MM)	20.9	CHANGES OBSERVED	GROSS:	BRAIN	SPINAL C.-CERV.	SPINAL C.-LUMB.	
BRAIN WIDTH(MM)	14.2		MICRO:	SPINAL C.-CERV.	SPINAL C.-LUMB.	HIPPOCAMPUS	OLFACTORY BULBS
FINAL BODY WT(G)	342.			TRIG. GANGLION	TRIGEMINAL NERVE	LUMBAR DOR. GANG	LUMBAR DOR. FIB.
				LUMBAR VENT. FIB	CERV. DOR. GANG.	CERV. DOR. FIB.	CERV. VENT. FIB.
				SCIATIC NERVE	SURAL NERVE	TIBIAL NERVE	PERONEAL NERVE
				MIDBRAIN	CEREBELLUM	OPTIC NERVE	CEREBRAL CORTEX
				EYES	BASAL GANGLIA	THALAMUS	HYPOTHALAMUS
				PONS	MEDULLA OBLONG.	GASTROC. MUSCLE	LUM SPIN NERVE
				CERV SPIN NERVE			

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT

TABLE I29

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

ANIMAL NO. 59870 GROUP 1: 0 MG/KG MALE SCHEDULED EUTH 12/17/09 DATE OF DEATH: 12/17/09

ORGAN WEIGHT	ABS.(G)			GRADE
BRAIN	2.13	LUMBAR DOR. GANG	MICRO: PERFUSED CHROMATOLYSIS NOTE DORSAL ROOT FIBER DEGENERATION ALSO PRESENT	1
BRAIN LENGTH(MM)	20.4			
BRAIN WIDTH(MM)	15.3	LUMBAR DOR. FIB.	MICRO: DEGENERATION, NERVE FIBER	1
FINAL BODY WT(G)	343.	SURAL NERVE	MICRO: DEGENERATION, NERVE FIBER	1
		LUM SPIN NERVE	MICRO: DEGENERATION, NERVE FIBER	1
		NO SIGNIFICANT CHANGES OBSERVED		

GROSS:	BRAIN	SPINAL C.-CERV.	SPINAL C.-LUMB.	
MICRO:	SPINAL C.-CERV.	SPINAL C.-LUMB.	HIPPOCAMPUS	OLFACTORY BULBS
	TRIG. GANGLION	TRIGEMINAL NERVE	LUMBAR VENT. FIB	CERV. DOR. GANG.
	CERV. DOR. FIB.	CERV. VENT. FIB.	SCIATIC NERVE	TIBIAL NERVE
	PERONEAL NERVE	MIDBRAIN	CEREBELLUM	OPTIC NERVE
	CEREBRAL CORTEX	EYES	BASAL GANGLIA	THALAMUS
	HYPOTHALAMUS	PONS	MEDULLA OBLONG.	GASTROC. MUSCLE
	CERV SPIN NERVE			

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT

ANIMAL NO. 59881 GROUP 1: 0 MG/KG MALE SCHEDULED EUTH 12/16/09 DATE OF DEATH: 12/16/09

ORGAN WEIGHT	ABS.(G)		PERFUSED			GRADE
BRAIN	2.12	NO SIGNIFICANT				
BRAIN LENGTH(MM)	20.2	CHANGES OBSERVED	GROSS:BRAIN	SPINAL C.-CERV.	SPINAL C.-LUMB.	
BRAIN WIDTH(MM)	14.7					
FINAL BODY WT(G)	311.					

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT

TABLE I29

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

ANIMAL NO. 59884 GROUP 1: 0 MG/KG MALE SCHEDULED EUTH 12/15/09 DATE OF DEATH: 12/15/09

ORGAN WEIGHT	ABS.(G)						GRADE
BRAIN	2.11	NO SIGNIFICANT		PERFUSED			
BRAIN LENGTH(MM)	20.4	CHANGES OBSERVED	GROSS:	BRAIN	SPINAL C.-CERV.	SPINAL C.-LUMB.	
BRAIN WIDTH(MM)	15.5		MICRO:	SPINAL C.-CERV.	SPINAL C.-LUMB.	HIPPOCAMPUS	OLFACTORY BULBS
FINAL BODY WT(G)	262.			TRIG. GANGLION	TRIGEMINAL NERVE	LUMBAR DOR. GANG	LUMBAR DOR. FIB.
				LUMBAR VENT. FIB	CERV. DOR. GANG.	CERV. DOR. FIB.	CERV. VENT. FIB.
				SCIATIC NERVE	SURAL NERVE	TIBIAL NERVE	PERONEAL NERVE
				MIDBRAIN	CEREBELLUM	OPTIC NERVE	CEREBRAL CORTEX
				EYES	BASAL GANGLIA	THALAMUS	HYPOTHALAMUS
				PONS	MEDULLA OBLONG.	GASTROC. MUSCLE	LUM SPIN NERVE
				CERV SPIN NERVE			

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT

ANIMAL NO. 59885 GROUP 1: 0 MG/KG MALE SCHEDULED EUTH 12/15/09 DATE OF DEATH: 12/15/09

ORGAN WEIGHT	ABS.(G)		PERFUSED			GRADE
BRAIN	2.03	NO SIGNIFICANT				
BRAIN LENGTH(MM)	20.2	CHANGES OBSERVED	GROSS:BRAIN	SPINAL C.-CERV.	SPINAL C.-LUMB.	
BRAIN WIDTH(MM)	15.5					
FINAL BODY WT(G)	304.					

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT

TABLE I29

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

ANIMAL NO. 59891 GROUP 1: 0 MG/KG MALE SCHEDULED EUTH 12/18/09 DATE OF DEATH: 12/18/09

ORGAN WEIGHT	ABS.(G)						GRADE
BRAIN	2.14	NO SIGNIFICANT		PERFUSED			
BRAIN LENGTH(MM)	20.7	CHANGES OBSERVED	GROSS:	BRAIN	SPINAL C.-CERV.	SPINAL C.-LUMB.	
BRAIN WIDTH(MM)	15.1		MICRO:	SPINAL C.-CERV.	SPINAL C.-LUMB.	HIPPOCAMPUS	OLFACTORY BULBS
FINAL BODY WT(G)	333.			TRIG. GANGLION	TRIGEMINAL NERVE	LUMBAR DOR. GANG	LUMBAR DOR. FIB.
				LUMBAR VENT. FIB	CERV. DOR. GANG.	CERV. DOR. FIB.	CERV. VENT. FIB.
				SCIATIC NERVE	SURAL NERVE	TIBIAL NERVE	PERONEAL NERVE
				MIDBRAIN	CEREBELLUM	OPTIC NERVE	CEREBRAL CORTEX
				EYES	BASAL GANGLIA	THALAMUS	HYPOTHALAMUS
				PONS	MEDULLA OBLONG.	GASTROC. MUSCLE	LUM SPIN NERVE
				CERV SPIN NERVE			

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT

TABLE I29

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

ANIMAL NO. 59892 GROUP 1: 0 MG/KG MALE SCHEDULED EUTH 12/17/09 DATE OF DEATH: 12/17/09

ORGAN WEIGHT	ABS.(G)					GRADE
BRAIN	2.00	NO SIGNIFICANT	PERFUSED			
BRAIN LENGTH(MM)	20.5	CHANGES OBSERVED	GROSS:BRAIN	SPINAL C.-CERV.	SPINAL C.-LUMB.	
BRAIN WIDTH(MM)	14.9					
FINAL BODY WT(G)	306.					

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT

TABLE I29

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

ANIMAL NO. 59901 GROUP 1: 0 MG/KG MALE SCHEDULED EUTH 12/17/09 DATE OF DEATH: 12/17/09

ORGAN WEIGHT	ABS.(G)			GRADE
BRAIN	2.20	LUMBAR VENT. FIB	PERFUSED MICRO: DEGENERATION, NERVE FIBER	1
BRAIN LENGTH(MM)	20.2	NO SIGNIFICANT		
BRAIN WIDTH(MM)	15.1	CHANGES OBSERVED		
FINAL BODY WT(G)	300.			

GROSS:	BRAIN	SPINAL C.-CERV.	SPINAL C.-LUMB.	
MICRO:	SPINAL C.-CERV.	SPINAL C.-LUMB.	HIPPOCAMPUS	OLFACTORY BULBS
	TRIG. GANGLION	TRIGEMINAL NERVE	LUMBAR DOR. GANG	LUMBAR DOR. FIB.
	CERV. DOR. GANG.	CERV. DOR. FIB.	CERV. VENT. FIB.	SCIATIC NERVE
	SURAL NERVE	TIBIAL NERVE	PERONEAL NERVE	MIDBRAIN
	CEREBELLUM	OPTIC NERVE	CEREBRAL CORTEX	EYES
	BASAL GANGLIA	THALAMUS	HYPOTHALAMUS	PONS
	MEDULLA OBLONG.	GASTROC. MUSCLE	LUM SPIN NERVE	CERV SPIN NERVE

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT

ANIMAL NO. 59914 GROUP 1: 0 MG/KG MALE SCHEDULED EUTH 12/16/09 DATE OF DEATH: 12/16/09

ORGAN WEIGHT	ABS.(G)				GRADE
BRAIN	2.21	NO SIGNIFICANT	PERFUSED		
BRAIN LENGTH(MM)	20.5	CHANGES OBSERVED	GROSS:BRAIN	SPINAL C.-CERV.	SPINAL C.-LUMB.
BRAIN WIDTH(MM)	15.1				
FINAL BODY WT(G)	279.				

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT

TABLE I29

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

ANIMAL NO. 59915 GROUP 1: 0 MG/KG MALE SCHEDULED EUTH 12/15/09 DATE OF DEATH: 12/15/09

ORGAN WEIGHT	ABS.(G)						GRADE
BRAIN	1.98	NO SIGNIFICANT		PERFUSED			
BRAIN LENGTH(MM)	19.4	CHANGES OBSERVED	GROSS:	BRAIN	SPINAL C.-CERV.	SPINAL C.-LUMB.	
BRAIN WIDTH(MM)	15.2		MICRO:	SPINAL C.-CERV.	SPINAL C.-LUMB.	HIPPOCAMPUS	OLFACTORY BULBS
FINAL BODY WT(G)	288.			TRIG. GANGLION	TRIGEMINAL NERVE	LUMBAR DOR. GANG	LUMBAR DOR. FIB.
				LUMBAR VENT. FIB	CERV. DOR. GANG.	CERV. DOR. FIB.	CERV. VENT. FIB.
				SCIATIC NERVE	SURAL NERVE	TIBIAL NERVE	PERONEAL NERVE
				MIDBRAIN	CEREBELLUM	OPTIC NERVE	CEREBRAL CORTEX
				EYES	BASAL GANGLIA	THALAMUS	HYPOTHALAMUS
				PONS	MEDULLA OBLONG.	GASTROC. MUSCLE	LUM SPIN NERVE
				CERV SPIN NERVE			

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT

ANIMAL NO. 59865 GROUP 2: 200 MG/KG MALE SCHEDULED EUTH 12/17/09 DATE OF DEATH: 12/17/09

ORGAN WEIGHT	ABS.(G)		PERFUSED		GRADE
BRAIN	2.05	NO SIGNIFICANT			
BRAIN LENGTH(MM)	20.8	CHANGES OBSERVED	GROSS:BRAIN	SPINAL C.-CERV.	SPINAL C.-LUMB.
BRAIN WIDTH(MM)	15.4				
FINAL BODY WT(G)	341.				

