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Report Amendment 1

A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS WITH AMMONIUM PERCHLORATE

AMENDED FINAL REPORT

Author

Joseph C. Siglin, Ph.D., DABT

Original Study Completion Date

May 18, 1998

Amended Study Completion Date

June 3, 1998

Performing Laboratory

Springborn Laboratories, Inc. (SLI)
Health and Environmental Sciences
640 North Elizabeth Street
Spencerville, OH 45887

SLI Study No.

3455.1

Submitted to:

ManTech Environmental Technology
P. O. Box 31009
Dayton, Ohio 45437-0009

Springborn Laboratories

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Volume 1 of 3

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COMPLIANCE STATEMENT

This study was conducted in compliance with the Good Laboratory Practice Standards as described by the EPA (40 CFR Part 792) and SLI's Standard Operating Procedures.

Joseph C. Siglin

Date 5/18/98

Joseph C. Siglin, Ph.D./DABT
Study Director/Author
Springborn Laboratories, Inc.

QUALITY ASSURANCE STATEMENT

This study was inspected by the Quality Assurance Unit and reports were submitted to management and the Study Director in accordance with SLI's Standard Operating Procedures as follows:

Phase	Date
Test Article Receipt Trail	08/27/97
Animal Receipt	08/28/97
Dose Preparation/Sampling for Sponsor	09/02/97
Randomization	09/08/97
Dosing	09/09/97
Hematology, Biochemistry, Serum Processing	09/25/97, 12/12/97
Necropsy/Blood Collection/Organ Weights	09/26/97
Food Consumption	10/07/97
Body Weights/Clinical Observations	11/17/97
Blood Collection, Sperm Analysis, Prosection, Organ Weights	12/11/97
Bone Marrow Harvesting	12/12/97
Differential Count	01/30/98
Sectioning, Tissue/Slide/Block Accountability and Histology Worksheets	02/18/98, 02/21/98, 03/03/98
Data Audits	02/02/98, 02/24/98, 02/25/98, 03/02/98, 03/03/98, 03/04/98, 03/05/98, 03/06/98, 03/11/98, 03/30/98
Draft Report Review	03/30/98
Final Draft Report Review	04/15/98
Final Report Review	05/18/98
Amended Final Report Review	06/03/98
Reports Submitted to Study Director and Management	09/09/97, 09/15/97, 10/07/97, 11/17/97, 01/12/98, 01/30/98, 03/13/98, 03/30/98, 04/09/98, 04/15/98, 05/18/98, 06/03/98

QUALITY ASSURANCE STATEMENT

This study was conducted in compliance with the Good Laboratory Practice Standards as described by the EPA (40 CFR Part 792).

Deanna M. Talerico, RQAP-GLP
Supervisor of Nonacute Quality Assurance

Date 6-3-98

Anita M. Bosau, RQAP-GLP
Director of Compliance Assurance

Date 6/3/98

The following revised page has been incorporated into this report.

Page No.	Revision	Reason for Change
453	The blood sample collection times for day 18 were added to this page.	The day 18 blood sample collection times were inadvertently omitted from the original final report.

The above revision was necessary to add detail and clarity to the report. The revision did not effect the interpretation or results of the study.

Joseph C. Siglin, Ph.D., DABT
Study Director

Date 6/3/98

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SUMMARY

This study was performed to evaluate the potential toxicity of Ammonium Perchlorate (AP) when administered to Sprague-Dawley rats in the drinking water over the course of 90 days. The study design was as follows:

Group	No. of Animals		Dosage Material	Target Dosage Level (mg/kg/day)	Euthanasia Schedule (No. of Animals - Male/Female)		
	Male	Female			Day 14	Day 90	Day 120 (Recovery)
1	30	30	Vehicle - Water	0	10/10	10/10	10/10
2	20	20	AP	0.01	10/10	10/10	-
3	30	30	AP	0.05	10/10	10/10	10/10
4	20	20	AP	0.2	10/10	10/10	-
5	30	30	AP	1.0	10/10	10/10	10/10
6	30	30	AP	10.0	10/10	10/10	10/10

For each sex-group, the concentration of AP in the drinking water was adjusted weekly to achieve the desired (target) dosage levels. Average test article intake based on measured body weights and water consumption for animals in groups 2, 3, 4, 5 and 6 was 0.01, 0.05, 0.21, 1.02 and 10.11 mg/kg/day for males and 0.01, 0.05, 0.21, 1.03 and 10.20 mg/kg/day for females, respectively. The rats were observed daily for clinical signs of toxicity. Individual body weights and food consumption were measured on a weekly basis throughout the study, and water consumption was measured weekly during the 90-day dosing period. Blood samples were obtained from surviving animals at scheduled euthanasia after 14, 90 or 120 days for evaluation of selected hematology and clinical chemistry parameters, as well as serum TSH, T_3 and T_4 levels. Ophthalmological examinations were performed prior to in-life initiation, near conclusion of dosing, and near completion of the recovery phase. Vaginal smears were examined for assessment of estrous cyclicity for three weeks prior to scheduled euthanasia at 90 or 120 days. Ten animals/sex/group were euthanized and necropsied following 14 and 90 days of treatment; remaining animals in groups 1, 3, 5 and 6 were euthanized following a 30-day nontreatment recovery period. Each animal was subjected to a complete gross necropsy at the time of death or scheduled euthanasia. Bone marrow samples were collected from all animals euthanized at 90 and 120 days for evaluation of micronuclei formation. Semen samples were obtained from male rats euthanized at 90 and 120 days for

evaluation of sperm count, concentration, motility and morphology. At each euthanasia interval, organ weights were obtained from surviving animals and selected tissues were preserved for histopathological examination.

All animals survived to scheduled euthanasia following 14, 90 or 120 days, with the exception of one 0.05 mg/kg/day female rat that was found dead during the recovery period on study day 97. Although the exact cause of this death was not determined, it was considered unrelated to treatment since no deaths occurred at the higher AP treatment levels.

No statistically significant and/or toxicologically meaningful differences were observed among the groups with respect to clinical observations, body weights, food consumption, water consumption, ophthalmology, hematology, routine clinical chemistry, estrous cycling, sperm parameters or bone marrow micronuclei formation. Mean body weight gain of 10.0 mg/kg/day males was slightly but significantly decreased during the first week of treatment; however, no significant differences in mean body weights were observed in males or females.

Absolute and relative thyroid weights were significantly increased in males at the 10.0 mg/kg/day level after 14 and 90 days of treatment, and in females at the 10.0 mg/kg/day level after 90 days of treatment. Thyroid weights of both males and females at the 10.0 mg/kg/day level were comparable to controls at the end of the 30-day recovery period.

Microscopic examinations revealed test article-related follicular cell hyperplasia in the thyroid glands of male and female rats of the 10.0 mg/kg/day group euthanized after 14 and 90 days of treatment. The hyperplasia was minimal in most cases with only an occasional thyroid with a severity grade of mild. The hyperplasia was characterized by an increased number of small follicles in the central portion of the thyroid compared to thyroids of control rats. No test article-related thyroid pathology was noted in the lower dose groups or in recovery animals euthanized after a nontreatment period of 30 days. Similarly, no test article-related microscopic changes were observed in the other organs and tissues from 10 mg/kg/day males and females euthanized after 14 and 90 days of treatment.

Significant differences in TSH, T_3 and T_4 were observed in one or both sexes following 14 and 90 days of treatment, and following the 30-day nontreatment recovery period. In general, these differences tended to follow a dose-related pattern and consisted of significantly increased TSH levels and significantly decreased T_3 and T_4 levels. Although thyroid hormone levels were significantly different from controls at AP dosage levels as low as 0.01 mg/kg/day, these changes were associated with increased thyroid weights and abnormal thyroid pathology only at the 10.0 mg/kg/day level.

In summary, oral administration of AP to rats via the drinking water produced a target organ effect in the thyroid which was characterized by increased thyroid weights and corresponding thyroid follicular cell hyperplasia after 14 and 90 days of treatment at the high-dose level of 10.0 mg/kg/day. These changes were reversible after a nontreatment recovery period of 30 days. Statistically significant changes in thyroid hormone levels were observed at AP dosage levels as low as 0.01 mg/kg/day. However, no treatment-related organ weight changes or abnormal thyroid pathology were observed at dosage levels of 1.0 mg/kg/day and lower. Based on these results, 1.0 mg/kg/day is considered a No-Observed-Adverse-Effect Level (NOAEL) for oral administration of AP to rats via the drinking water for 90 days.

I. INTRODUCTION

This report details the experimental procedures and results of a 90-day drinking water toxicity study in rats with Ammonium Perchlorate (AP). The study was authorized by ManTech Environmental Technology, Dayton, Ohio, and was conducted at Springborn Laboratories, Inc. (SLI), 640 North Elizabeth Street, Spencerville, Ohio. The laboratory rat was selected as the experimental model for this study since this is one species recommended by the regulatory agencies for oral toxicity testing. The oral (drinking water) route of administration was selected as this is the potential route of human exposure. The protocol was signed by the Study Director on September 4, 1997 (GLP initiation date). The in-life phase of the study was initiated with test article administration on September 9, 1997, and concluded with final euthanasia of recovery phase animals on January 9, 1998.

II. OBJECTIVE

This study was performed to evaluate the potential toxicity of AP when administered to rats in the drinking water over the course of 90 days. The potential effects of AP on male sperm parameters, female estrous cycling, bone marrow micronucleus formation and serum thyroid hormone levels were also investigated. Data from this study may be used in the assessment of potential human risk to AP.

III. MATERIALS AND METHODS

A. Experimental Protocol

The study protocol, protocol amendments and protocol deviations are presented in Appendix A.

B. Test Article and Vehicle Control Material

1. Test Article Receipt, Identification and Storage

The test article was purchased from Aldrich Chemical Company, supplied by the Sponsor, and identified as follows:

Identification	Assigned SLI ID	Physical Description	Receipt Date	Purity
Ammonium Perchlorate Batch (Lot) No. 03907LF	S97.001.3455	White powder	08/15/97	99.8%

A one gram retention sample of the test article was taken and stored at SLI. The retention sample and bulk test article were stored at room temperature, protected from light. Documentation concerning chemical identification, purity, strength, stability and other required data was the responsibility of the Sponsor.

2. Test Article Preparation

The test article was diluted with reverse osmosis (RO) water from the SLI pharmacy source to prepare drinking water solutions at appropriate concentrations. A 50 mg/mL stock solution of the test article in RO water was prepared using volumetric glassware. The stock solution was diluted with RO water to produce working solutions and these were further diluted to produce the desired (final) concentrations. Following final dilution, each drinking water solution was stirred for a minimum of 30 minutes using a magnetic stir plate and teflon-coated stir bar.

The AP stock solution was prepared fresh five times during the course of the study, at least once every five weeks. The diluted dosing solutions were prepared fresh for each week of dosing and stored refrigerated until use. The dosing solutions were allowed to equilibrate to room temperature and stirred for approximately 30 minutes prior to dispensing. All unused AP solutions were properly disposed of by Rader Environmental Services, Inc., Findlay, Ohio.

For each sex-group, the concentration of AP in the drinking water solutions was adjusted weekly to achieve the desired (target) dose levels. Concentrations prepared for the first week of the study were based on estimated body weights and water consumption. Thereafter, the concentrations were adjusted based on measured body weights and water intake.

3. Analysis of Dosing Preparations

Stability analyses were conducted by the Sponsor on low and high concentrations of AP in reagent water (0.05 and 200 µg/mL). The concentration of each 50 mg/mL stock solution and of dosing solutions prepared for study weeks 1, 3, 5, 8 and 12 were also verified by the Sponsor. Triplicate samples of the vehicle and each AP dosing solution were obtained for concentration analyses. Duplicate samples were shipped to the Sponsor on ice for analysis; the remaining samples were retained at SLI and stored refrigerated (2-8°C) as back-up samples. The back-up samples were discarded following completion of the analytical analyses.

Methods and results of analytical analyses are presented in Appendix B, as provided by the Sponsor.

C. Animals and Animal Husbandry

Animal housing and care were based on the standards established by the Association for Assessment and Accreditation of Laboratory Animal Care, International (AAALAC) and the guidelines set forth in the Guide for the Care and Use of Laboratory Animals, NIH Publication No. 96-03, 1996.

1. Animal Receipt, Identification and Housing

A total of 175 male and 175 female Sprague-Dawley Crl:CD®BR VAF/Plus® (ROPV free) rats were received at SLI on August 28, 1997, from Charles River Laboratories, Inc., Kingston, New York. At receipt, the animals were identified with temporary identification numbers recorded on the cage cards and in the data records. The animals were housed individually in suspended stainless steel wire mesh cages. A metal ear tag displaying a unique identification number was used to identify each animal assigned to the study. A cage card displaying the study, animal and group numbers, and sex was affixed to each cage. The cage cards were color-coded according to group number following randomization.

2. Acclimation

The animals were examined upon receipt and daily thereafter for overt physical or behavioral abnormalities. General health/moribundity and mortality checks were performed twice daily, in the morning and afternoon. Individual body weights were recorded on day -7 and prior to randomization on day -1. The animals were acclimated to the laboratory conditions for a period of 11 days prior to randomization.

3. Food

PMI Certified Rodent Chow® (meal) #5002 (Purina Mills, Inc.) was provided to the animals ad libitum throughout the study. The feed was analyzed by the supplier for nutritional components and environmental contaminants. The lot number and expiration date of each batch of feed used during the study were recorded. Dietary limitations for various environmental contaminants, including heavy metals, pesticides, polychlorinated biphenyls and total aflatoxin are set by the manufacturer. Within these limits, there are no contaminants reasonably expected in the diet which would interfere with the conduct of this study. Results of the dietary analyses (Certificates of Analysis) are provided by the manufacturer for each lot of diet, and are maintained at SLI. According to the manufacturer, the

target concentration of calcium iodate in PMI Certified Rodent Chow® #5002 is 0.67 ppm.

4. Water

During the acclimation period, all rats received RO water via individual water bottles for ad libitum drinking. During the study, animals received individual water bottles containing RO water alone (Group 1) or RO water containing the test article (Groups 2-6). Freshly filled water bottles were provided to all animals at a minimum of once weekly during the course of the study. Monitoring of the drinking water for contaminants was conducted by the testing laboratory and the records are maintained at SLI. In addition, blank (control) drinking water solutions were analyzed by the Sponsor during the course of the study and found to contain no detectable nitrate, a potential interference ion.

5. Environmental Conditions

The environmental controls in the animal room were set to maintain room temperature and relative humidity ranges of 65 to 79°F and 30 to 70%, respectively. Environmental control equipment was monitored and adjusted as necessary to minimize fluctuations in the animal room environment. Light timers were set to maintain a 12-hour light/12-hour dark cycle and the room ventilation was set to produce 10 to 15 air changes per hour. The room temperature and relative humidity were recorded daily. Following the randomization of animals to cages, animals remained in their same relative location on the animal rack for the duration of the study.

D. Experimental Procedures

1. Study Group Design

The study group design and dosage levels tested were as follows:

Group	No. of Animals		Dosage Material	Target Dosage Level (mg/kg/day)	Euthanasia Schedule (No. of Animals - Male/Female)		
	Male	Female			Day 14	Day 90[a]	Day 120[a] (Recovery)
1	30	30	Vehicle - Water[b]	0	10/10	10/10	10/10
2	20	20	AP[c]	0.01	10/10	10/10	-
3	30	30	AP[c]	0.05	10/10	10/10	10/10
4	20	20	AP[c]	0.2	10/10	10/10	-
5	30	30	AP[c]	1.0	10/10	10/10	10/10
6	30	30	AP[c]	10.0	10/10	10/10	10/10

[a] An additional six male rats were administered a single dose of cyclophosphamide by intraperitoneal injection at a level of 20 mg/kg approximately 24 hours prior to euthanasia at the 90 and 120-day periods (3 males per interval) to serve as positive control animals for bone marrow micronuclei evaluations.
[b] Reverse osmosis (RO) water only.
[c] AP in RO water. For each sex-group, the concentration was adjusted on a weekly basis to achieve the desired (target) dosage levels.

2. Justification of Dose Level Selection

Dosage levels were provided by the Sponsor. Dosage levels were selected by a panel of 11 toxicologists in an attempt to produce graded responses to the test article. The panel attempted to select doses that would, at the lower doses, identify a no-effect level for serum hormone (TSH, T_3 and T_4) changes and at the higher doses produce frank thyroid effects and identify other possible target organs. Since there was little relevant literature available, the panel relied on Caldwell *et al.* [1] and Brabant *et al.* [2].

3. Randomization and Group Assignment

Animals determined to be suitable test subjects were randomly assigned to groups using a computer-generated random number table. For each sex, mean body weight values were similar among the groups following randomization. At in-life initiation, the animals were approximately seven weeks of age with body weights ranging from 169 to 222 grams for males and 132 to 173 grams for females. Six male rats used as positive controls for the bone marrow micronuclei evaluations were from the same animal shipment as rats for the main study.

4. Treatment

The test article was administered ad libitum in the drinking water for a minimum of 14 or 90 days. All animals received continuous exposure to the vehicle or AP until scheduled euthanasia. Ten animals per sex in groups 1, 3, 5 and 6 were maintained for a 30 day nontreatment recovery period.

E. Parameters Evaluated

1. Clinical Observations

General health/mortality and moribundity checks were performed twice daily, once in the morning and afternoon. In addition, cage-side observations were performed once daily and detailed clinical examinations were performed once weekly for each animal.

2. Body Weights

Individual body weights were recorded prior to the initiation of treatment (Day -1) and weekly thereafter. A final body weight was recorded for each animal on the day of scheduled euthanasia.

3. Food Consumption

Individual food consumption was recorded weekly during the study. Food consumption was calculated and reported as grams/animal/day.

4. Water Consumption

Individual water consumption was recorded weekly during the study. Water consumption was calculated and reported as grams/animal/day. Average test article intake (mg/kg/day) was calculated for each sex-group based on measured water consumption and body weights.

5. Clinical Pathology

Blood was collected from all animals at scheduled euthanasia after 14, 90 or 120 days for evaluation of selected hematology and clinical chemistry parameters, as well as serum TSH, T_3 and T_4 levels. The blood samples were obtained via the vena cava immediately prior to necropsy. The time of blood sampling was recorded for each animal (see Appendix I for sample collection times). The rats were not fasted prior to blood sample collection. When insufficient sample was

available for analysis, priority was given to evaluation of thyroid parameters (TSH, T_3 and T_4) followed by hematology and then clinical chemistry analyses.

Serum for TSH, T_3 and T_4 determinations was immediately frozen on dry ice and then stored frozen (-70°C). These samples were subsequently shipped to the Sponsor on dry ice for analysis by radioimmuno assay (RIA). Methods for TSH, T_3 and T_4 analyses are presented in Appendix I. Methods for routine hematology and clinical chemistry evaluations are presented in Appendix C. The following parameters were evaluated:

a. Hematology

Erythrocyte count (RBC)
Hematocrit (Hct)
Hemoglobin concentration (Hgb)
Mean corpuscular hemoglobin (MCH)
Mean corpuscular hemoglobin concentration (MCHC)
Mean corpuscular volume (MCV)
Platelet count
Total and differential leukocyte counts

b. Biochemistry

Alanine aminotransferase (ALT)
Albumin
Albumin/globulin ratio (calculated)
Alkaline phosphatase
Aspartate aminotransferase (AST)
Blood creatinine
Calcium
Chloride
Cholesterol
Gamma glutamyl transferase (GGT)
Globulin (calculated)
Glucose
Magnesium
Phosphorus
Potassium
Sodium
Sorbitol Dehydrogenase
Total bilirubin
Total serum protein
Urea nitrogen (BUN)

6. Ophthalmological Examinations

Ophthalmological examinations were performed prior to in-life initiation (day -1), near conclusion of dosing (day 85) and near completion of the recovery phase (day 119). The examinations were performed by Dr. David A. Wilkie (days -1 and 119) and Dr. Brian Gilger (day 85), Board Certified Veterinary Ophthalmologists. Eyes were dilated using 0.5% Mydriacyl® ophthalmic solution prior to biomicroscopic slit-lamp and indirect ophthalmoscopic examinations.

7. Estrous Cyclicity

Estrous cyclicity was evaluated by examining daily vaginal smears for all females selected for the 90 and 120 day euthanasia intervals for three weeks prior to euthanasia. For each group, the number and percentage of females cycling, and the mean cycle length were determined.

8. Gross Necropsy

All animals received a complete gross necropsy at the time of death or scheduled euthanasia. The necropsy examination included evaluation of the external surfaces of the body and all viscera. Ten animals/sex/group were randomly selected for euthanasia and necropsy following 14 and 90 days of treatment using a computer-generated random number table. All remaining animals in groups 1, 3, 5 and 6 were euthanized following completion of a 30-day nontreatment recovery period, with the exception of one group 3 female that was found dead during the recovery period (on study day 97). Surviving animals were euthanized by carbon dioxide inhalation followed by exsanguination. The necropsies were conducted over the course of three or four days at each scheduled euthanasia interval. A Board Certified Veterinary Pathologist, Dr. Robert G. Geil or Dr. J. Dale Thurman, was present at all scheduled necropsies. The following organs and tissues were preserved at necropsy in 10% neutral buffered formalin for possible future histopathological examination:

Accessory genital organs (epididymides, seminal vesicles and prostate or uterus with cervix and vagina)
Adrenals
All gross lesions
Aorta
Brain (including sections of medulla/pons, cerebellar cortex and cerebral cortex)
Cecum
Colon
Duodenum
Esophagus

Exorbital lachrymal glands
Eyes with optic nerve
Femur (including articular surface) and bone marrow
Heart
Ileum
Jejunum
Kidneys
Liver (3 sections collected)
Lungs (infused with formalin) with bronchi
Mammary gland
Mandibular lymph node
Mediastinal lymph node
Mesenteric lymph node
Ovaries
Pancreas
Peripheral nerve (sciatic) - with skeletal muscle
Pharynx, larynx, nose
Pituitary
Rectum
Skin
Spinal cord (cervical, midthoracic and lumbar)
Spleen
Sternum with bone marrow
Stomach (glandular/nonglandular)
Submandibular salivary gland
Testes
Thymus
Thyroid/parathyroid
Tongue
Trachea
Urinary bladder

In addition to the above tissues, bone marrow samples were collected from all animals euthanized after 90 and 120 days for evaluation of micronuclei formation. The bone marrow slides were submitted to the Sponsor for evaluation (see Appendix P), along with slides from six additional male rats that were treated with cyclophosphamide and euthanized after 90 and 120 days (three males per interval) to serve as positive controls for micronuclei evaluations.

9. Organ Weights

Fresh organ weights were obtained at scheduled euthanasia for the liver, kidneys, testes, ovaries, brain, spleen, lungs, epididymides, left cauda epididymis, uterus,

pituitary and heart of all animals. The thyroid/parathyroid were immersed in fixative immediately after collection. Following fixation, the thyroid/parathyroid from each animal was carefully trimmed and weighed. The same technician performed all trimming and weighing of thyroid/parathyroid tissues. The trimming and weighing procedure began approximately nine weeks following the first evaluation interval.

10. Histopathology

All tissues from control and high-dose animals euthanized after 14 and 90 days, and all tissues from one recovery rat that was found dead on study day 97, were examined microscopically. In addition, the liver, kidneys, lungs, thyroid/parathyroid and gross lesions from all intermediate dose group animals euthanized after 14 and 90 days, and from all animals in groups 1, 3, 5 and 6 euthanized following the recovery period, were examined microscopically. The tissues were trimmed, embedded in paraffin, sectioned and stained with hematoxylin and eosin. Histological processing was performed by HistoTechniques, Powell, Ohio. Microscopic pathology was performed by Dr. Paul K. Hildebrandt, a Board-Certified Veterinary Pathologist.

11. Sperm Analysis

Semen samples were obtained from all male rats euthanized after 90 or 120 days for evaluation of sperm count, concentration, motility and morphology. Sperm count and concentration were determined from samples collected from the left cauda epididymis. Sperm motility and morphology were evaluated from samples collected from the vas deferens. A Hamilton Thorne IVOS 10 semen analyzer was used for sperm count, concentration and motility assessments. Sperm morphology was assessed by microscopic examination of a minimum of two-hundred sperm per animal at 300-500x magnification. Morphological endpoints were based primarily on head and tail abnormalities, according to a modification of the classification systems described by Linder [3] and Seed [4]. The mean percentage of normal sperm was calculated for each group.

IV. STATISTICAL ANALYSES

Continuous data, including body weights, weight gain, food consumption, water consumption, clinical pathology parameters, organ weights, estrous cycle lengths, and semen parameters (sperm count, concentration, motility, and percent with normal morphology), were analyzed by One-Way Analysis of Variance (ANOVA) [5]. When significance was observed with ANOVA, control to treatment group comparisons were performed using the Tukey-Kramer method [6]. Chi-Square test [7] was used to analyze the incidence of females in each group exhibiting estrous cyclicity. All tests were

two-tailed with a minimum significance level of 5% ($p<0.05$). Statistical methods for hormone and micronuclei evaluations are indicated in the Sponsor's reports (see Appendices I and P, respectively).

V. MAINTENANCE OF RAW DATA, RECORDS AND SPECIMENS

The bulk test article was returned to the Sponsor following completion of the in-life phase of the study. All original paper data, magnetically encoded records, wet tissues, blocks, slides and the final report will be transferred to the SLI archives and stored for a minimum of ten years. The Sponsor will be consulted prior to final disposition of these materials. Raw data and records regarding dosing solution stability and concentration analyses, thyroid hormone analyses, and bone marrow micronuclei evaluations (including prepared slides) will be archived by the Sponsor.

VI. RESULTS

A. Analytical Chemistry

Appendix B (Analytical Chemistry Report)

Detailed information concerning methods and results of analytical analyses may be found in the Analytical Chemistry Report, which was provided by the Sponsor. Briefly, a sensitive and selective ion chromatography (IC) method for analysis of perchlorate (ClO_4^-) and nitrate (NO_3^-), a possible interference ion, was developed by the Sponsor to support this study. The methods development and validation data demonstrated that the IC method was capable of detecting both perchlorate and nitrate at 0.005 µg/mL (5 ppb) in reagent water with excellent accuracy and precision. Analysis of stability solutions showed that under controlled room temperature, relative humidity and light intensity, AP was stable in reagent water at concentrations of 0.05 and 200 µg/mL for 109 days. Analyses of 50 mg/mL stock solutions and of AP dosing solutions prepared for study weeks 1, 3, 5, 8 and 12 indicated that all were within the acceptable range of ± 10%.

B. Survival and Clinical Observations

Table 1 (Summary Data)
Appendix D (Individual Data)

No clinical signs of toxicity were observed in any of the study groups during the treatment or recovery periods. One female in the 0.05 mg/kg/day group (#11948) was found dead during the recovery period (study day 97). This female exhibited no adverse clinical signs prior to death. All other males and females survived to scheduled euthanasia after 14, 90 or 120 days.

C. Body Weights and Weight Gain

Tables 2 and 3 (Summary Data)
Appendices E and F (Individual Data)

There were no statistically significant differences in mean body weights among the groups. Mean body weight gain was slightly but significantly decreased in males at the 10.0 mg/kg/day level during days -1 to 7. No other significant differences in mean body weight gain were observed.

D. Food Consumption

Table 4 (Summary Data)
Appendix G (Individual Data)

During the first three weeks of dosing, slight but statistically significant reductions in food consumption were observed in all male and female AP-treated groups (except 0.2 mg/kg/day males) on one or more occasions. However, as these reductions did not follow any apparent dose-response pattern and were relatively minor and transient, they were not considered to be of particular toxicological significance. No other statistically significant differences in food consumption were noted during the study.

E. Water Consumption

Table 5 (Summary Data)
Appendix H (Individual Data)

Mean water consumption was significantly decreased in females of the 0.2 mg/kg/day group during days 8-14, and in females of the 0.01, 0.05, 0.2, 1.0 and 10.0 mg/kg/day groups during days 15-21. These differences were not considered

to be toxicologically meaningful since they did not follow any dose-response pattern. Moreover, the significant decreases observed in the AP-treated females on days 15-21 were associated with a higher than expected control group water consumption of 41 grams/animal/day. This value (41 grams/animal/day) was markedly higher than all other female control water consumption values, which ranged from 30-34 grams/animal/day over the course of the study.

F. Test Article Intake

Table 6 (Summary Data)

Average test article intake (mg/kg/day) for males and females in each AP-treated group was as follows:

Group:	2		3		4		5		6	
Target Level:	0.01 mg/kg/day		0.05 mg/kg/day		0.2 mg/kg/day		1.0 mg/kg/day		10.0 mg/kg/day	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
Average	0.01	0.01	0.05	0.05	0.21	0.21	1.02	1.03	10.11	10.20
Range	0.009 to 0.012	0.008 to 0.012	0.043 to 0.059	0.041 to 0.064	0.183 to 0.244	0.168 to 0.247	0.931 to 1.250	0.946 to 1.192	7.573 to 12.245	9.616 to 12.357

G. Clinical Pathology

1. Thyroid Hormone Levels

Appendix I [Serum Hormone (TSH, T_3 and T_4) Report]

Significant differences in TSH, T_3 and T_4 were observed in one or both sexes following 14 and 90 days of treatment, and following the 30-day nontreatment recovery period. In general, these differences tended to follow a dose-related pattern and consisted of significantly increased mean TSH levels and significantly decreased mean T_3 and T_4 levels compared to controls.

After 14 days of AP treatment, mean TSH levels were significantly increased in males at levels of 0.2 mg/kg/day and higher, and in females at levels of 0.05 mg/kg/day and higher. The increases in TSH ranged from 17.1% for 0.05 mg/kg/day females to 62.2% for 10.0 mg/kg/day males. Mean T_4 levels were significantly decreased in both males and females at the 10.0 mg/kg/day level with mean values 23.2% and 18.2% lower than controls, respectively. Mean T_3 levels were significantly decreased in males at levels of 0.01 mg/kg/day and higher. The

decreases in T_3 levels ranged from 21% for 0.01 mg/kg/day males to 38.5% for 10.0 mg/kg/day males. No significant differences in T_3 levels were observed in the female treatment groups.

After 90 days of AP treatment, mean TSH levels were significantly increased in males at levels of 0.2 mg/kg/day and higher, and in females at 10.0 mg/kg/day only. The increases in TSH ranged from 17.3% for 0.2 mg/kg/day males to 21.2% for 10.0 mg/kg/day females. Mean T_3 and T_4 levels were significantly decreased in both sexes at levels of 0.01 mg/kg/day and higher. The decreases in T_4 ranged from 13.7% for 0.01 mg/kg/day males to 43.1% for 10.0 mg/kg/day males. The decreases in T_3 ranged from 12.2% for 0.01 mg/kg/day males to 35% for 10.0 mg/kg/day males.

Following the 30-day nontreatment recovery period, mean TSH levels were significantly increased in all three female recovery groups (0.05, 1.0 and 10.0 mg/kg/day), while no significant differences in TSH levels were observed in males. The increases in TSH levels of females ranged from 15.5% for 0.05 mg/kg/day females to 22.1% for 10.0 mg/kg/day females. Mean T_4 levels were significantly decreased in all three male recovery groups (0.05, 1.0 and 10.0 mg/kg/day), while no significant differences in T_4 levels were observed in females. The decreases in T_4 levels of males ranged from 22.5% for the 0.05 and 1.0 mg/kg/day males to 38.8% for the 10.0 mg/kg/day males. Significant differences in T_3 were limited to a lower mean T_3 value in 10.0 mg/kg/day females (12.1% lower than controls). No significant differences in T_3 levels were observed in the male treatment groups.

2. Hematology

Table 7 (Summary Data)
Appendix J (Individual Data)
Appendix L (SLI Clinical Pathology Historical Control Data)

Statistically significant differences in hematology data were limited to decreased monocytes in the 0.05 and 0.2 mg/kg/day females after 90 days of treatment. These decreases were not considered toxicologically meaningful since similar differences were not observed in females of the 1.0 and 10.0 mg/kg/day groups.

3. Clinical Chemistry

Table 8 (Summary Data)
Appendix K (Individual Data)
Appendix L (SLI Clinical Pathology Historical Control Data)

Statistically significant differences in clinical chemistry data included increased potassium, phosphorus, and sorbitol dehydrogenase in the 0.01 mg/kg/day males after 90 days of treatment. These differences were not considered toxicologically meaningful since they were not observed at higher AP-dose levels. The only other statistical difference in clinical chemistry data consisted of an incidental increase in the cholesterol level of 1.0 mg/kg/day males at the end of the recovery period.

H. Ophthalmology

Appendix M (Ophthalmology Reports)

Ophthalmological examinations did not reveal any test article-related ocular effects in the AP-treated rats.

I. Estrous Cyclicity

Table 9 (Summary Data)
Appendix N (Individual Data)

There were no statistically significant differences in estrous cyclicity data among the groups at the end of 90 days of treatment or at the end of the 30-day recovery period. The number of females cycling in each group and the mean cycle length were comparable among the groups at the 90 and 120 day intervals.

J. Gross Necropsy Observations

Table 10 (Summary Data)

Gross necropsy findings for one female (#11948) at the 0.05 mg/kg/day level that was found dead during the recovery period (day 97) included reddened lungs and reddened thyroid gland. Remarkable gross necropsy findings for surviving animals were limited to reddened thyroid gland in three males at the 10.0 mg/kg/day level after 90 days of treatment. No other remarkable gross necropsy findings were observed after 14, 90 or 120 days.

K. Organ Weights

Tables 11, 12 and 13 (Summary Data)
Appendix O (Individual Data)

Absolute and relative thyroid/parathyroid weights (i.e., relative to both body and brain weights) were statistically increased in males at the 10.0 mg/kg/day level after 14 and 90 days of treatment, and in females at the 10.0 mg/kg/day level after 90 days of treatment. Thyroid/parathyroid weights of males and females at the 10.0 mg/kg/day level were comparable to controls at the end of the 30-day recovery period.

Absolute testes weight was statistically decreased in males at the 0.01 and 10.0 mg/kg/day levels after 90 days of treatment, and pituitary weight relative to final body weight was statistically increased in males at the 10.0 mg/kg/day level at the end of the recovery period. These organ weight differences were not considered toxicologically significant since they did not follow any dose-response pattern and were not correlated with any abnormal microscopic pathology. Moreover, the increased relative pituitary weight of the 10.0 mg/kg/day males occurred at the end of the recovery period, but not after 14 or 90 days of treatment.

L. Bone Marrow Micronuclei Evaluations

Appendix P (Bone Marrow Micronuclei Report)

Detailed information concerning methods and results of bone marrow micronuclei evaluations may be found in the Sponsor's report, which is provided in Appendix P. No test article-related changes in micronuclei formation were observed in the bone marrow of males or females in the 10.0 mg/kg/day group after 90 days of treatment. The test article was not mutagenic to the bone marrow cells of animals in the 10.0 mg/kg/day group after 90 days and did not cause any reduction of the polychromatic erythrocyte/normochromatic erythrocyte ratio, indicating that there was no toxicity to the bone marrow cells of the 10.0 mg/kg/day animals after 90 days. As expected, the positive control material, cyclophosphamide, induced a marked increase in the percentage of micronucleated polychromatic erythrocytes with no overt evidence of bone marrow toxicity.

M. Histopathology

Appendix Q (Histopathology Report)

Microscopic examinations revealed test article-related follicular cell hyperplasia in the thyroid glands of male and female rats of the 10.0 mg/kg/day group euthanized after

14 and 90 days of treatment. The hyperplasia was minimal in most cases with only an occasional thyroid with a severity grade of mild. The hyperplasia was characterized by an increased number of small follicles in the central portion of the thyroid compared to thyroids of control rats. The change present in many of the high-dose thyroids was difficult to differentiate from increased activity or an "active" thyroid. Because of the increased number of small follicles in the central portion of the thyroid, the term follicular cell hyperplasia was utilized. In contrast to the thyroid changes noted above, there were no test article-related changes in the lower dose groups or in recovery animals euthanized after a nontreatment period of 30 days. Similarly, no test article-related microscopic changes were observed in the other organs and tissues from 10 mg/kg/day males and females euthanized after 14 and 90 days of treatment. The cause of death of one 0.05 mg/kg/day female found dead during the recovery period (study day 97) could not be determined from the pathological examination.

N. Sperm Analysis

Table 14 (Summary Data)
Appendix R (Individual Data)

No statistically significant or toxicologically meaningful differences in sperm parameters were noted for male rats euthanized after 90 and 120 days. Sperm count, concentration, motility and morphology were comparable among the groups after 90 days of treatment and after the 30-day nontreatment recovery period.

VII. DISCUSSION AND CONCLUSION

This study was performed to evaluate the potential toxicity of AP when administered to rats in the drinking water over the course of 90 days at target exposure levels of 0.01, 0.05, 0.2, 1.0 and 10.0 mg/kg/day. The study design consisted of an interim euthanasia interval following 14 days of treatment, a second euthanasia interval following 90 days of treatment, and a 30-day nontreatment recovery period to evaluate the reversibility of any treatment-induced effects. The potential effects of AP on male sperm parameters, female estrous cycling, bone marrow micronucleus formation, and serum thyroid hormone levels, were also investigated.

All animals survived to scheduled euthanasia following 14, 90 or 120 days, with the exception of one 0.05 mg/kg/day female rat that was found dead during the recovery period on study day 97. Although the exact cause of this death could not be determined, it was considered unrelated to treatment since no deaths occurred at the higher AP treatment levels.

No statistically significant and/or toxicologically meaningful differences were observed among the groups with respect to clinical observations, body weights, food consumption, water consumption, ophthalmology, hematology, routine clinical chemistry, estrous cycling, sperm parameters or bone marrow micronuclei formation. Mean body weight gain of 10.0 mg/kg/day males was slightly but significantly decreased during the first week of treatment; however, no significant differences in mean body weights were observed in males or females.

Absolute and relative thyroid weights were significantly increased in males at the 10.0 mg/kg/day level after 14 and 90 days of treatment, and in females at the 10.0 mg/kg/day level after 90 days of treatment. Thyroid weights of both males and females at the 10.0 mg/kg/day level were comparable to controls at the end of the 30-day recovery period.

Microscopic examinations revealed test article-related follicular cell hyperplasia in the thyroid glands of male and female rats of the 10.0 mg/kg/day group euthanized after 14 and 90 days of treatment. The hyperplasia was minimal in most cases with only an occasional thyroid with a severity grade of mild. The hyperplasia was characterized by an increased number of small follicles in the central portion of the thyroid compared to thyroids of control rats. No test article-related thyroid pathology was noted in the lower dose groups or in recovery animals euthanized after a nontreatment period of 30 days. Similarly, no test article-related microscopic changes were observed in the other organs and tissues from 10 mg/kg/day males and females euthanized after 14 and 90 days of treatment.

Significant differences in TSH, T_3 and T_4 were observed in one or both sexes following 14 and 90 days of treatment, and following the 30-day nontreatment recovery period. In general, these differences tended to follow a dose-related pattern and consisted of significantly increased TSH levels and significantly decreased T_3 and T_4 levels. Although thyroid hormone levels were significantly different from controls at AP dosage levels as low as 0.01 mg/kg/day, these changes were associated with increased thyroid weights and abnormal thyroid pathology only at the 10.0 mg/kg/day level. Based on these findings, thyroid hormone changes at doses of 1.0 mg/kg/day and lower were not considered to represent adverse effects per se. This conclusion is supported by the lack of any other meaningful toxicological effects at doses of 1.0 mg/kg/day and lower, and by the reversibility of AP-induced organ weight and histopathological effects in the thyroids of recovery rats which continued to demonstrate significant differences in TSH, T_3 and T_4.

In conclusion, oral administration of AP to rats via the drinking water produced a target organ effect in the thyroid which was characterized by increased thyroid weights and corresponding thyroid follicular cell hyperplasia after 14 and 90 days of treatment at the high-dose level of 10.0 mg/kg/day. These changes were reversible after a nontreatment

recovery period of 30 days. Statistically significant changes in thyroid hormone levels were observed at AP dosage levels as low as 0.01 mg/kg/day. However, no treatment-related organ weight changes or abnormal thyroid pathology were observed at dosage levels of 1.0 mg/kg/day and lower. Based on these results, 1.0 mg/kg/day is considered a No-Observed-Adverse-Effect Level (NOAEL) for oral administration of AP to rats via the drinking water for 90 days.

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Study Director

Date 5/18/98

VIII. REPORT REVIEW

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Assistant Manager of Acute Toxicology

Date 5/18/98

Rusty E. Rush, M.S., LAT, DABT
Associate Director of Toxicology

Date 5-18-98

Malcolm Blair, Ph.D.
Vice President and Managing Director

Date 5/18/98

Note: The opinions expressed in this report are those of the author and do not necessarily reflect the opinions of the Sponsor, ManTech Environmental Technology, under contract with the U.S. Airforce.

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TABLE 1

SLI STUDY NO.: 3455.1 — A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS — PAGE 1

CLIENT: MANTECH ENVIRONMENTAL — WITH AMMONIUM PERCHLORATE

SUMMARY OF SURVIVAL AND CLINICAL OBSERVATIONS (OCCURRENCE/ANIMALS AFFECTED)

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

TABLE RANGE:	DAY 1 TO DAY 95					
GROUP:	1	2	3	4	5	6
LEVEL (MG/KG/DAY):	0	0.01	0.05	0.2	1.0	10.0
NORMAL						
-NO CLINICAL SIGNS	297/30	164/20	280/30	145/20	254/30	271/30
DEAD						
-SCHEDULED EUTHANASIA	20/20	20/20	20/20	20/20	20/20	20/20
EXCRETA						
-FEW FECES	3/ 2	4/ 2	3/ 2	4/ 2	5/ 4	6/ 5
-SOFT STOOLS	0/ 0	0/ 0	0/ 0	0/ 0	1/ 1	0/ 0
BODY						
-OPEN LESION(S)	7/ 3	0/ 0	1/ 1	2/ 2	3/ 1	4/ 2
-SCAB(S)	9/ 5	2/ 2	4/ 2	7/ 4	19/ 4	10/ 4
-DEHYDRATION	0/ 0	0/ 0	1/ 1	0/ 0	1/ 1	0/ 0
-HAIRLOSS	5/ 1	0/ 0	4/ 2	6/ 3	20/ 6	10/ 4
EYES						
-DARK MATERIAL AROUND EYE(S)	0/ 0	5/ 2	19/ 2	11/ 1	24/ 1	2/ 1
NOSE/MOUTH						
-DARK MATERIAL AROUND NOSE	6/ 2	2/ 1	15/ 8	9/ 4	20/ 7	9/ 5
-MALALIGNMENT	0/ 0	14/ 2	10/ 2	9/ 1	11/ 1	2/ 1
-INCISOR(S) BROKEN	1/ 1	0/ 0	2/ 2	2/ 2	0/ 0	0/ 0

NOTE: DATA REFLECT THE TOTAL OCCURRENCE OF EACH CLINICAL FINDING OVER THE NUMBER OF ANIMALS EXHIBITING THE FINDING.

TABLE 1
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
SUMMARY OF SURVIVAL AND CLINICAL OBSERVATIONS (OCCURRENCE/ANIMALS AFFECTED)

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

TABLE RANGE:	DAY 1 TO DAY 95					
GROUP:	1	2	3	4	5	6
LEVEL (MG/KG/DAY):	0	0.01	0.05	0.2	1.0	10.0
NOSE/MOUTH						
-INCISOR(S) TRIMMED	7/ 5	10/ 6	27/15	19/ 6	27/12	28/13
-INCISOR MISSING	0/ 0	3/ 1	1/ 1	5/ 1	0/ 0	0/ 0
QUALT FOOD/WATER						
-DECREASED WATER CONSUMPTION	0/ 0	0/ 0	0/ 0	0/ 0	1/ 1	0/ 0

NOTE: DATA REFLECT THE TOTAL OCCURRENCE OF EACH CLINICAL FINDING OVER THE NUMBER OF ANIMALS EXHIBITING THE FINDING.

TABLE 1
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
SUMMARY OF SURVIVAL AND CLINICAL OBSERVATIONS (OCCURRENCE/ANIMALS AFFECTED)
(RECOVERY PHASE)

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

TABLE RANGE:	DAY 96 TO DAY 123			
GROUP:	1	3	5	6
LEVEL (MG/KG/DAY):	0	0.05	1.0	10.0
NORMAL				
-NO CLINICAL SIGNS	43/10	30/ 9	36/ 9	32/ 8
DEAD				
-SCHEDULED EUTHANASIA	10/10	10/10	10/10	10/10
BODY				
-HAIRLOSS	0/ 0	0/ 0	1/ 1	5/ 1
EYES				
-DARK MATERIAL AROUND EYE(S)	0/ 0	32/ 2	7/ 2	11/ 1
NOSE/MOUTH				
-DARK MATERIAL AROUND NOSE	2/ 2	9/ 5	3/ 3	5/ 3
-MALALIGNMENT	0/ 0	6/ 1	5/ 1	5/ 1
-INCISOR(S) BROKEN	2/ 1	0/ 0	1/ 1	0/ 0
-INCISOR(S) TRIMMED	3/ 3	9/ 6	9/ 5	8/ 5
-INCISOR MISSING	0/ 0	0/ 0	0/ 0	1/ 1

NOTE: DATA REFLECT THE TOTAL OCCURRENCE OF EACH CLINICAL FINDING OVER THE NUMBER OF ANIMALS EXHIBITING THE FINDING.

TABLE 1

SLI STUDY NO.: 3455.1 — A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS — PAGE 4

CLIENT: MANTECH ENVIRONMENTAL — WITH AMMONIUM PERCHLORATE

SUMMARY OF SURVIVAL AND CLINICAL OBSERVATIONS (OCCURRENCE/ANIMALS AFFECTED)

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

TABLE RANGE:	DAY 1 TO DAY 95					
GROUP:	1	2	3	4	5	6
LEVEL (MG/KG/DAY):	0	0.01	0.05	0.2	1.0	10.0
NORMAL						
-NO CLINICAL SIGNS	307/30	160/20	282/30	173/20	292/30	302/30
DEAD						
-SCHEDULED EUTHANASIA	20/20	20/20	20/20	20/20	20/20	20/20
EXCRETA						
-FEW FECES	11/ 8	6/ 4	15/10	12/ 6	9/ 4	20/ 6
BODY						
-OPEN LESION(S)	0/ 0	1/ 1	0/ 0	0/ 0	0/ 0	0/ 0
-SCAB(S)	0/ 0	2/ 1	0/ 0	0/ 0	1/ 1	2/ 2
-DEHYDRATION	1/ 1	0/ 0	0/ 0	0/ 0	2/ 2	2/ 1
-HAIRLOSS	2/ 1	0/ 0	20/ 3	1/ 1	10/ 3	7/ 2
-URINE STAIN	0/ 0	0/ 0	0/ 0	1/ 1	0/ 0	0/ 0
EYES						
-DARK MATERIAL AROUND EYE(S)	2/ 1	9/ 2	0/ 0	6/ 2	15/ 1	2/ 2
NOSE/MOUTH						
-DARK MATERIAL AROUND NOSE	8/ 6	5/ 1	4/ 2	4/ 3	9/ 7	1/ 1
-MALALIGNMENT	8/ 2	7/ 2	2/ 1	4/ 2	4/ 1	0/ 0
-INCISOR(S) BROKEN	0/ 0	1/ 1	0/ 0	3/ 3	0/ 0	2/ 1
-INCISOR(S) TRIMMED	6/ 4	9/ 4	12/ 9	4/ 2	15/ 9	9/ 7

NOTE: DATA REFLECT THE TOTAL OCCURRENCE OF EACH CLINICAL FINDING OVER THE NUMBER OF ANIMALS EXHIBITING THE FINDING.

TABLE 1
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
SUMMARY OF SURVIVAL AND CLINICAL OBSERVATIONS (OCCURRENCE/ANIMALS AFFECTED)

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

TABLE RANGE:	DAY 1 TO DAY 95					
GROUP:	1	2	3	4	5	6
LEVEL (MG/KG/DAY):	0	0.01	0.05	0.2	1.0	10.0
NOSE/MOUTH						
-DARK MATERIAL AROUND MOUTH	0/ 0	0/ 0	0/ 0	0/ 0	1/ 1	0/ 0
QUALT FOOD/WATER						
-DECREASED WATER CONSUMPTION	0/ 0	0/ 0	0/ 0	1/ 1	1/ 1	0/ 0

NOTE: DATA REFLECT THE TOTAL OCCURRENCE OF EACH CLINICAL FINDING OVER THE NUMBER OF ANIMALS EXHIBITING THE FINDING.

TABLE 1

A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE

SUMMARY OF SURVIVAL AND CLINICAL OBSERVATIONS (OCCURRENCE/ANIMALS AFFECTED)
(RECOVERY PHASE)

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

TABLE RANGE:	DAY 96 TO DAY 123			
GROUP:	1	3	5	6
LEVEL (MG/KG/DAY):	0	0.05	1.0	10.0
NORMAL				
-NO CLINICAL SIGNS	48/10	38/ 9	40/10	43/10
DEAD				
-SCHEDULED EUTHANASIA	10/10	9/ 9	10/10	10/10
-FOUND DEAD	0/ 0	1/ 1	0/ 0	0/ 0
BODY				
-OPEN LESION(S)	0/ 0	2/ 1	0/ 0	0/ 0
-HAIRLOSS	0/ 0	0/ 0	4/ 1	3/ 1
-URINE STAIN	0/ 0	1/ 1	0/ 0	0/ 0
EYES				
-DARK MATERIAL AROUND EYE(S)	0/ 0	17/ 1	2/ 2	5/ 1
NOSE/MOUTH				
-DARK MATERIAL AROUND NOSE	1/ 1	2/ 2	2/ 2	1/ 1
-MALALIGNMENT	0/ 0	4/ 1	4/ 1	1/ 1
-INCISOR(S) TRIMMED	1/ 1	5/ 2	2/ 2	0/ 0
-DARK MATERIAL AROUND MOUTH	0/ 0	0/ 0	1/ 1	0/ 0
-SALIVATION	0/ 0	0/ 0	1/ 1	0/ 0

NOTE: DATA REFLECT THE TOTAL OCCURRENCE OF EACH CLINICAL FINDING OVER THE NUMBER OF ANIMALS EXHIBITING THE FINDING.

SLI STUDY NO.: 3455.1
CLIENT: MANTECH ENVIRONMENTAL

TABLE 2
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
SUMMARY OF BODY WEIGHT DATA (GRAMS)

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

	GROUP:	1	2	3	4	5	6
	LEVEL (MG/KG/DAY):	0	0.01	0.05	0.2	1.0	10.0
DAY -1	MEAN	197	195	196	195	197	196
	S.D.	9.9	10.5	10.3	10.4	10.2	9.8
	N	30	20	30	20	30	30
DAY 7	MEAN	261	256	255	256	256	253
	S.D.	11.3	13.0	16.4	12.7	14.9	12.9
	N	30	20	30	20	30	30
DAY 14	MEAN	311	303	304	309	304	299
	S.D.	15.2	19.1	19.3	15.6	22.2	15.8
	N	30	20	30	20	30	30
DAY 21	MEAN	354	339	349	356	348	338
	S.D.	15.7	24.5	19.0	24.2	28.0	21.6
	N	20	10	20	10	20	20
DAY 28	MEAN	388	374	384	393	387	377
	S.D.	20.4	29.7	24.7	29.9	31.4	25.6
	N	20	10	20	10	20	20
DAY 35	MEAN	420	402	415	424	420	405
	S.D.	22.3	34.1	28.4	32.0	38.9	30.2
	N	20	10	20	10	20	20
DAY 42	MEAN	446	424	438	452	446	430
	S.D.	25.4	37.6	28.8	35.6	43.0	33.4
	N	20	10	20	10	20	20

NONE SIGNIFICANTLY DIFFERENT FROM CONTROL

TABLE 2
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
SUMMARY OF BODY WEIGHT DATA (GRAMS)

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

	GROUP:	1	2	3	4	5	6
	LEVEL (MG/KG/DAY):	0	0.01	0.05	0.2	1.0	10.0
DAY 49	MEAN	468	445	457	475	468	449
	S.D.	29.8	39.6	32.9	35.6	47.6	34.3
	N	20	10	20	10	20	20
DAY 56	MEAN	488	465	476	497	490	469
	S.D.	31.5	39.8	37.2	38.0	50.5	36.7
	N	20	10	20	10	20	20
DAY 63	MEAN	506	481	494	514	507	483
	S.D.	34.6	43.2	40.2	40.0	53.5	39.2
	N	20	10	20	10	20	20
DAY 70	MEAN	524	496	510	530	523	499
	S.D.	37.8	48.2	39.3	41.8	54.3	42.7
	N	20	10	20	10	20	20
DAY 77	MEAN	536	510	521	538	533	510
	S.D.	40.5	48.6	43.3	43.7	57.8	43.2
	N	20	10	20	10	20	20
DAY 84	MEAN	547	519	533	548	542	518
	S.D.	42.7	47.9	44.0	45.7	59.4	45.5
	N	20	10	20	10	20	20
DAY 91	MEAN	556	529	543	560	554	524
	S.D.	46.2	50.2	47.4	47.0	58.9	51.8
	N	20	10	20	10	20	20

NONE SIGNIFICANTLY DIFFERENT FROM CONTROL

TABLE 2
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
SUMMARY OF BODY WEIGHT DATA (GRAMS)
(RECOVERY PHASE)

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

	GROUP:	1	3	5	6
	LEVEL (MG/KG/DAY):	0	0.05	1.0	10.0
DAY 98	MEAN	552	554	560	533
	S.D.	53.0	52.9	66.4	52.2
	N	10	10	10	10
DAY 105	MEAN	562	559	564	538
	S.D.	55.5	53.8	65.1	54.0
	N	10	10	10	10
DAY 112	MEAN	568	567	574	545
	S.D.	57.4	56.2	67.6	54.5
	N	10	10	10	10
DAY 119	MEAN	574	569	579	550
	S.D.	60.7	60.9	65.5	56.6
	N	10	10	10	10

NONE SIGNIFICANTLY DIFFERENT FROM CONTROL
NOTE: MALES IN GROUPS 2 AND 4 WERE EUTHANIZED ON DAYS 15-18 OR DAYS 92-95.

TABLE 2
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
SUMMARY OF BODY WEIGHT DATA (GRAMS)

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

	GROUP:	1	2	3	4	5	6
	LEVEL (MG/KG/DAY):	0	0.01	0.05	0.2	1.0	10.0
DAY -1	MEAN	152	152	153	151	152	151
	S.D.	8.9	9.1	9.4	9.4	9.6	9.2
	N	30	20	30	20	30	30
DAY 7	MEAN	187	183	182	182	182	183
	S.D.	10.6	11.1	13.6	11.4	12.9	9.8
	N	30	20	30	20	30	30
DAY 14	MEAN	213	206	206	203	206	207
	S.D.	13.0	12.8	16.8	16.6	12.4	12.6
	N	30	20	30	20	30	30
DAY 21	MEAN	232	224	221	225	224	226
	S.D.	13.4	12.8	17.7	15.9	12.3	15.8
	N	20	10	20	10	20	20
DAY 28	MEAN	247	242	236	240	240	247
	S.D.	13.7	16.3	22.0	23.8	14.7	19.6
	N	20	10	20	10	20	20
DAY 35	MEAN	262	253	250	258	256	260
	S.D.	17.7	21.9	22.3	28.3	15.8	24.7
	N	20	10	20	10	20	20
DAY 42	MEAN	274	264	260	267	265	269
	S.D.	20.1	22.2	24.5	29.7	18.7	24.0
	N	20	10	20	10	20	20

NONE SIGNIFICANTLY DIFFERENT FROM CONTROL

TABLE 2
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
SUMMARY OF BODY WEIGHT DATA (GRAMS)

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

	GROUP:	1	2	3	4	5	6
	LEVEL (MG/KG/DAY):	0	0.01	0.05	0.2	1.0	10.0
DAY 49	MEAN	280	271	267	275	271	275
	S.D.	19.9	25.1	25.4	31.0	18.3	24.6
	N	20	10	20	10	20	20
DAY 56	MEAN	290	277	273	286	280	283
	S.D.	21.2	25.4	28.5	37.6	19.0	23.4
	N	20	10	20	10	20	20
DAY 63	MEAN	298	281	280	293	288	290
	S.D.	22.6	26.7	28.7	38.5	20.9	23.3
	N	20	10	20	10	20	20
DAY 70	MEAN	304	289	286	298	294	296
	S.D.	25.0	26.1	28.5	41.7	21.3	26.6
	N	20	10	20	10	20	20
DAY 77	MEAN	306	289	288	299	296	298
	S.D.	25.9	28.7	28.7	38.7	21.4	23.7
	N	20	10	20	10	20	20
DAY 84	MEAN	310	294	293	305	300	305
	S.D.	24.0	26.8	30.8	45.1	23.8	25.6
	N	20	10	20	10	20	20
DAY 91	MEAN	313	299	296	314	304	309
	S.D.	23.9	29.8	31.1	57.8	25.1	26.5
	N	20	10	20	10	20	20

NONE SIGNIFICANTLY DIFFERENT FROM CONTROL

TABLE 2
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
SUMMARY OF BODY WEIGHT DATA (GRAMS)
(RECOVERY PHASE)

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

	GROUP:	1	3	5	6
	LEVEL (MG/KG/DAY):	0	0.05	1.0	10.0
DAY 98	MEAN	311	301	308	313
	S.D.	26.3	40.0	28.6	25.8
	N	10	9	10	10
DAY 105	MEAN	315	300	312	316
	S.D.	24.2	42.3	29.2	25.7
	N	10	9	10	10
DAY 112	MEAN	324	310	324	323
	S.D.	20.8	46.9	31.3	27.9
	N	10	9	10	10
DAY 119	MEAN	323	309	322	321
	S.D.	24.3	45.3	31.0	25.1
	N	10	9	10	10

NONE SIGNIFICANTLY DIFFERENT FROM CONTROL
NOTE: FEMALES IN GROUPS 2 AND 4 WERE EUTHANIZED ON DAYS 15-18 OR DAYS 92-95.

TABLE 3
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
SUMMARY OF BODY WEIGHT GAIN DATA (GRAMS)

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

	GROUP:	1	2	3	4	5	6
	LEVEL (MG/KG/DAY):	0	0.01	0.05	0.2	1.0	10.0
DAY -1 TO 7	MEAN	64	61	60	62	59	57**
	S.D.	5.6	6.2	10.3	5.0	7.7	7.2
	N	30	20	30	20	30	30
DAY 7 TO 14	MEAN	50	47	49	53	49	46
	S.D.	6.2	13.7	6.9	4.9	9.6	5.6
	N	30	20	30	20	30	30
DAY 14 TO 21	MEAN	40	39	40	46	41	40
	S.D.	5.3	7.9	7.2	7.4	22.0	8.7
	N	20	10	20	10	20	20
DAY 21 TO 28	MEAN	34	35	35	37	39	39
	S.D.	11.1	6.8	8.7	11.0	21.3	8.7
	N	20	10	20	10	20	20
DAY 28 TO 35	MEAN	32	29	30	31	33	28
	S.D.	7.1	5.3	7.2	4.2	9.8	6.4
	N	20	10	20	10	20	20
DAY 35 TO 42	MEAN	26	22	23	28	26	25
	S.D.	6.4	5.9	9.2	7.0	7.1	5.0
	N	20	10	20	10	20	20
DAY 42 TO 49	MEAN	22	21	20	24	22	19
	S.D.	6.7	4.7	5.2	4.4	6.7	4.9
	N	20	10	20	10	20	20

SIGNIFICANTLY DIFFERENT FROM CONTROL: ** = P<0.01

TABLE 3
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
SUMMARY OF BODY WEIGHT GAIN DATA (GRAMS)

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

	GROUP:	1	2	3	4	5	6
	LEVEL (MG/KG/DAY):	0	0.01	0.05	0.2	1.0	10.0
DAY 49 TO 56	MEAN	21	20	18	21	22	20
	S.D.	5.7	2.4	5.9	5.5	5.0	6.8
	N	20	10	20	10	20	20
DAY 56 TO 63	MEAN	18	16	18	17	17	15
	S.D.	6.0	4.2	5.9	3.8	6.7	4.4
	N	20	10	20	10	20	20
DAY 63 TO 70	MEAN	18	15	17	16	16	16
	S.D.	6.7	9.2	6.7	4.3	5.1	5.8
	N	20	10	20	10	20	20
DAY 70 TO 77	MEAN	12	14	10	8	10	11
	S.D.	5.1	4.4	6.3	9.5	7.2	4.4
	N	20	10	20	10	20	20
DAY 77 TO 84	MEAN	11	10	12	10	9	8
	S.D.	6.9	2.0	4.0	5.9	7.8	5.3
	N	20	10	20	10	20	20
DAY 84 TO 91	MEAN	8	10	10	12	12	6
	S.D.	9.9	5.6	7.3	5.6	7.7	18.2
	N	20	10	20	10	20	20

NONE SIGNIFICANTLY DIFFERENT FROM CONTROL

TABLE 3
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
SUMMARY OF BODY WEIGHT GAIN DATA (GRAMS)
(RECOVERY PHASE)

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

GROUP:		1	3	5	6
LEVEL (MG/KG/DAY):		0	0.05	1.0	10.0
DAY 91 TO 98	MEAN	7	8	5	7
	S.D.	7.1	4.3	7.6	6.8
	N	10	10	10	10
DAY 98 TO 105	MEAN	10	5	4	5
	S.D.	5.9	5.1	6.5	6.3
	N	10	10	10	10
DAY 105 TO 112	MEAN	6	8	10	6
	S.D.	4.0	7.0	5.5	3.9
	N	10	10	10	10
DAY 112 TO 119	MEAN	6	2	5	5
	S.D.	5.4	7.1	5.5	4.2
	N	10	10	10	10

NONE SIGNIFICANTLY DIFFERENT FROM CONTROL
NOTE: MALES IN GROUPS 2 AND 4 WERE EUTHANIZED ON DAYS 15-18 OR DAYS 92-95.

TABLE 3
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
SUMMARY OF BODY WEIGHT GAIN DATA (GRAMS)

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

	GROUP:	1	2	3	4	5	6
	LEVEL (MG/KG/DAY):	0	0.01	0.05	0.2	1.0	10.0
DAY -1 TO 7	MEAN	35	31	30	32	30	31
	S.D.	6.4	5.2	7.7	6.1	8.6	5.2
	N	30	20	30	20	30	30
DAY 7 TO 14	MEAN	26	24	24	20	24	24
	S.D.	5.1	4.7	5.0	12.7	6.2	5.1
	N	30	20	30	20	30	30
DAY 14 TO 21	MEAN	18	19	18	25	20	19
	S.D.	6.2	6.6	7.0	18.4	6.6	5.1
	N	20	10	20	10	20	20
DAY 21 TO 28	MEAN	15	18	15	15	16	21
	S.D.	6.5	9.1	8.1	13.4	6.3	6.2
	N	20	10	20	10	20	20
DAY 28 TO 35	MEAN	15	11	14	18	16	13
	S.D.	7.1	10.7	7.9	12.0	6.8	8.1
	N	20	10	20	10	20	20
DAY 35 TO 42	MEAN	12	11	10	9	9	9
	S.D.	7.7	7.4	7.1	7.2	6.7	5.9
	N	20	10	20	10	20	20
DAY 42 TO 49	MEAN	6	7	7	8	6	6
	S.D.	6.4	7.5	8.0	6.7	5.3	4.7
	N	20	10	20	10	20	20

NONE SIGNIFICANTLY DIFFERENT FROM CONTROL

TABLE 3
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
SUMMARY OF BODY WEIGHT GAIN DATA (GRAMS)

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

	GROUP:	1	2	3	4	5	6
	LEVEL (MG/KG/DAY):	0	0.01	0.05	0.2	1.0	10.0
DAY 49 TO 56	MEAN	10	6	6	11	9	8
	S.D.	6.2	19.2	6.9	8.8	5.3	3.8
	N	20	10	20	10	20	20
DAY 56 TO 63	MEAN	7	4	7	7	9	6
	S.D.	3.8	15.5	3.6	3.7	5.5	5.5
	N	20	10	20	10	20	20
DAY 63 TO 70	MEAN	6	8	7	5	6	6
	S.D.	6.2	8.3	6.5	5.2	5.5	4.9
	N	20	10	20	10	20	20
DAY 70 TO 77	MEAN	2	0	2	1	2	3
	S.D.	8.1	5.4	7.2	8.4	5.4	6.5
	N	20	10	20	10	20	20
DAY 77 TO 84	MEAN	4	5	5	5	5	7
	S.D.	5.5	5.7	6.6	9.8	10.8	5.6
	N	20	10	20	10	20	20
DAY 84 TO 91	MEAN	3	5	2	9	3	4
	S.D.	8.1	9.1	7.6	14.4	9.3	8.9
	N	20	10	20	10	20	20

NONE SIGNIFICANTLY DIFFERENT FROM CONTROL

TABLE 3
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
SUMMARY OF BODY WEIGHT GAIN DATA (GRAMS)
(RECOVERY PHASE)

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

GROUP:		1	3	5	6
LEVEL (MG/KG/DAY):		0	0.05	1.0	10.0
DAY 91 TO 98	MEAN	4	0	4	3
	S.D.	4.8	6.0	4.9	5.1
	N	10	9	10	10
DAY 98 TO 105	MEAN	4	-1	4	3
	S.D.	7.7	19.1	8.2	7.3
	N	10	9	10	10
DAY 105 TO 112	MEAN	9	10	12	8
	S.D.	8.8	11.3	11.3	6.4
	N	10	9	10	10
DAY 112 TO 119	MEAN	-1	0	-2	-2
	S.D.	8.6	10.1	8.3	8.7
	N	10	9	10	10

NONE SIGNIFICANTLY DIFFERENT FROM CONTROL
NOTE: FEMALES IN GROUPS 2 AND 4 WERE EUTHANIZED ON DAYS 15-18 OR DAYS 92-95.

SLI STUDY NO.: 3455.1
CLIENT: MANTECH ENVIRONMENTAL

TABLE 4
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
SUMMARY OF FOOD CONSUMPTION DATA (GRAMS/ANIMAL/DAY)

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

	GROUP:	1	2	3	4	5	6
	LEVEL (MG/KG/DAY):	0	0.01	0.05	0.2	1.0	10.0
DAY 1 TO 8	MEAN	26	25	25**	26	25*	25*
	S.D.	1.9	1.5	2.6	1.5	2.1	2.0
	N	30	20	30	20	30	30
DAY 8 TO 15	MEAN	28	26**	26**	28	27*	26**
	S.D.	1.7	3.2	2.2	1.7	2.4	2.2
	N	30	20	30	20	30	30
DAY 15 TO 22	MEAN	29	26	27	28	26	26
	S.D.	1.8	2.3	2.3	2.3	3.2	2.5
	N	20	10	20	10	20	20
DAY 22 TO 29	MEAN	27	27	27	28	28	27
	S.D.	2.0	1.8	2.7	2.1	3.0	2.9
	N	20	10	20	10	20	20
DAY 29 TO 36	MEAN	29	28	27	29	28	28
	S.D.	2.0	2.4	2.6	2.0	2.9	2.7
	N	20	10	20	10	19	19
DAY 36 TO 43	MEAN	29	27	28	29	28	28
	S.D.	2.0	2.5	2.5	2.0	2.5	2.6
	N	20	10	20	10	20	20
DAY 43 TO 50	MEAN	29	27	27	29	28	28
	S.D.	1.9	2.3	2.6	1.9	2.7	2.6
	N	20	10	20	10	20	20

SIGNIFICANTLY DIFFERENT FROM CONTROL: * = P<0.05; ** = P<0.01

TABLE 4
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
SUMMARY OF FOOD CONSUMPTION DATA (GRAMS/ANIMAL/DAY)

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

	GROUP:	1	2	3	4	5	6
	LEVEL (MG/KG/DAY):	0	0.01	0.05	0.2	1.0	10.0
DAY 50 TO 57	MEAN	29	28	27	29	28	28
	S.D.	1.6	2.3	2.8	1.9	2.4	2.2
	N	20	10	20	10	20	20
DAY 57 TO 64	MEAN	29	28	28	29	28	28
	S.D.	1.4	2.5	2.5	1.9	2.4	2.5
	N	20	10	20	10	20	20
DAY 64 TO 71	MEAN	28	27	27	29	28	28
	S.D.	1.8	2.9	2.4	1.8	2.8	2.4
	N	20	10	20	10	20	20
DAY 71 TO 78	MEAN	28	28	27	28	27	28
	S.D.	1.9	2.6	2.5	2.5	3.0	2.4
	N	20	10	20	10	20	20
DAY 78 TO 85	MEAN	27	26	26	28	27	27
	S.D.	2.6	2.2	2.4	2.5	2.3	2.3
	N	19	10	20	10	20	20
DAY 85 TO 91	MEAN	27	26	27	28	27	27
	S.D.	2.7	2.2	2.6	1.7	2.9	4.2
	N	20	10	20	10	20	20

NONE SIGNIFICANTLY DIFFERENT FROM CONTROL

TABLE 4
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
SUMMARY OF FOOD CONSUMPTION DATA (GRAMS/ANIMAL/DAY)
(RECOVERY PHASE)

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

	GROUP:	1	3	5	6
	LEVEL (MG/KG/DAY):	0	0.05	1.0	10.0
DAY 91 TO 98	MEAN	27	27	27	28
	S.D.	1.9	2.4	2.9	2.9
	N	10	10	10	10
DAY 98 TO 105	MEAN	28	27	27	28
	S.D.	2.6	2.3	3.0	2.8
	N	10	10	10	10
DAY 105 TO 112	MEAN	28	27	27	27
	S.D.	2.6	2.2	3.1	2.4
	N	10	10	10	10
DAY 112 TO 119	MEAN	28	26	27	27
	S.D.	3.0	2.5	2.5	2.4
	N	10	10	10	10

NONE SIGNIFICANTLY DIFFERENT FROM CONTROL
NOTE: MALES IN GROUPS 2 AND 4 WERE EUTHANIZED ON DAYS 15-18 OR DAYS 92-95.

(cc)

TABLE 4
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
SUMMARY OF FOOD CONSUMPTION DATA (GRAMS/ANIMAL/DAY)

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

	GROUP:	1	2	3	4	5	6
	LEVEL (MG/KG/DAY):	0	0.01	0.05	0.2	1.0	10.0
DAY 1 TO 8	MEAN	20	19	19*	19	18#	19*
	S.D.	1.7	2.1	1.8	2.1	2.2	1.3
	N	30	20	30	20	30	30
DAY 8 TO 15	MEAN	21	19*	19*	18#	19**	19**
	S.D.	1.9	2.1	1.9	3.2	1.7	1.4
	N	30	20	30	20	30	30
DAY 15 TO 22	MEAN	21	20	19	20	20	19*
	S.D.	2.2	2.4	2.5	3.2	1.5	1.8
	N	18	10	19	10	20	20
DAY 22 TO 29	MEAN	22	20	21	20	20	20
	S.D.	2.4	2.7	3.0	3.3	2.9	2.3
	N	20	10	20	10	20	20
DAY 29 TO 36	MEAN	21	21	20	21	21	21
	S.D.	2.2	2.8	2.8	4.2	2.1	2.0
	N	19	10	20	10	20	20
DAY 36 TO 43	MEAN	22	20	20	20	20	20
	S.D.	2.6	2.6	3.1	2.6	1.8	2.0
	N	20	10	20	10	20	20
DAY 43 TO 50	MEAN	21	20	21	20	20	20
	S.D.	2.1	2.2	4.9	2.5	2.0	1.9
	N	20	10	20	10	20	20

SIGNIFICANTLY DIFFERENT FROM CONTROL: * = P<0.05; ** = P<0.01; # = P<0.001

TABLE 4
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
SUMMARY OF FOOD CONSUMPTION DATA (GRAMS/ANIMAL/DAY)

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

	GROUP:	1	2	3	4	5	6
	LEVEL (MG/KG/DAY):	0	0.01	0.05	0.2	1.0	10.0
DAY 50 TO 57	MEAN	21	19	20	20	19	20
	S.D.	2.1	2.3	1.8	3.3	1.8	1.3
	N	20	10	20	10	20	19
DAY 57 TO 64	MEAN	21	20	20	20	20	20
	S.D.	2.4	3.0	2.4	2.6	1.5	1.9
	N	20	10	20	10	20	20
DAY 64 TO 71	MEAN	20	19	19	19	19	19
	S.D.	1.9	2.2	2.0	2.2	1.7	1.5
	N	20	10	20	10	20	18
DAY 71 TO 78	MEAN	19	18	19	18	19	19
	S.D.	1.8	1.9	1.3	2.2	1.7	1.0
	N	20	10	20	10	20	20
DAY 78 TO 85	MEAN	19	18	18	19	18	20
	S.D.	1.5	1.9	1.6	2.3	1.8	3.5
	N	20	10	20	10	20	20
DAY 85 TO 91	MEAN	19	18	18	20	19	19
	S.D.	1.7	2.4	2.0	4.9	3.1	2.3
	N	20	10	20	10	20	20

NONE SIGNIFICANTLY DIFFERENT FROM CONTROL

TABLE 4
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
SUMMARY OF FOOD CONSUMPTION DATA (GRAMS/ANIMAL/DAY)
(RECOVERY PHASE)

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

	GROUP:	1	3	5	6
	LEVEL (MG/KG/DAY):	0	0.05	1.0	10.0
DAY 91 TO 98	MEAN	20	18	20	19
	S.D.	2.4	1.8	2.0	1.5
	N	10	9	9	10
DAY 98 TO 105	MEAN	20	18	20	19
	S.D.	2.9	3.3	1.7	1.4
	N	10	9	10	10
DAY 105 TO 112	MEAN	21	21	21	20
	S.D.	2.4	6.2	2.1	2.5
	N	10	9	10	10
DAY 112 TO 119	MEAN	20	19	19	19
	S.D.	2.2	2.3	2.0	1.1
	N	10	9	10	10

NONE SIGNIFICANTLY DIFFERENT FROM CONTROL
NOTE: FEMALES IN GROUPS 2 AND 4 WERE EUTHANIZED ON DAYS 15-18 OR DAYS 92-95.