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT

TABLE I29

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

ANIMAL NO. 59873 GROUP 2: 200 MG/KG MALE SCHEDULED EUTH 12/15/09 DATE OF DEATH: 12/15/09

ORGAN WEIGHT	ABS.(G)		PERFUSED			GRADE
BRAIN	2.01	NO SIGNIFICANT				
BRAIN LENGTH(MM)	20.2	CHANGES OBSERVED	GROSS:BRAIN	SPINAL C.-CERV.	SPINAL C.-LUMB.	
BRAIN WIDTH(MM)	14.9					
FINAL BODY WT(G)	261.					

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT

TABLE I29

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

ANIMAL NO. 59875 GROUP 2: 200 MG/KG MALE SCHEDULED EUTH 12/15/09 DATE OF DEATH: 12/15/09

ORGAN WEIGHT	ABS.(G)				GRADE
			PERFUSED		
BRAIN	2.02	NO SIGNIFICANT			
BRAIN LENGTH(MM)	20.3	CHANGES OBSERVED	GROSS:BRAIN	SPINAL C.-CERV.	SPINAL C.-LUMB.
BRAIN WIDTH(MM)	14.8				
FINAL BODY WT(G)	260.				

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT

TABLE I29

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

ANIMAL NO. 59878 GROUP 2: 200 MG/KG MALE SCHEDULED EUTH 12/16/09 DATE OF DEATH: 12/16/09

ORGAN WEIGHT	ABS.(G)		PERFUSED			GRADE
BRAIN	2.20	NO SIGNIFICANT				
BRAIN LENGTH(MM)	20.0	CHANGES OBSERVED	GROSS:BRAIN	SPINAL C.-CERV.	SPINAL C.-LUMB.	
BRAIN WIDTH(MM)	15.3					
FINAL BODY WT(G)	322.					

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT

ANIMAL NO. 59879 GROUP 2: 200 MG/KG MALE SCHEDULED EUTH 12/17/09 DATE OF DEATH: 12/17/09

ORGAN WEIGHT	ABS.(G)		PERFUSED			GRADE
BRAIN	2.07	NO SIGNIFICANT				
BRAIN LENGTH(MM)	20.4	CHANGES OBSERVED	GROSS:BRAIN	SPINAL C.-CERV.	SPINAL C.-LUMB.	
BRAIN WIDTH(MM)	15.1					
FINAL BODY WT(G)	287.					

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT

TABLE I29

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS PAGE 18

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

ANIMAL NO. 59880 GROUP 2: 200 MG/KG MALE SCHEDULED EUTH 12/17/09 DATE OF DEATH: 12/17/09

ORGAN WEIGHT	ABS.(G)	PERFUSED	GRADE
BRAIN	2.05	NO SIGNIFICANT	
BRAIN LENGTH(MM)	20.5	CHANGES OBSERVED GROSS:BRAIN	SPINAL C.-CERV. SPINAL C.-LUMB.
BRAIN WIDTH(MM)	15.1		
FINAL BODY WT(G)	304.		

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT

TABLE I29

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS PAGE 19

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

ANIMAL NO. 59882 GROUP 2: 200 MG/KG MALE SCHEDULED EUTH 12/18/09 DATE OF DEATH: 12/18/09

						GRADE
ORGAN WEIGHT	ABS.(G)		PERFUSED			
BRAIN	2.09	NO SIGNIFICANT				
BRAIN LENGTH(MM)	20.3	CHANGES OBSERVED	GROSS:BRAIN	SPINAL C.-CERV.	SPINAL C.-LUMB.	
BRAIN WIDTH(MM)	15.2					
FINAL BODY WT(G)	313.					

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT

TABLE I29

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

ANIMAL NO. 59889 GROUP 2: 200 MG/KG MALE SCHEDULED EUTH 12/16/09 DATE OF DEATH: 12/16/09

ORGAN WEIGHT	ABS.(G)				GRADE
			PERFUSED		
BRAIN	2.05	NO SIGNIFICANT			
BRAIN LENGTH(MM)	19.8	CHANGES OBSERVED	GROSS:BRAIN	SPINAL C.-CERV.	SPINAL C.-LUMB.
BRAIN WIDTH(MM)	14.9				
FINAL BODY WT(G)	335.				

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT

TABLE I29

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

ANIMAL NO. 59893 GROUP 2: 200 MG/KG MALE SCHEDULED EUTH 12/18/09 DATE OF DEATH: 12/18/09

ORGAN WEIGHT	ABS.(G)				GRADE
BRAIN	2.14	NO SIGNIFICANT	PERFUSED		
BRAIN LENGTH(MM)	20.3	CHANGES OBSERVED	GROSS:BRAIN	SPINAL C.-CERV.	SPINAL C.-LUMB.
BRAIN WIDTH(MM)	15.3				
FINAL BODY WT(G)	330.				

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT

TABLE I29

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

ANIMAL NO. 59897 GROUP 2: 200 MG/KG MALE SCHEDULED EUTH 12/16/09 DATE OF DEATH: 12/16/09

ORGAN WEIGHT	ABS.(G)					GRADE
			PERFUSED			
BRAIN	1.99	NO SIGNIFICANT				
BRAIN LENGTH(MM)	19.9	CHANGES OBSERVED	GROSS:BRAIN	SPINAL C.-CERV.	SPINAL C.-LUMB.	
BRAIN WIDTH(MM)	14.1					
FINAL BODY WT(G)	261.					

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT

TABLE I29

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

ANIMAL NO. 59911 GROUP 2: 200 MG/KG MALE SCHEDULED EUTH 12/18/09 DATE OF DEATH: 12/18/09

ORGAN WEIGHT	ABS.(G)					GRADE
BRAIN	2.15	NO SIGNIFICANT	PERFUSED			
BRAIN LENGTH(MM)	20.4	CHANGES OBSERVED	GROSS:BRAIN	SPINAL C.-CERV.	SPINAL C.-LUMB.	
BRAIN WIDTH(MM)	15.3					
FINAL BODY WT(G)	347.					

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT

TABLE I29

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

ANIMAL NO. 59913 GROUP 2: 200 MG/KG MALE SCHEDULED EUTH 12/15/09 DATE OF DEATH: 12/15/09

ORGAN WEIGHT	ABS.(G)					GRADE
BRAIN	2.06	NO SIGNIFICANT	PERFUSED			
BRAIN LENGTH(MM)	20.0	CHANGES OBSERVED	GROSS:BRAIN	SPINAL C.-CERV.	SPINAL C.-LUMB.	
BRAIN WIDTH(MM)	15.0					
FINAL BODY WT(G)	279.					

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT

TABLE I29

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

ANIMAL NO. 59874 GROUP 3: 700 MG/KG MALE SCHEDULED EUTH 12/16/09 DATE OF DEATH: 12/16/09

ORGAN WEIGHT	ABS.(G)				GRADE
			PERFUSED		
BRAIN	2.13	NO SIGNIFICANT			
BRAIN LENGTH(MM)	20.2	CHANGES OBSERVED	GROSS:BRAIN	SPINAL C.-CERV.	SPINAL C.-LUMB.
BRAIN WIDTH(MM)	14.6				
FINAL BODY WT(G)	304.				

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT

TABLE I29

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

ANIMAL NO. 59894 GROUP 3: 700 MG/KG MALE SCHEDULED EUTH 12/18/09 DATE OF DEATH: 12/18/09

ORGAN WEIGHT	ABS.(G)				GRADE
			PERFUSED		
BRAIN	2.19	NO SIGNIFICANT			
BRAIN LENGTH(MM)	20.4	CHANGES OBSERVED	GROSS:BRAIN	SPINAL C.-CERV.	SPINAL C.-LUMB.
BRAIN WIDTH(MM)	15.7				
FINAL BODY WT(G)	339.				

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT

TABLE I29

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

ANIMAL NO. 59895 GROUP 3: 700 MG/KG MALE SCHEDULED EUTH 12/17/09 DATE OF DEATH: 12/17/09

ORGAN WEIGHT	ABS.(G)		PERFUSED		GRADE
BRAIN	2.12	NO SIGNIFICANT			
BRAIN LENGTH(MM)	20.0	CHANGES OBSERVED	GROSS:BRAIN	SPINAL C.-CERV.	SPINAL C.-LUMB.
BRAIN WIDTH(MM)	15.4				
FINAL BODY WT(G)	321.				

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT

TABLE I29

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

ANIMAL NO. 59896 GROUP 3: 700 MG/KG MALE SCHEDULED EUTH 12/15/09 DATE OF DEATH: 12/15/09

ORGAN WEIGHT	ABS.(G)		PERFUSED			GRADE
BRAIN	2.07	NO SIGNIFICANT				
BRAIN LENGTH(MM)	20.5	CHANGES OBSERVED	GROSS:BRAIN	SPINAL C.-CERV.	SPINAL C.-LUMB.	
BRAIN WIDTH(MM)	14.7					
FINAL BODY WT(G)	339.					

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT

TABLE I29

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

ANIMAL NO. 59899 GROUP 3: 700 MG/KG MALE SCHEDULED EUTH 12/16/09 DATE OF DEATH: 12/16/09

ORGAN WEIGHT	ABS.(G)				GRADE
			PERFUSED		
BRAIN	2.04	NO SIGNIFICANT			
BRAIN LENGTH(MM)	20.1	CHANGES OBSERVED	GROSS:BRAIN	SPINAL C.-CERV.	SPINAL C.-LUMB.
BRAIN WIDTH(MM)	14.7				
FINAL BODY WT(G)	282.				

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT

TABLE I29

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

ANIMAL NO. 59902 GROUP 3: 700 MG/KG MALE SCHEDULED EUTH 12/18/09 DATE OF DEATH: 12/18/09

ORGAN WEIGHT	ABS.(G)					GRADE
BRAIN	1.94	NO SIGNIFICANT	PERFUSED			
BRAIN LENGTH(MM)	19.7	CHANGES OBSERVED	GROSS:BRAIN	SPINAL C.-CERV.	SPINAL C.-LUMB.	
BRAIN WIDTH(MM)	14.6					
FINAL BODY WT(G)	291.					

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT

TABLE I29

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

ANIMAL NO. 59903 GROUP 3: 700 MG/KG MALE SCHEDULED EUTH 12/15/09 DATE OF DEATH: 12/15/09

ORGAN WEIGHT	ABS.(G)		PERFUSED			GRADE
BRAIN	1.97	NO SIGNIFICANT				
BRAIN LENGTH(MM)	19.8	CHANGES OBSERVED	GROSS:BRAIN	SPINAL C.-CERV.	SPINAL C.-LUMB.	
BRAIN WIDTH(MM)	14.7					
FINAL BODY WT(G)	275.					

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT

TABLE I29

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

ANIMAL NO. 59904 GROUP 3: 700 MG/KG MALE SCHEDULED EUTH 12/17/09 DATE OF DEATH: 12/17/09

ORGAN WEIGHT	ABS.(G)				GRADE
			PERFUSED		
BRAIN	2.16	NO SIGNIFICANT			
BRAIN LENGTH(MM)	21.4	CHANGES OBSERVED	GROSS:BRAIN	SPINAL C.-CERV.	SPINAL C.-LUMB.
BRAIN WIDTH(MM)	15.4				
FINAL BODY WT(G)	305.				

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT

TABLE I29

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

ANIMAL NO. 59905 GROUP 3: 700 MG/KG MALE SCHEDULED EUTH 12/16/09 DATE OF DEATH: 12/16/09

ORGAN WEIGHT	ABS.(G)		PERFUSED		GRADE
BRAIN	2.09	NO SIGNIFICANT			
BRAIN LENGTH(MM)	20.6	CHANGES OBSERVED	GROSS:BRAIN	SPINAL C.-CERV.	SPINAL C.-LUMB.
BRAIN WIDTH(MM)	14.9				
FINAL BODY WT(G)	303.				

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT

TABLE I29

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

ANIMAL NO. 59909 GROUP 3: 700 MG/KG MALE SCHEDULED EUTH 12/15/09 DATE OF DEATH: 12/15/09

ORGAN WEIGHT	ABS.(G)					GRADE
BRAIN	2.12	NO SIGNIFICANT	PERFUSED			
BRAIN LENGTH(MM)	20.3	CHANGES OBSERVED	GROSS:BRAIN	SPINAL C.-CERV.	SPINAL C.-LUMB.	
BRAIN WIDTH(MM)	15.0					
FINAL BODY WT(G)	268.					

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT

TABLE I29

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

ANIMAL NO. 59910 GROUP 3: 700 MG/KG MALE SCHEDULED EUTH 12/17/09 DATE OF DEATH: 12/17/09

ORGAN WEIGHT	ABS.(G)	PERFUSED	GRADE
BRAIN	1.95	NO SIGNIFICANT	
BRAIN LENGTH(MM)	20.1	CHANGES OBSERVED	
BRAIN WIDTH(MM)	14.4		
FINAL BODY WT(G)	338.		

GROSS:BRAIN SPINAL C.-CERV. SPINAL C.-LUMB.

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT

TABLE I29

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

ANIMAL NO. 59916 GROUP 3: 700 MG/KG MALE SCHEDULED EUTH 12/18/09 DATE OF DEATH: 12/18/09

ORGAN WEIGHT	ABS.(G)					GRADE
BRAIN	1.97	NO SIGNIFICANT	PERFUSED			
BRAIN LENGTH(MM)	20.2	CHANGES OBSERVED	GROSS:BRAIN	SPINAL C.-CERV.	SPINAL C.-LUMB.	
BRAIN WIDTH(MM)	14.7					
FINAL BODY WT(G)	294.					

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT

TABLE I29

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

ANIMAL NO. 59876 GROUP 4: 2000 MG/KG MALE SCHEDULED EUTH 12/15/09 DATE OF DEATH: 12/15/09

ORGAN WEIGHT	ABS.(G)						GRADE
BRAIN	2.08	NO SIGNIFICANT		PERFUSED			
BRAIN LENGTH(MM)	19.6	CHANGES OBSERVED	GROSS:	BRAIN	SPINAL C.-CERV.	SPINAL C.-LUMB.	
BRAIN WIDTH(MM)	15.4		MICRO:	SPINAL C.-CERV.	SPINAL C.-LUMB.	HIPPOCAMPUS	OLFACTORY BULBS
FINAL BODY WT(G)	291.			TRIG. GANGLION	TRIGEMINAL NERVE	LUMBAR DOR. GANG	LUMBAR DOR. FIB.
				LUMBAR VENT. FIB	CERV. DOR. GANG.	CERV. DOR. FIB.	CERV. VENT. FIB.
				SCIATIC NERVE	SURAL NERVE	TIBIAL NERVE	PERONEAL NERVE
				MIDBRAIN	CEREBELLUM	OPTIC NERVE	CEREBRAL CORTEX
				EYES	BASAL GANGLIA	THALAMUS	HYPOTHALAMUS
				PONS	MEDULLA OBLONG.	GASTROC. MUSCLE	LUM SPIN NERVE
				CERV SPIN NERVE			

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT

TABLE I29

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

ANIMAL NO. 59883 GROUP 4: 2000 MG/KG MALE SCHEDULED EUTH 12/15/09 DATE OF DEATH: 12/15/09

ORGAN WEIGHT	ABS.(G)	PERFUSED	GRADE
BRAIN	2.08	NO SIGNIFICANT	
BRAIN LENGTH(MM)	19.4	CHANGES OBSERVED	
BRAIN WIDTH(MM)	15.2		
FINAL BODY WT(G)	252.		

GROSS:BRAIN SPINAL C.-CERV. SPINAL C.-LUMB.

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT

TABLE I29

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

ANIMAL NO. 59886 GROUP 4: 2000 MG/KG MALE SCHEDULED EUTH 12/17/09 DATE OF DEATH: 12/17/09

ORGAN WEIGHT	ABS.(G)						GRADE
BRAIN	2.05	NO SIGNIFICANT		PERFUSED			
BRAIN LENGTH(MM)	20.5	CHANGES OBSERVED	GROSS:	BRAIN	SPINAL C.-CERV.	SPINAL C.-LUMB.	
BRAIN WIDTH(MM)	15.0		MICRO:	SPINAL C.-CERV.	SPINAL C.-LUMB.	HIPPOCAMPUS	OLFACTORY BULBS
FINAL BODY WT(G)	329.			TRIG. GANGLION	TRIGEMINAL NERVE	LUMBAR DOR. GANG	LUMBAR DOR. FIB.
				LUMBAR VENT. FIB	CERV. DOR. GANG.	CERV. DOR. FIB.	CERV. VENT. FIB.
				SCIATIC NERVE	SURAL NERVE	TIBIAL NERVE	PERONEAL NERVE
				MIDBRAIN	CEREBELLUM	OPTIC NERVE	CEREBRAL CORTEX
				EYES	BASAL GANGLIA	THALAMUS	HYPOTHALAMUS
				PONS	MEDULLA OBLONG.	GASTROC. MUSCLE	LUM SPIN NERVE
				CERV SPIN NERVE			

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT

TABLE I29

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

ANIMAL NO. 59887 GROUP 4: 2000 MG/KG MALE SCHEDULED EUTH 12/16/09 DATE OF DEATH: 12/16/09

ORGAN WEIGHT	ABS.(G)						GRADE
BRAIN	2.06	EYES	MICRO:	PERFUSED DYSPLASIA, RETINAL UNILATERAL			3
BRAIN LENGTH(MM)	19.9						
BRAIN WIDTH(MM)	14.8	NO SIGNIFICANT					
FINAL BODY WT(G)	252.	CHANGES OBSERVED	GROSS:	BRAIN	SPINAL C.-CERV.	SPINAL C.-LUMB.	
			MICRO:	SPINAL C.-CERV.	SPINAL C.-LUMB.	HIPPOCAMPUS	OLFACTORY BULBS
				TRIG. GANGLION	TRIGEMINAL NERVE	LUMBAR DOR. GANG	LUMBAR DOR. FIB.
				LUMBAR VENT. FIB	CERV. DOR. GANG.	CERV. DOR. FIB.	CERV. VENT. FIB.
				SCIATIC NERVE	SURAL NERVE	TIBIAL NERVE	PERONEAL NERVE
				MIDBRAIN	CEREBELLUM	OPTIC NERVE	CEREBRAL CORTEX
				BASAL GANGLIA	THALAMUS	HYPOTHALAMUS	PONS
				MEDULLA OBLONG.	GASTROC. MUSCLE	LUM SPIN NERVE	CERV SPIN NERVE

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT

TABLE I29

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

ANIMAL NO. 59890 GROUP 4: 2000 MG/KG MALE SCHEDULED EUTH 12/18/09 DATE OF DEATH: 12/18/09

ORGAN WEIGHT	ABS.(G)	PERFUSED	GRADE
BRAIN	2.09	NO SIGNIFICANT	
BRAIN LENGTH(MM)	20.6	CHANGES OBSERVED	
BRAIN WIDTH(MM)	14.7		
FINAL BODY WT(G)	333.		

GROSS:BRAIN SPINAL C.-CERV. SPINAL C.-LUMB.

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT

TABLE I29

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

ANIMAL NO. 59898 GROUP 4: 2000 MG/KG MALE SCHEDULED EUTH 12/15/09 DATE OF DEATH: 12/15/09

ORGAN WEIGHT	ABS.(G)						GRADE
BRAIN	2.23	NO SIGNIFICANT		PERFUSED			
BRAIN LENGTH(MM)	20.5	CHANGES OBSERVED	GROSS:	BRAIN	SPINAL C.-CERV.	SPINAL C.-LUMB.	
BRAIN WIDTH(MM)	15.4		MICRO:	SPINAL C.-CERV.	SPINAL C.-LUMB.	HIPPOCAMPUS	OLFACTORY BULBS
FINAL BODY WT(G)	322.			TRIG. GANGLION	TRIGEMINAL NERVE	LUMBAR DOR. GANG	LUMBAR DOR. FIB.
				LUMBAR VENT. FIB	CERV. DOR. GANG.	CERV. DOR. FIB.	CERV. VENT. FIB.
				SCIATIC NERVE	SURAL NERVE	TIBIAL NERVE	PERONEAL NERVE
				MIDBRAIN	CEREBELLUM	OPTIC NERVE	CEREBRAL CORTEX
				EYES	BASAL GANGLIA	THALAMUS	HYPOTHALAMUS
				PONS	MEDULLA OBLONG.	GASTROC. MUSCLE	LUM SPIN NERVE
				CERV SPIN NERVE			

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT

TABLE I29

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

ANIMAL NO. 59900 GROUP 4: 2000 MG/KG MALE SCHEDULED EUTH 12/17/09 DATE OF DEATH: 12/17/09

ORGAN WEIGHT	ABS.(G)	PERFUSED	GRADE
BRAIN	2.07	NO SIGNIFICANT	
BRAIN LENGTH(MM)	20.8	CHANGES OBSERVED	
BRAIN WIDTH(MM)	15.5		
FINAL BODY WT(G)	341.		