SLI STUDY NO.: 3455.1
CLIENT: MANTECH ENVIRONMENTAL

TABLE 5
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
SUMMARY OF WATER CONSUMPTION DATA (GRAMS/ANIMAL/DAY)

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

	GROUP:	1	2	3	4	5	6
	LEVEL (MG/KG/DAY):	0	0.01	0.05	0.2	1.0	10.0
DAY 1 TO 7	MEAN	33	33	32	33	34	33
	S.D.	3.5	3.3	5.0	2.9	4.0	4.3
	N	30	20	30	20	30	30
DAY 8 TO 14	MEAN	38	35	35	37	36	35
	S.D.	4.7	6.9	3.8	3.5	4.0	4.4
	N	29	20	30	20	30	30
DAY 15 TO 21	MEAN	36	37	36	40	36	37
	S.D.	2.8	6.5	4.4	2.1	7.6	5.6
	N	20	10	19	9	20	18
DAY 22 TO 28	MEAN	36	37	36	38	39	36
	S.D.	4.0	5.8	4.4	4.0	6.4	5.6
	N	20	10	19	10	20	20
DAY 29 TO 35	MEAN	39	39	37	44	41	38
	S.D.	4.2	6.2	4.6	6.2	8.0	5.8
	N	19	10	20	10	20	20
DAY 36 TO 42	MEAN	39	38	37	40	41	39
	S.D.	5.0	5.8	4.6	4.4	7.5	7.6
	N	20	10	20	10	20	19
DAY 43 TO 49	MEAN	39	40	39	42	41	40
	S.D.	3.4	7.5	5.3	4.5	8.5	7.3
	N	20	10	20	10	20	20

NONE SIGNIFICANTLY DIFFERENT FROM CONTROL

TABLE 5
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
SUMMARY OF WATER CONSUMPTION DATA (GRAMS/ANIMAL/DAY)

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

	GROUP:	1	2	3	4	5	6
	LEVEL (MG/KG/DAY):	0	0.01	0.05	0.2	1.0	10.0
DAY 50 TO 56	MEAN	38	40	39	40	40	40
	S.D.	4.5	6.3	6.3	3.6	7.3	6.8
	N	20	10	20	10	20	19
DAY 57 TO 63	MEAN	39	39	39	42	42	39
	S.D.	4.2	5.7	5.7	5.1	8.7	6.6
	N	20	10	19	10	20	18
DAY 64 TO 70	MEAN	38	41	37	40	39	40
	S.D.	3.7	8.3	5.5	4.9	8.2	7.4
	N	20	10	20	10	20	20
DAY 71 TO 77	MEAN	39	41	38	39	40	40
	S.D.	5.7	7.5	6.2	5.3	8.2	7.7
	N	20	10	20	10	20	20
DAY 78 TO 84	MEAN	38	37	36	39	39	38
	S.D.	7.7	5.8	6.4	4.5	8.1	7.5
	N	19	10	20	10	20	20
DAY 85 TO 91	MEAN	38	37	37	40	38	39
	S.D.	7.1	6.0	6.0	4.7	7.1	8.1
	N	20	10	20	10	20	19

NONE SIGNIFICANTLY DIFFERENT FROM CONTROL

TABLE 5
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
SUMMARY OF WATER CONSUMPTION DATA (GRAMS/ANIMAL/DAY)

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

	GROUP:	1	2	3	4	5	6
	LEVEL (MG/KG/DAY):	0	0.01	0.05	0.2	1.0	10.0
DAY 1 TO 7	MEAN	30	27	29	28	27	28
	S.D.	4.1	4.8	4.1	5.8	6.0	4.1
	N	29	20	29	20	30	30
DAY 8 TO 14	MEAN	31	27	28	26*	28	29
	S.D.	7.5	4.6	4.7	7.6	5.1	5.1
	N	30	20	30	20	30	29
DAY 15 TO 21	MEAN	41	30*	29#	31*	30#	31**
	S.D.	12.5	6.1	5.1	9.2	6.5	6.6
	N	19	10	20	10	20	20
DAY 22 TO 28	MEAN	31	30	29	32	29	32
	S.D.	7.7	5.9	6.7	12.6	5.8	6.8
	N	20	10	20	10	20	20
DAY 29 TO 35	MEAN	32	31	32	35	33	34
	S.D.	6.8	6.7	7.7	12.8	8.9	7.3
	N	20	10	20	10	20	20
DAY 36 TO 42	MEAN	33	34	33	34	32	33
	S.D.	8.2	13.5	9.6	9.5	6.8	7.5
	N	20	10	20	10	20	20
DAY 43 TO 49	MEAN	32	35	34	35	31	34
	S.D.	7.3	9.7	8.4	10.5	6.5	7.7
	N	20	10	20	10	20	20

SIGNIFICANTLY DIFFERENT FROM CONTROL: * = P<0.05; ** = P<0.01; # = P<0.001

TABLE 5
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
SUMMARY OF WATER CONSUMPTION DATA (GRAMS/ANIMAL/DAY)

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

	GROUP:	1	2	3	4	5	6
	LEVEL (MG/KG/DAY):	0	0.01	0.05	0.2	1.0	10.0
DAY 50 TO 56	MEAN	33	32	34	35	32	34
	S.D.	8.2	6.3	10.3	12.6	5.3	6.4
	N	20	10	20	10	20	20
DAY 57 TO 63	MEAN	34	31	35	39	33	34
	S.D.	9.2	7.7	10.8	14.2	7.3	8.0
	N	20	10	20	9	19	20
DAY 64 TO 70	MEAN	31	32	34	36	32	33
	S.D.	7.5	10.0	11.7	14.2	7.5	7.2
	N	19	10	19	9	20	20
DAY 71 TO 77	MEAN	31	31	33	30	31	33
	S.D.	7.4	9.6	9.1	7.7	8.3	7.7
	N	20	10	19	9	20	20
DAY 78 TO 84	MEAN	32	27	33	35	32	32
	S.D.	10.4	5.1	9.7	12.6	8.0	6.9
	N	20	9	20	9	20	20
DAY 85 TO 91	MEAN	32	31	33	37	33	33
	S.D.	8.2	9.9	6.8	16.7	10.2	7.6
	N	19	10	19	9	20	20

NONE SIGNIFICANTLY DIFFERENT FROM CONTROL

TABLE 6
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
SUMMARY OF TEST ARTICLE INTAKE (MG/KG/DAY)

---- MALE ----

TARGET LEVEL	GROUP: (MG/KG/DAY)	2 0.01	3 0.05	4 0.2	5 1.0	6 10.0
DAY 1 TO 7		0.012	0.059	0.244	1.250	12.245
DAY 8 TO 14		0.010	0.050	0.203	0.968	9.726
DAY 15 TO 21		0.011	0.052	0.219	1.006	10.688
DAY 22 TO 28		0.010	0.043	0.186	1.055	7.573
DAY 29 TO 35		0.011	0.051	0.231	1.048	10.613
DAY 36 TO 42		0.010	0.050	0.183	1.009	10.303
DAY 43 TO 49		0.010	0.053	0.211	1.005	10.339
DAY 50 TO 56		0.010	0.050	0.191	0.975	10.004
DAY 57 TO 63		0.010	0.050	0.211	1.056	9.816
DAY 64 TO 70		0.010	0.048	0.191	0.931	10.232
DAY 71 TO 77		0.010	0.052	0.196	1.032	10.054
DAY 78 TO 84		0.009	0.047	0.200	0.976	9.537
DAY 85 TO 91		0.010	0.052	0.205	0.973	10.285
MEAN		0.010	0.050	0.205	1.023	10.109
S.D.		0.001	0.004	0.018	0.076	1.012
N		13	13	13	13	13

NOTE: DAILY TEST ARTICLE CONSUMPTION WAS CALCULATED FROM GROUP MEAN BODY WEIGHTS AND LIQUID CONSUMPTION VALUES.

TABLE 6
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
SUMMARY OF TEST ARTICLE INTAKE (MG/KG/DAY)

		---- FEMALE ----				
	GROUP:	2	3	4	5	6
TARGET LEVEL	(MG/KG/DAY)	0.01	0.05	0.2	1.0	10.0
DAY 1 TO 7		0.008	0.064	0.247	1.192	12.357
DAY 8 TO 14		0.009	0.041	0.176	0.973	9.726
DAY 15 TO 21		0.011	0.053	0.239	1.087	9.794
DAY 22 TO 28		0.010	0.049	0.205	0.946	10.040
DAY 29 TO 35		0.010	0.055	0.215	1.134	10.730
DAY 36 TO 42		0.011	0.052	0.198	0.983	9.794
DAY 43 TO 49		0.010	0.052	0.207	0.976	10.375
DAY 50 TO 56		0.009	0.050	0.198	1.027	9.968
DAY 57 TO 63		0.010	0.051	0.225	1.035	10.016
DAY 64 TO 70		0.010	0.049	0.185	0.973	9.742
DAY 71 TO 77		0.010	0.049	0.168	0.975	10.067
DAY 78 TO 84		0.009	0.050	0.232	1.029	9.616
DAY 85 TO 91		0.012	0.050	0.210	1.032	10.384
MEAN		0.010	0.051	0.208	1.028	10.202
S.D.		0.001	0.005	0.024	0.072	0.720
N		13	13	13	13	13

NOTE: DAILY TEST ARTICLE CONSUMPTION WAS CALCULATED FROM GROUP MEAN BODY WEIGHTS AND LIQUID CONSUMPTION VALUES.

SLI STUDY NO.: 3455.1
CLIENT: MANTECH ENVIRONMENTAL

TABLE 7
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
SUMMARY OF HEMATOLOGY DATA

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

GROUP:		1	2	3	4	5	6
LEVEL (MG/KG/DAY):		0	0.01	0.05	0.2	1.0	10.0
ERYTHROCYTES 10*6/CMM							
DAYS 15-18	MEAN	6.91	7.29	7.07	6.95	6.74	7.00
	S.D.	0.369	0.366	0.447	0.317	0.617	0.346
	N	9	9	9	10	9	7
DAYS 92-95	MEAN	8.55	9.04	8.69	8.67	8.60	8.43
	S.D.	0.381	0.744	0.572	0.758	0.291	0.834
	N	10	10	10	9	10	10
DAYS 121-123 (RECOVERY PHASE)	MEAN	8.57		8.64		8.42	8.70
	S.D.	0.667		0.712		0.505	0.490
	N	10		10		10	10
HEMOGLOBIN G/DL							
DAYS 15-18	MEAN	15.0	15.2	15.0	15.1	14.7	15.1
	S.D.	0.30	0.42	0.53	0.59	0.48	0.31
	N	9	9	9	10	9	7
DAYS 92-95	MEAN	15.5	16.1	15.6	15.6	15.6	15.7
	S.D.	0.79	0.93	0.99	1.15	0.54	1.63
	N	10	10	10	9	10	10
DAYS 121-123 (RECOVERY PHASE)	MEAN	15.1		15.3		15.3	15.1
	S.D.	1.30		1.11		0.73	0.63
	N	10		10		10	10

NONE SIGNIFICANTLY DIFFERENT FROM CONTROL
NOTE: THE MEANS AND STANDARD DEVIATIONS WERE CALCULATED USING NONROUNDED VALUES.
MALES IN GROUPS 2 AND 4 WERE EUTHANIZED ON DAYS 15-18 OR DAYS 92-95.

TABLE 7
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
SUMMARY OF HEMATOLOGY DATA

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

GROUP:		1	2	3	4	5	6
LEVEL (MG/KG/DAY):		0	0.01	0.05	0.2	1.0	10.0
HEMATOCRIT %							
DAYS 15-18	MEAN	42.0	43.4	43.0	43.0	41.0	43.3
	S.D.	1.16	1.98	1.65	1.90	3.85	1.45
	N	9	9	9	10	9	7
DAYS 92-95	MEAN	45.4	47.3	45.7	45.6	45.6	45.6
	S.D.	2.40	3.36	3.20	4.04	2.07	5.27
	N	10	10	10	9	10	10
DAYS 121-123 (RECOVERY PHASE)	MEAN	43.8		44.8		44.2	44.8
	S.D.	4.15		3.62		2.51	1.81
	N	10		10		10	10
MEAN CORPUS VOL FL							
DAYS 15-18	MEAN	60.9	59.7	61.0	61.9	60.8	62.0
	S.D.	2.15	1.68	1.85	2.26	1.16	1.78
	N	9	9	9	10	9	7
DAYS 92-95	MEAN	53.1	52.4	52.6	52.6	53.0	54.0
	S.D.	1.43	2.18	1.49	1.31	1.74	1.48
	N	10	10	10	9	10	10
DAYS 121-123 (RECOVERY PHASE)	MEAN	51.1		51.9		52.5	51.6
	S.D.	2.05		1.59		2.12	1.92
	N	10		10		10	10

NONE SIGNIFICANTLY DIFFERENT FROM CONTROL
NOTE: THE MEANS AND STANDARD DEVIATIONS WERE CALCULATED USING NONROUNDED VALUES.
MALES IN GROUPS 2 AND 4 WERE EUTHANIZED ON DAYS 15-18 OR DAYS 92-95.

TABLE 7
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
SUMMARY OF HEMATOLOGY DATA

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

GROUP:		1	2	3	4	5	6
LEVEL (MG/KG/DAY):		0	0.01	0.05	0.2	1.0	10.0
MCH PG							
DAYS 15-18	MEAN	21.7	20.9	21.3	21.7	21.9	21.6
	S.D.	1.04	0.79	0.92	0.61	1.91	1.08
	N	9	9	9	10	9	7
DAYS 92-95	MEAN	18.1	17.8	18.0	18.0	18.2	18.7
	S.D.	0.46	0.76	0.58	0.70	0.64	0.48
	N	10	10	10	9	10	10
DAYS 121-123 (RECOVERY PHASE)	MEAN	17.7		17.7		18.2	17.4
	S.D.	0.61		0.61		0.75	1.23
	N	10		10		10	10
MCHC G/DL							
DAYS 15-18	MEAN	35.6	35.1	35.0	35.1	36.0	34.8
	S.D.	1.07	1.27	0.73	0.88	3.18	0.82
	N	9	9	9	10	9	7
DAYS 92-95	MEAN	34.1	34.0	34.1	34.3	34.3	34.5
	S.D.	0.93	0.58	0.77	1.11	0.90	0.77
	N	10	10	10	9	10	10
DAYS 121-123 (RECOVERY PHASE)	MEAN	34.5		34.1		34.6	33.8
	S.D.	0.58		0.84		0.66	1.79
	N	10		10		10	10

NONE SIGNIFICANTLY DIFFERENT FROM CONTROL
NOTE: THE MEANS AND STANDARD DEVIATIONS WERE CALCULATED USING NONROUNDED VALUES.
MALES IN GROUPS 2 AND 4 WERE EUTHANIZED ON DAYS 15-18 OR DAYS 92-95.

TABLE 7
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
SUMMARY OF HEMATOLOGY DATA

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

GROUP:		1	2	3	4	5	6
LEVEL (MG/KG/DAY):		0	0.01	0.05	0.2	1.0	10.0
PLATELETS 10*3/CMM							
DAYS 15-18	MEAN	864	802	867	812	834	880
	S.D.	95.9	154.5	94.3	150.7	169.4	172.1
	N	9	9	9	10	9	7
DAYS 92-95	MEAN	899	792	882	867	855	840
	S.D.	129.6	99.0	140.5	99.4	117.7	140.9
	N	10	10	10	9	10	10
DAYS 121-123 (RECOVERY PHASE)	MEAN	863		882		895	886
	S.D.	94.2		121.9		97.6	116.7
	N	10		10		10	10
NUCLEATED RBC'S % WBC							
DAYS 15-18	MEAN	0	0	0	0	0	0
	S.D.	0.0	0.0	0.0	0.0	0.0	0.0
	N	9	9	9	10	9	7
DAYS 92-95	MEAN	0	0	0	0	0	0
	S.D.	0.0	0.0	0.3	0.0	0.0	0.0
	N	10	10	10	9	10	10
DAYS 121-123 (RECOVERY PHASE)	MEAN	0		0		0	0
	S.D.	0.0		0.0		0.0	0.0
	N	10		10		10	10

NONE SIGNIFICANTLY DIFFERENT FROM CONTROL
NOTE: THE MEANS AND STANDARD DEVIATIONS WERE CALCULATED USING NONROUNDED VALUES.
MALES IN GROUPS 2 AND 4 WERE EUTHANIZED ON DAYS 15-18 OR DAYS 92-95.

TABLE 7
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
SUMMARY OF HEMATOLOGY DATA

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

GROUP:		1	2	3	4	5	6
LEVEL (MG/KG/DAY):		0	0.01	0.05	0.2	1.0	10.0
RED CELL MORPHOLOGY							
DAYS 15-18	NORMAL	9/ 9	9/ 9	9/ 9	10/ 10	9/ 9	7/ 7
DAYS 92-95	NORMAL	9/ 10	10/ 10	10/ 10	9/ 9	10/ 10	10/ 10
	SLIGHT ANISOCYTOSIS	1/ 10	0/ 10	0/ 10	0/ 9	0/ 10	0/ 10
DAYS 121-123 (RECOVERY PHASE)	NORMAL	10/ 10		10/ 10		10/ 10	10/ 10

NOTE: MALES IN GROUPS 2 AND 4 WERE EUTHANIZED ON DAYS 15-18 OR DAYS 92-95.

TABLE 7
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
SUMMARY OF HEMATOLOGY DATA

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

GROUP:		1	2	3	4	5	6
LEVEL (MG/KG/DAY):		0	0.01	0.05	0.2	1.0	10.0
LEUKOCYTES 10*3/CMM							
DAYS 15-18	MEAN	14.3	15.7	15.3	13.0	15.7	16.2
	S.D.	2.39	3.40	3.17	1.87	2.90	2.88
	N	9	9	9	10	9	7
DAYS 92-95	MEAN	12.5	12.9	13.5	12.8	12.8	12.9
	S.D.	3.33	2.37	3.76	3.56	3.83	3.75
	N	10	10	10	9	10	10
DAYS 121-123 (RECOVERY PHASE)	MEAN	13.5		12.8		12.2	13.8
	S.D.	3.21		3.27		1.70	2.23
	N	10		10		10	10
SEGD NEUTROPHILS 10*3/CMM							
DAYS 15-18	MEAN	1.2	1.2	1.4	1.2	1.5	1.5
	S.D.	0.55	0.58	0.47	0.56	0.73	0.43
	N	9	9	9	10	9	7
DAYS 92-95	MEAN	1.4	1.0	1.1	1.2	1.1	1.5
	S.D.	0.60	0.61	0.61	0.43	0.63	1.10
	N	10	10	10	9	10	10
DAYS 121-123 (RECOVERY PHASE)	MEAN	1.2		1.3		1.4	1.3
	S.D.	0.37		0.49		0.77	0.61
	N	10		10		10	10

NONE SIGNIFICANTLY DIFFERENT FROM CONTROL
NOTE: THE MEANS AND STANDARD DEVIATIONS WERE CALCULATED USING NONROUNDED VALUES.
MALES IN GROUPS 2 AND 4 WERE EUTHANIZED ON DAYS 15-18 OR DAYS 92-95.

TABLE 7
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
SUMMARY OF HEMATOLOGY DATA

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

GROUP:		1	2	3	4	5	6
LEVEL (MG/KG/DAY):		0	0.01	0.05	0.2	1.0	10.0
NON-SEGD NEUTRO. 10*3/CMM							
DAYS 15-18	MEAN	0.0	0.0	0.0	0.0	0.0	0.0
	S.D.	0.00	0.00	0.00	0.00	0.00	0.00
	N	9	9	9	10	9	7
DAYS 92-95	MEAN	0.0	0.0	0.0	0.0	0.0	0.0
	S.D.	0.00	0.00	0.00	0.00	0.00	0.00
	N	10	10	10	9	10	10
DAYS 121-123	MEAN	0.0		0.0		0.0	0.0
(RECOVERY PHASE)	S.D.	0.00		0.00		0.00	0.00
	N	10		10		10	10
LYMPHOCYTES 10*3/CMM							
DAYS 15-18	MEAN	12.8	14.3	13.7	11.6	13.9	14.5
	S.D.	2.41	3.15	2.96	2.22	2.82	2.66
	N	9	9	9	10	9	7
DAYS 92-95	MEAN	10.8	11.6	12.1	11.3	11.5	11.1
	S.D.	3.37	2.12	3.50	3.53	3.40	3.91
	N	10	10	10	9	10	10
DAYS 121-123	MEAN	12.1		11.1		10.6	12.2
(RECOVERY PHASE)	S.D.	2.88		3.23		1.68	2.50
	N	10		10		10	10

NONE SIGNIFICANTLY DIFFERENT FROM CONTROL
NOTE: THE MEANS AND STANDARD DEVIATIONS WERE CALCULATED USING NONROUNDED VALUES.
MALES IN GROUPS 2 AND 4 WERE EUTHANIZED ON DAYS 15-18 OR DAYS 92-95.

TABLE 7
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
SUMMARY OF HEMATOLOGY DATA

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

GROUP:		1	2	3	4	5	6
LEVEL (MG/KG/DAY):		0	0.01	0.05	0.2	1.0	10.0
MONOCYTES 10*3/CMM							
DAYS 15-18	MEAN	0.2	0.1	0.1	0.1	0.2	0.2
	S.D.	0.17	0.14	0.13	0.11	0.23	0.19
	N	9	9	9	10	9	7
DAYS 92-95	MEAN	0.2	0.2	0.2	0.2	0.1	0.1
	S.D.	0.18	0.14	0.11	0.20	0.23	0.15
	N	10	10	10	9	10	10
DAYS 121-123 (RECOVERY PHASE)	MEAN	0.1		0.2		0.1	0.2
	S.D.	0.13		0.15		0.08	0.15
	N	10		10		10	10
EOSINOPHILS 10*3/CMM							
DAYS 15-18	MEAN	0.1	0.0	0.1	0.1	0.1	0.0
	S.D.	0.09	0.05	0.09	0.09	0.17	0.05
	N	9	9	9	10	9	7
DAYS 92-95	MEAN	0.1	0.1	0.1	0.1	0.2	0.1
	S.D.	0.16	0.13	0.09	0.11	0.18	0.14
	N	10	10	10	9	10	10
DAYS 121-123 (RECOVERY PHASE)	MEAN	0.1		0.2		0.1	0.1
	S.D.	0.13		0.19		0.11	0.13
	N	10		10		10	10

NONE SIGNIFICANTLY DIFFERENT FROM CONTROL
NOTE: THE MEANS AND STANDARD DEVIATIONS WERE CALCULATED USING NONROUNDED VALUES.
MALES IN GROUPS 2 AND 4 WERE EUTHANIZED ON DAYS 15-18 OR DAYS 92-95.

TABLE 7
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
SUMMARY OF HEMATOLOGY DATA

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

GROUP:		1	2	3	4	5	6
LEVEL (MG/KG/DAY):		0	0.01	0.05	0.2	1.0	10.0
BASOPHILS 10*3/CMM							
DAYS 15-18	MEAN	0.0	0.0	0.0	0.0	0.0	0.0
	S.D.	0.00	0.00	0.00	0.05	0.00	0.00
	N	9	9	9	10	9	7
DAYS 92-95	MEAN	0.0	0.0	0.0	0.0	0.0	0.0
	S.D.	0.00	0.00	0.00	0.00	0.00	0.00
	N	10	10	10	9	10	10
DAYS 121-123	MEAN	0.0		0.0		0.0	0.0
(RECOVERY PHASE)	S.D.	0.00		0.00		0.00	0.00
	N	10		10		10	10

NONE SIGNIFICANTLY DIFFERENT FROM CONTROL
NOTE: THE MEANS AND STANDARD DEVIATIONS WERE CALCULATED USING NONROUNDED VALUES.
MALES IN GROUPS 2 AND 4 WERE EUTHANIZED ON DAYS 15-18 OR DAYS 92-95.

TABLE 7
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
SUMMARY OF HEMATOLOGY DATA

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

GROUP:		1	2	3	4	5	6
LEVEL (MG/KG/DAY):		0	0.01	0.05	0.2	1.0	10.0
ERYTHROCYTES 10*6/CMM							
DAYS 15-18	MEAN	7.04	7.18	7.12	6.92	7.18	7.08
	S.D.	0.267	0.294	0.353	0.346	0.591	0.215
	N	8	10	9	9	9	10
DAYS 92-95	MEAN	7.89	8.16	8.21	8.08	8.10	8.29
	S.D.	0.518	0.331	0.558	0.305	0.447	0.520
	N	9	10	9	10	10	10
DAYS 121-123	MEAN	8.21		8.46		8.07	8.27
(RECOVERY PHASE)	S.D.	0.540		0.702		0.665	0.400
	N	10		9		10	10
HEMOGLOBIN G/DL							
DAYS 15-18	MEAN	15.0	15.3	15.2	15.0	15.3	15.1
	S.D.	0.48	0.50	0.54	0.65	0.85	0.69
	N	8	10	9	9	9	10
DAYS 92-95	MEAN	15.0	15.4	15.5	15.2	15.5	15.7
	S.D.	0.98	0.63	0.86	0.72	0.81	0.74
	N	9	10	9	10	10	10
DAYS 121-123	MEAN	15.6		15.8		15.3	15.8
(RECOVERY PHASE)	S.D.	0.87		0.86		1.26	0.55
	N	10		9		10	10

NONE SIGNIFICANTLY DIFFERENT FROM CONTROL
NOTE: THE MEANS AND STANDARD DEVIATIONS WERE CALCULATED USING NONROUNDED VALUES.
FEMALES IN GROUPS 2 AND 4 WERE EUTHANIZED ON DAYS 15-18 OR DAYS 92-95.

TABLE 7
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
SUMMARY OF HEMATOLOGY DATA

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

GROUP:		1	2	3	4	5	6
LEVEL (MG/KG/DAY):		0	0.01	0.05	0.2	1.0	10.0
HEMATOCRIT %							
DAYS 15-18	MEAN	41.4	42.6	42.3	41.5	42.6	41.8
	S.D.	1.45	1.22	2.08	2.12	3.02	1.77
	N	8	10	9	9	9	10
DAYS 92-95	MEAN	43.2	44.2	44.3	43.0	44.0	45.4
	S.D.	3.40	1.93	3.07	1.88	3.32	2.72
	N	9	10	9	10	10	10
DAYS 121-123 (RECOVERY PHASE)	MEAN	45.1		46.0		44.7	45.3
	S.D.	2.81		2.78		4.26	2.12
	N	10		9		10	10
MEAN CORPUS VOL FL							
DAYS 15-18	MEAN	58.9	59.3	59.4	60.0	59.4	59.1
	S.D.	1.36	1.81	1.65	1.58	1.22	2.06
	N	8	10	9	9	9	10
DAYS 92-95	MEAN	54.8	54.2	53.9	53.2	54.3	54.8
	S.D.	1.79	2.00	1.23	2.04	1.72	1.24
	N	9	10	9	10	10	10
DAYS 121-123 (RECOVERY PHASE)	MEAN	55.0		54.5		55.4	54.8
	S.D.	1.70		2.07		1.63	1.79
	N	10		9		10	10

NONE SIGNIFICANTLY DIFFERENT FROM CONTROL
NOTE: THE MEANS AND STANDARD DEVIATIONS WERE CALCULATED USING NONROUNDED VALUES.
FEMALES IN GROUPS 2 AND 4 WERE EUTHANIZED ON DAYS 15-18 OR DAYS 92-95.

TABLE 7
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
SUMMARY OF HEMATOLOGY DATA

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

GROUP:		1	2	3	4	5	6
LEVEL (MG/KG/DAY):		0	0.01	0.05	0.2	1.0	10.0
MCH PG							
DAYS 15-18	MEAN	21.3	21.4	21.3	21.7	21.3	21.4
	S.D.	0.46	0.90	0.62	0.64	0.68	0.71
	N	8	10	9	9	9	10
DAYS 92-95	MEAN	19.1	18.9	18.9	18.8	19.1	19.0
	S.D.	0.62	0.41	0.57	0.62	0.29	0.55
	N	9	10	9	10	10	10
DAYS 121-123 (RECOVERY PHASE)	MEAN	19.0		18.7		19.0	19.1
	S.D.	0.65		0.62		0.81	0.49
	N	10		9		10	10
MCHC G/DL							
DAYS 15-18	MEAN	36.2	36.1	35.9	36.2	36.0	36.2
	S.D.	0.73	0.77	0.91	1.05	0.93	1.13
	N	8	10	9	9	9	10
DAYS 92-95	MEAN	34.8	34.8	35.2	35.4	35.2	34.7
	S.D.	0.89	0.96	0.82	0.99	1.03	0.87
	N	9	10	9	10	10	10
DAYS 121-123 (RECOVERY PHASE)	MEAN	34.6		34.3		34.2	34.8
	S.D.	0.97		1.08		0.94	1.03
	N	10		9		10	10

NONE SIGNIFICANTLY DIFFERENT FROM CONTROL
NOTE: THE MEANS AND STANDARD DEVIATIONS WERE CALCULATED USING NONROUNDED VALUES.
FEMALES IN GROUPS 2 AND 4 WERE EUTHANIZED ON DAYS 15-18 OR DAYS 92-95.

TABLE 7
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
SUMMARY OF HEMATOLOGY DATA

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

GROUP:		1	2	3	4	5	6
LEVEL (MG/KG/DAY):		0	0.01	0.05	0.2	1.0	10.0
PLATELETS 10*3/CMM							
DAYS 15-18	MEAN	916	784	881	869	842	873
	S.D.	87.5	208.7	126.1	179.1	204.3	85.6
	N	8	10	9	9	9	10
DAYS 92-95	MEAN	863	921	962	859	845	876
	S.D.	85.9	137.5	154.8	262.6	146.5	137.6
	N	9	10	9	10	10	10
DAYS 121-123 (RECOVERY PHASE)	MEAN	813		889		836	776
	S.D.	245.1		154.9		94.7	120.8
	N	10		9		10	10
NUCLEATED RBC'S % WBC							
DAYS 15-18	MEAN	0	0	0	0	0	0
	S.D.	0.0	0.0	0.0	0.0	0.0	0.0
	N	8	10	9	9	9	10
DAYS 92-95	MEAN	0	0	0	0	0	0
	S.D.	0.0	0.0	0.0	0.0	0.0	0.0
	N	9	10	9	10	10	10
DAYS 121-123 (RECOVERY PHASE)	MEAN	0		0		0	0
	S.D.	0.0		0.0		0.0	0.0
	N	10		9		10	10

NONE SIGNIFICANTLY DIFFERENT FROM CONTROL
NOTE: THE MEANS AND STANDARD DEVIATIONS WERE CALCULATED USING NONROUNDED VALUES.
FEMALES IN GROUPS 2 AND 4 WERE EUTHANIZED ON DAYS 15-18 OR DAYS 92-95.

TABLE 7
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
SUMMARY OF HEMATOLOGY DATA

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

GROUP:		1	2	3	4	5	6
LEVEL (MG/KG/DAY):		0	0.01	0.05	0.2	1.0	10.0
RED CELL MORPHOLOGY							
DAYS 15-18	NORMAL	8/ 8	10/ 10	9/ 9	9/ 9	9/ 9	10/ 10
DAYS 92-95	NORMAL	9/ 9	10/ 10	9/ 9	10/ 10	10/ 10	10/ 10
DAYS 121-123 (RECOVERY PHASE)	NORMAL	10/ 10		9/ 9		10/ 10	10/ 10

NOTE: FEMALES IN GROUPS 2 AND 4 WERE EUTHANIZED ON DAYS 15-18 OR DAYS 92-95.

TABLE 7
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
SUMMARY OF HEMATOLOGY DATA

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

GROUP:		1	2	3	4	5	6
LEVEL (MG/KG/DAY):		0	0.01	0.05	0.2	1.0	10.0
LEUKOCYTES 10*3/CMM							
DAYS 15-18	MEAN	12.1	13.5	13.8	14.0	14.8	12.7
	S.D.	3.20	2.16	2.88	2.63	2.88	1.61
	N	8	10	9	9	9	10
DAYS 92-95	MEAN	11.7	12.4	12.2	12.7	10.4	11.4
	S.D.	1.49	2.54	1.78	3.19	3.51	2.75
	N	9	10	9	10	10	10
DAYS 121-123	MEAN	10.7		12.3		12.1	9.8
(RECOVERY PHASE)	S.D.	2.64		2.59		2.87	2.46
	N	10		9		10	10
SEGD NEUTROPHILS 10*3/CMM							
DAYS 15-18	MEAN	0.8	1.1	1.1	0.9	1.1	1.0
	S.D.	0.30	0.50	0.56	0.22	0.82	0.62
	N	8	10	9	9	9	10
DAYS 92-95	MEAN	1.0	1.1	0.7	1.1	0.7	0.6
	S.D.	0.58	0.72	0.38	1.08	0.36	0.38
	N	9	10	9	10	10	10
DAYS 121-123	MEAN	0.9		1.5		1.5	0.7
(RECOVERY PHASE)	S.D.	0.55		0.84		1.33	0.38
	N	10		9		10	10

NONE SIGNIFICANTLY DIFFERENT FROM CONTROL
NOTE: THE MEANS AND STANDARD DEVIATIONS WERE CALCULATED USING NONROUNDED VALUES.
FEMALES IN GROUPS 2 AND 4 WERE EUTHANIZED ON DAYS 15-18 OR DAYS 92-95.

TABLE 7
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
SUMMARY OF HEMATOLOGY DATA

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

GROUP:		1	2	3	4	5	6
LEVEL (MG/KG/DAY):		0	0.01	0.05	0.2	1.0	10.0
NON-SEGD NEUTRO. 10*3/CMM							
DAYS 15-18	MEAN	0.0	0.0	0.0	0.0	0.0	0.0
	S.D.	0.00	0.00	0.00	0.00	0.00	0.00
	N	8	10	9	9	9	10
DAYS 92-95	MEAN	0.0	0.0	0.0	0.0	0.0	0.0
	S.D.	0.00	0.00	0.00	0.00	0.00	0.00
	N	9	10	9	10	10	10
DAYS 121-123	MEAN	0.0		0.0		0.0	0.0
(RECOVERY PHASE)	S.D.	0.00		0.00		0.00	0.00
	N	10		9		10	10
LYMPHOCYTES 10*3/CMM							
DAYS 15-18	MEAN	10.9	12.2	12.4	12.9	13.4	11.5
	S.D.	3.15	2.27	2.62	2.79	2.28	1.55
	N	8	10	9	9	9	10
DAYS 92-95	MEAN	10.3	11.1	11.3	11.4	9.5	10.6
	S.D.	1.61	2.69	1.80	2.39	3.28	2.75
	N	9	10	9	10	10	10
DAYS 121-123	MEAN	9.7		10.5		10.4	9.0
(RECOVERY PHASE)	S.D.	2.42		2.23		2.68	2.56
	N	10		9		10	10

NONE SIGNIFICANTLY DIFFERENT FROM CONTROL
NOTE: THE MEANS AND STANDARD DEVIATIONS WERE CALCULATED USING NONROUNDED VALUES.
FEMALES IN GROUPS 2 AND 4 WERE EUTHANIZED ON DAYS 15-18 OR DAYS 92-95.

TABLE 7
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
SUMMARY OF HEMATOLOGY DATA

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

GROUP:		1	2	3	4	5	6
LEVEL (MG/KG/DAY):		0	0.01	0.05	0.2	1.0	10.0
MONOCYTES 10*3/CMM							
DAYS 15-18	MEAN	0.2	0.2	0.2	0.1	0.1	0.1
	S.D.	0.23	0.15	0.20	0.10	0.10	0.16
	N	8	10	9	9	9	10
DAYS 92-95	MEAN	0.2	0.1	0.1*	0.1*	0.1	0.1
	S.D.	0.12	0.11	0.09	0.09	0.05	0.09
	N	9	10	9	10	10	10
DAYS 121-123 (RECOVERY PHASE)	MEAN	0.1		0.2		0.1	0.1
	S.D.	0.09		0.21		0.16	0.09
	N	10		9		10	10
EOSINOPHILS 10*3/CMM							
DAYS 15-18	MEAN	0.1	0.1	0.1	0.1	0.2	0.1
	S.D.	0.11	0.09	0.11	0.08	0.12	0.13
	N	8	10	9	9	9	10
DAYS 92-95	MEAN	0.1	0.1	0.1	0.1	0.1	0.1
	S.D.	0.08	0.08	0.13	0.13	0.10	0.05
	N	9	10	9	10	10	10
DAYS 121-123 (RECOVERY PHASE)	MEAN	0.0		0.1		0.1	0.1
	S.D.	0.06		0.08		0.10	0.09
	N	10		9		10	10

SIGNIFICANTLY DIFFERENT FROM CONTROL: * = P<0.05
NOTE: THE MEANS AND STANDARD DEVIATIONS WERE CALCULATED USING NONROUNDED VALUES.
FEMALES IN GROUPS 2 AND 4 WERE EUTHANIZED ON DAYS 15-18 OR DAYS 92-95.

TABLE 7
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
SUMMARY OF HEMATOLOGY DATA

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

GROUP:		1	2	3	4	5	6
LEVEL (MG/KG/DAY):		0	0.01	0.05	0.2	1.0	10.0
BASOPHILS 10*3/CMM							
DAYS 15-18	MEAN	0.0	0.0	0.0	0.0	0.0	0.0
	S.D.	0.00	0.00	0.05	0.00	0.00	0.00
	N	8	10	9	9	9	10
DAYS 92-95	MEAN	0.0	0.0	0.0	0.0	0.0	0.0
	S.D.	0.00	0.00	0.00	0.00	0.00	0.00
	N	9	10	9	10	10	10
DAYS 121-123	MEAN	0.0		0.0		0.0	0.0
(RECOVERY PHASE)	S.D.	0.00		0.00		0.00	0.00
	N	10		9		10	10

NONE SIGNIFICANTLY DIFFERENT FROM CONTROL
NOTE: THE MEANS AND STANDARD DEVIATIONS WERE CALCULATED USING NONROUNDED VALUES.
FEMALES IN GROUPS 2 AND 4 WERE EUTHANIZED ON DAYS 15-18 OR DAYS 92-95.

TABLE 8
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
SUMMARY OF BIOCHEMISTRY DATA

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

GROUP:			1	2	3	4	5	6
LEVEL (MG/KG/DAY):			0	0.01	0.05	0.2	1.0	10.0
AST	IU/L							
DAYS 15-18		MEAN	101	120	97	114	105	117
		S.D.	37.7	37.2	31.4	43.1	45.7	43.5
		N	9	10	8	10	8	9
DAYS 92-95		MEAN	89	138	109	103	95	100
		S.D.	20.9	69.9	64.8	26.7	29.0	19.3
		N	10	10	10	10	10	10
DAYS 121-123		MEAN	93		79		86	97
(RECOVERY PHASE)		S.D.	27.4		10.9		21.6	34.5
		N	9		10		10	10
ALT	IU/L							
DAYS 15-18		MEAN	63	68	57	64	65	62
		S.D.	30.0	30.7	24.7	23.6	27.2	24.7
		N	9	10	9	10	8	9
DAYS 92-95		MEAN	60	147	82	79	72	70
		S.D.	22.5	118.9	81.6	32.8	52.8	30.6
		N	10	10	10	10	10	10
DAYS 121-123		MEAN	62		50		68	68
(RECOVERY PHASE)		S.D.	31.6		12.4		34.8	39.3
		N	9		10		10	10

NONE SIGNIFICANTLY DIFFERENT FROM CONTROL
NOTE: THE MEANS AND STANDARD DEVIATIONS WERE CALCULATED USING NONROUNDED VALUES.
MALES IN GROUPS 2 AND 4 WERE EUTHANIZED ON DAYS 15-18 OR DAYS 92-95.

TABLE 8
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
SUMMARY OF BIOCHEMISTRY DATA

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

GROUP:		1	2	3	4	5	6
LEVEL (MG/KG/DAY):		0	0.01	0.05	0.2	1.0	10.0
ALK PHOS'TASE IU/L							
DAYS 15-18	MEAN	353	373	372	353	364	379
	S.D.	86.3	123.9	104.6	81.8	93.9	80.5
	N	9	10	9	10	8	9
DAYS 92-95	MEAN	131	168	171	171	159	190
	S.D.	26.1	57.1	61.9	48.3	59.7	67.9
	N	10	10	10	10	10	10
DAYS 121-123 (RECOVERY PHASE)	MEAN	157		142		152	142
	S.D.	72.7		53.4		55.1	48.2
	N	9		10		10	10
TOTAL BILIRUBIN MG/DL							
DAYS 15-18	MEAN	0.51	0.51	0.50	0.52	0.57	0.51
	S.D.	0.066	0.122	0.136	0.155	0.129	0.105
	N	9	10	8	9	8	8
DAYS 92-95	MEAN	0.37	0.41	0.38	0.35	0.43	0.33
	S.D.	0.124	0.138	0.052	0.106	0.119	0.119
	N	10	10	10	10	10	10
DAYS 121-123 (RECOVERY PHASE)	MEAN	0.35		0.38		0.40	0.36
	S.D.	0.078		0.083		0.164	0.077
	N	9		10		10	10

NONE SIGNIFICANTLY DIFFERENT FROM CONTROL
NOTE: THE MEANS AND STANDARD DEVIATIONS WERE CALCULATED USING NONROUNDED VALUES.
MALES IN GROUPS 2 AND 4 WERE EUTHANIZED ON DAYS 15-18 OR DAYS 92-95.

TABLE 8
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
SUMMARY OF BIOCHEMISTRY DATA

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

GROUP:		1	2	3	4	5	6
LEVEL (MG/KG/DAY):		0	0.01	0.05	0.2	1.0	10.0
TOTAL PROTEIN G/DL							
DAYS 15-18	MEAN	6.24	6.18	6.07	6.17	5.98	6.18
	S.D.	0.231	0.286	0.252	0.315	0.315	0.226
	N	9	10	8	9	8	8
DAYS 92-95	MEAN	6.71	6.53	6.75	6.72	6.70	6.66
	S.D.	0.363	0.313	0.310	0.295	0.486	0.390
	N	10	10	10	10	10	10
DAYS 121-123 (RECOVERY PHASE)	MEAN	6.81		6.75		6.89	6.60
	S.D.	0.224		0.223		0.322	0.319
	N	9		10		10	10
ALBUMIN G/DL							
DAYS 15-18	MEAN	3.26	3.18	3.15	3.16	3.01	3.16
	S.D.	0.181	0.219	0.159	0.256	0.146	0.222
	N	9	10	8	9	8	8
DAYS 92-95	MEAN	3.37	3.44	3.33	3.41	3.42	3.39
	S.D.	0.247	0.170	0.237	0.198	0.212	0.262
	N	10	10	10	10	10	10
DAYS 121-123 (RECOVERY PHASE)	MEAN	3.51		3.46		3.40	3.37
	S.D.	0.197		0.174		0.175	0.119
	N	9		10		10	10

NONE SIGNIFICANTLY DIFFERENT FROM CONTROL
NOTE: THE MEANS AND STANDARD DEVIATIONS WERE CALCULATED USING NONROUNDED VALUES.
MALES IN GROUPS 2 AND 4 WERE EUTHANIZED ON DAYS 15-18 OR DAYS 92-95.

TABLE 8
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
SUMMARY OF BIOCHEMISTRY DATA

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

GROUP:		1	2	3	4	5	6
LEVEL (MG/KG/DAY):		0	0.01	0.05	0.2	1.0	10.0
GLOBULIN G/DL							
DAYS 15-18	MEAN	2.98	3.01	2.92	3.01	2.98	3.02
	S.D.	0.251	0.270	0.335	0.238	0.217	0.252
	N	9	10	8	9	8	8
DAYS 92-95	MEAN	3.34	3.09	3.42	3.31	3.28	3.27
	S.D.	0.276	0.200	0.242	0.246	0.401	0.307
	N	10	10	10	10	10	10
DAYS 121-123 (RECOVERY PHASE)	MEAN	3.30		3.29		3.50	3.23
	S.D.	0.166		0.182		0.307	0.324
	N	9		10		10	10
A/G RATIO							
DAYS 15-18	MEAN	1.10	1.07	1.10	1.06	1.01	1.06
	S.D.	0.139	0.147	0.175	0.128	0.069	0.150
	N	9	10	8	9	8	8
DAYS 92-95	MEAN	1.02	1.12	0.98	1.04	1.06	1.04
	S.D.	0.111	0.070	0.102	0.105	0.134	0.134
	N	10	10	10	10	10	10
DAYS 121-123 (RECOVERY PHASE)	MEAN	1.07		1.06		0.98	1.06
	S.D.	0.089		0.088		0.110	0.136
	N	9		10		10	10

NONE SIGNIFICANTLY DIFFERENT FROM CONTROL
NOTE: THE MEANS AND STANDARD DEVIATIONS WERE CALCULATED USING NONROUNDED VALUES.
MALES IN GROUPS 2 AND 4 WERE EUTHANIZED ON DAYS 15-18 OR DAYS 92-95.

TABLE 8
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
SUMMARY OF BIOCHEMISTRY DATA

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

GROUP:		1	2	3	4	5	6
LEVEL (MG/KG/DAY):		0	0.01	0.05	0.2	1.0	10.0
UREA NITROGEN MG/DL							
DAYS 15-18	MEAN	17	18	17	17	19	15
	S.D.	2.9	3.2	2.7	2.1	4.9	2.8
	N	9	10	8	9	8	8
DAYS 92-95	MEAN	19	19	19	19	19	20
	S.D.	2.8	1.6	2.2	1.8	1.1	4.5
	N	10	10	10	10	10	10
DAYS 121-123 (RECOVERY PHASE)	MEAN	19		18		19	17
	S.D.	2.3		2.3		1.6	2.1
	N	9		10		10	10
CREATININE MG/DL							
DAYS 15-18	MEAN	0.51	0.48	0.50	0.50	0.51	0.50
	S.D.	0.039	0.040	0.080	0.052	0.093	0.074
	N	9	10	8	9	8	8
DAYS 92-95	MEAN	0.59	0.63	0.57	0.60	0.58	0.57
	S.D.	0.052	0.063	0.055	0.059	0.050	0.082
	N	10	10	10	10	10	10
DAYS 121-123 (RECOVERY PHASE)	MEAN	0.56		0.56		0.57	0.56
	S.D.	0.121		0.064		0.075	0.115
	N	9		10		10	10

NONE SIGNIFICANTLY DIFFERENT FROM CONTROL
NOTE: THE MEANS AND STANDARD DEVIATIONS WERE CALCULATED USING NONROUNDED VALUES.
MALES IN GROUPS 2 AND 4 WERE EUTHANIZED ON DAYS 15-18 OR DAYS 92-95.

TABLE 8
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
SUMMARY OF BIOCHEMISTRY DATA

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

GROUP:		1	2	3	4	5	6
LEVEL (MG/KG/DAY):		0	0.01	0.05	0.2	1.0	10.0
GLUCOSE MG/DL							
DAYS 15-18	MEAN	299	274	290	285	281	288
	S.D.	74.2	55.4	44.7	35.1	39.0	46.4
	N	9	10	8	9	8	8
DAYS 92-95	MEAN	240	261	249	262	273	257
	S.D.	35.6	29.0	23.0	30.5	32.3	50.2
	N	10	10	10	10	10	10
DAYS 121-123 (RECOVERY PHASE)	MEAN	265		229		259	263
	S.D.	24.2		33.0		25.7	38.9
	N	9		10		10	10
SODIUM MMOL/L							
DAYS 15-18	MEAN	146	145	146	144	145	145
	S.D.	1.8	2.0	2.1	3.3	2.7	2.5
	N	9	10	9	10	8	9
DAYS 92-95	MEAN	148	147	149	147	148	148
	S.D.	1.5	5.4	4.2	1.8	1.3	1.2
	N	10	10	10	10	10	10
DAYS 121-123 (RECOVERY PHASE)	MEAN	147		147		148	148
	S.D.	1.9		2.1		2.1	1.9
	N	9		10		10	10

NONE SIGNIFICANTLY DIFFERENT FROM CONTROL
NOTE: THE MEANS AND STANDARD DEVIATIONS WERE CALCULATED USING NONROUNDED VALUES.
MALES IN GROUPS 2 AND 4 WERE EUTHANIZED ON DAYS 15-18 OR DAYS 92-95.

TABLE 8
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
SUMMARY OF BIOCHEMISTRY DATA

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

GROUP:		1	2	3	4	5	6
LEVEL (MG/KG/DAY):		0	0.01	0.05	0.2	1.0	10.0
POTASSIUM MMOL/L							
DAYS 15-18	MEAN	6.91	7.76	6.60	7.70	6.82	6.86
	S.D.	1.123	1.603	1.327	2.236	1.468	2.102
	N	9	10	9	10	8	9
DAYS 92-95	MEAN	6.12	8.60**	7.48	7.29	6.65	6.87
	S.D.	1.063	1.241	1.829	1.437	1.520	1.253
	N	10	10	10	10	10	10
DAYS 121-123 (RECOVERY PHASE)	MEAN	6.17		6.57		6.05	6.45
	S.D.	1.080		0.781		0.979	1.567
	N	9		10		10	10
CHLORIDE MMOL/L							
DAYS 15-18	MEAN	101	100	101	101	101	101
	S.D.	1.0	2.3	2.7	2.2	2.5	2.5
	N	9	10	9	10	8	9
DAYS 92-95	MEAN	104	105	106	103	104	105
	S.D.	2.4	3.9	2.9	3.2	2.0	2.6
	N	10	10	10	10	10	10
DAYS 121-123 (RECOVERY PHASE)	MEAN	103		104		104	103
	S.D.	2.6		2.5		3.0	2.6
	N	9		10		10	10

SIGNIFICANTLY DIFFERENT FROM CONTROL: ** = P<0.01
NOTE: THE MEANS AND STANDARD DEVIATIONS WERE CALCULATED USING NONROUNDED VALUES.
MALES IN GROUPS 2 AND 4 WERE EUTHANIZED ON DAYS 15-18 OR DAYS 92-95.

TABLE 8
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
SUMMARY OF BIOCHEMISTRY DATA

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

GROUP:		1	2	3	4	5	6
LEVEL (MG/KG/DAY):		0	0.01	0.05	0.2	1.0	10.0
CALCIUM MG/DL							
DAYS 15-18	MEAN	13.47	13.03	13.29	13.30	13.48	13.19
	S.D.	0.508	0.561	0.445	0.240	0.566	0.949
	N	9	10	8	9	8	8
DAYS 92-95	MEAN	12.33	12.01	12.22	12.32	12.39	12.36
	S.D.	0.469	0.438	0.636	0.567	0.643	0.760
	N	10	10	10	10	10	10
DAYS 121-123 (RECOVERY PHASE)	MEAN	12.24		12.07		12.39	12.10
	S.D.	0.368		0.407		0.314	0.322
	N	9		10		10	10
CHOLESTEROL MG/DL							
DAYS 15-18	MEAN	53	48	50	49	50	51
	S.D.	7.5	6.7	7.9	6.6	19.1	9.5
	N	9	10	8	9	8	8
DAYS 92-95	MEAN	45	42	46	51	45	57
	S.D.	4.0	18.4	13.7	11.9	14.0	19.5
	N	10	10	10	10	10	10
DAYS 121-123 (RECOVERY PHASE)	MEAN	43		46		59*	42
	S.D.	7.8		13.5		13.1	10.4
	N	9		10		10	10

SIGNIFICANTLY DIFFERENT FROM CONTROL: * = P<0.05
NOTE: THE MEANS AND STANDARD DEVIATIONS WERE CALCULATED USING NONROUNDED VALUES.
MALES IN GROUPS 2 AND 4 WERE EUTHANIZED ON DAYS 15-18 OR DAYS 92-95.

TABLE 8
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
SUMMARY OF BIOCHEMISTRY DATA

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

GROUP:		1	2	3	4	5	6
LEVEL (MG/KG/DAY):		0	0.01	0.05	0.2	1.0	10.0
PHOSPHORUS MG/DL							
DAYS 15-18	MEAN	13.15	13.04	12.30	12.27	13.47	11.94
	S.D.	3.948	1.848	2.737	2.993	2.141	2.135
	N	9	10	8	9	8	8
DAYS 92-95	MEAN	8.94	10.31**	9.69	9.56	9.44	9.60
	S.D.	0.947	0.902	0.572	0.790	0.756	0.966
	N	10	10	10	10	10	10
DAYS 121-123 (RECOVERY PHASE)	MEAN	8.87		8.83		9.02	8.87
	S.D.	0.858		0.716		0.723	0.650
	N	9		10		10	10
GGT, SERUM IU/L							
DAYS 15-18	MEAN	2.38	2.29	2.03	2.26	2.28	1.95
	S.D.	1.075	0.901	0.995	0.572	0.755	0.919
	N	9	9	8	8	8	8
DAYS 92-95	MEAN	2.70	2.57	2.67	2.45	2.48	2.61
	S.D.	0.861	0.690	0.540	0.578	0.780	0.674
	N	10	10	10	10	10	10
DAYS 121-123 (RECOVERY PHASE)	MEAN	2.77		2.13		2.55	2.32
	S.D.	0.711		0.805		0.487	0.582
	N	9		10		10	10

SIGNIFICANTLY DIFFERENT FROM CONTROL: ** = P<0.01
NOTE: THE MEANS AND STANDARD DEVIATIONS WERE CALCULATED USING NONROUNDED VALUES.
MALES IN GROUPS 2 AND 4 WERE EUTHANIZED ON DAYS 15-18 OR DAYS 92-95.

TABLE 8
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
SUMMARY OF BIOCHEMISTRY DATA

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

GROUP:		1	2	3	4	5	6
LEVEL (MG/KG/DAY):		0	0.01	0.05	0.2	1.0	10.0
SORBITOL DEHYDR. IU/L							
DAYS 15-18	MEAN	28.9	41.7	42.3	46.4	31.0	26.9
	S.D.	26.51	28.05	44.39	37.91	17.62	14.85
	N	8	7	8	7	7	7
DAYS 92-95	MEAN	33.2	103.4*	53.5	63.4	47.9	47.6
	S.D.	24.96	80.38	44.53	35.57	45.99	32.14
	N	10	10	10	10	10	10
DAYS 121-123 (RECOVERY PHASE)	MEAN	34.6		23.7		35.6	36.9
	S.D.	23.82		7.50		30.59	30.20
	N	9		10		10	10
MAGNESIUM MG/DL							
DAYS 15-18	MEAN	3.6	3.5	3.6	3.5	3.6	3.4
	S.D.	0.50	0.36	0.33	0.37	0.26	0.26
	N	9	10	8	9	8	8
DAYS 92-95	MEAN	3.2	3.4	3.2	3.2	3.3	3.2
	S.D.	0.19	0.22	0.18	0.22	0.29	0.38
	N	10	10	10	10	10	10
DAYS 121-123 (RECOVERY PHASE)	MEAN	3.2		3.1		3.1	3.2
	S.D.	0.35		0.25		0.18	0.43
	N	9		10		10	10

SIGNIFICANTLY DIFFERENT FROM CONTROL: * = P<0.05
NOTE: THE MEANS AND STANDARD DEVIATIONS WERE CALCULATED USING NONROUNDED VALUES.
MALES IN GROUPS 2 AND 4 WERE EUTHANIZED ON DAYS 15-18 OR DAYS 92-95.

TABLE 8
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
SUMMARY OF BIOCHEMISTRY DATA

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

		GROUP:	1	2	3	4	5	6
		LEVEL (MG/KG/DAY):	0	0.01	0.05	0.2	1.0	10.0
AST	IU/L							
DAYS 15-18		MEAN	86	83	79	84	85	74
		S.D.	19.0	11.6	12.8	32.1	19.1	9.0
		N	10	6	8	8	9	8
DAYS 92-95		MEAN	95	83	81	74	78	83
		S.D.	27.1	21.8	10.4	14.5	15.0	52.5
		N	10	10	10	10	9	10
DAYS 121-123 (RECOVERY PHASE)		MEAN	110		126		104	103
		S.D.	46.6		79.4		30.4	32.9
		N	10		9		10	10
ALT	IU/L							
DAYS 15-18		MEAN	45	37	38	36	40	36
		S.D.	10.5	4.5	6.5	14.0	12.5	7.9
		N	10	6	8	7	9	8
DAYS 92-95		MEAN	63	46	42	40	45	47
		S.D.	30.4	13.2	13.6	6.2	11.6	32.4
		N	10	10	10	10	9	10
DAYS 121-123 (RECOVERY PHASE)		MEAN	68		74		58	61
		S.D.	31.2		48.9		20.5	23.0
		N	10		9		10	10

NONE SIGNIFICANTLY DIFFERENT FROM CONTROL
NOTE: THE MEANS AND STANDARD DEVIATIONS WERE CALCULATED USING NONROUNDED VALUES.
FEMALES IN GROUPS 2 AND 4 WERE EUTHANIZED ON DAYS 15-18 OR DAYS 92-95.

TABLE 8
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
SUMMARY OF BIOCHEMISTRY DATA

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

GROUP:		1	2	3	4	5	6
LEVEL (MG/KG/DAY):		0	0.01	0.05	0.2	1.0	10.0
ALK PHOS'TASE IU/L							
DAYS 15-18	MEAN	242	230	248	214	226	231
	S.D.	74.2	44.6	64.9	85.3	44.1	66.8
	N	10	7	8	8	9	8
DAYS 92-95	MEAN	106	114	105	133	89	95
	S.D.	48.1	61.2	51.2	49.2	24.4	43.8
	N	10	10	10	10	9	10
DAYS 121-123	MEAN	114		97		80	94
(RECOVERY PHASE)	S.D.	40.9		44.7		14.1	43.2
	N	10		9		10	10
TOTAL BILIRUBIN MG/DL							
DAYS 15-18	MEAN	0.53	0.47	0.46	0.66	0.56	0.53
	S.D.	0.165	0.172	0.235	0.097	0.112	0.085
	N	9	6	7	5	7	7
DAYS 92-95	MEAN	0.41	0.38	0.34	0.38	0.45	0.42
	S.D.	0.095	0.051	0.126	0.100	0.069	0.078
	N	10	10	10	10	9	10
DAYS 121-123	MEAN	0.41		0.42		0.44	0.42
(RECOVERY PHASE)	S.D.	0.093		0.094		0.142	0.083
	N	10		9		10	10

NONE SIGNIFICANTLY DIFFERENT FROM CONTROL
NOTE: THE MEANS AND STANDARD DEVIATIONS WERE CALCULATED USING NONROUNDED VALUES.
FEMALES IN GROUPS 2 AND 4 WERE EUTHANIZED ON DAYS 15-18 OR DAYS 92-95.

TABLE 8
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
SUMMARY OF BIOCHEMISTRY DATA

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

GROUP:		1	2	3	4	5	6
LEVEL (MG/KG/DAY):		0	0.01	0.05	0.2	1.0	10.0
TOTAL PROTEIN G/DL							
DAYS 15-18	MEAN	6.19	6.05	6.33	6.30	6.35	6.19
	S.D.	0.276	0.301	0.308	0.231	0.393	0.269
	N	9	6	7	5	8	7
DAYS 92-95	MEAN	7.22	7.08	7.05	6.70	7.02	6.84
	S.D.	0.407	0.584	0.390	0.381	0.563	0.292
	N	10	10	10	10	9	10
DAYS 121-123 (RECOVERY PHASE)	MEAN	7.36		7.32		7.34	7.41
	S.D.	0.539		0.406		0.618	0.519
	N	10		9		10	10
ALBUMIN G/DL							
DAYS 15-18	MEAN	3.10	3.14	3.23	3.16	3.26	3.17
	S.D.	0.207	0.324	0.157	0.203	0.266	0.256
	N	9	6	7	7	8	8
DAYS 92-95	MEAN	3.84	3.58	3.64	3.47	3.65	3.61
	S.D.	0.367	0.312	0.308	0.267	0.383	0.273
	N	10	10	10	10	9	10
DAYS 121-123 (RECOVERY PHASE)	MEAN	3.86		3.84		3.82	4.02
	S.D.	0.378		0.318		0.394	0.300
	N	10		9		10	10

NONE SIGNIFICANTLY DIFFERENT FROM CONTROL
NOTE: THE MEANS AND STANDARD DEVIATIONS WERE CALCULATED USING NONROUNDED VALUES.
FEMALES IN GROUPS 2 AND 4 WERE EUTHANIZED ON DAYS 15-18 OR DAYS 92-95.

TABLE 8
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
SUMMARY OF BIOCHEMISTRY DATA

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

GROUP:		1	2	3	4	5	6
LEVEL (MG/KG/DAY):		0	0.01	0.05	0.2	1.0	10.0
GLOBULIN G/DL							
DAYS 15-18	MEAN	3.09	2.91	3.10	3.09	3.09	3.02
	S.D.	0.313	0.202	0.278	0.287	0.236	0.244
	N	9	6	7	5	8	7
DAYS 92-95	MEAN	3.37	3.50	3.41	3.23	3.37	3.23
	S.D.	0.282	0.312	0.249	0.261	0.260	0.216
	N	10	10	10	10	9	10
DAYS 121-123 (RECOVERY PHASE)	MEAN	3.50		3.48		3.53	3.39
	S.D.	0.283		0.202		0.320	0.305
	N	10		9		10	10
A/G RATIO							
DAYS 15-18	MEAN	1.01	1.09	1.05	1.05	1.06	1.06
	S.D.	0.140	0.154	0.114	0.147	0.111	0.148
	N	9	6	7	5	8	7
DAYS 92-95	MEAN	1.15	1.03	1.07	1.08	1.09	1.12
	S.D.	0.170	0.062	0.121	0.123	0.095	0.134
	N	10	10	10	10	9	10
DAYS 121-123 (RECOVERY PHASE)	MEAN	1.11		1.11		1.09	1.19
	S.D.	0.129		0.104		0.107	0.092
	N	10		9		10	10

NONE SIGNIFICANTLY DIFFERENT FROM CONTROL
NOTE: THE MEANS AND STANDARD DEVIATIONS WERE CALCULATED USING NONROUNDED VALUES.
FEMALES IN GROUPS 2 AND 4 WERE EUTHANIZED ON DAYS 15-18 OR DAYS 92-95.

TABLE 8
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
SUMMARY OF BIOCHEMISTRY DATA

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

GROUP:		1	2	3	4	5	6
LEVEL (MG/KG/DAY):		0	0.01	0.05	0.2	1.0	10.0
UREA NITROGEN MG/DL							
DAYS 15-18	MEAN	16	18	17	15	14	16
	S.D.	2.8	3.9	1.7	3.4	2.8	2.1
	N	7	6	6	4	6	6
DAYS 92-95	MEAN	18	18	17	17	17	18
	S.D.	2.6	2.4	2.6	3.1	3.2	3.3
	N	9	10	10	10	9	10
DAYS 121-123 (RECOVERY PHASE)	MEAN	19		18		18	17
	S.D.	3.3		3.6		3.1	3.8
	N	10		9		10	10
CREATININE MG/DL							
DAYS 15-18	MEAN	0.52	0.51	0.49	0.51	0.51	0.49
	S.D.	0.063	0.082	0.084	0.065	0.052	0.045
	N	9	6	7	5	7	7
DAYS 92-95	MEAN	0.58	0.60	0.59	0.59	0.52	0.56
	S.D.	0.067	0.064	0.058	0.091	0.056	0.068
	N	9	10	10	10	9	10
DAYS 121-123 (RECOVERY PHASE)	MEAN	0.57		0.60		0.57	0.58
	S.D.	0.076		0.062		0.072	0.069
	N	10		9		10	10

NONE SIGNIFICANTLY DIFFERENT FROM CONTROL
NOTE: THE MEANS AND STANDARD DEVIATIONS WERE CALCULATED USING NONROUNDED VALUES.
FEMALES IN GROUPS 2 AND 4 WERE EUTHANIZED ON DAYS 15-18 OR DAYS 92-95.

TABLE 8
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
SUMMARY OF BIOCHEMISTRY DATA

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

GROUP:		1	2	3	4	5	6
LEVEL (MG/KG/DAY):		0	0.01	0.05	0.2	1.0	10.0
GLUCOSE MG/DL							
DAYS 15-18	MEAN	253	238	239	255	252	256
	S.D.	25.2	26.5	29.3	38.6	63.5	46.2
	N	9	6	7	6	8	8
DAYS 92-95	MEAN	239	230	235	225	232	234
	S.D.	23.4	27.2	32.0	15.6	27.9	36.8
	N	10	10	10	10	9	10
DAYS 121-123 (RECOVERY PHASE)	MEAN	241		258		253	262
	S.D.	55.0		37.3		32.0	33.7
	N	10		9		10	10
SODIUM MMOL/L							
DAYS 15-18	MEAN	144	144	144	143	145	144
	S.D.	2.0	1.7	2.8	2.7	3.1	1.7
	N	10	7	9	8	9	9
DAYS 92-95	MEAN	147	147	148	148	147	148
	S.D.	5.4	3.8	3.9	2.8	3.4	2.8
	N	10	10	10	10	9	10
DAYS 121-123 (RECOVERY PHASE)	MEAN	147		146		146	146
	S.D.	1.9		1.6		1.2	1.7
	N	10		9		10	10

NONE SIGNIFICANTLY DIFFERENT FROM CONTROL
NOTE: THE MEANS AND STANDARD DEVIATIONS WERE CALCULATED USING NONROUNDED VALUES.
FEMALES IN GROUPS 2 AND 4 WERE EUTHANIZED ON DAYS 15-18 OR DAYS 92-95.

TABLE 8
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
SUMMARY OF BIOCHEMISTRY DATA

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

GROUP:		1	2	3	4	5	6
LEVEL (MG/KG/DAY):		0	0.01	0.05	0.2	1.0	10.0
POTASSIUM MMOL/L							
DAYS 15-18	MEAN	6.39	6.65	7.00	6.61	6.41	6.17
	S.D.	0.896	0.736	1.724	1.377	1.515	0.471
	N	10	7	9	8	9	9
DAYS 92-95	MEAN	6.44	6.35	6.26	6.66	6.11	6.77
	S.D.	0.609	0.403	0.521	1.091	0.433	1.420
	N	10	10	10	10	9	10
DAYS 121-123	MEAN	6.41		6.18		6.49	6.65
(RECOVERY PHASE)	S.D.	1.119		0.399		1.097	1.187
	N	10		9		10	10
CHLORIDE MMOL/L							
DAYS 15-18	MEAN	101	102	102	102	102	102
	S.D.	2.4	2.3	3.4	2.1	2.2	3.1
	N	10	7	9	8	9	9
DAYS 92-95	MEAN	106	106	105	106	106	106
	S.D.	3.6	3.1	2.1	2.1	3.3	2.6
	N	10	10	10	10	9	10
DAYS 121-123	MEAN	106		105		105	106
(RECOVERY PHASE)	S.D.	2.0		1.9		2.0	1.9
	N	10		9		10	10

NONE SIGNIFICANTLY DIFFERENT FROM CONTROL
NOTE: THE MEANS AND STANDARD DEVIATIONS WERE CALCULATED USING NONROUNDED VALUES.
FEMALES IN GROUPS 2 AND 4 WERE EUTHANIZED ON DAYS 15-18 OR DAYS 92-95.

TABLE 8
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
SUMMARY OF BIOCHEMISTRY DATA

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

GROUP:		1	2	3	4	5	6
LEVEL (MG/KG/DAY):		0	0.01	0.05	0.2	1.0	10.0
CALCIUM MG/DL							
DAYS 15-18	MEAN	13.27	13.14	13.21	13.07	13.27	13.00
	S.D.	0.443	0.576	0.320	0.452	0.723	0.479
	N	9	6	7	5	7	7
DAYS 92-95	MEAN	12.80	12.62	12.67	12.46	12.31	12.47
	S.D.	0.222	0.480	0.379	0.340	0.466	0.523
	N	10	10	10	10	9	10
DAYS 121-123 (RECOVERY PHASE)	MEAN	12.63		12.58		12.66	12.83
	S.D.	0.448		0.285		0.457	0.505
	N	10		9		10	10
CHOLESTEROL MG/DL							
DAYS 15-18	MEAN	51	45	47	45	52	50
	S.D.	8.6	9.8	9.4	6.4	8.7	6.7
	N	9	6	7	7	8	8
DAYS 92-95	MEAN	61	58	54	49	50	50
	S.D.	12.6	19.2	14.6	7.5	13.2	7.6
	N	10	10	10	10	9	10
DAYS 121-123 (RECOVERY PHASE)	MEAN	51		53		55	56
	S.D.	12.4		12.2		18.6	18.1
	N	10		9		10	10

NONE SIGNIFICANTLY DIFFERENT FROM CONTROL
NOTE: THE MEANS AND STANDARD DEVIATIONS WERE CALCULATED USING NONROUNDED VALUES.
FEMALES IN GROUPS 2 AND 4 WERE EUTHANIZED ON DAYS 15-18 OR DAYS 92-95.

TABLE 8
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
SUMMARY OF BIOCHEMISTRY DATA

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

GROUP:		1	2	3	4	5	6
LEVEL (MG/KG/DAY):		0	0.01	0.05	0.2	1.0	10.0
PHOSPHORUS MG/DL							
DAYS 15-18	MEAN	11.58	11.99	12.05	11.47	11.56	11.39
	S.D.	0.807	1.614	0.969	0.590	1.570	1.340
	N	9	6	7	5	7	7
DAYS 92-95	MEAN	8.65	8.67	9.02	9.29	8.73	9.38
	S.D.	1.267	0.542	0.856	0.822	0.827	1.074
	N	10	10	10	10	9	10
DAYS 121-123 (RECOVERY PHASE)	MEAN	8.46		7.94		8.88	9.05
	S.D.	1.358		0.771		1.171	1.175
	N	10		9		10	10
GGT,SERUM IU/L							
DAYS 15-18	MEAN	2.40	2.56	2.08	2.70	2.53	2.24
	S.D.	0.747	0.838	0.332	0.772	0.934	0.494
	N	9	6	7	5	7	7
DAYS 92-95	MEAN	2.46	2.66	3.01	2.71	2.77	2.18
	S.D.	0.739	0.520	0.452	0.552	0.906	0.626
	N	10	10	10	10	9	10
DAYS 121-123 (RECOVERY PHASE)	MEAN	2.54		2.75		2.94	2.89
	S.D.	0.656		0.654		0.810	0.840
	N	10		9		10	10

NONE SIGNIFICANTLY DIFFERENT FROM CONTROL
NOTE: THE MEANS AND STANDARD DEVIATIONS WERE CALCULATED USING NONROUNDED VALUES.
FEMALES IN GROUPS 2 AND 4 WERE EUTHANIZED ON DAYS 15-18 OR DAYS 92-95.

TABLE 8
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
SUMMARY OF BIOCHEMISTRY DATA

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

GROUP:		1	2	3	4	5	6
LEVEL (MG/KG/DAY):		0	0.01	0.05	0.2	1.0	10.0
SORBITOL DEHYDR. IU/L							
DAYS 15-18	MEAN	25.3	28.3	16.7	16.8	26.5	16.9
	S.D.	18.07	20.75	2.90	4.70	21.95	6.25
	N	8	6	7	5	9	8
DAYS 92-95	MEAN	28.7	19.8	19.3	22.9	19.4	41.9
	S.D.	14.74	9.53	6.31	16.42	7.93	73.89
	N	10	10	10	10	9	10
DAYS 121-123 (RECOVERY PHASE)	MEAN	32.6		43.8		30.0	30.0
	S.D.	21.33		38.99		17.84	21.12
	N	10		9		10	10
MAGNESIUM MG/DL							
DAYS 15-18	MEAN	3.5	3.3	3.4	3.6	3.4	3.3
	S.D.	0.22	0.41	0.27	0.34	0.20	0.38
	N	9	6	7	5	7	7
DAYS 92-95	MEAN	3.5	3.4	3.5	3.4	3.3	3.4
	S.D.	0.18	0.21	0.29	0.20	0.23	0.35
	N	10	10	10	10	9	10
DAYS 121-123 (RECOVERY PHASE)	MEAN	3.5		3.7		3.6	3.6
	S.D.	0.42		0.36		0.31	0.31
	N	10		9		10	10

NONE SIGNIFICANTLY DIFFERENT FROM CONTROL
NOTE: THE MEANS AND STANDARD DEVIATIONS WERE CALCULATED USING NONROUNDED VALUES.
FEMALES IN GROUPS 2 AND 4 WERE EUTHANIZED ON DAYS 15-18 OR DAYS 92-95.

TABLE 9
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
SUMMARY OF ESTROUS CYCLICITY DATA

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

GROUP:	1	2	3	4	5	6
LEVEL (MG/KG/DAY):	0	0.01	0.05	0.2	1.0	10.0
MEAN CYCLE LENGTH (DAYS)	4.30	4.38	4.48	4.68	4.06	4.22
S.D.	0.434	0.484	0.602	0.567	0.177	0.381
NO. OF FEMALES EVALUATED	10	10	10	10	10	10
NO. (%) CYCLING	10 (100.0)	10 (100.0)	9 (90.0)	9 (90.0)	8 (80.0)	10 (100.0)

NONE SIGNIFICANTLY DIFFERENT FROM CONTROL

NOTE: CYCLE LENGTH (DAYS) = THE NUMBER OF DAYS FROM THE FIRST TO THE SECOND OBSERVED ESTROUS, FROM THE SECOND TO THIRD OBSERVED ESTROUS, ETC. THE NO. (%) CYCLING = FEMALES WERE CONSIDERED TO BE CYCLING IF THEY HAD AT LEAST THREE ESTROUS CYCLES DURING THE 21-DAY EVALUATION PERIOD.

TABLE 9
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
SUMMARY OF ESTROUS CYCLICITY DATA
(RECOVERY PHASE)

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

GROUP:	1	3	5	6
LEVEL (MG/KG/DAY):	0	0.05	1.0	10.0
MEAN CYCLE LENGTH (DAYS)	4.38	4.14	4.26	4.81
S.D.	0.727	0.283	0.532	0.765
NO. OF FEMALES EVALUATED	10	10	10	10
NO. (%) CYCLING	5 (50.0)	7 (70.0)	6 (60.0)	6 (60.0)

NONE SIGNIFICANTLY DIFFERENT FROM CONTROL

NOTE: CYCLE LENGTH (DAYS) = THE NUMBER OF DAYS FROM THE FIRST TO THE SECOND OBSERVED ESTROUS, FROM THE SECOND TO THIRD OBSERVED ESTROUS, ETC. THE NO. (%) CYCLING = FEMALES WERE CONSIDERED TO BE CYCLING IF THEY HAD AT LEAST THREE ESTROUS CYCLES DURING THE 21-DAY EVALUATION PERIOD. FEMALES IN GROUPS 2 AND 4 WERE EUTHANIZED ON DAYS 15-18 OR DAYS 92-95.