GROSS:BRAIN SPINAL C.-CERV. SPINAL C.-LUMB.

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT

TABLE I29

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

ANIMAL NO. 59906 GROUP 4: 2000 MG/KG MALE SCHEDULED EUTH 12/18/09 DATE OF DEATH: 12/18/09

ORGAN WEIGHT	ABS.(G)	PERFUSED	GRADE
BRAIN	2.09	NO SIGNIFICANT	
BRAIN LENGTH(MM)	20.0	CHANGES OBSERVED	
BRAIN WIDTH(MM)	15.1		
FINAL BODY WT(G)	309.		

GROSS:BRAIN	SPINAL C.-CERV.	SPINAL C.-LUMB.

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT

TABLE I29

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

ANIMAL NO. 59907 GROUP 4: 2000 MG/KG MALE SCHEDULED EUTH 12/16/09 DATE OF DEATH: 12/16/09

ORGAN WEIGHT	ABS.(G)						GRADE
			PERFUSED				
BRAIN	1.99	NO SIGNIFICANT					
BRAIN LENGTH(MM)	20.0	CHANGES OBSERVED	GROSS:	BRAIN	SPINAL C.-CERV.	SPINAL C.-LUMB.	
BRAIN WIDTH(MM)	14.8		MICRO:	SPINAL C.-CERV.	SPINAL C.-LUMB.	HIPPOCAMPUS	OLFACTORY BULBS
FINAL BODY WT(G)	283.			TRIG. GANGLION	TRIGEMINAL NERVE	LUMBAR DOR. GANG	LUMBAR DOR. FIB.
				LUMBAR VENT. FIB	CERV. DOR. GANG.	CERV. DOR. FIB.	CERV. VENT. FIB.
				SCIATIC NERVE	SURAL NERVE	TIBIAL NERVE	PERONEAL NERVE
				MIDBRAIN	CEREBELLUM	OPTIC NERVE	CEREBRAL CORTEX
				EYES	BASAL GANGLIA	THALAMUS	HYPOTHALAMUS
				PONS	MEDULLA OBLONG.	GASTROC. MUSCLE	LUM SPIN NERVE
				CERV SPIN NERVE			

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT

TABLE I29

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

ANIMAL NO. 59908 GROUP 4: 2000 MG/KG MALE SCHEDULED EUTH 12/18/09 DATE OF DEATH: 12/18/09

			GRADE
ORGAN WEIGHT	ABS.(G)		
BRAIN	2.01	BRAIN PERFUSED MATERIAL, DARK RED ATTACHED TO MENINGES COVERING CEREBELLUM	P
BRAIN LENGTH(MM)	20.1		
BRAIN WIDTH(MM)	14.8	^==> GROSS UNCONFIRMED	
FINAL BODY WT(G)	315.	EYES MICRO: DYSPLASIA, RETINAL UNILATERAL	1
		NO SIGNIFICANT CHANGES OBSERVED	

GROSS:	SPINAL C.-CERV.	SPINAL C.-LUMB.		
MICRO:	SPINAL C.-CERV.	SPINAL C.-LUMB.	HIPPOCAMPUS	OLFACTORY BULBS
	TRIG. GANGLION	TRIGEMINAL NERVE	LUMBAR DOR. GANG	LUMBAR DOR. FIB.
	LUMBAR VENT. FIB	CERV. DOR. GANG.	CERV. DOR. FIB.	CERV. VENT. FIB.
	SCIATIC NERVE	SURAL NERVE	TIBIAL NERVE	PERONEAL NERVE
	MIDBRAIN	CEREBELLUM	OPTIC NERVE	CEREBRAL CORTEX
	BASAL GANGLIA	THALAMUS	HYPOTHALAMUS	PONS
	MEDULLA OBLONG.	GASTROC. MUSCLE	LUM SPIN NERVE	CERV SPIN NERVE

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT
^==> INDICATES MICRO CONFIRMATION OF ABOVE GROSS FINDING

TABLE I29

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

ANIMAL NO. 59912 GROUP 4: 2000 MG/KG MALE SCHEDULED EUTH 12/16/09 DATE OF DEATH: 12/16/09

ORGAN WEIGHT	ABS.(G)				GRADE
BRAIN	2.14	NO SIGNIFICANT	PERFUSED		
BRAIN LENGTH(MM)	19.9	CHANGES OBSERVED	GROSS:BRAIN	SPINAL C.-CERV.	SPINAL C.-LUMB.
BRAIN WIDTH(MM)	15.1				
FINAL BODY WT(G)	270.				

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT

TABLE I29

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

ANIMAL NO. 59917 GROUP 4: 2000 MG/KG MALE SCHEDULED EUTH 12/17/09 DATE OF DEATH: 12/17/09

ORGAN WEIGHT	ABS.(G)		PERFUSED		GRADE
BRAIN	2.03	NO SIGNIFICANT			
BRAIN LENGTH(MM)	20.4	CHANGES OBSERVED	GROSS:BRAIN	SPINAL C.-CERV.	SPINAL C.-LUMB.
BRAIN WIDTH(MM)	14.5				
FINAL BODY WT(G)	320.				

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT

ANIMAL NO. 59919 GROUP 1: 0 MG/KG FEMALE SCHEDULED EUTH 12/18/09 DATE OF DEATH: 12/18/09

ORGAN WEIGHT	ABS.(G)			GRADE
BRAIN	1.78	NO SIGNIFICANT	PERFUSED	
BRAIN LENGTH(MM)	19.7	CHANGES OBSERVED	GROSS:BRAIN	SPINAL C.-CERV. SPINAL C.-LUMB.
BRAIN WIDTH(MM)	14.3			
FINAL BODY WT(G)	213.			

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT

TABLE I29

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

ANIMAL NO. 59920 GROUP 1: 0 MG/KG FEMALE SCHEDULED EUTH 12/17/09 DATE OF DEATH: 12/17/09

ORGAN WEIGHT	ABS.(G)						GRADE
BRAIN	1.78	NO SIGNIFICANT		PERFUSED			
BRAIN LENGTH(MM)	19.8	CHANGES OBSERVED	GROSS:	BRAIN	SPINAL C.-CERV.	SPINAL C.-LUMB.	
BRAIN WIDTH(MM)	14.3		MICRO:	SPINAL C.-CERV.	SPINAL C.-LUMB.	HIPPOCAMPUS	OLFACTORY BULBS
FINAL BODY WT(G)	193.			TRIG. GANGLION	TRIGEMINAL NERVE	LUMBAR DOR. GANG	LUMBAR DOR. FIB.
				LUMBAR VENT. FIB	CERV. DOR. GANG.	CERV. DOR. FIB.	CERV. VENT. FIB.
				SCIATIC NERVE	SURAL NERVE	TIBIAL NERVE	PERONEAL NERVE
				MIDBRAIN	CEREBELLUM	OPTIC NERVE	CEREBRAL CORTEX
				EYES	BASAL GANGLIA	THALAMUS	HYPOTHALAMUS
				PONS	MEDULLA OBLONG.	GASTROC. MUSCLE	LUM SPIN NERVE
				CERV SPIN NERVE			

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT

TABLE I29

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

ANIMAL NO. 59923 GROUP 1: 0 MG/KG FEMALE SCHEDULED EUTH 12/15/09 DATE OF DEATH: 12/15/09

ORGAN WEIGHT	ABS.(G)						GRADE
			PERFUSED				
BRAIN	1.94	EYES	MICRO: DYSPLASIA, RETINAL				1
BRAIN LENGTH(MM)	19.7	NO SIGNIFICANT					
BRAIN WIDTH(MM)	14.4	CHANGES OBSERVED	GROSS:BRAIN	SPINAL C.-CERV.	SPINAL C.-LUMB.		
FINAL BODY WT(G)	230.		MICRO:SPINAL C.-CERV.	SPINAL C.-LUMB.	HIPPOCAMPUS	OLFACTORY BULBS	
			TRIG. GANGLION	TRIGEMINAL NERVE	LUMBAR DOR. GANG	LUMBAR DOR. FIB.	
			LUMBAR VENT. FIB	CERV. DOR. GANG.	CERV. DOR. FIB.	CERV. VENT. FIB.	
			SCIATIC NERVE	SURAL NERVE	TIBIAL NERVE	PERONEAL NERVE	
			MIDBRAIN	CEREBELLUM	OPTIC NERVE	CEREBRAL CORTEX	
			BASAL GANGLIA	THALAMUS	HYPOTHALAMUS	PONS	
			MEDULLA OBLONG.	GASTROC. MUSCLE	LUM SPIN NERVE	CERV SPIN NERVE	

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT

TABLE I29

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

ANIMAL NO. 59924 GROUP 1: 0 MG/KG FEMALE SCHEDULED EUTH 12/18/09 DATE OF DEATH: 12/18/09

ORGAN WEIGHT	ABS.(G)						GRADE
BRAIN	1.94	NO SIGNIFICANT		PERFUSED			
BRAIN LENGTH(MM)	19.5	CHANGES OBSERVED	GROSS:	BRAIN	SPINAL C.-CERV.	SPINAL C.-LUMB.	
BRAIN WIDTH(MM)	15.1		MICRO:	SPINAL C.-CERV.	SPINAL C.-LUMB.	HIPPOCAMPUS	OLFACTORY BULBS
FINAL BODY WT(G)	203.			TRIG. GANGLION	TRIGEMINAL NERVE	LUMBAR DOR. GANG	LUMBAR DOR. FIB.
				LUMBAR VENT. FIB	CERV. DOR. GANG.	CERV. DOR. FIB.	CERV. VENT. FIB.
				SCIATIC NERVE	SURAL NERVE	TIBIAL NERVE	PERONEAL NERVE
				MIDBRAIN	CEREBELLUM	OPTIC NERVE	CEREBRAL CORTEX
				EYES	BASAL GANGLIA	THALAMUS	HYPOTHALAMUS
				PONS	MEDULLA OBLONG.	GASTROC. MUSCLE	LUM SPIN NERVE
				CERV SPIN NERVE			

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT

TABLE I29

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

ANIMAL NO. 59933 GROUP 1: 0 MG/KG FEMALE SCHEDULED EUTH 12/16/09 DATE OF DEATH: 12/16/09

ORGAN WEIGHT	ABS.(G)						GRADE
BRAIN	2.02	NO SIGNIFICANT		PERFUSED			
BRAIN LENGTH(MM)	19.4	CHANGES OBSERVED	GROSS:	BRAIN	SPINAL C.-CERV.	SPINAL C.-LUMB.	
BRAIN WIDTH(MM)	14.8		MICRO:	SPINAL C.-CERV.	SPINAL C.-LUMB.	HIPPOCAMPUS	OLFACTORY BULBS
FINAL BODY WT(G)	195.			TRIG. GANGLION	TRIGEMINAL NERVE	LUMBAR DOR. GANG	LUMBAR DOR. FIB.
				LUMBAR VENT. FIB	CERV. DOR. GANG.	CERV. DOR. FIB.	CERV. VENT. FIB.
				SCIATIC NERVE	SURAL NERVE	TIBIAL NERVE	PERONEAL NERVE
				MIDBRAIN	CEREBELLUM	OPTIC NERVE	CEREBRAL CORTEX
				EYES	BASAL GANGLIA	THALAMUS	HYPOTHALAMUS
				PONS	MEDULLA OBLONG.	GASTROC. MUSCLE	LUM SPIN NERVE
				CERV SPIN NERVE			

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT

TABLE I29

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

ANIMAL NO. 59939 GROUP 1: 0 MG/KG FEMALE SCHEDULED EUTH 12/17/09 DATE OF DEATH: 12/17/09

ORGAN WEIGHT	ABS.(G)						GRADE
BRAIN	1.93	NO SIGNIFICANT		PERFUSED			
BRAIN LENGTH(MM)	20.1	CHANGES OBSERVED	GROSS:	BRAIN	SPINAL C.-CERV.	SPINAL C.-LUMB.	
BRAIN WIDTH(MM)	14.4		MICRO:	SPINAL C.-CERV.	SPINAL C.-LUMB.	HIPPOCAMPUS	OLFACTORY BULBS
FINAL BODY WT(G)	170.			TRIG. GANGLION	TRIGEMINAL NERVE	LUMBAR DOR. GANG	LUMBAR DOR. FIB.
				LUMBAR VENT. FIB	CERV. DOR. GANG.	CERV. DOR. FIB.	CERV. VENT. FIB.
				SCIATIC NERVE	SURAL NERVE	TIBIAL NERVE	PERONEAL NERVE
				MIDBRAIN	CEREBELLUM	OPTIC NERVE	CEREBRAL CORTEX
				EYES	BASAL GANGLIA	THALAMUS	HYPOTHALAMUS
				PONS	MEDULLA OBLONG.	GASTROC. MUSCLE	LUM SPIN NERVE
				CERV SPIN NERVE			

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT

TABLE I29

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

ANIMAL NO. 59941 GROUP 1: 0 MG/KG FEMALE SCHEDULED EUTH 12/17/09 DATE OF DEATH: 12/17/09

ORGAN WEIGHT	ABS.(G)	PERFUSED	GRADE
BRAIN	1.86	NO SIGNIFICANT	
BRAIN LENGTH(MM)	19.4	CHANGES OBSERVED	
BRAIN WIDTH(MM)	14.4		
FINAL BODY WT(G)	213.		

GROSS:BRAIN	SPINAL C.-CERV.	SPINAL C.-LUMB.

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT

TABLE I29

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

ANIMAL NO. 59942 GROUP 1: 0 MG/KG FEMALE SCHEDULED EUTH 12/15/09 DATE OF DEATH: 12/15/09

ORGAN WEIGHT	ABS.(G)	PERFUSED	GRADE
BRAIN	1.89	NO SIGNIFICANT	
BRAIN LENGTH(MM)	19.9	CHANGES OBSERVED	
BRAIN WIDTH(MM)	14.9		
FINAL BODY WT(G)	220.		

GROSS:BRAIN	SPINAL C.-CERV.	SPINAL C.-LUMB.

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT

TABLE I29

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

ANIMAL NO. 59950 GROUP 1: 0 MG/KG FEMALE SCHEDULED EUTH 12/16/09 DATE OF DEATH: 12/16/09

ORGAN WEIGHT	ABS.(G)	PERFUSED	GRADE
BRAIN	1.97	NO SIGNIFICANT	
BRAIN LENGTH(MM)	19.4	CHANGES OBSERVED	
BRAIN WIDTH(MM)	14.6		
FINAL BODY WT(G)	196.		

GROSS:BRAIN SPINAL C.-CERV. SPINAL C.-LUMB.

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT

TABLE I29

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS PAGE 58

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

ANIMAL NO. 59956 GROUP 1: 0 MG/KG FEMALE SCHEDULED EUTH 12/16/09 DATE OF DEATH: 12/16/09

ORGAN WEIGHT	ABS.(G)	PERFUSED	GRADE
BRAIN	1.83	NO SIGNIFICANT	
BRAIN LENGTH(MM)	18.9	CHANGES OBSERVED GROSS:BRAIN	SPINAL C.-CERV. SPINAL C.-LUMB.
BRAIN WIDTH(MM)	14.2		
FINAL BODY WT(G)	165.		

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT

TABLE I29

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

ANIMAL NO. 59969 GROUP 1: 0 MG/KG FEMALE SCHEDULED EUTH 12/18/09 DATE OF DEATH: 12/18/09

ORGAN WEIGHT	ABS.(G)	PERFUSED	GRADE
BRAIN	1.94	NO SIGNIFICANT	
BRAIN LENGTH(MM)	19.9	CHANGES OBSERVED	
BRAIN WIDTH(MM)	15.0		
FINAL BODY WT(G)	187.		

GROSS:BRAIN SPINAL C.-CERV. SPINAL C.-LUMB.

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT

TABLE I29

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

ANIMAL NO. 59970 GROUP 1: 0 MG/KG FEMALE SCHEDULED EUTH 12/15/09 DATE OF DEATH: 12/15/09

ORGAN WEIGHT	ABS.(G)		GRADE
BRAIN	1.87	NO SIGNIFICANT CHANGES OBSERVED	
BRAIN LENGTH(MM)	20.1		
BRAIN WIDTH(MM)	14.9		
FINAL BODY WT(G)	206.		

PERFUSED

GROSS:	BRAIN	SPINAL C.-CERV.	SPINAL C.-LUMB.	
MICRO:	SPINAL C.-CERV.	SPINAL C.-LUMB.	HIPPOCAMPUS	OLFACTORY BULBS
	TRIG. GANGLION	TRIGEMINAL NERVE	LUMBAR DOR. GANG	LUMBAR DOR. FIB.
	LUMBAR VENT. FIB	CERV. DOR. GANG.	CERV. DOR. FIB.	CERV. VENT. FIB.
	SCIATIC NERVE	SURAL NERVE	TIBIAL NERVE	PERONEAL NERVE
	MIDBRAIN	CEREBELLUM	OPTIC NERVE	CEREBRAL CORTEX
	EYES	BASAL GANGLIA	THALAMUS	HYPOTHALAMUS
	PONS	MEDULLA OBLONG.	GASTROC. MUSCLE	LUM SPIN NERVE
	CERV SPIN NERVE			

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT

TABLE I29

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

ANIMAL NO. 59922 GROUP 2: 200 MG/KG FEMALE SCHEDULED EUTH 12/17/09 DATE OF DEATH: 12/17/09

ORGAN WEIGHT	ABS.(G)				GRADE
			PERFUSED		
BRAIN	1.80	NO SIGNIFICANT			
BRAIN LENGTH(MM)	19.9	CHANGES OBSERVED	GROSS:BRAIN	SPINAL C.-CERV.	SPINAL C.-LUMB.
BRAIN WIDTH(MM)	14.5				
FINAL BODY WT(G)	198.				

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT

TABLE I29

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

ANIMAL NO. 59926 GROUP 2: 200 MG/KG FEMALE SCHEDULED EUTH 12/16/09 DATE OF DEATH: 12/16/09

ORGAN WEIGHT	ABS.(G)				GRADE
BRAIN	1.98	NO SIGNIFICANT	PERFUSED		
BRAIN LENGTH(MM)	19.5	CHANGES OBSERVED	GROSS:BRAIN	SPINAL C.-CERV.	SPINAL C.-LUMB.
BRAIN WIDTH(MM)	14.0				
FINAL BODY WT(G)	183.				

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT

TABLE I29

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

ANIMAL NO. 59927 GROUP 2: 200 MG/KG FEMALE SCHEDULED EUTH 12/15/09 DATE OF DEATH: 12/15/09

ORGAN WEIGHT	ABS.(G)			GRADE
BRAIN	1.89	GENERAL COMMENT	PERFUSED ORGAN DAMAGED AT TRIMMING BRAIN	P
BRAIN LENGTH(MM)	19.1			
BRAIN WIDTH(MM)	14.3	NO SIGNIFICANT		
FINAL BODY WT(G)	197.	CHANGES OBSERVED	GROSS:BRAIN SPINAL C.-CERV. SPINAL C.-LUMB.	

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT

TABLE I29

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

ANIMAL NO. 59936 GROUP 2: 200 MG/KG FEMALE SCHEDULED EUTH 12/17/09 DATE OF DEATH: 12/17/09

ORGAN WEIGHT	ABS.(G)				GRADE
			PERFUSED		
BRAIN	2.04	NO SIGNIFICANT			
BRAIN LENGTH(MM)	19.6	CHANGES OBSERVED	GROSS:BRAIN	SPINAL C.-CERV.	SPINAL C.-LUMB.
BRAIN WIDTH(MM)	15.2				
FINAL BODY WT(G)	217.				

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT

TABLE I29

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

ANIMAL NO. 59937 GROUP 2: 200 MG/KG FEMALE SCHEDULED EUTH 12/18/09 DATE OF DEATH: 12/18/09

ORGAN WEIGHT	ABS.(G)	PERFUSED	GRADE
BRAIN	1.83	NO SIGNIFICANT	
BRAIN LENGTH(MM)	19.9	CHANGES OBSERVED	
BRAIN WIDTH(MM)	14.4		
FINAL BODY WT(G)	186.		

GROSS:BRAIN	SPINAL C.-CERV.	SPINAL C.-LUMB.

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT

TABLE I29

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

ANIMAL NO. 59949 GROUP 2: 200 MG/KG FEMALE SCHEDULED EUTH 12/15/09 DATE OF DEATH: 12/15/09

ORGAN WEIGHT	ABS.(G)				GRADE
			PERFUSED		
BRAIN	1.98	NO SIGNIFICANT			
BRAIN LENGTH(MM)	19.7	CHANGES OBSERVED	GROSS:BRAIN	SPINAL C.-CERV.	SPINAL C.-LUMB.
BRAIN WIDTH(MM)	14.5				
FINAL BODY WT(G)	204.				