TABLE 10
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
SUMMARY OF GROSS NECROPSY OBSERVATIONS
(FOUND DEAD)

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

GROUP:	1	2	3	4	5	6
LEVEL (MG/KG/DAY):	0	0.01	0.05	0.2	1.0	10.0
NUMBER OF ANIMALS EXAMINED	0	0	1	0	0	0
LUNG						
-REDDENED	0	0	1	0	0	0
THYROID GLAND						
-REDDENED	0	0	1	0	0	0

TABLE 10
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
SUMMARY OF GROSS NECROPSY OBSERVATIONS
(SCHEDULED EUTHANASIA - DAYS 15-18)

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

GROUP:	1	2	3	4	5	6
LEVEL (MG/KG/DAY):	0	0.01	0.05	0.2	1.0	10.0
NUMBER OF ANIMALS EXAMINED	10	10	10	10	10	10
ALL TISSUES WITHIN NORMAL LIMITS	8	9	10	7	8	10
HAIRCOAT						
-HAIRLOSS	0	0	0	0	1	0
KIDNEY						
-CYST(S)	0	0	0	1	0	0
-LESION	0	0	0	0	1	0
SKIN						
-SCABBING	2	0	0	1	0	0
TESTES						
-SMALL	0	1	0	0	0	0
URINARY BLADDER/URETHRA						
-LESION	0	0	0	1	0	0

TABLE 10
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
SUMMARY OF GROSS NECROPSY OBSERVATIONS
(SCHEDULED EUTHANASIA - DAYS 92-95)

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

GROUP:	1	2	3	4	5	6
LEVEL (MG/KG/DAY):	0	0.01	0.05	0.2	1.0	10.0
NUMBER OF ANIMALS EXAMINED	10	10	10	10	10	10
ALL TISSUES WITHIN NORMAL LIMITS	10	7	7	9	7	6
ABDOMINAL CAVITY						
-ADHESION	0	1	0	0	0	0
-UMBILICAL HERNIA	0	0	0	1	1	0
EXTERNAL APPEARANCE						
-PINNA(E) - THICKENED	0	0	1	0	0	0
HAIRCOAT						
-HAIRLOSS	0	0	0	0	1	0
-DARK MATERIAL	0	0	1	1	1	0
KIDNEY						
-CYST(S)	0	0	0	0	0	1
-DILATED PELVIS	0	0	1	0	0	0
-ENLARGED	0	0	0	0	0	1
-FOCI	0	0	0	0	0	1
LIVER						
-ADHESION	0	0	1	0	0	0
-MOTTLED	0	0	0	0	0	1
ORAL CAVITY						
-INCISOR - MALALIGNED	0	1	1	1	1	0

TABLE 10
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
SUMMARY OF GROSS NECROPSY OBSERVATIONS
(SCHEDULED EUTHANASIA - DAYS 92-95)

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

GROUP:	1	2	3	4	5	6
LEVEL (MG/KG/DAY):	0	0.01	0.05	0.2	1.0	10.0
NUMBER OF ANIMALS EXAMINED	10	10	10	10	10	10
ALL TISSUES WITHIN NORMAL LIMITS	10	7	7	9	7	6
ORAL CAVITY (CONTINUED)						
-INCISOR - ABSENT	0	1	0	1	0	0
THYROID GLAND						
-REDDENED	0	0	0	0	0	3

TABLE 10
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
SUMMARY OF GROSS NECROPSY OBSERVATIONS
(RECOVERY PHASE/SCHEDULED EUTHANASIA - DAYS 121-123)

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

GROUP:	1	3	5	6
LEVEL (MG/KG/DAY):	0	0.05	1.0	10.0
NUMBER OF ANIMALS EXAMINED	10	10	10	10
ALL TISSUES WITHIN NORMAL LIMITS	9	8	6	6
HAIRCOAT				
-HAIRLOSS	0	0	0	2
-DARK MATERIAL	0	2	2	1
KIDNEY				
-CYST(S)	0	0	1	0
-PITTED	0	0	1	1
ORAL CAVITY				
-INCISOR - MALALIGNED	0	1	1	1
-INCISOR - BROKEN	0	0	0	1
SPLEEN				
-CYST(S)	0	0	0	1
THYMUS				
-REDDENED	1	0	0	0

TABLE 10
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
SUMMARY OF GROSS NECROPSY OBSERVATIONS
(SCHEDULED EUTHANASIA - DAYS 15-18)

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

GROUP:	1	2	3	4	5	6
LEVEL (MG/KG/DAY):	0	0.01	0.05	0.2	1.0	10.0
NUMBER OF ANIMALS EXAMINED	10	10	10	10	10	10
ALL TISSUES WITHIN NORMAL LIMITS	10	9	10	10	9	9
OVARY						
-CYST(S)	0	0	0	0	0	1
SKIN						
-SCABBING	0	1	0	0	0	0
UTERUS						
-DISTENDED	0	0	0	0	1	0

TABLE 10
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
SUMMARY OF GROSS NECROPSY OBSERVATIONS
(SCHEDULED EUTHANASIA - DAYS 92-95)

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

GROUP:	1	2	3	4	5	6
LEVEL (MG/KG/DAY):	0	0.01	0.05	0.2	1.0	10.0
NUMBER OF ANIMALS EXAMINED	10	10	10	10	10	10
ALL TISSUES WITHIN NORMAL LIMITS	6	6	6	7	8	8
ABDOMINAL CAVITY						
-UMBILICAL HERNIA	0	0	0	0	0	1
EXTERNAL APPEARANCE						
-PINNA(E) - THICKENED	1	1	1	0	0	0
HAIRCOAT						
-HAIRLOSS	0	0	2	0	0	0
-DARK MATERIAL	0	0	0	2	1	0
KIDNEY						
-DILATED PELVIS	0	1	0	0	0	1
LUNG						
-FOCI	1	0	0	0	0	0
-REDDENED	1	0	0	0	0	0
MANDIBULAR LYMPH NODE						
-REDDENED	0	1	0	0	0	0
OVARY						
-CYST(S)	0	0	0	0	1	0
ORAL CAVITY						
-INCISOR - MALALIGNED	1	1	0	1	1	0

TABLE 10
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
SUMMARY OF GROSS NECROPSY OBSERVATIONS
(SCHEDULED EUTHANASIA - DAYS 92-95)

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

GROUP:	1	2	3	4	5	6
LEVEL (MG/KG/DAY):	0	0.01	0.05	0.2	1.0	10.0
NUMBER OF ANIMALS EXAMINED	10	10	10	10	10	10
ALL TISSUES WITHIN NORMAL LIMITS	6	6	6	7	8	8
ORAL CAVITY (CONTINUED)						
-INCISOR - BROKEN	0	0	0	1	0	0
UTERUS						
-DISTENDED	0	2	0	0	0	0
GENERAL COMMENT						
-FINAL CLINICAL OBSERVATION NOT APPARENT POSTMORTEM	1	0	1	0	0	0

TABLE 10
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
SUMMARY OF GROSS NECROPSY OBSERVATIONS
(RECOVERY PHASE/SCHEDULED EUTHANASIA - DAYS 121-123)

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

GROUP:	1	3	5	6
LEVEL (MG/KG/DAY):	0	0.05	1.0	10.0
NUMBER OF ANIMALS EXAMINED	10	9	10	10
ALL TISSUES WITHIN NORMAL LIMITS	9	7	6	6
EXTERNAL APPEARANCE				
-PINNA(E) - THICKENED	1	1	2	0
HAIRCOAT				
-HAIRLOSS	0	0	1	1
-DARK MATERIAL	0	1	2	0
-WET MATTING	0	0	1	0
KIDNEY				
-DILATED PELVIS	0	0	0	1
ORAL CAVITY				
-INCISOR - MALALIGNED	0	1	1	0
TRACHEA				
-CONTENT ABNORMAL	0	0	1	1
UTERUS				
-DISTENDED	0	0	0	1

SLI STUDY NO.: 3455.1
CLIENT: MANTECH ENVIRONMENTAL

TABLE 11
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
SUMMARY OF ABSOLUTE ORGAN WEIGHT DATA (GRAMS)
(SCHEDULED EUTHANASIA - DAYS 15-18)

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

GROUP:		1	2	3	4	5	6
LEVEL (MG/KG/DAY):		0	0.01	0.05	0.2	1.0	10.0
BRAIN							
	MEAN	2.09	2.05	2.10	2.09	2.11	2.12
	S.D.	0.066	0.067	0.106	0.073	0.082	0.077
	N	10	10	10	10	10	10
PITUITARY							
	MEAN	0.0119	0.0125	0.0117	0.0129	0.0117	0.0119
	S.D.	0.00181	0.00198	0.00293	0.00218	0.00189	0.00126
	N	10	10	10	10	10	10
KIDNEYS							
	MEAN	3.11	3.05	2.98	3.20	3.00	3.01
	S.D.	0.376	0.223	0.193	0.410	0.359	0.133
	N	10	10	10	10	10	10
TESTES							
	MEAN	3.01	2.77	2.97	2.78	2.89	2.93
	S.D.	0.271	0.721	0.219	0.182	0.242	0.184
	N	10	10	10	10	10	10
HEART							
	MEAN	1.30	1.26	1.24	1.35	1.26	1.25
	S.D.	0.111	0.150	0.117	0.174	0.111	0.062
	N	10	10	10	10	10	10

NONE SIGNIFICANTLY DIFFERENT FROM CONTROL

TABLE 11
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
SUMMARY OF ABSOLUTE ORGAN WEIGHT DATA (GRAMS)
(SCHEDULED EUTHANASIA - DAYS 15-18)

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

GROUP:	1	2	3	4	5	6
LEVEL (MG/KG/DAY):	0	0.01	0.05	0.2	1.0	10.0
LUNGS						
MEAN	1.54	1.54	1.48	1.67	1.56	1.56
S.D.	0.256	0.185	0.223	0.234	0.132	0.255
N	10	10	10	10	10	10
LIVER						
MEAN	15.38	15.51	14.19	15.56	14.72	14.86
S.D.	1.536	1.578	1.431	1.908	1.934	1.109
N	10	10	10	10	10	10
SPLEEN						
MEAN	0.73	0.77	0.72	0.71	0.78	0.73
S.D.	0.133	0.131	0.104	0.091	0.084	0.067
N	10	10	10	10	10	10
EPIDIDYMIS						
MEAN	0.69	0.64	0.72	0.67	0.66	0.68
S.D.	0.088	0.106	0.100	0.061	0.054	0.074
N	10	10	10	10	10	10
THYROID/PARATHYROID						
MEAN	0.0206	0.0207	0.0199	0.0220	0.0206	0.0256*
S.D.	0.00307	0.00235	0.00419	0.00364	0.00385	0.00286
N	10	10	10	10	10	10

SIGNIFICANTLY DIFFERENT FROM CONTROL: * = P<0.05

TABLE 11
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
SUMMARY OF ABSOLUTE ORGAN WEIGHT DATA (GRAMS)
(SCHEDULED EUTHANASIA - DAYS 92-95)

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

GROUP:		1	2	3	4	5	6
LEVEL (MG/KG/DAY):		0	0.01	0.05	0.2	1.0	10.0
BRAIN							
	MEAN	2.33	2.22	2.26	2.27	2.26	2.26
	S.D.	0.125	0.080	0.124	0.084	0.152	0.098
	N	10	10	10	10	10	10
PITUITARY							
	MEAN	0.0138	0.0128	0.0149	0.0144	0.0129	0.0142
	S.D.	0.00166	0.00140	0.00203	0.00186	0.00129	0.00258
	N	10	10	9	10	10	10
KIDNEYS							
	MEAN	4.04	3.97	3.95	4.11	4.02	4.50
	S.D.	0.307	0.611	0.253	0.218	0.303	1.667
	N	10	10	10	10	10	10
TESTES							
	MEAN	3.73	3.36*	3.44	3.39	3.47	3.31**
	S.D.	0.282	0.285	0.195	0.271	0.321	0.216
	N	10	10	10	10	10	10
HEART							
	MEAN	1.73	1.66	1.69	1.68	1.66	1.62
	S.D.	0.168	0.181	0.201	0.142	0.166	0.196
	N	10	10	10	10	10	10

SIGNIFICANTLY DIFFERENT FROM CONTROL: * = P<0.05; ** = P<0.01

TABLE 11
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
SUMMARY OF ABSOLUTE ORGAN WEIGHT DATA (GRAMS)
(SCHEDULED EUTHANASIA - DAYS 92-95)

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

GROUP:	1	2	3	4	5	6
LEVEL (MG/KG/DAY):	0	0.01	0.05	0.2	1.0	10.0
LUNGS						
MEAN	1.87	1.87	1.82	1.88	1.76	1.91
S.D.	0.166	0.286	0.248	0.289	0.309	0.325
N	10	10	10	10	10	10
LIVER						
MEAN	20.24	19.12	18.63	20.02	19.89	18.95
S.D.	2.387	2.819	3.104	2.655	3.403	2.228
N	10	10	10	10	10	10
SPLEEN						
MEAN	0.86	0.81	0.86	0.77	0.90	0.83
S.D.	0.139	0.136	0.137	0.131	0.149	0.166
N	10	10	10	10	10	10
EPIDIDYMIS						
MEAN	1.52	1.39	1.44	1.37	1.48	1.44
S.D.	0.114	0.079	0.149	0.186	0.206	0.169
N	10	10	10	10	10	10
THYROID/PARATHYROID						
MEAN	0.0294	0.0274	0.0265	0.0279	0.0321	0.0378**
S.D.	0.00466	0.00394	0.00427	0.00277	0.00443	0.00613
N	10	10	10	10	10	10

SIGNIFICANTLY DIFFERENT FROM CONTROL: ** = P<0.01

TABLE 11
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
SUMMARY OF ABSOLUTE ORGAN WEIGHT DATA (GRAMS)
(RECOVERY PHASE/SCHEDULED EUTHANASIA - DAYS 121-123)

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

GROUP:		1	3	5	6
LEVEL (MG/KG/DAY):		0	0.05	1.0	10.0
BRAIN					
	MEAN	2.32	2.35	2.37	2.38
	S.D.	0.119	0.114	0.119	0.073
	N	10	10	10	10
PITUITARY					
	MEAN	0.0127	0.0135	0.0134	0.0142
	S.D.	0.00191	0.00127	0.00183	0.00251
	N	10	10	10	10
KIDNEYS					
	MEAN	4.22	4.23	4.18	4.20
	S.D.	0.563	0.435	0.375	0.507
	N	10	10	10	10
TESTES					
	MEAN	3.54	3.62	3.47	3.58
	S.D.	0.192	0.300	0.233	0.266
	N	10	10	10	10
HEART					
	MEAN	1.84	1.81	1.76	1.85
	S.D.	0.355	0.175	0.204	0.317
	N	10	10	10	10

NONE SIGNIFICANTLY DIFFERENT FROM CONTROL
NOTE: MALES IN GROUPS 2 AND 4 WERE EUTHANIZED ON DAYS 15-18 OR DAYS 92-95.

TABLE 11
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
SUMMARY OF ABSOLUTE ORGAN WEIGHT DATA (GRAMS)
(RECOVERY PHASE/SCHEDULED EUTHANASIA - DAYS 121-123)

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

GROUP:	1	3	5	6
LEVEL (MG/KG/DAY):	0	0.05	1.0	10.0
LUNGS				
MEAN	1.88	1.93	1.91	1.92
S.D.	0.248	0.129	0.262	0.145
N	10	10	10	10
LIVER				
MEAN	21.20	20.55	21.38	18.63
S.D.	4.225	3.519	4.059	2.989
N	10	10	10	10
SPLEEN				
MEAN	0.90	0.91	0.93	0.88
S.D.	0.123	0.166	0.166	0.105
N	10	10	10	10
EPIDIDYMIS				
MEAN	1.57	1.48	1.49	1.46
S.D.	0.130	0.142	0.117	0.143
N	10	10	10	10
THYROID/PARATHYROID				
MEAN	0.0308	0.0306	0.0289	0.0321
S.D.	0.00536	0.00568	0.00420	0.00541
N	10	10	10	10

NONE SIGNIFICANTLY DIFFERENT FROM CONTROL
NOTE: MALES IN GROUPS 2 AND 4 WERE EUTHANIZED ON DAYS 15-18 OR DAYS 92-95.

TABLE 11
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
SUMMARY OF ABSOLUTE ORGAN WEIGHT DATA (GRAMS)
(SCHEDULED EUTHANASIA - DAYS 15-18)

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

GROUP:		1	2	3	4	5	6
LEVEL (MG/KG/DAY):		0	0.01	0.05	0.2	1.0	10.0
BRAIN							
	MEAN	1.99	1.96	1.95	1.95	1.96	1.94
	S.D.	0.057	0.086	0.126	0.112	0.059	0.086
	N	10	10	10	10	10	10
PITUITARY							
	MEAN	0.0133	0.0137	0.0129	0.0133	0.0125	0.0133
	S.D.	0.00229	0.00325	0.00267	0.00301	0.00258	0.00222
	N	10	10	10	10	10	10
OVARIES							
	MEAN	0.1003	0.1079	0.1078	0.0982	0.0954	0.1077
	S.D.	0.01510	0.02303	0.01747	0.01361	0.01710	0.04333
	N	10	10	10	10	10	10
KIDNEYS							
	MEAN	2.13	2.10	2.07	2.08	2.10	2.11
	S.D.	0.140	0.158	0.134	0.205	0.140	0.163
	N	10	10	10	10	10	10
HEART							
	MEAN	0.97	0.93	0.96	0.95	0.91	0.93
	S.D.	0.085	0.054	0.081	0.121	0.059	0.078
	N	10	10	10	10	10	10

NONE SIGNIFICANTLY DIFFERENT FROM CONTROL

TABLE 11
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
SUMMARY OF ABSOLUTE ORGAN WEIGHT DATA (GRAMS)
(SCHEDULED EUTHANASIA - DAYS 15-18)

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

GROUP:		1	2	3	4	5	6
LEVEL (MG/KG/DAY):		0	0.01	0.05	0.2	1.0	10.0
LUNGS							
	MEAN	1.22	1.22	1.27	1.30	1.21	1.27
	S.D.	0.116	0.073	0.100	0.202	0.098	0.208
	N	10	10	10	10	8	10
LIVER							
	MEAN	10.58	10.09	10.60	10.30	9.91	9.85
	S.D.	1.477	1.068	1.170	1.195	0.994	0.642
	N	10	10	10	10	10	10
SPLEEN							
	MEAN	0.55	0.57	0.61	0.60	0.56	0.57
	S.D.	0.089	0.048	0.098	0.069	0.071	0.083
	N	10	10	10	10	10	10
UTERUS							
	MEAN	0.43	0.51	0.48	0.54	0.59	0.48
	S.D.	0.106	0.190	0.090	0.226	0.312	0.105
	N	10	10	10	10	10	10
THYROID/PARATHYROID							
	MEAN	0.0188	0.0177	0.0194	0.0187	0.0178	0.0196
	S.D.	0.00284	0.00205	0.00343	0.00304	0.00190	0.00194
	N	10	10	10	10	10	10

NONE SIGNIFICANTLY DIFFERENT FROM CONTROL

TABLE 11
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
SUMMARY OF ABSOLUTE ORGAN WEIGHT DATA (GRAMS)
(SCHEDULED EUTHANASIA - DAYS 92-95)

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

GROUP:		1	2	3	4	5	6
LEVEL (MG/KG/DAY):		0	0.01	0.05	0.2	1.0	10.0
BRAIN							
	MEAN	2.10	2.08	2.05	2.15	2.07	2.07
	S.D.	0.091	0.098	0.120	0.110	0.082	0.160
	N	10	10	10	10	10	10
PITUITARY							
	MEAN	0.0175	0.0165	0.0172	0.0166	0.0167	0.0152
	S.D.	0.00226	0.00244	0.00236	0.00307	0.00273	0.00182
	N	10	10	10	10	10	10
OVARIES							
	MEAN	0.0812	0.0836	0.0770	0.0864	0.0783	0.0837
	S.D.	0.02216	0.01169	0.01759	0.01773	0.02019	0.01102
	N	10	10	10	10	10	10
KIDNEYS							
	MEAN	2.32	2.23	2.20	2.37	2.17	2.25
	S.D.	0.251	0.199	0.154	0.189	0.205	0.158
	N	10	10	10	10	10	10
HEART							
	MEAN	1.10	1.02	1.05	1.08	1.10	1.08
	S.D.	0.086	0.085	0.094	0.082	0.100	0.072
	N	10	10	10	10	10	10

NONE SIGNIFICANTLY DIFFERENT FROM CONTROL

TABLE 11
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
SUMMARY OF ABSOLUTE ORGAN WEIGHT DATA (GRAMS)
(SCHEDULED EUTHANASIA - DAYS 92-95)

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

GROUP:	1	2	3	4	5	6
LEVEL (MG/KG/DAY):	0	0.01	0.05	0.2	1.0	10.0
LUNGS						
MEAN	1.52	1.33	1.54	1.58	1.53	1.50
S.D.	0.255	0.103	0.257	0.253	0.475	0.256
N	10	10	10	10	10	10
LIVER						
MEAN	11.60	10.25	10.01	10.66	10.33	10.10
S.D.	1.354	1.760	1.397	1.503	1.101	1.563
N	10	10	10	10	10	10
SPLEEN						
MEAN	0.64	0.60	0.60	0.63	0.61	0.54
S.D.	0.078	0.109	0.054	0.068	0.067	0.094
N	10	10	10	10	10	10
UTERUS						
MEAN	0.55	0.74	0.64	0.67	0.66	0.68
S.D.	0.088	0.383	0.209	0.331	0.231	0.213
N	10	10	10	10	10	10
THYROID/PARATHYROID						
MEAN	0.0221	0.0218	0.0197	0.0202	0.0193	0.0270*
S.D.	0.00341	0.00367	0.00261	0.00265	0.00352	0.00505
N	10	10	10	10	10	10

SIGNIFICANTLY DIFFERENT FROM CONTROL: * = P<0.05

TABLE 11
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
SUMMARY OF ABSOLUTE ORGAN WEIGHT DATA (GRAMS)
(RECOVERY PHASE/SCHEDULED EUTHANASIA - DAYS 121-123)

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

GROUP:		1	3	5	6
LEVEL (MG/KG/DAY):		0	0.05	1.0	10.0
BRAIN					
	MEAN	2.16	2.24	2.16	2.16
	S.D.	0.087	0.124	0.039	0.115
	N	10	9	10	10
PITUITARY					
	MEAN	0.0159	0.0156	0.0143	0.0154
	S.D.	0.00520	0.00161	0.00393	0.00221
	N	10	9	10	10
OVARIES					
	MEAN	0.0963	0.0923	0.0967	0.0965
	S.D.	0.02063	0.01786	0.01300	0.01705
	N	10	9	10	10
KIDNEYS					
	MEAN	2.37	2.30	2.34	2.37
	S.D.	0.179	0.200	0.257	0.219
	N	10	9	10	10
HEART					
	MEAN	1.19	1.08	1.16	1.22
	S.D.	0.100	0.101	0.094	0.152
	N	10	9	10	10

NONE SIGNIFICANTLY DIFFERENT FROM CONTROL
NOTE: FEMALES IN GROUPS 2 AND 4 WERE EUTHANIZED ON DAYS 15-18 OR DAYS 92-95.

TABLE 11
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
SUMMARY OF ABSOLUTE ORGAN WEIGHT DATA (GRAMS)
(RECOVERY PHASE/SCHEDULED EUTHANASIA - DAYS 121-123)

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

GROUP:	1	3	5	6
LEVEL (MG/KG/DAY):	0	0.05	1.0	10.0
LUNGS				
MEAN	1.50	1.42	1.59	1.66
S.D.	0.289	0.197	0.379	0.329
N	10	9	10	10
LIVER				
MEAN	11.47	10.51	10.95	11.19
S.D.	1.299	1.484	1.359	1.465
N	10	9	10	10
SPLEEN				
MEAN	0.63	0.60	0.64	0.64
S.D.	0.103	0.054	0.135	0.076
N	10	9	10	10
UTERUS				
MEAN	0.50	0.54	0.62	0.55
S.D.	0.069	0.198	0.150	0.090
N	10	9	10	10
THYROID/PARATHYROID				
MEAN	0.0219	0.0218	0.0217	0.0236
S.D.	0.00416	0.00460	0.00322	0.00317
N	10	9	10	10

NONE SIGNIFICANTLY DIFFERENT FROM CONTROL
NOTE: FEMALES IN GROUPS 2 AND 4 WERE EUTHANIZED ON DAYS 15-18 OR DAYS 92-95.

SLI STUDY NO.: 3455.1
CLIENT: MANTECH ENVIRONMENTAL

TABLE 12
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
SUMMARY OF ORGAN WEIGHT DATA RELATIVE TO FINAL BODY WEIGHT (%)
(SCHEDULED EUTHANASIA - DAYS 15-18)

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

GROUP:	1	2	3	4	5	6
LEVEL (MG/KG/DAY):	0	0.01	0.05	0.2	1.0	10.0
FINAL BODY WEIGHT (g)						
MEAN	318	318	304	323	316	319
S.D.	23.1	26.5	27.0	13.2	26.4	16.0
N	10	10	10	10	10	10
BRAIN						
MEAN	0.66	0.65	0.70	0.65	0.67	0.67
S.D.	0.040	0.065	0.057	0.032	0.052	0.038
N	10	10	10	10	10	10
PITUITARY						
MEAN	0.0037	0.0039	0.0038	0.0040	0.0037	0.0037
S.D.	0.00042	0.00048	0.00070	0.00064	0.00057	0.00032
N	10	10	10	10	10	10
KIDNEYS						
MEAN	0.98	0.96	0.98	0.99	0.95	0.95
S.D.	0.077	0.068	0.046	0.129	0.112	0.056
N	10	10	10	10	10	10
TESTES						
MEAN	0.95	0.87	0.98	0.86	0.92	0.92
S.D.	0.073	0.229	0.094	0.063	0.073	0.053
N	10	10	10	10	10	10

NONE SIGNIFICANTLY DIFFERENT FROM CONTROL

TABLE 12
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
SUMMARY OF ORGAN WEIGHT DATA RELATIVE TO FINAL BODY WEIGHT (%)
(SCHEDULED EUTHANASIA - DAYS 15-18)

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

GROUP:	1	2	3	4	5	6
LEVEL (MG/KG/DAY):	0	0.01	0.05	0.2	1.0	10.0
HEART						
MEAN	0.41	0.40	0.41	0.42	0.40	0.39
S.D.	0.026	0.032	0.019	0.046	0.026	0.025
N	10	10	10	10	10	10
LUNGS						
MEAN	0.48	0.49	0.49	0.52	0.50	0.49
S.D.	0.062	0.076	0.064	0.064	0.034	0.080
N	10	10	10	10	10	10
LIVER						
MEAN	4.83	4.89	4.67	4.81	4.65	4.66
S.D.	0.319	0.313	0.271	0.531	0.295	0.346
N	10	10	10	10	10	10
SPLEEN						
MEAN	0.23	0.24	0.24	0.22	0.25	0.23
S.D.	0.033	0.031	0.026	0.025	0.023	0.020
N	10	10	10	10	10	10
EPIDIDYMIS						
MEAN	0.22	0.20	0.24	0.21	0.21	0.21
S.D.	0.023	0.037	0.039	0.022	0.021	0.028
N	10	10	10	10	10	10

NONE SIGNIFICANTLY DIFFERENT FROM CONTROL

TABLE 12
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
SUMMARY OF ORGAN WEIGHT DATA RELATIVE TO FINAL BODY WEIGHT (%)
(SCHEDULED EUTHANASIA - DAYS 15-18)

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

GROUP:	1	2	3	4	5	6
LEVEL (MG/KG/DAY):	0	0.01	0.05	0.2	1.0	10.0
THYROID/PARATHYROID						
MEAN	0.0065	0.0065	0.0065	0.0068	0.0065	0.0080*
S.D.	0.00080	0.00061	0.00127	0.00120	0.00099	0.00105
N	10	10	10	10	10	10

SIGNIFICANTLY DIFFERENT FROM CONTROL: * = P<0.05

TABLE 12
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
SUMMARY OF ORGAN WEIGHT DATA RELATIVE TO FINAL BODY WEIGHT (%)
(SCHEDULED EUTHANASIA - DAYS 92-95)

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

GROUP:	1	2	3	4	5	6
LEVEL (MG/KG/DAY):	0	0.01	0.05	0.2	1.0	10.0
FINAL BODY WEIGHT (g)						
MEAN	567	527	543	563	556	531
S.D.	38.3	52.1	45.3	51.1	58.6	48.1
N	10	10	10	9	10	10
BRAIN						
MEAN	0.41	0.42	0.42	0.40	0.41	0.43
S.D.	0.028	0.038	0.039	0.040	0.026	0.041
N	10	10	10	9	10	10
PITUITARY						
MEAN	0.0024	0.0024	0.0027	0.0025	0.0023	0.0027
S.D.	0.00029	0.00028	0.00040	0.00036	0.00029	0.00043
N	10	10	9	9	10	10
KIDNEYS						
MEAN	0.71	0.75	0.73	0.73	0.73	0.86
S.D.	0.034	0.093	0.050	0.054	0.050	0.367
N	10	10	10	9	10	10
TESTES						
MEAN	0.66	0.64	0.64	0.61	0.63	0.63
S.D.	0.093	0.053	0.061	0.044	0.044	0.062
N	10	10	10	9	10	10

NONE SIGNIFICANTLY DIFFERENT FROM CONTROL

TABLE 12
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
SUMMARY OF ORGAN WEIGHT DATA RELATIVE TO FINAL BODY WEIGHT (%)
(SCHEDULED EUTHANASIA - DAYS 92-95)

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

GROUP:		1	2	3	4	5	6
LEVEL (MG/KG/DAY):		0	0.01	0.05	0.2	1.0	10.0
HEART							
	MEAN	0.30	0.32	0.31	0.30	0.30	0.31
	S.D.	0.016	0.031	0.032	0.011	0.023	0.021
	N	10	10	10	9	10	10
LUNGS							
	MEAN	0.33	0.36	0.34	0.34	0.31	0.36
	S.D.	0.035	0.049	0.046	0.055	0.030	0.065
	N	10	10	10	9	10	10
LIVER							
	MEAN	3.57	3.63	3.42	3.57	3.56	3.58
	S.D.	0.317	0.397	0.365	0.275	0.320	0.361
	N	10	10	10	9	10	10
SPLEEN							
	MEAN	0.15	0.15	0.16	0.14	0.16	0.16
	S.D.	0.017	0.016	0.019	0.019	0.015	0.034
	N	10	10	10	9	10	10
EPIDIDYMIS							
	MEAN	0.27	0.27	0.27	0.24	0.27	0.27
	S.D.	0.036	0.023	0.027	0.030	0.018	0.039
	N	10	10	10	9	10	10

NONE SIGNIFICANTLY DIFFERENT FROM CONTROL

TABLE 12
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
SUMMARY OF ORGAN WEIGHT DATA RELATIVE TO FINAL BODY WEIGHT (%)
(SCHEDULED EUTHANASIA - DAYS 92-95)

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

GROUP:	1	2	3	4	5	6
LEVEL (MG/KG/DAY):	0	0.01	0.05	0.2	1.0	10.0
THYROID/PARATHYROID						
MEAN	0.0052	0.0052	0.0049	0.0049	0.0058	0.0072#
S.D.	0.00100	0.00054	0.00060	0.00050	0.00060	0.00122
N	10	10	10	9	10	10

SIGNIFICANTLY DIFFERENT FROM CONTROL: # = P<0.001

TABLE 12
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
SUMMARY OF ORGAN WEIGHT DATA RELATIVE TO FINAL BODY WEIGHT (%)
(RECOVERY PHASE/SCHEDULED EUTHANASIA - DAYS 121-123)

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

GROUP:	1	3	5	6
LEVEL (MG/KG/DAY):	0	0.05	1.0	10.0
FINAL BODY WEIGHT (g)				
MEAN	576	571	581	549
S.D.	65.1	62.0	67.7	59.9
N	10	10	10	10
BRAIN				
MEAN	0.41	0.42	0.41	0.44
S.D.	0.044	0.039	0.046	0.055
N	10	10	10	10
PITUITARY				
MEAN	0.0022	0.0024	0.0023	0.0026*
S.D.	0.00022	0.00029	0.00020	0.00035
N	10	10	10	10
KIDNEYS				
MEAN	0.73	0.74	0.73	0.77
S.D.	0.066	0.073	0.072	0.050
N	10	10	10	10
TESTES				
MEAN	0.62	0.64	0.61	0.66
S.D.	0.083	0.064	0.081	0.051
N	10	10	10	10

SIGNIFICANTLY DIFFERENT FROM CONTROL: * = P<0.05
NOTE: MALES IN GROUPS 2 AND 4 WERE EUTHANIZED ON DAYS 15-18 OR DAYS 92-95.

TABLE 12
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
SUMMARY OF ORGAN WEIGHT DATA RELATIVE TO FINAL BODY WEIGHT (%)
(RECOVERY PHASE/SCHEDULED EUTHANASIA - DAYS 121-123)

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

GROUP:		1	3	5	6
LEVEL (MG/KG/DAY):		0	0.05	1.0	10.0
HEART					
	MEAN	0.32	0.32	0.30	0.34
	S.D.	0.040	0.032	0.023	0.049
	N	10	10	10	10
LUNGS					
	MEAN	0.33	0.34	0.33	0.35
	S.D.	0.038	0.045	0.037	0.037
	N	10	10	10	10
LIVER					
	MEAN	3.66	3.59	3.66	3.38
	S.D.	0.389	0.307	0.355	0.261
	N	10	10	10	10
SPLEEN					
	MEAN	0.16	0.16	0.16	0.16
	S.D.	0.011	0.023	0.016	0.018
	N	10	10	10	10
EPIDIDYMIS					
	MEAN	0.28	0.26	0.26	0.27
	S.D.	0.037	0.031	0.037	0.029
	N	10	10	10	10

NONE SIGNIFICANTLY DIFFERENT FROM CONTROL
NOTE: MALES IN GROUPS 2 AND 4 WERE EUTHANIZED ON DAYS 15-18 OR DAYS 92-95.

TABLE 12
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
SUMMARY OF ORGAN WEIGHT DATA RELATIVE TO FINAL BODY WEIGHT (%)
(RECOVERY PHASE/SCHEDULED EUTHANASIA - DAYS 121-123)

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

GROUP:	1	3	5	6
LEVEL (MG/KG/DAY):	0	0.05	1.0	10.0
THYROID/PARATHYROID				
MEAN	0.0054	0.0054	0.0050	0.0059
S.D.	0.00085	0.00072	0.00065	0.00127
N	10	10	10	10

NONE SIGNIFICANTLY DIFFERENT FROM CONTROL
NOTE: MALES IN GROUPS 2 AND 4 WERE EUTHANIZED ON DAYS 15-18 OR DAYS 92-95.

TABLE 12
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
SUMMARY OF ORGAN WEIGHT DATA RELATIVE TO FINAL BODY WEIGHT (%)
(SCHEDULED EUTHANASIA - DAYS 15-18)

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

GROUP:	1	2	3	4	5	6
LEVEL (MG/KG/DAY):	0	0.01	0.05	0.2	1.0	10.0
FINAL BODY WEIGHT (g)						
MEAN	218	214	221	210	217	212
S.D.	20.4	16.7	20.4	18.8	12.6	11.1
N	10	10	10	10	10	10
BRAIN						
MEAN	0.92	0.92	0.89	0.93	0.90	0.91
S.D.	0.068	0.088	0.099	0.090	0.057	0.055
N	10	10	10	10	10	10
PITUITARY						
MEAN	0.0061	0.0064	0.0058	0.0063	0.0058	0.0063
S.D.	0.00091	0.00164	0.00103	0.00138	0.00122	0.00124
N	10	10	10	10	10	10
OVARIES						
MEAN	0.0459	0.0503	0.0489	0.0469	0.0440	0.0508
S.D.	0.00450	0.00947	0.00844	0.00692	0.00791	0.02019
N	10	10	10	10	10	10
KIDNEYS						
MEAN	0.98	0.98	0.94	0.99	0.97	0.99
S.D.	0.065	0.051	0.096	0.036	0.068	0.079
N	10	10	10	10	10	10

NONE SIGNIFICANTLY DIFFERENT FROM CONTROL

TABLE 12
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
SUMMARY OF ORGAN WEIGHT DATA RELATIVE TO FINAL BODY WEIGHT (%)
(SCHEDULED EUTHANASIA - DAYS 15-18)

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

GROUP:	1	2	3	4	5	6
LEVEL (MG/KG/DAY):	0	0.01	0.05	0.2	1.0	10.0
HEART						
MEAN	0.44	0.44	0.44	0.45	0.42	0.44
S.D.	0.041	0.031	0.034	0.035	0.027	0.031
N	10	10	10	10	10	10
LUNGS						
MEAN	0.56	0.57	0.58	0.62	0.55	0.60
S.D.	0.067	0.043	0.062	0.087	0.052	0.085
N	10	10	10	10	8	10
LIVER						
MEAN	4.84	4.70	4.79	4.89	4.56	4.64
S.D.	0.351	0.326	0.228	0.356	0.363	0.193
N	10	10	10	10	10	10
SPLEEN						
MEAN	0.25	0.27	0.28	0.29	0.26	0.27
S.D.	0.034	0.015	0.045	0.030	0.028	0.046
N	10	10	10	10	10	10
UTERUS						
MEAN	0.20	0.24	0.22	0.25	0.28	0.23
S.D.	0.051	0.095	0.044	0.095	0.149	0.055
N	10	10	10	10	10	10

NONE SIGNIFICANTLY DIFFERENT FROM CONTROL

TABLE 12
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
SUMMARY OF ORGAN WEIGHT DATA RELATIVE TO FINAL BODY WEIGHT (%)
(SCHEDULED EUTHANASIA - DAYS 15-18)

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

GROUP:	1	2	3	4	5	6
LEVEL (MG/KG/DAY):	0	0.01	0.05	0.2	1.0	10.0
THYROID/PARATHYROID						
MEAN	0.0087	0.0083	0.0088	0.0089	0.0082	0.0092
S.D.	0.00131	0.00130	0.00185	0.00125	0.00084	0.00106
N	10	10	10	10	10	10

NONE SIGNIFICANTLY DIFFERENT FROM CONTROL

TABLE 12
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
SUMMARY OF ORGAN WEIGHT DATA RELATIVE TO FINAL BODY WEIGHT (%)
(SCHEDULED EUTHANASIA - DAYS 92-95)

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

GROUP:	1	2	3	4	5	6
LEVEL (MG/KG/DAY):	0	0.01	0.05	0.2	1.0	10.0
FINAL BODY WEIGHT (g)						
MEAN	319	301	290	314	305	311
S.D.	25.9	30.0	24.8	55.7	22.2	31.5
N	10	10	10	10	10	10
BRAIN						
MEAN	0.66	0.70	0.71	0.70	0.68	0.67
S.D.	0.052	0.058	0.053	0.092	0.056	0.054
N	10	10	10	10	10	10
PITUITARY						
MEAN	0.0055	0.0055	0.0060	0.0055	0.0055	0.0049
S.D.	0.00067	0.00087	0.00106	0.00142	0.00084	0.00077
N	10	10	10	10	10	10
OVARIES						
MEAN	0.0255	0.0280	0.0269	0.0278	0.0257	0.0270
S.D.	0.00725	0.00472	0.00735	0.00495	0.00654	0.00303
N	10	10	10	10	10	10
KIDNEYS						
MEAN	0.73	0.74	0.76	0.77	0.71	0.73
S.D.	0.067	0.048	0.068	0.102	0.059	0.043
N	10	10	10	10	10	10

NONE SIGNIFICANTLY DIFFERENT FROM CONTROL

TABLE 12
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
SUMMARY OF ORGAN WEIGHT DATA RELATIVE TO FINAL BODY WEIGHT (%)
(SCHEDULED EUTHANASIA - DAYS 92-95)

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

GROUP:		1	2	3	4	5	6
LEVEL (MG/KG/DAY):		0	0.01	0.05	0.2	1.0	10.0
HEART							
	MEAN	0.35	0.34	0.36	0.35	0.36	0.35
	S.D.	0.029	0.024	0.035	0.041	0.032	0.033
	N	10	10	10	10	10	10
LUNGS							
	MEAN	0.48	0.45	0.53	0.51	0.50	0.48
	S.D.	0.106	0.046	0.074	0.098	0.140	0.058
	N	10	10	10	10	10	10
LIVER							
	MEAN	3.64	3.39	3.45	3.43	3.39	3.24
	S.D.	0.418	0.282	0.370	0.367	0.365	0.269
	N	10	10	10	10	10	10
SPLEEN							
	MEAN	0.20	0.20	0.21	0.21	0.20	0.17
	S.D.	0.022	0.025	0.016	0.033	0.015	0.019
	N	10	10	10	10	10	10
UTERUS							
	MEAN	0.17	0.25	0.22	0.23	0.22	0.22
	S.D.	0.026	0.138	0.076	0.145	0.068	0.087
	N	10	10	10	10	10	10

NONE SIGNIFICANTLY DIFFERENT FROM CONTROL

TABLE 12
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
SUMMARY OF ORGAN WEIGHT DATA RELATIVE TO FINAL BODY WEIGHT (%)
(SCHEDULED EUTHANASIA - DAYS 92-95)

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

GROUP:	1	2	3	4	5	6
LEVEL (MG/KG/DAY):	0	0.01	0.05	0.2	1.0	10.0
THYROID/PARATHYROID						
MEAN	0.0070	0.0073	0.0068	0.0065	0.0064	0.0087*
S.D.	0.00110	0.00123	0.00091	0.00087	0.00124	0.00122
N	10	10	10	10	10	10

SIGNIFICANTLY DIFFERENT FROM CONTROL: * = P<0.05

TABLE 12
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
SUMMARY OF ORGAN WEIGHT DATA RELATIVE TO FINAL BODY WEIGHT (%)
(RECOVERY PHASE/SCHEDULED EUTHANASIA - DAYS 121-123)

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

GROUP:	1	3	5	6
LEVEL (MG/KG/DAY):	0	0.05	1.0	10.0
FINAL BODY WEIGHT (g)				
MEAN	321	307	318	320
S.D.	25.0	43.7	30.7	25.1
N	10	9	10	10
BRAIN				
MEAN	0.68	0.74	0.68	0.68
S.D.	0.053	0.077	0.066	0.076
N	10	9	10	10
PITUITARY				
MEAN	0.0050	0.0051	0.0045	0.0048
S.D.	0.00166	0.00074	0.00101	0.00058
N	10	9	10	10
OVARIES				
MEAN	0.0302	0.0302	0.0304	0.0301
S.D.	0.00704	0.00532	0.00295	0.00432
N	10	9	10	10
KIDNEYS				
MEAN	0.74	0.76	0.74	0.74
S.D.	0.044	0.047	0.066	0.070
N	10	9	10	10

NONE SIGNIFICANTLY DIFFERENT FROM CONTROL
NOTE: FEMALES IN GROUPS 2 AND 4 WERE EUTHANIZED ON DAYS 15-18 OR DAYS 92-95.

TABLE 12
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
SUMMARY OF ORGAN WEIGHT DATA RELATIVE TO FINAL BODY WEIGHT (%)
(RECOVERY PHASE/SCHEDULED EUTHANASIA - DAYS 121-123)

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

GROUP:		1	3	5	6
LEVEL (MG/KG/DAY):		0	0.05	1.0	10.0
HEART					
	MEAN	0.37	0.35	0.36	0.38
	S.D.	0.025	0.034	0.016	0.030
	N	10	9	10	10
LUNGS					
	MEAN	0.47	0.47	0.50	0.52
	S.D.	0.111	0.068	0.096	0.113
	N	10	9	10	10
LIVER					
	MEAN	3.57	3.43	3.44	3.50
	S.D.	0.170	0.111	0.343	0.319
	N	10	9	10	10
SPLEEN					
	MEAN	0.20	0.20	0.20	0.20
	S.D.	0.023	0.022	0.036	0.020
	N	10	9	10	10
UTERUS					
	MEAN	0.16	0.18	0.20	0.17
	S.D.	0.019	0.085	0.050	0.034
	N	10	9	10	10

NONE SIGNIFICANTLY DIFFERENT FROM CONTROL
NOTE: FEMALES IN GROUPS 2 AND 4 WERE EUTHANIZED ON DAYS 15-18 OR DAYS 92-95.

TABLE 12
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
SUMMARY OF ORGAN WEIGHT DATA RELATIVE TO FINAL BODY WEIGHT (%)
(RECOVERY PHASE/SCHEDULED EUTHANASIA - DAYS 121-123)

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

GROUP:	1	3	5	6
LEVEL (MG/KG/DAY):	0	0.05	1.0	10.0
THYROID/PARATHYROID				
MEAN	0.0068	0.0072	0.0068	0.0074
S.D.	0.00096	0.00139	0.00105	0.00076
N	10	9	10	10

NONE SIGNIFICANTLY DIFFERENT FROM CONTROL
NOTE: FEMALES IN GROUPS 2 AND 4 WERE EUTHANIZED ON DAYS 15-18 OR DAYS 92-95.

TABLE 13
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
SUMMARY OF ORGAN WEIGHT DATA RELATIVE TO BRAIN WEIGHT (%)
(SCHEDULED EUTHANASIA - DAYS 15-18)

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

GROUP:		1	2	3	4	5	6
LEVEL (MG/KG/DAY):		0	0.01	0.05	0.2	1.0	10.0
BRAIN (G)							
	MEAN	2.09	2.05	2.10	2.09	2.11	2.12
	S.D.	0.066	0.067	0.106	0.073	0.082	0.077
	N	10	10	10	10	10	10
PITUITARY							
	MEAN	0.5679	0.6091	0.5581	0.6170	0.5582	0.5622
	S.D.	0.08209	0.11209	0.14036	0.10393	0.09754	0.05641
	N	10	10	10	10	10	10
KIDNEYS							
	MEAN	148.58	148.71	141.69	153.11	142.31	142.29
	S.D.	15.694	11.861	10.586	19.281	16.449	8.688
	N	10	10	10	10	10	10
TESTES							
	MEAN	144.01	134.99	141.17	133.12	137.13	138.35
	S.D.	9.765	35.338	11.800	11.498	9.868	10.202
	N	10	10	10	10	10	10
HEART							
	MEAN	62.09	61.37	59.11	64.73	59.72	59.12
	S.D.	4.722	8.085	5.734	8.725	4.695	4.599
	N	10	10	10	10	10	10

NONE SIGNIFICANTLY DIFFERENT FROM CONTROL

TABLE 13
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
SUMMARY OF ORGAN WEIGHT DATA RELATIVE TO BRAIN WEIGHT (%)
(SCHEDULED EUTHANASIA - DAYS 15-18)

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

GROUP:	1	2	3	4	5	6
LEVEL (MG/KG/DAY):	0	0.01	0.05	0.2	1.0	10.0
LUNGS						
MEAN	73.66	74.87	70.14	80.09	74.21	73.88
S.D.	10.552	10.254	9.025	12.379	5.733	13.977
N	10	10	10	10	10	10
LIVER						
MEAN	735.66	756.07	674.97	744.02	698.33	701.90
S.D.	65.491	90.099	67.118	88.803	85.650	55.388
N	10	10	10	10	10	10
SPLEEN						
MEAN	34.82	37.49	34.15	34.08	37.25	34.47
S.D.	5.937	6.817	4.430	4.066	3.906	3.111
N	10	10	10	10	10	10
EPIDIDYMIS						
MEAN	33.03	31.00	34.20	32.25	31.51	31.90
S.D.	3.292	5.070	4.638	2.870	3.011	3.675
N	10	10	10	10	10	10
THYROID/PARATHYROID						
MEAN	0.9839	1.0085	0.9495	1.0558	0.9800	1.2081*
S.D.	0.13609	0.10621	0.21048	0.19234	0.17925	0.15135
N	10	10	10	10	10	10

SIGNIFICANTLY DIFFERENT FROM CONTROL: * = P<0.05

TABLE 13
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
SUMMARY OF ORGAN WEIGHT DATA RELATIVE TO BRAIN WEIGHT (%)
(SCHEDULED EUTHANASIA - DAYS 92-95)

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

GROUP:	1	2	3	4	5	6
LEVEL (MG/KG/DAY):	0	0.01	0.05	0.2	1.0	10.0
BRAIN (G)						
MEAN	2.33	2.22	2.26	2.27	2.26	2.26
S.D.	0.125	0.080	0.124	0.084	0.152	0.098
N	10	10	10	10	10	10
PITUITARY						
MEAN	0.5942	0.5765	0.6566	0.6338	0.5715	0.6268
S.D.	0.07581	0.06493	0.08536	0.07990	0.04864	0.11090
N	10	10	9	10	10	10
KIDNEYS						
MEAN	173.52	178.69	175.52	181.34	178.15	199.81
S.D.	14.234	26.397	14.651	9.069	11.805	78.631
N	10	10	10	10	10	10
TESTES						
MEAN	160.63	151.14	152.73	149.70	154.02	146.47
S.D.	16.388	12.078	10.053	12.888	12.985	9.247
N	10	10	10	10	10	10
HEART						
MEAN	74.27	74.90	75.06	74.09	73.39	71.82
S.D.	6.722	7.055	8.942	5.842	5.129	8.874
N	10	10	10	10	10	10

NONE SIGNIFICANTLY DIFFERENT FROM CONTROL

TABLE 13
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
SUMMARY OF ORGAN WEIGHT DATA RELATIVE TO BRAIN WEIGHT (%)
(SCHEDULED EUTHANASIA - DAYS 92-95)

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

GROUP:	1	2	3	4	5	6
LEVEL (MG/KG/DAY):	0	0.01	0.05	0.2	1.0	10.0
LUNGS						
MEAN	80.15	84.37	80.72	82.97	77.70	84.92
S.D.	5.107	13.926	11.152	12.980	11.358	16.055
N	10	10	10	10	10	10
LIVER						
MEAN	868.29	861.89	828.39	883.21	876.75	840.94
S.D.	92.442	131.058	153.584	109.901	102.521	116.892
N	10	10	10	10	10	10
SPLEEN						
MEAN	36.88	36.31	38.02	34.04	39.91	36.55
S.D.	5.934	6.174	5.514	5.586	5.293	7.123
N	10	10	10	10	10	10
EPIDIDYMIS						
MEAN	65.34	62.69	63.68	60.47	65.34	63.85
S.D.	5.495	3.590	6.901	7.561	6.989	6.648
N	10	10	10	10	10	10
THYROID/PARATHYROID						
MEAN	1.2641	1.2348	1.1815	1.2301	1.4219	1.6762#
S.D.	0.20238	0.16520	0.22417	0.12561	0.16853	0.28501
N	10	10	10	10	10	10

SIGNIFICANTLY DIFFERENT FROM CONTROL: # = P<0.001

TABLE 13
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
SUMMARY OF ORGAN WEIGHT DATA RELATIVE TO BRAIN WEIGHT (%)
(RECOVERY PHASE/SCHEDULED EUTHANASIA - DAYS 121-123)

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

GROUP:		1	3	5	6
LEVEL (MG/KG/DAY):		0	0.05	1.0	10.0
BRAIN (G)					
	MEAN	2.32	2.35	2.37	2.38
	S.D.	0.119	0.114	0.119	0.073
	N	10	10	10	10
PITUITARY					
	MEAN	0.5456	0.5729	0.5641	0.5983
	S.D.	0.07507	0.05039	0.06341	0.11587
	N	10	10	10	10
KIDNEYS					
	MEAN	182.11	179.80	176.46	176.74
	S.D.	25.302	19.793	15.475	21.038
	N	10	10	10	10
TESTES					
	MEAN	152.42	153.92	146.51	150.66
	S.D.	9.242	14.128	7.289	11.194
	N	10	10	10	10
HEART					
	MEAN	79.45	77.19	74.17	77.79
	S.D.	15.235	8.079	7.505	13.830
	N	10	10	10	10

NONE SIGNIFICANTLY DIFFERENT FROM CONTROL
NOTE: MALES IN GROUPS 2 AND 4 WERE EUTHANIZED ON DAYS 15-18 OR DAYS 92-95.

TABLE 13
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
SUMMARY OF ORGAN WEIGHT DATA RELATIVE TO BRAIN WEIGHT (%)
(RECOVERY PHASE/SCHEDULED EUTHANASIA - DAYS 121-123)

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

GROUP:	1	3	5	6
LEVEL (MG/KG/DAY):	0	0.05	1.0	10.0
LUNGS				
MEAN	81.07	82.16	80.68	80.91
S.D.	12.355	7.861	11.355	6.499
N	10	10	10	10
LIVER				
MEAN	913.51	872.84	899.18	786.50
S.D.	179.195	142.196	144.212	139.454
N	10	10	10	10
SPLEEN				
MEAN	38.78	38.59	39.05	37.08
S.D.	4.933	5.745	6.175	4.669
N	10	10	10	10
EPIDIDYMIS				
MEAN	67.75	62.99	62.80	61.50
S.D.	6.493	5.851	5.284	5.377
N	10	10	10	10
THYROID/PARATHYROID				
MEAN	1.3266	1.3029	1.2195	1.3505
S.D.	0.23933	0.24654	0.15962	0.23714
N	10	10	10	10

NONE SIGNIFICANTLY DIFFERENT FROM CONTROL
NOTE: MALES IN GROUPS 2 AND 4 WERE EUTHANIZED ON DAYS 15-18 OR DAYS 92-95.

TABLE 13
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
SUMMARY OF ORGAN WEIGHT DATA RELATIVE TO BRAIN WEIGHT (%)
(SCHEDULED EUTHANASIA - DAYS 15-18)

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

GROUP:		1	2	3	4	5	6
LEVEL (MG/KG/DAY):		0	0.01	0.05	0.2	1.0	10.0
BRAIN (G)							
	MEAN	1.99	1.96	1.95	1.95	1.96	1.94
	S.D.	0.057	0.086	0.126	0.112	0.059	0.086
	N	10	10	10	10	10	10
PITUITARY							
	MEAN	0.6669	0.6997	0.6581	0.6812	0.6390	0.6877
	S.D.	0.11136	0.16676	0.12806	0.14721	0.12440	0.12129
	N	10	10	10	10	10	10
OVARIES							
	MEAN	5.0348	5.5102	5.5475	5.0172	4.8731	5.5807
	S.D.	0.66682	1.15587	1.00267	0.53294	0.82963	2.28128
	N	10	10	10	10	10	10
KIDNEYS							
	MEAN	107.01	107.14	106.18	106.87	107.60	108.83
	S.D.	6.647	8.707	5.703	10.445	6.961	9.193
	N	10	10	10	10	10	10
HEART							
	MEAN	48.60	47.70	49.24	48.96	46.47	48.14
	S.D.	4.453	3.209	3.595	5.864	3.906	3.938
	N	10	10	10	10	10	10

NONE SIGNIFICANTLY DIFFERENT FROM CONTROL

TABLE 13
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
SUMMARY OF ORGAN WEIGHT DATA RELATIVE TO BRAIN WEIGHT (%)
(SCHEDULED EUTHANASIA - DAYS 15-18)

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

GROUP:		1	2	3	4	5	6
LEVEL (MG/KG/DAY):		0	0.01	0.05	0.2	1.0	10.0
LUNGS							
	MEAN	61.58	62.44	65.20	66.52	61.96	65.43
	S.D.	6.050	4.624	5.353	10.168	4.928	10.074
	N	10	10	10	10	8	10
LIVER							
	MEAN	530.98	515.40	545.00	529.65	506.51	509.24
	S.D.	65.004	54.111	74.213	68.193	50.942	34.259
	N	10	10	10	10	10	10
SPLEEN							
	MEAN	27.60	29.13	31.08	31.10	28.41	29.17
	S.D.	4.077	2.587	5.003	4.443	3.442	4.079
	N	10	10	10	10	10	10
UTERUS							
	MEAN	21.63	25.80	24.54	27.54	30.31	24.98
	S.D.	5.287	9.117	3.758	11.303	15.732	5.774
	N	10	10	10	10	10	10
THYROID/PARATHYROID							
	MEAN	0.9443	0.9062	0.9932	0.9564	0.9087	1.0102
	S.D.	0.13158	0.10291	0.16445	0.13313	0.09369	0.09948
	N	10	10	10	10	10	10

NONE SIGNIFICANTLY DIFFERENT FROM CONTROL

TABLE 13
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
SUMMARY OF ORGAN WEIGHT DATA RELATIVE TO BRAIN WEIGHT (%)
(SCHEDULED EUTHANASIA - DAYS 92-95)

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

GROUP:		1	2	3	4	5	6
LEVEL (MG/KG/DAY):		0	0.01	0.05	0.2	1.0	10.0
BRAIN (G)							
	MEAN	2.10	2.08	2.05	2.15	2.07	2.07
	S.D.	0.091	0.098	0.120	0.110	0.082	0.160
	N	10	10	10	10	10	10
PITUITARY							
	MEAN	0.8364	0.7917	0.8418	0.7740	0.8068	0.7355
	S.D.	0.13441	0.11321	0.12306	0.14666	0.14198	0.09608
	N	10	10	10	10	10	10
OVARIES							
	MEAN	3.8672	4.0252	3.7730	3.9940	3.7774	4.0495
	S.D.	1.06924	0.58968	0.92407	0.66731	0.94830	0.51673
	N	10	10	10	10	10	10
KIDNEYS							
	MEAN	110.44	107.32	107.40	110.34	104.76	108.67
	S.D.	11.478	9.001	6.490	8.044	11.143	5.444
	N	10	10	10	10	10	10
HEART							
	MEAN	52.57	49.20	51.08	50.26	53.23	52.22
	S.D.	4.318	3.590	3.686	3.537	5.214	3.063
	N	10	10	10	10	10	10

NONE SIGNIFICANTLY DIFFERENT FROM CONTROL

TABLE 13
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
SUMMARY OF ORGAN WEIGHT DATA RELATIVE TO BRAIN WEIGHT (%)
(SCHEDULED EUTHANASIA - DAYS 92-95)

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

GROUP:		1	2	3	4	5	6
LEVEL (MG/KG/DAY):		0	0.01	0.05	0.2	1.0	10.0
LUNGS							
	MEAN	72.34	64.19	75.45	73.49	73.20	72.11
	S.D.	13.157	5.399	13.093	11.565	20.444	9.948
	N	10	10	10	10	10	10
LIVER							
	MEAN	553.22	491.70	486.86	494.10	499.84	487.22
	S.D.	76.360	72.034	53.750	55.142	60.247	61.046
	N	10	10	10	10	10	10
SPLEEN							
	MEAN	30.57	28.93	29.11	29.35	29.64	25.95
	S.D.	3.431	4.309	2.249	2.728	2.908	3.816
	N	10	10	10	10	10	10
UTERUS							
	MEAN	26.36	36.07	31.23	30.99	31.72	33.07
	S.D.	4.231	20.430	10.752	15.687	10.179	10.119
	N	10	10	10	10	10	10
THYROID/PARATHYROID							
	MEAN	1.0486	1.0538	0.9563	0.9382	0.9349	1.3007**
	S.D.	0.13114	0.20377	0.07893	0.10077	0.17491	0.19361
	N	10	10	10	10	10	10

SIGNIFICANTLY DIFFERENT FROM CONTROL: ** = P<0.01

TABLE 13
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
SUMMARY OF ORGAN WEIGHT DATA RELATIVE TO BRAIN WEIGHT (%)
(RECOVERY PHASE/SCHEDULED EUTHANASIA - DAYS 121-123)

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

GROUP:		1	3	5	6
LEVEL (MG/KG/DAY):		0	0.05	1.0	10.0
BRAIN (G)					
	MEAN	2.16	2.24	2.16	2.16
	S.D.	0.087	0.124	0.039	0.115
	N	10	9	10	10
PITUITARY					
	MEAN	0.7360	0.6954	0.6645	0.7169
	S.D.	0.23189	0.07588	0.18793	0.12412
	N	10	9	10	10
OVARIES					
	MEAN	4.4505	4.1010	4.4910	4.5094
	S.D.	0.90271	0.67446	0.64190	0.99088
	N	10	9	10	10
KIDNEYS					
	MEAN	109.83	102.65	108.58	110.27
	S.D.	7.783	5.493	12.162	12.335
	N	10	9	10	10
HEART					
	MEAN	55.08	48.12	53.60	56.82
	S.D.	5.280	4.044	4.244	8.662
	N	10	9	10	10

NONE SIGNIFICANTLY DIFFERENT FROM CONTROL
NOTE: FEMALES IN GROUPS 2 AND 4 WERE EUTHANIZED ON DAYS 15-18 OR DAYS 92-95.

TABLE 13
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
SUMMARY OF ORGAN WEIGHT DATA RELATIVE TO BRAIN WEIGHT (%)
(RECOVERY PHASE/SCHEDULED EUTHANASIA - DAYS 121-123)

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

GROUP:		1	3	5	6
LEVEL (MG/KG/DAY):		0	0.05	1.0	10.0
LUNGS					
	MEAN	69.60	63.40	73.60	76.92
	S.D.	14.796	8.391	17.553	14.023
	N	10	9	10	10
LIVER					
	MEAN	531.50	467.89	508.69	520.30
	S.D.	58.214	51.915	67.417	75.101
	N	10	9	10	10
SPLEEN					
	MEAN	29.09	26.68	29.70	29.64
	S.D.	4.267	2.046	6.275	4.227
	N	10	9	10	10
UTERUS					
	MEAN	23.37	24.47	28.87	25.73
	S.D.	3.185	9.456	6.947	4.214
	N	10	9	10	10
THYROID/PARATHYROID					
	MEAN	1.0172	0.9748	1.0055	1.1029
	S.D.	0.18937	0.20271	0.14312	0.18865
	N	10	9	10	10

NONE SIGNIFICANTLY DIFFERENT FROM CONTROL
NOTE: FEMALES IN GROUPS 2 AND 4 WERE EUTHANIZED ON DAYS 15-18 OR DAYS 92-95.

SLI STUDY NO.: 3455.1
CLIENT: MANTECH ENVIRONMENTAL

TABLE 14
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
SUMMARY OF SEMEN ANALYSIS DATA
(SCHEDULED EUTHANASIA - DAYS 92-95)

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

GROUP:		1	2	3	4	5	6
LEVEL (MG/KG/DAY):		0	0.01	0.05	0.2	1.0	10.0
LEFT CAUDA EPIDIDYMIS (G)							
	MEAN	0.32	0.30	0.29	0.29	0.30	0.30
	S.D.	0.035	0.023	0.039	0.039	0.040	0.035
	N	10	10	10	10	10	10
SPERM MOTILITY (%)							
	MEAN	71	80	78	63	74	77
	S.D.	14.4	8.7	8.1	24.9	14.6	9.4
	N	7	8	8	8	8	9
SPERM CONCENTRATION (M/ML)							
	MEAN	4.8	4.6	4.4	4.3	4.8	4.6
	S.D.	1.00	0.73	1.02	1.17	0.97	0.82
	N	10	10	10	10	10	10
TOTAL SPERM COUNT (M/G)							
	MEAN	1053.0	1079.3	1038.3	1037.8	1139.2	1070.4
	S.D.	250.73	201.66	189.25	238.19	163.50	126.11
	N	10	10	10	10	10	10
SPERM MORPHOLOGY (% NORMAL SPERM)							
	MEAN	93.2	95.3	91.1	86.8	93.3	92.1
	S.D.	7.88	3.32	6.78	24.98	2.43	5.31
	N	10	10	10	10	10	10

NONE SIGNIFICANTLY DIFFERENT FROM CONTROL
NOTE: G = GRAMS; M = MILLION; ML = MILLILITER.

TABLE 14
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
SUMMARY OF SEMEN ANALYSIS DATA
(RECOVERY PHASE/SCHEDULED EUTHANASIA - DAYS 121-123)

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

GROUP:		1	3	5	6
LEVEL (MG/KG/DAY):		0	0.05	1.0	10.0
LEFT CAUDA EPIDIDYMIS (G)					
	MEAN	0.34	0.33	0.31	0.31
	S.D.	0.019	0.031	0.029	0.061
	N	10	10	10	10
SPERM MOTILITY (%)					
	MEAN	86	76	65	77
	S.D.	4.7	14.3	26.5	20.3
	N	10	10	10	10
SPERM CONCENTRATION (M/ML)					
	MEAN	5.2	5.4	4.9	4.5
	S.D.	0.92	1.57	1.27	1.79
	N	10	10	10	10
TOTAL SPERM COUNT (M/G)					
	MEAN	1072.9	1130.7	1122.3	1001.6
	S.D.	196.30	250.54	277.56	347.67
	N	10	10	10	10
SPERM MORPHOLOGY (% NORMAL SPERM)					
	MEAN	94.8	90.7	92.5	85.6
	S.D.	2.24	8.26	4.07	23.76
	N	10	10	10	10

NONE SIGNIFICANTLY DIFFERENT FROM CONTROL
NOTE: G = GRAMS; M = MILLION; ML = MILLILITER. MALES IN GROUPS 2 AND 4 WERE EUTHANIZED ON DAYS 15-18 OR DAYS 92-95.

APPENDIX A

Protocol, Protocol Amendments and Protocol Deviations

A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS WITH AMMONIUM PERCHLORATE

PROTOCOL

Springborn Study No. 3455.1

Springborn Laboratories, Inc. (SLI)
Health and Environmental Sciences
640 N. Elizabeth Street
Spencerville, OH 45887

Joseph C. Siglin, Ph.D., DABT
Study Director

For

ManTech Environmental Technology
P.O. Box 31009
Dayton, OH 45437-0009

Springborn Laboratories

SLI Study No. 3455.1

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I. PURPOSE

The purpose of this study is to evaluate the potential toxicity of the test article when administered to rats in the drinking water over the course of 90 days. The study will also evaluate the potential effects of the test article on male sperm development and female estrous cyclicity. Data from this study may be used in the assessment of potential human risk. The study will be conducted in accordance with U.S. EPA Good Laboratory Practices.

II. RESPONSIBILITIES

A. Sponsor

ManTech Environmental Technology
P.O. Box 31009
Dayton, OH 45437-0009

B. Shipping Address

ManTech Environmental Technology
OLAL HSC/OET Bldg. 79
2856 G Street
Wright-Patterson AFB, OH 45433-7400

C. Sponsor's Representative

Darol E. Dodd, Ph.D., DABT
Phone: (937) 255-5150, Ext. 3142
Fax: (937) 258-2197

D. Testing Location

Springborn Laboratories, Inc.
Health and Environmental Sciences
640 N. Elizabeth Street
Spencerville, Ohio 45887
Telephone: (419) 647-4196
Fax: (419) 647-6560

E. Personnel Responsibilities

1. Joseph C. Siglin, Ph.D., DABT
   Study Director/Director of Toxicology

2. Deborah A. Douds, M.S.
   Alternate Contact/Toxicologist

3. Malcolm Blair, Ph.D.
   Vice President and Managing Director

4. Anita M. Bosau
   Director of Compliance Assurance

5. J. Dale Thurman, D.V.M., M.S., DACVP
   Director of Pathology

6. Delores Knippen
   Pharmacy Supervisor

7. Steve Magness, B.S., LATG
   Supervisor of Gross and Fetal Pathology

8. Jack May, Jr., A.A., MT(AMT), LAT
   Supervisor of Clinical Pathology

9. David A. Wilkie, D.V.M., M.S., DACVO
   Consultant Ophthalmologist

10. Robert G. Geil, D.V.M., DACVP
    Consultant Pathologist

III. PROPOSED STUDY SCHEDULE

A. Initiation of In-Life Phase: September 9, 1997

B. Completion of In-Life Phase: January 9, 1998

C. Audited Draft Report Date: March 31, 1998

A Key Events Schedule for the study is provided in Attachment 1.

IV. TEST ARTICLE AND CONTROL MATERIAL

A. Test Article

1. Sponsor Identification

   Ammonium Perchlorate

2. SLI Test Article Identification Number

   S97.001.3455

3. Batch (Lot) Number

   03907LF

4. Source

   Aldrich Chemical Company

5. Purity

   99.8%

6. Description

   White Powder

7. Shelf Life/Expiration Date

   None provided

8. Characteristics

The Sponsor is responsible for any necessary evaluations of the test article concerning chemical identity, purity, strength, stability, and other required data.

9. Storage Conditions

The bulk test article will be stored at room temperature. Aqueous solutions of the test article (stock solutions and final solutions for administration to animals) will be stored refrigerated (2-8°C).

10. Handling Precautions

Safety data regarding the test article has been provided by the Sponsor [Material Safety Data Sheet (MSDS). Technical personnel are required to read this information prior to handling the test article. Any question concerning this information should be referred to the Study Director.

The test article is a potent oxidizer. Extreme care must be exercised in handling the bulk chemical to avoid contact with reducing agents such as metal surfaces and other metal instruments and equipment. Sources of heat and friction must also be avoided with the bulk chemical.

Additional safety and handling information may be provided by the Study Director and/or Sponsor. Minimum safety requirements for handling the bulk and diluted test article include safety glasses, impervious gloves, and laboratory wear. A MSDS (or equivalent) shall also be available for any other chemical entities utilized in the conduct of this study.

B. Retention Sample

A 1 g retention sample of each lot of the test article will be taken and stored at SLI under the specified storage conditions.

C. Test Article Disposition

The bulk test article will be returned to the Sponsor following completion of all studies with the test article. The unused test article dosing solutions will be properly disposed of by Rader Environmental Services, Inc., Findlay, Ohio.

D. Method and Frequency of Test Article Preparation

The test article will be diluted with reverse osmosis (deionized) water from the SLI pharmacy source (RO water) to prepare drinking water solutions at appropriate concentrations. Fresh drinking water solutions will be prepared on a weekly basis during the study.

A stock solution of the test article will be prepared using volumetric glassware (50 mg/mL). The stock solution will be further diluted with RO water to produce working solutions and, ultimately, the desired (final) concentrations. It will be assumed for the purpose of drinking water preparations that 1 g of RO water equals 1 mL. Thus, dilutions of the stock solution will be performed with the aid of a balance and final concentrations will be expressed as w/v solutions. Following final dilution, each drinking water solution will be stirred for a minimum of 30 minutes using a magnetic stir plate and teflon-coated stir bar. The stock solution will be prepared fresh at least every four weeks during the study unless stability analyses demonstrate that longer periods are acceptable.

The concentration of the test article in the drinking water will be adjusted on a weekly basis for each sex-group to achieve the desired (target) dose levels. Concentrations prepared for the first week of the study will be based on estimated body weights and water consumption as follows: Males - 175 g, 21 mL/animal/day and Females - 140 g, 19 mL/animal/day. Thereafter, concentrations will be calculated and adjusted for each sex-group based on measured mean body weights and water intake. The same polyethylene container(s) will be used for each sex-group throughout the study to avoid any potential cross contamination.

E. Analysis of Dosing Preparations

Concentrations of the test article (in RO water) which encompass the expected high and low concentrations for the study will be prepared and analyzed by the Sponsor to verify stability for a minimum of 10 days at room temperature. During the study, prepared stock solutions and test and control drinking water solutions will be submitted to the Sponsor for analysis according to the schedule given in Attachment 2. For each solution (including stock solutions and untreated RO water for Group 1), duplicate 2 mL samples will be obtained and shipped on ice, by overnight carrier or hand delivered, to the address given below. A third 2 mL sample will be taken and retained at SLI under the specified storage conditions until results of the analyses are received from the Sponsor.

David T. Tsui, Captain, USAF
OL AL HSC/OET Bldg. 79
2856 G Street
Wright-Patterson AFB, OH 45433-7400

V. TEST SYSTEM

A. Justification of the Test System

The laboratory rat has been selected as the animal model for this study since:

1. The rat is a preferred species for oral toxicity testing by U.S. and international regulatory agencies.

2. The Sprague-Dawley rat has been shown to be sensitive to the toxic effects of a variety of drugs and chemicals. Therefore, this species and strain is a reasonable alternative to larger mammals for toxicity testing of drugs and chemicals for human safety assessment.

3. The Sprague-Dawley rat has been used extensively for toxicological testing. Thus, data from this study may be compared and contrasted to other studies performed in rats.

4. Historical information concerning Sprague-Dawley rats is available at SLI, from the supplier, and in the published literature.

5. Healthy Sprague-Dawley rats may be obtained from reliable, USDA approved and regulated suppliers.

6. The laboratory rat may be safely handled and manipulated by trained technical personnel.

B. Justification of the Route of Exposure and Number of Animals

1. The oral (drinking water) route of exposure was selected since this is a potential route of human exposure.

2. This study was designed to use the fewest number of animals possible, consistent with the objectives of the study, the scientific needs of the Sponsor, contemporary scientific standards and in consideration of applicable regulatory requirements.

C. Description

1. Species

Rat

2. Strain

Sprague-Dawley Crl:CD®BR VAF/Plus®
Rat Orphan Parvo Virus Free Animals

3. Source

The Charles River Laboratories, Inc.
Route 209
Kingston, NY 12484

4. Age and Body Weight Range (at In-Life Initiation)

Males approximately 6 to 7 weeks old and 100 to 250 g
Females approximately 6 to 7 weeks old and 90 to 200 g

Actual body weights will be documented in the study records.

5. Number of Animals/Sex on Study

166 males and 160 females

A minimum of 175 male and 175 female rats will be ordered for the study. The females will be nulliparous and nonpregnant.

D. Method of Identification

During the acclimation period, animals will be assigned individual temporary identification numbers which will be recorded on the cage cards and in the data records. Metal ear tags displaying unique numbers will be used as the method of permanent study identification (i.e., after randomization) for each animal. Color coded cage cards displaying the study, animal and group numbers and sex will be affixed to each cage. Cage cards are color coded with colored dots.