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT

TABLE I29

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

ANIMAL NO. 59952 GROUP 2: 200 MG/KG FEMALE SCHEDULED EUTH 12/17/09 DATE OF DEATH: 12/17/09

ORGAN WEIGHT	ABS.(G)	PERFUSED	GRADE
BRAIN	1.88	NO SIGNIFICANT	
BRAIN LENGTH(MM)	19.5	CHANGES OBSERVED	
BRAIN WIDTH(MM)	14.7		
FINAL BODY WT(G)	175.		

GROSS:BRAIN	SPINAL C.-CERV.	SPINAL C.-LUMB.

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT

TABLE I29

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

ANIMAL NO. 59954 GROUP 2: 200 MG/KG FEMALE SCHEDULED EUTH 12/18/09 DATE OF DEATH: 12/18/09

ORGAN WEIGHT	ABS.(G)				GRADE
			PERFUSED		
BRAIN	2.00	NO SIGNIFICANT			
BRAIN LENGTH(MM)	19.7	CHANGES OBSERVED	GROSS:BRAIN	SPINAL C.-CERV.	SPINAL C.-LUMB.
BRAIN WIDTH(MM)	15.1				
FINAL BODY WT(G)	220.				

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT

TABLE I29

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

ANIMAL NO. 59958 GROUP 2: 200 MG/KG FEMALE SCHEDULED EUTH 12/15/09 DATE OF DEATH: 12/15/09

ORGAN WEIGHT	ABS.(G)	PERFUSED	GRADE
BRAIN	1.77	NO SIGNIFICANT	
BRAIN LENGTH(MM)	18.9	CHANGES OBSERVED	
BRAIN WIDTH(MM)	14.1		
FINAL BODY WT(G)	192.		

GROSS:BRAIN	SPINAL C.-CERV.	SPINAL C.-LUMB.

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT

TABLE I29

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

ANIMAL NO. 59962 GROUP 2: 200 MG/KG FEMALE SCHEDULED EUTH 12/16/09 DATE OF DEATH: 12/16/09

ORGAN WEIGHT	ABS.(G)	PERFUSED	GRADE
BRAIN	1.91	NO SIGNIFICANT	
BRAIN LENGTH(MM)	19.1	CHANGES OBSERVED	
BRAIN WIDTH(MM)	14.3		
FINAL BODY WT(G)	197.		

GROSS:BRAIN SPINAL C.-CERV. SPINAL C.-LUMB.

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT

TABLE I29

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

ANIMAL NO. 59967 GROUP 2: 200 MG/KG FEMALE SCHEDULED EUTH 12/16/09 DATE OF DEATH: 12/16/09

ORGAN WEIGHT	ABS.(G)				GRADE
		PERFUSED			
BRAIN	1.94	NO SIGNIFICANT			
BRAIN LENGTH(MM)	18.9	CHANGES OBSERVED	GROSS:BRAIN	SPINAL C.-CERV.	SPINAL C.-LUMB.
BRAIN WIDTH(MM)	14.9				
FINAL BODY WT(G)	201.				

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT

ANIMAL NO. 59968 GROUP 2: 200 MG/KG FEMALE SCHEDULED EUTH 12/18/09 DATE OF DEATH: 12/18/09

ORGAN WEIGHT	ABS.(G)				GRADE
BRAIN	1.95	NO SIGNIFICANT	PERFUSED		
BRAIN LENGTH(MM)	19.9	CHANGES OBSERVED	GROSS:BRAIN	SPINAL C.-CERV.	SPINAL C.-LUMB.
BRAIN WIDTH(MM)	14.6				
FINAL BODY WT(G)	182.				

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT

ANIMAL NO. 59918 GROUP 3: 700 MG/KG FEMALE SCHEDULED EUTH 12/18/09 DATE OF DEATH: 12/18/09

ORGAN WEIGHT	ABS.(G)			GRADE
BRAIN	1.93	NO SIGNIFICANT	PERFUSED	
BRAIN LENGTH(MM)	19.6	CHANGES OBSERVED	GROSS:BRAIN	SPINAL C.-CERV. SPINAL C.-LUMB.
BRAIN WIDTH(MM)	14.6			
FINAL BODY WT(G)	214.			

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT

ANIMAL NO. 59925 GROUP 3: 700 MG/KG FEMALE SCHEDULED EUTH 12/18/09 DATE OF DEATH: 12/18/09

ORGAN WEIGHT	ABS.(G)				GRADE
BRAIN	1.86	NO SIGNIFICANT	PERFUSED		
BRAIN LENGTH(MM)	19.7	CHANGES OBSERVED	GROSS:BRAIN	SPINAL C.-CERV.	SPINAL C.-LUMB.
BRAIN WIDTH(MM)	14.3				
FINAL BODY WT(G)	204.				

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT

TABLE I29

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

ANIMAL NO. 59930 GROUP 3: 700 MG/KG FEMALE SCHEDULED EUTH 12/15/09 DATE OF DEATH: 12/15/09

ORGAN WEIGHT	ABS.(G)	PERFUSED	GRADE
BRAIN	1.93	NO SIGNIFICANT	
BRAIN LENGTH(MM)	19.8	CHANGES OBSERVED	
BRAIN WIDTH(MM)	14.8		
FINAL BODY WT(G)	215.		

GROSS:BRAIN	SPINAL C.-CERV.	SPINAL C.-LUMB.

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT

TABLE I29

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

ANIMAL NO. 59931 GROUP 3: 700 MG/KG FEMALE SCHEDULED EUTH 12/17/09 DATE OF DEATH: 12/17/09

ORGAN WEIGHT	ABS.(G)	PERFUSED	GRADE
BRAIN	2.01	NO SIGNIFICANT	
BRAIN LENGTH(MM)	20.1	CHANGES OBSERVED	
BRAIN WIDTH(MM)	15.3		
FINAL BODY WT(G)	209.		

GROSS:BRAIN	SPINAL C.-CERV.	SPINAL C.-LUMB.

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT

ANIMAL NO. 59932 GROUP 3: 700 MG/KG FEMALE SCHEDULED EUTH 12/17/09 DATE OF DEATH: 12/17/09

ORGAN WEIGHT	ABS.(G)				GRADE
BRAIN	1.80	NO SIGNIFICANT	PERFUSED		
BRAIN LENGTH(MM)	19.6	CHANGES OBSERVED	GROSS:BRAIN	SPINAL C.-CERV.	SPINAL C.-LUMB.
BRAIN WIDTH(MM)	14.6				
FINAL BODY WT(G)	187.				

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT

TABLE I29

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS PAGE 78

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

ANIMAL NO. 59935 GROUP 3: 700 MG/KG FEMALE SCHEDULED EUTH 12/15/09 DATE OF DEATH: 12/15/09

					GRADE
ORGAN WEIGHT	ABS.(G)		PERFUSED		
BRAIN	1.86	NO SIGNIFICANT			
BRAIN LENGTH(MM)	18.8	CHANGES OBSERVED	GROSS:BRAIN	SPINAL C.-CERV.	SPINAL C.-LUMB.
BRAIN WIDTH(MM)	13.8				
FINAL BODY WT(G)	209.				

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT

TABLE I29

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

ANIMAL NO. 59940 GROUP 3: 700 MG/KG FEMALE SCHEDULED EUTH 12/16/09 DATE OF DEATH: 12/16/09

ORGAN WEIGHT	ABS.(G)				GRADE
BRAIN	2.09	NO SIGNIFICANT	PERFUSED		
BRAIN LENGTH(MM)	19.8	CHANGES OBSERVED	GROSS:BRAIN	SPINAL C.-CERV.	SPINAL C.-LUMB.
BRAIN WIDTH(MM)	14.7				
FINAL BODY WT(G)	212.				

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT

TABLE I29

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

ANIMAL NO. 59944 GROUP 3: 700 MG/KG FEMALE SCHEDULED EUTH 12/17/09 DATE OF DEATH: 12/17/09

ORGAN WEIGHT	ABS.(G)	PERFUSED	GRADE
BRAIN	1.99	NO SIGNIFICANT	
BRAIN LENGTH(MM)	20.4	CHANGES OBSERVED	
BRAIN WIDTH(MM)	14.8		
FINAL BODY WT(G)	188.		

GROSS:BRAIN	SPINAL C.-CERV.	SPINAL C.-LUMB.

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT

TABLE I29

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

ANIMAL NO. 59945 GROUP 3: 700 MG/KG FEMALE SCHEDULED EUTH 12/16/09 DATE OF DEATH: 12/16/09

ORGAN WEIGHT	ABS.(G)	PERFUSED	GRADE
BRAIN	2.05	NO SIGNIFICANT	
BRAIN LENGTH(MM)	20.9	CHANGES OBSERVED	
BRAIN WIDTH(MM)	14.4		
FINAL BODY WT(G)	212.		

GROSS:BRAIN	SPINAL C.-CERV.	SPINAL C.-LUMB.

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT

TABLE I29

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

ANIMAL NO. 59948 GROUP 3: 700 MG/KG FEMALE SCHEDULED EUTH 12/16/09 DATE OF DEATH: 12/16/09

ORGAN WEIGHT	ABS.(G)	PERFUSED	GRADE
BRAIN	1.96	NO SIGNIFICANT	
BRAIN LENGTH(MM)	19.0	CHANGES OBSERVED	
BRAIN WIDTH(MM)	14.7		
FINAL BODY WT(G)	167.		

GROSS:BRAIN	SPINAL C.-CERV.	SPINAL C.-LUMB.

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT

TABLE I29

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

ANIMAL NO. 59959 GROUP 3: 700 MG/KG FEMALE SCHEDULED EUTH 12/15/09 DATE OF DEATH: 12/15/09

ORGAN WEIGHT	ABS.(G)	PERFUSED	GRADE
BRAIN	1.86	NO SIGNIFICANT	
BRAIN LENGTH(MM)	19.6	CHANGES OBSERVED	
BRAIN WIDTH(MM)	14.3		
FINAL BODY WT(G)	194.		

GROSS:BRAIN	SPINAL C.-CERV.	SPINAL C.-LUMB.

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT

TABLE I29

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

ANIMAL NO. 59963 GROUP 3: 700 MG/KG FEMALE SCHEDULED EUTH 12/18/09 DATE OF DEATH: 12/18/09

ORGAN WEIGHT	ABS.(G)			GRADE
BRAIN	2.00	GENERAL COMMENT	PERFUSED ORGAN DAMAGED AT TRIMMING BRAIN	P
BRAIN LENGTH(MM)	20.5			
BRAIN WIDTH(MM)	15.1	NO SIGNIFICANT		
FINAL BODY WT(G)	195.	CHANGES OBSERVED	GROSS:BRAIN SPINAL C.-CERV. SPINAL C.-LUMB.	