E. Animal Husbandry

1. Housing

The animals will be housed individually in suspended stainless steel cages. All housing and care will be based on the standards recommended by the Guide for the Care and Use of Laboratory Animals [1].

2. Environment

The environmental controls for the animal room will be set to maintain room temperature and relative humidity ranges of 72 ± 7°F and 50 ± 20%, respectively. Environmental control equipment will be monitored and adjusted as necessary to minimize fluctuations in the animal room environment. Light timers will be set to maintain a 12-hour light/12-hour dark cycle and the room ventilation will be set to produce 10-15 air changes/hour. The room temperature and relative humidity will be recorded a minimum of once daily.

3. Food

PMI Certified Rodent Chow® #5002 (Purina Mills, Inc.) will be provided ad libitum throughout the study. The feed is analyzed by the supplier for nutritional components and environmental contaminants. The lot number and expiration date of each batch of diet used during the study will be recorded. Dietary limitations for various environmental contaminants, including heavy metals, pesticides, polychlorinated biphenyls and total aflatoxin are set by the manufacturer. Within these limits, there are no contaminants reasonably expected in the diet which would interfere with the conduct of this study. Results of the dietary analyses (Certificates of Analysis) are provided by the manufacturer for each lot of diet. These will be maintained by the testing laboratory.

4. Water

During the acclimation period, all rats will receive RO water via individual water bottles for ad libitum drinking. During the study, animals will receive individual water bottles containing RO water alone (Group 1) or RO water containing the test article (Groups 2-6). Freshly filled water bottles will be provided to all animals at a minimum of once weekly during the course of the study. Monitoring of the water for contaminants will be conducted by the testing laboratory and the records will be available for inspection. Levels of contaminants which may be present are not expected to compromise the purpose of the study.

F. Acclimation

Upon receipt, the animals will be examined by qualified personnel and allowed to acclimate for a minimum of 10 days. During the acclimation period the animals will be observed daily for overt physical and behavioral abnormalities. General health/moribundity and mortality checks will be performed twice daily throughout the acclimation period (in the morning and afternoon). Any animals exhibiting abnormal signs will not be used on the study. Individual body weights will be performed after receipt on day -7.

G. Randomization

Prior to randomization, the animals will be weighed and examined in detail for signs of physical disorder. Animals determined to be suitable as test subjects will be assigned randomly to groups. The animal numbers and the respective body weight values will be entered into the computer. Homogeneity of groups by weight will be the criterion of acceptance of the randomization. Disposition of animals not selected for study will be documented in the data records.

At the commencement of the study, the weight variation of the animals used will not exceed ± 20% of the mean weight for that sex.

VI. EXPERIMENTAL DESIGN AND PROCEDURES

A. Study Group Design

The experimental design for the study is as follows:

Group	No. of Animals		Dosage Material	Target Dosage Level (mg/kg/day)	Euthanasia Schedule (No. Of Animals - Male/Female)		
	Male	Female			Day 14	Day 90[a]	Day 120[a] (recovery)
1	30	30	Vehicle[b]	0	10/10	10/10	10/10
2	20	20	Test Article[c]	0.01	10/10	10/10	-
3	30	30	Test Article[c]	0.05	10/10	10/10	10/10
4	20	20	Test Article[c]	0.2	10/10	10/10	-
5	30	30	Test Article[c]	1.0	10/10	10/10	10/10
6	30	30	Test Article[c]	10.0	10/10	10/10	10/10

[a]An additional six male rats will be treated with cyclophosphamide and then euthanized at the 90 and 120-day periods (3 males per interval) to serve as positive control animals for bone marrow micronuclei evaluations. These rats will remain untreated until administration of cyclophosphamide at approximately 24 hours prior to euthanasia. The cyclophosphamide positive control will be administered as a single dose, by intraperitoneal injection, at a level of 20 mg/kg diluted in physiological saline. These rats will be observed for general health/mortality and moribundity twice daily (once in the morning and once in the afternoon) and weighed on the day of dosing.
[b]RO water only.
[c]Ammonium perchlorate in RO water. For each sex-group, the concentration will be adjusted on a weekly basis to achieve the desired (target) dosage levels.

B. Rationale for Dosage Level Selection

Dosage levels for the study were selected by the Sponsor in an attempt to produce graded responses to the test article. The dosage levels were selected on the basis of available data from previous studies.

C. Study Duration

The rats will be given continual access to the test article for a minimum of 14 or 90 days. There will be a 30 day recovery period for animals in groups 1, 3, 5 and 6.

D. Treatment

Control and test article solutions will be administered in the drinking water ad libitum. The first day of exposure will be defined as study day 1.

E. Clinical Signs

The animals will be checked for general health/mortality and moribundity twice daily during the study (once in the morning and once in the afternoon). In addition, cage-side observations will be performed once daily and detailed clinical observations will be performed weekly. The detailed weekly observations will include, but not be limited to, evaluations of the skin and fur; eyes and mucous membranes; respiratory, circulatory, autonomic and central nervous system; somatomotor activity and behavioral pattern. Particular attention will be directed to observations of tremors, convulsions, lethargy, other signs of central nervous system depression, salivation and diarrhea.

F. Body Weights

Each animal will be weighed prior to the initiation of treatment. During the study period, the individual body weights will be recorded weekly. A final body weight will be obtained from each animal prior to scheduled euthanasia.

G. Food Consumption

Individual food consumption will be measured on a weekly basis during the study. Food consumption will be reported as g/animal/day.

H. Water Consumption

Individual water consumption will be measured on a weekly basis during the study.

I. Clinical Pathology

At scheduled euthanasia (after 14, 90 and 120 days on study), blood samples will be collected from all rats via the inferior vena cava for determination of TSH, T_3, T_4, as well as hematology and clinical chemistry parameters. The rats will be euthanized by carbon dioxide inhalation. The rats will not be fasted prior to sample collection and euthanasia. Required blood samples will be obtained prior to necropsy. The

time of blood sample collection will be recorded for each animal. Target volumes for the various samples are as follows:

- TSH, T_3, T_4: Approximately 3 mL blood in a serum separator tube to yield around 1500 µL of serum. The serum will be aliquoted into three vials (approximately 500 µL/vial) and frozen as indicated below.

- Hematology: Approximately 0.5 mL blood in an EDTA tube.

- Clinical Chemistry: Approximately 2 mL blood in a serum separator tube.

In the event that there is insufficient sample for all scheduled analyses, priority will be given to the evaluation of thyroid parameters (TSH, T_3, T_4) followed by hematology and then clinical chemistry analyses.

Serum for TSH, T_3 and T_4 will be immediately frozen on dry ice and maintained frozen thereafter (-70°C). These samples will be subsequently sent to the Sponsor for analysis by radioimmuno assay (RIA). The samples will be shipped on dry ice, via overnight carrier or hand delivered, to the following address:

Attn: Darol E. Dodd, Ph.D., DABT
ManTech Environmental Technology
OLAL HSC/OET Bldg. 79
2856 G Street
Wright-Patterson AFB, OH 45433-7400

1. Hematology Parameters

   erythrocyte count (RBC)
   hematocrit (Hct)
   hemoglobin concentration (Hgb)
   mean corpuscular hemoglobin (MCH)
   mean corpuscular hemoglobin concentration (MCHC)
   mean corpuscular volume (MCV)
   platelet count
   reticulocyte count*
   total and differential leukocyte counts

   *Slides will be prepared but reticulocyte counts will only be performed if considered necessary by the Sponsor and Study Director.

2. Biochemistry Parameters

alanine aminotransferase (ALT)
albumin
albumin/globulin ratio (calculated)
alkaline phosphatase
aspartate aminotransferase (AST)
calcium
blood creatinine
chloride
cholesterol
gamma glutamyl transpeptidase
globulin (calculated)
glucose (fasting)
magnesium
phosphorus
potassium
sodium
sorbitol dehydrogenase
total bilirubin
total serum protein
urea nitrogen (BUN)

J. Ophthalmological Examinations

All animals will be examined for ocular abnormalities by a board certified veterinary ophthalmologist prior to study initiation, near conclusion of dosing (90 days), and near completion of the recovery phase (120 days).

K. Estrous Cyclicity

Estrous cyclicity will be evaluated by examining daily vaginal smears for all 90 and 120 day females for three weeks prior to scheduled euthanasia.

L. Unscheduled Deaths and Euthanasia

Any animals showing signs of severe debility or toxicity, particularly if death appears imminent, will be euthanized for cause (carbon dioxide inhalation followed by exsanguination) and to prevent loss of tissues through autolysis. All animals euthanized for cause or found dead will be subjected to a gross necropsy examination and a complete set of tissues will be preserved as specified in Section VI.M.1. Any animal found dead outside of normal working hours will be necropsied as soon as possible with the carcass refrigerated during the interim period.

M. Pathology

1. Gross Necropsy

Ten male and 10 female rats per dose group will be randomly selected in a stratified block design for euthanasia and necropsy following 14 and 90 days of treatment. The remaining animals in groups 1, 3, 5 and 6 will be euthanized following completion of a 30 day recovery period. The rats will be subjected to a gross necropsy which includes the examination of external surfaces of the body and all viscera.

The rats will be euthanized by carbon dioxide inhalation followed by exsanguination and necropsies will be conducted over the course of three to four days for each interval. A pathologist will be present for all scheduled necropsies. The rats will not be fasted prior to euthanasia. Throughout the euthanasia and necropsy procedures, every effort will be made to avoid inducing stress in the animals since this could impact scheduled hormone evaluations (e.g., no excessive noise or radios).

Bone marrow smears will be prepared for all animals euthanized after 90 and 120 days according to the method in Attachment 3. The smears will then be sent to the Sponsor for evaluation.

The following organs and tissues will be preserved from each animal in 10% neutral buffered formalin for possible future histopathological examination:

accessory genital organs (epididymides, seminal vesicles, prostate or uterus with cervix and vagina)
adrenals (2)
all gross lesions
aorta
brain (including sections of medulla/pons, cerebellar cortex and cerebral cortex)
cecum
colon
duodenum
esophagus
exorbital lachrymal glands
eyes[a] with optic nerve
femur (including articular surface) and bone marrow
heart
ileum
jejunum
kidneys (2)
liver (2 lobes examined; 3 sections collected)
lungs[b] with bronchi (2)
mammary gland[c]
mandibular lymph node
mediastinal lymph node
mesenteric lymph node
pancreas
peripheral nerve (sciatic) - with skeletal muscle
pharynx, larynx, nose
pituitary
rectum
skin
spinal cord at three levels (cervical, midthoracic, and lumbar)
spleen
sternum with bone marrow
stomach (glandular/nonglandular)
submaxillary salivary gland
testes/ovaries
thymus[c]
thyroid/parathyroid (2)[d]
tongue
trachea
urinary bladder

[a]Eyes will be fixed in formalin.
[b]Lungs will be inflated with formalin via the trachea.
[c]At times these tissues cannot be identified with the unaided eye because of physiologic variation in size. However, tissue from the region will be fixed for microscopic evaluation.
[d]Parathyroids cannot always be identified macroscopically. They will be examined if in the plane of the section and in all cases where they are noted as grossly enlarged.

2. Organ Weights

The liver, kidneys, testes, ovaries, brain, spleen, lungs, epididymides, left cauda epididymis, uterus, pituitary and heart from all surviving animals will be weighed wet as soon as possible to avoid drying. The thyroid/parathyroid will be immersed in fixative immediately after collection. Following fixation, the thyroid/parathryoid tissue samples will be carefully trimmed and weighed. The same technician will perform all trimming of thyroid/parathyroid tissues. Absolute and relative organ weights will be reported.

3. Histopathology

The following tissues will be trimmed and processed to paraffin blocks and Hematoxylin and Eosin slides:

a. All tissues from control and high-dose animals listed in Section VI.M.1.

b. The liver, kidneys, lungs and thyroids/parathyroids from all animals in all dose groups.

c. Gross lesions from all animals in all groups (see appropriate SLI SOP).

d. All tissues listed in Section VI.M.1. from any intermediate dose group animals which die or are euthanized for cause.

Histological processing will be performed by Histo Techniques, Powell, Ohio. Microscopic pathology will be performed by a Board Certified Veterinary Pathologist experienced in rodent pathology. The histopathological examination may be extended to previously unscheduled tissues from intermediate dose animals if considered necessary to further investigate changes observed in the high-dose group (additional cost).

Special stains and techniques may be used by the pathologist as needed to aid in the diagnosis of specific lesions. If a tissue is missing from the microscopic slide, the pathologist and the histotechnologist will determine what, if any, steps will be taken to obtain an additional sample for examination.

4. Sperm Analysis

Semen from the males euthanized after 90 or 120 days will be analyzed for the following parameters:

- sperm count (total)
- sperm concentration
- sperm motility
- sperm morphology

Total count and concentration will be evaluated from sperm collected from the left cauda epididymis. Motility and morphology will be evaluated from sperm collected from the vas deferens. The semen will be evaluated utilizing the Hamilton Thorne IVOS 10 semen analyzer. For evaluation of morphology two sperm smear slides will be prepared for each animal. Two hundred sperm cells/animal will be examined for morphological development. The slides will be sent to Pathology Associates International for evaluation.

VII. PROTOCOL AMENDMENT

Alterations to this protocol may be made as the study progresses. No changes in the protocol will be made without the specific consent of the Sponsor's Representative. A protocol amendment will be prepared and signed by the Study Director, SLI Quality Assurance and Sponsor's Representative for any such changes.

VIII. DATA REPORTING

One copy of the draft report and two copies of the final report (one bound and one unbound) will be submitted to the Sponsor. The final report will include all information necessary to provide a complete and accurate description of the experimental procedures and results. An interim letter report with unaudited data tables will be sent to the Sponsor following the 14-day and 90-day euthanasia intervals.

The report will include at least the following information:

- Table of Contents
- Regulatory Compliance
- Summary
- Introduction and Objective
- Experimental Design and Test Procedures
- Presentation and Discussion of Results
- Conclusion
- References

The following data will be tabulated:

- Summary of Survival and Incidence of Clinical Signs
- Summary of Body Weights
- Summary of Body Weight Changes
- Summary of Food Consumption (g/animal/day)
- Summary of Test Article Intake (mg/kg/day)
- Summary of Clinical Pathological Findings
- Summary of Gross Necropsy Findings
- Summary of Absolute and Relative Organ Weights
  (organ-to-body weight and/or organ-to-brain weight ratios)
- Summary of Sperm Count, Concentration, Motility and Morphology
- Summary of Estrous Cyclicity
- Individual Survival and Clinical Signs
- Individual Body Weights
- Individual Body Weight Changes
- Individual Food Consumption (g/animal/day)
- Individual Clinical Pathological Findings
- Individual Gross Necropsy Findings
- Individual Absolute and Relative Organ Weights
  (organ-to-body weight and/or organ-to-brain weight ratios)
- Individual Sperm Count, Concentration, Motility and Morphology
- Individual Estrous Cyclicity

The following additional information will be presented in the appendices: protocol and any amendments, analytical chemistry report (supplied by the Sponsor), clinical pathology methods, ophthalmology report, histopathology report and personnel responsibilities.

IX. STATISTICAL ANALYSIS

Statistical analyses will be performed using MicroVax 3100 computer. The level of significance will be a minimum of 5% and tests will be two-tailed. The summary tables will indicate the level of significance detected. The control group data will be compared to the treated data using all groups or by a group by group comparison depending on the test. Data including body weights, weight gain, food consumption and organ weight data will be analyzed by one way analysis of variance. If significance is detected, a group by group comparison will proceed with Tukey-Kramer.

X. MAINTENANCE OF RAW DATA, RECORDS AND SPECIMENS

All original data, specimens and reports from this study are the property of the Sponsor. These materials shall be available at SLI to facilitate auditing of the study during its progress and prior to acceptance of the final report. Following study completion, all original paper data, magnetically encoded records, tissues, tissue blocks, slides and the final report will be transferred to the SLI archives and stored for a minimum of 10 years. The Sponsor will be contacted prior to the final disposition of these materials.

XI. REGULATORY COMPLIANCE

The study may be submitted and will be performed in compliance with U.S. EPA Health Effects Test Guidelines (OPPTS 870.3100); EPA Good Laboratory Practice regulations (40 CFR Part 160); and SLI's Standard Operating Procedures.

XII. QUALITY ASSURANCE

All critical phases of this study will be inspected by Springborn Laboratories, Inc. Quality Assurance Unit while in progress to assure compliance with Good Laboratory Practice regulations, SLI's Standard Operating Procedures and for conformance with the protocol and protocol amendments. The final report will be audited prior to submission to the Sponsor to ensure that it completely and accurately describes the test procedures and results of the study.

XIII. ANIMAL WELFARE COMPLIANCE STATEMENT

In order to ensure the welfare of the animals used on this project, this study will comply with all applicable sections of the Final Rules of the Animal Welfare Act regulations (9 CFR) and the Public Health Service Policy on Humane Care and Use of Laboratory Animals (OPRR, NIH, 1986). All procedures conducted on the animals have been approved by the Springborn Laboratories, Inc. Institutional Animal Care and Use Committee (SLI IACUC) and are described in the study protocol and/or the standard operating procedures of this institution. These procedures are based on the most currently available regulatory accepted technologies. The SLI IACUC has approved the use of a maximum of 360 animals on this study.

In order to reduce the possibility of animals being exposed to overt pain/distress, the animals used on this study will be observed daily by the technical staff and monitored as necessary by the Study Director or Facility Veterinarian. If an animal is determined to be in overt pain/distress, the animal will be euthanized for humane reasons in accordance with the Report of the AVMA on Euthanasia (JAVMA 1993). In addition, if an animal appears moribund and is beyond the point where recovery appears reasonable, the animal will be euthanized for humane reasons. Anesthetics/Analgesics will not be used on this study since such treatment could interfere with the study and confound the results.

XIV. DECLARATION OF INTENT

This study will be listed on the SLI Quality Assurance Master Schedule for the U.S. Environmental Protection Agency.

XV. PROTOCOL APPROVAL

The Sponsor's signature below documents that there are no acceptable non-animal alternatives for this study, and that since this study is required by the relevant supervising government agency, it does not unnecessarily duplicate any previous experiments.

Joseph C. Siglin, Ph.D., DABT
Study Director (SLI)

Date: 9/4/97

Quality Assurance Unit (SLI)

Date: 9/4/97

Darol E. Dodd, Ph.D., DABT
Sponsor's Representative
(Principal Investigator)

Date: 9/5/97

XVI. REFERENCES

1. Guide for the Care and Use of Laboratory Animals, DHHS Publication No. (NIH) 96-03, 1996.

2. 1993 Report of the American Veterinary Medical Assoc. Panel on Euthanasia, JAVMA, Vol. 202, No. 2, pp. 229-249, January 15, 1993.

ATTACHMENT 1

Key Events Schedule

Date	Day	Event(s)
8/28/97	-12	Receive 175♂ and 175♀ rats on H_2O bottles, acclimation observations
8/29/97 - 9/07/97	-11 to -2	Acclimation observations
9/02/97	-7	Body weights (on-line), tables to Pharmacy
9/08/97	-1	Ocular examinations (Dr. Wilkie), detailed observations, body weights, randomization, move animals into groups, address cage cards
9/09/97	1	Detailed observations, water consumption (fed), record test article label information, food consumption (fed)
9/10-14/97	2 to 6	Cageside observations
9/15/97	7	Detailed observations, body weights, water consumption (left)
9/16-21/97	8 to 13	Cageside observations
9/16/97	8	Water consumption (fed), food consumption (left and fed)
9/18/97	10	Perform random selection for day 16 to 19 necropsy
9/22/97	14	Detailed observations, body weights, water consumption (left)
9/23-28/97	15 to 20	Cageside observations
9/23-26/97	15 to 18	(30) Final body weights, detailed observations, scheduled euthanasia, animals to necropsy, clinical pathology
9/23/97	15	Water consumption (fed), food consumption (left and fed)
9/29/97	21	Detailed observations, body weights, water consumption (left)
9/30/97 - 10/05/97	22 to 27	Cageside observations
9/30/97	22	Water consumption (fed), food consumption (left and fed)
10/06/97	28	Detailed observations, body weights, water consumption (left)
10/07-12/97	29 to 34	Cageside observations
10/07/97	29	Water consumption (fed), food consumption (left and fed)
10/13/97	35	Detailed observations, body weights, water consumption (left)
10/14-19/97	36 to 41	Cageside observations
10/14/97	36	Water consumption (fed), food consumption (left and fed)
10/16/97	38	Perform random selection for day 92 to 95 necropsy

Date	Day	Event(s)
10/20/97	42	Detailed observations, body weights, water consumption (left)
10/21-26/97	43 to 48	Cageside observations
10/21/97	43	Water consumption (fed), food consumption (left and fed)
10/27/97	49	Detailed observations, body weights, water consumption (left)
10/28/97 - 11/02/97	50 to 55	Cageside observations
10/28/97	50	Water consumption (fed), food consumption (left and fed)
11/03/97	56	Detailed observations, body weights, water consumption (left)
11/04-09/97	57 to 62	Cageside observations
11/04/97	57	Water consumption (fed), food consumption (left and fed)
11/10/97	63	Detailed observations, body weights, water consumption (left)
11/11-16/97	64 to 69	Cageside observations
11/11/97	64	Water consumption (fed), food consumption (left and fed)
11/17/97 - 12/07/97	70 to 90	Estrous evaluation
11/17/97	70	Detailed observations, body weights, water consumption (left)
11/18-23/97	71 to 76	Cageside observations
11/18/97	71	Water consumption (fed), food consumption (left and fed)
11/24/97	77	Detailed observations, body weights, water consumption (left)
11/25-30/97	78 to 83	Cageside observations
11/25/97	78	Water consumption (fed), food consumption (left and fed)
12/01/97	84	Detailed observations, body weights, water consumption (left)
12/02-07/97	85 to 90	Cageside observations
12/02/97	85	Water consumption (fed), food consumption (left and fed)
12/05/97	88	Ocular Examinations (Dr. Wilkie)
12/08/97	91	Detailed observations, body weight, water consumption (left and fed), food consumption (left and fed)
12/09-14/97	92 to 97	Cageside observations
12/09/97	92	Detailed observations, final body weight, scheduled euthanasia, animals to necropsy (30), clinical pathology
12/10/97	93	Detailed observations, final body weights, scheduled euthanasia, animals (30) to necropsy, clinical pathology

Date	Day	Event(s)
12/11/97	94	Detailed observations, final body weights, scheduled euthanasia, animals (30) to necropsy, clinical pathology
12/12/97	95	Detailed observations, final body weights, scheduled euthanasia, animals (30) to necropsy, clinical pathology
12/15/97	98	Detailed observations, body weights, food consumption (left and fed), water consumption (left and fed)
12/16-21/97	99 to 104	Cageside observations
12/17/97 - 1/06/98	100 to 120	Estrous Evaluation
12/22/97	105	Detailed observations, body weights, food consumption (left and fed), water consumption (left and fed)
12/23-28/97	106 to 111	Cageside observations
12/29/97	112	Detailed observations, body weights, food consumption (left and fed), water consumption (left and fed)
1/05/98	119	Detailed observations, body weights, food consumption (left), water consumption (left), ocular examinations (Dr. Wilkie)
1/07/98	121	Detailed observations, final body weights, scheduled euthanasia, animals to necropsy, clinical pathology
1/08/98	122	Detailed observations, final body weights, scheduled euthanasia, animals to necropsy, clinical pathology
1/09/98	123	Detailed observations, final body weights, scheduled euthanasia, animals to necropsy, clinical pathology

ATTACHMENT 2

Preparation and Sampling Schedule for Animal Drinking Water Solutions

Event	Date	Concentrations to be Analyzed
Preparation of Stock Standard Solution (#1) and Week 1 Dosing Solutions	9/02/97	Stock Standard (#1) and Dosing Solutions
Preparation of Week 2 Dosing Solutions	9/15/97	None
Preparation of Week 3 Dosing Solutions	9/22/97	Stock Standard (#2) and Dosing Solutions
Preparation of Week 4 Dosing Solutions	9/29/97	None
Preparation of Stock Standard Solution (#2) and Week 5 Dosing Solutions	10/06/97	Stock Standard (#3) and Dosing Solutions
Preparation of Week 6 Dosing Solutions	10/13/97	None
Preparation of Week 7 Dosing Solutions	10/20/97	None
Preparation of Stock Standard Solution (#3) and Week 8 Dosing Solutions	10/27/97	Stock Standard (#4) and Dosing Solutions
Preparation of Week 9 Dosing Solutions	11/03/97	None
Preparation of Week 10 Dosing Solutions	11/10/97	None
Preparation of Week 11 Dosing Solutions	11/17/97	None
Preparation of Stock Standard Solution (#4) and Week 12 Dosing Solutions	11/24/97	Stock Standard (#5) and Dosing Solutions
Preparation of Week 13 Dosing Solutions	12/01/97	None

ATTACHMENT 3

Bone Marrow Procedure

A. Reagents

Fetal bovine serum (HyClone® Laboratories, Inc.)
Sodium citrate

B. Preparation

1. Dissolve 1g of sodium citrate in 99 mL of high purity water to prepare a 1% sodium citrate solution.

2. Mix 70 mL of the 1% sodium citrate solution with 30 mL of fetal bovine serum.

3. Use approximately 10 mL for each day of use and place the remainder of the solution in a refrigerator. The prepared solution will expire 10 days after preparation.

4. Discard all solutions after warmed to room temperature after day of use.

C. Methods

1. Bone Marrow Harvest

a. Animals are euthanized at the appropriate intervals by CO_2 inhalation.
b. One femur is removed by cutting through the pelvis bone and below the knee.
c. Clean the muscle from the bone.
d. Use a small scalpel to make a 45° angle cut through the distal end (knee). A small hole is observed in the femur.
e. Dip the small paintbrush (#000 sabel hair or similar paintbrush) into the prepared solution of fetal bovine serum and place it in the small hole in the femur. Insert the brush as far as possible to obtain bone marrow.
f. Take the paint brush and make a small wide streak on a pre-cleaned microscope slide the length of the slide.
g. Take the paint brush and again insert in the femur (do not dip the paintbrush in the fetal bovine serum). Make a small wide streak on the same slide just below the 1st streak for the length of the slide. A 3rd streak will be prepared below the 2nd streak.
h. Repeat all of the above procedures with the other femur.

2. Slide Fixation

   a. Allow the slides to air dry overnight.
   b. Fix the bone marrow slides in 100% Reagent grade methanol in a staining jar or glass beaker.
   c. Allow the slides to air dry and appropriately label each slide.

A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS WITH AMMONIUM PERCHLORATE

PROTOCOL AMENDMENT NO. 1

1) PART TO BE CHANGED/REVISED:

Attachment 3

CHANGE/REVISION:

Replace the current Attachment 3 with the following revised procedures:

Bone Marrow Procedure

A. Reagents

Fetal bovine serum (Hyclone® Laboratories, Inc.)
Sodium citrate

B. Preparation of Reagent

1. Dissolve 1g of sodium citrate in 99 mL of high purity water to prepare a 1% sodium citrate solution.

2. Mix 70 mL of the 1% sodium citrate solution with 30 mL of fetal bovine serum.

3. Use approximately 10 mL for each day of use and place the remainder of the solution in a refrigerator. The prepared solution will expire 10 days after preparation.

4. Discard all solutions that have warmed to room temperature after day of use.

A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS WITH AMMONIUM PERCHLORATE

PROTOCOL AMENDMENT NO. 1

C. Methods

1. Bone Marrow Harvest

   a. Pre-fill the centrifuge tubes with approximately 2 mLs of the prepared Fetal Bovine Serum (FBS) solution on the day of bone marrow collection.
   b. Animals are euthanized at the appropriate intervals by CO_2 inhalation.
   c. One femur is removed by cutting through the pelvis bones and below the knee.
   d. Clean, as much as possible, the muscle from the bone.
   e. Use a small scalpel to make a horizontal cut through the distal end (knee) and shorten the proximal end of the femur until a small opening to the marrow canal is visible on both ends.
   f. Aspirate approximately 1 mL of the prepared FBS Solution from the pre-filled centrifuged tube into the syringe.
   g. Insert the syringe into the marrow canal through the proximal opening.
   h. Gently force out and disperse the bone marrow by gently flushing the prepared FBS solution through the femur.
   i. Discard the femur and perform the same procedure on the second femur.
   j. Cap the centrifuge tube and submit it to the Clinical Pathology department

2. Preparation of Bone Marrow Smears

   a. Centrifuge the tubes at approximately 1000 rpm (Dial #5 on the centrifuge) for approximately 5 minutes.
   b. Remove the supernatent by a Pasteur pipette but leave a small amount of supernatent (approximately 2-4 drops) in the tube.
   c. Gently resuspend the cells in the centrifuge tube with the remaining prepared FBS Solution.
   d. Put one drop of the resuspend cells on a microscope slide and prepare a bone marrow smear similarly as a differential or reticulocyte smear.
   e. Make 5 bone marrow smear slides per animal.
   f. Air dry the smears until completely dry.

3. Bone Marrow Slide Fixation

   a. After air drying completely, fix the smears in methanol in a staining jar for approximately 10 minutes.

A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS WITH AMMONIUM PERCHLORATE

PROTOCOL AMENDMENT NO. 1

b. Allow the slides to air dry completely.
c. Once the slides are fixed with methanol, staining the slides can be performed at a later time not necessarily on the day of preparation.

4. Bone Marrow Slide Staining and Permount Fixation

a. Stain all the slides on the Ames Hematek Slide Stainer.
b. Dip the slide in a staining jar containing Xylene for a few seconds. The time of dipping the slide in the Xylene is not significant since the slide needs to be wet with Xylene for fixing purposes only.
c. Drop a small amount of permount on one end of the slide on the smear.
d. Place a rectangular cover slip on the permount over the smear on the slide being careful not to create air bubbles between the microscope slide and cover slip.
e. Wipe excess permount, if any, from the edges of the cover slip.

REASON FOR CHANGE/REVISION:

The revised procedures were recommended by the Sponsor to help ensure high quality slides for micronuclei evaluations.

Joseph C. Siglin, Ph.D., DABT
Study Director (SLI)

Date 11/26/97

Quality Assurance Unit (SLI)

Date 11/26/97

Darol E. Dodd, Ph.D., DABT
Sponsor's Representative
(Principal Investigator)

Date 12/3/97

A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS WITH AMMONIUM PERCHLORATE

PROTOCOL AMENDMENT NO. 2

1) PART TO BE CHANGED/REVISED:

Protocol Amendment No. 1, Section B (Preparation of Reagent)

CHANGE/REVISION:

Replace section B with the following:

1. Dissolve 1 g of sodium citrate in 99 mL of high purity water to prepare a 1% sodium citrate solution. Prepare enough solution for each days use at this ratio.

2. Mix 70 mL of the 1% sodium citrate solution with 30 mL of fetal bovine serum. Prepare enough solution for each days use at this ratio.

3. The prepared solution will expire 10 days after preparation.

REASON FOR CHANGE/REVISION:

To allow flexibility in the amount of solution prepared, and to eliminate item #4 which is no longer applicable.

2) PART TO BE CHANGED/REVISED:

Protocol Amendment No. 1, Section C.2. (Preparation of Bone Marrow Smears)

CHANGE/REVISION:

In item "d" the word "resuspend" should be changed to "resuspended".

REASON FOR CHANGE/REVISION:

To correct a clerical error.

A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS WITH AMMONIUM PERCHLORATE

PROTOCOL AMENDMENT NO. 2

Joseph C. Siglin, Ph.D., DABT
Study Director (SLI)

Date 12/3/97

Quality Assurance Unit (SLI)

Date 12/3/97

Darol E. Dodd, Ph.D., DABT
Sponsor's Representative
(Principal Investigator)

Date 12/5/97

A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS WITH AMMONIUM PERCHLORATE

PROTOCOL AMENDMENT NO. 3

1) PART TO BE CHANGED/REVISED:

VI.M.3. Histopathology

CHANGE/REVISION:

For histopathology of surviving recovery animals, only the following tissues will be processed and examined microscopically: liver, kidneys, lungs, thyroids/parathyroids, and gross lesions. For one recovery rat that died spontaneously, all collected tissues listed in protocol section VI.M.1. will be processed and examined microscopically. In addition, the histopathological examination of recovery animals may be extended to include any target organs identified from the 14 and/or 90-day euthanasia intervals.

REASON FOR CHANGE/REVISION:

To clarify histopathology procedures for recovery animals.

2) PART TO BE CHANGED/REVISED:

VI.M.4. Sperm Analysis

CHANGE/REVISION:

Sperm morphology will be assessed by SLI rather than Pathology Associates International.

REASON FOR CHANGE/REVISION:

Sperm morphology can be assessed with the same level of precision and expertise by SLI. Additionally, this change allows all required sperm parameters to be assessed by the primary contracting laboratory (i.e., sperm count, concentration, motility and morphology).

A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS WITH AMMONIUM PERCHLORATE

PROTOCOL AMENDMENT NO. 3

3) PART TO BE CHANGED/REVISED:

VIII. DATA REPORTING

CHANGE/REVISION:

In addition to analytical chemistry results, the Sponsor will provide the following additional information for incorporation in the 90-day study report: a report describing results of bone marrow micronuclei evaluations, and a report describing results of thyroid hormone evaluations.

REASON FOR CHANGE/REVISION:

To specify what additional information would be provided by the Sponsor for inclusion in the final report.

Joseph C. Siglin — Date 1/19/98
Joseph C. Siglin, Ph.D., DABT
Study Director (SLI)

Jessica M. Talerico — Date 1-19-98
Quality Assurance Unit (SLI)

Darol E. Dodd — Date 1/20/98
Darol E. Dodd, Ph.D., DABT
Sponsor's Representative
(Principal Investigator)

A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS WITH AMMONIUM PERCHLORATE

PROTOCOL AMENDMENT NO. 4

1) PART TO BE CHANGED/REVISED:

Protocol Amendment No. 1, Part 1

CHANGE/REVISION:

Replace the following:

C.1.i. The second femur will be processed for histopathology.

REASON FOR CHANGE/REVISION:

To clarify that the second femur will be processed for histopathology rather than bone marrow evaluations.

2) PART TO BE CHANGED/REVISED:

IV.A.9. Storage Conditions

CHANGE/REVISION:

Replace the first sentence with the following:

The bulk test article will be stored at room temperature, in amber bags to protect it from light.

REASON FOR CHANGE/REVISION:

To reflect the actual storage conditions for the bulk test article.

A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS WITH AMMONIUM PERCHLORATE

PROTOCOL AMENDMENT NO. 4

3) PART TO BE CHANGED/REVISED:

VI.I.2. Biochemistry Parameters

CHANGE/REVISION:

Delete "(fasting)" from glucose (fasting)

REASON FOR CHANGE/REVISION:

The animals will not be fasted prior to blood sample collection.

4) PART TO BE CHANGED/REVISED:

VI.M.2. Organ Weights

CHANGE/REVISION:

Add the following:

Left cauda epididymis weights will not be obtained for animals euthanized after 14 days since sperm analysis is not scheduled for these animals.

REASON FOR CHANGE/REVISION:

Left cauda epididymis weights are necessary only for animals scheduled for sperm analysis after 90 and 120 days.

5) PART TO BE CHANGED/REVISED:

VI.M.4. Sperm Analysis

CHANGE/REVISION:

For evaluation of sperm morphology, three sperm smear slides will be prepared for each animal.

A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS WITH AMMONIUM PERCHLORATE

PROTOCOL AMENDMENT NO. 4

REASON FOR CHANGE/REVISION:

To ensure an adequate number of slides for evaluation.

6) PART TO BE CHANGED/REVISED:

VIII. DATA REPORTING

CHANGE/REVISION:

Add the following to the list of information to be included in the report:

-Summary of Water Consumption (g/animal/day)
-Individual Water Consumption (g/animal/day)

REASON FOR CHANGE/REVISION:

Summary and individual water consumption tables will be included in the report.

7) PART TO BE CHANGED/REVISED:

IX. STATISTICAL ANALYSIS

CHANGE/REVISION:

Replace this section with the following:

Continuous data, including body weights, weight gain, food consumption, water consumption, clinical pathology parameters, organ weights, estrous cycle lengths, and semen parameters (sperm count, concentration, motility, and percent with normal morphology), were analyzed by One-Way Analysis of Variance (ANOVA). When significance was observed with ANOVA, control to treatment group comparisons were performed using the Tukey-Kramer method. Chi-Square test was used to analyze the incidence of females in each group exhibiting estrous cyclicity. All tests were two-tailed with a minimum significance level of 5% ($p<0.05$).

A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS WITH AMMONIUM PERCHLORATE

PROTOCOL AMENDMENT NO. 4

REASON FOR CHANGE/REVISION:

To specify statistical tests for sperm parameters and estrous cycle parameters.

8) PART TO BE CHANGED/REVISED:

Attachment 2

CHANGE/REVISION:

Replace Attachment 2 with the following revised schedule:

Event	Date	Concentrations to be Analyzed
Preparation of Stock Standard Solution (#1) and Week 1 Dosing Solutions	9/02/97	Stock Standard (#1) and Dosing Solutions
Preparation of Week 2 Dosing Solutions	9/15/97	None
Preparation of Stock Standard Solution (#2) and Preparation of Week 3 Dosing Solutions	9/22/97	Stock Standard (#2) and Dosing Solutions
Preparation of Week 4 Dosing Solutions	9/29/97	None
Preparation of Stock Standard Solution (#3) and Week 5 Dosing Solutions	10/06/97	Stock Standard (#3) and Dosing Solutions
Preparation of Week 6 Dosing Solutions	10/13/97	None
Preparation of Stock Standard Solution (#4) and Preparation of Week 7 Dosing Solutions	10/20/97	Stock Standard (#4)
Preparation of Week 8 Dosing Solutions	10/27/97	Dosing Solutions
Preparation of Week 9 Dosing Solutions	11/03/97	None
Preparation of Week 10 Dosing Solutions	11/10/97	None
Preparation of Week 11 Dosing Solutions	11/17/97	None
Preparation of Stock Standard Solution (#5) and Week 12 Dosing Solutions	11/24/97	Stock Standard (#5) and Dosing Solutions
Preparation of Week 13 Dosing Solutions	12/01/97	None

A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS WITH AMMONIUM PERCHLORATE

PROTOCOL AMENDMENT NO. 4

REASON FOR CHANGE/REVISION:

To reflect correct dates of sample preparation and analysis. Also, stock solution #4 was prepared on 10/20/97 (not 10/27/97) due to an insufficient amount of stock standard #3 for preparations on 10/20/97.

9) PART TO BE CHANGED/REVISED:

XI. REGULATORY COMPLIANCE

CHANGE/REVISION:

Change reference to "EPA Good Laboratory Practice regulations (40 CFR Part 160)" to "EPA Good Laboratory Practice Standards (40 CFR Part 792)".

REASON FOR CHANGE/REVISION:

EPA TSCA, not EPA FIFRA, GLP Standards apply to this study.

Joseph C. Siglin, Ph.D., DABT
Study Director (SLI)

Date 3/31/98

Quality Assurance Unit (SLI)

Date 3/31/98

Darol E. Dodd, Ph.D., DABT
Sponsor's Representative
(Principal Investigator)

Date 4/1/98

A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS WITH AMMONIUM PERCHLORATE

PROTOCOL AMENDMENT NO. 5

1) PART TO BE CHANGED/REVISED:

V. MAINTENANCE OF RAW DATA, RECORDS AND SPECIMENS

CHANGE/REVISION:

Add the following:

Raw data and records regarding dosing solution stability and concentration analyses, thyroid hormone analyses, and bone marrow micronuclei evaluations (including prepared slides) will be archived by the Sponsor.

REASON FOR CHANGE/REVISION:

To indicate where the above materials will be archived.

Joseph C. Siglin, Ph.D., DABT
Study Director (SLI)

Date 4/14/98

Quality Assurance Unit (SLI)

Date 4-14-98

Darol E. Dodd, Ph.D., DABT
Sponsor's Representative
(Principal Investigator)

Date 4/20/98

SLI Study No. 3455.1

Protocol deviations and "study occurrences" noted during the course of the study are described below. None of the noted events are considered to have significantly impacted the overall integrity of the study from a scientific or GLP perspective.

1. Variability occurred in the way uteri were trimmed prior to weighing at the 14- and 90-day intervals. Some prosectors removed the cervix from the uterus while others left the cervix attached. Uteri from all recovery rats were weighed without the cervix.

2. The lungs of group 5 females #11989 and #11991 were infused prior to weighing on Days 16 and 18, respectively. Therefore, the lung weights of these females were not included in the calculation of the group mean and standard deviation.

3. The time of blood collection was not documented for group 6 female #12022 at necropsy on day 94.

4. A final body weight was not recorded for group 4 male #11800 prior to euthanasia after 90 days. Therefore, organ-to-body weight calculations were not possible for this animal.

5. Although not required, a final body weight was taken for group 3 female #11948 found dead on day 97.

6. The disposition of some animals not selected for study was not recorded in the data records.

7. Two males determined to be suitable test subjects (pretest #8544 and #8593) were inadvertently not included in the study randomization.

8. Cage-side observations were not documented for the group 6 animals on study day 32.

9. The water bottle weight was not recorded for group 1 male #11743 on day 29.

10. There is no documentation that an ophthalmological examination was performed for group 4 male #11815 on study day 85.

11. No reason was documented to indicate why the amount of food left for group 5 female #11978 on day 98 was edited to zero.

12. The lungs of group 3 male #11786 and group 1 female #11877 were only partially infused at necropsy on study days 15 and 16, respectively, due to damage that occurred to the bronchi during tissue trimming prior to weight collection.

13. The animal room relative humidity was outside the specified range of 30 to 70% on three days during the study. The actual animal room relative humidity ranged from 24 to 65%.

14. Reticulocyte slides were inadvertently not prepared for group 1 male #11739 or group 5 female #12005 on study day 15. While the protocol required that reticulocyte slides be prepared for all animals, slides were to be examined only if considered necessary by the Sponsor and Study Director. No reticulocyte slides were examined in this study.

15. Blood samples collected on day 15 from males #11739, #11763, #11786, and #11807 from groups 1, 2, 3 and 4, respectively, were inadvertently placed on dry ice prior to obtaining serum for thyroid hormone analyses.

APPENDIX B

Analytical Chemistry Report
(as Provided by the Sponsor)

SLI Study No. 3455.1

STABILITY STUDY OF AMMONIUM PERCHLORATE AND CONCENTRATION VERIFICATION ANALYSIS OF AMMONIUM PERCHLORATE DOSING SOLUTIONS FOR SPRINGBORN LABORATORIES, INC.

SUBMITTED TO:
JOSEPH SIGLIN, PH.D., D.A.B.T.
Springborn Laboratories, Inc.,
640 N. Elizabeth St.,
Spencerville, OH 45887

SUBMITTED BY:

Latha Narayanan 05/14/98
Latha Narayanan

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David T. Tsui, Capt. USAF 14 May 98
David Mattie, Ph.D., D.A.B.T. J.F for Dave Mattie Jeff Tuttle 5/19/98

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ABSTRACT

Stability and concentration verification of the ammonium perchlorate dosing solutions used in the on-going 90-Day Oral Toxicity Study conducted by Springborn Laboratories, Inc. (SLI Study No. 3455.1) was performed. A sensitive and selective ion chromatography (IC) method for the analysis of perchlorate (ClO_4^-) and nitrate (NO_3^-), a possible interference anion, was developed to support these studies. The methods development and validation data more than sufficiently demonstrated that the IC method is capable of detecting both perchlorate and nitrate at 0.005 µg/mL (5 ppb) in reagent water with excellent accuracy and precision. Ion chromatographic analysis of the stability solutions showed that under controlled room temperature, relative humidity and light intensity, ammonium perchlorate is stable in reagent water within 109 days. The concentrations of the ammonium perchlorate dosing solutions (0.05 to 200 µg/mL) were verified by IC analysis to be within an acceptable range of +/- 10 %.

LIST OF ABBREVIATIONS

NH_4^+	ammonium cation
NH_4ClO_4	ammonium perchlorate
cm	centi-meter
CAS NO.	chemical abstract services registry number
CV or % CV	coefficient of variation or percent coefficient of variation
F crit	critical value of the *F* ratio
^oC	degrees Centigrade
^oF	degrees Fahrenheit
df	degrees of freedom
fc	footcandle
g	gram
L	liter
MS	mean square
MDL	method detection limit
µg	microgram
µl	microliter
µM	micromolar or micromole/liter
µmol	micromole
mg	milligram
mL	milliliter
mm	millimeter
MΩ	milli-ohm
min	minute
M	molarity
mol	mole
ng	nanagram
NO_3^-	nitrate anion

ANOVA	one-way analysis of variance
oz.	ounce
ppb	parts per billion
ppm	parts per million
ClO_4^-	perchlorate anion
PQL	practical quantitation limit
p-value	probability value
n	sample size
SS	sum of squares
F	the *F* ratio, test for homogeneity of variance
F crit	the F *value*
UV	ultraviolet
µS	micro-siemen

SLI Study No. 3455.1

Stability Study Of Ammonium Perchlorate and Concentration Verification Analysis Of Ammonium Perchlorate Dosing Solution For Springborn Laboratories, Inc.

Section I: Introduction

Ammonium perchlorate (NH_4ClO_4, CAS NO. 7790-98-9) is a white, crystalline salt that readily dissociates in water. The solubility of NH_4ClO_4 in water at 20 ^oC is 107.44 mg/mL. NH_4ClO_4 is a powerful oxidizer (Class 1.1, Department of Transportation) and it has been used extensively by the Department of Defense in solid propellant mixtures for rockets, missile engines and munitions. [1] Perchlorate is not regulated in the U.S. under the federal Safe Drink Water Act and it was once used pharmaceutically to treat hyperthyroidism (Grave's disease) [2-4]. However, since finding greater than 0.005 μg/mL (5 ppb) of perchlorate in several western U.S. municipalities, DoD has initiated several research studies on perchlorate. [5-10]

We provided a stability study and a concentration verification of the ammonium perchlorate dosing solutions used in the on-going 90-Day Oral Toxicity study conducted by Springborn Laboratories, Inc. A sensitive ion chromatography (IC) method for the analysis of perchlorate (ClO_4^-) and nitrate (NO_3^-), a possible interference anion, was developed to support these studies.

SECTION II: METHODS AND MATERIALS

Compliance Statement

The study entitled "Stability and Concentration Verification of Ammonium Perchlorate Dosing Solution" was conducted to be in compliance with the Environmental Protection Agency's Good Laboratory Practices Standards, 40 CFR 792.

Test Materials

Primary ammonium perchlorate (lot # 03907LF) and ammonium nitrate (lot # 09016AR) standards were purchased from Aldrich Chemical Company (St. Louis, MO). Secondary ammonium perchlorate (lot # K15G11) and ammonium nitrate (lot # 22141) check standards were purchased from Alpha Chemical Company (Ward Hill, MA). Test materials were used without further purification.

Reagents

Sodium hydroxide (45 Mm) was prepared by dissolving 1.8 g of NaOH in 1 L 55:45 reagent water and HPLC grade methanol. Sodium hydroxide was purchased from Aldrich Chemical Company (Milwaukee, WI). HPLC grade methanol was purchased from CORCO Chemical Company. Type I reagent water (18.0 to 18.3 MΩ-cm) was collected from a Barnstead Model D4751 Ultra-Pure water system.

Calibration Standards

Ammonium perchlorate and ammonium nitrate stock standard solutions at 50 mg/mL were prepared gravimetrically (Metler Model PE-360 analytical balance, ± 0.0001 g) from pure neat standards. 1000 µg/L working standard solutions were prepared from the individual stock standard solutions. From the working standard solutions, calibration standards at 0.05, 0.10, 0.50, 1.00, 2.00, 5.00, 10.0, 20.0, 50.0, 100 and 200 µg/mL were prepared by serial dilution.

Analytical Method

Ion chromatography was performed on a Dionex DX-300 High Performance Liquid Chromatograph with a Dionex CDM-3 conductivity detector. An ASRS-II anion suppresser, operating in auto suppression-external water mode, was used. The system included a Dionex AI 350 autosampler. All data were collected using Dionex AI-450 software. Dionex IonPak AS-11 ion chromatography column (4.0 x 250 mm), Dionex ATC-1 anion trap column and Dionex AG-11 guard column (4.0 x 50 mm) were used to perform anion analysis. The mobile phase, consisting of 45 mM NaOH in 55:45 water:methanol, was set at 1 mL/min flow rate. The injection loop volume was 50 µL, and the regenerant flow rate was 10 mL/min. Analysis was performed at 30°C.

Perchlorate Stability Analysis

Stock perchlorate solution (50 mg/mL) was prepared gravimetrically by adding 25 g of ammonium perchlorate to a 500 mL volumetric flask and bringing to volume with Type I laboratory reagent water. From the 50 mg/mL stock standard solution, 4 L perchlorate stability solutions at 0.05 and 200 µg/mL were prepared in a polyethylene carboy (Consolidated Plastics Co., Twinsberg, OH. Cat. # 22788LH) by serial dilution. The concentrations of the 0.05 and 200 µg/mL stability solutions were verified by ion chromatography. For each perchlorate solution, 200 mL aliquots were transferred to four 16-oz. clear French square bottles (Ancare Corp., Bellmore, N.Y. ,Cat. # FS-101) and three 300 mL amber French square bottles (All-Pak In., Bridgeville, P.A., Cat. # 7934). Each bottle was capped with a double-bearing metal spout, sealed with a rubber septum, and transferred to a rodent cage. The concentration of the stability solutions was monitored by ion chromatography on days 7, 15, 36, 50, 61, and 109 from the date of preparation.

To simulate perchlorate exposure to light during a normal animal testing study, a rack housing 14 rodent cages complete with bedding and feeders, was centered between light sources in an animal room. Water bottles containing stability solutions were placed on the cages. The temperature and relative humidity of the animal room was maintained at 70 to 72°F and 60 to 65% relative humidity. The light/dark cycle was set at 12 hour intervals. The animal cages were rotated daily. On days 10, 27, 41, and 54, the light intensity of the animal room was measured

with a Litemate III model 504 light meter (Photo Research Division, Kollmorgen Instrument Corporation, Chatsworth, CA).

Concentration Verification

Dose formulations were prepared by Springborn Laboratories, Inc. Triplicate samples (2 mL each) were taken from the prepared formulations on the day of preparation. One of each triplicate was retained at the testing laboratories as a backup sample. Two samples were shipped on ice to AFRL/HEST by overnight delivery. To avoid cross contamination, the samples were immediately stored in a dedicated 4 to 6°C refrigerator upon receipt. Within 36 hours of arrival, the samples were analyzed by ion chromatography for nitrate and perchlorate.

SECTION III: RESULTS

Method Development and Validation

Chromatographic conditions were optimized and described in Section II. Baseline noise was kept minimal. The system was equilibrated to produce a background conductance less than 1.9 Ms. A system blank, deionized water, established the baseline and confirmed the lack of contamination in the system. A typical ion chromatogram of 5 µg/mL nitrate and perchlorate standards is shown in Figure 3.1. The order of elution was established by injecting each standard separately, at 10 µg/mL. The retention times for nitrate and perchlorate were approximately 2.2 and 9.4 min, respectively. Both peaks were well-resolved. The nitrate peak was relatively sharper than that of the perchlorate peak. The peak-width at half height for nitrate was 0.3 minute and for perchlorate, 0.5-0.6 minute.

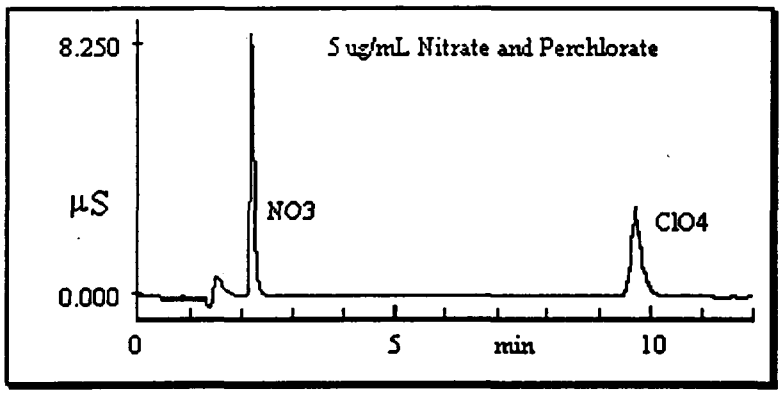

Figure 3.1. An ion chromatogram of 5 µg/mL nitrate and perchlorate.

The perchlorate peak could be sharpened by using straight 100 mM sodium hydroxide in reagent grade water as mobile phase rather than using 45 mM sodium hydroxide in 45:55 reagent grade water: HPLC grade methanol. However, with a straight 100 mM sodium hydroxide mobile, the nitrate peak is un-retained and it runs into the water/injection peak.

The method detection limit data for nitrate and perchlorate are shown in Table 3.1. Eight replicates of 0.05 µg/mL standards containing both nitrate and perchlorate were prepared. The

0.05 µg/mL replicates were analyzed over 72 hours. Per guidelines and procedures set forth in Code of Federal Regulations 40, Chapter 1, Pt. 136, Appendix B, [12] the calculated method detection limit (MDL) for both nitrate and perchlorate is 0.005 µg/mL (5 ppb). The appropriate Student t-value for eight samples (n= 8, degree of freedom = 7) at the 99% confidence limit is 2.998. The relative percent recovery for nitrate and perchlorate were 101 and 100%, respectively. For both nitrate and perchlorate, the signal to noise ratio at 0.005 µg/mL (5 ppb) is greater than 3, and the chromatograms of perchlorate and nitrate at the detection limit are shown in Figures 3.2 and 3.3., respectively. Both chromatograms show that the perchlorate and nitrate peaks are well resolved even at the detection limit. The calculated on-column limit is 0.25 ng (0.005 µg/mL * 50 µΛ = 2.5×10^{-4} µg) and the practical quantitation limit at 10 times the MDL is 0.05 µg/mL. The lower and upper confidence limits, set at 95% confidence limit, are 0.0036 and 0.011 µg/mL.

Table 3.1. MDL data for perchlorate and nitrate analysis by ion chromatography

Perchlorate			**Nitrate**		
Data Points	**Area Count**	**Conc. (µg/mL)**	**Data Points**	**Area Count**	**Conc. (µg/mL)**
1	212034	0.050	1	480855	0.048
2	211140	0.050	2	517693	0.051
3	221194	0.052	3	521485	0.051
4	227660	0.054	4	517938	0.051
5	210420	0.050	5	528041	0.052
6	213280	0.050	6	470344	0.048
7	209608	0.050	7	499425	0.049
8	206890	0.049	8	505112	0.050
Avg. Conc. (µg/mL)		0.051	Avg. Conc. (µg/mL)		0.050
Expected Conc. (µg/mL)		0.050	Expected Conc. (µg/mL)		0.050
% Recovery		101%	% Recovery		100%
Standard Deviation		0.002	Standard Deviation		0.002
MDL (µg/mL)		0.005	MDL (µg/mL)		0.005
PQL (10Xmdl)		0.05	PQL (10Xmdl)		0.05

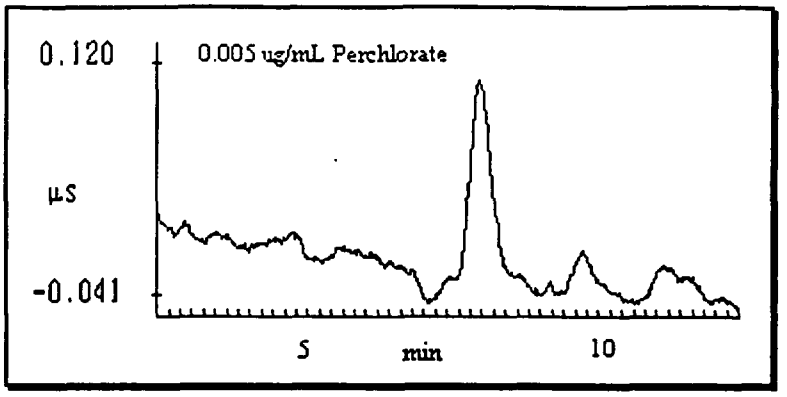

Figure 3.2. A typical ion chromatogram of 0.005 µg/mL perchlorate standard

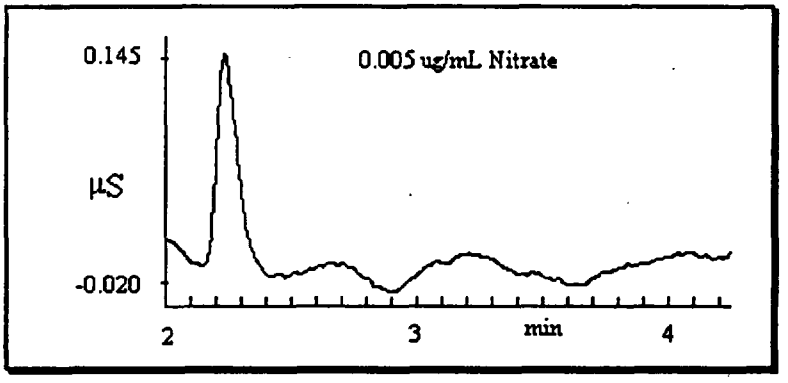

Figure 3.3. A typical ion chromatogram of 0.005 µg/mL nitrate standard

Calibration curves for nitrate and perchlorate were generated by plotting the concentrations of each standard against the peak area count obtained. The calibration curves are shown in Figure 3.4. In each case, the calibration curves were linear through the calibration range, from MDL to 40000 x MDL, over 5 orders of magnitude. For perchlorate, the calibration line was typically described by the equation Y = 5939330.55 X and nitrate, Y = 10247858.25 X. The correlation coefficient values were 0.9999 for both perchlorate and nitrate. The calibration curves were verified by nitrate and perchlorate standards purchased from a second source.

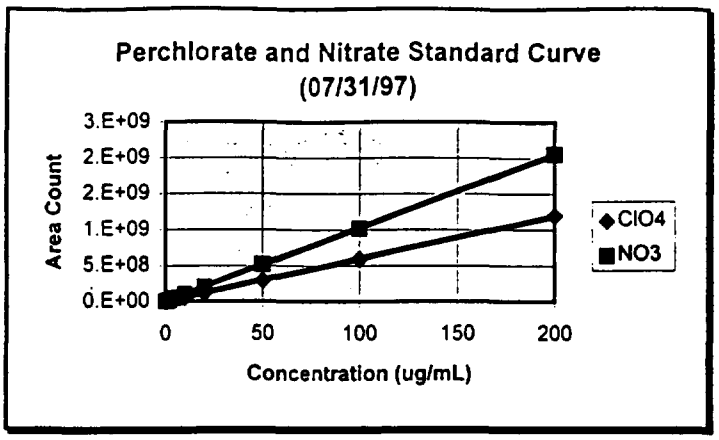

Figure 3.4. Typical calibration curves for perchlorate and nitrate

The intra- and inter-day method variabilities for perchlorate and nitrate were measured and expressed as percent coefficient of variation (Table 3.2). The average intra- and inter-day variability were less than 10% coefficient of variation for all concentration levels and did not show concentration dependence.

Table 3.2. Intra- and Inter-day variabilities for perchlorate and nitrate

	Perchlorate		Nitrate	
Concentrations (µg /mL)	% Intra-day Variability	% Inter-day Variability	% Intra-day Variability	% Inter-day Variability
n	2	4	2	4
0.05	0.42	7.99	0.00	5.38
0.10	2.83	3.73	2.22	8.86
0.50	8.14	2.86	1.85	0.69
1.00	8.74	4.98	1.06	1.19
2.00	0.81	9.81	2.12	2.32
5.00	1.86	4.34	1.82	5.99
10.0	0.13	3.02	0.58	4.26
20.0	1.87	0.93	0.95	0.51
50.0	1.72	0.52	0.10	1.99
100	1.54	0.03	0.48	0.43
200	0.84	1.60	0.09	0.36

Perchlorate Stability Study

The perchlorate stability study was designed to mimic conditions during a normal animal testing study. Exposure of the perchlorate stability solutions to light, temperature and humidity was carefully controlled and monitored. The temperature and relative humidity of the animal room were between 70 to 72°F and 60 to 65% relative humidity. The light/dark cycle was set at 12 hour intervals, except for day 11 of the study. On day 11 of the study, the perchlorate stability solutions were exposed to 10 hours of light and 14 hours of dark due to a power outage. The intensity of incident light on the top left, top right, center, bottom left and bottom right of the set of animal cages was measured on days 10, 27, 41, 54 and 102. The results are shown in Table 3.3. As expected, stability solutions located on the top of the animal cages, closest to the light source, were consistently exposed to more light than those on the bottom of the animal cages. For a given location on the set of animal cages, variability in light intensity with respect to time, as measured by percent coefficient of variation (% CV), was less than 6%, indicating little or no change in light intensity. Daily rotation of the animal cages ensured that throughout the entire study, stability solutions were exposed to equal amount of light. Respectively, the daily mean light intensity for days 10, 27, 41, and 54were 34.8, 35.6, 35.7, and 32.9. The average, standard deviation and %CV for the daily mean light intensity were 34.7 fc, 1.10 fc and 3.7%CV, respectively.

Table 3.3. Incident light intensity measurements.

Day	Top Left	Top Right	Middle	Bottom Left	Bottom Right
	(fc)	(fc)	(fc)	(fc)	(fc)
10	37.5	38.2	35.2	31.0	32.0
27	37.3	37.7	39.0	30.0	33.8
41	38.7	38.5	37.3	30.0	34.1
54	37.5	35.7	33.7	28.4	29.4
Average	37.8	37.5	36.3	29.9	32.3
Std Dev	0.5	1.0	1.8	0.8	1.7
%CV	1.6%	2.6%	4.9%	2.8%	5.4%

The stability data of 0.05 and 200 µg/mL stability solutions in clear and amber bottles are listed in Appendix A. Because the stability solutions were pooled on day 109 of the study, only

two data points are shown. Concentrations of the stability solutions were measured twice by IC as described in Section II. Each ion chromatograms was examined in detail and the formation of nitrate was not observed in any of the stability solutions.

An one way analysis of variance (ANOVA) analysis, shown on the bottom of each table, was employed to examine the differences of within group (intra-day) and between groups (inter-day) concentration variations. As shown in Appendix A, three categories of sums of squares (*SS*) are presented in the ANOVA summary report, along with the degrees of freedom (*df*) for the between and within variance. The mean square (*MS*) and the test for homogeneity of variance (*F*-ratio) were calculated from *SS* and *df* by the following equations: $MS = SS/df$ and *F*-ratio = between *MS*/ within *MS*. The *F critical* values at 0.05 rejection level (α) were obtained from Reference 13. As compared to the appropriate F-critical values, the small F-values (test of homogeneity of variance) for all four sets of data indicated that ammonium perchlorate in aqueous solution at 0.05 and 200 µg/mL is stable for 109 days. At a given level, no trend was observed in the perchlorate concentration, as some might expect an increasing trend due to evaporation. Furthermore, no significant perchlorate concentration difference was noted between the solutions stored in amber and clear water bottles at a given concentration. Since the amber bottles are impermeable to light and UV radiation, the results indicated that average 12-hour daily exposure to light does not lead to the degradation of perchlorate in reagent water.

Concentration Verification

The results of concentration verification analysis for Springborn Laboratories, Inc., are presented in Appendix B, respectively. Date of formulation preparation and analysis date are clearly denoted. If possible, duplicate sample analysis was performed for every set of samples. If performed, duplicates were analyzed at least once every ten samples. As shown in Appendices B, the very low percent difference between the concentration of duplicate samples ensures the method is reproducible. Spike recovery analysis at either 0.05 or 200 µg/mL was performed for every set of samples. The percent spike recovery was consistently between +/-10%, indicating acceptable method accuracy. The difference between the nominal and measured concentration was within 90 to 110%. No nitrate was found in any of the formulations.

SECTION IV: DISCUSSION AND CONCULSIONS

A sensitive IC method for the analysis of perchlorate and nitrate has been developed and optimized to support the stability study of ammonium perchlorate in water. The method detection limit for perchlorate and nitrate is 0.005 µg /mL (5 ppb). The sensitivity of the method is comparable to existing IC [14-17] and CE [18, 19] methods. This optimized IC method is far more sensitive and selective than gravimetry [20-23], UV-spectrophotometry [24-38], ion selective electrode [39-42] and flame atomic absorption spectroscopy [43] methods. Methods such as those of California Department of Health Services (CDHS) are not as robust as this IC method; the CDHS can not detect nitrate. The method is linear from MDL to 4000 x MDL and is demonstrated to have accepted precision and accuracy.

Since perchlorate is a strong oxidizing agent, it was thought that the stability of perchlorate may be limited. [1] A stability study of ammonium perchlorate in reagent water was conducted at constant temperature and humidity. Ammonium perchlorate in reagent water was found to be stable in the presence of light at two concentrations (0.05 and 200 µg/mL). Detailed examination of the ion chromatograms showed absence of nitrate in the stability solution for upto 109 days of storage. Due to the very low MDL, we believe that any degradation of ammonium perchlorate would have been detected within this time period. Stability solutions for a given concentration level and bottle type were pooled and analyzed at day 145. The results of the pooled stability solutions indicated that perchlorate appears to be still stable.

Concentration verification of dosing solutions was performed for samples received from Springborn Laboratories, Inc. The concentration of perchlorate in the dosing solutions was determined by IC. Measured concentrations agreed well with the nominal concentrations.

IC was used to aggressively monitor the possible presence of nitrate in the dosing solution because nitrate is an interfering anion commonly found in rural ground water supply. At the method detection limit of 0.005 µg/mL, no nitrate was found in the dosing solutions.

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SECTION VI: QUALITY ASSURANCE

The study, "Stability Study of Ammonium Perchlorate and Concentration Verification Analysis of Ammonium Perchlorate Dosing Solution for Springborn Laboratories," was conducted to be in compliance with the Environmental Protection Agency's Good Laboratory Practices Standards, 40 CFR 792.

The data, notebook, and Investigators Report for this study were inspected by the Quality Assurance Unit. Data for light intensity measurement were not included in this review. These data were collected by the auditor in his capacity as Unit Safety Representative for AFRL/HEST, Toxicology Branch. Results of the inspections were reported directly to the Investigator.

DATE OF INSPECTION	ITEM INSPECTED
March 16,17, 1998	Data, Report, Notebook

The Quality Assurance Unit has determined through review process that this report accurately describes those methods and standard operating procedures required by the protocol and that the reported results accurately reflect the raw data obtained during the course of the study. No discrepancies were found that would alter the interpretations presented in this Final Report.

M. G. Schneider
QA Coordinator
Toxic Hazards Research Unit

19 March 1998

APENDIX A. STABILITY DATA

0.05 µg/mL PERCHLORATE SOLUTION IN CLEAR BOTTLE						
	Day 7	Day15	Day36	Day50	Day61	Day109
Bottle A	0.048	0.050	0.051	0.050	0.050	0.050
Bottle B	0.050	0.051	0.048	0.049	0.051	
Bottle C	0.051	0.050	0.048	0.051	0.051	0.050
Bottle D	0.052	0.049	0.050	0.050	0.049	
ANOVA: Single Factor, $\alpha = 0.05$						
SUMMARY						
Groups	*Count*	*Sum*	*Average*	*Variance*		
Day 7	4	0.201	0.050	2.9E-06		
Day15	4	0.200	0.050	6.7E-07		
Day36	4	0.196	0.049	1.9E-06		
Day50	4	0.201	0.050	5.2E-07		
Day61	4	0.201	0.050	9.2E-07		
Day109	2	0.100	0.050	0		
ANOVA						
Source of Variation	*SS*	*df*	*MS*	*F*	*P-value*	*F crit*
Between Groups	4.51E-06	5	9.02E-07	0.69858	0.63236	2.85241
Within Groups	2.07E-05	16	1.29E-06			
Total	2.52E-05	21				

200 μg/mL PERCHLORATE SOLUTION IN CLEAR BOTTLE						
	Day 7	Day15	Day36	Day50	Day61	Day109
Bottle A	198.44	200.00	206.66	196.67	201.39	200.67
Bottle B	199.27	199.57	200.89	200.45	202.81	
Bottle C	204.55	200.16	201.89	199.59	196.92	199.58
Bottle D	207.95	199.90	199.24	202.36	203.11	
ANOVA: Single Factor, α = 0.05						
SUMMARY						
Groups	*Count*	*Sum*	*Average*	*Variance*		
Day 7	4	810.2	202.553	20.2702		
Day15	4	799.6	199.909	0.0607		
Day36	4	808.7	202.169	10.1468		
Day50	4	799.1	199.768	5.5960		
Day61	4	804.2	201.057	8.1864		
Day109	2	400.2	200.123	0.5962		
ANOVA						
Source of Variation	*SS*	*df*	*MS*	*F*	*P-value*	*F crit*
Between Groups	27.493	5	5.49861	0.65962	0.65905	2.85241
Within Groups	133.376	16	8.33601			
Total	160.869	21				

0.05 μg/mL PERCHLORATE SOLUTION IN AMBER BOTTLE						
	Day 7	Day15	Day36	Day50	Day61	Day109
	0.055	0.050	0.049	0.050	0.050	0.052
	0.048	0.049	0.050	0.049	0.049	0.051
	0.052	0.051	0.048	0.049	0.050	
ANOVA: Single Factor, α = 0.05						
SUMMARY						
Groups	*Count*	*Sum*	*Average*	*Variance*		
Day 7	3	0.155	0.052	1.2E-05		
Day15	3	0.155	0.050	1.0E-06		
Day36	3	0.147	0.049	1.1E-06		
Day50	3	0.148	0.049	7.9E-07		
Day61	3	0.149	0.050	4.4E-07		
Day109	2	0.103	0.052	5.0E-07		
ANOVA						
Source of Variation	*SS*	*df*	*MS*	*F*	*P-value*	*F crit*
Between Groups	1.83E-05	5	3.66E-06	1.26043	0.34664	3.20388
Within Groups	3.19E-05	11	2.90E-06			
Total	5.02E-05	16				

200 µg/mL PERCHLORATE SOLUTION IN AMBER BOTTLE						
	Day 7	Day15	Day36	Day50	Day61	Day109
	202.41	200.00	207.04	202.00	199.42	200.67
	197.39	203.19	200.89	200.25	200.78	199.58
	199.10	200.31	200.41	199.50	197.66	
ANOVA: Single Factor, α = 0.05						
SUMMARY						
Groups	*Count*	*Sum*	*Average*	*Variance*		
Day 7	3	598.9	199.633	6.5134		
Day15	3	603.5	201.165	3.0923		
Day36	3	608.3	202.779	13.7003		
Day50	3	601.8	200.583	1.6443		
Day61	3	597.9	199.284	2.4465		
Day109	2	400.2	200.123	0.5962		
ANOVA						
Source of Variation	*SS*	*df*	*MS*	*F*	*P-value*	*F crit*
Between Groups	23.651	5	4.73016	0.93937	0.49285	3.20388
Within Groups	55.389	11	5.03542			
Total	79.0404	16				

APPENDIX C. CONCENTRATION VERIFICATION ANALYSIS FOR SPRINGBORN LABORATORIES.

SLI Study No. 3455.1				
SLI Vehicle	**R.O. D.I. Water**			
Prep Date	**9/2/97**			
Test Article No.	**S97.001.3455**			
Analysis Date	**9/2/97**			
		Measured		
	Nominal	Perchlorate	Perchlorate	Percent
	Concentrations	Concentrations	MDL	Difference
Identifiers	(µg /mL)	(µg /mL)	(µg /mL)	(%)
Control A	0.000	ND	0.005	0.00%
Gr. 2 M A	0.083	0.081	0.005	2.41%
Gr. 2 F A	0.074	0.072	0.005	2.70%
Gr. 3 M A	0.042	0.043	0.005	2.38%
Gr. 3 F A	0.037	0.038	0.005	2.70%
Gr. 4 M A	1.670	1.689	0.005	1.14%
Gr. 4 F A	1.470	1.534	0.005	4.35%
Gr. 5 M A	8.330	8.043	0.005	3.45%
Gr. 5 F A	7.370	7.138	0.005	3.15%
Gr. 6 M A	83.300	82.477	0.005	0.99%
Gr. 6 F A	73.700	72.627	0.005	1.46%
50 mg/mL	50000.000	50230	1.250	0.46%
ND	"= Non-Detect			
QA/QC Data				
	Nominal	Measured		
	Concentrations	Perchlorate		
	(µg /mL)	Concentrations		
		(µg /mL)		
Control #1	20	19.3		
Control #2	20	19.3		
Average	20	19.3		
% Difference		0.00%		
% Recovery		**96.50%**		
Gr. 4M A	1.667	1.689		
Gr. 4M B Duplicate	1.667	1.684		
% Difference		**0.30%**		
Gr. 2F A	0.074	0.072		
Gr. 2F B+20ppm spike	20.074	19.375		
% Spike Recovery		**99.63%**		

SLI Study No. 3455.1				
SLI Vehicle	**R.O. D.I. Water**			
Prep Date	**9/22/97**			
Test Article No.	**S97.001.3455**			
Analysis Date	**9/22/97**			
		Measured		
	Nominal	Perchlorate	Perchlorate	Percent
	Concentrations	Concentrations	MDL	Difference
Identifiers	(µg /mL)	(µg /mL)	(µg /mL)	(%)
Gr. 1 M/F	0.000	0.000	0.005	0.00%
Gr. 2 M A	0.093	0.091	0.005	2.15%
Gr. 2 F A	0.081	0.079	0.005	2.47%
Gr. 3 M A	0.470	0.454	0.005	4.82%
Gr. 3 F A	0.390	0.350	0.005	9.54%
Gr. 4 M A	1.813	1.715	0.005	5.41%
Gr. 4 F A	1.647	1.621	0.005	1.58%
Gr. 5 M A	9.100	9.115	0.005	0.16%
Gr. 5 F A	7.800	7.575	0.005	2.88%
Gr. 6 M A	92.000	89.313	0.005	2.92%
Gr. 6 F A	68.333	68.078	0.005	0.37%
50 mg/mL, 1:250 Dil	50000	49200	1.250	1.60%
QA/QC Data				
	Nominal	Measured		
	Concentrations	Perchlorate		
	(µg /mL)	Concentrations		
		(µg /mL)		
Control #1	20	20.171		
Control #2	20	20.275		
Average	20	20.223		
% Difference		0.52%		
% Recovery		**101.12%**		
Gr. 2M A	0.093	0.091		
Gr. 2M B Duplicate	0.093	0.091		
% Difference		**0.00%**		
Gr. 2F A	0.081	0.079		
Gr. 2F B+20ppm spike	20.081	20.187		
% Spike Recovery		**99.61%**		

SLI Study No. 3455.1

SLI Study No. 3455.1				
SLI Vehicle	**R.O. D.I. Water**			
Prep Date	**10/6/97**			
Test Article No.	**S97.001.3455**			
Analysis Date	**10/7/97**			
		Measured		
	Nominal	Perchlorate	Perchlorate	Percent
	Concentrations	Concentrations	MDL	Difference
Identifiers	(µg /mL)	(µg /mL)	(µg /mL)	(%)
Gr. 1 M/F	0.000	0.000	0.005	0.00%
Gr. 2 M A	0.105	0.106	0.005	0.95%
Gr. 2 F A	0.083	0.084	0.005	1.20%
Gr. 3 M A	0.552	0.572	0.005	3.62%
Gr. 3 F A	0.419	0.407	0.005	2.86%
Gr. 4 M A	2.142	2.254	0.005	5.23%
Gr. 4 F A	1.533	1.560	0.005	1.74%
Gr. 5 M A	10.292	10.278	0.005	0.14%
Gr. 5 F A	8.500	8.437	0.005	0.74%
Gr. 6 M A	109.167	103.055	0.005	5.60%
Gr. 6 F A	80.000	81.016	0.005	0.85%
50 mg/mL, 1:250 Dil	50000	50900.000	1.250	1.80%
QA/QC Data				
	Nominal	Measured		
	Concentrations	Perchlorate		
	(µg /mL)	Concentrations		
		(µg /mL)		
Control #1	20	19.856		
Control #2	20	19.856		
Average		19.856		
% Difference		0.00%		
% Recovery		**99.28%**		
Gr. 2F A	0.083	0.084		
Gr. 2F B Duplicate	0.083	0.084		
% Difference		**0.00%**		
Gr. 2M A	0.105	0.106		
Gr. 2M B+20ppm spike	20.105	20.187		
% Spike Recovery		**99.47%**		

SLI Study No.	**3455.1**			
SLI Vehicle	**R.O. D.I. Water**			
Prep Date	**10/28/97**			
Test Article No.	**S97.001.3455**			
Analysis Date	**10/28/97**			
		Measured		
	Nominal	Perchlorate	Perchlorate	Percent
	Concentrations	Concentrations	MDL	Difference
Identifiers	(µg /mL)	(µg /mL)	(µg /mL)	(%)
Gr. 1 M/F	0.000	0.000	0.005	0.00%
Gr. 2 M A	0.114	0.114	0.005	0.00%
Gr. 2 F A	0.078	0.079	0.005	1.28%
Gr. 3 M A	0.598	0.581	0.005	2.84%
Gr. 3 F A	0.398	0.398	0.005	0.00%
Gr. 4 M A	2.322	2.406	0.005	3.62%
Gr. 4 F A	1.589	1.604	0.005	0.94%
Gr. 5 M A	11.667	11.630	0.005	0.32%
Gr. 5 F A	8.375	8.487	0.005	1.34%
Gr. 6 M A	114.583	115.253	0.005	0.58%
Gr. 6 F A	81.667	82.516	0.005	1.04%
50 mg/mL,1:250 Dil	50000	50200.000	1.250	0.40%
QA/QC Data				
	Nominal	Measured		
	Concentrations	Perchlorate		
	(µg /mL)	Concentrations		
		(µg /mL)		
Control #1	20	20.047		
Control #2	20	20.013		
Average		20.03		
% Difference		0.17%		
% Recovery		**100.15%**		
Gr. 2F A	0.078	0.079		
Gr. 2F B Duplicate	0.083	0.079		
% Difference		**0.00%**		
Gr. 2M A	0.114	0.114		
Gr. 2M B+20ppm spike	20.114	20.134		
% Spike Recovery		**99.43%**		

SLI Study No.	**3455.1**			
SLI Vehicle	**R.O. D.I. Water**			
Prep Date	**11/24/97**			
Test Article No.	**S97.001.3455**			
Analysis Date	**11/24/97**			
		Measured		
	Nominal	Perchlorate	Perchlorate	Percent
	Concentrations	Concentrations	MDL	Difference
Identifiers	(µg /mL)	(µg /mL)	(µg /mL)	(%)
Gr. 1 M/F	0.000	0.000	0.005	0.00%
Gr. 2 M A	0.126	0.126	0.005	0.00%
Gr. 2 F A	0.093	0.092	0.005	1.08%
Gr. 3 M A	0.694	0.686	0.005	1.15%
Gr. 3 F A	0.438	0.436	0.005	0.46%
Gr. 4 M A	2.775	2.704	0.005	2.56%
Gr. 4 F A	2.000	1.969	0.005	1.56%
Gr. 5 M A	13.458	13.258	0.005	1.49%
Gr. 5 F A	9.583	9.493	0.005	0.94%
Gr. 6 M A	129.167	130.086	0.005	0.71%
Gr. 6 F A	90.417	91.477	0.005	1.17%
50 mg/mL,1:250 Dil	50000	50700.000	1.250	1.40%
QA/QC Data				
	Nominal	Measured		
	Concentrations	Perchlorate		
	(µg /mL)	Concentrations		
		(µg /mL)		
Control #1	20	20.094		
Control #2	20	20.013		
Average		20.0535		
% Difference		0.40%		
% Recovery		**100.27%**		
Gr. 2F A	0.093	0.092		
Gr. 2F B Duplicate	0.093	0.092		
% Difference		**0.00%**		
Gr. 2M A	0.126	0.126		
Gr. 2M B+20ppm spike	20.126	20.177		
% Spike Recovery		**99.38%**		

APPENDIX C

Clinical Pathology Methods

A. Blood Collection

Blood samples for hematology were collected into tubes containing K_3EDTA anticoagulant. Blood samples for biochemistry were collected in serum SST tubes containing no anticoagulant.

B. Hematology

1. Red blood cell (RBC) and white blood cell (WBC). A Coulter S Plus IV hematology analyzer is used in determining the RBC and WBC. A Coulter S-Cal kit is used to calibrate the instrument and Coulter Tri-Pack control sera are used in monitoring accuracy and precision of the instrument.

2. Hemoglobin (HGB). Hemoglobin is measured on the Coulter S Plus IV hematology analyzer. A lysing reagent lyses the RBC and converts the released HGB to a stable cyanide-containing pigment which is measured photometrically. Coulter Tri-Pack control sera are used in monitoring accuracy and the precision of the instrument.

3. Mean corpuscular (erythrocyte) volume (MCV). The MCV is measured on the Coulter S Plus IV hematology analyzer. Coulter Tri-Pack control sera are used in monitoring the precision and accuracy of the instrument.

4. Mean corpuscular (erythrocyte) hemoglobin (MCH). The MCH is computed electronically on the Coulter S Plus IV hematology analyzer using the following equation:

$$\text{MCH } (\mu\mu g) = 10 \times \frac{\text{HGB}}{\text{RBC}}$$

5. Mean corpuscular (erythrocyte) hemoglobin concentration (MCHC). MCHC is computed electronically on the Coulter S Plus IV hematology analyzer using the following equation:

$$\text{MCHC } (g/dL) = 100 \times \frac{\text{HGB}}{\text{HCT}}$$

6. Hematocrit (HCT). Hematocrit is the relative volume of erythrocytes and is computed electronically on the Coulter S Plus IV hematology analyzer using the following equation:

$$\text{HCT } (\%) = \frac{\text{RBC} \times \text{MCV}}{10}$$

7. Platelet count (PLT). The platelet count is determined on the Coulter S Plus IV hematology analyzer. Coulter 4C Tri-Pack control sera are used to monitor precision and accuracy of the instrument.

8. Differential leukocyte and nucleated red blood cell counts (NRBC). An Ames Hema-tek slide stainer is used to automatically stain the slides using a combination of Wright stain, buffers and rinse solutions (Wright-Giemsa stain). One hundred white cells are counted and identified under oil immersion (100x) using the Nikon Labophot microscope. The slides are also checked for any abnormal RBC morphology. Nucleated red blood cell (NRBC) counts are counted as per 100 leukocytes.

C. Biochemistry

All biochemistry parameters are performed on the Beckman Synchron CX-5 chemistry analyzer. Synchron Control Level I and Level II are used as control sera to monitor accuracy and precision of the instrument. Listed below are the biochemistry parameters and their methodology.

1. Albumin (ALB). Beckman Albumin reagent is used to measure the albumin concentration by a timed-endpoint method. In the reaction, the albumin combines with Bromcresol Green (BCG) to form a colored product. The system monitors the change in absorbance at 600 nanometers at a fixed-time interval. This change in absorbance is directly proportional to the concentration of albumin in the sample and is used by the Synchron CX-5 System to calculate and express the albumin concentration.

2. Alkaline phosphatase (ALP). Beckman ALP Reagent is used to measure the ALP activity by an enzymatic rate method using a 2-Amino-2-Methyl-1-Propanol (AMP) buffer. In the reaction, the ALP catalyzes the hydrolysis of the colorless organic phosphate ester substrate, p-Nitrophenylphosphate, to the yellow colored product, p-Nitrophenol, and phosphate. This reaction occurs at an alkaline pH of 10.3. The system monitors the rate of change in absorbance at 410 nanometers over a fixed-time interval. This rate of change in absorbance is directly proportional to the activity of ALP in the sample and is used by the Synchron CX-5 System to calculate and express the ALP activity.

3. Alanine aminotransferase (ALT). Beckman ALT Reagent is used to measure the ALT activity by an enzymatic rate method. In the reaction, the ALT catalyzes the reversible transamination of L-alanine and alpha-ketoglutarate to pyruvate and L-glutamate. The pyruvate is then reduced to lactate in the presence of lactate dehydrogenase (LDH) with the concurrent oxidation of b-Nicotinamide Adenine Dinucleotide (reduced form) (NADH) to b-Nicotinamide Adenine Dinucleotide (NAD). The system monitors the rate of change in absorbance at 340 nanometers over a fixed-time

interval. This rate of change in absorbance is directly proportional to the activity of ALT in the sample and is used by the Synchron CX-5 System to calculate and express the ALT activity.

4. Aspartate aminotransferase (AST). Beckman AST Reagent is used to measure the AST activity by an enzymatic rate method. In the reaction, the AST catalyzes the reversible transamination of L-aspartate and alpha-ketoglutarate to oxaloacetate and L-glutamate. The oxaloacetate is then reduced to malate in the presence of malate dehydrogenase (MDH) with the concurrent oxidation of b-Nicotinamide Adenine Dinucleotide (reduced form) (NADH) to b-Nicotinamide Adenine Dinucleotide (NAD). The system monitors the rate of change in absorbance at 340 nanometers over a fixed-time interval. This rate of change in absorbance is directly proportional to the activity of AST in the sample and is used by the Synchron CX-5 System to calculate and express the AST activity.

5. Urea nitrogen (BUN). Beckman BUN Reagent is used to measure the BUN concentration by an enzymatic rate method. In the reaction, urea is hydrolyzed by urease to ammonia and carbon dioxide. Glutamate dehydrogenase (GDH) catalyzes the condensation of ammonia and alpha-ketoglutarate to glutamate with the concomitant oxidation of b-Nicotinamide Adenine Dinucleotide (reduced form) (NADH) to b-Nicotinamide Adenine Dinucleotide (NAD). The system monitors the rate of change in absorbance at 340 nanometers over a fixed-time interval. This rate of change in absorbance is directly proportional to the concentration of BUN in the sample and is used by the Synchron CX-5 System to calculate and express the BUN concentration.

6. Calcium (CA). Beckman Calcium Reagent is used to measure the calcium concentration by a timed-endpoint method. In the reaction, the calcium combines with Arsenazo III to form a colored product. The system monitors the change in absorbance at 650 nanometers at a fixed-time interval. This change in absorbance is directly proportional to the concentration of calcium in the sample and is used by the Synchron CX-5 System to calculate and express the calcium concentration.

7. Cholesterol (CHOL). Beckman Cholesterol Reagent is used to measure the cholesterol concentration by a timed-endpoint method. In the reaction, the cholesterol esterase (CE) hydrolyzes cholesterol esters to free cholesterol and fatty acids. The free cholesterol is oxidized to cholesten-3-one and hydrogen peroxide by cholesterol oxidase (CO). Peroxidase catalyzes the reaction of hydrogen peroxide with 4-aminoantipyrine (4-AAP) and phenol to produce a colored quinoneimine product. The system monitors the change in absorbance at 520 nanometers at a fixed-time interval. This change in absorbance is directly proportional to the concentration of cholesterol in the sample and is used by the Synchron CX-5 System to calculate and express the cholesterol concentration.

8. Creatinine (CREA). Beckman Creatinine Reagent is used to measure the creatinine concentration by a modified rate Jaffe method. In the reaction, the creatinine combines with picrate in an alkaline solution to form a creatinine-picrate complex. The system monitors the rate of change in absorbance at 520 nanometers over a fixed-time interval. This rate of change in absorbance is directly proportional to the concentration of creatinine in the sample and is used by the Synchron CX-5 System to calculate and express the creatinine concentration.

9. Gamma-glutamyl transferase (GGT). Beckman GGT reagent is used to measure the GGT activity by an enzymatic rate method. In the reaction, the GGT catalyzes the transfer of a gamma-glutamyl group from the colorless substrate, gamma-glutamyl-p-nitroaniline, to the acceptor, glycylglycine with the production of the colored product, p-nitroaniline. The system monitors the rate of change in absorbance at 410 nanometers over a fixed-time interval. This rate of change in absorbance is directly proportional to the activity of GGT in the sample and is used by the Synchron CX-5 system to calculate and express the GGT activity.

10. Glucose (GLU). Beckman Glucose Reagent is used to measure the glucose concentration by a timed-endpoint method. In the reaction, hexokinase (HK) catalyzes the transfer of a phosphate group from adenosine triphosphate (ATP) to glucose to form adenosine diphosphate (ADP) and glucose-6-phosphate. The glucose-6-phosphate is then oxidized to 6-phosphogluconate with the concomitant reduction of b-Nicotinamide Adenine Dinucleotide (NAD) to b-Nicotinamide Adenine Dinucleotide (reduced form) (NADH) by the catalytic action of glucose-6-phosphate dehydrogenase (G6PDH). The system monitors the change in absorbance at 340 nanometers at a fixed-time interval. This change in absorbance is directly proportional to the concentration of glucose in the sample and is used by the Synchron CX-5 System to calculate and express the glucose concentration.

11. Magnesium (Mg). Beckman Magnesium Reagent is used to measure the magnesium concentration by a timed-endpoint method. In the reaction, the magnesium combines with Calmagite to form a colored complex. The system monitors the change in absorbance at 520 nanometers over a fixed time interval. This change in absorbance is directly proportional to the concentration of magnesium in the sample and is used by the Synchron CX-5 System to calculate and express the magnesium concentration.

12. Phosphorus (PHOS). Beckman Phosphorus Reagent is used to measure the phosphorus concentration by a timed-endpoint method. In the reaction, inorganic phosphorus reacts with ammonium molybdate in an acidic solution to form a colored phosphomolybdate complex. The system monitors the change in absorbance at 340 nanometers at a fixed-time interval. This change in absorbance is directly proportional to the concentration of phosphorus in the sample and is used by the Synchron CX-5 System to calculate and express the phosphorus concentration.

13. Sorbitol Dehydrogenase (SDH). Sigma diagnostics supplied reagent is used to measure SDH by an enzymatic kinetic method using ultraviolet light. In the reaction, SDH catalyzes fructose in the presence of reduced Nicotinamide Adenine Dinucleotide (NADH) to yield sorbitol and NAD. The rate of decrease in absorbance at 340 nonometers is directly proportional to concentration of SDH on the Synchron CX-5 system. SDH controls are used to monitor accuracy and precision of the instrument and reagent.

14. Total bilirubin (TBIL). Beckman Total Bilirubin Reagent is used to measure the total bilirubin concentration by a timed-endpoint Diazo method. In the reaction, the bilirubin reacts with diazo reagent in the presence of caffeine, benzoate, and acetate as accelerators to form azobilirubin. The system monitors the change in absorbance at 560 nanometers at a fixed-time interval. This change in absorbance is directly proportional to the concentration of total bilirubin in the sample and is used by the Synchron CX-5 System to calculate and express the total bilirubin concentration.

15. Total protein (TP). Beckman Total Protein Reagent is used to measure the total protein concentration by a timed-endpoint biuret method. In the reaction, the peptide bonds in the protein sample bind to cupric ions in an alkaline medium to form colored peptide/copper complexes. The system monitors the change in absorbance of 560 nanometers at a fixed-time interval. This change in absorbance is directly proportional to the concentration of total protein in the sample and is used by the Synchron CX-5 System to calculate and express the total protein concentration.

16. Sodium (Na), potassium (K), chloride (Cl). The Synchron CX-5 System determines sodium, potassium, and chloride by measuring electrolyte ion activity in solution. Measurements are made by ion selective electrodes. A precise volume of sample is mixed with a buffer solution at a ratio of 1:20 to establish a constant ionic strength and to set a constant activity coefficient for the electrodes. With constant activity established, the electrode system is calibrated to concentration values. This mixture is transported to the flow cell which houses the electrodes. Sodium, potassium, and chloride determinations are made by measuring potentials developed at the face of ion-selective electrodes.

17. Globulin (GLB). Globulin parameter is not measured directly but is calculated using the following equation:

$$\text{Globulin g/dL} = \text{Total Protein} - \text{Albumin}$$

18. Albumin/Globulin Ratio (A/G Ratio). Parameter is not measured directly but is a calculated value using the following equation:

$$\text{Albumin/Globulin Ratio: (A/G Ratio)} = \frac{\text{Albumin}}{\text{Globulin}}$$

A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS WITH AMMONIUM PERCHLORATE

FINAL REPORT
Volume 2 of 3

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Study Completed on

May 18, 1998

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APPENDIX D

Individual Survival and Clinical Observations (Positive Findings)

APPENDIX D
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL SURVIVAL AND CLINICAL OBSERVATIONS

(POSITIVE FINDINGS)

ANIMAL NO.	GROUP	CATEGORY	STUDY DAY	GRADE	OBSERVATIONS
11716 M	0 MG/KG/DAY	DEAD	18	P	SCHEDULED EUTHANASIA
11717 M	0 MG/KG/DAY	DEAD	15	P	SCHEDULED EUTHANASIA
11718 M	0 MG/KG/DAY	DEAD	16	P	SCHEDULED EUTHANASIA
11719 M	0 MG/KG/DAY	DEAD	121	P	SCHEDULED EUTHANASIA
11720 M	0 MG/KG/DAY	DEAD	15	P	SCHEDULED EUTHANASIA
11721 M	0 MG/KG/DAY	DEAD	92	P	SCHEDULED EUTHANASIA
11722 M	0 MG/KG/DAY	BODY	14	P	OPEN LESION(S) RIGHT SHOULDER
		BODY	21	P	SCAB(S) RIGHT SHOULDER
		DEAD	121	P	SCHEDULED EUTHANASIA
11723 M	0 MG/KG/DAY	NOSE/MOUTH	28	P	DARK MATERIAL AROUND NOSE
		NOSE/MOUTH	49	P	DARK MATERIAL AROUND NOSE
		NOSE/MOUTH	91	P	DARK MATERIAL AROUND NOSE
		NOSE/MOUTH	121	P	DARK MATERIAL AROUND NOSE
		DEAD	121	P	SCHEDULED EUTHANASIA
11724 M	0 MG/KG/DAY	NOSE/MOUTH	49	P	INCISOR(S) TRIMMED
		NOSE/MOUTH	77	P	INCISOR(S) TRIMMED
		DEAD	92	P	SCHEDULED EUTHANASIA
11725 M	0 MG/KG/DAY	BODY	14	P	SCAB(S) RIGHT SHOULDER
		BODY	17	P	SCAB(S) RIGHT SHOULDER

GRADE CODE: 1-SLIGHT 2-MODERATE 3-MARKED P-PRESENT

APPENDIX D
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL SURVIVAL AND CLINICAL OBSERVATIONS

(POSITIVE FINDINGS)

ANIMAL NO.	GROUP	CATEGORY	STUDY DAY	GRADE	OBSERVATIONS
11725 M	0 MG/KG/DAY	DEAD	17	P	SCHEDULED EUTHANASIA
11726 M	0 MG/KG/DAY	DEAD	121	P	SCHEDULED EUTHANASIA
11727 M	0 MG/KG/DAY	EXCRETA	26	P	FEW FECES
		NOSE/MOUTH	77	P	INCISOR(S) TRIMMED
		NOSE/MOUTH	98	P	INCISOR(S) TRIMMED
		NOSE/MOUTH	119	P	INCISOR(S) BROKEN
		NOSE/MOUTH	122	P	INCISOR(S) BROKEN
		DEAD	122	P	SCHEDULED EUTHANASIA
11728 M	0 MG/KG/DAY	BODY	14	P	OPEN LESION(S) RIGHT LATERAL HEAD
		BODY	17	P	SCAB(S) RIGHT LATERAL HEAD
		DEAD	17	P	SCHEDULED EUTHANASIA
11729 M	0 MG/KG/DAY	EXCRETA	81	P	FEW FECES
		EXCRETA	82	P	FEW FECES
		DEAD	92	P	SCHEDULED EUTHANASIA
11730 M	0 MG/KG/DAY	NOSE/MOUTH	77	P	INCISOR(S) TRIMMED
		NOSE/MOUTH	105	P	INCISOR(S) TRIMMED
		DEAD	122	P	SCHEDULED EUTHANASIA
11731 M	0 MG/KG/DAY	DEAD	16	P	SCHEDULED EUTHANASIA
11732 M	0 MG/KG/DAY	DEAD	93	P	SCHEDULED EUTHANASIA
11733 M	0 MG/KG/DAY	DEAD	122	P	SCHEDULED EUTHANASIA
11734 M	0 MG/KG/DAY	DEAD	93	P	SCHEDULED EUTHANASIA

GRADE CODE: 1-SLIGHT 2-MODERATE 3-MARKED P-PRESENT

APPENDIX D
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL SURVIVAL AND CLINICAL OBSERVATIONS

(POSITIVE FINDINGS)

ANIMAL NO.	GROUP	CATEGORY	STUDY DAY	GRADE	OBSERVATIONS
11735 M	0 MG/KG/DAY	BODY	14	P	SCAB(S) RIGHT SHOULDER
		BODY	21	P	SCAB(S) RIGHT SHOULDER
		BODY	28	P	SCAB(S) RIGHT SHOULDER
		NOSE/MOUTH	63	P	DARK MATERIAL AROUND NOSE
		NOSE/MOUTH	70	P	DARK MATERIAL AROUND NOSE
		NOSE/MOUTH	77	P	DARK MATERIAL AROUND NOSE
		DEAD	94	P	SCHEDULED EUTHANASIA
11736 M	0 MG/KG/DAY	NOSE/MOUTH	56	P	INCISOR(S) TRIMMED
		NOSE/MOUTH	77	P	INCISOR(S) TRIMMED
		DEAD	94	P	SCHEDULED EUTHANASIA
11737 M	0 MG/KG/DAY	NOSE/MOUTH	105	P	INCISOR(S) TRIMMED
		DEAD	123	P	SCHEDULED EUTHANASIA
11738 M	0 MG/KG/DAY	DEAD	94	P	SCHEDULED EUTHANASIA
11739 M	0 MG/KG/DAY	DEAD	15	P	SCHEDULED EUTHANASIA
11740 M	0 MG/KG/DAY	NOSE/MOUTH	98	P	DARK MATERIAL AROUND NOSE
		DEAD	123	P	SCHEDULED EUTHANASIA
11741 M	0 MG/KG/DAY	NOSE/MOUTH	70	P	INCISOR(S) BROKEN
		NOSE/MOUTH	77	P	INCISOR(S) TRIMMED
		DEAD	95	P	SCHEDULED EUTHANASIA
11742 M	0 MG/KG/DAY	BODY	7	P	OPEN LESION(S) LEFT AND RIGHT SHOULDER

GRADE CODE: 1-SLIGHT 2-MODERATE 3-MARKED P-PRESENT

APPENDIX D
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL SURVIVAL AND CLINICAL OBSERVATIONS

(POSITIVE FINDINGS)

ANIMAL NO.	GROUP	CATEGORY	STUDY DAY	GRADE	OBSERVATIONS
11742 M	0 MG/KG/DAY	BODY	14	P	OPEN LESION(S) RIGHT SHOULDER
		BODY	21	P	OPEN LESION(S) LEFT SHOULDER
		BODY	21	P	SCAB(S) RIGHT SHOULDER
		BODY	28	P	OPEN LESION(S) LEFT SHOULDER
		BODY	35	P	OPEN LESION(S) LEFT SHOULDER
		BODY	42	P	SCAB(S) LEFT SHOULDER
		BODY	42	1	HAIRLOSS
		BODY	49	1	HAIRLOSS
		BODY	56	1	HAIRLOSS
		BODY	63	1	HAIRLOSS
		BODY	70	1	HAIRLOSS
		DEAD	95	P	SCHEDULED EUTHANASIA
11743 M	0 MG/KG/DAY	DEAD	123	P	SCHEDULED EUTHANASIA
11744 M	0 MG/KG/DAY	DEAD	18	P	SCHEDULED EUTHANASIA
11745 M	0 MG/KG/DAY	DEAD	17	P	SCHEDULED EUTHANASIA
11746 M	0.01 MG/KG/DAY	BODY	14	P	SCAB(S) RIGHT SHOULDER

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APPENDIX D
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(POSITIVE FINDINGS)

ANIMAL NO.	GROUP	CATEGORY	STUDY DAY	GRADE	OBSERVATIONS
11746 M	0.01 MG/KG/DAY	NOSE/MOUTH	77	P	INCISOR(S) TRIMMED
		DEAD	92	P	SCHEDULED EUTHANASIA
11747 M	0.01 MG/KG/DAY	DEAD	18	P	SCHEDULED EUTHANASIA
11748 M	0.01 MG/KG/DAY	EXCRETA	23	P	FEW FECES
		NOSE/MOUTH	42	P	INCISOR(S) TRIMMED
		EXCRETA	45	P	FEW FECES
		NOSE/MOUTH	63	P	INCISOR(S) TRIMMED
		EYES	70	P	DARK MATERIAL AROUND EYE(S)
		NOSE/MOUTH	70	P	MALALIGNMENT
		NOSE/MOUTH	70	P	DARK MATERIAL AROUND NOSE
		NOSE/MOUTH	70	P	INCISOR(S) TRIMMED
		NOSE/MOUTH	77	P	MALALIGNMENT
		NOSE/MOUTH	77	P	INCISOR(S) TRIMMED
		EYES	84	P	DARK MATERIAL AROUND EYE(S)
		NOSE/MOUTH	84	P	MALALIGNMENT
		EYES	91	P	DARK MATERIAL AROUND EYE(S)
		NOSE/MOUTH	91	P	MALALIGNMENT
		NOSE/MOUTH	91	P	DARK MATERIAL AROUND NOSE
		EYES	92	P	DARK MATERIAL AROUND EYE(S)
		NOSE/MOUTH	92	P	MALALIGNMENT
		DEAD	92	P	SCHEDULED EUTHANASIA
11749 M	0.01 MG/KG/DAY	NOSE/MOUTH	70	P	INCISOR(S) TRIMMED
		DEAD	92	P	SCHEDULED EUTHANASIA

GRADE CODE: 1-SLIGHT 2-MODERATE 3-MARKED P-PRESENT

APPENDIX D
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL SURVIVAL AND CLINICAL OBSERVATIONS

(POSITIVE FINDINGS)

ANIMAL NO.	GROUP	CATEGORY	STUDY DAY	GRADE	OBSERVATIONS
11750 M	0.01 MG/KG/DAY	DEAD	93	P	SCHEDULED EUTHANASIA
11751 M	0.01 MG/KG/DAY	DEAD	16	P	SCHEDULED EUTHANASIA
11752 M	0.01 MG/KG/DAY	NOSE/MOUTH	77	P	INCISOR(S) TRIMMED
		DEAD	93	P	SCHEDULED EUTHANASIA
11753 M	0.01 MG/KG/DAY	EXCRETA	24	P	FEW FECES
		EXCRETA	29	P	FEW FECES
		DEAD	94	P	SCHEDULED EUTHANASIA
11754 M	0.01 MG/KG/DAY	BODY	14	P	SCAB(S) RIGHT SIDE OF MOUTH
		NOSE/MOUTH	77	P	INCISOR(S) TRIMMED
		DEAD	94	P	SCHEDULED EUTHANASIA
11755 M	0.01 MG/KG/DAY	EYES	14	P	DARK MATERIAL AROUND EYE(S)
		NOSE/MOUTH	21	P	MALALIGNMENT
		NOSE/MOUTH	28	P	MALALIGNMENT
		NOSE/MOUTH	28	P	INCISOR(S) TRIMMED
		NOSE/MOUTH	35	P	MALALIGNMENT
		NOSE/MOUTH	42	P	MALALIGNMENT
		NOSE/MOUTH	49	P	MALALIGNMENT
		NOSE/MOUTH	56	P	MALALIGNMENT
		NOSE/MOUTH	63	P	MALALIGNMENT
		NOSE/MOUTH	70	P	MALALIGNMENT
		NOSE/MOUTH	77	P	MALALIGNMENT
		NOSE/MOUTH	77	P	INCISOR(S) TRIMMED

GRADE CODE: 1-SLIGHT 2-MODERATE 3-MARKED P-PRESENT

APPENDIX D
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL SURVIVAL AND CLINICAL OBSERVATIONS

(POSITIVE FINDINGS)

ANIMAL NO.	GROUP	CATEGORY	STUDY DAY	GRADE	OBSERVATIONS
11755 M	0.01 MG/KG/DAY	NOSE/MOUTH	84	P	INCISOR MISSING
		NOSE/MOUTH	91	P	INCISOR MISSING
		NOSE/MOUTH	94	P	INCISOR MISSING
		DEAD	94	P	SCHEDULED EUTHANASIA
11756 M	0.01 MG/KG/DAY	DEAD	17	P	SCHEDULED EUTHANASIA
11757 M	0.01 MG/KG/DAY	DEAD	17	P	SCHEDULED EUTHANASIA
11758 M	0.01 MG/KG/DAY	DEAD	16	P	SCHEDULED EUTHANASIA
11759 M	0.01 MG/KG/DAY	DEAD	15	P	SCHEDULED EUTHANASIA
11760 M	0.01 MG/KG/DAY	DEAD	17	P	SCHEDULED EUTHANASIA
11761 M	0.01 MG/KG/DAY	DEAD	95	P	SCHEDULED EUTHANASIA
11762 M	0.01 MG/KG/DAY	DEAD	15	P	SCHEDULED EUTHANASIA
11763 M	0.01 MG/KG/DAY	DEAD	15	P	SCHEDULED EUTHANASIA
11764 M	0.01 MG/KG/DAY	DEAD	18	P	SCHEDULED EUTHANASIA
11765 M	0.01 MG/KG/DAY	DEAD	95	P	SCHEDULED EUTHANASIA
11766 M	0.05 MG/KG/DAY	DEAD	16	P	SCHEDULED EUTHANASIA
11767 M	0.05 MG/KG/DAY	NOSE/MOUTH	98	P	DARK MATERIAL AROUND NOSE
		NOSE/MOUTH	98	P	INCISOR(S) TRIMMED
		EYES	107	P	DARK MATERIAL AROUND EYE(S)
		EYES	108	P	DARK MATERIAL AROUND EYE(S)
		EYES	109	P	DARK MATERIAL AROUND EYE(S)
		EYES	110	P	DARK MATERIAL AROUND EYE(S)
		EYES	111	P	DARK MATERIAL AROUND EYE(S)
		EYES	112	P	DARK MATERIAL AROUND EYE(S)

GRADE CODE: 1-SLIGHT 2-MODERATE 3-MARKED P-PRESENT

APPENDIX D
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL SURVIVAL AND CLINICAL OBSERVATIONS

(POSITIVE FINDINGS)

ANIMAL NO.	GROUP	CATEGORY	STUDY DAY	GRADE	OBSERVATIONS
11767 M	0.05 MG/KG/DAY	EYES	113	P	DARK MATERIAL AROUND EYE(S)
		EYES	114	P	DARK MATERIAL AROUND EYE(S)
		EYES	115	P	DARK MATERIAL AROUND EYE(S)
		EYES	116	P	DARK MATERIAL AROUND EYE(S)
		EYES	118	P	DARK MATERIAL AROUND EYE(S)
		EYES	119	P	DARK MATERIAL AROUND EYE(S)
		EYES	121	P	DARK MATERIAL AROUND EYE(S)
		DEAD	121	P	SCHEDULED EUTHANASIA
11768 M	0.05 MG/KG/DAY	DEAD	17	P	SCHEDULED EUTHANASIA
11769 M	0.05 MG/KG/DAY	NOSE/MOUTH	21	P	INCISOR(S) BROKEN
		NOSE/MOUTH	77	P	INCISOR(S) TRIMMED
		DEAD	92	P	SCHEDULED EUTHANASIA
11770 M	0.05 MG/KG/DAY	NOSE/MOUTH	42	P	INCISOR(S) TRIMMED
		NOSE/MOUTH	56	P	INCISOR(S) TRIMMED
		NOSE/MOUTH	70	P	INCISOR(S) TRIMMED
		NOSE/MOUTH	77	P	INCISOR(S) TRIMMED
		NOSE/MOUTH	98	P	INCISOR(S) TRIMMED
		NOSE/MOUTH	105	P	INCISOR(S) TRIMMED
		DEAD	121	P	SCHEDULED EUTHANASIA
11771 M	0.05 MG/KG/DAY	DEAD	18	P	SCHEDULED EUTHANASIA
11772 M	0.05 MG/KG/DAY	NOSE/MOUTH	14	P	DARK MATERIAL AROUND NOSE
		DEAD	18	P	SCHEDULED EUTHANASIA
11773 M	0.05 MG/KG/DAY	NOSE/MOUTH	112	P	INCISOR(S) TRIMMED

GRADE CODE: 1-SLIGHT 2-MODERATE 3-MARKED P-PRESENT

APPENDIX D
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL SURVIVAL AND CLINICAL OBSERVATIONS

(POSITIVE FINDINGS)

ANIMAL NO.	GROUP	CATEGORY	STUDY DAY	GRADE	OBSERVATIONS
11773 M	0.05 MG/KG/DAY	DEAD	121	P	SCHEDULED EUTHANASIA
11774 M	0.05 MG/KG/DAY	NOSE/MOUTH	63	P	INCISOR(S) TRIMMED
		NOSE/MOUTH	70	P	INCISOR(S) TRIMMED
		DEAD	92	P	SCHEDULED EUTHANASIA
11775 M	0.05 MG/KG/DAY	NOSE/MOUTH	21	P	DARK MATERIAL AROUND NOSE
		NOSE/MOUTH	28	P	DARK MATERIAL AROUND NOSE
		NOSE/MOUTH	42	P	DARK MATERIAL AROUND NOSE
		NOSE/MOUTH	49	P	DARK MATERIAL AROUND NOSE
		NOSE/MOUTH	49	P	INCISOR(S) TRIMMED
		BODY	49	P	OPEN LESION(S) LEFT SHOULDER
		BODY	56	P	SCAB(S) LEFT SHOULDER
		BODY	56	1	HAIRLOSS
		NOSE/MOUTH	63	P	DARK MATERIAL AROUND NOSE
		NOSE/MOUTH	63	P	INCISOR(S) TRIMMED
		BODY	63	1	HAIRLOSS
		BODY	63	P	SCAB(S) LEFT SHOULDER
		BODY	70	P	SCAB(S) LEFT SHOULDER
		BODY	77	1	HAIRLOSS
		NOSE/MOUTH	77	P	DARK MATERIAL AROUND NOSE

GRADE CODE: 1-SLIGHT 2-MODERATE 3-MARKED P-PRESENT

APPENDIX D
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INDIVIDUAL SURVIVAL AND CLINICAL OBSERVATIONS

(POSITIVE FINDINGS)

ANIMAL NO.	GROUP	CATEGORY	STUDY DAY	GRADE	OBSERVATIONS
11775 M	0.05 MG/KG/DAY	NOSE/MOUTH	91	P	DARK MATERIAL AROUND NOSE
		NOSE/MOUTH	98	P	DARK MATERIAL AROUND NOSE
		NOSE/MOUTH	98	P	INCISOR(S) TRIMMED
		NOSE/MOUTH	105	P	DARK MATERIAL AROUND NOSE
		NOSE/MOUTH	112	P	DARK MATERIAL AROUND NOSE
		NOSE/MOUTH	119	P	DARK MATERIAL AROUND NOSE
		DEAD	121	P	SCHEDULED EUTHANASIA
11776 M	0.05 MG/KG/DAY	NOSE/MOUTH	63	P	INCISOR(S) TRIMMED
		NOSE/MOUTH	70	P	INCISOR(S) TRIMMED
		DEAD	92	P	SCHEDULED EUTHANASIA
11777 M	0.05 MG/KG/DAY	NOSE/MOUTH	77	P	DARK MATERIAL AROUND NOSE
		DEAD	93	P	SCHEDULED EUTHANASIA
11778 M	0.05 MG/KG/DAY	DEAD	15	P	SCHEDULED EUTHANASIA
11779 M	0.05 MG/KG/DAY	DEAD	16	P	SCHEDULED EUTHANASIA
11780 M	0.05 MG/KG/DAY	EYES	42	P	DARK MATERIAL AROUND EYE(S)
		NOSE/MOUTH	42	P	MALALIGNMENT
		NOSE/MOUTH	42	P	INCISOR(S) TRIMMED
		BODY	42	P	DEHYDRATION
		NOSE/MOUTH	49	P	DARK MATERIAL AROUND NOSE
		EYES	49	P	DARK MATERIAL AROUND EYE(S)
		EYES	56	P	DARK MATERIAL AROUND EYE(S)
		NOSE/MOUTH	56	P	MALALIGNMENT
		NOSE/MOUTH	56	P	INCISOR(S) TRIMMED

GRADE CODE: 1-SLIGHT 2-MODERATE 3-MARKED P-PRESENT

APPENDIX D
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
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INDIVIDUAL SURVIVAL AND CLINICAL OBSERVATIONS

(POSITIVE FINDINGS)

ANIMAL NO.	GROUP	CATEGORY	STUDY DAY	GRADE	OBSERVATIONS
11780 M	0.05 MG/KG/DAY	NOSE/MOUTH	63	P	INCISOR(S) TRIMMED
		NOSE/MOUTH	63	P	MALALIGNMENT
		EYES	63	P	DARK MATERIAL AROUND EYE(S)
		EYES	70	P	DARK MATERIAL AROUND EYE(S)
		NOSE/MOUTH	70	P	MALALIGNMENT
		NOSE/MOUTH	70	P	INCISOR(S) TRIMMED
		EYES	72	P	DARK MATERIAL AROUND EYE(S)
		EYES	77	P	DARK MATERIAL AROUND EYE(S)
		NOSE/MOUTH	77	P	MALALIGNMENT
		NOSE/MOUTH	77	P	INCISOR(S) TRIMMED
		NOSE/MOUTH	84	P	MALALIGNMENT
		EYES	84	P	DARK MATERIAL AROUND EYE(S)
		EYES	85	P	DARK MATERIAL AROUND EYE(S)
		EYES	86	P	DARK MATERIAL AROUND EYE(S)
		EYES	87	P	DARK MATERIAL AROUND EYE(S)
		EYES	88	P	DARK MATERIAL AROUND EYE(S)
		EYES	91	P	DARK MATERIAL AROUND EYE(S)
		EYES	93	P	DARK MATERIAL AROUND EYE(S)
		DEAD	93	P	SCHEDULED EUTHANASIA
11781 M	0.05 MG/KG/DAY	NOSE/MOUTH	56	P	INCISOR(S) TRIMMED
		NOSE/MOUTH	84	P	INCISOR(S) BROKEN
		NOSE/MOUTH	105	P	DARK MATERIAL AROUND NOSE
		DEAD	122	P	SCHEDULED EUTHANASIA

GRADE CODE: 1-SLIGHT 2-MODERATE 3-MARKED P-PRESENT

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A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL SURVIVAL AND CLINICAL OBSERVATIONS

(POSITIVE FINDINGS)

ANIMAL NO.	GROUP	CATEGORY	STUDY DAY	GRADE	OBSERVATIONS
11782 M	0.05 MG/KG/DAY	BODY	14	P	SCAB(S) RIGHT SHOULDER
		NOSE/MOUTH	28	P	DARK MATERIAL AROUND NOSE
		NOSE/MOUTH	49	P	INCISOR(S) TRIMMED
		NOSE/MOUTH	112	P	INCISOR(S) TRIMMED
		DEAD	122	P	SCHEDULED EUTHANASIA
11783 M	0.05 MG/KG/DAY	NOSE/MOUTH	49	P	INCISOR(S) TRIMMED
		BODY	84	1	HAIRLOSS
		DEAD	122	P	SCHEDULED EUTHANASIA
11784 M	0.05 MG/KG/DAY	DEAD	17	P	SCHEDULED EUTHANASIA
11785 M	0.05 MG/KG/DAY	EXCRETA	45	P	FEW FECES
		EYES	70	P	DARK MATERIAL AROUND EYE(S)
		NOSE/MOUTH	70	P	MALALIGNMENT
		NOSE/MOUTH	70	P	INCISOR(S) TRIMMED
		EYES	77	P	DARK MATERIAL AROUND EYE(S)
		NOSE/MOUTH	77	P	MALALIGNMENT
		NOSE/MOUTH	77	P	INCISOR(S) TRIMMED
		EYES	84	P	DARK MATERIAL AROUND EYE(S)
		NOSE/MOUTH	84	P	MALALIGNMENT
		EYES	88	P	DARK MATERIAL AROUND EYE(S)
		EYES	91	P	DARK MATERIAL AROUND EYE(S)
		NOSE/MOUTH	91	P	MALALIGNMENT
		NOSE/MOUTH	91	P	INCISOR(S) TRIMMED

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APPENDIX D
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(POSITIVE FINDINGS)

ANIMAL NO.	GROUP	CATEGORY	STUDY DAY	GRADE	OBSERVATIONS
11785 M	0.05 MG/KG/DAY	EYES	98	P	DARK MATERIAL AROUND EYE(S)
		NOSE/MOUTH	98	P	MALALIGNMENT
		NOSE/MOUTH	98	P	MALALIGNMENT
		NOSE/MOUTH	98	P	INCISOR(S) TRIMMED
		EYES	99	P	DARK MATERIAL AROUND EYE(S)
		EYES	105	P	DARK MATERIAL AROUND EYE(S)
		NOSE/MOUTH	105	P	MALALIGNMENT
		NOSE/MOUTH	105	P	INCISOR(S) TRIMMED
		EYES	107	P	DARK MATERIAL AROUND EYE(S)
		EYES	108	P	DARK MATERIAL AROUND EYE(S)
		EYES	109	P	DARK MATERIAL AROUND EYE(S)
		EYES	110	P	DARK MATERIAL AROUND EYE(S)
		EYES	111	P	DARK MATERIAL AROUND EYE(S)
		EYES	112	P	DARK MATERIAL AROUND EYE(S)
		NOSE/MOUTH	112	P	MALALIGNMENT
		NOSE/MOUTH	112	P	INCISOR(S) TRIMMED
		EYES	113	P	DARK MATERIAL AROUND EYE(S)
		EYES	114	P	DARK MATERIAL AROUND EYE(S)
		EYES	115	P	DARK MATERIAL AROUND EYE(S)
		EYES	116	P	DARK MATERIAL AROUND EYE(S)
		EYES	117	P	DARK MATERIAL AROUND EYE(S)
		EYES	118	P	DARK MATERIAL AROUND EYE(S)
		EYES	119	P	DARK MATERIAL AROUND EYE(S)

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APPENDIX D
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
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INDIVIDUAL SURVIVAL AND CLINICAL OBSERVATIONS

(POSITIVE FINDINGS)

ANIMAL NO.	GROUP	CATEGORY	STUDY DAY	GRADE	OBSERVATIONS
11785 M	0.05 MG/KG/DAY	NOSE/MOUTH	119	P	DARK MATERIAL AROUND NOSE
		NOSE/MOUTH	119	P	MALALIGNMENT
		EYES	120	P	DARK MATERIAL AROUND EYE(S)
		EYES	122	P	DARK MATERIAL AROUND EYE(S)
		EYES	123	P	DARK MATERIAL AROUND EYE(S)
		NOSE/MOUTH	123	P	MALALIGNMENT
		DEAD	123	P	SCHEDULED EUTHANASIA
11786 M	0.05 MG/KG/DAY	DEAD	15	P	SCHEDULED EUTHANASIA
11787 M	0.05 MG/KG/DAY	NOSE/MOUTH	28	P	DARK MATERIAL AROUND NOSE
		DEAD	94	P	SCHEDULED EUTHANASIA
11788 M	0.05 MG/KG/DAY	NOSE/MOUTH	91	P	INCISOR MISSING
		NOSE/MOUTH	91	P	INCISOR(S) TRIMMED
		DEAD	123	P	SCHEDULED EUTHANASIA
11789 M	0.05 MG/KG/DAY	EXCRETA	6	P	FEW FECES
		EXCRETA	7	P	FEW FECES
		DEAD	15	P	SCHEDULED EUTHANASIA
11790 M	0.05 MG/KG/DAY	NOSE/MOUTH	77	P	INCISOR(S) TRIMMED
		DEAD	94	P	SCHEDULED EUTHANASIA
11791 M	0.05 MG/KG/DAY	NOSE/MOUTH	77	P	INCISOR(S) TRIMMED
		DEAD	94	P	SCHEDULED EUTHANASIA
11792 M	0.05 MG/KG/DAY	NOSE/MOUTH	42	P	DARK MATERIAL AROUND NOSE
		NOSE/MOUTH	77	P	DARK MATERIAL AROUND NOSE
		DEAD	95	P	SCHEDULED EUTHANASIA

GRADE CODE: 1-SLIGHT 2-MODERATE 3-MARKED P-PRESENT

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(POSITIVE FINDINGS)

ANIMAL NO.	GROUP	CATEGORY	STUDY DAY	GRADE	OBSERVATIONS
11793 M	0.05 MG/KG/DAY	DEAD	17	P	SCHEDULED EUTHANASIA
11794 M	0.05 MG/KG/DAY	NOSE/MOUTH	77	P	DARK MATERIAL AROUND NOSE
		NOSE/MOUTH	77	P	INCISOR(S) TRIMMED
		DEAD	95	P	SCHEDULED EUTHANASIA
11795 M	0.05 MG/KG/DAY	NOSE/MOUTH	49	P	INCISOR(S) TRIMMED
		NOSE/MOUTH	98	P	DARK MATERIAL AROUND NOSE
		NOSE/MOUTH	123	P	DARK MATERIAL AROUND NOSE
		DEAD	123	P	SCHEDULED EUTHANASIA
11796 M	0.2 MG/KG/DAY	DEAD	18	P	SCHEDULED EUTHANASIA
11797 M	0.2 MG/KG/DAY	NOSE/MOUTH	49	P	INCISOR(S) TRIMMED
		NOSE/MOUTH	63	P	INCISOR(S) TRIMMED
		NOSE/MOUTH	70	P	INCISOR(S) TRIMMED
		NOSE/MOUTH	77	P	INCISOR(S) TRIMMED
		DEAD	92	P	SCHEDULED EUTHANASIA
11798 M	0.2 MG/KG/DAY	DEAD	16	P	SCHEDULED EUTHANASIA
11799 M	0.2 MG/KG/DAY	NOSE/MOUTH	49	P	INCISOR(S) TRIMMED
		NOSE/MOUTH	70	P	INCISOR(S) TRIMMED
		NOSE/MOUTH	91	P	DARK MATERIAL AROUND NOSE
		DEAD	92	P	SCHEDULED EUTHANASIA
11800 M	0.2 MG/KG/DAY	EXCRETA	21	P	FEW FECES
		DEAD	92	P	SCHEDULED EUTHANASIA
11801 M	0.2 MG/KG/DAY	DEAD	17	P	SCHEDULED EUTHANASIA
11802 M	0.2 MG/KG/DAY	DEAD	18	P	SCHEDULED EUTHANASIA

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A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
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INDIVIDUAL SURVIVAL AND CLINICAL OBSERVATIONS

(POSITIVE FINDINGS)

ANIMAL NO.	GROUP	CATEGORY	STUDY DAY	GRADE	OBSERVATIONS
11803 M	0.2 MG/KG/DAY	DEAD	15	P	SCHEDULED EUTHANASIA
11804 M	0.2 MG/KG/DAY	DEAD	17	P	SCHEDULED EUTHANASIA
11805 M	0.2 MG/KG/DAY	NOSE/MOUTH	56	P	INCISOR(S) TRIMMED
		NOSE/MOUTH	63	P	DARK MATERIAL AROUND NOSE
		NOSE/MOUTH	70	P	DARK MATERIAL AROUND NOSE
		NOSE/MOUTH	77	P	DARK MATERIAL AROUND NOSE
		NOSE/MOUTH	91	P	DARK MATERIAL AROUND NOSE
		DEAD	93	P	SCHEDULED EUTHANASIA
11806 M	0.2 MG/KG/DAY	BODY	14	P	SCAB(S) VENTRAL NECK
		BODY	21	1	HAIRLOSS
		NOSE/MOUTH	49	P	INCISOR(S) TRIMMED
		NOSE/MOUTH	63	P	INCISOR(S) TRIMMED
		NOSE/MOUTH	70	P	INCISOR(S) TRIMMED
		NOSE/MOUTH	77	P	INCISOR(S) TRIMMED
		DEAD	93	P	SCHEDULED EUTHANASIA
11807 M	0.2 MG/KG/DAY	DEAD	15	P	SCHEDULED EUTHANASIA
11808 M	0.2 MG/KG/DAY	DEAD	17	P	SCHEDULED EUTHANASIA
11809 M	0.2 MG/KG/DAY	NOSE/MOUTH	56	P	INCISOR(S) TRIMMED
		NOSE/MOUTH	77	P	INCISOR(S) BROKEN
		NOSE/MOUTH	77	P	INCISOR(S) TRIMMED
		DEAD	94	P	SCHEDULED EUTHANASIA
11810 M	0.2 MG/KG/DAY	DEAD	15	P	SCHEDULED EUTHANASIA

GRADE CODE: 1-SLIGHT 2-MODERATE 3-MARKED P-PRESENT

APPENDIX D
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL SURVIVAL AND CLINICAL OBSERVATIONS

(POSITIVE FINDINGS)

ANIMAL NO.	GROUP	CATEGORY	STUDY DAY	GRADE	OBSERVATIONS
11811 M	0.2 MG/KG/DAY	BODY	7	P	OPEN LESION(S) VENTRAL NECK
		BODY	14	P	SCAB(S) VENTRAL NECK
		EXCRETA	21	P	FEW FECES
		BODY	21	1	HAIRLOSS
		EXCRETA	28	P	FEW FECES
		NOSE/MOUTH	28	P	MALALIGNMENT
		EYES	28	P	DARK MATERIAL AROUND EYE(S)
		NOSE/MOUTH	28	P	INCISOR(S) TRIMMED
		EXCRETA	29	P	FEW FECES
		NOSE/MOUTH	35	P	MALALIGNMENT
		EYES	35	P	DARK MATERIAL AROUND EYE(S)
		EYES	42	P	DARK MATERIAL AROUND EYE(S)
		NOSE/MOUTH	42	P	MALALIGNMENT
		NOSE/MOUTH	42	P	INCISOR(S) TRIMMED
		EYES	49	P	DARK MATERIAL AROUND EYE(S)
		NOSE/MOUTH	49	P	MALALIGNMENT
		EYES	56	P	DARK MATERIAL AROUND EYE(S)
		NOSE/MOUTH	56	P	INCISOR(S) BROKEN
		NOSE/MOUTH	56	P	INCISOR(S) TRIMMED
		EYES	63	P	DARK MATERIAL AROUND EYE(S)
		NOSE/MOUTH	63	P	MALALIGNMENT

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A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
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INDIVIDUAL SURVIVAL AND CLINICAL OBSERVATIONS

(POSITIVE FINDINGS)

ANIMAL NO.	GROUP	CATEGORY	STUDY DAY	GRADE	OBSERVATIONS
11811 M	0.2 MG/KG/DAY	NOSE/MOUTH	63	P	INCISOR(S) TRIMMED
		EYES	70	P	DARK MATERIAL AROUND EYE(S)
		NOSE/MOUTH	70	P	MALALIGNMENT
		NOSE/MOUTH	70	P	INCISOR(S) TRIMMED
		NOSE/MOUTH	70	P	INCISOR MISSING
		EYES	77	P	DARK MATERIAL AROUND EYE(S)
		NOSE/MOUTH	77	P	INCISOR(S) TRIMMED
		NOSE/MOUTH	77	P	INCISOR MISSING
		EYES	81	P	DARK MATERIAL AROUND EYE(S)
		BODY	84	1	HAIRLOSS
		NOSE/MOUTH	84	P	MALALIGNMENT
		NOSE/MOUTH	84	P	INCISOR MISSING
		EYES	91	P	DARK MATERIAL AROUND EYE(S)
		NOSE/MOUTH	91	P	MALALIGNMENT
		NOSE/MOUTH	91	P	INCISOR MISSING
		EYES	94	P	DARK MATERIAL AROUND EYE(S)
		NOSE/MOUTH	94	P	MALALIGNMENT
		NOSE/MOUTH	94	P	INCISOR MISSING
		DEAD	94	P	SCHEDULED EUTHANASIA
11812 M	0.2 MG/KG/DAY	NOSE/MOUTH	35	P	DARK MATERIAL AROUND NOSE
		NOSE/MOUTH	63	P	DARK MATERIAL AROUND NOSE
		NOSE/MOUTH	70	P	DARK MATERIAL AROUND NOSE
		DEAD	94	P	SCHEDULED EUTHANASIA

GRADE CODE: 1-SLIGHT 2-MODERATE 3-MARKED P-PRESENT

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INDIVIDUAL SURVIVAL AND CLINICAL OBSERVATIONS

(POSITIVE FINDINGS)

ANIMAL NO.	GROUP	CATEGORY	STUDY DAY	GRADE	OBSERVATIONS
11813 M	0.2 MG/KG/DAY	BODY	7	P	OPEN LESION(S) VENTRAL NECK
		BODY	14	P	SCAB(S) RIGHT SHOULDER
		BODY	16	P	SCAB(S) RIGHT SHOULDER
		DEAD	16	P	SCHEDULED EUTHANASIA
11814 M	0.2 MG/KG/DAY	NOSE/MOUTH	14	P	DARK MATERIAL AROUND NOSE
		DEAD	95	P	SCHEDULED EUTHANASIA
11815 M	0.2 MG/KG/DAY	BODY	14	P	SCAB(S) VENTRAL NECK
		BODY	14	1	HAIRLOSS
		BODY	21	1	HAIRLOSS
		BODY	21	P	SCAB(S) VENTRAL NECK
		BODY	28	P	SCAB(S) VENTRAL NECK
		BODY	28	1	HAIRLOSS
		DEAD	95	P	SCHEDULED EUTHANASIA
11816 M	1.0 MG/KG/DAY	DEAD	15	P	SCHEDULED EUTHANASIA
11817 M	1.0 MG/KG/DAY	BODY	14	P	SCAB(S) LEFT LATERAL ABDOMINAL
		BODY	21	P	SCAB(S) LEFT LATERAL ABDOMINAL

GRADE CODE: 1-SLIGHT 2-MODERATE 3-MARKED P-PRESENT

APPENDIX D
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL SURVIVAL AND CLINICAL OBSERVATIONS

(POSITIVE FINDINGS)

ANIMAL NO.	GROUP	CATEGORY	STUDY DAY	GRADE	OBSERVATIONS
11817 M	1.0 MG/KG/DAY	BODY	28	P	SCAB(S) LEFT LATERAL ABDOMINAL
		BODY	28	1	HAIRLOSS
		NOSE/MOUTH	28	P	DARK MATERIAL AROUND NOSE
		NOSE/MOUTH	49	P	DARK MATERIAL AROUND NOSE
		NOSE/MOUTH	70	P	DARK MATERIAL AROUND NOSE
		BODY	84	1	HAIRLOSS
		BODY	91	1	HAIRLOSS
		BODY	92	1	HAIRLOSS
		DEAD	92	P	SCHEDULED EUTHANASIA
11818 M	1.0 MG/KG/DAY	DEAD	18	P	SCHEDULED EUTHANASIA
11819 M	1.0 MG/KG/DAY	DEAD	15	P	SCHEDULED EUTHANASIA
11820 M	1.0 MG/KG/DAY	DEAD	17	P	SCHEDULED EUTHANASIA
11821 M	1.0 MG/KG/DAY	EXCRETA	3	P	FEW FECES
		NOSE/MOUTH	91	P	INCISOR(S) TRIMMED
		DEAD	121	P	SCHEDULED EUTHANASIA
11822 M	1.0 MG/KG/DAY	EXCRETA	63	P	SOFT STOOLS
		NOSE/MOUTH	70	P	INCISOR(S) TRIMMED
		BODY	84	1	HAIRLOSS
		DEAD	92	P	SCHEDULED EUTHANASIA
11823 M	1.0 MG/KG/DAY	BODY	7	P	SCAB(S) VENTRAL NECK
		BODY	14	P	SCAB(S) VENTRAL NECK

GRADE CODE: 1-SLIGHT 2-MODERATE 3-MARKED P-PRESENT

APPENDIX D
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL SURVIVAL AND CLINICAL OBSERVATIONS

(POSITIVE FINDINGS)

ANIMAL NO.	GROUP	CATEGORY	STUDY DAY	GRADE	OBSERVATIONS
11823 M	1.0 MG/KG/DAY	BODY	14	1	HAIRLOSS
		BODY	21	1	HAIRLOSS
		BODY	21	P	SCAB(S) VENTRAL NECK
		BODY	28	P	SCAB(S) VENTRAL NECK
		BODY	28	1	HAIRLOSS
		BODY	35	P	OPEN LESION(S) LEFT SHOULDER
		BODY	35	P	SCAB(S) VENTRAL NECK
		BODY	42	P	SCAB(S) VENTRAL NECK/LEFT SHOULDER
		BODY	42	1	HAIRLOSS
		BODY	49	P	SCAB(S) VEVTRAL NECK/LEFT SHOULDER
		BODY	49	1	HAIRLOSS
		BODY	56	P	SCAB(S) LEFT SHOULDER
		BODY	63	P	SCAB(S) VENTRAL THORACIC
		BODY	70	P	SCAB(S) VENTRAL THORACIC

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(POSITIVE FINDINGS)

ANIMAL NO.	GROUP	CATEGORY	STUDY DAY	GRADE	OBSERVATIONS
11823 M	1.0 MG/KG/DAY	NOSE/MOUTH	70	P	DARK MATERIAL AROUND NOSE
		BODY	70	1	HAIRLOSS
		BODY	77	P	OPEN LESION(S) VENTRAL THORACIC
		BODY	77	1	HAIRLOSS
		NOSE/MOUTH	77	P	DARK MATERIAL AROUND NOSE
		BODY	84	P	OPEN LESION(S) VENTRAL THORACIC
		BODY	84	1	HAIRLOSS
		BODY	91	1	HAIRLOSS
		BODY	91	P	SCAB(S) VENTRAL THORACIC
		NOSE/MOUTH	91	P	INCISOR(S) TRIMMED
		BODY	98	1	HAIRLOSS
		NOSE/MOUTH	105	P	DARK MATERIAL AROUND NOSE
		NOSE/MOUTH	105	P	INCISOR(S) TRIMMED
		NOSE/MOUTH	112	P	INCISOR(S) TRIMMED
		DEAD	121	P	SCHEDULED EUTHANASIA
11824 M	1.0 MG/KG/DAY	NOSE/MOUTH	49	P	INCISOR(S) TRIMMED
		NOSE/MOUTH	70	P	INCISOR(S) TRIMMED
		NOSE/MOUTH	77	P	INCISOR(S) TRIMMED
		DEAD	92	P	SCHEDULED EUTHANASIA
11825 M	1.0 MG/KG/DAY	DEAD	18	P	SCHEDULED EUTHANASIA

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A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL SURVIVAL AND CLINICAL OBSERVATIONS

(POSITIVE FINDINGS)

ANIMAL NO.	GROUP	CATEGORY	STUDY DAY	GRADE	OBSERVATIONS
11826 M	1.0 MG/KG/DAY	EYES	98	P	DARK MATERIAL AROUND EYE(S)
		NOSE/MOUTH	98	P	MALALIGNMENT
		NOSE/MOUTH	98	P	INCISOR(S) TRIMMED
		EYES	105	P	DARK MATERIAL AROUND EYE(S)
		NOSE/MOUTH	105	P	MALALIGNMENT
		NOSE/MOUTH	105	P	INCISOR(S) TRIMMED
		EYES	112	P	DARK MATERIAL AROUND EYE(S)
		NOSE/MOUTH	112	P	MALALIGNMENT
		NOSE/MOUTH	112	P	INCISOR(S) TRIMMED
		EYES	119	P	DARK MATERIAL AROUND EYE(S)
		NOSE/MOUTH	119	P	DARK MATERIAL AROUND NOSE
		NOSE/MOUTH	119	P	MALALIGNMENT
		EYES	121	P	DARK MATERIAL AROUND EYE(S)
		NOSE/MOUTH	121	P	MALALIGNMENT
		NOSE/MOUTH	121	P	INCISOR(S) BROKEN
		DEAD	121	P	SCHEDULED EUTHANASIA
11827 M	1.0 MG/KG/DAY	DEAD	93	P	SCHEDULED EUTHANASIA
11828 M	1.0 MG/KG/DAY	NOSE/MOUTH	49	P	INCISOR(S) TRIMMED
		NOSE/MOUTH	56	P	DARK MATERIAL AROUND NOSE
		NOSE/MOUTH	91	P	DARK MATERIAL AROUND NOSE
		NOSE/MOUTH	91	P	INCISOR(S) TRIMMED
		EYES	120	P	DARK MATERIAL AROUND EYE(S)
		EYES	121	P	DARK MATERIAL AROUND EYE(S)

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ANIMAL NO.	GROUP	CATEGORY	STUDY DAY	GRADE	OBSERVATIONS
11828 M	1.0 MG/KG/DAY	DEAD	121	P	SCHEDULED EUTHANASIA
11829 M	1.0 MG/KG/DAY	BODY	14	P	SCAB(S) RIGHT SHOULDER
		BODY	21	P	SCAB(S) RIGHT SHOULDER
		BODY	28	1	HAIRLOSS
		BODY	42	1	HAIRLOSS
		BODY	49	1	HAIRLOSS
		NOSE/MOUTH	91	P	DARK MATERIAL AROUND NOSE
		NOSE/MOUTH	91	P	INCISOR(S) TRIMMED
		NOSE/MOUTH	98	P	INCISOR(S) TRIMMED
		NOSE/MOUTH	112	P	INCISOR(S) TRIMMED
		DEAD	122	P	SCHEDULED EUTHANASIA
11830 M	1.0 MG/KG/DAY	NOSE/MOUTH	49	P	INCISOR(S) TRIMMED
		NOSE/MOUTH	77	P	INCISOR(S) TRIMMED
		DEAD	93	P	SCHEDULED EUTHANASIA
11831 M	1.0 MG/KG/DAY	BODY	14	1	HAIRLOSS
		BODY	16	P	HAIRLOSS SLIGHT
		DEAD	16	P	SCHEDULED EUTHANASIA
11832 M	1.0 MG/KG/DAY	BODY	14	P	SCAB(S) DORSAL NECK
		NOSE/MOUTH	21	P	DARK MATERIAL AROUND NOSE

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(POSITIVE FINDINGS)

ANIMAL NO.	GROUP	CATEGORY	STUDY DAY	GRADE	OBSERVATIONS
11832 M	1.0 MG/KG/DAY	BODY	28	P	SCAB(S) LEFT LATERAL NECK
		NOSE/MOUTH	28	P	DARK MATERIAL AROUND NOSE
		BODY	35	P	SCAB(S) LEFT LATERAL NECK
		BODY	35	1	HAIRLOSS
		NOSE/MOUTH	35	P	DARK MATERIAL AROUND NOSE
		NOSE/MOUTH	49	P	DARK MATERIAL AROUND NOSE
		NOSE/MOUTH	56	P	DARK MATERIAL AROUND NOSE
		NOSE/MOUTH	63	P	DARK MATERIAL AROUND NOSE
		NOSE/MOUTH	70	P	DARK MATERIAL AROUND NOSE
		NOSE/MOUTH	77	P	DARK MATERIAL AROUND NOSE
		NOSE/MOUTH	94	P	DARK MATERIAL AROUND NOSE
		DEAD	94	P	SCHEDULED EUTHANASIA
11833 M	1.0 MG/KG/DAY	DEAD	122	P	SCHEDULED EUTHANASIA
11834 M	1.0 MG/KG/DAY	EXCRETA	21	P	FEW FECES
		BODY	21	P	DEHYDRATION
		QUALT FOOD/WATER	21	P	DECREASED WATER CONSUMPTION
		EXCRETA	22	P	FEW FECES
		NOSE/MOUTH	49	P	DARK MATERIAL AROUND NOSE
		NOSE/MOUTH	91	P	DARK MATERIAL AROUND NOSE
		DEAD	122	P	SCHEDULED EUTHANASIA
11835 M	1.0 MG/KG/DAY	DEAD	15	P	SCHEDULED EUTHANASIA

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(POSITIVE FINDINGS)

ANIMAL NO.	GROUP	CATEGORY	STUDY DAY	GRADE	OBSERVATIONS
11836 M	1.0 MG/KG/DAY	DEAD	17	P	SCHEDULED EUTHANASIA
11837 M	1.0 MG/KG/DAY	NOSE/MOUTH	63	P	INCISOR(S) TRIMMED
		NOSE/MOUTH	70	P	INCISOR(S) TRIMMED
		NOSE/MOUTH	77	P	INCISOR(S) TRIMMED
		NOSE/MOUTH	91	P	INCISOR(S) TRIMMED
		DEAD	123	P	SCHEDULED EUTHANASIA
11838 M	1.0 MG/KG/DAY	NOSE/MOUTH	105	P	INCISOR(S) TRIMMED
		NOSE/MOUTH	112	P	DARK MATERIAL AROUND NOSE
		DEAD	123	P	SCHEDULED EUTHANASIA
11839 M	1.0 MG/KG/DAY	DEAD	16	P	SCHEDULED EUTHANASIA
11840 M	1.0 MG/KG/DAY	NOSE/MOUTH	49	P	INCISOR(S) TRIMMED
		DEAD	94	P	SCHEDULED EUTHANASIA
11841 M	1.0 MG/KG/DAY	EXCRETA	28	P	FEW FECES
		EYES	28	P	DARK MATERIAL AROUND EYE(S)
		NOSE/MOUTH	28	P	MALALIGNMENT
		NOSE/MOUTH	28	P	INCISOR(S) TRIMMED
		EYES	35	P	DARK MATERIAL AROUND EYE(S)
		NOSE/MOUTH	35	P	MALALIGNMENT
		EYES	42	P	DARK MATERIAL AROUND EYE(S)
		NOSE/MOUTH	42	P	MALALIGNMENT
		NOSE/MOUTH	42	P	INCISOR(S) TRIMMED
		EYES	49	P	DARK MATERIAL AROUND EYE(S)

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ANIMAL NO.	GROUP	CATEGORY	STUDY DAY	GRADE	OBSERVATIONS
11841 M	1.0 MG/KG/DAY	NOSE/MOUTH	49	P	MALALIGNMENT
		EYES	56	P	DARK MATERIAL AROUND EYE(S)
		NOSE/MOUTH	56	P	MALALIGNMENT
		NOSE/MOUTH	56	P	INCISOR(S) TRIMMED
		EYES	58	P	DARK MATERIAL AROUND EYE(S)
		EYES	59	P	DARK MATERIAL AROUND EYE(S)
		EYES	60	P	DARK MATERIAL AROUND EYE(S)
		EYES	63	P	DARK MATERIAL AROUND EYE(S)
		NOSE/MOUTH	63	P	MALALIGNMENT
		NOSE/MOUTH	63	P	INCISOR(S) TRIMMED
		EYES	64	P	DARK MATERIAL AROUND EYE(S)
		EYES	70	P	DARK MATERIAL AROUND EYE(S)
		NOSE/MOUTH	70	P	MALALIGNMENT
		NOSE/MOUTH	70	P	INCISOR(S) TRIMMED
		EYES	73	P	DARK MATERIAL AROUND EYE(S)
		EYES	77	P	DARK MATERIAL AROUND EYE(S)
		NOSE/MOUTH	77	P	MALALIGNMENT
		NOSE/MOUTH	77	P	INCISOR(S) TRIMMED
		EYES	78	P	DARK MATERIAL AROUND EYE(S)
		EYES	79	P	DARK MATERIAL AROUND EYE(S)
		EYES	80	P	DARK MATERIAL AROUND EYE(S)
		EYES	81	P	DARK MATERIAL AROUND EYE(S)
		EYES	82	P	DARK MATERIAL AROUND EYE(S)

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ANIMAL NO.	GROUP	CATEGORY	STUDY DAY	GRADE	OBSERVATIONS
11841 M	1.0 MG/KG/DAY	EYES	83	P	DARK MATERIAL AROUND EYE(S)
		EYES	84	P	DARK MATERIAL AROUND EYE(S)
		NOSE/MOUTH	84	P	MALALIGNMENT
		EYES	91	P	DARK MATERIAL AROUND EYE(S)
		NOSE/MOUTH	91	P	MALALIGNMENT
		EYES	92	P	DARK MATERIAL AROUND EYE(S)
		EYES	93	P	DARK MATERIAL AROUND EYE(S)
		EYES	94	P	DARK MATERIAL AROUND EYE(S)
		NOSE/MOUTH	94	P	MALALIGNMENT
		DEAD	94	P	SCHEDULED EUTHANASIA
11842 M	1.0 MG/KG/DAY	NOSE/MOUTH	49	P	INCISOR(S) TRIMMED
		NOSE/MOUTH	70	P	INCISOR(S) TRIMMED
		DEAD	95	P	SCHEDULED EUTHANASIA
11843 M	1.0 MG/KG/DAY	NOSE/MOUTH	105	P	INCISOR(S) TRIMMED
		DEAD	123	P	SCHEDULED EUTHANASIA
11844 M	1.0 MG/KG/DAY	DEAD	17	P	SCHEDULED EUTHANASIA
11845 M	1.0 MG/KG/DAY	EXCRETA	21	P	FEW FECES
		NOSE/MOUTH	49	P	INCISOR(S) TRIMMED
		NOSE/MOUTH	63	P	DARK MATERIAL AROUND NOSE
		NOSE/MOUTH	63	P	INCISOR(S) TRIMMED
		NOSE/MOUTH	70	P	INCISOR(S) TRIMMED
		DEAD	95	P	SCHEDULED EUTHANASIA
11846 M	10.0 MG/KG/DAY	DEAD	17	P	SCHEDULED EUTHANASIA

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ANIMAL NO.	GROUP	CATEGORY	STUDY DAY	GRADE	OBSERVATIONS
11847 M	10.0 MG/KG/DAY	DEAD	16	P	SCHEDULED EUTHANASIA
11848 M	10.0 MG/KG/DAY	DEAD	15	P	SCHEDULED EUTHANASIA
11849 M	10.0 MG/KG/DAY	DEAD	121	P	SCHEDULED EUTHANASIA
11850 M	10.0 MG/KG/DAY	BODY	7	P	OPEN LESION(S) VENTRAL NECK
		BODY	14	P	SCAB(S) VENTRAL NECK
		BODY	21	1	HAIRLOSS
		BODY	21	P	SCAB(S) RIGHT SHOULDER
		BODY	28	1	HAIRLOSS
		NOSE/MOUTH	49	P	INCISOR(S) TRIMMED
		NOSE/MOUTH	84	P	MALALIGNMENT
		EYES	84	P	DARK MATERIAL AROUND EYE(S)
		EYES	91	P	DARK MATERIAL AROUND EYE(S)
		NOSE/MOUTH	91	P	MALALIGNMENT
		NOSE/MOUTH	91	P	INCISOR(S) TRIMMED
		EYES	98	P	DARK MATERIAL AROUND EYE(S)
		NOSE/MOUTH	98	P	MALALIGNMENT
		NOSE/MOUTH	98	P	INCISOR(S) TRIMMED
		EYES	105	P	DARK MATERIAL AROUND EYE(S)
		NOSE/MOUTH	105	P	MALALIGNMENT
		NOSE/MOUTH	105	P	DARK MATERIAL AROUND NOSE

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(POSITIVE FINDINGS)

ANIMAL NO.	GROUP	CATEGORY	STUDY DAY	GRADE	OBSERVATIONS
11850 M	10.0 MG/KG/DAY	NOSE/MOUTH	105	P	INCISOR(S) TRIMMED
		EYES	112	P	DARK MATERIAL AROUND EYE(S)
		NOSE/MOUTH	112	P	MALALIGNMENT
		NOSE/MOUTH	112	P	INCISOR(S) TRIMMED
		EYES	113	P	DARK MATERIAL AROUND EYE(S)
		EYES	114	P	DARK MATERIAL AROUND EYE(S)
		EYES	115	P	DARK MATERIAL AROUND EYE(S)
		EYES	116	P	DARK MATERIAL AROUND EYE(S)
		EYES	117	P	DARK MATERIAL AROUND EYE(S)
		EYES	118	P	DARK MATERIAL AROUND EYE(S)
		EYES	119	P	DARK MATERIAL AROUND EYE(S)
		NOSE/MOUTH	119	P	MALALIGNMENT
		EYES	121	P	DARK MATERIAL AROUND EYE(S)
		NOSE/MOUTH	121	P	MALALIGNMENT
		DEAD	121	P	SCHEDULED EUTHANASIA
11851 M	10.0 MG/KG/DAY	DEAD	92	P	SCHEDULED EUTHANASIA
11852 M	10.0 MG/KG/DAY	EXCRETA	28	P	FEW FECES
		NOSE/MOUTH	49	P	INCISOR(S) TRIMMED
		NOSE/MOUTH	70	P	INCISOR(S) TRIMMED
		NOSE/MOUTH	77	P	INCISOR(S) TRIMMED
		DEAD	92	P	SCHEDULED EUTHANASIA
11853 M	10.0 MG/KG/DAY	DEAD	18	P	SCHEDULED EUTHANASIA
11854 M	10.0 MG/KG/DAY	DEAD	92	P	SCHEDULED EUTHANASIA