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT

TABLE I29

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

ANIMAL NO. 59921 GROUP 4: 2000 MG/KG FEMALE SCHEDULED EUTH 12/16/09 DATE OF DEATH: 12/16/09

ORGAN WEIGHT	ABS.(G)						GRADE
BRAIN	1.89	EYES	MICRO:	PERFUSED DYSPLASIA, RETINAL BILATERAL			2
BRAIN LENGTH(MM)	19.1						
BRAIN WIDTH(MM)	14.5	NO SIGNIFICANT					
FINAL BODY WT(G)	169.	CHANGES OBSERVED	GROSS:	BRAIN	SPINAL C.-CERV.	SPINAL C.-LUMB.	
			MICRO:	SPINAL C.-CERV.	SPINAL C.-LUMB.	HIPPOCAMPUS	OLFACTORY BULBS
				TRIG. GANGLION	TRIGEMINAL NERVE	LUMBAR DOR. GANG	LUMBAR DOR. FIB.
				LUMBAR VENT. FIB	CERV. DOR. GANG.	CERV. DOR. FIB.	CERV. VENT. FIB.
				SCIATIC NERVE	SURAL NERVE	TIBIAL NERVE	PERONEAL NERVE
				MIDBRAIN	CEREBELLUM	OPTIC NERVE	CEREBRAL CORTEX
				BASAL GANGLIA	THALAMUS	HYPOTHALAMUS	PONS
				MEDULLA OBLONG.	GASTROC. MUSCLE	LUM SPIN NERVE	CERV SPIN NERVE

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT

TABLE I29

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

ANIMAL NO. 59928 GROUP 4: 2000 MG/KG FEMALE SCHEDULED EUTH 12/18/09 DATE OF DEATH: 12/18/09

ORGAN WEIGHT	ABS.(G)						GRADE
BRAIN	2.10	GENERAL COMMENT	PERFUSED ORGAN DAMAGED AT TRIMMING BRAIN				P
BRAIN LENGTH(MM)	20.4						
BRAIN WIDTH(MM)	15.2	NO SIGNIFICANT					
FINAL BODY WT(G)	223.	CHANGES OBSERVED	GROSS:	BRAIN	SPINAL C.-CERV.	SPINAL C.-LUMB.	
			MICRO:	SPINAL C.-CERV.	SPINAL C.-LUMB.	HIPPOCAMPUS	OLFACTORY BULBS
				TRIG. GANGLION	TRIGEMINAL NERVE	LUMBAR DOR. GANG	LUMBAR DOR. FIB.
				LUMBAR VENT. FIB	CERV. DOR. GANG.	CERV. DOR. FIB.	CERV. VENT. FIB.
				SCIATIC NERVE	SURAL NERVE	TIBIAL NERVE	PERONEAL NERVE
				MIDBRAIN	CEREBELLUM	OPTIC NERVE	CEREBRAL CORTEX
				EYES	BASAL GANGLIA	THALAMUS	HYPOTHALAMUS
				PONS	MEDULLA OBLONG.	GASTROC. MUSCLE	LUM SPIN NERVE
				CERV SPIN NERVE			

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT

ANIMAL NO. 59929 GROUP 4: 2000 MG/KG FEMALE SCHEDULED EUTH 12/16/09 DATE OF DEATH: 12/16/09

ORGAN WEIGHT	ABS.(G)			GRADE
BRAIN	1.87	NO SIGNIFICANT	PERFUSED	
BRAIN LENGTH(MM)	19.6	CHANGES OBSERVED	GROSS:BRAIN	SPINAL C.-CERV. SPINAL C.-LUMB.
BRAIN WIDTH(MM)	14.3			
FINAL BODY WT(G)	200.			

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT

TABLE I29

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

ANIMAL NO. 59934 GROUP 4: 2000 MG/KG FEMALE SCHEDULED EUTH 12/15/09 DATE OF DEATH: 12/15/09

ORGAN WEIGHT	ABS.(G)						GRADE
BRAIN	1.86	NO SIGNIFICANT		PERFUSED			
BRAIN LENGTH(MM)	19.3	CHANGES OBSERVED	GROSS:	BRAIN	SPINAL C.-CERV.	SPINAL C.-LUMB.	
BRAIN WIDTH(MM)	14.8		MICRO:	SPINAL C.-CERV.	SPINAL C.-LUMB.	HIPPOCAMPUS	OLFACTORY BULBS
FINAL BODY WT(G)	193.			TRIG. GANGLION	TRIGEMINAL NERVE	LUMBAR DOR. GANG	LUMBAR DOR. FIB.
				LUMBAR VENT. FIB	CERV. DOR. GANG.	CERV. DOR. FIB.	CERV. VENT. FIB.
				SCIATIC NERVE	SURAL NERVE	TIBIAL NERVE	PERONEAL NERVE
				MIDBRAIN	CEREBELLUM	OPTIC NERVE	CEREBRAL CORTEX
				EYES	BASAL GANGLIA	THALAMUS	HYPOTHALAMUS
				PONS	MEDULLA OBLONG.	GASTROC. MUSCLE	LUM SPIN NERVE
				CERV SPIN NERVE			

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT

TABLE I29

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS PAGE 89

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

ANIMAL NO. 59938 GROUP 4: 2000 MG/KG FEMALE SCHEDULED EUTH 12/18/09 DATE OF DEATH: 12/18/09

					GRADE
ORGAN WEIGHT	ABS.(G)		PERFUSED		
BRAIN	1.91	NO SIGNIFICANT			
BRAIN LENGTH(MM)	20.2	CHANGES OBSERVED	GROSS:BRAIN	SPINAL C.-CERV.	SPINAL C.-LUMB.
BRAIN WIDTH(MM)	14.3				
FINAL BODY WT(G)	188.				

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT

TABLE I29

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

ANIMAL NO. 59943 GROUP 4: 2000 MG/KG FEMALE SCHEDULED EUTH 12/17/09 DATE OF DEATH: 12/17/09

ORGAN WEIGHT	ABS.(G)						GRADE
BRAIN	1.96	NO SIGNIFICANT		PERFUSED			
BRAIN LENGTH(MM)	19.9	CHANGES OBSERVED	GROSS:	BRAIN	SPINAL C.-CERV.	SPINAL C.-LUMB.	
BRAIN WIDTH(MM)	14.5		MICRO:	SPINAL C.-CERV.	SPINAL C.-LUMB.	HIPPOCAMPUS	OLFACTORY BULBS
FINAL BODY WT(G)	209.			TRIG. GANGLION	TRIGEMINAL NERVE	LUMBAR DOR. GANG	LUMBAR DOR. FIB.
				LUMBAR VENT. FIB	CERV. DOR. GANG.	CERV. DOR. FIB.	CERV. VENT. FIB.
				SCIATIC NERVE	SURAL NERVE	TIBIAL NERVE	PERONEAL NERVE
				MIDBRAIN	CEREBELLUM	OPTIC NERVE	CEREBRAL CORTEX
				EYES	BASAL GANGLIA	THALAMUS	HYPOTHALAMUS
				PONS	MEDULLA OBLONG.	GASTROC. MUSCLE	LUM SPIN NERVE
				CERV SPIN NERVE			

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT

TABLE I29

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS PAGE 91

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

ANIMAL NO. 59946 GROUP 4: 2000 MG/KG FEMALE SCHEDULED EUTH 12/18/09 DATE OF DEATH: 12/18/09

					GRADE
ORGAN WEIGHT	ABS.(G)	PERFUSED			
BRAIN	1.92	NO SIGNIFICANT			
BRAIN LENGTH(MM)	19.6	CHANGES OBSERVED	GROSS:BRAIN	SPINAL C.-CERV.	SPINAL C.-LUMB.
BRAIN WIDTH(MM)	14.7				
FINAL BODY WT(G)	186.				

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT

TABLE I29

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

ANIMAL NO. 59947 GROUP 4: 2000 MG/KG FEMALE SCHEDULED EUTH 12/17/09 DATE OF DEATH: 12/17/09

ORGAN WEIGHT	ABS.(G)					GRADE
			PERFUSED			
BRAIN	1.98	NO SIGNIFICANT				
BRAIN LENGTH(MM)	20.1	CHANGES OBSERVED	GROSS:BRAIN	SPINAL C.-CERV.	SPINAL C.-LUMB.	
BRAIN WIDTH(MM)	14.9					
FINAL BODY WT(G)	200.					

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT

TABLE I29

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

ANIMAL NO. 59951 GROUP 4: 2000 MG/KG FEMALE SCHEDULED EUTH 12/16/09 DATE OF DEATH: 12/16/09

ORGAN WEIGHT	ABS.(G)						GRADE
BRAIN	1.88	NO SIGNIFICANT		PERFUSED			
BRAIN LENGTH(MM)	19.5	CHANGES OBSERVED	GROSS:	BRAIN	SPINAL C.-CERV.	SPINAL C.-LUMB.	
BRAIN WIDTH(MM)	14.5		MICRO:	SPINAL C.-CERV.	SPINAL C.-LUMB.	HIPPOCAMPUS	OLFACTORY BULBS
FINAL BODY WT(G)	196.			TRIG. GANGLION	TRIGEMINAL NERVE	LUMBAR DOR. GANG	LUMBAR DOR. FIB.
				LUMBAR VENT. FIB	CERV. DOR. GANG.	CERV. DOR. FIB.	CERV. VENT. FIB.
				SCIATIC NERVE	SURAL NERVE	TIBIAL NERVE	PERONEAL NERVE
				MIDBRAIN	CEREBELLUM	OPTIC NERVE	CEREBRAL CORTEX
				EYES	BASAL GANGLIA	THALAMUS	HYPOTHALAMUS
				PONS	MEDULLA OBLONG.	GASTROC. MUSCLE	LUM SPIN NERVE
				CERV SPIN NERVE			

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT

TABLE I29

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

ANIMAL NO. 59955 GROUP 4: 2000 MG/KG FEMALE SCHEDULED EUTH 12/17/09 DATE OF DEATH: 12/17/09

ORGAN WEIGHT	ABS.(G)			GRADE
BRAIN	1.95	BRAIN	PERFUSED MISSHAPEN	P
BRAIN LENGTH(MM)	20.3		CEREBELLUM; RIGHT PARAFLOCCULUS SMALLER THAN NORMAL	
BRAIN WIDTH(MM)	14.4	NO SIGNIFICANT		
FINAL BODY WT(G)	192.	CHANGES OBSERVED	GROSS:SPINAL C.-CERV. SPINAL C.-LUMB.	