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ANIMAL NO.	GROUP	CATEGORY	STUDY DAY	GRADE	OBSERVATIONS
11855 M	10.0 MG/KG/DAY	BODY	14	P	SCAB(S) DORSAL NECK
		NOSE/MOUTH	70	P	INCISOR(S) TRIMMED
		DEAD	121	P	SCHEDULED EUTHANASIA
11856 M	10.0 MG/KG/DAY	EXCRETA	21	P	FEW FECES
		EXCRETA	28	P	FEW FECES
		NOSE/MOUTH	49	P	INCISOR(S) TRIMMED
		NOSE/MOUTH	84	P	DARK MATERIAL AROUND NOSE
		DEAD	122	P	SCHEDULED EUTHANASIA
11857 M	10.0 MG/KG/DAY	DEAD	17	P	SCHEDULED EUTHANASIA
11858 M	10.0 MG/KG/DAY	DEAD	17	P	SCHEDULED EUTHANASIA
11859 M	10.0 MG/KG/DAY	DEAD	16	P	SCHEDULED EUTHANASIA
11860 M	10.0 MG/KG/DAY	NOSE/MOUTH	49	P	DARK MATERIAL AROUND NOSE
		NOSE/MOUTH	56	P	INCISOR(S) TRIMMED
		NOSE/MOUTH	63	P	DARK MATERIAL AROUND NOSE
		NOSE/MOUTH	70	P	INCISOR(S) TRIMMED
		NOSE/MOUTH	77	P	DARK MATERIAL AROUND NOSE
		NOSE/MOUTH	77	P	INCISOR(S) TRIMMED
		DEAD	93	P	SCHEDULED EUTHANASIA
11861 M	10.0 MG/KG/DAY	DEAD	15	P	SCHEDULED EUTHANASIA
11862 M	10.0 MG/KG/DAY	NOSE/MOUTH	49	P	INCISOR(S) TRIMMED
		NOSE/MOUTH	63	P	INCISOR(S) TRIMMED
		NOSE/MOUTH	70	P	INCISOR(S) TRIMMED

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ANIMAL NO.	GROUP	CATEGORY	STUDY DAY	GRADE	OBSERVATIONS
11862 M	10.0 MG/KG/DAY	DEAD	93	P	SCHEDULED EUTHANASIA
11863 M	10.0 MG/KG/DAY	DEAD	18	P	SCHEDULED EUTHANASIA
11864 M	10.0 MG/KG/DAY	BODY	14	P	SCAB(S) RIGHT SHOULDER
		NOSE/MOUTH	42	P	DARK MATERIAL AROUND NOSE
		NOSE/MOUTH	63	P	INCISOR(S) TRIMMED
		NOSE/MOUTH	70	P	INCISOR(S) TRIMMED
		BODY	84	1	HAIRLOSS
		NOSE/MOUTH	91	P	DARK MATERIAL AROUND NOSE
		NOSE/MOUTH	91	P	INCISOR(S) TRIMMED
		NOSE/MOUTH	98	P	DARK MATERIAL AROUND NOSE
		NOSE/MOUTH	105	P	DARK MATERIAL AROUND NOSE
		NOSE/MOUTH	119	P	DARK MATERIAL AROUND NOSE
		DEAD	122	P	SCHEDULED EUTHANASIA
11865 M	10.0 MG/KG/DAY	NOSE/MOUTH	49	P	INCISOR(S) TRIMMED
		NOSE/MOUTH	91	P	INCISOR(S) TRIMMED
		NOSE/MOUTH	112	P	INCISOR(S) TRIMMED
		DEAD	122	P	SCHEDULED EUTHANASIA
11866 M	10.0 MG/KG/DAY	NOSE/MOUTH	91	P	DARK MATERIAL AROUND NOSE
		NOSE/MOUTH	94	P	DARK MATERIAL AROUND NOSE
		DEAD	94	P	SCHEDULED EUTHANASIA
11867 M	10.0 MG/KG/DAY	EXCRETA	8	P	FEW FECES
		NOSE/MOUTH	63	P	INCISOR(S) TRIMMED

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ANIMAL NO.	GROUP	CATEGORY	STUDY DAY	GRADE	OBSERVATIONS
11867 M	10.0 MG/KG/DAY	NOSE/MOUTH	70	P	INCISOR(S) TRIMMED
		NOSE/MOUTH	77	P	INCISOR(S) TRIMMED
		DEAD	94	P	SCHEDULED EUTHANASIA
11868 M	10.0 MG/KG/DAY	BODY	7	P	OPEN LESION(S) RIGHT SHOULDER
		BODY	14	P	SCAB(S) RIGHT AND LEFT SHOULDER
		EXCRETA	21	P	FEW FECES
		BODY	21	P	SCAB(S) RIGHT AND LEFT SHOULDER
		BODY	28	P	SCAB(S) RIGHT AND LEFT SHOULDER
		BODY	49	P	OPEN LESION(S) ANTERIOR DORSAL
		BODY	49	P	SCAB(S) DORSAL HEAD
		BODY	56	P	OPEN LESION(S) ANTERIOR DORSAL
		BODY	56	1	HAIRLOSS
		BODY	63	P	SCAB(S) ANTERIOR DORSAL
		BODY	63	1	HAIRLOSS
		BODY	70	P	SCAB(S) ANTERIOR DORSAL

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INDIVIDUAL SURVIVAL AND CLINICAL OBSERVATIONS

(POSITIVE FINDINGS)

ANIMAL NO.	GROUP	CATEGORY	STUDY DAY	GRADE	OBSERVATIONS
11868 M	10.0 MG/KG/DAY	BODY	77	1	HAIRLOSS
		NOSE/MOUTH	98	P	DARK MATERIAL AROUND NOSE
		DEAD	122	P	SCHEDULED EUTHANASIA
11869 M	10.0 MG/KG/DAY	BODY	70	1	HAIRLOSS
		BODY	77	1	HAIRLOSS
		BODY	84	1	HAIRLOSS
		BODY	91	1	HAIRLOSS
		BODY	98	1	HAIRLOSS
		BODY	105	1	HAIRLOSS
		NOSE/MOUTH	105	P	INCISOR(S) TRIMMED
		BODY	112	1	HAIRLOSS
		BODY	119	1	HAIRLOSS
		BODY	123	1	HAIRLOSS
		NOSE/MOUTH	123	P	INCISOR MISSING
		DEAD	123	P	SCHEDULED EUTHANASIA
11870 M	10.0 MG/KG/DAY	DEAD	15	P	SCHEDULED EUTHANASIA
11871 M	10.0 MG/KG/DAY	EXCRETA	21	P	FEW FECES
		DEAD	94	P	SCHEDULED EUTHANASIA
11872 M	10.0 MG/KG/DAY	NOSE/MOUTH	49	P	INCISOR(S) TRIMMED
		DEAD	95	P	SCHEDULED EUTHANASIA
11873 M	10.0 MG/KG/DAY	NOSE/MOUTH	49	P	INCISOR(S) TRIMMED
		DEAD	95	P	SCHEDULED EUTHANASIA
11874 M	10.0 MG/KG/DAY	NOSE/MOUTH	49	P	INCISOR(S) TRIMMED

GRADE CODE: 1-SLIGHT 2-MODERATE 3-MARKED P-PRESENT

APPENDIX D
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL SURVIVAL AND CLINICAL OBSERVATIONS

(POSITIVE FINDINGS)

ANIMAL NO.	GROUP	CATEGORY	STUDY DAY	GRADE	OBSERVATIONS
11874 M	10.0 MG/KG/DAY	NOSE/MOUTH	77	P	INCISOR(S) TRIMMED
		NOSE/MOUTH	91	P	DARK MATERIAL AROUND NOSE
		NOSE/MOUTH	91	P	INCISOR(S) TRIMMED
		NOSE/MOUTH	98	P	INCISOR(S) TRIMMED
		NOSE/MOUTH	112	P	INCISOR(S) TRIMMED
		DEAD	123	P	SCHEDULED EUTHANASIA
11875 M	10.0 MG/KG/DAY	NOSE/MOUTH	49	P	INCISOR(S) TRIMMED
		NOSE/MOUTH	77	P	INCISOR(S) TRIMMED
		NOSE/MOUTH	105	P	INCISOR(S) TRIMMED
		DEAD	123	P	SCHEDULED EUTHANASIA
11876 F	0 MG/KG/DAY	DEAD	92	P	SCHEDULED EUTHANASIA
11877 F	0 MG/KG/DAY	DEAD	16	P	SCHEDULED EUTHANASIA
11878 F	0 MG/KG/DAY	DEAD	15	P	SCHEDULED EUTHANASIA
11879 F	0 MG/KG/DAY	DEAD	121	P	SCHEDULED EUTHANASIA
11880 F	0 MG/KG/DAY	DEAD	121	P	SCHEDULED EUTHANASIA
11881 F	0 MG/KG/DAY	DEAD	15	P	SCHEDULED EUTHANASIA
11882 F	0 MG/KG/DAY	DEAD	16	P	SCHEDULED EUTHANASIA
11883 F	0 MG/KG/DAY	NOSE/MOUTH	14	P	DARK MATERIAL AROUND NOSE
		NOSE/MOUTH	21	P	DARK MATERIAL AROUND NOSE
		EXCRETA	23	P	FEW FECES
		NOSE/MOUTH	63	P	DARK MATERIAL AROUND NOSE
		NOSE/MOUTH	119	P	DARK MATERIAL AROUND NOSE
		DEAD	121	P	SCHEDULED EUTHANASIA

GRADE CODE: 1-SLIGHT 2-MODERATE 3-MARKED P-PRESENT

APPENDIX D
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL SURVIVAL AND CLINICAL OBSERVATIONS

(POSITIVE FINDINGS)

ANIMAL NO.	GROUP	CATEGORY	STUDY DAY	GRADE	OBSERVATIONS
11884 F	0 MG/KG/DAY	DEAD	17	P	SCHEDULED EUTHANASIA
11885 F	0 MG/KG/DAY	DEAD	122	P	SCHEDULED EUTHANASIA
11886 F	0 MG/KG/DAY	EXCRETA	21	P	FEW FECES
		EXCRETA	22	P	FEW FECES
		DEAD	92	P	SCHEDULED EUTHANASIA
11887 F	0 MG/KG/DAY	EXCRETA	27	P	FEW FECES
		DEAD	122	P	SCHEDULED EUTHANASIA
11888 F	0 MG/KG/DAY	NOSE/MOUTH	98	P	INCISOR(S) TRIMMED
		DEAD	122	P	SCHEDULED EUTHANASIA
11889 F	0 MG/KG/DAY	DEAD	16	P	SCHEDULED EUTHANASIA
11890 F	0 MG/KG/DAY	EXCRETA	25	P	FEW FECES
		EXCRETA	26	P	FEW FECES
		NOSE/MOUTH	42	P	DARK MATERIAL AROUND NOSE
		NOSE/MOUTH	77	P	INCISOR(S) TRIMMED
		DEAD	93	P	SCHEDULED EUTHANASIA
11891 F	0 MG/KG/DAY	DEAD	93	P	SCHEDULED EUTHANASIA
11892 F	0 MG/KG/DAY	NOSE/MOUTH	84	P	MALALIGNMENT
		NOSE/MOUTH	91	P	MALALIGNMENT
		NOSE/MOUTH	93	P	MALALIGNMENT
		DEAD	93	P	SCHEDULED EUTHANASIA
11893 F	0 MG/KG/DAY	DEAD	17	P	SCHEDULED EUTHANASIA
11894 F	0 MG/KG/DAY	DEAD	18	P	SCHEDULED EUTHANASIA
11895 F	0 MG/KG/DAY	NOSE/MOUTH	49	P	DARK MATERIAL AROUND NOSE

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INDIVIDUAL SURVIVAL AND CLINICAL OBSERVATIONS

(POSITIVE FINDINGS)

ANIMAL NO.	GROUP	CATEGORY	STUDY DAY	GRADE	OBSERVATIONS
11895 F	0 MG/KG/DAY	NOSE/MOUTH	77	P	INCISOR(S) TRIMMED
		DEAD	94	P	SCHEDULED EUTHANASIA
11896 F	0 MG/KG/DAY	EXCRETA	29	P	FEW FECES
		NOSE/MOUTH	49	P	INCISOR(S) TRIMMED
		BODY	56	P	DEHYDRATION
		DEAD	94	P	SCHEDULED EUTHANASIA
11897 F	0 MG/KG/DAY	EXCRETA	24	P	FEW FECES
		DEAD	122	P	SCHEDULED EUTHANASIA
11898 F	0 MG/KG/DAY	NOSE/MOUTH	63	P	DARK MATERIAL AROUND NOSE
		DEAD	123	P	SCHEDULED EUTHANASIA
11899 F	0 MG/KG/DAY	NOSE/MOUTH	91	P	DARK MATERIAL AROUND NOSE
		DEAD	123	P	SCHEDULED EUTHANASIA
11900 F	0 MG/KG/DAY	DEAD	18	P	SCHEDULED EUTHANASIA
11901 F	0 MG/KG/DAY	EXCRETA	15	P	FEW FECES
		DEAD	95	P	SCHEDULED EUTHANASIA
11902 F	0 MG/KG/DAY	NOSE/MOUTH	49	P	INCISOR(S) TRIMMED
		EYES	70	P	DARK MATERIAL AROUND EYE(S)
		NOSE/MOUTH	70	P	MALALIGNMENT
		NOSE/MOUTH	70	P	INCISOR(S) TRIMMED
		NOSE/MOUTH	70	P	DARK MATERIAL AROUND NOSE
		NOSE/MOUTH	77	P	MALALIGNMENT
		NOSE/MOUTH	77	P	INCISOR(S) TRIMMED
		NOSE/MOUTH	84	P	MALALIGNMENT

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(POSITIVE FINDINGS)

ANIMAL NO.	GROUP	CATEGORY	STUDY DAY	GRADE	OBSERVATIONS
11902 F	0 MG/KG/DAY	NOSE/MOUTH	91	P	MALALIGNMENT
		EYES	95	P	DARK MATERIAL AROUND EYE(S)
		NOSE/MOUTH	95	P	MALALIGNMENT
		DEAD	95	P	SCHEDULED EUTHANASIA
11903 F	0 MG/KG/DAY	DEAD	18	P	SCHEDULED EUTHANASIA
11904 F	0 MG/KG/DAY	EXCRETA	15	P	FEW FECES
		EXCRETA	36	P	FEW FECES
		DEAD	95	P	SCHEDULED EUTHANASIA
11905 F	0 MG/KG/DAY	BODY	84	1	HAIRLOSS
		BODY	91	1	HAIRLOSS
		DEAD	123	P	SCHEDULED EUTHANASIA
11906 F	0.01 MG/KG/DAY	DEAD	18	P	SCHEDULED EUTHANASIA
11907 F	0.01 MG/KG/DAY	EXCRETA	19	P	FEW FECES
		NOSE/MOUTH	63	P	INCISOR(S) TRIMMED
		DEAD	92	P	SCHEDULED EUTHANASIA
11908 F	0.01 MG/KG/DAY	DEAD	15	P	SCHEDULED EUTHANASIA
11909 F	0.01 MG/KG/DAY	BODY	7	P	OPEN LESION(S) LEFT SHOULDER
		BODY	14	P	SCAB(S) RIGHT SHOULDER
		BODY	15	P	SCAB(S) RIGHT SHOULDER
		DEAD	15	P	SCHEDULED EUTHANASIA

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(POSITIVE FINDINGS)

ANIMAL NO.	GROUP	CATEGORY	STUDY DAY	GRADE	OBSERVATIONS
11910 F	0.01 MG/KG/DAY	DEAD	92	P	SCHEDULED EUTHANASIA
11911 F	0.01 MG/KG/DAY	DEAD	16	P	SCHEDULED EUTHANASIA
11912 F	0.01 MG/KG/DAY	EXCRETA	12	P	FEW FECES
		DEAD	16	P	SCHEDULED EUTHANASIA
11913 F	0.01 MG/KG/DAY	DEAD	16	P	SCHEDULED EUTHANASIA
11914 F	0.01 MG/KG/DAY	EXCRETA	56	P	FEW FECES
		DEAD	93	P	SCHEDULED EUTHANASIA
11915 F	0.01 MG/KG/DAY	DEAD	93	P	SCHEDULED EUTHANASIA
11916 F	0.01 MG/KG/DAY	NOSE/MOUTH	49	P	INCISOR(S) TRIMMED
		NOSE/MOUTH	56	P	DARK MATERIAL AROUND NOSE
		NOSE/MOUTH	63	P	DARK MATERIAL AROUND NOSE
		NOSE/MOUTH	63	P	INCISOR(S) TRIMMED
		NOSE/MOUTH	70	P	DARK MATERIAL AROUND NOSE
		NOSE/MOUTH	77	P	DARK MATERIAL AROUND NOSE
		NOSE/MOUTH	91	P	DARK MATERIAL AROUND NOSE
		DEAD	93	P	SCHEDULED EUTHANASIA
11917 F	0.01 MG/KG/DAY	DEAD	18	P	SCHEDULED EUTHANASIA
11918 F	0.01 MG/KG/DAY	EYES	35	P	DARK MATERIAL AROUND EYE(S)
		EYES	56	P	DARK MATERIAL AROUND EYE(S)
		EYES	63	P	DARK MATERIAL AROUND EYE(S)
		EYES	70	P	DARK MATERIAL AROUND EYE(S)
		EYES	77	P	DARK MATERIAL AROUND EYE(S)
		EYES	84	P	DARK MATERIAL AROUND EYE(S)

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(POSITIVE FINDINGS)

ANIMAL NO.	GROUP	CATEGORY	STUDY DAY	GRADE	OBSERVATIONS
11918 F	0.01 MG/KG/DAY	EYES	91	P	DARK MATERIAL AROUND EYE(S)
		EYES	94	P	DARK MATERIAL AROUND EYE(S)
		DEAD	94	P	SCHEDULED EUTHANASIA
11919 F	0.01 MG/KG/DAY	DEAD	94	P	SCHEDULED EUTHANASIA
11920 F	0.01 MG/KG/DAY	DEAD	95	P	SCHEDULED EUTHANASIA
11921 F	0.01 MG/KG/DAY	DEAD	17	P	SCHEDULED EUTHANASIA
11922 F	0.01 MG/KG/DAY	NOSE/MOUTH	28	P	INCISOR(S) BROKEN
		NOSE/MOUTH	56	P	MALALIGNMENT
		NOSE/MOUTH	56	P	INCISOR(S) TRIMMED
		NOSE/MOUTH	70	P	INCISOR(S) TRIMMED
		EYES	91	P	DARK MATERIAL AROUND EYE(S)
		DEAD	95	P	SCHEDULED EUTHANASIA
11923 F	0.01 MG/KG/DAY	DEAD	18	P	SCHEDULED EUTHANASIA
11924 F	0.01 MG/KG/DAY	EXCRETA	15	P	FEW FECES
		EXCRETA	18	P	FEW FECES
		EXCRETA	22	P	FEW FECES
		NOSE/MOUTH	49	P	INCISOR(S) TRIMMED
		NOSE/MOUTH	63	P	MALALIGNMENT
		NOSE/MOUTH	63	P	INCISOR(S) TRIMMED
		NOSE/MOUTH	70	P	MALALIGNMENT
		NOSE/MOUTH	70	P	INCISOR(S) TRIMMED
		NOSE/MOUTH	77	P	MALALIGNMENT
		NOSE/MOUTH	77	P	INCISOR(S) TRIMMED

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(POSITIVE FINDINGS)

ANIMAL NO.	GROUP	CATEGORY	STUDY DAY	GRADE	OBSERVATIONS
11924 F	0.01 MG/KG/DAY	NOSE/MOUTH	84	P	MALALIGNMENT
		NOSE/MOUTH	91	P	MALALIGNMENT
		NOSE/MOUTH	95	P	MALALIGNMENT
		DEAD	95	P	SCHEDULED EUTHANASIA
11925 F	0.01 MG/KG/DAY	DEAD	17	P	SCHEDULED EUTHANASIA
11926 F	0.05 MG/KG/DAY	EXCRETA	14	P	FEW FECES
		EXCRETA	29	P	FEW FECES
		NOSE/MOUTH	49	P	INCISOR(S) TRIMMED
		EYES	102	P	DARK MATERIAL AROUND EYE(S)
		NOSE/MOUTH	102	P	DARK MATERIAL AROUND NOSE
		BODY	102	1	URINE STAIN
		EYES	103	P	DARK MATERIAL AROUND EYE(S)
		EYES	104	P	DARK MATERIAL AROUND EYE(S)
		EYES	105	P	DARK MATERIAL AROUND EYE(S)
		NOSE/MOUTH	105	P	MALALIGNMENT
		NOSE/MOUTH	105	P	INCISOR(S) TRIMMED
		BODY	105	P	OPEN LESION(S) ROOF OF MOUTH
		EYES	106	P	DARK MATERIAL AROUND EYE(S)
		EYES	107	P	DARK MATERIAL AROUND EYE(S)
		EYES	108	P	DARK MATERIAL AROUND EYE(S)
		BODY	112	P	OPEN LESION(S) ROOF OF MOUTH

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ANIMAL NO.	GROUP	CATEGORY	STUDY DAY	GRADE	OBSERVATIONS
11926 F	0.05 MG/KG/DAY	EYES	112	P	DARK MATERIAL AROUND EYE(S)
		NOSE/MOUTH	112	P	MALALIGNMENT
		NOSE/MOUTH	112	P	INCISOR(S) TRIMMED
		EYES	113	P	DARK MATERIAL AROUND EYE(S)
		EYES	114	P	DARK MATERIAL AROUND EYE(S)
		EYES	115	P	DARK MATERIAL AROUND EYE(S)
		EYES	116	P	DARK MATERIAL AROUND EYE(S)
		EYES	117	P	DARK MATERIAL AROUND EYE(S)
		EYES	118	P	DARK MATERIAL AROUND EYE(S)
		EYES	119	P	DARK MATERIAL AROUND EYE(S)
		NOSE/MOUTH	119	P	MALALIGNMENT
		EYES	120	P	DARK MATERIAL AROUND EYE(S)
		EYES	121	P	DARK MATERIAL AROUND EYE(S)
		NOSE/MOUTH	121	P	MALALIGNMENT
		DEAD	121	P	SCHEDULED EUTHANASIA
11927 F	0.05 MG/KG/DAY	EXCRETA	28	P	FEW FECES
		BODY	42	1	HAIRLOSS
		BODY	49	1	HAIRLOSS
		BODY	56	1	HAIRLOSS
		BODY	63	1	HAIRLOSS
		BODY	70	1	HAIRLOSS
		BODY	77	1	HAIRLOSS
		BODY	84	1	HAIRLOSS

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A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
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(POSITIVE FINDINGS)

ANIMAL NO.	GROUP	CATEGORY	STUDY DAY	GRADE	OBSERVATIONS
11927 F	0.05 MG/KG/DAY	BODY	91	2	HAIRLOSS
		BODY	92	2	HAIRLOSS
		DEAD	92	P	SCHEDULED EUTHANASIA
11928 F	0.05 MG/KG/DAY	EXCRETA	17	P	FEW FECES
		EXCRETA	18	P	FEW FECES
		EXCRETA	21	P	FEW FECES
		EXCRETA	22	P	FEW FECES
		EXCRETA	26	P	FEW FECES
		DEAD	121	P	SCHEDULED EUTHANASIA
11929 F	0.05 MG/KG/DAY	NOSE/MOUTH	77	P	DARK MATERIAL AROUND NOSE
		DEAD	92	P	SCHEDULED EUTHANASIA
11930 F	0.05 MG/KG/DAY	DEAD	15	P	SCHEDULED EUTHANASIA
11931 F	0.05 MG/KG/DAY	DEAD	15	P	SCHEDULED EUTHANASIA
11932 F	0.05 MG/KG/DAY	EXCRETA	14	P	FEW FECES
		NOSE/MOUTH	49	P	INCISOR(S) TRIMMED
		DEAD	121	P	SCHEDULED EUTHANASIA
11933 F	0.05 MG/KG/DAY	DEAD	122	P	SCHEDULED EUTHANASIA
11934 F	0.05 MG/KG/DAY	EXCRETA	14	P	FEW FECES
		DEAD	16	P	SCHEDULED EUTHANASIA
11935 F	0.05 MG/KG/DAY	NOSE/MOUTH	63	P	INCISOR(S) TRIMMED
		DEAD	93	P	SCHEDULED EUTHANASIA
11936 F	0.05 MG/KG/DAY	EXCRETA	28	P	FEW FECES
		NOSE/MOUTH	91	P	MALALIGNMENT

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ANIMAL NO.	GROUP	CATEGORY	STUDY DAY	GRADE	OBSERVATIONS
11936 F	0.05 MG/KG/DAY	NOSE/MOUTH	93	P	MALALIGNMENT
		DEAD	93	P	SCHEDULED EUTHANASIA
11937 F	0.05 MG/KG/DAY	NOSE/MOUTH	49	P	INCISOR(S) TRIMMED
		DEAD	93	P	SCHEDULED EUTHANASIA
11938 F	0.05 MG/KG/DAY	EXCRETA	14	P	FEW FECES
		NOSE/MOUTH	77	P	INCISOR(S) TRIMMED
		DEAD	94	P	SCHEDULED EUTHANASIA
11939 F	0.05 MG/KG/DAY	EXCRETA	21	P	FEW FECES
		BODY	84	1	HAIRLOSS
		BODY	91	1	HAIRLOSS
		BODY	94	1	HAIRLOSS
		DEAD	94	P	SCHEDULED EUTHANASIA
11940 F	0.05 MG/KG/DAY	DEAD	122	P	SCHEDULED EUTHANASIA
11941 F	0.05 MG/KG/DAY	DEAD	17	P	SCHEDULED EUTHANASIA
11942 F	0.05 MG/KG/DAY	EXCRETA	17	P	FEW FECES
		DEAD	17	P	SCHEDULED EUTHANASIA
11943 F	0.05 MG/KG/DAY	DEAD	122	P	SCHEDULED EUTHANASIA
11944 F	0.05 MG/KG/DAY	NOSE/MOUTH	49	P	INCISOR(S) TRIMMED
		NOSE/MOUTH	63	P	INCISOR(S) TRIMMED
		NOSE/MOUTH	77	P	INCISOR(S) TRIMMED
		NOSE/MOUTH	98	P	INCISOR(S) TRIMMED
		NOSE/MOUTH	105	P	INCISOR(S) TRIMMED
		NOSE/MOUTH	112	P	DARK MATERIAL AROUND NOSE

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(POSITIVE FINDINGS)

ANIMAL NO.	GROUP	CATEGORY	STUDY DAY	GRADE	OBSERVATIONS
11944 F	0.05 MG/KG/DAY	NOSE/MOUTH	112	P	INCISOR(S) TRIMMED
		DEAD	122	P	SCHEDULED EUTHANASIA
11945 F	0.05 MG/KG/DAY	DEAD	16	P	SCHEDULED EUTHANASIA
11946 F	0.05 MG/KG/DAY	DEAD	18	P	SCHEDULED EUTHANASIA
11947 F	0.05 MG/KG/DAY	EXCRETA	14	P	FEW FECES
		DEAD	123	P	SCHEDULED EUTHANASIA
11948 F	0.05 MG/KG/DAY	NOSE/MOUTH	49	P	INCISOR(S) TRIMMED
		NOSE/MOUTH	63	P	INCISOR(S) TRIMMED
		DEAD	97	P	FOUND DEAD
11949 F	0.05 MG/KG/DAY	DEAD	123	P	SCHEDULED EUTHANASIA
11950 F	0.05 MG/KG/DAY	NOSE/MOUTH	28	P	DARK MATERIAL AROUND NOSE
		NOSE/MOUTH	49	P	INCISOR(S) TRIMMED
		NOSE/MOUTH	77	P	DARK MATERIAL AROUND NOSE
		NOSE/MOUTH	91	P	DARK MATERIAL AROUND NOSE
		DEAD	95	P	SCHEDULED EUTHANASIA
11951 F	0.05 MG/KG/DAY	DEAD	18	P	SCHEDULED EUTHANASIA
11952 F	0.05 MG/KG/DAY	DEAD	18	P	SCHEDULED EUTHANASIA
11953 F	0.05 MG/KG/DAY	DEAD	16	P	SCHEDULED EUTHANASIA
11954 F	0.05 MG/KG/DAY	DEAD	95	P	SCHEDULED EUTHANASIA
11955 F	0.05 MG/KG/DAY	BODY	42	1	HAIRLOSS
		BODY	49	1	HAIRLOSS
		BODY	56	1	HAIRLOSS
		BODY	63	1	HAIRLOSS

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(POSITIVE FINDINGS)

ANIMAL NO.	GROUP	CATEGORY	STUDY DAY	GRADE	OBSERVATIONS
11955 F	0.05 MG/KG/DAY	NOSE/MOUTH	70	P	INCISOR(S) TRIMMED
		BODY	77	1	HAIRLOSS
		BODY	84	2	HAIRLOSS
		BODY	91	2	HAIRLOSS
		BODY	95	2	HAIRLOSS
		DEAD	95	P	SCHEDULED EUTHANASIA
11956 F	0.2 MG/KG/DAY	NOSE/MOUTH	49	P	INCISOR(S) TRIMMED
		NOSE/MOUTH	77	P	INCISOR(S) TRIMMED
		EYES	84	P	DARK MATERIAL AROUND EYE(S)
		NOSE/MOUTH	84	P	MALALIGNMENT
		NOSE/MOUTH	84	P	INCISOR(S) BROKEN
		EYES	88	P	DARK MATERIAL AROUND EYE(S)
		EYES	91	P	DARK MATERIAL AROUND EYE(S)
		NOSE/MOUTH	91	P	MALALIGNMENT
		EYES	92	P	DARK MATERIAL AROUND EYE(S)
		NOSE/MOUTH	92	P	MALALIGNMENT
		DEAD	92	P	SCHEDULED EUTHANASIA
11957 F	0.2 MG/KG/DAY	EXCRETA	19	P	FEW FECES
		DEAD	92	P	SCHEDULED EUTHANASIA
11958 F	0.2 MG/KG/DAY	EXCRETA	26	P	FEW FECES
		EXCRETA	28	P	FEW FECES
		DEAD	93	P	SCHEDULED EUTHANASIA
11959 F	0.2 MG/KG/DAY	DEAD	16	P	SCHEDULED EUTHANASIA

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(POSITIVE FINDINGS)

ANIMAL NO.	GROUP	CATEGORY	STUDY DAY	GRADE	OBSERVATIONS
11960 F	0.2 MG/KG/DAY	DEAD	17	P	SCHEDULED EUTHANASIA
11961 F	0.2 MG/KG/DAY	NOSE/MOUTH	49	P	INCISOR(S) TRIMMED
		NOSE/MOUTH	63	P	INCISOR(S) TRIMMED
		DEAD	93	P	SCHEDULED EUTHANASIA
11962 F	0.2 MG/KG/DAY	EXCRETA	14	P	FEW FECES
		DEAD	17	P	SCHEDULED EUTHANASIA
11963 F	0.2 MG/KG/DAY	DEAD	15	P	SCHEDULED EUTHANASIA
11964 F	0.2 MG/KG/DAY	DEAD	16	P	SCHEDULED EUTHANASIA
11965 F	0.2 MG/KG/DAY	EXCRETA	38	P	FEW FECES
		NOSE/MOUTH	93	P	INCISOR(S) BROKEN
		DEAD	93	P	SCHEDULED EUTHANASIA
11966 F	0.2 MG/KG/DAY	DEAD	94	P	SCHEDULED EUTHANASIA
11967 F	0.2 MG/KG/DAY	EXCRETA	2	P	FEW FECES
		EXCRETA	8	P	FEW FECES
		EXCRETA	9	P	FEW FECES
		EXCRETA	12	P	FEW FECES
		EXCRETA	17	P	FEW FECES
		DEAD	18	P	SCHEDULED EUTHANASIA
11968 F	0.2 MG/KG/DAY	DEAD	16	P	SCHEDULED EUTHANASIA
11969 F	0.2 MG/KG/DAY	EXCRETA	11	P	FEW FECES
		EXCRETA	14	P	FEW FECES
		BODY	14	1	URINE STAIN
		EYES	14	P	DARK MATERIAL AROUND EYE(S) BOTH

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(POSITIVE FINDINGS)

ANIMAL NO.	GROUP	CATEGORY	STUDY DAY	GRADE	OBSERVATIONS
11969 F	0.2 MG/KG/DAY	QUALT FOOD/WATER	14	P	DECREASED WATER CONSUMPTION
		EYES	77	P	DARK MATERIAL AROUND EYE(S)
		DEAD	94	P	SCHEDULED EUTHANASIA
11970 F	0.2 MG/KG/DAY	DEAD	18	P	SCHEDULED EUTHANASIA
11971 F	0.2 MG/KG/DAY	NOSE/MOUTH	14	P	DARK MATERIAL AROUND NOSE
		DEAD	15	P	SCHEDULED EUTHANASIA
11972 F	0.2 MG/KG/DAY	NOSE/MOUTH	91	P	DARK MATERIAL AROUND NOSE
		NOSE/MOUTH	95	P	DARK MATERIAL AROUND NOSE
		DEAD	95	P	SCHEDULED EUTHANASIA
11973 F	0.2 MG/KG/DAY	NOSE/MOUTH	77	P	DARK MATERIAL AROUND NOSE
		DEAD	95	P	SCHEDULED EUTHANASIA
11974 F	0.2 MG/KG/DAY	DEAD	18	P	SCHEDULED EUTHANASIA
11975 F	0.2 MG/KG/DAY	BODY	84	1	HAIRLOSS
		NOSE/MOUTH	84	P	MALALIGNMENT
		NOSE/MOUTH	84	P	INCISOR(S) BROKEN
		DEAD	95	P	SCHEDULED EUTHANASIA
11976 F	1.0 MG/KG/DAY	DEAD	92	P	SCHEDULED EUTHANASIA
11977 F	1.0 MG/KG/DAY	DEAD	16	P	SCHEDULED EUTHANASIA
11978 F	1.0 MG/KG/DAY	NOSE/MOUTH	49	P	INCISOR(S) TRIMMED
		EYES	121	P	DARK MATERIAL AROUND EYE(S)
		NOSE/MOUTH	121	P	DARK MATERIAL AROUND NOSE
		NOSE/MOUTH	121	P	SALIVATION
		NOSE/MOUTH	121	P	DARK MATERIAL AROUND MOUTH

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(POSITIVE FINDINGS)

ANIMAL NO.	GROUP	CATEGORY	STUDY DAY	GRADE	OBSERVATIONS
11978 F	1.0 MG/KG/DAY	DEAD	121	P	SCHEDULED EUTHANASIA
11979 F	1.0 MG/KG/DAY	DEAD	121	P	SCHEDULED EUTHANASIA
11980 F	1.0 MG/KG/DAY	BODY	42	1	HAIRLOSS
		BODY	49	1	HAIRLOSS
		BODY	56	1	HAIRLOSS
		BODY	63	1	HAIRLOSS
		NOSE/MOUTH	63	P	DARK MATERIAL AROUND NOSE
		BODY	84	1	HAIRLOSS
		BODY	91	1	HAIRLOSS
		BODY	105	1	HAIRLOSS
		BODY	112	1	HAIRLOSS
		BODY	119	1	HAIRLOSS
		BODY	121	1	HAIRLOSS
		NOSE/MOUTH	121	P	DARK MATERIAL AROUND NOSE
		DEAD	121	P	SCHEDULED EUTHANASIA
11981 F	1.0 MG/KG/DAY	BODY	49	P	DEHYDRATION
		DEAD	122	P	SCHEDULED EUTHANASIA
11982 F	1.0 MG/KG/DAY	DEAD	18	P	SCHEDULED EUTHANASIA
11983 F	1.0 MG/KG/DAY	EXCRETA	4	P	FEW FECES
		EXCRETA	7	P	FEW FECES
		QUALT FOOD/WATER	7	P	DECREASED WATER CONSUMPTION
		BODY	7	P	DEHYDRATION
		DEAD	92	P	SCHEDULED EUTHANASIA

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(POSITIVE FINDINGS)

ANIMAL NO.	GROUP	CATEGORY	STUDY DAY	GRADE	OBSERVATIONS
11984 F	1.0 MG/KG/DAY	DEAD	17	P	SCHEDULED EUTHANASIA
11985 F	1.0 MG/KG/DAY	NOSE/MOUTH	105	P	MALALIGNMENT
		NOSE/MOUTH	105	P	INCISOR(S) TRIMMED
		NOSE/MOUTH	112	P	MALALIGNMENT
		EYES	119	P	DARK MATERIAL AROUND EYE(S)
		NOSE/MOUTH	119	P	MALALIGNMENT
		NOSE/MOUTH	122	P	MALALIGNMENT
		DEAD	122	P	SCHEDULED EUTHANASIA
11986 F	1.0 MG/KG/DAY	NOSE/MOUTH	49	P	INCISOR(S) TRIMMED
		NOSE/MOUTH	77	P	DARK MATERIAL AROUND NOSE
		DEAD	122	P	SCHEDULED EUTHANASIA
11987 F	1.0 MG/KG/DAY	NOSE/MOUTH	77	P	INCISOR(S) TRIMMED
		DEAD	123	P	SCHEDULED EUTHANASIA
11988 F	1.0 MG/KG/DAY	DEAD	93	P	SCHEDULED EUTHANASIA
11989 F	1.0 MG/KG/DAY	DEAD	16	P	SCHEDULED EUTHANASIA
11990 F	1.0 MG/KG/DAY	NOSE/MOUTH	49	P	INCISOR(S) TRIMMED
		EYES	76	P	DARK MATERIAL AROUND EYE(S)
		NOSE/MOUTH	76	P	DARK MATERIAL AROUND NOSE
		NOSE/MOUTH	76	P	DARK MATERIAL AROUND MOUTH
		EYES	77	P	DARK MATERIAL AROUND EYE(S)
		NOSE/MOUTH	77	P	DARK MATERIAL AROUND NOSE
		NOSE/MOUTH	77	P	MALALIGNMENT
		NOSE/MOUTH	77	P	INCISOR(S) TRIMMED

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(POSITIVE FINDINGS)

ANIMAL NO.	GROUP	CATEGORY	STUDY DAY	GRADE	OBSERVATIONS
11990 F	1.0 MG/KG/DAY	EYES	78	P	DARK MATERIAL AROUND EYE(S)
		EYES	79	P	DARK MATERIAL AROUND EYE(S)
		EYES	80	P	DARK MATERIAL AROUND EYE(S)
		EYES	81	P	DARK MATERIAL AROUND EYE(S)
		EYES	82	P	DARK MATERIAL AROUND EYE(S)
		EYES	83	P	DARK MATERIAL AROUND EYE(S)
		BODY	84	1	HAIRLOSS
		EYES	84	P	DARK MATERIAL AROUND EYE(S)
		NOSE/MOUTH	84	P	MALALIGNMENT
		EYES	85	P	DARK MATERIAL AROUND EYE(S)
		EYES	86	P	DARK MATERIAL AROUND EYE(S)
		EYES	87	P	DARK MATERIAL AROUND EYE(S)
		EYES	88	P	DARK MATERIAL AROUND EYE(S)
		EYES	91	P	DARK MATERIAL AROUND EYE(S)
		NOSE/MOUTH	91	P	MALALIGNMENT
		NOSE/MOUTH	91	P	INCISOR(S) TRIMMED
		EYES	93	P	DARK MATERIAL AROUND EYE(S)
		NOSE/MOUTH	93	P	MALALIGNMENT
		DEAD	93	P	SCHEDULED EUTHANASIA
11991 F	1.0 MG/KG/DAY	EXCRETA	18	P	FEW FECES
		DEAD	18	P	SCHEDULED EUTHANASIA
11992 F	1.0 MG/KG/DAY	DEAD	18	P	SCHEDULED EUTHANASIA
11993 F	1.0 MG/KG/DAY	DEAD	93	P	SCHEDULED EUTHANASIA

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(POSITIVE FINDINGS)

ANIMAL NO.	GROUP	CATEGORY	STUDY DAY	GRADE	OBSERVATIONS
11994 F	1.0 MG/KG/DAY	EXCRETA	16	P	FEW FECES
		DEAD	16	P	SCHEDULED EUTHANASIA
11995 F	1.0 MG/KG/DAY	NOSE/MOUTH	49	P	DARK MATERIAL AROUND NOSE
		DEAD	94	P	SCHEDULED EUTHANASIA
11996 F	1.0 MG/KG/DAY	NOSE/MOUTH	49	P	INCISOR(S) TRIMMED
		NOSE/MOUTH	63	P	INCISOR(S) TRIMMED
		NOSE/MOUTH	77	P	DARK MATERIAL AROUND NOSE
		BODY	84	1	HAIRLOSS
		BODY	91	1	HAIRLOSS
		BODY	94	1	HAIRLOSS
		DEAD	94	P	SCHEDULED EUTHANASIA
11997 F	1.0 MG/KG/DAY	EXCRETA	9	P	FEW FECES
		EXCRETA	10	P	FEW FECES
		EXCRETA	11	P	FEW FECES
		EXCRETA	21	P	FEW FECES
		EXCRETA	35	P	FEW FECES
		NOSE/MOUTH	49	P	INCISOR(S) TRIMMED
		NOSE/MOUTH	70	P	DARK MATERIAL AROUND NOSE
		NOSE/MOUTH	91	P	DARK MATERIAL AROUND NOSE
		DEAD	95	P	SCHEDULED EUTHANASIA
11998 F	1.0 MG/KG/DAY	NOSE/MOUTH	63	P	INCISOR(S) TRIMMED
		DEAD	95	P	SCHEDULED EUTHANASIA
11999 F	1.0 MG/KG/DAY	DEAD	123	P	SCHEDULED EUTHANASIA

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WITH AMMONIUM PERCHLORATE
INDIVIDUAL SURVIVAL AND CLINICAL OBSERVATIONS

(POSITIVE FINDINGS)

ANIMAL NO.	GROUP	CATEGORY	STUDY DAY	GRADE	OBSERVATIONS
12000 F	1.0 MG/KG/DAY	DEAD	95	P	SCHEDULED EUTHANASIA
12001 F	1.0 MG/KG/DAY	DEAD	15	P	SCHEDULED EUTHANASIA
12002 F	1.0 MG/KG/DAY	BODY	14	P	SCAB(S) RIGHT LATERAL HEAD
		NOSE/MOUTH	49	P	INCISOR(S) TRIMMED
		NOSE/MOUTH	63	P	INCISOR(S) TRIMMED
		NOSE/MOUTH	91	P	INCISOR(S) TRIMMED
		NOSE/MOUTH	105	P	INCISOR(S) TRIMMED
		DEAD	123	P	SCHEDULED EUTHANASIA
12003 F	1.0 MG/KG/DAY	DEAD	17	P	SCHEDULED EUTHANASIA
12004 F	1.0 MG/KG/DAY	NOSE/MOUTH	77	P	DARK MATERIAL AROUND NOSE
		NOSE/MOUTH	77	P	INCISOR(S) TRIMMED
		NOSE/MOUTH	91	P	INCISOR(S) TRIMMED
		DEAD	123	P	SCHEDULED EUTHANASIA
12005 F	1.0 MG/KG/DAY	DEAD	15	P	SCHEDULED EUTHANASIA
12006 F	10.0 MG/KG/DAY	EXCRETA	24	P	FEW FECES
		EXCRETA	35	P	FEW FECES
		BODY	35	P	DEHYDRATION
		BODY	49	P	DEHYDRATION
		DEAD	92	P	SCHEDULED EUTHANASIA
12007 F	10.0 MG/KG/DAY	DEAD	92	P	SCHEDULED EUTHANASIA
12008 F	10.0 MG/KG/DAY	EYES	21	P	DARK MATERIAL AROUND EYE(S)
		DEAD	121	P	SCHEDULED EUTHANASIA

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(POSITIVE FINDINGS)

ANIMAL NO.	GROUP	CATEGORY	STUDY DAY	GRADE	OBSERVATIONS
12009 F	10.0 MG/KG/DAY	DEAD	121	P	SCHEDULED EUTHANASIA
12010 F	10.0 MG/KG/DAY	DEAD	15	P	SCHEDULED EUTHANASIA
12011 F	10.0 MG/KG/DAY	NOSE/MOUTH	49	P	INCISOR(S) TRIMMED
		NOSE/MOUTH	63	P	DARK MATERIAL AROUND NOSE
		NOSE/MOUTH	63	P	INCISOR(S) TRIMMED
		NOSE/MOUTH	77	P	INCISOR(S) TRIMMED
		DEAD	93	P	SCHEDULED EUTHANASIA
12012 F	10.0 MG/KG/DAY	EXCRETA	87	P	FEW FECES
		EXCRETA	88	P	FEW FECES
		DEAD	93	P	SCHEDULED EUTHANASIA
12013 F	10.0 MG/KG/DAY	EXCRETA	17	P	FEW FECES
		DEAD	17	P	SCHEDULED EUTHANASIA
12014 F	10.0 MG/KG/DAY	NOSE/MOUTH	49	P	INCISOR(S) TRIMMED
		DEAD	121	P	SCHEDULED EUTHANASIA
12015 F	10.0 MG/KG/DAY	EYES	91	P	DARK MATERIAL AROUND EYE(S)
		EYES	98	P	DARK MATERIAL AROUND EYE(S)
		NOSE/MOUTH	98	P	MALALIGNMENT
		EYES	105	P	DARK MATERIAL AROUND EYE(S)
		EYES	112	P	DARK MATERIAL AROUND EYE(S)
		EYES	113	P	DARK MATERIAL AROUND EYE(S)
		EYES	119	P	DARK MATERIAL AROUND EYE(S)
		DEAD	122	P	SCHEDULED EUTHANASIA
12016 F	10.0 MG/KG/DAY	DEAD	16	P	SCHEDULED EUTHANASIA

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(POSITIVE FINDINGS)

ANIMAL NO.	GROUP	CATEGORY	STUDY DAY	GRADE	OBSERVATIONS
12017 F	10.0 MG/KG/DAY	DEAD	122	P	SCHEDULED EUTHANASIA
12018 F	10.0 MG/KG/DAY	EXCRETA	21	P	FEW FECES
		NOSE/MOUTH	77	P	INCISOR(S) TRIMMED
		DEAD	93	P	SCHEDULED EUTHANASIA
12019 F	10.0 MG/KG/DAY	DEAD	94	P	SCHEDULED EUTHANASIA
12020 F	10.0 MG/KG/DAY	BODY	42	1	HAIRLOSS
		BODY	49	1	HAIRLOSS
		BODY	63	1	HAIRLOSS
		BODY	70	1	HAIRLOSS
		BODY	77	1	HAIRLOSS
		BODY	84	1	HAIRLOSS
		NOSE/MOUTH	112	P	DARK MATERIAL AROUND NOSE
		BODY	112	1	HAIRLOSS
		BODY	119	1	HAIRLOSS
		BODY	122	1	HAIRLOSS
		DEAD	122	P	SCHEDULED EUTHANASIA
12021 F	10.0 MG/KG/DAY	DEAD	15	P	SCHEDULED EUTHANASIA
12022 F	10.0 MG/KG/DAY	EXCRETA	6	P	FEW FECES
		EXCRETA	12	P	FEW FECES
		EXCRETA	15	P	FEW FECES
		EXCRETA	18	P	FEW FECES
		EXCRETA	20	P	FEW FECES
		EXCRETA	21	P	FEW FECES

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(POSITIVE FINDINGS)

ANIMAL NO.	GROUP	CATEGORY	STUDY DAY	GRADE	OBSERVATIONS
12022 F	10.0 MG/KG/DAY	EXCRETA	22	P	FEW FECES
		EXCRETA	24	P	FEW FECES
		EXCRETA	25	P	FEW FECES
		EXCRETA	27	P	FEW FECES
		EXCRETA	28	P	FEW FECES
		EXCRETA	43	P	FEW FECES
		EXCRETA	44	P	FEW FECES
		DEAD	94	P	SCHEDULED EUTHANASIA
12023 F	10.0 MG/KG/DAY	DEAD	16	P	SCHEDULED EUTHANASIA
12024 F	10.0 MG/KG/DAY	DEAD	123	P	SCHEDULED EUTHANASIA
12025 F	10.0 MG/KG/DAY	EXCRETA	19	P	FEW FECES
		DEAD	95	P	SCHEDULED EUTHANASIA
12026 F	10.0 MG/KG/DAY	DEAD	18	P	SCHEDULED EUTHANASIA
12027 F	10.0 MG/KG/DAY	BODY	14	P	SCAB(S) DORSAL NECK
		NOSE/MOUTH	77	P	INCISOR(S) TRIMMED
		DEAD	123	P	SCHEDULED EUTHANASIA
12028 F	10.0 MG/KG/DAY	DEAD	16	P	SCHEDULED EUTHANASIA
12029 F	10.0 MG/KG/DAY	BODY	14	1	HAIRLOSS
		DEAD	95	P	SCHEDULED EUTHANASIA
12030 F	10.0 MG/KG/DAY	DEAD	17	P	SCHEDULED EUTHANASIA
12031 F	10.0 MG/KG/DAY	BODY	14	P	SCAB(S) DORSAL NECK

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INDIVIDUAL SURVIVAL AND CLINICAL OBSERVATIONS

(POSITIVE FINDINGS)

ANIMAL NO.	GROUP	CATEGORY	STUDY DAY	GRADE	OBSERVATIONS
12031 F	10.0 MG/KG/DAY	DEAD	18	P	SCHEDULED EUTHANASIA
12032 F	10.0 MG/KG/DAY	DEAD	18	P	SCHEDULED EUTHANASIA
12033 F	10.0 MG/KG/DAY	NOSE/MOUTH	63	P	INCISOR(S) TRIMMED
		DEAD	95	P	SCHEDULED EUTHANASIA
12034 F	10.0 MG/KG/DAY	NOSE/MOUTH	77	P	INCISOR(S) TRIMMED
		DEAD	123	P	SCHEDULED EUTHANASIA
12035 F	10.0 MG/KG/DAY	NOSE/MOUTH	56	P	INCISOR(S) BROKEN
		NOSE/MOUTH	63	P	INCISOR(S) BROKEN
		NOSE/MOUTH	91	P	INCISOR(S) TRIMMED
		DEAD	123	P	SCHEDULED EUTHANASIA

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APPENDIX E

Individual Body Weight Data

APPENDIX E
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL BODY WEIGHT DATA (GRAMS)

DAY	-7	-1	7	14	21	28	35	42	49	56	63	70	77	84	91
GROUP 1: 0 MG/KG/DAY															
11716 M	136	174	239	289	SCHEDULED EUTHANASIA										
11717 M	133	180	239	288	SCHEDULED EUTHANASIA										
11718 M	146	183	240	280	SCHEDULED EUTHANASIA										
11719 M	141	186	256	313	357	389	424	455	467	485	509	525	539	549	564
11720 M	147	188	250	297	SCHEDULED EUTHANASIA										
11721 M	145	190	265	327	371	401	427	457	475	499	515	536	541	557	561
11722 M	145	192	257	304	344	383	411	438	458	479	497	517	526	538	544
11723 M	145	193	255	290	335	357	393	423	443	461	477	493	501	508	518
11724 M	143	193	254	296	332	361	382	402	418	437	450	473	481	494	505
11725 M	149	196	255	295	SCHEDULED EUTHANASIA										
11726 M	146	196	268	328	373	417	444	471	502	522	532	544	557	568	579
11727 M	145	197	273	328	379	381	434	478	512	534	559	589	611	628	639
11728 M	145	199	270	319	SCHEDULED EUTHANASIA										
11729 M	150	201	269	319	352	398	436	463	493	503	519	539	543	542	558
11730 M	156	202	263	309	343	371	397	411	423	449	463	483	490	498	510
11731 M	149	205	264	309	SCHEDULED EUTHANASIA										
11732 M	155	206	263	313	349	377	409	430	446	462	473	485	490	503	509
11733 M	158	208	271	324	366	414	447	474	502	528	549	568	586	601	623
11734 M	158	210	273	328	376	414	444	471	494	522	540	560	574	578	589
11735 M	159	217	287	345	382	430	462	485	509	526	548	564	578	589	594
11736 M	155	188	250	297	332	363	397	429	456	483	508	540	555	587	593
11737 M	143	189	250	304	343	378	403	431	444	469	479	494	508	511	483
11738 M	137	193	265	319	358	396	434	464	492	513	547	563	576	592	607
11739 M	147	196	268	323	SCHEDULED EUTHANASIA										
11740 M	148	200	261	306	350	375	401	420	438	452	471	478	488	492	496
11741 M	149	202	263	310	355	397	430	457	474	500	516	534	554	565	579
11742 M	156	203	260	306	346	392	426	452	480	505	523	540	558	568	570
11743 M	155	205	264	309	341	367	390	407	429	436	449	451	466	481	494

APPENDIX E
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL BODY WEIGHT DATA (GRAMS)

DAY	-7	-1	7	14	21	28	35	42	49	56	63	70	77	84	91
GROUP 1: 0 MG/KG/DAY															
11744 M	157	208	273	325	SCHEDULED EUTHANASIA										
11745 M	156	211	277	328	SCHEDULED EUTHANASIA										
MEAN	148	197	261	311	354	388	420	446	468	488	506	524	536	547	556
S.D.	6.9	9.9	11.3	15.2	15.7	20.4	22.3	25.4	29.8	31.5	34.6	37.8	40.5	42.7	46.2
N	30	30	30	30	20	20	20	20	20	20	20	20	20	20	20

(302)

DAY	98	105	112	119
GROUP 1: 0 MG/KG/DAY				
11716 M	SCHEDULED EUTHANASIA			
11717 M	SCHEDULED EUTHANASIA			
11718 M	SCHEDULED EUTHANASIA			
11719 M	562	563	573	578
11720 M	SCHEDULED EUTHANASIA			
11721 M	SCHEDULED EUTHANASIA			
11722 M	551	567	575	583
11723 M	525	533	537	547
11724 M	SCHEDULED EUTHANASIA			
11725 M	SCHEDULED EUTHANASIA			
11726 M	590	596	601	609
11727 M	644	658	667	680
11728 M	SCHEDULED EUTHANASIA			
11729 M	SCHEDULED EUTHANASIA			
11730 M	513	530	538	544
11731 M	SCHEDULED EUTHANASIA			
11732 M	SCHEDULED EUTHANASIA			
11733 M	627	645	653	660
11734 M	SCHEDULED EUTHANASIA			
11735 M	SCHEDULED EUTHANASIA			
11736 M	SCHEDULED EUTHANASIA			
11737 M	508	514	517	523
11738 M	SCHEDULED EUTHANASIA			
11739 M	SCHEDULED EUTHANASIA			
11740 M	502	507	517	510
11741 M	SCHEDULED EUTHANASIA			
11742 M	SCHEDULED EUTHANASIA			
11743 M	498	505	502	504

APPENDIX E
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL BODY WEIGHT DATA (GRAMS)

DAY	98	105	112	119
GROUP 1: 0 MG/KG/DAY				
11744 M	SCHEDULED EUTHANASIA			
11745 M	SCHEDULED EUTHANASIA			
MEAN	552	562	568	574
S.D.	53.0	55.5	57.4	60.7
N	10	10	10	10

APPENDIX E
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL BODY WEIGHT DATA (GRAMS)

DAY	-7	-1	7	14	21	28	35	42	49	56	63	70	77	84	91
GROUP 2: 0.01 MG/KG/DAY															
11746 M	137	173	227	279	307	346	375	400	423	442	460	480	492	506	514
11747 M	142	177	241	287	SCHEDULED EUTHANASIA										
11748 M	140	182	236	279	315	342	366	390	401	423	438	429	451	462	472
11749 M	137	185	248	292	335	369	395	416	443	463	478	493	506	515	530
11750 M	146	187	241	279	310	332	358	370	393	412	421	433	438	449	455
11751 M	148	189	249	292	SCHEDULED EUTHANASIA										
11752 M	143	191	252	302	334	368	390	411	426	449	463	486	501	509	525
11753 M	141	192	254	310	356	397	430	458	481	502	522	543	555	563	568
11754 M	141	193	251	296	330	358	380	397	415	434	444	458	471	479	481
11755 M	147	194	262	321	371	411	447	474	496	517	539	559	573	583	603
11756 M	153	196	259	311	SCHEDULED EUTHANASIA										
11757 M	144	197	272	332	SCHEDULED EUTHANASIA										
11758 M	150	198	258	312	SCHEDULED EUTHANASIA										
11759 M	157	200	266	320	SCHEDULED EUTHANASIA										
11760 M	149	202	260	313	SCHEDULED EUTHANASIA										
11761 M	153	203	264	315	364	403	436	452	475	490	504	516	534	542	548
11762 M	156	205	266	260	SCHEDULED EUTHANASIA										
11763 M	158	208	254	301	SCHEDULED EUTHANASIA										
11764 M	155	209	271	321	SCHEDULED EUTHANASIA										
11765 M	157	212	280	328	369	410	445	476	499	522	541	560	574	583	593
MEAN	148	195	256	303	339	374	402	424	445	465	481	496	510	519	529
S.D.	6.9	10.5	13.0	19.1	24.5	29.7	34.1	37.6	39.6	39.8	43.2	48.2	48.6	47.9	50.2
N	20	20	20	20	10	10	10	10	10	10	10	10	10	10	10

NOTE: GROUP 2 MALES WERE EUTHANIZED ON DAYS 15-18 OR DAYS 92-95.

APPENDIX E
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL BODY WEIGHT DATA (GRAMS)

DAY	-7	-1	7	14	21	28	35	42	49	56	63	70	77	84	91
GROUP 3: 0.05 MG/KG/DAY															
11766 M	125	169	224	276	SCHEDULED EUTHANASIA										
11767 M	137	177	239	278	317	353	391	415	438	448	467	477	483	501	518
11768 M	136	181	237	286	SCHEDULED EUTHANASIA										
11769 M	136	184	244	290	327	360	382	409	426	446	460	473	481	494	501
11770 M	142	186	251	301	333	373	407	436	460	481	504	522	528	543	547
11771 M	143	189	237	277	SCHEDULED EUTHANASIA										
11772 M	143	191	249	297	SCHEDULED EUTHANASIA										
11773 M	154	192	250	294	322	348	374	394	406	414	433	450	456	470	474
11774 M	150	193	255	297	342	363	401	420	433	454	467	490	487	495	496
11775 M	148	194	257	305	339	373	402	424	441	458	467	483	491	504	508
11776 M	149	196	253	294	328	351	368	385	397	408	416	430	436	442	454
11777 M	147	196	270	329	372	401	444	469	489	510	528	550	560	574	595
11778 M	148	198	261	312	SCHEDULED EUTHANASIA										
11779 M	150	200	258	303	SCHEDULED EUTHANASIA										
11780 M	150	201	266	324	378	424	460	449	473	495	514	541	552	558	565
11781 M	151	203	265	321	356	401	426	454	476	492	507	527	537	543	557
11782 M	158	205	269	312	355	387	407	426	445	467	480	498	518	530	541
11783 M	160	207	269	319	361	403	433	458	482	502	528	542	558	575	587
11784 M	152	209	271	319	SCHEDULED EUTHANASIA										
11785 M	161	211	279	328	373	419	461	485	515	541	565	561	581	598	602
11786 M	150	184	232	267	SCHEDULED EUTHANASIA										
11787 M	141	189	247	299	351	397	432	462	483	501	520	535	549	565	586
11788 M	148	193	258	299	335	361	382	407	421	435	452	472	475	489	488
11789 M	155	195	208	265	SCHEDULED EUTHANASIA										
11790 M	142	199	265	319	357	380	413	447	464	482	497	520	535	543	547
11791 M	151	202	262	318	352	387	415	440	460	487	507	524	541	554	578
11792 M	154	203	269	316	350	382	414	430	453	463	496	521	523	538	551
11793 M	153	205	273	335	SCHEDULED EUTHANASIA										

APPENDIX E
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL BODY WEIGHT DATA (GRAMS)

DAY	-7	-1	7	14	21	28	35	42	49	56	63	70	77	84	91
GROUP 3: 0.05 MG/KG/DAY															
11794 M	156	207	268	309	352	393	420	445	459	473	488	500	510	517	528
11795 M	149	211	273	333	385	433	464	495	523	553	576	590	609	619	638
MEAN	148	196	255	304	349	384	415	438	457	476	494	510	521	533	543
S.D.	7.8	10.3	16.4	19.3	19.0	24.7	28.4	28.8	32.9	37.2	40.2	39.3	43.3	44.0	47.4
N	30	30	30	30	20	20	20	20	20	20	20	20	20	20	20

APPENDIX E
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL BODY WEIGHT DATA (GRAMS)

DAY	98	105	112	119
GROUP 3: 0.05 MG/KG/DAY				
11766 M	SCHEDULED EUTHANASIA			
11767 M	519	525	526	521
11768 M	SCHEDULED EUTHANASIA			
11769 M	SCHEDULED EUTHANASIA			
11770 M	561	572	576	581
11771 M	SCHEDULED EUTHANASIA			
11772 M	SCHEDULED EUTHANASIA			
11773 M	483	476	493	491
11774 M	SCHEDULED EUTHANASIA			
11775 M	513	521	522	523
11776 M	SCHEDULED EUTHANASIA			
11777 M	SCHEDULED EUTHANASIA			
11778 M	SCHEDULED EUTHANASIA			
11779 M	SCHEDULED EUTHANASIA			
11780 M	SCHEDULED EUTHANASIA			
11781 M	567	570	578	579
11782 M	544	554	556	545
11783 M	593	599	610	623
11784 M	SCHEDULED EUTHANASIA			
11785 M	616	619	641	651
11786 M	SCHEDULED EUTHANASIA			
11787 M	SCHEDULED EUTHANASIA			
11788 M	495	503	509	512
11789 M	SCHEDULED EUTHANASIA			
11790 M	SCHEDULED EUTHANASIA			
11791 M	SCHEDULED EUTHANASIA			
11792 M	SCHEDULED EUTHANASIA			
11793 M	SCHEDULED EUTHANASIA			

APPENDIX E
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL BODY WEIGHT DATA (GRAMS)

DAY	98	105	112	119
GROUP 3: 0.05 MG/KG/DAY				
11794 M	SCHEDULED EUTHANASIA			
11795 M	644	648	658	665
MEAN	554	559	567	569
S.D.	52.9	53.8	56.2	60.9
N	10	10	10	10

APPENDIX E
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL BODY WEIGHT DATA (GRAMS)

DAY	-7	-1	7	14	21	28	35	42	49	56	63	70	77	84	91
GROUP 4: 0.2 MG/KG/DAY															
11796 M	136	174	232	286	SCHEDULED EUTHANASIA										
11797 M	144	177	239	285	322	363	392	420	448	474	488	504	521	531	550
11798 M	142	183	247	299	SCHEDULED EUTHANASIA										
11799 M	141	185	245	295	340	374	406	442	462	485	508	529	539	554	570
11800 M	147	187	251	301	341	387	419	458	485	506	528	548	533	552	571
11801 M	140	189	242	295	SCHEDULED EUTHANASIA										
11802 M	144	191	258	315	SCHEDULED EUTHANASIA										
11803 M	143	192	249	304	SCHEDULED EUTHANASIA										
11804 M	143	193	255	308	SCHEDULED EUTHANASIA										
11805 M	147	195	255	304	352	385	416	442	469	486	504	524	536	545	559
11806 M	153	196	251	296	342	375	404	426	444	462	478	493	506	512	518
11807 M	153	197	260	310	SCHEDULED EUTHANASIA										
11808 M	147	198	258	314	SCHEDULED EUTHANASIA										
11809 M	147	200	269	330	380	425	456	485	506	533	549	564	572	582	592
11810 M	151	202	264	319	SCHEDULED EUTHANASIA										
11811 M	152	203	261	313	366	392	423	446	473	501	518	531	541	556	558
11812 M	156	206	259	300	338	362	385	402	421	434	444	455	455	457	466
11813 M	156	208	272	328	SCHEDULED EUTHANASIA										
11814 M	152	209	280	338	399	458	490	526	545	570	589	610	624	635	649
11815 M	159	212	280	338	380	406	446	471	500	514	533	542	557	557	566
MEAN	148	195	256	309	356	393	424	452	475	497	514	530	538	548	560
S.D.	6.1	10.4	12.7	15.6	24.2	29.9	32.0	35.6	35.6	38.0	40.0	41.8	43.7	45.7	47.0
N	20	20	20	20	10	10	10	10	10	10	10	10	10	10	10

NOTE: GROUP 4 MALES WERE EUTHANIZED ON DAYS 15-18 OR DAYS 92-95.

APPENDIX E
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL BODY WEIGHT DATA (GRAMS)

DAY	-7	-1	7	14	21	28	35	42	49	56	63	70	77	84	91
GROUP 5: 1.0 MG/KG/DAY															
11816 M	140	177	232	271	SCHEDULED EUTHANASIA										
11817 M	154	180	244	283	328	351	383	410	435	460	477	490	504	510	521
11818 M	142	184	245	296	SCHEDULED EUTHANASIA										
11819 M	142	186	241	283	SCHEDULED EUTHANASIA										
11820 M	148	188	249	300	SCHEDULED EUTHANASIA										
11821 M	144	191	234	289	329	361	382	399	411	430	439	448	453	452	460
11822 M	149	192	259	316	355	388	429	443	451	480	482	502	503	520	537
11823 M	145	193	245	285	327	357	382	407	430	453	474	494	507	521	532
11824 M	142	193	244	285	326	355	382	414	435	454	465	480	484	491	505
11825 M	149	196	243	290	SCHEDULED EUTHANASIA										
11826 M	144	196	256	308	357	409	443	475	503	524	545	560	574	579	613
11827 M	143	197	274	350	415	465	512	550	583	614	634	644	661	679	688
11828 M	152	199	255	311	367	409	440	473	500	528	552	569	587	594	602
11829 M	153	201	262	321	366	406	446	472	495	523	545	562	580	596	611
11830 M	158	203	257	297	339	373	401	416	435	447	462	475	479	494	503
11831 M	154	205	274	326	SCHEDULED EUTHANASIA										
11832 M	151	207	272	320	364	411	454	478	508	532	552	564	580	590	606
11833 M	155	209	276	331	379	409	450	479	504	524	538	562	568	579	580
11834 M	153	210	279	341	293	415	475	513	543	567	592	613	630	643	640
11835 M	160	222	294	354	SCHEDULED EUTHANASIA										
11836 M	142	181	239	276	SCHEDULED EUTHANASIA										
11837 M	144	188	249	292	334	369	393	408	419	437	443	452	465	471	477
11838 M	146	189	235	265	296	324	347	370	388	405	430	446	457	472	482
11839 M	153	194	249	287	SCHEDULED EUTHANASIA										
11840 M	146	197	256	309	353	381	410	441	457	482	502	527	537	546	556
11841 M	154	200	259	306	354	372	399	420	443	460	470	485	496	501	524
11842 M	155	202	264	303	342	374	403	432	458	474	491	511	499	515	532
11843 M	144	203	263	316	366	403	426	451	469	493	519	526	537	546	557

APPENDIX E
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL BODY WEIGHT DATA (GRAMS)

DAY	-7	-1	7	14	21	28	35	42	49	56	63	70	77	84	91
GROUP 5: 1.0 MG/KG/DAY															
11844 M	153	205	262	305	SCHEDULED EUTHANASIA										
11845 M	155	210	264	317	365	407	442	467	489	506	523	544	553	537	551
MEAN	149	197	256	304	348	387	420	446	468	490	507	523	533	542	554
S.D.	5.6	10.2	14.9	22.2	28.0	31.4	38.9	43.0	47.6	50.5	53.5	54.3	57.8	59.4	58.9
N	30	30	30	30	20	20	20	20	20	20	20	20	20	20	20

APPENDIX E
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL BODY WEIGHT DATA (GRAMS)

DAY	98	105	112	119
GROUP 5: 1.0 MG/KG/DAY				
11816 M	SCHEDULED EUTHANASIA			
11817 M	SCHEDULED EUTHANASIA			
11818 M	SCHEDULED EUTHANASIA			
11819 M	SCHEDULED EUTHANASIA			
11820 M	SCHEDULED EUTHANASIA			
11821 M	466	470	475	474
11822 M	SCHEDULED EUTHANASIA			
11823 M	529	534	547	556
11824 M	SCHEDULED EUTHANASIA			
11825 M	SCHEDULED EUTHANASIA			
11826 M	602	610	625	634
11827 M	SCHEDULED EUTHANASIA			
11828 M	615	630	639	645
11829 M	620	624	640	636
11830 M	SCHEDULED EUTHANASIA			
11831 M	SCHEDULED EUTHANASIA			
11832 M	SCHEDULED EUTHANASIA			
11833 M	594	595	610	613
11834 M	650	639	641	639
11835 M	SCHEDULED EUTHANASIA			
11836 M	SCHEDULED EUTHANASIA			
11837 M	478	483	484	495
11838 M	486	492	500	511
11839 M	SCHEDULED EUTHANASIA			
11840 M	SCHEDULED EUTHANASIA			
11841 M	SCHEDULED EUTHANASIA			
11842 M	SCHEDULED EUTHANASIA			
11843 M	563	566	578	582

APPENDIX E
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL BODY WEIGHT DATA (GRAMS)

DAY	98	105	112	119
GROUP 5: 1.0 MG/KG/DAY				
11844 M	SCHEDULED EUTHANASIA			
11845 M	SCHEDULED EUTHANASIA			
MEAN	560	564	574	579
S.D.	66.4	65.1	67.6	65.5
N	10	10	10	10

APPENDIX E
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL BODY WEIGHT DATA (GRAMS)

DAY	-7	-1	7	14	21	28	35	42	49	56	63	70	77	84	91
GROUP 6: 10.0 MG/KG/DAY															
11846 M	135	174	223	269	SCHEDULED EUTHANASIA										
11847 M	131	180	246	303	SCHEDULED EUTHANASIA										
11848 M	137	183	244	295	SCHEDULED EUTHANASIA										
11849 M	144	186	242	289	331	369	398	421	443	459	471	492	502	507	507
11850 M	145	187	250	292	334	382	411	442	464	495	512	529	534	534	549
11851 M	146	190	241	282	320	351	372	400	418	439	451	471	478	490	502
11852 M	148	192	239	280	314	349	379	400	421	432	450	457	468	472	479
11853 M	145	193	255	309	SCHEDULED EUTHANASIA										
11854 M	153	193	256	303	344	384	413	437	451	483	498	518	525	539	553
11855 M	149	195	256	303	350	389	417	442	457	473	486	501	511	518	528
11856 M	148	196	251	287	327	355	377	393	409	426	437	453	463	471	485
11857 M	145	197	256	300	SCHEDULED EUTHANASIA										
11858 M	154	198	261	306	SCHEDULED EUTHANASIA										
11859 M	151	200	264	321	SCHEDULED EUTHANASIA										
11860 M	149	202	255	304	353	396	434	453	482	507	527	539	558	573	581
11861 M	155	204	270	311	SCHEDULED EUTHANASIA										
11862 M	153	206	272	322	366	408	433	465	484	509	519	544	561	566	576
11863 M	157	208	255	298	SCHEDULED EUTHANASIA										
11864 M	153	210	274	323	367	421	452	481	494	501	513	537	539	554	571
11865 M	161	214	275	324	372	409	456	487	511	533	551	568	582	595	600
11866 M	143	183	233	273	306	344	365	390	417	427	432	437	454	451	465
11867 M	146	188	238	278	316	351	371	395	416	437	452	465	481	492	424
11868 M	144	191	240	275	312	339	364	385	397	417	429	443	452	454	464
11869 M	158	194	248	285	313	339	361	378	391	409	417	421	428	438	438
11870 M	150	198	255	297	SCHEDULED EUTHANASIA										
11871 M	151	201	255	302	315	376	402	425	445	457	472	485	498	501	511
11872 M	149	202	247	297	347	381	413	435	461	481	501	522	534	544	548
11873 M	150	205	274	323	359	404	438	472	489	514	531	548	557	571	583

APPENDIX E
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL BODY WEIGHT DATA (GRAMS)

DAY	-7	-1	7	14	21	28	35	42	49	56	63	70	77	84	91
GROUP 6: 10.0 MG/KG/DAY															
11874 M	152	206	268	316	360	396	424	453	471	494	511	523	537	546	562
11875 M	150	211	256	305	355	392	419	442	458	486	509	528	540	543	558
MEAN	148	196	253	299	338	377	405	430	449	469	483	499	510	518	524
S.D.	6.5	9.8	12.9	15.8	21.6	25.6	30.2	33.4	34.3	36.7	39.2	42.7	43.2	45.5	51.8
N	30	30	30	30	20	20	20	20	20	20	20	20	20	20	20

APPENDIX E
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL BODY WEIGHT DATA (GRAMS)

DAY	98	105	112	119
GROUP 6: 10.0 MG/KG/DAY				
11846 M	SCHEDULED EUTHANASIA			
11847 M	SCHEDULED EUTHANASIA			
11848 M	SCHEDULED EUTHANASIA			
11849 M	517	519	525	534
11850 M	543	555	565	566
11851 M	SCHEDULED EUTHANASIA			
11852 M	SCHEDULED EUTHANASIA			
11853 M	SCHEDULED EUTHANASIA			
11854 M	SCHEDULED EUTHANASIA			
11855 M	535	541	545	549
11856 M	497	486	492	498
11857 M	SCHEDULED EUTHANASIA			
11858 M	SCHEDULED EUTHANASIA			
11859 M	SCHEDULED EUTHANASIA			
11860 M	SCHEDULED EUTHANASIA			
11861 M	SCHEDULED EUTHANASIA			
11862 M	SCHEDULED EUTHANASIA			
11863 M	SCHEDULED EUTHANASIA			
11864 M	571	578	585	585
11865 M	611	619	619	628
11866 M	SCHEDULED EUTHANASIA			
11867 M	SCHEDULED EUTHANASIA			
11868 M	465	473	481	483
11869 M	447	454	455	455
11870 M	SCHEDULED EUTHANASIA			
11871 M	SCHEDULED EUTHANASIA			
11872 M	SCHEDULED EUTHANASIA			
11873 M	SCHEDULED EUTHANASIA			

APPENDIX E
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL BODY WEIGHT DATA (GRAMS)

DAY	98	105	112	119
GROUP 6: 10.0 MG/KG/DAY				
11874 M	574	582	588	598
11875 M	574	577	590	600
MEAN	533	538	545	550
S.D.	52.2	54.0	54.5	56.6
N	10	10	10	10

APPENDIX E
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL BODY WEIGHT DATA (GRAMS)

DAY	-7	-1	7	14	21	28	35	42	49	56	63	70	77	84	91
GROUP 1: 0 MG/KG/DAY															
11876 F	118	138	171	204	226	238	254	271	278	280	287	298	293	293	303
11877 F	115	139	162	184	SCHEDULED EUTHANASIA										
11878 F	115	141	179	202	SCHEDULED EUTHANASIA										
11879 F	116	142	176	204	228	250	257	266	272	288	291	301	320	316	310
11880 F	103	143	199	231	258	270	294	314	319	327	338	356	356	352	356
11881 F	127	145	172	194	SCHEDULED EUTHANASIA										
11882 F	113	146	192	211	SCHEDULED EUTHANASIA										
11883 F	121	147	181	199	224	233	246	239	259	264	267	269	269	281	285
11884 F	135	149	188	209	SCHEDULED EUTHANASIA										
11885 F	131	151	186	206	218	232	239	245	254	258	261	260	273	271	273
11886 F	128	153	177	203	210	228	234	257	266	274	277	283	289	293	293
11887 F	131	154	187	213	231	240	268	286	287	291	302	314	305	308	315
11888 F	131	155	193	221	241	247	268	281	288	294	308	317	321	321	332
11889 F	131	157	185	216	SCHEDULED EUTHANASIA										
11890 F	138	158	190	208	220	247	255	263	268	284	295	297	296	306	314
11891 F	119	160	196	225	244	253	274	292	293	299	312	321	316	315	322
11892 F	136	161	196	234	246	258	272	288	288	308	315	321	318	323	315
11893 F	135	163	202	236	SCHEDULED EUTHANASIA										
11894 F	135	165	197	222	SCHEDULED EUTHANASIA										
11895 F	139	168	207	233	254	272	290	295	302	314	317	319	318	323	326
11896 F	110	138	175	204	217	238	252	263	260	277	284	287	283	290	296
11897 F	125	143	175	196	221	236	244	261	260	282	285	291	303	318	295
11898 F	117	145	181	209	225	233	248	262	267	268	278	293	287	289	297
11899 F	114	148	185	204	229	250	259	267	280	290	293	296	307	312	312
11900 F	115	151	181	207	SCHEDULED EUTHANASIA										
11901 F	131	153	188	212	221	241	253	258	266	280	289	292	291	303	306
11902 F	118	158	198	222	248	269	283	307	310	324	330	322	338	335	348
11903 F	123	159	198	227	SCHEDULED EUTHANASIA										

APPENDIX E
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL BODY WEIGHT DATA (GRAMS)

DAY	-7	-1	7	14	21	28	35	42	49	56	63	70	77	84	91
GROUP 1: 0 MG/KG/DAY															
11904 F	128	163	198	227	242	265	293	296	317	332	342	357	364	368	367
11905 F	141	166	192	222	234	238	263	268	266	272	279	281	276	283	292
MEAN	125	152	187	213	232	247	262	274	280	290	298	304	306	310	313
S.D.	9.8	8.9	10.6	13.0	13.4	13.7	17.7	20.1	19.9	21.2	22.6	25.0	25.9	24.0	23.9
N	30	30	30	30	20	20	20	20	20	20	20	20	20	20	20

APPENDIX E
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL BODY WEIGHT DATA (GRAMS)

DAY	98	105	112	119
GROUP 1: 0 MG/KG/DAY				
11876 F	SCHEDULED EUTHANASIA			
11877 F	SCHEDULED EUTHANASIA			
11878 F	SCHEDULED EUTHANASIA			
11879 F	312	321	318	322
11880 F	364	370	373	381
11881 F	SCHEDULED EUTHANASIA			
11882 F	SCHEDULED EUTHANASIA			
11883 F	282	294	313	297
11884 F	SCHEDULED EUTHANASIA			
11885 F	278	290	309	316
11886 F	SCHEDULED EUTHANASIA			
11887 F	326	318	319	323
11888 F	339	334	338	340
11889 F	SCHEDULED EUTHANASIA			
11890 F	SCHEDULED EUTHANASIA			
11891 F	SCHEDULED EUTHANASIA			
11892 F	SCHEDULED EUTHANASIA			
11893 F	SCHEDULED EUTHANASIA			
11894 F	SCHEDULED EUTHANASIA			
11895 F	SCHEDULED EUTHANASIA			
11896 F	SCHEDULED EUTHANASIA			
11897 F	306	314	334	332
11898 F	299	308	326	310
11899 F	311	312	316	312
11900 F	SCHEDULED EUTHANASIA			
11901 F	SCHEDULED EUTHANASIA			
11902 F	SCHEDULED EUTHANASIA			
11903 F	SCHEDULED EUTHANASIA			

APPENDIX E
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL BODY WEIGHT DATA (GRAMS)

DAY	98	105	112	119
GROUP 1: 0 MG/KG/DAY				
11904 F	SCHEDULED EUTHANASIA			
11905 F	294	288	297	299
MEAN	311	315	324	323
S.D.	26.3	24.2	20.8	24.3
N	10	10	10	10

APPENDIX E
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL BODY WEIGHT DATA (GRAMS)

DAY	-7	-1	7	14	21	28	35	42	49	56	63	70	77	84	91
GROUP 2: 0.01 MG/KG/DAY															
11906 F	122	139	163	185	SCHEDULED EUTHANASIA										
11907 F	112	139	172	196	220	218	243	258	259	261	276	284	282	283	295
11908 F	130	141	167	196	SCHEDULED EUTHANASIA										
11909 F	124	142	176	202	SCHEDULED EUTHANASIA										
11910 F	124	144	176	203	212	234	245	255	267	277	281	291	293	298	297
11911 F	113	145	178	200	SCHEDULED EUTHANASIA										
11912 F	136	146	187	221	SCHEDULED EUTHANASIA										
11913 F	121	147	173	190	SCHEDULED EUTHANASIA										
11914 F	126	149	173	202	224	232	236	260	268	272	269	292	293	296	321
11915 F	130	152	175	191	214	230	232	234	245	255	252	254	257	262	263
11916 F	130	153	180	201	223	245	249	259	268	269	278	271	275	272	280
11917 F	132	154	185	207	SCHEDULED EUTHANASIA										
11918 F	139	155	191	212	223	249	264	266	264	281	284	295	286	299	293
11919 F	136	157	182	197	209	229	223	235	239	233	236	253	248	260	255
11920 F	121	159	197	220	248	274	288	307	318	286	322	331	339	338	345
11921 F	142	160	194	221	SCHEDULED EUTHANASIA										
11922 F	139	162	188	209	222	247	262	274	271	316	290	292	287	299	300
11923 F	148	164	201	227	SCHEDULED EUTHANASIA										
11924 F	141	166	196	223	244	257	286	288	310	315	321	327	333	335	341
11925 F	139	168	199	226	SCHEDULED EUTHANASIA										
MEAN	130	152	183	206	224	242	253	264	271	277	281	289	289	294	299
S.D.	9.8	9.1	11.1	12.8	12.8	16.3	21.9	22.2	25.1	25.4	26.7	26.1	28.7	26.8	29.8
N	20	20	20	20	10	10	10	10	10	10	10	10	10	10	10

NOTE: GROUP 2 FEMALES WERE EUTHANIZED ON DAYS 15-18 OR DAYS 92-95.