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT

TABLE I29

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL MACROSCOPIC AND MICROSCOPIC FINDINGS

ANIMAL NO. 59964 GROUP 4: 2000 MG/KG FEMALE SCHEDULED EUTH 12/15/09 DATE OF DEATH: 12/15/09

ORGAN WEIGHT	ABS.(G)		PERFUSED	GRADE
BRAIN	1.99	NO SIGNIFICANT		
BRAIN LENGTH(MM)	19.4	CHANGES OBSERVED	GROSS:BRAIN	SPINAL C.-CERV. SPINAL C.-LUMB.
BRAIN WIDTH(MM)	15.1			
FINAL BODY WT(G)	202.			

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT

ANIMAL NO. 59966 GROUP 4: 2000 MG/KG FEMALE SCHEDULED EUTH 12/15/09 DATE OF DEATH: 12/15/09

ORGAN WEIGHT	ABS.(G)						GRADE
BRAIN	1.84	SURAL NERVE	PERFUSED MICRO: NO SIGNIFICANT CHANGES OBSERVED LONGITUDINAL SECTION NOT EXAMINED				
BRAIN LENGTH(MM)	19.3						
BRAIN WIDTH(MM)	14.5	NO SIGNIFICANT					
FINAL BODY WT(G)	188.	CHANGES OBSERVED	GROSS:	BRAIN	SPINAL C.-CERV.	SPINAL C.-LUMB.	
			MICRO:	SPINAL C.-CERV.	SPINAL C.-LUMB.	HIPPOCAMPUS	OLFACTORY BULBS
				TRIG. GANGLION	TRIGEMINAL NERVE	LUMBAR DOR. GANG	LUMBAR DOR. FIB.
				LUMBAR VENT. FIB	CERV. DOR. GANG.	CERV. DOR. FIB.	CERV. VENT. FIB.
				SCIATIC NERVE	SURAL NERVE	TIBIAL NERVE	PERONEAL NERVE
				MIDBRAIN	CEREBELLUM	OPTIC NERVE	CEREBRAL CORTEX
				EYES	BASAL GANGLIA	THALAMUS	HYPOTHALAMUS
				PONS	MEDULLA OBLONG.	GASTROC. MUSCLE	LUM SPIN NERVE
				CERV SPIN NERVE			

GROSS GRADE CODE: 1-SLIGHT, 2-MODERATE, 3-MARKED, P-PRESENT

MICRO GRADE CODE: 1-MINIMAL; 2-MILD; 3-MODERATE; 4-SEVERE; P-PRESENT

PGRHv4.64
02/12/2010
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TABLE I30

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL FINAL BODY AND BRAIN WEIGHTS AND BRAIN MEASUREMENTS

MALE GROUP: 0 MG/KG

ANIMAL	FBW(G)	WEIGHT(G)	LENGTH(MM)	WIDTH(MM)
59866	283.	2.15	20.2	15.3
59867	300.	2.17	21.4	15.1
59869	342.	2.19	20.9	14.2
59870	343.	2.13	20.4	15.3
59881	311.	2.12	20.2	14.7
59884	262.	2.11	20.4	15.5
59885	304.	2.03	20.2	15.5
59891	333.	2.14	20.7	15.1
59892	306.	2.00	20.5	15.0
59901	300.	2.20	20.2	15.1
59914	279.	2.21	20.5	15.1
59915	288.	1.98	19.4	15.2
MEAN	304.	2.12	20.4	15.1
S.D.	25.2	0.077	0.48	0.36
S.E.	7.3	0.022	0.14	0.10
N	12	12	12	12

TABLE I30

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL FINAL BODY AND BRAIN WEIGHTS AND BRAIN MEASUREMENTS

MALE GROUP: 200 MG/KG

ANIMAL	FBW(G)	WEIGHT(G)	LENGTH(MM)	WIDTH(MM)
59865	341.	2.05	20.8	15.4
59873	261.	2.01	20.2	14.9
59875	260.	2.02	20.3	14.8
59878	322.	2.20	20.0	15.3
59879	287.	2.07	20.4	15.1
59880	304.	2.05	20.5	15.1
59882	313.	2.09	20.3	15.2
59889	335.	2.05	19.8	14.9
59893	330.	2.14	20.3	15.3
59897	261.	1.99	19.9	14.1
59911	347.	2.15	20.4	15.3
59913	279.	2.06	20.0	15.0
MEAN	303.	2.07	20.2	15.0
S.D.	32.8	0.062	0.28	0.35
S.E.	9.5	0.018	0.08	0.10
N	12	12	12	12

TABLE I30

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL FINAL BODY AND BRAIN WEIGHTS AND BRAIN MEASUREMENTS

MALE GROUP: 700 MG/KG

ANIMAL	FBW(G)	WEIGHT(G)	LENGTH(MM)	WIDTH(MM)
59874	304.	2.13	20.2	14.6
59894	339.	2.19	20.4	15.7
59895	321.	2.12	20.0	15.4
59896	339.	2.07	20.5	14.7
59899	282.	2.04	20.1	14.7
59902	291.	1.94	19.7	14.6
59903	275.	1.97	19.8	14.7
59904	305.	2.16	21.4	15.4
59905	303.	2.09	20.6	14.9
59909	268.	2.12	20.3	15.0
59910	338.	1.95	20.1	14.4
59916	294.	1.97	20.2	14.7
MEAN	305.	2.06	20.3	14.9
S.D.	24.8	0.087	0.44	0.40
S.E.	7.2	0.025	0.13	0.11
N	12	12	12	12

TABLE I30

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL FINAL BODY AND BRAIN WEIGHTS AND BRAIN MEASUREMENTS

MALE GROUP: 2000 MG/KG

ANIMAL	FBW(G)	WEIGHT(G)	LENGTH(MM)	WIDTH(MM)
59876	291.	2.08	19.7	15.4
59883	252.	2.08	19.4	15.2
59886	329.	2.05	20.5	15.0
59887	252.	2.06	19.9	14.8
59890	333.	2.09	20.6	14.7
59898	322.	2.23	20.5	15.4
59900	341.	2.07	20.8	15.5
59906	309.	2.09	20.0	15.1
59907	283.	1.99	20.0	14.8
59908	315.	2.01	20.1	14.8
59912	270.	2.14	19.9	15.2
59917	320.	2.03	20.4	14.5
MEAN	301.	2.08	20.2	15.0
S.D.	31.1	0.063	0.41	0.32
S.E.	9.0	0.018	0.12	0.09
N	12	12	12	12

TABLE I30

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL FINAL BODY AND BRAIN WEIGHTS AND BRAIN MEASUREMENTS

FEMALE GROUP: 0 MG/KG

ANIMAL	FBW(G)	WEIGHT(G)	LENGTH(MM)	WIDTH(MM)
59919	213.	1.78	19.7	14.3
59920	193.	1.78	19.8	14.3
59923	230.	1.94	19.7	14.4
59924	203.	1.94	19.5	15.1
59933	195.	2.02	19.4	14.8
59939	170.	1.93	20.1	14.4
59941	213.	1.86	19.4	14.4
59942	220.	1.89	19.9	14.9
59950	196.	1.97	19.4	14.6
59956	165.	1.83	18.9	14.2
59969	187.	1.94	19.9	15.0
59970	206.	1.87	20.1	14.9
MEAN	199.	1.90	19.7	14.6
S.D.	19.2	0.075	0.35	0.31
S.E.	5.5	0.022	0.10	0.09
N	12	12	12	12

TABLE I30

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL FINAL BODY AND BRAIN WEIGHTS AND BRAIN MEASUREMENTS

FEMALE GROUP: 200 MG/KG

ANIMAL	FBW(G)	WEIGHT(G)	LENGTH(MM)	WIDTH(MM)
59922	198.	1.80	19.9	14.5
59926	183.	1.98	19.5	14.0
59927	197.	1.89	19.1	14.3
59936	217.	2.04	19.6	15.2
59937	186.	1.83	19.9	14.4
59949	204.	1.98	19.7	14.5
59952	175.	1.88	19.5	14.7
59954	220.	2.00	19.7	15.1
59958	192.	1.77	18.9	14.2
59962	197.	1.91	19.1	14.3
59967	201.	1.94	18.9	15.0
59968	182.	1.95	19.9	14.7
MEAN	196.	1.91	19.5	14.6
S.D.	13.6	0.083	0.38	0.37
S.E.	3.9	0.024	0.11	0.11
N	12	12	12	12

TABLE I30

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL FINAL BODY AND BRAIN WEIGHTS AND BRAIN MEASUREMENTS

FEMALE GROUP: 700 MG/KG

ANIMAL	FBW(G)	WEIGHT(G)	LENGTH(MM)	WIDTH(MM)
59918	214.	1.93	19.7	14.6
59925	204.	1.86	19.7	14.3
59930	215.	1.93	19.8	14.8
59931	209.	2.01	20.1	15.3
59932	187.	1.80	19.6	14.6
59935	209.	1.86	18.8	13.8
59940	212.	2.09	19.8	14.7
59944	188.	1.99	20.4	14.8
59945	212.	2.05	20.9	14.4
59948	167.	1.96	19.0	14.7
59959	194.	1.86	19.6	14.3
59963	195.	2.00	20.5	15.2
MEAN	201.	1.95	19.8	14.6
S.D.	14.6	0.088	0.59	0.40
S.E.	4.2	0.025	0.17	0.12
N	12	12	12	12

TABLE I30

PROJECT NO.:WIL-118043 AN ORAL ACUTE NEUROTOXICITY STUDY OF TOLCLOFOS-METHYL IN RATS

SPONSOR:SUMITOMO CHEMICAL INDIVIDUAL FINAL BODY AND BRAIN WEIGHTS AND BRAIN MEASUREMENTS

FEMALE GROUP: 2000 MG/KG

ANIMAL	FBW(G)	WEIGHT(G)	LENGTH(MM)	WIDTH(MM)
59921	169.	1.89	19.1	14.5
59928	223.	2.10	20.4	15.2
59929	200.	1.87	19.7	14.3
59934	193.	1.86	19.3	14.8
59938	188.	1.91	20.2	14.3
59943	209.	1.96	19.9	14.5
59946	186.	1.92	19.6	14.7
59947	200.	1.98	20.1	14.9
59951	196.	1.88	19.5	14.5
59955	192.	1.95	20.3	14.5
59964	202.	1.99	19.4	15.1
59966	188.	1.84	19.3	14.5
MEAN	196.	1.93	19.7	14.7
S.D.	13.3	0.072	0.44	0.29
S.E.	3.8	0.021	0.13	0.08
N	12	12	12	12

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01/13/2010