APPENDIX E
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL BODY WEIGHT DATA (GRAMS)

DAY	-7	-1	7	14	21	28	35	42	49	56	63	70	77	84	91
GROUP 3: 0.05 MG/KG/DAY															
11926 F	114	135	177	200	224	243	259	280	282	292	297	313	313	307	318
11927 F	118	139	167	190	211	211	233	240	244	237	252	261	258	270	267
11928 F	106	140	171	193	210	229	245	257	257	266	274	277	277	282	284
11929 F	127	142	160	175	195	208	221	234	244	250	256	265	268	264	271
11930 F	110	143	177	202	SCHEDULED EUTHANASIA										
11931 F	120	145	175	196	SCHEDULED EUTHANASIA										
11932 F	126	145	170	188	203	215	221	228	236	234	234	239	237	243	244
11933 F	117	147	187	211	236	243	279	311	310	317	326	340	333	349	343
11934 F	116	149	184	210	SCHEDULED EUTHANASIA										
11935 F	123	151	176	201	214	237	237	257	255	275	283	286	285	298	291
11936 F	130	153	174	191	212	216	238	244	265	261	265	280	286	286	279
11937 F	130	153	175	202	214	219	228	237	248	244	254	261	278	277	290
11938 F	137	155	175	202	219	237	247	257	256	267	274	279	287	289	287
11939 F	142	157	200	219	234	242	262	269	268	276	278	294	287	289	293
11940 F	116	158	185	219	228	252	270	276	303	312	318	330	328	335	343
11941 F	130	160	188	217	SCHEDULED EUTHANASIA										
11942 F	135	161	199	234	SCHEDULED EUTHANASIA										
11943 F	135	163	188	207	215	232	243	247	252	261	271	267	269	269	275
11944 F	137	164	202	224	258	288	296	307	322	327	335	338	350	354	354
11945 F	135	167	202	232	SCHEDULED EUTHANASIA										
11946 F	118	141	167	189	SCHEDULED EUTHANASIA										
11947 F	130	144	158	179	192	202	219	225	228	229	237	251	249	242	251
11948 F	114	147	177	199	227	257	269	278	282	296	303	300	313	321	319
11949 F	129	150	181	205	222	237	254	255	262	268	276	275	284	296	291
11950 F	131	152	173	193	207	224	228	243	249	253	252	263	263	274	267
11951 F	137	156	185	210	SCHEDULED EUTHANASIA										
11952 F	136	159	198	230	SCHEDULED EUTHANASIA										
11953 F	141	162	190	208	SCHEDULED EUTHANASIA										

APPENDIX E
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL BODY WEIGHT DATA (GRAMS)

DAY	-7	-1	7	14	21	28	35	42	49	56	63	70	77	84	91
GROUP 3: 0.05 MG/KG/DAY															
11954 F	138	164	194	218	243	257	269	273	288	294	299	299	304	310	330
11955 F	151	173	216	248	255	272	279	288	285	301	307	307	296	308	315
MEAN	128	153	182	206	221	236	250	260	267	273	280	286	288	293	296
S.D.	10.8	9.4	13.6	16.8	17.7	22.0	22.3	24.5	25.4	28.5	28.7	28.5	28.7	30.8	31.1
N	30	30	30	30	20	20	20	20	20	20	20	20	20	20	20

APPENDIX E
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL BODY WEIGHT DATA (GRAMS)

DAY	98	105	112	119
GROUP 3: 0.05 MG/KG/DAY				
11926 F	322	272	296	284
11927 F	SCHEDULED EUTHANASIA			
11928 F	282	282	295	284
11929 F	SCHEDULED EUTHANASIA			
11930 F	SCHEDULED EUTHANASIA			
11931 F	SCHEDULED EUTHANASIA			
11932 F	250	252	253	253
11933 F	351	351	357	365
11934 F	SCHEDULED EUTHANASIA			
11935 F	SCHEDULED EUTHANASIA			
11936 F	SCHEDULED EUTHANASIA			
11937 F	SCHEDULED EUTHANASIA			
11938 F	SCHEDULED EUTHANASIA			
11939 F	SCHEDULED EUTHANASIA			
11940 F	331	344	370	366
11941 F	SCHEDULED EUTHANASIA			
11942 F	SCHEDULED EUTHANASIA			
11943 F	273	274	280	285
11944 F	352	358	361	363
11945 F	SCHEDULED EUTHANASIA			
11946 F	SCHEDULED EUTHANASIA			
11947 F	250	253	245	264
11948 F	FOUND DEAD			
11949 F	295	310	329	320
11950 F	SCHEDULED EUTHANASIA			
11951 F	SCHEDULED EUTHANASIA			
11952 F	SCHEDULED EUTHANASIA			
11953 F	SCHEDULED EUTHANASIA			

APPENDIX E
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL BODY WEIGHT DATA (GRAMS)

DAY	98	105	112	119
GROUP 3: 0.05 MG/KG/DAY				
11954 F	SCHEDULED EUTHANASIA			
11955 F	SCHEDULED EUTHANASIA			
MEAN	301	300	310	309
S.D.	40.0	42.3	46.9	45.3
N	9	9	9	9

APPENDIX E
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL BODY WEIGHT DATA (GRAMS)

DAY	-7	-1	7	14	21	28	35	42	49	56	63	70	77	84	91
GROUP 4: 0.2 MG/KG/DAY															
11956 F	104	132	174	200	233	240	262	275	278	289	296	298	298	301	310
11957 F	108	139	177	205	227	250	267	270	282	296	303	300	307	319	341
11958 F	121	140	163	178	195	208	221	230	234	239	244	243	245	251	248
11959 F	127	142	165	184	SCHEDULED EUTHANASIA										
11960 F	116	142	176	199	SCHEDULED EUTHANASIA										
11961 F	121	144	172	186	217	235	234	251	258	267	277	276	289	289	284
11962 F	113	145	178	195	SCHEDULED EUTHANASIA										
11963 F	121	147	176	198	SCHEDULED EUTHANASIA										
11964 F	136	147	165	185	SCHEDULED EUTHANASIA										
11965 F	112	150	186	203	229	225	254	253	270	277	287	295	279	293	292
11966 F	123	153	183	202	209	211	239	245	252	250	263	269	271	268	274
11967 F	127	153	185	207	SCHEDULED EUTHANASIA										
11968 F	120	154	189	217	SCHEDULED EUTHANASIA										
11969 F	120	156	197	169	239	283	320	333	341	372	383	396	387	413	457
11970 F	132	157	190	228	SCHEDULED EUTHANASIA										
11971 F	124	159	194	213	SCHEDULED EUTHANASIA										
11972 F	139	161	185	209	216	232	237	251	248	265	267	272	281	274	282
11973 F	129	163	196	227	250	271	279	298	305	315	322	329	332	333	337
11974 F	132	164	199	223	SCHEDULED EUTHANASIA										
11975 F	144	166	198	223	234	241	265	264	284	290	292	302	305	304	310
MEAN	123	151	182	203	225	240	258	267	275	286	293	298	299	305	314
S.D.	10.2	9.4	11.4	16.6	15.9	23.8	28.3	29.7	31.0	37.6	38.5	41.7	38.7	45.1	57.8
N	20	20	20	20	10	10	10	10	10	10	10	10	10	10	10

NOTE: GROUP 4 FEMALES WERE EUTHANIZED ON DAYS 15-18 OR DAYS 92-95.

APPENDIX E
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL BODY WEIGHT DATA (GRAMS)

DAY	-7	-1	7	14	21	28	35	42	49	56	63	70	77	84	91
GROUP 5: 1.0 MG/KG/DAY															
11976 F	109	133	161	183	216	239	257	268	280	294	296	300	307	308	334
11977 F	115	139	166	196	SCHEDULED EUTHANASIA										
11978 F	111	140	179	201	223	239	252	246	264	277	279	275	281	287	292
11979 F	132	142	173	190	210	227	244	252	254	269	278	283	289	283	285
11980 F	122	143	179	209	228	241	268	285	287	301	313	315	316	327	336
11981 F	131	144	174	187	213	229	234	235	245	254	255	257	268	271	266
11982 F	115	145	180	202	SCHEDULED EUTHANASIA										
11983 F	125	147	143	185	210	227	240	251	252	262	267	274	274	281	285
11984 F	127	148	188	213	SCHEDULED EUTHANASIA										
11985 F	131	151	186	203	213	211	235	250	254	257	275	290	290	290	291
11986 F	129	153	193	223	247	258	283	301	306	310	326	342	339	339	346
11987 F	140	153	177	201	212	227	237	243	242	254	268	274	267	274	274
11988 F	132	154	166	196	215	223	243	255	259	260	274	281	280	275	287
11989 F	144	156	182	200	SCHEDULED EUTHANASIA										
11990 F	123	158	194	218	225	241	269	273	280	296	306	302	292	335	312
11991 F	126	160	190	210	SCHEDULED EUTHANASIA										
11992 F	133	161	196	224	SCHEDULED EUTHANASIA										
11993 F	131	163	201	226	244	264	283	295	302	303	318	321	325	321	331
11994 F	143	164	194	221	SCHEDULED EUTHANASIA										
11995 F	145	167	198	225	248	261	279	285	285	298	308	314	317	324	323
11996 F	113	140	176	201	223	246	260	263	269	283	289	293	290	299	299
11997 F	127	143	172	195	213	221	241	246	253	257	262	267	269	265	270
11998 F	116	146	172	197	226	241	249	268	273	275	278	293	299	298	292
11999 F	130	150	185	202	229	244	252	252	271	281	280	293	301	294	292
12000 F	137	152	185	206	219	244	256	263	265	267	276	281	276	283	292
12001 F	132	156	189	221	SCHEDULED EUTHANASIA										
12002 F	139	159	189	210	234	254	261	277	281	292	303	306	306	318	323
12003 F	140	161	189	203	SCHEDULED EUTHANASIA										

APPENDIX E
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL BODY WEIGHT DATA (GRAMS)

DAY	-7	-1	7	14	21	28	35	42	49	56	63	70	77	84	91
GROUP 5: 1.0 MG/KG/DAY															
12004 F	139	164	196	219	237	259	272	287	292	305	317	321	328	336	342
12005 F	149	172	198	213	SCHEDULED EUTHANASIA										
MEAN	130	152	182	206	224	240	256	265	271	280	288	294	296	300	304
S.D.	10.7	9.6	12.9	12.4	12.3	14.7	15.8	18.7	18.3	19.0	20.9	21.3	21.4	23.8	25.1
N	30	30	30	30	20	20	20	20	20	20	20	20	20	20	20

APPENDIX E
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL BODY WEIGHT DATA (GRAMS)

DAY	98	105	112	119
GROUP 5: 1.0 MG/KG/DAY				
11976 F	SCHEDULED EUTHANASIA			
11977 F	SCHEDULED EUTHANASIA			
11978 F	298	299	302	301
11979 F	287	280	291	291
11980 F	332	345	361	348
11981 F	267	279	304	296
11982 F	SCHEDULED EUTHANASIA			
11983 F	SCHEDULED EUTHANASIA			
11984 F	SCHEDULED EUTHANASIA			
11985 F	298	313	330	318
11986 F	356	351	348	361
11987 F	279	273	279	284
11988 F	SCHEDULED EUTHANASIA			
11989 F	SCHEDULED EUTHANASIA			
11990 F	SCHEDULED EUTHANASIA			
11991 F	SCHEDULED EUTHANASIA			
11992 F	SCHEDULED EUTHANASIA			
11993 F	SCHEDULED EUTHANASIA			
11994 F	SCHEDULED EUTHANASIA			
11995 F	SCHEDULED EUTHANASIA			
11996 F	SCHEDULED EUTHANASIA			
11997 F	SCHEDULED EUTHANASIA			
11998 F	SCHEDULED EUTHANASIA			
11999 F	303	309	307	307
12000 F	SCHEDULED EUTHANASIA			
12001 F	SCHEDULED EUTHANASIA			
12002 F	323	331	363	356
12003 F	SCHEDULED EUTHANASIA			

APPENDIX E
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL BODY WEIGHT DATA (GRAMS)

DAY	98	105	112	119
GROUP 5: 1.0 MG/KG/DAY				
12004 F	341	342	356	361
12005 F	SCHEDULED EUTHANASIA			
MEAN	308	312	324	322
S.D.	28.6	29.2	31.3	31.0
N	10	10	10	10

APPENDIX E
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL BODY WEIGHT DATA (GRAMS)

DAY	-7	-1	7	14	21	28	35	42	49	56	63	70	77	84	91
GROUP 6: 10.0 MG/KG/DAY															
12006 F	124	132	158	173	186	193	190	202	208	218	232	228	245	247	255
12007 F	115	139	165	195	210	233	230	252	254	264	267	264	272	279	275
12008 F	126	140	171	188	201	219	234	247	254	263	277	280	287	289	293
12009 F	116	141	180	206	225	252	263	278	280	298	306	312	308	320	316
12010 F	121	142	181	210	SCHEDULED EUTHANASIA										
12011 F	121	144	180	208	230	249	277	295	298	303	318	329	329	331	342
12012 F	114	145	181	205	237	260	276	282	297	303	312	316	325	331	329
12013 F	118	146	184	211	SCHEDULED EUTHANASIA										
12014 F	115	147	181	211	227	256	277	285	286	298	308	314	316	329	330
12015 F	127	150	175	198	209	226	238	249	248	260	269	269	268	281	289
12016 F	130	153	190	215	SCHEDULED EUTHANASIA										
12017 F	123	153	180	201	217	240	256	256	263	273	276	285	284	295	301
12018 F	129	154	190	214	233	254	269	276	276	286	293	302	292	299	301
12019 F	127	155	188	216	228	243	257	265	274	279	288	297	294	300	299
12020 F	124	157	182	207	228	256	266	278	282	289	288	300	303	307	309
12021 F	135	159	191	212	SCHEDULED EUTHANASIA										
12022 F	136	161	186	209	229	247	262	268	269	280	277	284	287	296	281
12023 F	146	163	187	208	SCHEDULED EUTHANASIA										
12024 F	133	164	201	234	254	290	313	320	328	334	340	348	349	371	369
12025 F	142	166	200	235	254	270	287	299	307	309	319	330	326	325	330
12026 F	113	139	169	186	SCHEDULED EUTHANASIA										
12027 F	115	143	172	204	225	242	266	270	283	289	293	297	294	301	303
12028 F	134	146	176	196	SCHEDULED EUTHANASIA										
12029 F	117	149	178	204	229	253	258	274	280	286	290	303	307	310	333
12030 F	134	152	190	212	SCHEDULED EUTHANASIA										
12031 F	140	154	176	192	SCHEDULED EUTHANASIA										
12032 F	135	158	194	217	SCHEDULED EUTHANASIA										
12033 F	136	159	186	203	229	253	260	261	274	284	278	284	299	305	330

APPENDIX E
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL BODY WEIGHT DATA (GRAMS)

DAY	-7	-1	7	14	21	28	35	42	49	56	63	70	77	84	91
GROUP 6: 10.0 MG/KG/DAY															
12034 F	140	163	190	215	233	253	265	268	279	281	287	293	298	296	299
12035 F	141	167	194	215	231	247	253	256	266	272	279	278	284	289	288
MEAN	128	151	183	207	226	247	260	269	275	283	290	296	298	305	309
S.D.	9.7	9.2	9.8	12.6	15.8	19.6	24.7	24.0	24.6	23.4	23.3	26.6	23.7	25.6	26.5
N	30	30	30	30	20	20	20	20	20	20	20	20	20	20	20

APPENDIX E
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL BODY WEIGHT DATA (GRAMS)

DAY	98	105	112	119
GROUP 6: 10.0 MG/KG/DAY				
12006 F	SCHEDULED EUTHANASIA			
12007 F	SCHEDULED EUTHANASIA			
12008 F	298	297	301	308
12009 F	323	314	324	331
12010 F	SCHEDULED EUTHANASIA			
12011 F	SCHEDULED EUTHANASIA			
12012 F	SCHEDULED EUTHANASIA			
12013 F	SCHEDULED EUTHANASIA			
12014 F	334	343	365	355
12015 F	289	286	289	288
12016 F	SCHEDULED EUTHANASIA			
12017 F	297	295	300	306
12018 F	SCHEDULED EUTHANASIA			
12019 F	SCHEDULED EUTHANASIA			
12020 F	308	320	326	322
12021 F	SCHEDULED EUTHANASIA			
12022 F	SCHEDULED EUTHANASIA			
12023 F	SCHEDULED EUTHANASIA			
12024 F	372	370	370	370
12025 F	SCHEDULED EUTHANASIA			
12026 F	SCHEDULED EUTHANASIA			
12027 F	315	322	336	316
12028 F	SCHEDULED EUTHANASIA			
12029 F	SCHEDULED EUTHANASIA			
12030 F	SCHEDULED EUTHANASIA			
12031 F	SCHEDULED EUTHANASIA			
12032 F	SCHEDULED EUTHANASIA			
12033 F	SCHEDULED EUTHANASIA			

APPENDIX E
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL BODY WEIGHT DATA (GRAMS)

DAY	98	105	112	119
GROUP 6: 10.0 MG/KG/DAY				
12034 F	305	316	324	316
12035 F	284	293	297	299
MEAN	313	316	323	321
S.D.	25.8	25.7	27.9	25.1
N	10	10	10	10

APPENDIX F

Individual Body Weight Gain Data

APPENDIX F
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL BODY WEIGHT GAIN DATA (GRAMS)

DAY	-1-7	7-14	14-21	21-28	28-35	35-42	42-49	49-56	56-63	63-70	70-77	77-84
GROUP 1: 0 MG/KG/DAY												
11716 M	65	50	SCHEDULED EUTHANASIA									
11717 M	59	49	SCHEDULED EUTHANASIA									
11718 M	57	40	SCHEDULED EUTHANASIA									
11719 M	70	57	44	32	35	31	12	18	24	16	14	10
11720 M	62	47	SCHEDULED EUTHANASIA									
11721 M	75	62	44	30	26	30	18	24	16	21	5	16
11722 M	65	47	40	39	28	27	20	21	18	20	9	12
11723 M	62	35	45	22	36	30	20	18	16	16	8	7
11724 M	61	42	36	29	21	20	16	19	13	23	8	13
11725 M	59	40	SCHEDULED EUTHANASIA									
11726 M	72	60	45	44	27	27	31	20	10	12	13	11
11727 M	76	55	51	2	53	44	34	22	25	30	22	17
11728 M	71	49	SCHEDULED EUTHANASIA									
11729 M	68	50	33	46	38	27	30	10	16	20	4	-1
11730 M	61	46	34	28	26	14	12	26	14	20	7	8
11731 M	59	45	SCHEDULED EUTHANASIA									
11732 M	57	50	36	28	32	21	16	16	11	12	5	13
11733 M	63	53	42	48	33	27	28	26	21	19	18	15
11734 M	63	55	48	38	30	27	23	28	18	20	14	4
11735 M	70	58	37	48	32	23	24	17	22	16	14	11
11736 M	62	47	35	31	34	32	27	27	25	32	15	32
11737 M	61	54	39	35	25	28	13	25	10	15	14	3
11738 M	72	54	39	38	38	30	28	21	34	16	13	16
11739 M	72	55	SCHEDULED EUTHANASIA									
11740 M	61	45	44	25	26	19	18	14	19	7	10	4
11741 M	61	47	45	42	33	27	17	26	16	18	20	11
11742 M	57	46	40	46	34	26	28	25	18	17	18	10
11743 M	59	45	32	26	23	17	22	7	13	2	15	15

APPENDIX F
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL BODY WEIGHT GAIN DATA (GRAMS)

DAY	-1-7	7-14	14-21	21-28	28-35	35-42	42-49	49-56	56-63	63-70	70-77	77-84
GROUP 1: 0 MG/KG/DAY												
11744 M	65	52	SCHEDULED EUTHANASIA									
11745 M	66	51	SCHEDULED EUTHANASIA									
MEAN	64	50	40	34	32	26	22	21	18	18	12	11
S.D.	5.6	6.2	5.3	11.1	7.1	6.4	6.7	5.7	6.0	6.7	5.1	6.9
N	30	30	20	20	20	20	20	20	20	20	20	20

INDIVIDUAL BODY WEIGHT GAIN DATA (GRAMS)

DAY	84-91	91-98	98-105	105-112	112-119
GROUP 1: 0 MG/KG/DAY					
11716 M	SCHEDULED EUTHANASIA				
11717 M	SCHEDULED EUTHANASIA				
11718 M	SCHEDULED EUTHANASIA				
11719 M	15	-2	1	10	5
11720 M	SCHEDULED EUTHANASIA				
11721 M	4	SCHEDULED EUTHANASIA			
11722 M	6	7	16	8	8
11723 M	10	7	8	4	10
11724 M	11	SCHEDULED EUTHANASIA			
11725 M	SCHEDULED EUTHANASIA				
11726 M	11	11	6	5	8
11727 M	11	5	14	9	13
11728 M	SCHEDULED EUTHANASIA				
11729 M	16	SCHEDULED EUTHANASIA			
11730 M	12	3	17	8	6
11731 M	SCHEDULED EUTHANASIA				
11732 M	6	SCHEDULED EUTHANASIA			
11733 M	22	4	18	8	7
11734 M	11	SCHEDULED EUTHANASIA			
11735 M	5	SCHEDULED EUTHANASIA			
11736 M	6	SCHEDULED EUTHANASIA			
11737 M	-28	25	6	3	6
11738 M	15	SCHEDULED EUTHANASIA			
11739 M	SCHEDULED EUTHANASIA				
11740 M	4	6	5	10	-7
11741 M	14	SCHEDULED EUTHANASIA			
11742 M	2	SCHEDULED EUTHANASIA			
11743 M	13	4	7	-3	2

APPENDIX F
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL BODY WEIGHT GAIN DATA (GRAMS)

DAY	84-91	91-98	98-105	105-112	112-119
GROUP 1: 0 MG/KG/DAY					
11744 M	SCHEDULED EUTHANASIA				
11745 M	SCHEDULED EUTHANASIA				
MEAN	8	7	10	6	6
S.D.	9.9	7.1	5.9	4.0	5.4
N	20	10	10	10	10

APPENDIX F
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL BODY WEIGHT GAIN DATA (GRAMS)

DAY	-1-7	7-14	14-21	21-28	28-35	35-42	42-49	49-56	56-63	63-70	70-77	77-84
GROUP 2: 0.01 MG/KG/DAY												
11746 M	54	52	28	39	29	25	23	19	18	20	12	14
11747 M	64	46	SCHEDULED EUTHANASIA									
11748 M	54	43	36	27	24	24	11	22	15	-9	22	11
11749 M	63	44	43	34	26	21	27	20	15	15	13	9
11750 M	54	38	31	22	26	12	23	19	9	12	5	11
11751 M	60	43	SCHEDULED EUTHANASIA									
11752 M	61	50	32	34	22	21	15	23	14	23	15	8
11753 M	62	56	46	41	33	28	23	21	20	21	12	8
11754 M	58	45	34	28	22	17	18	19	10	14	13	8
11755 M	68	59	50	40	36	27	22	21	22	20	14	10
11756 M	63	52	SCHEDULED EUTHANASIA									
11757 M	75	60	SCHEDULED EUTHANASIA									
11758 M	60	54	SCHEDULED EUTHANASIA									
11759 M	66	54	SCHEDULED EUTHANASIA									
11760 M	58	53	SCHEDULED EUTHANASIA									
11761 M	61	51	49	39	33	16	23	15	14	12	18	8
11762 M	61	-6	SCHEDULED EUTHANASIA									
11763 M	46	47	SCHEDULED EUTHANASIA									
11764 M	62	50	SCHEDULED EUTHANASIA									
11765 M	68	48	41	41	35	31	23	23	19	19	14	9
MEAN	61	47	39	35	29	22	21	20	16	15	14	10
S.D.	6.2	13.7	7.9	6.8	5.3	5.9	4.7	2.4	4.2	9.2	4.4	2.0
N	20	20	10	10	10	10	10	10	10	10	10	10

APPENDIX F
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL BODY WEIGHT GAIN DATA (GRAMS)

DAY	84-91	91-98	98-105	105-112	112-119
GROUP 2: 0.01 MG/KG/DAY					
11746 M	8	SCHEDULED EUTHANASIA			
11747 M	SCHEDULED EUTHANASIA				
11748 M	10	SCHEDULED EUTHANASIA			
11749 M	15	SCHEDULED EUTHANASIA			
11750 M	6	SCHEDULED EUTHANASIA			
11751 M	SCHEDULED EUTHANASIA				
11752 M	16	SCHEDULED EUTHANASIA			
11753 M	5	SCHEDULED EUTHANASIA			
11754 M	2	SCHEDULED EUTHANASIA			
11755 M	20	SCHEDULED EUTHANASIA			
11756 M	SCHEDULED EUTHANASIA				
11757 M	SCHEDULED EUTHANASIA				
11758 M	SCHEDULED EUTHANASIA				
11759 M	SCHEDULED EUTHANASIA				
11760 M	SCHEDULED EUTHANASIA				
11761 M	6	SCHEDULED EUTHANASIA			
11762 M	SCHEDULED EUTHANASIA				
11763 M	SCHEDULED EUTHANASIA				
11764 M	SCHEDULED EUTHANASIA				
11765 M	10	SCHEDULED EUTHANASIA			
MEAN	10				
S.D.	5.6				
N	10				

APPENDIX F
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL BODY WEIGHT GAIN DATA (GRAMS)

DAY	-1-7	7-14	14-21	21-28	28-35	35-42	42-49	49-56	56-63	63-70	70-77	77-84
GROUP 3: 0.05 MG/KG/DAY												
11766 M	55	52	SCHEDULED EUTHANASIA									
11767 M	62	39	39	36	38	24	23	10	19	10	6	18
11768 M	56	49	SCHEDULED EUTHANASIA									
11769 M	60	46	37	33	22	27	17	20	14	13	8	13
11770 M	65	50	32	40	34	29	24	21	23	18	6	15
11771 M	48	40	SCHEDULED EUTHANASIA									
11772 M	58	48	SCHEDULED EUTHANASIA									
11773 M	58	44	28	26	26	20	12	8	19	17	6	14
11774 M	62	42	45	21	38	19	13	21	13	23	-3	8
11775 M	63	48	34	34	29	22	17	17	9	16	8	13
11776 M	57	41	34	23	17	17	12	11	8	14	6	6
11777 M	74	59	43	29	43	25	20	21	18	22	10	14
11778 M	63	51	SCHEDULED EUTHANASIA									
11779 M	58	45	SCHEDULED EUTHANASIA									
11780 M	65	58	54	46	36	-11	24	22	19	27	11	6
11781 M	62	56	35	45	25	28	22	16	15	20	10	6
11782 M	64	43	43	32	20	19	19	22	13	18	20	12
11783 M	62	50	42	42	30	25	24	20	26	14	16	17
11784 M	62	48	SCHEDULED EUTHANASIA									
11785 M	68	49	45	46	42	24	30	26	24	-4	20	17
11786 M	48	35	SCHEDULED EUTHANASIA									
11787 M	58	52	52	46	35	30	21	18	19	15	14	16
11788 M	65	41	36	26	21	25	14	14	17	20	3	14
11789 M	13	57	SCHEDULED EUTHANASIA									
11790 M	66	54	38	23	33	34	17	18	15	23	15	8
11791 M	60	56	34	35	28	25	20	27	20	17	17	13
11792 M	66	47	34	32	32	16	23	10	33	25	2	15
11793 M	68	62	SCHEDULED EUTHANASIA									

APPENDIX F
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL BODY WEIGHT GAIN DATA (GRAMS)

DAY	-1-7	7-14	14-21	21-28	28-35	35-42	42-49	49-56	56-63	63-70	70-77	77-84
GROUP 3: 0.05 MG/KG/DAY												
11794 M	61	41	43	41	27	25	14	14	15	12	10	7
11795 M	62	60	52	48	31	31	28	30	23	14	19	10
MEAN	60	49	40	35	30	23	20	18	18	17	10	12
S.D.	10.3	6.9	7.2	8.7	7.2	9.2	5.2	5.9	5.9	6.7	6.3	4.0
N	30	30	20	20	20	20	20	20	20	20	20	20

APPENDIX F
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL BODY WEIGHT GAIN DATA (GRAMS)

DAY	84-91	91-98	98-105	105-112	112-119
GROUP 3: 0.05 MG/KG/DAY					
11766 M	SCHEDULED EUTHANASIA				
11767 M	17	1	6	1	-5
11768 M	SCHEDULED EUTHANASIA				
11769 M	7	SCHEDULED EUTHANASIA			
11770 M	4	14	11	4	5
11771 M	SCHEDULED EUTHANASIA				
11772 M	SCHEDULED EUTHANASIA				
11773 M	4	9	-7	17	-2
11774 M	1	SCHEDULED EUTHANASIA			
11775 M	4	5	8	1	1
11776 M	12	SCHEDULED EUTHANASIA			
11777 M	21	SCHEDULED EUTHANASIA			
11778 M	SCHEDULED EUTHANASIA				
11779 M	SCHEDULED EUTHANASIA				
11780 M	7	SCHEDULED EUTHANASIA			
11781 M	14	10	3	8	1
11782 M	11	3	10	2	-11
11783 M	12	6	6	11	13
11784 M	SCHEDULED EUTHANASIA				
11785 M	4	14	3	22	10
11786 M	SCHEDULED EUTHANASIA				
11787 M	21	SCHEDULED EUTHANASIA			
11788 M	-1	7	8	6	3
11789 M	SCHEDULED EUTHANASIA				
11790 M	4	SCHEDULED EUTHANASIA			
11791 M	24	SCHEDULED EUTHANASIA			
11792 M	13	SCHEDULED EUTHANASIA			
11793 M	SCHEDULED EUTHANASIA				

APPENDIX F
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL BODY WEIGHT GAIN DATA (GRAMS)

DAY	84-91	91-98	98-105	105-112	112-119
GROUP 3: 0.05 MG/KG/DAY					
11794 M	11	SCHEDULED EUTHANASIA			
11795 M	19	6	4	10	7
MEAN	10	8	5	8	2
S.D.	7.3	4.3	5.1	7.0	7.1
N	20	10	10	10	10

APPENDIX F
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL BODY WEIGHT GAIN DATA (GRAMS)

DAY	-1-7	7-14	14-21	21-28	28-35	35-42	42-49	49-56	56-63	63-70	70-77	77-84
GROUP 4: 0.2 MG/KG/DAY												
11796 M	58	54	SCHEDULED EUTHANASIA									
11797 M	62	46	37	41	29	28	28	26	14	16	17	10
11798 M	64	52	SCHEDULED EUTHANASIA									
11799 M	60	50	45	34	32	36	20	23	23	21	10	15
11800 M	64	50	40	46	32	39	27	21	22	20	-15	19
11801 M	53	53	SCHEDULED EUTHANASIA									
11802 M	67	57	SCHEDULED EUTHANASIA									
11803 M	57	55	SCHEDULED EUTHANASIA									
11804 M	62	53	SCHEDULED EUTHANASIA									
11805 M	60	49	48	33	31	26	27	17	18	20	12	9
11806 M	55	45	46	33	29	22	18	18	16	15	13	6
11807 M	63	50	SCHEDULED EUTHANASIA									
11808 M	60	56	SCHEDULED EUTHANASIA									
11809 M	69	61	50	45	31	29	21	27	16	15	8	10
11810 M	62	55	SCHEDULED EUTHANASIA									
11811 M	58	52	53	26	31	23	27	28	17	13	10	15
11812 M	53	41	38	24	23	17	19	13	10	11	0	2
11813 M	64	56	SCHEDULED EUTHANASIA									
11814 M	71	58	61	59	32	36	19	25	19	21	14	11
11815 M	68	58	42	26	40	25	29	14	19	9	15	0
MEAN	62	53	46	37	31	28	24	21	17	16	8	10
S.D.	5.0	4.9	7.4	11.0	4.2	7.0	4.4	5.5	3.8	4.3	9.5	5.9
N	20	20	10	10	10	10	10	10	10	10	10	10

APPENDIX F
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL BODY WEIGHT GAIN DATA (GRAMS)

DAY	84-91	91-98	98-105	105-112	112-119
GROUP 4: 0.2 MG/KG/DAY					
11796 M	SCHEDULED EUTHANASIA				
11797 M	19	SCHEDULED EUTHANASIA			
11798 M	SCHEDULED EUTHANASIA				
11799 M	16	SCHEDULED EUTHANASIA			
11800 M	19	SCHEDULED EUTHANASIA			
11801 M	SCHEDULED EUTHANASIA				
11802 M	SCHEDULED EUTHANASIA				
11803 M	SCHEDULED EUTHANASIA				
11804 M	SCHEDULED EUTHANASIA				
11805 M	14	SCHEDULED EUTHANASIA			
11806 M	6	SCHEDULED EUTHANASIA			
11807 M	SCHEDULED EUTHANASIA				
11808 M	SCHEDULED EUTHANASIA				
11809 M	10	SCHEDULED EUTHANASIA			
11810 M	SCHEDULED EUTHANASIA				
11811 M	2	SCHEDULED EUTHANASIA			
11812 M	9	SCHEDULED EUTHANASIA			
11813 M	SCHEDULED EUTHANASIA				
11814 M	14	SCHEDULED EUTHANASIA			
11815 M	9	SCHEDULED EUTHANASIA			
MEAN	12				
S.D.	5.6				
N	10				

APPENDIX F
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL BODY WEIGHT GAIN DATA (GRAMS)

DAY	-1-7	7-14	14-21	21-28	28-35	35-42	42-49	49-56	56-63	63-70	70-77	77-84
GROUP 5: 1.0 MG/KG/DAY												
11816 M	55	39	SCHEDULED EUTHANASIA									
11817 M	64	39	45	23	32	27	25	25	17	13	14	6
11818 M	61	51	SCHEDULED EUTHANASIA									
11819 M	55	42	SCHEDULED EUTHANASIA									
11820 M	61	51	SCHEDULED EUTHANASIA									
11821 M	43	55	40	32	21	17	12	19	9	9	5	-1
11822 M	67	57	39	33	41	14	8	29	2	20	1	17
11823 M	52	40	42	30	25	25	23	23	21	20	13	14
11824 M	51	41	41	29	27	32	21	19	11	15	4	7
11825 M	47	47	SCHEDULED EUTHANASIA									
11826 M	60	52	49	52	34	32	28	21	21	15	14	5
11827 M	77	76	65	50	47	38	33	31	20	10	17	18
11828 M	56	56	56	42	31	33	27	28	24	17	18	7
11829 M	61	59	45	40	40	26	23	28	22	17	18	16
11830 M	54	40	42	34	28	15	19	12	15	13	4	15
11831 M	69	52	SCHEDULED EUTHANASIA									
11832 M	65	48	44	47	43	24	30	24	20	12	16	10
11833 M	67	55	48	30	41	29	25	20	14	24	6	11
11834 M	69	62	-48	122	60	38	30	24	25	21	17	13
11835 M	72	60	SCHEDULED EUTHANASIA									
11836 M	58	37	SCHEDULED EUTHANASIA									
11837 M	61	43	42	35	24	15	11	18	6	9	13	6
11838 M	46	30	31	28	23	23	18	17	25	16	11	15
11839 M	55	38	SCHEDULED EUTHANASIA									
11840 M	59	53	44	28	29	31	16	25	20	25	10	9
11841 M	59	47	48	18	27	21	23	17	10	15	11	5
11842 M	62	39	39	32	29	29	26	16	17	20	-12	16
11843 M	60	53	50	37	23	25	18	24	26	7	11	9

APPENDIX F
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL BODY WEIGHT GAIN DATA (GRAMS)

DAY	-1-7	7-14	14-21	21-28	28-35	35-42	42-49	49-56	56-63	63-70	70-77	77-84
GROUP 5: 1.0 MG/KG/DAY												
11844 M	57	43	SCHEDULED EUTHANASIA									
11845 M	54	53	48	42	35	25	22	17	17	21	9	-16
MEAN	59	49	41	39	33	26	22	22	17	16	10	9
S.D.	7.7	9.6	22.0	21.3	9.8	7.1	6.7	5.0	6.7	5.1	7.2	7.8
N	30	30	20	20	20	20	20	20	20	20	20	20

APPENDIX F
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL BODY WEIGHT GAIN DATA (GRAMS)

DAY	84-91	91-98	98-105	105-112	112-119
GROUP 5: 1.0 MG/KG/DAY					
11816 M	SCHEDULED EUTHANASIA				
11817 M	11	SCHEDULED EUTHANASIA			
11818 M	SCHEDULED EUTHANASIA				
11819 M	SCHEDULED EUTHANASIA				
11820 M	SCHEDULED EUTHANASIA				
11821 M	8	6	4	5	-1
11822 M	17	SCHEDULED EUTHANASIA			
11823 M	11	-3	5	13	9
11824 M	14	SCHEDULED EUTHANASIA			
11825 M	SCHEDULED EUTHANASIA				
11826 M	34	-11	8	15	9
11827 M	9	SCHEDULED EUTHANASIA			
11828 M	8	13	15	9	6
11829 M	15	9	4	16	-4
11830 M	9	SCHEDULED EUTHANASIA			
11831 M	SCHEDULED EUTHANASIA				
11832 M	16	SCHEDULED EUTHANASIA			
11833 M	1	14	1	15	3
11834 M	-3	10	-11	2	-2
11835 M	SCHEDULED EUTHANASIA				
11836 M	SCHEDULED EUTHANASIA				
11837 M	6	1	5	1	11
11838 M	10	4	6	8	11
11839 M	SCHEDULED EUTHANASIA				
11840 M	10	SCHEDULED EUTHANASIA			
11841 M	23	SCHEDULED EUTHANASIA			
11842 M	17	SCHEDULED EUTHANASIA			
11843 M	11	6	3	12	4

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APPENDIX F
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL BODY WEIGHT GAIN DATA (GRAMS)

DAY	84-91	91-98	98-105	105-112	112-119
GROUP 5: 1.0 MG/KG/DAY					
11844 M	SCHEDULED EUTHANASIA				
11845 M	14	SCHEDULED EUTHANASIA			
MEAN	12	5	4	10	5
S.D.	7.7	7.6	6.5	5.5	5.5
N	20	10	10	10	10

APPENDIX F
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL BODY WEIGHT GAIN DATA (GRAMS)

DAY	-1-7	7-14	14-21	21-28	28-35	35-42	42-49	49-56	56-63	63-70	70-77	77-84
GROUP 6: 10.0 MG/KG/DAY												
11846 M	49	46	SCHEDULED EUTHANASIA									
11847 M	66	57	SCHEDULED EUTHANASIA									
11848 M	61	51	SCHEDULED EUTHANASIA									
11849 M	56	47	42	38	29	23	22	16	12	21	10	5
11850 M	63	42	42	48	29	31	22	31	17	17	5	0
11851 M	51	41	38	31	21	28	18	21	12	20	7	12
11852 M	47	41	34	35	30	21	21	11	18	7	11	4
11853 M	62	54	SCHEDULED EUTHANASIA									
11854 M	63	47	41	40	29	24	14	32	15	20	7	14
11855 M	61	47	47	39	28	25	15	16	13	15	10	7
11856 M	55	36	40	28	22	16	16	17	11	16	10	8
11857 M	59	44	SCHEDULED EUTHANASIA									
11858 M	63	45	SCHEDULED EUTHANASIA									
11859 M	64	57	SCHEDULED EUTHANASIA									
11860 M	53	49	49	43	38	19	29	25	20	12	19	15
11861 M	66	41	SCHEDULED EUTHANASIA									
11862 M	66	50	44	42	25	32	19	25	10	25	17	5
11863 M	47	43	SCHEDULED EUTHANASIA									
11864 M	64	49	44	54	31	29	13	7	12	24	2	15
11865 M	61	49	48	37	47	31	24	22	18	17	14	13
11866 M	50	40	33	38	21	25	27	10	5	5	17	-3
11867 M	50	40	38	35	20	24	21	21	15	13	16	11
11868 M	49	35	37	27	25	21	12	20	12	14	9	2
11869 M	54	37	28	26	22	17	13	18	8	4	7	10
11870 M	57	42	SCHEDULED EUTHANASIA									
11871 M	54	47	13	61	26	23	20	12	15	13	13	3
11872 M	45	50	50	34	32	22	26	20	20	21	12	10
11873 M	69	49	36	45	34	34	17	25	17	17	9	14

APPENDIX F
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL BODY WEIGHT GAIN DATA (GRAMS)

DAY	-1-7	7-14	14-21	21-28	28-35	35-42	42-49	49-56	56-63	63-70	70-77	77-84
GROUP 6: 10.0 MG/KG/DAY												
11874 M	62	48	44	36	28	29	18	23	17	12	14	9
11875 M	45	49	50	37	27	23	16	28	23	19	12	3
MEAN	57	46	40	39	28	25	19	20	15	16	11	8
S.D.	7.2	5.6	8.7	8.7	6.4	5.0	4.9	6.8	4.4	5.8	4.4	5.3
N	30	30	20	20	20	20	20	20	20	20	20	20

DAY	84-91	91-98	98-105	105-112	112-119
GROUP 6: 10.0 MG/KG/DAY					
11846 M	SCHEDULED EUTHANASIA				
11847 M	SCHEDULED EUTHANASIA				
11848 M	SCHEDULED EUTHANASIA				
11849 M	0	10	2	6	9
11850 M	15	-6	12	10	1
11851 M	12	SCHEDULED EUTHANASIA			
11852 M	7	SCHEDULED EUTHANASIA			
11853 M	SCHEDULED EUTHANASIA				
11854 M	14	SCHEDULED EUTHANASIA			
11855 M	10	7	6	4	4
11856 M	14	12	-11	6	6
11857 M	SCHEDULED EUTHANASIA				
11858 M	SCHEDULED EUTHANASIA				
11859 M	SCHEDULED EUTHANASIA				
11860 M	8	SCHEDULED EUTHANASIA			
11861 M	SCHEDULED EUTHANASIA				
11862 M	10	SCHEDULED EUTHANASIA			
11863 M	SCHEDULED EUTHANASIA				
11864 M	17	0	7	7	0
11865 M	5	11	8	0	9
11866 M	14	SCHEDULED EUTHANASIA			
11867 M	-68	SCHEDULED EUTHANASIA			
11868 M	10	1	8	8	2
11869 M	0	9	7	1	0
11870 M	SCHEDULED EUTHANASIA				
11871 M	10	SCHEDULED EUTHANASIA			
11872 M	4	SCHEDULED EUTHANASIA			
11873 M	12	SCHEDULED EUTHANASIA			

APPENDIX F
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL BODY WEIGHT GAIN DATA (GRAMS)

DAY	84-91	91-98	98-105	105-112	112-119
GROUP 6: 10.0 MG/KG/DAY					
11874 M	16	12	8	6	10
11875 M	15	16	3	13	10
MEAN	6	7	5	6	5
S.D.	18.2	6.8	6.3	3.9	4.2
N	20	10	10	10	10

APPENDIX F
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL BODY WEIGHT GAIN DATA (GRAMS)

DAY	-1-7	7-14	14-21	21-28	28-35	35-42	42-49	49-56	56-63	63-70	70-77	77-84
GROUP 1: 0 MG/KG/DAY												
11876 F	33	33	22	12	16	17	7	2	7	11	-5	0
11877 F	23	22	SCHEDULED EUTHANASIA									
11878 F	38	23	SCHEDULED EUTHANASIA									
11879 F	34	28	24	22	7	9	6	16	3	10	19	-4
11880 F	56	32	27	12	24	20	5	8	11	18	0	-4
11881 F	27	22	SCHEDULED EUTHANASIA									
11882 F	46	19	SCHEDULED EUTHANASIA									
11883 F	34	18	25	9	13	-7	20	5	3	2	0	12
11884 F	39	21	SCHEDULED EUTHANASIA									
11885 F	35	20	12	14	7	6	9	4	3	-1	13	-2
11886 F	24	26	7	18	6	23	9	8	3	6	6	4
11887 F	33	26	18	9	28	18	1	4	11	12	-9	3
11888 F	38	28	20	6	21	13	7	6	14	9	4	0
11889 F	28	31	SCHEDULED EUTHANASIA									
11890 F	32	18	12	27	8	8	5	16	11	2	-1	10
11891 F	36	29	19	9	21	18	1	6	13	9	-5	-1
11892 F	35	38	12	12	14	16	0	20	7	6	-3	5
11893 F	39	34	SCHEDULED EUTHANASIA									
11894 F	32	25	SCHEDULED EUTHANASIA									
11895 F	39	26	21	18	18	5	7	12	3	2	-1	5
11896 F	37	29	13	21	14	11	-3	17	7	3	-4	7
11897 F	32	21	25	15	8	17	-1	22	3	6	12	15
11898 F	36	28	16	8	15	14	5	1	10	15	-6	2
11899 F	37	19	25	21	9	8	13	10	3	3	11	5
11900 F	30	26	SCHEDULED EUTHANASIA									
11901 F	35	24	9	20	12	5	8	14	9	3	-1	12
11902 F	40	24	26	21	14	24	3	14	6	-8	16	-3
11903 F	39	29	SCHEDULED EUTHANASIA									

APPENDIX F
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL BODY WEIGHT GAIN DATA (GRAMS)

DAY	-1-7	7-14	14-21	21-28	28-35	35-42	42-49	49-56	56-63	63-70	70-77	77-84
GROUP 1: 0 MG/KG/DAY												
11904 F	35	29	15	23	28	3	21	15	10	15	7	4
11905 F	26	30	12	4	25	5	-2	6	7	2	-5	7
MEAN	35	26	18	15	15	12	6	10	7	6	2	4
S.D.	6.4	5.1	6.2	6.5	7.1	7.7	6.4	6.2	3.8	6.2	8.1	5.5
N	30	30	20	20	20	20	20	20	20	20	20	20

APPENDIX F
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL BODY WEIGHT GAIN DATA (GRAMS)

DAY	84-91	91-98	98-105	105-112	112-119
GROUP 1: 0 MG/KG/DAY					
11876 F	10	SCHEDULED EUTHANASIA			
11877 F	SCHEDULED EUTHANASIA				
11878 F	SCHEDULED EUTHANASIA				
11879 F	-6	2	9	-3	4
11880 F	4	8	6	3	8
11881 F	SCHEDULED EUTHANASIA				
11882 F	SCHEDULED EUTHANASIA				
11883 F	4	-3	12	19	-16
11884 F	SCHEDULED EUTHANASIA				
11885 F	2	5	12	19	7
11886 F	0	SCHEDULED EUTHANASIA			
11887 F	7	11	-8	1	4
11888 F	11	7	-5	4	2
11889 F	SCHEDULED EUTHANASIA				
11890 F	8	SCHEDULED EUTHANASIA			
11891 F	7	SCHEDULED EUTHANASIA			
11892 F	-8	SCHEDULED EUTHANASIA			
11893 F	SCHEDULED EUTHANASIA				
11894 F	SCHEDULED EUTHANASIA				
11895 F	3	SCHEDULED EUTHANASIA			
11896 F	6	SCHEDULED EUTHANASIA			
11897 F	-23	11	8	20	-2
11898 F	8	2	9	18	-16
11899 F	0	-1	1	4	-4
11900 F	SCHEDULED EUTHANASIA				
11901 F	3	SCHEDULED EUTHANASIA			
11902 F	13	SCHEDULED EUTHANASIA			
11903 F	SCHEDULED EUTHANASIA				

APPENDIX F
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL BODY WEIGHT GAIN DATA (GRAMS)

DAY	84-91	91-98	98-105	105-112	112-119
GROUP 1: 0 MG/KG/DAY					
11904 F	-1	SCHEDULED EUTHANASIA			
11905 F	9	2	-6	9	2
MEAN	3	4	4	9	-1
S.D.	8.1	4.8	7.7	8.8	8.6
N	20	10	10	10	10

APPENDIX F
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL BODY WEIGHT GAIN DATA (GRAMS)

DAY	-1-7	7-14	14-21	21-28	28-35	35-42	42-49	49-56	56-63	63-70	70-77	77-84
GROUP 2: 0.01 MG/KG/DAY												
11906 F	24	22	SCHEDULED EUTHANASIA									
11907 F	33	24	24	-2	25	15	1	2	15	8	-2	1
11908 F	26	29	SCHEDULED EUTHANASIA									
11909 F	34	26	SCHEDULED EUTHANASIA									
11910 F	32	27	9	22	11	10	12	10	4	10	2	5
11911 F	33	22	SCHEDULED EUTHANASIA									
11912 F	41	34	SCHEDULED EUTHANASIA									
11913 F	26	17	SCHEDULED EUTHANASIA									
11914 F	24	29	22	8	4	24	8	4	-3	23	1	3
11915 F	23	16	23	16	2	2	11	10	-3	2	3	5
11916 F	27	21	22	22	4	10	9	1	9	-7	4	-3
11917 F	31	22	SCHEDULED EUTHANASIA									
11918 F	36	21	11	26	15	2	-2	17	3	11	-9	13
11919 F	25	15	12	20	-6	12	4	-6	3	17	-5	12
11920 F	38	23	28	26	14	19	11	-32	36	9	8	-1
11921 F	34	27	SCHEDULED EUTHANASIA									
11922 F	26	21	13	25	15	12	-3	45	-26	2	-5	12
11923 F	37	26	SCHEDULED EUTHANASIA									
11924 F	30	27	21	13	29	2	22	5	6	6	6	2
11925 F	31	27	SCHEDULED EUTHANASIA									
MEAN	31	24	19	18	11	11	7	6	4	8	0	5
S.D.	5.2	4.7	6.6	9.1	10.7	7.4	7.5	19.2	15.5	8.3	5.4	5.7
N	20	20	10	10	10	10	10	10	10	10	10	10

APPENDIX F
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL BODY WEIGHT GAIN DATA (GRAMS)

DAY	84-91	91-98	98-105	105-112	112-119
GROUP 2: 0.01 MG/KG/DAY					
11906 F	SCHEDULED EUTHANASIA				
11907 F	12	SCHEDULED EUTHANASIA			
11908 F	SCHEDULED EUTHANASIA				
11909 F	SCHEDULED EUTHANASIA				
11910 F	-1	SCHEDULED EUTHANASIA			
11911 F	SCHEDULED EUTHANASIA				
11912 F	SCHEDULED EUTHANASIA				
11913 F	SCHEDULED EUTHANASIA				
11914 F	25	SCHEDULED EUTHANASIA			
11915 F	1	SCHEDULED EUTHANASIA			
11916 F	8	SCHEDULED EUTHANASIA			
11917 F	SCHEDULED EUTHANASIA				
11918 F	-6	SCHEDULED EUTHANASIA			
11919 F	-5	SCHEDULED EUTHANASIA			
11920 F	7	SCHEDULED EUTHANASIA			
11921 F	SCHEDULED EUTHANASIA				
11922 F	1	SCHEDULED EUTHANASIA			
11923 F	SCHEDULED EUTHANASIA				
11924 F	6	SCHEDULED EUTHANASIA			
11925 F	SCHEDULED EUTHANASIA				
MEAN	5				
S.D.	9.1				
N	10				

APPENDIX F
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL BODY WEIGHT GAIN DATA (GRAMS)

DAY	-1-7	7-14	14-21	21-28	28-35	35-42	42-49	49-56	56-63	63-70	70-77	77-84
GROUP 3: 0.05 MG/KG/DAY												
11926 F	42	23	24	19	16	21	2	10	5	16	0	-6
11927 F	28	23	21	0	22	7	4	-7	15	9	-3	12
11928 F	31	22	17	19	16	12	0	9	8	3	0	5
11929 F	18	15	20	13	13	13	10	6	6	9	3	-4
11930 F	34	25	SCHEDULED EUTHANASIA									
11931 F	30	21	SCHEDULED EUTHANASIA									
11932 F	25	18	15	12	6	7	8	-2	0	5	-2	6
11933 F	40	24	25	7	36	32	-1	7	9	14	-7	16
11934 F	35	26	SCHEDULED EUTHANASIA									
11935 F	25	25	13	23	0	20	-2	20	8	3	-1	13
11936 F	21	17	21	4	22	6	21	-4	4	15	6	0
11937 F	22	27	12	5	9	9	11	-4	10	7	17	-1
11938 F	20	27	17	18	10	10	-1	11	7	5	8	2
11939 F	43	19	15	8	20	7	-1	8	2	16	-7	2
11940 F	27	34	9	24	18	6	27	9	6	12	-2	7
11941 F	28	29	SCHEDULED EUTHANASIA									
11942 F	38	35	SCHEDULED EUTHANASIA									
11943 F	25	19	8	17	11	4	5	9	10	-4	2	0
11944 F	38	22	34	30	8	11	15	5	8	3	12	4
11945 F	35	30	SCHEDULED EUTHANASIA									
11946 F	26	22	SCHEDULED EUTHANASIA									
11947 F	14	21	13	10	17	6	3	1	8	14	-2	-7
11948 F	30	22	28	30	12	9	4	14	7	-3	13	8
11949 F	31	24	17	15	17	1	7	6	8	-1	9	12
11950 F	21	20	14	17	4	15	6	4	-1	11	0	11
11951 F	29	25	SCHEDULED EUTHANASIA									
11952 F	39	32	SCHEDULED EUTHANASIA									
11953 F	28	18	SCHEDULED EUTHANASIA									

APPENDIX F
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL BODY WEIGHT GAIN DATA (GRAMS)

DAY	-1-7	7-14	14-21	21-28	28-35	35-42	42-49	49-56	56-63	63-70	70-77	77-84
GROUP 3: 0.05 MG/KG/DAY												
11954 F	30	24	25	14	12	4	15	6	5	0	5	6
11955 F	43	32	7	17	7	9	-3	16	6	0	-11	12
MEAN	30	24	18	15	14	10	7	6	7	7	2	5
S.D.	7.7	5.0	7.0	8.1	7.9	7.1	8.0	6.9	3.6	6.5	7.2	6.6
N	30	30	20	20	20	20	20	20	20	20	20	20

APPENDIX F
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL BODY WEIGHT GAIN DATA (GRAMS)

DAY	84-91	91-98	98-105	105-112	112-119
GROUP 3: 0.05 MG/KG/DAY					
11926 F	11	4	-50	24	-12
11927 F	-3	SCHEDULED EUTHANASIA			
11928 F	2	-2	0	13	-11
11929 F	7	SCHEDULED EUTHANASIA			
11930 F	SCHEDULED EUTHANASIA				
11931 F	SCHEDULED EUTHANASIA				
11932 F	1	6	2	1	0
11933 F	-6	8	0	6	8
11934 F	SCHEDULED EUTHANASIA				
11935 F	-7	SCHEDULED EUTHANASIA			
11936 F	-7	SCHEDULED EUTHANASIA			
11937 F	13	SCHEDULED EUTHANASIA			
11938 F	-2	SCHEDULED EUTHANASIA			
11939 F	4	SCHEDULED EUTHANASIA			
11940 F	8	-12	13	26	-4
11941 F	SCHEDULED EUTHANASIA				
11942 F	SCHEDULED EUTHANASIA				
11943 F	6	-2	1	6	5
11944 F	0	-2	6	3	2
11945 F	SCHEDULED EUTHANASIA				
11946 F	SCHEDULED EUTHANASIA				
11947 F	9	-1	3	-8	19
11948 F	-2	FOUND DEAD			
11949 F	-5	4	15	19	-9
11950 F	-7	SCHEDULED EUTHANASIA			
11951 F	SCHEDULED EUTHANASIA				
11952 F	SCHEDULED EUTHANASIA				
11953 F	SCHEDULED EUTHANASIA				

(300)

APPENDIX F
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL BODY WEIGHT GAIN DATA (GRAMS)

DAY	84-91	91-98	98-105	105-112	112-119
GROUP 3: 0.05 MG/KG/DAY					
11954 F	20	SCHEDULED EUTHANASIA			
11955 F	7	SCHEDULED EUTHANASIA			
MEAN	2	0	-1	10	0
S.D.	7.6	6.0	19.1	11.3	10.1
N	20	9	9	9	9

APPENDIX F
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL BODY WEIGHT GAIN DATA (GRAMS)

DAY	-1-7	7-14	14-21	21-28	28-35	35-42	42-49	49-56	56-63	63-70	70-77	77-84
GROUP 4: 0.2 MG/KG/DAY												
11956 F	42	26	33	7	22	13	3	11	7	2	0	3
11957 F	38	28	22	23	17	3	12	14	7	-3	7	12
11958 F	23	15	17	13	13	9	4	5	5	-1	2	6
11959 F	23	19	SCHEDULED EUTHANASIA									
11960 F	34	23	SCHEDULED EUTHANASIA									
11961 F	28	14	31	18	-1	17	7	9	10	-1	13	0
11962 F	33	17	SCHEDULED EUTHANASIA									
11963 F	29	22	SCHEDULED EUTHANASIA									
11964 F	18	20	SCHEDULED EUTHANASIA									
11965 F	36	17	26	-4	29	-1	17	7	10	8	-16	14
11966 F	30	19	7	2	28	6	7	-2	13	6	2	-3
11967 F	32	22	SCHEDULED EUTHANASIA									
11968 F	35	28	SCHEDULED EUTHANASIA									
11969 F	41	-28	70	44	37	13	8	31	11	13	-9	26
11970 F	33	38	SCHEDULED EUTHANASIA									
11971 F	35	19	SCHEDULED EUTHANASIA									
11972 F	24	24	7	16	5	14	-3	17	2	5	9	-7
11973 F	33	31	23	21	8	19	7	10	7	7	3	1
11974 F	35	24	SCHEDULED EUTHANASIA									
11975 F	32	25	11	7	24	-1	20	6	2	10	3	-1
MEAN	32	20	25	15	18	9	8	11	7	5	1	5
S.D.	6.1	12.7	18.4	13.4	12.0	7.2	6.7	8.8	3.7	5.2	8.4	9.8
N	20	20	10	10	10	10	10	10	10	10	10	10

INDIVIDUAL BODY WEIGHT GAIN DATA (GRAMS)

DAY	84-91	91-98	98-105	105-112	112-119
GROUP 4: 0.2 MG/KG/DAY					
11956 F	9	SCHEDULED EUTHANASIA			
11957 F	22	SCHEDULED EUTHANASIA			
11958 F	-3	SCHEDULED EUTHANASIA			
11959 F	SCHEDULED EUTHANASIA				
11960 F	SCHEDULED EUTHANASIA				
11961 F	-5	SCHEDULED EUTHANASIA			
11962 F	SCHEDULED EUTHANASIA				
11963 F	SCHEDULED EUTHANASIA				
11964 F	SCHEDULED EUTHANASIA				
11965 F	-1	SCHEDULED EUTHANASIA			
11966 F	6	SCHEDULED EUTHANASIA			
11967 F	SCHEDULED EUTHANASIA				
11968 F	SCHEDULED EUTHANASIA				
11969 F	44	SCHEDULED EUTHANASIA			
11970 F	SCHEDULED EUTHANASIA				
11971 F	SCHEDULED EUTHANASIA				
11972 F	8	SCHEDULED EUTHANASIA			
11973 F	4	SCHEDULED EUTHANASIA			
11974 F	SCHEDULED EUTHANASIA				
11975 F	6	SCHEDULED EUTHANASIA			
MEAN	9				
S.D.	14.4				
N	10				

APPENDIX F
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL BODY WEIGHT GAIN DATA (GRAMS)

DAY	-1-7	7-14	14-21	21-28	28-35	35-42	42-49	49-56	56-63	63-70	70-77	77-84
GROUP 5: 1.0 MG/KG/DAY												
11976 F	28	22	33	23	18	11	12	14	2	4	7	1
11977 F	27	30	SCHEDULED EUTHANASIA									
11978 F	39	22	22	16	13	-6	18	13	2	-4	6	6
11979 F	31	17	20	17	17	8	2	15	9	5	6	-6
11980 F	36	30	19	13	27	17	2	14	12	2	1	11
11981 F	30	13	26	16	5	1	10	9	1	2	11	3
11982 F	35	22	SCHEDULED EUTHANASIA									
11983 F	-4	42	25	17	13	11	1	10	5	7	0	7
11984 F	40	25	SCHEDULED EUTHANASIA									
11985 F	35	17	10	-2	24	15	4	3	18	15	0	0
11986 F	40	30	24	11	25	18	5	4	16	16	-3	0
11987 F	24	24	11	15	10	6	-1	12	14	6	-7	7
11988 F	12	30	19	8	20	12	4	1	14	7	-1	-5
11989 F	26	18	SCHEDULED EUTHANASIA									
11990 F	36	24	7	16	28	4	7	16	10	-4	-10	43
11991 F	30	20	SCHEDULED EUTHANASIA									
11992 F	35	28	SCHEDULED EUTHANASIA									
11993 F	38	25	18	20	19	12	7	1	15	3	4	-4
11994 F	30	27	SCHEDULED EUTHANASIA									
11995 F	31	27	23	13	18	6	0	13	10	6	3	7
11996 F	36	25	22	23	14	3	6	14	6	4	-3	9
11997 F	29	23	18	8	20	5	7	4	5	5	2	-4
11998 F	26	25	29	15	8	19	5	2	3	15	6	-1
11999 F	35	17	27	15	8	0	19	10	-1	13	8	-7
12000 F	33	21	13	25	12	7	2	2	9	5	-5	7
12001 F	33	32	SCHEDULED EUTHANASIA									
12002 F	30	21	24	20	7	16	4	11	11	3	0	12
12003 F	28	14	SCHEDULED EUTHANASIA									

APPENDIX F
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL BODY WEIGHT GAIN DATA (GRAMS)

DAY	-1-7	7-14	14-21	21-28	28-35	35-42	42-49	49-56	56-63	63-70	70-77	77-84
GROUP 5: 1.0 MG/KG/DAY												
12004 F	32	23	18	22	13	15	5	13	12	4	7	8
12005 F	26	15	SCHEDULED EUTHANASIA									
MEAN	30	24	20	16	16	9	6	9	9	6	2	5
S.D.	8.6	6.2	6.6	6.3	6.8	6.7	5.3	5.3	5.5	5.5	5.4	10.8
N	30	30	20	20	20	20	20	20	20	20	20	20

APPENDIX F
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL BODY WEIGHT GAIN DATA (GRAMS)

DAY	84-91	91-98	98-105	105-112	112-119
GROUP 5: 1.0 MG/KG/DAY					
11976 F	26	SCHEDULED EUTHANASIA			
11977 F	SCHEDULED EUTHANASIA				
11978 F	5	6	1	3	-1
11979 F	2	2	-7	11	0
11980 F	9	-4	13	16	-13
11981 F	-5	1	12	25	-8
11982 F	SCHEDULED EUTHANASIA				
11983 F	4	SCHEDULED EUTHANASIA			
11984 F	SCHEDULED EUTHANASIA				
11985 F	1	7	15	17	-12
11986 F	7	10	-5	-3	13
11987 F	0	5	-6	6	5
11988 F	12	SCHEDULED EUTHANASIA			
11989 F	SCHEDULED EUTHANASIA				
11990 F	-23	SCHEDULED EUTHANASIA			
11991 F	SCHEDULED EUTHANASIA				
11992 F	SCHEDULED EUTHANASIA				
11993 F	10	SCHEDULED EUTHANASIA			
11994 F	SCHEDULED EUTHANASIA				
11995 F	-1	SCHEDULED EUTHANASIA			
11996 F	0	SCHEDULED EUTHANASIA			
11997 F	5	SCHEDULED EUTHANASIA			
11998 F	-6	SCHEDULED EUTHANASIA			
11999 F	-2	11	6	-2	0
12000 F	9	SCHEDULED EUTHANASIA			
12001 F	SCHEDULED EUTHANASIA				
12002 F	5	0	8	32	-7
12003 F	SCHEDULED EUTHANASIA				

APPENDIX F
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL BODY WEIGHT GAIN DATA (GRAMS)

DAY	84-91	91-98	98-105	105-112	112-119
GROUP 5: 1.0 MG/KG/DAY					
12004 F	6	-1	1	14	5
12005 F	SCHEDULED EUTHANASIA				
MEAN	3	4	4	12	-2
S.D.	9.3	4.9	8.2	11.3	8.3
N	20	10	10	10	10

APPENDIX F
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL BODY WEIGHT GAIN DATA (GRAMS)

DAY	-1-7	7-14	14-21	21-28	28-35	35-42	42-49	49-56	56-63	63-70	70-77	77-84
GROUP 6: 10.0 MG/KG/DAY												
12006 F	26	15	13	7	-3	12	6	10	14	-4	17	2
12007 F	26	30	15	23	-3	22	2	10	3	-3	8	7
12008 F	31	17	13	18	15	13	7	9	14	3	7	2
12009 F	39	26	19	27	11	15	2	18	8	6	-4	12
12010 F	39	29	SCHEDULED EUTHANASIA									
12011 F	36	28	22	19	28	18	3	5	15	11	0	2
12012 F	36	24	32	23	16	6	15	6	9	4	9	6
12013 F	38	27	SCHEDULED EUTHANASIA									
12014 F	34	30	16	29	21	8	1	12	10	6	2	13
12015 F	25	23	11	17	12	11	-1	12	9	0	-1	13
12016 F	37	25	SCHEDULED EUTHANASIA									
12017 F	27	21	16	23	16	0	7	10	3	9	-1	11
12018 F	36	24	19	21	15	7	0	10	7	9	-10	7
12019 F	33	28	12	15	14	8	9	5	9	9	-3	6
12020 F	25	25	21	28	10	12	4	7	-1	12	3	4
12021 F	32	21	SCHEDULED EUTHANASIA									
12022 F	25	23	20	18	15	6	1	11	-3	7	3	9
12023 F	24	21	SCHEDULED EUTHANASIA									
12024 F	37	33	20	36	23	7	8	6	6	8	1	22
12025 F	34	35	19	16	17	12	8	2	10	11	-4	-1
12026 F	30	17	SCHEDULED EUTHANASIA									
12027 F	29	32	21	17	24	4	13	6	4	4	-3	7
12028 F	30	20	SCHEDULED EUTHANASIA									
12029 F	29	26	25	24	5	16	6	6	4	13	4	3
12030 F	38	22	SCHEDULED EUTHANASIA									
12031 F	22	16	SCHEDULED EUTHANASIA									
12032 F	36	23	SCHEDULED EUTHANASIA									
12033 F	27	17	26	24	7	1	13	10	-6	6	15	6

APPENDIX F
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL BODY WEIGHT GAIN DATA (GRAMS)

DAY	-1-7	7-14	14-21	21-28	28-35	35-42	42-49	49-56	56-63	63-70	70-77	77-84
GROUP 6: 10.0 MG/KG/DAY												
12034 F	27	25	18	20	12	3	11	2	6	6	5	-2
12035 F	27	21	16	16	6	3	10	6	7	-1	6	5
MEAN	31	24	19	21	13	9	6	8	6	6	3	7
S.D.	5.2	5.1	5.1	6.2	8.1	5.9	4.7	3.8	5.5	4.9	6.5	5.6
N	30	30	20	20	20	20	20	20	20	20	20	20

APPENDIX F
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL BODY WEIGHT GAIN DATA (GRAMS)

DAY	84-91	91-98	98-105	105-112	112-119
GROUP 6: 10.0 MG/KG/DAY					
12006 F	8	SCHEDULED EUTHANASIA			
12007 F	-4	SCHEDULED EUTHANASIA			
12008 F	4	5	-1	4	7
12009 F	-4	7	-9	10	7
12010 F	SCHEDULED EUTHANASIA				
12011 F	11	SCHEDULED EUTHANASIA			
12012 F	-2	SCHEDULED EUTHANASIA			
12013 F	SCHEDULED EUTHANASIA				
12014 F	1	4	9	22	-10
12015 F	8	0	-3	3	-1
12016 F	SCHEDULED EUTHANASIA				
12017 F	6	-4	-2	5	6
12018 F	2	SCHEDULED EUTHANASIA			
12019 F	-1	SCHEDULED EUTHANASIA			
12020 F	2	-1	12	6	-4
12021 F	SCHEDULED EUTHANASIA				
12022 F	-15	SCHEDULED EUTHANASIA			
12023 F	SCHEDULED EUTHANASIA				
12024 F	-2	3	-2	0	0
12025 F	5	SCHEDULED EUTHANASIA			
12026 F	SCHEDULED EUTHANASIA				
12027 F	2	12	7	14	-20
12028 F	SCHEDULED EUTHANASIA				
12029 F	23	SCHEDULED EUTHANASIA			
12030 F	SCHEDULED EUTHANASIA				
12031 F	SCHEDULED EUTHANASIA				
12032 F	SCHEDULED EUTHANASIA				
12033 F	25	SCHEDULED EUTHANASIA			

APPENDIX F
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL BODY WEIGHT GAIN DATA (GRAMS)

DAY	84-91	91-98	98-105	105-112	112-119
GROUP 6: 10.0 MG/KG/DAY					
12034 F	3	6	11	8	-8
12035 F	-1	-4	9	4	2
MEAN	4	3	3	8	-2
S.D.	8.9	5.1	7.3	6.4	8.7
N	20	10	10	10	10

APPENDIX G

Individual Food Consumption Data
(grams/animal/day)

APPENDIX G
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL FOOD CONSUMPTION DATA (GRAMS/ANIMAL/DAY)

DAY	1-8	8-15	15-22	22-29	29-36	36-43	43-50	50-57	57-64	64-71	71-78	78-85
GROUP 1: 0 MG/KG/DAY												
11716 M	24	27	SCHEDULED EUTHANASIA									
11717 M	25	28	SCHEDULED EUTHANASIA									
11718 M	23	24	SCHEDULED EUTHANASIA									
11719 M	24	27	27	26	27	27	26	27	27	26	26	25
11720 M	24	26	SCHEDULED EUTHANASIA									
11721 M	27	31	30	29	28	31	29	30	30	30	29	28
11722 M	26	29	29	29	30	31	31	29	30	29	29	27
11723 M	26	27	29	27	28	29	28	28	28	27	27	a
11724 M	27	27	28	28	29	29	28	30	30	30	30	29
11725 M	25	26	SCHEDULED EUTHANASIA									
11726 M	26	30	30	29	28	27	28	28	27	26	26	26
11727 M	29	32	33	21	35	35	34	33	32	33	33	32
11728 M	31	31	SCHEDULED EUTHANASIA									
11729 M	28	28	26	27	29	28	28	28	28	28	27	20
11730 M	27	28	27	28	28	26	27	28	28	27	27	27
11731 M	26	28	SCHEDULED EUTHANASIA									
11732 M	29	30	31	29	32	30	30	28	28	27	27	26
11733 M	27	29	29	29	30	30	30	30	30	29	30	30
11734 M	27	29	30	28	28	30	30	30	31	29	30	29
11735 M	30	31	29	30	32	31	32	31	30	29	30	29
11736 M	25	29	29	27	27	29	30	29	30	30	31	31
11737 M	25	29	28	28	29	30	29	29	29	28	28	27
11738 M	28	29	28	26	28	29	28	28	30	29	29	28
11739 M	28	31	SCHEDULED EUTHANASIA									
11740 M	27	28	28	26	28	27	27	26	27	26	25	24
11741 M	24	28	27	27	28	27	27	27	29	26	28	27
11742 M	24	26	26	27	28	28	27	28	28	28	28	27
11743 M	27	28	27	26	27	28	28	27	28	27	28	28

[a]ELIMINATED DUE TO SPILLED WET FEED.

APPENDIX G
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL FOOD CONSUMPTION DATA (GRAMS/ANIMAL/DAY)

DAY	1-8	8-15	15-22	22-29	29-36	36-43	43-50	50-57	57-64	64-71	71-78	78-85
GROUP 1: 0 MG/KG/DAY												
11744 M	27	29	SCHEDULED EUTHANASIA									
11745 M	28	30	SCHEDULED EUTHANASIA									
MEAN	26	28	29	27	29	29	29	29	29	28	28	27
S.D.	1.9	1.7	1.8	2.0	2.0	2.0	1.9	1.6	1.4	1.8	1.9	2.6
N	30	30	20	20	20	20	20	20	20	20	20	19

INDIVIDUAL FOOD CONSUMPTION DATA (GRAMS/ANIMAL/DAY)

DAY	85-91	91-98	98-105	105-112	112-119
GROUP 1: 0 MG/KG/DAY					
11716 M	SCHEDULED EUTHANASIA				
11717 M	SCHEDULED EUTHANASIA				
11718 M	SCHEDULED EUTHANASIA				
11719 M	26	25	28	25	26
11720 M	SCHEDULED EUTHANASIA				
11721 M	28	SCHEDULED EUTHANASIA			
11722 M	27	27	28	28	28
11723 M	27	26	27	29	25
11724 M	29	SCHEDULED EUTHANASIA			
11725 M	SCHEDULED EUTHANASIA				
11726 M	26	27	26	27	31
11727 M	31	31	34	33	33
11728 M	SCHEDULED EUTHANASIA				
11729 M	29	SCHEDULED EUTHANASIA			
11730 M	27	27	28	27	27
11731 M	SCHEDULED EUTHANASIA				
11732 M	26	SCHEDULED EUTHANASIA			
11733 M	29	30	31	31	31
11734 M	29	SCHEDULED EUTHANASIA			
11735 M	29	SCHEDULED EUTHANASIA			
11736 M	31	SCHEDULED EUTHANASIA			
11737 M	19	28	26	25	25
11738 M	28	SCHEDULED EUTHANASIA			
11739 M	SCHEDULED EUTHANASIA				
11740 M	24	26	26	26	25
11741 M	28	SCHEDULED EUTHANASIA			
11742 M	26	SCHEDULED EUTHANASIA			
11743 M	28	27	26	26	26

APPENDIX G
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL FOOD CONSUMPTION DATA (GRAMS/ANIMAL/DAY)

DAY	85-91	91-98	98-105	105-112	112-119
GROUP 1: 0 MG/KG/DAY					
11744 M	SCHEDULED EUTHANASIA				
11745 M	SCHEDULED EUTHANASIA				
MEAN	27	27	28	28	28
S.D.	2.7	1.9	2.6	2.6	3.0
N	20	10	10	10	10

APPENDIX G
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL FOOD CONSUMPTION DATA (GRAMS/ANIMAL/DAY)

DAY	1-8	8-15	15-22	22-29	29-36	36-43	43-50	50-57	57-64	64-71	71-78	78-85
GROUP 2: 0.01 MG/KG/DAY												
11746 M	22	24	24	24	25	25	27	26	27	26	28	26
11747 M	22	24	SCHEDULED EUTHANASIA									
11748 M	24	25	25	26	24	25	24	25	25	23	24	23
11749 M	25	27	27	27	28	28	29	29	28	27	28	28
11750 M	24	25	23	25	26	26	26	27	25	25	25	24
11751 M	25	24	SCHEDULED EUTHANASIA									
11752 M	25	26	25	27	27	28	28	29	29	29	29	28
11753 M	25	27	27	28	27	27	26	27	27	27	27	26
11754 M	24	26	26	25	25	25	25	26	25	25	25	24
11755 M	26	29	30	29	31	32	31	31	31	32	31	29
11756 M	25	25	SCHEDULED EUTHANASIA									
11757 M	27	29	SCHEDULED EUTHANASIA									
11758 M	25	28	SCHEDULED EUTHANASIA									
11759 M	25	27	SCHEDULED EUTHANASIA									
11760 M	26	29	SCHEDULED EUTHANASIA									
11761 M	25	26	28	29	30	28	28	28	28	27	28	26
11762 M	26	14	SCHEDULED EUTHANASIA									
11763 M	24	28	SCHEDULED EUTHANASIA									
11764 M	27	27	SCHEDULED EUTHANASIA									
11765 M	28	29	29	30	31	31	31	32	32	31	31	30
MEAN	25	26	26	27	28	27	27	28	28	27	28	26
S.D.	1.5	3.2	2.3	1.8	2.4	2.5	2.3	2.3	2.5	2.9	2.6	2.2
N	20	20	10	10	10	10	10	10	10	10	10	10

DAY	85-91	91-98	98-105	105-112	112-119
GROUP 2: 0.01 MG/KG/DAY					
11746 M	26	SCHEDULED EUTHANASIA			
11747 M	SCHEDULED EUTHANASIA				
11748 M	23	SCHEDULED EUTHANASIA			
11749 M	27	SCHEDULED EUTHANASIA			
11750 M	24	SCHEDULED EUTHANASIA			
11751 M	SCHEDULED EUTHANASIA				
11752 M	29	SCHEDULED EUTHANASIA			
11753 M	26	SCHEDULED EUTHANASIA			
11754 M	25	SCHEDULED EUTHANASIA			
11755 M	28	SCHEDULED EUTHANASIA			
11756 M	SCHEDULED EUTHANASIA				
11757 M	SCHEDULED EUTHANASIA				
11758 M	SCHEDULED EUTHANASIA				
11759 M	SCHEDULED EUTHANASIA				
11760 M	SCHEDULED EUTHANASIA				
11761 M	26	SCHEDULED EUTHANASIA			
11762 M	SCHEDULED EUTHANASIA				
11763 M	SCHEDULED EUTHANASIA				
11764 M	SCHEDULED EUTHANASIA				
11765 M	29	SCHEDULED EUTHANASIA			
MEAN	26				
S.D.	2.2				
N	10				

APPENDIX G
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL FOOD CONSUMPTION DATA (GRAMS/ANIMAL/DAY)

DAY	1-8	8-15	15-22	22-29	29-36	36-43	43-50	50-57	57-64	64-71	71-78	78-85
GROUP 3: 0.05 MG/KG/DAY												
11766 M	23	25	SCHEDULED EUTHANASIA									
11767 M	24	26	27	27	29	28	30	27	28	28	28	28
11768 M	22	24	SCHEDULED EUTHANASIA									
11769 M	23	25	25	25	24	25	24	24	24	24	24	24
11770 M	26	28	28	26	27	28	27	27	28	26	27	26
11771 M	23	23	SCHEDULED EUTHANASIA									
11772 M	23	24	SCHEDULED EUTHANASIA									
11773 M	23	24	23	23	23	23	22	22	23	22	23	22
11774 M	24	26	28	27	28	28	27	28	28	26	26	25
11775 M	26	27	27	27	26	27	27	26	27	27	26	26
11776 M	24	24	24	23	22	23	23	22	23	22	22	22
11777 M	26	27	27	27	28	28	27	28	28	28	29	27
11778 M	25	28	SCHEDULED EUTHANASIA									
11779 M	26	25	SCHEDULED EUTHANASIA									
11780 M	28	31	32	33	32	26	26	29	28	29	29	28
11781 M	26	26	27	28	28	29	28	27	28	27	28	26
11782 M	25	25	26	26	25	27	27	27	27	27	30	28
11783 M	27	29	30	30	30	32	32	31	31	31	31	29
11784 M	28	29	SCHEDULED EUTHANASIA									
11785 M	26	28	27	29	30	30	29	30	31	24	27	27
11786 M	21	22	SCHEDULED EUTHANASIA									
11787 M	24	28	30	32	26	31	30	32	29	29	29	29
11788 M	24	25	25	26	26	27	26	27	27	26	27	26
11789 M	14	28	SCHEDULED EUTHANASIA									
11790 M	27	29	28	26	27	28	27	27	28	28	28	26
11791 M	25	27	27	28	28	30	29	28	28	28	29	28
11792 M	25	25	25	27	27	26	27	25	30	27	27	26
11793 M	27	30	SCHEDULED EUTHANASIA									

APPENDIX G
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL FOOD CONSUMPTION DATA (GRAMS/ANIMAL/DAY)

DAY	1-8	8-15	15-22	22-29	29-36	36-43	43-50	50-57	57-64	64-71	71-78	78-85
GROUP 3: 0.05 MG/KG/DAY												
11794 M	24	26	26	27	27	27	27	26	25	26	25	25
11795 M	26	30	31	32	32	32	33	33	32	31	32	31
MEAN	25	26	27	27	27	28	27	27	28	27	27	26
S.D.	2.6	2.2	2.3	2.7	2.6	2.5	2.6	2.8	2.5	2.4	2.5	2.4
N	30	30	20	20	20	20	20	20	20	20	20	20

APPENDIX G
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL FOOD CONSUMPTION DATA (GRAMS/ANIMAL/DAY)

DAY	85-91	91-98	98-105	105-112	112-119
GROUP 3: 0.05 MG/KG/DAY					
11766 M	SCHEDULED EUTHANASIA				
11767 M	29	29	28	26	25
11768 M	SCHEDULED EUTHANASIA				
11769 M	24	SCHEDULED EUTHANASIA			
11770 M	25	26	26	26	25
11771 M	SCHEDULED EUTHANASIA				
11772 M	SCHEDULED EUTHANASIA				
11773 M	22	24	22	23	22
11774 M	25	SCHEDULED EUTHANASIA			
11775 M	26	25	26	26	25
11776 M	22	SCHEDULED EUTHANASIA			
11777 M	29	SCHEDULED EUTHANASIA			
11778 M	SCHEDULED EUTHANASIA				
11779 M	SCHEDULED EUTHANASIA				
11780 M	29	SCHEDULED EUTHANASIA			
11781 M	28	28	27	26	26
11782 M	26	27	27	27	26
11783 M	30	30	30	30	30
11784 M	SCHEDULED EUTHANASIA				
11785 M	26	28	28	29	29
11786 M	SCHEDULED EUTHANASIA				
11787 M	29	SCHEDULED EUTHANASIA			
11788 M	24	25	25	25	24
11789 M	SCHEDULED EUTHANASIA				
11790 M	26	SCHEDULED EUTHANASIA			
11791 M	29	SCHEDULED EUTHANASIA			
11792 M	27	SCHEDULED EUTHANASIA			
11793 M	SCHEDULED EUTHANASIA				

APPENDIX G
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL FOOD CONSUMPTION DATA (GRAMS/ANIMAL/DAY)

DAY	85-91	91-98	98-105	105-112	112-119
GROUP 3: 0.05 MG/KG/DAY					
11794 M	25	SCHEDULED EUTHANASIA			
11795 M	32	31	30	30	30
MEAN	27	27	27	27	26
S.D.	2.6	2.4	2.3	2.2	2.5
N	20	10	10	10	10

APPENDIX G
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL FOOD CONSUMPTION DATA (GRAMS/ANIMAL/DAY)

DAY	1-8	8-15	15-22	22-29	29-36	36-43	43-50	50-57	57-64	64-71	71-78	78-85
GROUP 4: 0.2 MG/KG/DAY												
11796 M	24	27	SCHEDULED EUTHANASIA									
11797 M	23	25	26	27	27	27	28	28	28	28	27	26
11798 M	24	26	SCHEDULED EUTHANASIA									
11799 M	26	29	29	28	29	29	29	29	31	30	29	28
11800 M	24	26	26	27	29	29	29	29	30	29	24	27
11801 M	24	26	SCHEDULED EUTHANASIA									
11802 M	26	30	SCHEDULED EUTHANASIA									
11803 M	25	26	SCHEDULED EUTHANASIA									
11804 M	26	27	SCHEDULED EUTHANASIA									
11805 M	25	27	27	27	27	27	27	27	27	28	27	26
11806 M	25	26	26	28	29	28	28	29	28	28	29	27
11807 M	25	27	SCHEDULED EUTHANASIA									
11808 M	25	29	SCHEDULED EUTHANASIA									
11809 M	27	30	32	32	32	32	32	32	31	30	29	28
11810 M	26	29	SCHEDULED EUTHANASIA									
11811 M	24	27	29	28	27	29	31	30	32	32	31	30
11812 M	28	28	27	26	27	25	26	25	27	26	25	24
11813 M	27	29	SCHEDULED EUTHANASIA									
11814 M	27	31	32	32	32	31	31	31	31	31	31	30
11815 M	27	30	29	29	31	30	31	31	29	29	29	33
MEAN	25	28	28	28	29	29	29	29	29	29	28	28
S.D.	1.5	1.7	2.3	2.1	2.0	2.0	1.9	1.9	1.9	1.8	2.5	2.5
N	20	20	10	10	10	10	10	10	10	10	10	10

APPENDIX G
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL FOOD CONSUMPTION DATA (GRAMS/ANIMAL/DAY)

DAY	85-91	91-98	98-105	105-112	112-119
GROUP 4: 0.2 MG/KG/DAY					
11796 M	SCHEDULED EUTHANASIA				
11797 M	30	SCHEDULED EUTHANASIA			
11798 M	SCHEDULED EUTHANASIA				
11799 M	29	SCHEDULED EUTHANASIA			
11800 M	29	SCHEDULED EUTHANASIA			
11801 M	SCHEDULED EUTHANASIA				
11802 M	SCHEDULED EUTHANASIA				
11803 M	SCHEDULED EUTHANASIA				
11804 M	SCHEDULED EUTHANASIA				
11805 M	27	SCHEDULED EUTHANASIA			
11806 M	27	SCHEDULED EUTHANASIA			
11807 M	SCHEDULED EUTHANASIA				
11808 M	SCHEDULED EUTHANASIA				
11809 M	27	SCHEDULED EUTHANASIA			
11810 M	SCHEDULED EUTHANASIA				
11811 M	29	SCHEDULED EUTHANASIA			
11812 M	25	SCHEDULED EUTHANASIA			
11813 M	SCHEDULED EUTHANASIA				
11814 M	31	SCHEDULED EUTHANASIA			
11815 M	28	SCHEDULED EUTHANASIA			
MEAN	28				
S.D.	1.7				
N	10				

APPENDIX G
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL FOOD CONSUMPTION DATA (GRAMS/ANIMAL/DAY)

DAY	1-8	8-15	15-22	22-29	29-36	36-43	43-50	50-57	57-64	64-71	71-78	78-85
GROUP 5: 1.0 MG/KG/DAY												
11816 M	22	23	SCHEDULED EUTHANASIA									
11817 M	23	23	24	25	25	26	26	27	27	25	26	24
11818 M	24	26	SCHEDULED EUTHANASIA									
11819 M	24	25	SCHEDULED EUTHANASIA									
11820 M	26	28	SCHEDULED EUTHANASIA									
11821 M	21	25	24	24	24	23	23	23	23	22	21	21
11822 M	25	27	27	27	28	28	27	28	28	27	27	28
11823 M	23	25	24	25	26	25	27	27	28	28	27	26
11824 M	25	26	27	28	29	29	29	29	28	27	27	26
11825 M	24	26	SCHEDULED EUTHANASIA									
11826 M	24	26	27	29	29	29	29	29	29	28	28	27
11827 M	26	31	32	33	33	33	32	32	32	31	31	30
11828 M	24	26	27	29	29	28	29	29	29	29	29	27
11829 M	27	29	30	31	33	31	32	32	32	31	33	31
11830 M	23	25	26	27	a	29	28	26	27	25	24	26
11831 M	26	28	SCHEDULED EUTHANASIA									
11832 M	27	27	28	29	30	29	30	30	30	29	29	29
11833 M	27	29	30	29	32	31	32	30	31	33	30	29
11834 M	29	31	18	35	33	31	32	31	32	32	32	29
11835 M	30	31	SCHEDULED EUTHANASIA									
11836 M	23	23	SCHEDULED EUTHANASIA									
11837 M	25	27	27	27	28	27	26	26	25	25	25	24
11838 M	23	22	22	23	24	24	25	26	26	25	26	26
11839 M	23	24	SCHEDULED EUTHANASIA									
11840 M	26	29	30	27	27	27	27	27	29	28	28	25
11841 M	24	27	27	25	26	26	27	26	26	26	27	26
11842 M	27	28	28	29	29	30	30	29	28	29	22	28
11843 M	25	26	27	27	26	26	26	27	28	27	27	25

[a]ELIMINATED DUE TO SPILLED FEED.

APPENDIX G
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL FOOD CONSUMPTION DATA (GRAMS/ANIMAL/DAY)

DAY	1-8	8-15	15-22	22-29	29-36	36-43	43-50	50-57	57-64	64-71	71-78	78-85
GROUP 5: 1.0 MG/KG/DAY												
11844 M	27	28	SCHEDULED EUTHANASIA									
11845 M	25	27	28	30	30	29	30	29	29	30	29	25
MEAN	25	27	26	28	28	28	28	28	28	28	27	27
S.D.	2.1	2.4	3.2	3.0	2.9	2.5	2.7	2.4	2.4	2.8	3.0	2.3
N	30	30	20	20	19	20	20	20	20	20	20	20

APPENDIX G
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL FOOD CONSUMPTION DATA (GRAMS/ANIMAL/DAY)

DAY	85-91	91-98	98-105	105-112	112-119
GROUP 5: 1.0 MG/KG/DAY					
11816 M	SCHEDULED EUTHANASIA				
11817 M	25	SCHEDULED EUTHANASIA			
11818 M	SCHEDULED EUTHANASIA				
11819 M	SCHEDULED EUTHANASIA				
11820 M	SCHEDULED EUTHANASIA				
11821 M	22	23	22	22	22
11822 M	30	SCHEDULED EUTHANASIA			
11823 M	27	26	26	27	27
11824 M	25	SCHEDULED EUTHANASIA			
11825 M	SCHEDULED EUTHANASIA				
11826 M	28	25	27	27	29
11827 M	30	SCHEDULED EUTHANASIA			
11828 M	29	28	29	29	28
11829 M	33	32	33	33	31
11830 M	26	SCHEDULED EUTHANASIA			
11831 M	SCHEDULED EUTHANASIA				
11832 M	29	SCHEDULED EUTHANASIA			
11833 M	28	29	30	29	28
11834 M	31	31	28	28	28
11835 M	SCHEDULED EUTHANASIA				
11836 M	SCHEDULED EUTHANASIA				
11837 M	24	25	26	25	25
11838 M	27	25	25	26	25
11839 M	SCHEDULED EUTHANASIA				
11840 M	28	SCHEDULED EUTHANASIA			
11841 M	27	SCHEDULED EUTHANASIA			
11842 M	28	SCHEDULED EUTHANASIA			
11843 M	26	26	26	26	26

INDIVIDUAL FOOD CONSUMPTION DATA (GRAMS/ANIMAL/DAY)

DAY	85-91	91-98	98-105	105-112	112-119
GROUP 5: 1.0 MG/KG/DAY					
11844 M	SCHEDULED EUTHANASIA				
11845 M	21	SCHEDULED EUTHANASIA			
MEAN	27	27	27	27	27
S.D.	2.9	2.9	3.0	3.1	2.5
N	20	10	10	10	10

APPENDIX G
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL FOOD CONSUMPTION DATA (GRAMS/ANIMAL/DAY)

DAY	1-8	8-15	15-22	22-29	29-36	36-43	43-50	50-57	57-64	64-71	71-78	78-85
GROUP 6: 10.0 MG/KG/DAY												
11846 M	22	24	SCHEDULED EUTHANASIA									
11847 M	25	28	SCHEDULED EUTHANASIA									
11848 M	25	26	SCHEDULED EUTHANASIA									
11849 M	26	28	28	30	31	32	33	32	32	33	34	30
11850 M	25	27	28	28	29	29	30	30	30	30	29	26
11851 M	26	26	26	31	28	29	29	28	30	28	29	27
11852 M	22	23	23	25	26	26	25	26	26	25	25	25
11853 M	27	29	SCHEDULED EUTHANASIA									
11854 M	25	27	27	29	28	28	29	29	30	29	29	29
11855 M	24	26	27	26	26	26	26	26	26	26	25	23
11856 M	23	23	24	23	25	24	24	26	27	25	26	24
11857 M	24	24	SCHEDULED EUTHANASIA									
11858 M	26	27	SCHEDULED EUTHANASIA									
11859 M	26	28	SCHEDULED EUTHANASIA									
11860 M	26	28	31	32	32	30	31	30	30	29	29	29
11861 M	26	26	SCHEDULED EUTHANASIA									
11862 M	27	27	28	29	29	30	29	29	32	30	30	30
11863 M	23	23	SCHEDULED EUTHANASIA									
11864 M	27	28	27	31	30	32	30	28	28	28	29	28
11865 M	28	29	28	28	30	29	30	29	30	29	30	29
11866 M	22	24	22	25	24	25	26	25	24	23	25	24
11867 M	22	23	23	24	23	25	25	25	26	26	25	25
11868 M	22	22	23	23	23	25	24	25	25	25	24	24
11869 M	25	26	25	25	26	26	27	27	27	25	26	27
11870 M	25	25	SCHEDULED EUTHANASIA									
11871 M	24	26	24	27	27	27	27	26	26	26	26	26
11872 M	22	26	27	27	27	28	29	27	29	29	28	27
11873 M	30	30	31	32	31	33	32	32	31	30	31	30

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APPENDIX G
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL FOOD CONSUMPTION DATA (GRAMS/ANIMAL/DAY)

DAY	1-8	8-15	15-22	22-29	29-36	36-43	43-50	50-57	57-64	64-71	71-78	78-85
GROUP 6: 10.0 MG/KG/DAY												
11874 M	26	27	28	28	a	28	28	29	30	28	28	29
11875 M	24	27	27	27	28	27	28	28	29	29	28	27
MEAN	25	26	26	28	28	28	28	28	28	28	28	27
S.D.	2.0	2.2	2.5	2.9	2.7	2.6	2.6	2.2	2.5	2.4	2.4	2.3
N	30	30	20	20	19	20	20	20	20	20	20	20

[a]ELIMINATED DUE TO SPILLED FEED.

APPENDIX G
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL FOOD CONSUMPTION DATA (GRAMS/ANIMAL/DAY)

DAY	85-91	91-98	98-105	105-112	112-119
GROUP 6: 10.0 MG/KG/DAY					
11846 M	SCHEDULED EUTHANASIA				
11847 M	SCHEDULED EUTHANASIA				
11848 M	SCHEDULED EUTHANASIA				
11849 M	29	34	34	33	33
11850 M	28	25	27	27	27
11851 M	28	SCHEDULED EUTHANASIA			
11852 M	24	SCHEDULED EUTHANASIA			
11853 M	SCHEDULED EUTHANASIA				
11854 M	29	SCHEDULED EUTHANASIA			
11855 M	25	25	25	25	26
11856 M	27	27	24	26	26
11857 M	SCHEDULED EUTHANASIA				
11858 M	SCHEDULED EUTHANASIA				
11859 M	SCHEDULED EUTHANASIA				
11860 M	30	SCHEDULED EUTHANASIA			
11861 M	SCHEDULED EUTHANASIA				
11862 M	29	SCHEDULED EUTHANASIA			
11863 M	SCHEDULED EUTHANASIA				
11864 M	29	28	27	26	28
11865 M	28	29	29	28	29
11866 M	25	SCHEDULED EUTHANASIA			
11867 M	11	SCHEDULED EUTHANASIA			
11868 M	26	24	26	25	25
11869 M	28	26	27	25	25
11870 M	SCHEDULED EUTHANASIA				
11871 M	26	SCHEDULED EUTHANASIA			
11872 M	29	SCHEDULED EUTHANASIA			
11873 M	30	SCHEDULED EUTHANASIA			

APPENDIX G
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL FOOD CONSUMPTION DATA (GRAMS/ANIMAL/DAY)

DAY	85-91	91-98	98-105	105-112	112-119
GROUP 6: 10.0 MG/KG/DAY					
11874 M	29	29	28	28	29
11875 M	29	29	29	28	28
MEAN	27	28	28	27	27
S.D.	4.2	2.9	2.8	2.4	2.4
N	20	10	10	10	10

APPENDIX G
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL FOOD CONSUMPTION DATA (GRAMS/ANIMAL/DAY)

DAY	1-8	8-15	15-22	22-29	29-36	36-43	43-50	50-57	57-64	64-7	71-78	78-85
GROUP 1: 0 MG/KG/DAY												
11876 F	19	22	20	19	21	22	19	19	19	19	18	18
11877 F	19	19	SCHEDULED EUTHANASIA									
11878 F	19	20	SCHEDULED EUTHANASIA									
11879 F	21	21	21	20	a	19	19	20	19	19	21	17
11880 F	24	25	24	23	26	25	25	25	24	24	22	21
11881 F	19	19	SCHEDULED EUTHANASIA									
11882 F	23	20	SCHEDULED EUTHANASIA									
11883 F	20	20	19	19	19	18	18	19	18	18	18	19
11884 F	19	21	SCHEDULED EUTHANASIA									
11885 F	21	20	b	19	18	18	22	18	18	17	17	19
11886 F	17	20	19	20	18	21	20	20	19	19	19	19
11887 F	19	21	20	21	21	25	20	20	20	21	18	19
11888 F	20	22	21	20	20	21	21	19	21	21	19	19
11889 F	20	22	SCHEDULED EUTHANASIA									
11890 F	19	19	19	21	21	20	20	21	21	20	20	20
11891 F	20	23	24	22	23	25	22	22	26	21	19	20
11892 F	19	21	21	20	21	21	20	21	21	20	18	18
11893 F	23	25	SCHEDULED EUTHANASIA									
11894 F	20	21	SCHEDULED EUTHANASIA									
11895 F	22	24	25	23	23	25	25	22	24	20	21	20
11896 F	20	20	20	19	21	20	19	19	19	18	17	17
11897 F	19	19	21	22	23	21	21	22	21	20	22	22
11898 F	21	21	21	21	21	21	19	20	20	21	18	19
11899 F	20	19	19	20	19	19	20	19	19	19	19	20
11900 F	18	18	SCHEDULED EUTHANASIA									
11901 F	18	24	b	28	19	19	19	19	20	18	18	17
11902 F	23	24	26	26	25	26	22	24	22	20	20	20
11903 F	22	23	SCHEDULED EUTHANASIA									

[a]ELIMINATED DUE TO SPILLED FEED.
[b]ELIMINATED DUE TO SPILLED WET FEED.

APPENDIX G
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL FOOD CONSUMPTION DATA (GRAMS/ANIMAL/DAY)

DAY	1-8	8-15	15-22	22-29	29-36	36-43	43-50	50-57	57-64	64-71	71-78	78-85
GROUP 1: 0 MG/KG/DAY												
11904 F	23	22	21	23	24	24	24	25	25	24	23	22
11905 F	20	21	20	24	21	20	19	19	19	17	17	17
MEAN	20	21	21	22	21	22	21	21	21	20	19	19
S.D.	1.7	1.9	2.2	2.4	2.2	2.6	2.1	2.1	2.4	1.9	1.8	1.5
N	30	30	18	20	19	20	20	20	20	20	20	20

(400)

INDIVIDUAL FOOD CONSUMPTION DATA (GRAMS/ANIMAL/DAY)

DAY	85-91	91-98	98-105	105-112	112-119
GROUP 1: 0 MG/KG/DAY					
11876 F	18	SCHEDULED EUTHANASIA			
11877 F	SCHEDULED EUTHANASIA				
11878 F	SCHEDULED EUTHANASIA				
11879 F	17	18	19	18	19
11880 F	22	24	27	25	24
11881 F	SCHEDULED EUTHANASIA				
11882 F	SCHEDULED EUTHANASIA				
11883 F	18	19	20	22	18
11884 F	SCHEDULED EUTHANASIA				
11885 F	16	22	18	20	22
11886 F	18	SCHEDULED EUTHANASIA			
11887 F	19	24	17	19	18
11888 F	20	20	18	19	20
11889 F	SCHEDULED EUTHANASIA				
11890 F	20	SCHEDULED EUTHANASIA			
11891 F	22	SCHEDULED EUTHANASIA			
11892 F	17	SCHEDULED EUTHANASIA			
11893 F	SCHEDULED EUTHANASIA				
11894 F	SCHEDULED EUTHANASIA				
11895 F	20	SCHEDULED EUTHANASIA			
11896 F	18	SCHEDULED EUTHANASIA			
11897 F	17	19	20	24	22
11898 F	18	18	19	23	17
11899 F	18	19	18	19	18
11900 F	SCHEDULED EUTHANASIA				
11901 F	17	SCHEDULED EUTHANASIA			
11902 F	21	SCHEDULED EUTHANASIA			
11903 F	SCHEDULED EUTHANASIA				

APPENDIX G
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL FOOD CONSUMPTION DATA (GRAMS/ANIMAL/DAY)

DAY	85-91	91-98	98-105	105-112	112-119
GROUP 1: 0 MG/KG/DAY					
11904 F	21	SCHEDULED EUTHANASIA			
11905 F	18	17	18	19	18
MEAN	19	20	20	21	20
S.D.	1.7	2.4	2.9	2.4	2.2
N	20	10	10	10	10

APPENDIX G
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL FOOD CONSUMPTION DATA (GRAMS/ANIMAL/DAY)

DAY	1-8	8-15	15-22	22-29	29-36	36-43	43-50	50-57	57-64	64-71	71-78	78-85
GROUP 2: 0.01 MG/KG/DAY												
11906 F	16	18	SCHEDULED EUTHANASIA									
11907 F	18	19	20	16	23	21	19	19	19	19	18	17
11908 F	17	17	SCHEDULED EUTHANASIA									
11909 F	19	19	SCHEDULED EUTHANASIA									
11910 F	18	19	18	18	19	18	19	19	19	19	19	18
11911 F	19	20	SCHEDULED EUTHANASIA									
11912 F	18	22	SCHEDULED EUTHANASIA									
11913 F	18	18	SCHEDULED EUTHANASIA									
11914 F	17	18	19	19	19	19	21	20	19	20	19	19
11915 F	17	17	18	18	17	17	17	18	17	16	16	16
11916 F	18	18	19	20	18	19	19	18	19	16	17	15
11917 F	19	18	SCHEDULED EUTHANASIA									
11918 F	24	25	24	23	24	20	20	19	19	20	17	18
11919 F	17	16	17	17	16	17	16	15	16	16	16	16
11920 F	21	22	23	23	23	23	22	21	20	21	20	20
11921 F	20	19	SCHEDULED EUTHANASIA									
11922 F	19	18	19	21	22	24	21	22	20	19	19	18
11923 F	20	21	SCHEDULED EUTHANASIA									
11924 F	19	19	20	22	24	23	24	22	27	23	22	21
11925 F	25	22	SCHEDULED EUTHANASIA									
MEAN	19	19	20	20	21	20	20	19	20	19	18	18
S.D.	2.1	2.1	2.4	2.7	2.8	2.6	2.2	2.3	3.0	2.2	1.9	1.9
N	20	20	10	10	10	10	10	10	10	10	10	10

APPENDIX G
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL FOOD CONSUMPTION DATA (GRAMS/ANIMAL/DAY)

DAY	85-91	91-98	98-105	105-112	112-119
GROUP 2: 0.01 MG/KG/DAY					
11906 F	SCHEDULED EUTHANASIA				
11907 F	19	SCHEDULED EUTHANASIA			
11908 F	SCHEDULED EUTHANASIA				
11909 F	SCHEDULED EUTHANASIA				
11910 F	19	SCHEDULED EUTHANASIA			
11911 F	SCHEDULED EUTHANASIA				
11912 F	SCHEDULED EUTHANASIA				
11913 F	SCHEDULED EUTHANASIA				
11914 F	24	SCHEDULED EUTHANASIA			
11915 F	15	SCHEDULED EUTHANASIA			
11916 F	17	SCHEDULED EUTHANASIA			
11917 F	SCHEDULED EUTHANASIA				
11918 F	18	SCHEDULED EUTHANASIA			
11919 F	16	SCHEDULED EUTHANASIA			
11920 F	19	SCHEDULED EUTHANASIA			
11921 F	SCHEDULED EUTHANASIA				
11922 F	18	SCHEDULED EUTHANASIA			
11923 F	SCHEDULED EUTHANASIA				
11924 F	20	SCHEDULED EUTHANASIA			
11925 F	SCHEDULED EUTHANASIA				
MEAN	18				
S.D.	2.4				
N	10				

APPENDIX G
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL FOOD CONSUMPTION DATA (GRAMS/ANIMAL/DAY)

DAY	1-8	8-15	15-22	22-29	29-36	36-43	43-50	50-57	57-64	64-71	71-78	78-85
GROUP 3: 0.05 MG/KG/DAY												
11926 F	19	19	20	19	20	20	19	20	18	19	18	17
11927 F	17	18	19	17	20	19	25	18	19	20	19	19
11928 F	18	17	17	18	19	19	18	18	19	17	18	17
11929 F	16	17	17	18	20	21	39	19	19	20	19	18
11930 F	18	19	SCHEDULED EUTHANASIA									
11931 F	18	18	SCHEDULED EUTHANASIA									
11932 F	16	23	a	25	20	18	18	17	16	16	16	16
11933 F	21	21	22	21	24	26	21	23	23	22	20	22
11934 F	19	19	SCHEDULED EUTHANASIA									
11935 F	19	18	17	20	17	20	18	21	19	19	17	18
11936 F	17	20	17	27	23	20	22	20	27	25	21	17
11937 F	17	18	17	18	17	19	18	17	18	18	20	17
11938 F	17	18	18	20	20	19	19	20	19	19	19	18
11939 F	19	20	18	20	20	20	20	19	19	20	19	18
11940 F	20	21	20	20	21	23	22	21	21	21	20	20
11941 F	19	18	SCHEDULED EUTHANASIA									
11942 F	21	21	SCHEDULED EUTHANASIA									
11943 F	18	18	17	18	19	18	18	18	19	17	17	16
11944 F	20	19	22	24	21	21	22	20	20	20	20	20
11945 F	22	23	SCHEDULED EUTHANASIA									
11946 F	19	18	SCHEDULED EUTHANASIA									
11947 F	16	17	17	19	19	19	18	18	19	19	18	17
11948 F	19	20	20	23	23	21	21	23	22	20	20	21
11949 F	18	19	20	23	20	18	20	20	19	19	19	19
11950 F	16	16	17	17	17	17	18	17	20	16	17	18
11951 F	20	20	SCHEDULED EUTHANASIA									
11952 F	20	22	SCHEDULED EUTHANASIA									
11953 F	21	21	SCHEDULED EUTHANASIA									

[a]ELIMINATED DUE TO SPILLED WET FEED.

APPENDIX G
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL FOOD CONSUMPTION DATA (GRAMS/ANIMAL/DAY)

DAY	1-8	8-15	15-22	22-29	29-36	36-43	43-50	50-57	57-64	64-71	71-78	78-85
GROUP 3: 0.05 MG/KG/DAY												
11954 F	18	19	20	21	20	19	20	19	18	19	18	19
11955 F	23	25	27	27	29	31	28	22	24	20	18	19
MEAN	19	19	19	21	20	20	21	20	20	19	19	18
S.D.	1.8	1.9	2.5	3.0	2.8	3.1	4.9	1.8	2.4	2.0	1.3	1.6
N	30	30	19	20	20	20	20	20	20	20	20	20

INDIVIDUAL FOOD CONSUMPTION DATA (GRAMS/ANIMAL/DAY)

DAY	85-91	91-98	98-105	105-112	112-119
GROUP 3: 0.05 MG/KG/DAY					
11926 F	18	18	10	35	17
11927 F	18	SCHEDULED EUTHANASIA			
11928 F	17	16	18	19	17
11929 F	18	SCHEDULED EUTHANASIA			
11930 F	SCHEDULED EUTHANASIA				
11931 F	SCHEDULED EUTHANASIA				
11932 F	16	16	16	17	17
11933 F	20	21	20	21	22
11934 F	SCHEDULED EUTHANASIA				
11935 F	15	SCHEDULED EUTHANASIA			
11936 F	16	SCHEDULED EUTHANASIA			
11937 F	20	SCHEDULED EUTHANASIA			
11938 F	18	SCHEDULED EUTHANASIA			
11939 F	19	SCHEDULED EUTHANASIA			
11940 F	20	19	21	24	23
11941 F	SCHEDULED EUTHANASIA				
11942 F	SCHEDULED EUTHANASIA				
11943 F	18	16	18	18	18
11944 F	17	18	19	18	18
11945 F	SCHEDULED EUTHANASIA				
11946 F	SCHEDULED EUTHANASIA				
11947 F	22	16	18	15	21
11948 F	19	FOUND DEAD			
11949 F	17	20	20	27	20
11950 F	17	SCHEDULED EUTHANASIA			
11951 F	SCHEDULED EUTHANASIA				
11952 F	SCHEDULED EUTHANASIA				
11953 F	SCHEDULED EUTHANASIA				

APPENDIX G
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL FOOD CONSUMPTION DATA (GRAMS/ANIMAL/DAY)

DAY	85-91	91-98	98-105	105-112	112-119
GROUP 3: 0.05 MG/KG/DAY					
11954 F	22	SCHEDULED EUTHANASIA			
11955 F	20	SCHEDULED EUTHANASIA			
MEAN	18	18	18	21	19
S.D.	2.0	1.8	3.3	6.2	2.3
N	20	9	9	9	9

APPENDIX G
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL FOOD CONSUMPTION DATA (GRAMS/ANIMAL/DAY)

DAY	1-8	8-15	15-22	22-29	29-36	36-43	43-50	50-57	57-64	64-71	71-78	78-85
GROUP 4: 0.2 MG/KG/DAY												
11956 F	18	19	20	19	20	20	19	19	20	19	18	18
11957 F	19	21	20	21	21	21	21	22	20	20	19	20
11958 F	17	16	17	17	19	17	18	17	17	16	15	16
11959 F	16	17	SCHEDULED EUTHANASIA									
11960 F	18	19	SCHEDULED EUTHANASIA									
11961 F	17	17	19	19	18	19	21	19	18	17	17	17
11962 F	19	17	SCHEDULED EUTHANASIA									
11963 F	18	19	SCHEDULED EUTHANASIA									
11964 F	16	16	SCHEDULED EUTHANASIA									
11965 F	20	19	18	18	19	18	18	19	21	18	15	19
11966 F	21	19	17	20	19	20	19	17	20	20	21	19
11967 F	16	17	SCHEDULED EUTHANASIA									
11968 F	19	20	SCHEDULED EUTHANASIA									
11969 F	24	7	28	29	32	26	25	28	26	24	22	24
11970 F	19	20	SCHEDULED EUTHANASIA									
11971 F	21	22	SCHEDULED EUTHANASIA									
11972 F	18	19	18	18	18	18	17	18	18	18	17	16
11973 F	20	21	21	21	20	21	20	19	20	20	19	19
11974 F	19	20	SCHEDULED EUTHANASIA									
11975 F	21	21	19	20	22	21	23	20	21	19	20	19
MEAN	19	18	20	20	21	20	20	20	20	19	18	19
S.D.	2.1	3.2	3.2	3.3	4.2	2.6	2.5	3.3	2.6	2.2	2.2	2.3
N	20	20	10	10	10	10	10	10	10	10	10	10

INDIVIDUAL FOOD CONSUMPTION DATA (GRAMS/ANIMAL/DAY)

DAY	85-91	91-98	98-105	105-112	112-119
GROUP 4: 0.2 MG/KG/DAY					
11956 F	18	SCHEDULED EUTHANASIA			
11957 F	24	SCHEDULED EUTHANASIA			
11958 F	15	SCHEDULED EUTHANASIA			
11959 F	SCHEDULED EUTHANASIA				
11960 F	SCHEDULED EUTHANASIA				
11961 F	17	SCHEDULED EUTHANASIA			
11962 F	SCHEDULED EUTHANASIA				
11963 F	SCHEDULED EUTHANASIA				
11964 F	SCHEDULED EUTHANASIA				
11965 F	18	SCHEDULED EUTHANASIA			
11966 F	20	SCHEDULED EUTHANASIA			
11967 F	SCHEDULED EUTHANASIA				
11968 F	SCHEDULED EUTHANASIA				
11969 F	32	SCHEDULED EUTHANASIA			
11970 F	SCHEDULED EUTHANASIA				
11971 F	SCHEDULED EUTHANASIA				
11972 F	16	SCHEDULED EUTHANASIA			
11973 F	20	SCHEDULED EUTHANASIA			
11974 F	SCHEDULED EUTHANASIA				
11975 F	19	SCHEDULED EUTHANASIA			
MEAN	20				
S.D.	4.9				
N	10				

APPENDIX G
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL FOOD CONSUMPTION DATA (GRAMS/ANIMAL/DAY)

DAY	1-8	8-15	15-22	22-29	29-36	36-43	43-50	50-57	57-64	64-71	71-78	78-85
GROUP 5: 1.0 MG/KG/DAY												
11976 F	17	19	20	23	21	21	20	20	19	18	18	19
11977 F	17	19	SCHEDULED EUTHANASIA									
11978 F	20	22	21	21	24	20	20	20	20	18	19	19
11979 F	18	17	22	18	20	18	18	19	20	18	19	16
11980 F	19	20	19	20	19	21	19	19	21	18	19	18
11981 F	16	16	18	19	18	20	17	18	17	16	17	18
11982 F	21	20	SCHEDULED EUTHANASIA									
11983 F	9	21	19	18	20	19	17	18	18	18	18	18
11984 F	19	21	SCHEDULED EUTHANASIA									
11985 F	19	19	18	18	18	19	18	18	19	19	17	17
11986 F	20	23	22	30	23	25	23	23	23	24	21	22
11987 F	16	17	17	17	19	18	18	19	20	18	18	16
11988 F	18	19	19	19	18	21	20	18	19	20	18	18
11989 F	17	17	SCHEDULED EUTHANASIA									
11990 F	21	20	18	19	21	20	20	19	21	19	17	22
11991 F	18	18	SCHEDULED EUTHANASIA									
11992 F	20	21	SCHEDULED EUTHANASIA									
11993 F	21	21	21	21	22	22	21	19	21	19	20	19
11994 F	17	19	SCHEDULED EUTHANASIA									
11995 F	20	21	21	21	21	20	20	19	20	19	19	18
11996 F	19	19	19	19	20	19	19	19	20	17	19	18
11997 F	17	17	17	18	17	17	17	16	19	17	16	16
11998 F	19	20	21	20	21	21	24	19	21	20	20	18
11999 F	19	17	19	20	23	19	21	22	19	19	22	17
12000 F	19	20	20	20	22	21	20	18	20	18	18	19
12001 F	18	19	SCHEDULED EUTHANASIA									
12002 F	19	20	20	21	21	21	21	20	21	19	20	20
12003 F	18	18	SCHEDULED EUTHANASIA									

APPENDIX G
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL FOOD CONSUMPTION DATA (GRAMS/ANIMAL/DAY)

DAY	1-8	8-15	15-22	22-29	29-36	36-43	43-50	50-57	57-64	64-71	71-78	78-85
GROUP 5: 1.0 MG/KG/DAY												
12004 F	19	21	21	25	25	24	24	23	23	22	23	22
12005 F	18	19	SCHEDULED EUTHANASIA									
MEAN	18	19	20	20	21	20	20	19	20	19	19	18
S.D.	2.2	1.7	1.5	2.9	2.1	1.8	2.0	1.8	1.5	1.7	1.7	1.8
N	30	30	20	20	20	20	20	20	20	20	20	20

APPENDIX G
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL FOOD CONSUMPTION DATA (GRAMS/ANIMAL/DAY)

DAY	85-91	91-98	98-105	105-112	112-119
GROUP 5: 1.0 MG/KG/DAY					
11976 F	21	SCHEDULED EUTHANASIA			
11977 F	SCHEDULED EUTHANASIA				
11978 F	20	a	20	19	19
11979 F	18	17	17	19	19
11980 F	19	18	20	23	17
11981 F	15	17	17	21	20
11982 F	SCHEDULED EUTHANASIA				
11983 F	18	SCHEDULED EUTHANASIA			
11984 F	SCHEDULED EUTHANASIA				
11985 F	17	21	20	22	17
11986 F	31	23	21	21	22
11987 F	17	19	19	19	17
11988 F	19	SCHEDULED EUTHANASIA			
11989 F	SCHEDULED EUTHANASIA				
11990 F	18	SCHEDULED EUTHANASIA			
11991 F	SCHEDULED EUTHANASIA				
11992 F	SCHEDULED EUTHANASIA				
11993 F	19	SCHEDULED EUTHANASIA			
11994 F	SCHEDULED EUTHANASIA				
11995 F	18	SCHEDULED EUTHANASIA			
11996 F	18	SCHEDULED EUTHANASIA			
11997 F	17	SCHEDULED EUTHANASIA			
11998 F	18	SCHEDULED EUTHANASIA			
11999 F	17	20	20	18	19
12000 F	18	SCHEDULED EUTHANASIA			
12001 F	SCHEDULED EUTHANASIA				
12002 F	20	20	20	25	22
12003 F	SCHEDULED EUTHANASIA				

[a]ELIMINATED, HOWEVER, REASON WAS NOT DOCUMENTED.

APPENDIX G
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL FOOD CONSUMPTION DATA (GRAMS/ANIMAL/DAY)

DAY	85-91	91-98	98-105	105-112	112-119
GROUP 5: 1.0 MG/KG/DAY					
12004 F	21	20	23	22	21
12005 F	SCHEDULED EUTHANASIA				
MEAN	19	20	20	21	19
S.D.	3.1	2.0	1.7	2.1	2.0
N	20	9	10	10	10

APPENDIX G
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL FOOD CONSUMPTION DATA (GRAMS/ANIMAL/DAY)

DAY	1-8	8-15	15-22	22-29	29-36	36-43	43-50	50-57	57-64	64-71	71-78	78-85
GROUP 6: 10.0 MG/KG/DAY												
12006 F	21	16	16	14	16	17	15	a	26	a	19	26
12007 F	18	19	19	21	18	20	19	20	19	18	19	19
12008 F	17	18	17	18	19	20	20	19	20	20	20	19
12009 F	21	20	20	20	22	21	20	20	21	19	19	18
12010 F	19	22	SCHEDULED EUTHANASIA									
12011 F	18	20	20	21	23	24	21	20	21	21	20	19
12012 F	21	20	20	22	22	21	21	21	21	a	20	20
12013 F	19	20	SCHEDULED EUTHANASIA									
12014 F	19	20	18	19	22	21	20	18	21	19	20	19
12015 F	18	19	15	17	20	21	19	19	19	18	19	31
12016 F	19	20	SCHEDULED EUTHANASIA									
12017 F	18	18	21	22	20	17	18	18	18	19	19	18
12018 F	20	21	21	22	23	22	22	21	21	21	19	25
12019 F	18	19	19	19	19	19	19	19	19	20	19	18
12020 F	18	19	20	22	20	20	20	19	18	18	19	19
12021 F	19	19	SCHEDULED EUTHANASIA									
12022 F	17	17	17	20	20	18	17	18	17	17	18	17
12023 F	18	18	SCHEDULED EUTHANASIA									
12024 F	21	23	23	25	25	24	24	23	22	22	22	24
12025 F	18	20	20	20	21	21	21	19	20	20	19	19
12026 F	19	18	SCHEDULED EUTHANASIA									
12027 F	19	20	19	21	21	21	22	20	19	19	19	19
12028 F	18	18	SCHEDULED EUTHANASIA									
12029 F	18	19	19	20	19	19	20	19	20	19	19	19
12030 F	19	19	SCHEDULED EUTHANASIA									
12031 F	16	17	SCHEDULED EUTHANASIA									
12032 F	18	19	SCHEDULED EUTHANASIA									
12033 F	20	21	19	23	22	22	21	21	21	20	21	21

[a]ELIMINATED DUE TO SPILLED WET FEED.

APPENDIX G
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL FOOD CONSUMPTION DATA (GRAMS/ANIMAL/DAY)

DAY	1-8	8-15	15-22	22-29	29-36	36-43	43-50	50-57	57-64	64-71	71-78	78-85
GROUP 6: 10.0 MG/KG/DAY												
12034 F	19	20	19	21	21	20	21	20	20	20	20	19
12035 F	18	19	19	19	20	18	19	20	19	17	18	19
MEAN	19	19	19	20	21	20	20	20	20	19	19	20
S.D.	1.3	1.4	1.8	2.3	2.0	2.0	1.9	1.3	1.9	1.5	1.0	3.5
N	30	30	20	20	20	20	20	19	20	18	20	20

INDIVIDUAL FOOD CONSUMPTION DATA (GRAMS/ANIMAL/DAY)

DAY	85-91	91-98	98-105	105-112	112-119
GROUP 6: 10.0 MG/KG/DAY					
12006 F	19	SCHEDULED EUTHANASIA			
12007 F	18	SCHEDULED EUTHANASIA			
12008 F	20	18	18	19	20
12009 F	19	16	19	18	17
12010 F	SCHEDULED EUTHANASIA				
12011 F	20	SCHEDULED EUTHANASIA			
12012 F	18	SCHEDULED EUTHANASIA			
12013 F	SCHEDULED EUTHANASIA				
12014 F	19	19	20	24	19
12015 F	19	19	19	18	18
12016 F	SCHEDULED EUTHANASIA				
12017 F	18	18	17	17	19
12018 F	18	SCHEDULED EUTHANASIA			
12019 F	18	SCHEDULED EUTHANASIA			
12020 F	18	19	19	20	18
12021 F	SCHEDULED EUTHANASIA				
12022 F	14	SCHEDULED EUTHANASIA			
12023 F	SCHEDULED EUTHANASIA				
12024 F	22	21	22	21	21
12025 F	19	SCHEDULED EUTHANASIA			
12026 F	SCHEDULED EUTHANASIA				
12027 F	19	21	19	22	18
12028 F	SCHEDULED EUTHANASIA				
12029 F	22	SCHEDULED EUTHANASIA			
12030 F	SCHEDULED EUTHANASIA				
12031 F	SCHEDULED EUTHANASIA				
12032 F	SCHEDULED EUTHANASIA				
12033 F	26	SCHEDULED EUTHANASIA			

APPENDIX G
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL FOOD CONSUMPTION DATA (GRAMS/ANIMAL/DAY)

DAY	85-91	91-98	98-105	105-112	112-119
GROUP 6: 10.0 MG/KG/DAY					
12034 F	19	20	21	23	19
12035 F	18	19	21	18	19
MEAN	19	19	19	20	19
S.D.	2.3	1.5	1.4	2.5	1.1
N	20	10	10	10	10

APPENDIX H

Individual Water Consumption Data
(grams/animal/day)

APPENDIX H
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL WATER CONSUMPTION DATA (GRAMS/ANIMAL/DAY)

DAY	1- 7	8-14	15-21	22-28	29-35	36-42	43-49	50-56	57-63	64-70	71-77	78-84	85-91
GROUP 1: 0 MG/KG/DAY													
11716 M	29	34	SCHEDULED EUTHANASIA										
11717 M	31	34	SCHEDULED EUTHANASIA										
11718 M	28	29	SCHEDULED EUTHANASIA										
11719 M	30	33	38	38	37	39	41	47	45	45	45	42	45
11720 M	28	33	SCHEDULED EUTHANASIA										
11721 M	33	38	39	38	37	40	41	36	35	38	34	a	32
11722 M	31	34	37	38	40	38	38	37	38	36	35	34	34
11723 M	33	36	38	39	36	37	39	37	37	38	36	34	36
11724 M	34	37	36	34	34	36	36	37	35	37	35	37	38
11725 M	31	33	SCHEDULED EUTHANASIA										
11726 M	34	40	37	35	34	37	35	34	38	33	37	35	35
11727 M	35	41	42	22	49	50	48	43	42	43	42	41	38
11728 M	41	43	SCHEDULED EUTHANASIA										
11729 M	39	39	36	39	40	39	40	37	38	39	38	24	43
11730 M	32	34	31	32	33	31	31	33	32	32	31	31	32
11731 M	30	49	SCHEDULED EUTHANASIA										
11732 M	33	38	34	35	38	38	40	34	36	35	37	36	36
11733 M	31	38	35	38	44	42	43	48	46	40	42	45	41
11734 M	35	b	41	38	41	40	39	41	43	39	40	38	38
11735 M	35	37	36	36	39	35	37	38	37	36	39	35	32
11736 M	32	50	34	37	41	40	40	39	40	39	38	38	36
11737 M	32	39	35	37	41	39	39	35	36	34	33	35	32
11738 M	35	42	39	39	45	40	40	36	40	40	55	62	63
11739 M	38	41	SCHEDULED EUTHANASIA										
11740 M	37	37	40	36	39	38	38	34	36	35	36	34	37
11741 M	32	45	31	32	33	36	37	32	33	31	34	34	35
11742 M	33	34	34	35	41	38	40	40	43	42	42	40	43
11743 M	41	40	36	38	c	54	44	43	47	42	49	43	44

[a]ELIMINATED DUE TO SPILLED WATER.
[b]ELIMINATED DUE TO EMPTY WATER BOTTLE.
[c]ELIMINATED DUE TO TECHNICAL WEIGHING ERROR.

APPENDIX H
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL WATER CONSUMPTION DATA (GRAMS/ANIMAL/DAY)

DAY	1- 7	8-14	15-21	22-28	29-35	36-42	43-49	50-56	57-63	64-70	71-77	78-84	85-91
GROUP 1: 0 MG/KG/DAY													
11744 M	38	40	SCHEDULED EUTHANASIA										
11745 M	32	35	SCHEDULED EUTHANASIA										
MEAN	33	38	36	36	39	39	39	38	39	38	39	38	38
S.D.	3.5	4.7	2.8	4.0	4.2	5.0	3.4	4.5	4.2	3.7	5.7	7.7	7.1
N	30	29	20	20	19	20	20	20	20	20	20	19	20

APPENDIX H
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL WATER CONSUMPTION DATA (GRAMS/ANIMAL/DAY)

DAY	1- 7	8-14	15-21	22-28	29-35	36-42	43-49	50-56	57-63	64-70	71-77	78-84	85-91
GROUP 2: 0.01 MG/KG/DAY													
11746 M	30	33	34	35	37	37	36	37	37	37	40	38	40
11747 M	40	37	SCHEDULED EUTHANASIA										
11748 M	28	29	30	30	30	31	31	34	34	28	32	31	31
11749 M	37	41	44	42	43	43	45	45	40	45	53	42	43
11750 M	32	33	31	36	38	40	39	40	40	40	39	41	38
11751 M	31	31	SCHEDULED EUTHANASIA										
11752 M	29	34	37	36	40	39	45	45	41	48	44	40	39
11753 M	32	32	33	35	35	33	35	36	35	34	34	32	33
11754 M	28	31	31	29	29	28	27	29	29	29	29	27	26
11755 M	38	41	46	43	44	44	44	43	46	47	43	37	37
11756 M	34	35	SCHEDULED EUTHANASIA										
11757 M	36	41	SCHEDULED EUTHANASIA										
11758 M	35	39	SCHEDULED EUTHANASIA										
11759 M	33	35	SCHEDULED EUTHANASIA										
11760 M	33	34	SCHEDULED EUTHANASIA										
11761 M	35	41	46	47	48	46	50	49	46	49	49	46	47
11762 M	34	15	SCHEDULED EUTHANASIA										
11763 M	33	51	SCHEDULED EUTHANASIA										
11764 M	32	34	SCHEDULED EUTHANASIA										
11765 M	38	38	43	38	42	43	46	47	44	49	44	41	37
MEAN	33	35	37	37	39	38	40	40	39	41	41	37	37
S.D.	3.3	6.9	6.5	5.8	6.2	5.8	7.5	6.3	5.7	8.3	7.5	5.8	6.0
N	20	20	10	10	10	10	10	10	10	10	10	10	10

APPENDIX H
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL WATER CONSUMPTION DATA (GRAMS/ANIMAL/DAY)

DAY	1- 7	8-14	15-21	22-28	29-35	36-42	43-49	50-56	57-63	64-70	71-77	78-84	85-91
GROUP 3: 0.05 MG/KG/DAY													
11766 M	30	33	SCHEDULED EUTHANASIA										
11767 M	31	33	33	35	38	32	40	36	39	37	35	36	34
11768 M	32	35	SCHEDULED EUTHANASIA										
11769 M	30	33	35	33	34	32	36	34	34	35	34	32	34
11770 M	33	34	38	37	38	38	41	39	40	38	38	38	35
11771 M	29	30	SCHEDULED EUTHANASIA										
11772 M	32	36	SCHEDULED EUTHANASIA										
11773 M	30	32	31	30	30	28	29	28	30	27	27	26	29
11774 M	37	38	42	40	41	38	44	44	44	42	47	40	47
11775 M	29	32	32	32	33	34	34	34	34	33	30	31	29
11776 M	30	28	29	26	28	27	26	26	26	26	28	25	28
11777 M	36	38	37	a	43	37	44	37	39	38	36	32	41
11778 M	30	32	SCHEDULED EUTHANASIA										
11779 M	34	33	SCHEDULED EUTHANASIA										
11780 M	37	38	42	41	41	34	39	40	36	40	41	34	35
11781 M	30	31	32	31	31	32	32	32	32	30	29	29	29
11782 M	31	32	36	37	38	40	39	43	43	40	44	40	38
11783 M	33	36	40	42	44	42	41	37	43	39	37	37	41
11784 M	44	47	SCHEDULED EUTHANASIA										
11785 M	32	35	34	36	41	38	39	40	42	31	42	41	37
11786 M	28	28	SCHEDULED EUTHANASIA										
11787 M	29	34	38	39	37	39	36	39	36	36	35	38	34
11788 M	35	37	b	39	40	41	38	40	44	40	38	34	33
11789 M	13	37	SCHEDULED EUTHANASIA										
11790 M	36	37	38	33	38	39	42	42	42	42	42	39	38
11791 M	30	34	37	32	36	36	39	41	46	43	48	45	42
11792 M	35	37	37	40	38	42	49	54	c	45	43	50	49
11793 M	33	38	SCHEDULED EUTHANASIA										

[a]ELIMINATED DUE TO EMPTY WATER BOTTLE.
[b]ELIMINATED DUE TO SPILLED WATER.
[c]ELIMINATED DUE TO LEAKING WATER BOTTLE.

APPENDIX H
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL WATER CONSUMPTION DATA (GRAMS/ANIMAL/DAY)

DAY	1- 7	8-14	15-21	22-28	29-35	36-42	43-49	50-56	57-63	64-70	71-77	78-84	85-91
GROUP 3: 0.05 MG/KG/DAY													
11794 M	34	37	39	36	38	40	39	39	39	37	36	35	34
11795 M	38	40	47	42	46	45	44	47	48	46	45	45	45
MEAN	32	35	36	36	37	37	39	39	39	37	38	36	37
S.D.	5.0	3.8	4.4	4.4	4.6	4.6	5.3	6.3	5.7	5.5	6.2	6.4	6.0
N	30	30	19	19	20	20	20	20	19	20	20	20	20

APPENDIX H
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL WATER CONSUMPTION DATA (GRAMS/ANIMAL/DAY)

DAY	1- 7	8-14	15-21	22-28	29-35	36-42	43-49	50-56	57-63	64-70	71-77	78-84	85-91
GROUP 4: 0.2 MG/KG/DAY													
11796 M	28	32	SCHEDULED EUTHANASIA										
11797 M	30	35	40	36	57	35	41	39	41	39	40	40	43
11798 M	30	32	SCHEDULED EUTHANASIA										
11799 M	36	40	41	40	46	42	46	45	47	45	41	37	44
11800 M	33	37	38	37	41	38	38	37	38	35	30	35	37
11801 M	29	31	SCHEDULED EUTHANASIA										
11802 M	34	38	SCHEDULED EUTHANASIA										
11803 M	30	32	SCHEDULED EUTHANASIA										
11804 M	34	37	SCHEDULED EUTHANASIA										
11805 M	32	34	36	34	38	34	38	36	37	37	36	38	36
11806 M	35	37	39	37	40	41	40	40	38	37	38	38	38
11807 M	37	42	SCHEDULED EUTHANASIA										
11808 M	30	34	SCHEDULED EUTHANASIA										
11809 M	34	37	40	38	46	43	43	42	47	46	42	46	42
11810 M	38	39	SCHEDULED EUTHANASIA										
11811 M	31	41	44	42	45	43	44	44	48	46	45	44	46
11812 M	35	33	a	31	33	33	33	35	34	34	30	32	30
11813 M	34	37	SCHEDULED EUTHANASIA										
11814 M	37	44	41	45	47	44	46	44	46	45	42	44	43
11815 M	35	40	40	40	45	44	47	42	40	41	45	38	40
MEAN	33	37	40	38	44	40	42	40	42	40	39	39	40
S.D.	2.9	3.5	2.1	4.0	6.2	4.4	4.5	3.6	5.1	4.9	5.3	4.5	4.7
N	20	20	9	10	10	10	10	10	10	10	10	10	10

[a]ELIMINATED DUE TO EMPTY WATER BOTTLE.

APPENDIX H
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL WATER CONSUMPTION DATA (GRAMS/ANIMAL/DAY)

DAY	1- 7	8-14	15-21	22-28	29-35	36-42	43-49	50-56	57-63	64-70	71-77	78-84	85-91
GROUP 5: 1.0 MG/KG/DAY													
11816 M	31	31	SCHEDULED EUTHANASIA										
11817 M	36	33	41	40	40	41	38	45	44	41	40	39	41
11818 M	32	36	SCHEDULED EUTHANASIA										
11819 M	28	31	SCHEDULED EUTHANASIA										
11820 M	41	45	SCHEDULED EUTHANASIA										
11821 M	28	36	36	36	39	37	39	37	36	35	36	34	33
11822 M	34	39	37	36	42	37	37	40	41	40	42	42	47
11823 M	31	33	35	37	35	37	36	36	38	36	35	38	32
11824 M	34	35	41	38	43	42	42	42	43	40	42	40	38
11825 M	30	33	SCHEDULED EUTHANASIA										
11826 M	32	34	35	36	39	40	41	37	40	34	35	35	36
11827 M	34	37	39	43	42	42	40	41	43	35	42	37	34
11828 M	34	37	41	40	43	41	40	45	45	44	46	44	42
11829 M	34	36	38	42	45	45	44	43	44	43	43	38	41
11830 M	39	39	42	40	42	40	41	39	45	36	42	43	41
11831 M	36	38	SCHEDULED EUTHANASIA										
11832 M	46	44	52	51	54	55	60	53	61	57	58	58	57
11833 M	38	40	42	39	41	44	43	40	40	39	40	39	37
11834 M	40	47	10	58	68	65	67	63	67	64	63	61	52
11835 M	37	37	SCHEDULED EUTHANASIA										
11836 M	29	30	SCHEDULED EUTHANASIA										
11837 M	36	36	36	36	36	35	32	34	32	30	31	29	27
11838 M	32	32	32	32	32	34	34	33	36	34	35	34	34
11839 M	34	36	SCHEDULED EUTHANASIA										
11840 M	35	37	38	33	34	34	34	34	36	33	36	34	34
11841 M	32	34	35	31	38	34	34	34	31	33	33	32	35
11842 M	35	36	36	37	37	39	40	37	35	35	31	38	37
11843 M	30	33	34	35	34	35	36	36	38	36	35	33	33

APPENDIX H
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL WATER CONSUMPTION DATA (GRAMS/ANIMAL/DAY)

DAY	1- 7	8-14	15-21	22-28	29-35	36-42	43-49	50-56	57-63	64-70	71-77	78-84	85-91
GROUP 5: 1.0 MG/KG/DAY													
11844 M	34	35	SCHEDULED EUTHANASIA										
11845 M	31	34	34	38	41	41	38	35	44	39	38	29	39
MEAN	34	36	37	39	41	41	41	40	42	39	40	39	38
S.D.	4.0	4.0	7.6	6.4	8.0	7.5	8.5	7.3	8.7	8.2	8.2	8.1	7.1
N	30	30	20	20	20	20	20	20	20	20	20	20	20

APPENDIX H
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL WATER CONSUMPTION DATA (GRAMS/ANIMAL/DAY)

DAY	1- 7	8-14	15-21	22-28	29-35	36-42	43-49	50-56	57-63	64-70	71-77	78-84	85-91
GROUP 6: 10.0 MG/KG/DAY													
11846 M	32	34	SCHEDULED EUTHANASIA										
11847 M	34	35	SCHEDULED EUTHANASIA										
11848 M	36	37	SCHEDULED EUTHANASIA										
11849 M	31	33	33	33	36	35	35	36	36	36	34	33	30
11850 M	36	43	45	44	50	50	50	49	52	57	51	47	a
11851 M	31	33	33	33	35	32	34	35	35	34	34	32	33
11852 M	27	31	32	35	36	37	39	41	a	46	47	49	50
11853 M	38	42	SCHEDULED EUTHANASIA										
11854 M	30	32	33	34	35	33	39	35	36	38	37	35	37
11855 M	43	44	50	48	52	49	48	51	49	49	49	46	54
11856 M	33	33	36	35	37	40	43	47	50	47	52	48	51
11857 M	31	34	SCHEDULED EUTHANASIA										
11858 M	36	39	SCHEDULED EUTHANASIA										
11859 M	34	40	SCHEDULED EUTHANASIA										
11860 M	32	33	35	35	37	34	35	37	35	35	38	41	44
11861 M	40	41	SCHEDULED EUTHANASIA										
11862 M	32	34	35	32	33	30	31	a	32	32	32	30	32
11863 M	34	40	SCHEDULED EUTHANASIA										
11864 M	34	36	47	40	41	40	41	36	38	37	35	35	36
11865 M	32	35	33	31	34	32	33	33	35	32	34	33	32
11866 M	31	35	38	42	41	49	50	48	a	46	51	47	42
11867 M	28	32	34	36	37	39	41	42	38	39	42	40	39
11868 M	29	29	a	26	30	30	30	30	32	30	28	28	29
11869 M	28	29	28	27	30	29	30	30	31	28	29	24	27
11870 M	27	28	SCHEDULED EUTHANASIA										
11871 M	33	38	a	39	39	43	47	46	48	47	48	49	51
11872 M	25	37	38	38	44	52	54	46	44	46	38	38	40
11873 M	42	43	43	43	43	49	46	47	45	41	43	41	41

[a]ELIMINATED DUE TO EMPTY WATER BOTTLE.

APPENDIX H
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL WATER CONSUMPTION DATA (GRAMS/ANIMAL/DAY)

DAY	1- 7	8-14	15-21	22-28	29-35	36-42	43-49	50-56	57-63	64-70	71-77	78-84	85-91
GROUP 6: 10.0 MG/KG/DAY													
11874 M	32	33	35	32	34	38	36	36	36	35	36	34	33
11875 M	28	33	36	38	37	a	37	39	38	38	37	35	38
MEAN	33	35	37	36	38	39	40	40	39	40	40	38	39
S.D.	4.3	4.4	5.6	5.6	5.8	7.6	7.3	6.8	6.6	7.4	7.7	7.5	8.1
N	30	30	18	20	20	19	20	19	18	20	20	20	19

[a]ELIMINATED DUE TO EMPTY WATER BOTTLE.

APPENDIX H
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL WATER CONSUMPTION DATA (GRAMS/ANIMAL/DAY)

DAY	1- 7	8-14	15-21	22-28	29-35	36-42	43-49	50-56	57-63	64-70	71-77	78-84	85-91
GROUP 1: 0 MG/KG/DAY													
11876 F	31	31	27	25	28	30	28	26	26	26	25	25	25
11877 F	34	32	SCHEDULED EUTHANASIA										
11878 F	31	31	SCHEDULED EUTHANASIA										
11879 F	32	27	31	31	31	31	30	31	30	27	36	29	30
11880 F	45	32	37	31	35	35	32	33	33	33	28	27	31
11881 F	28	29	SCHEDULED EUTHANASIA										
11882 F	31	25	SCHEDULED EUTHANASIA										
11883 F	24	22	27	22	24	19	25	21	22	21	23	23	22
11884 F	28	29	SCHEDULED EUTHANASIA										
11885 F	31	32	36	36	35	32	37	36	38	38	38	33	36
11886 F	29	35	44	36	35	42	41	46	42	46	46	42	43
11887 F	a	27	28	26	28	30	27	25	26	26	22	23	30
11888 F	32	31	33	25	26	30	29	26	28	27	25	25	26
11889 F	33	38	SCHEDULED EUTHANASIA										
11890 F	28	26	30	27	26	23	24	26	25	24	23	24	25
11891 F	30	30	51	26	30	33	35	35	34	37	35	40	51
11892 F	34	40	48	37	37	38	40	39	37	35	33	32	32
11893 F	27	36	SCHEDULED EUTHANASIA										
11894 F	25	65	SCHEDULED EUTHANASIA										
11895 F	34	31	38	34	34	34	33	48	39	34	36	36	43
11896 F	31	30	68	32	34	32	32	34	32	30	29	29	30
11897 F	29	29	53	30	34	33	34	35	59	b	33	43	a
11898 F	30	29	47	28	29	29	27	28	28	27	25	27	27
11899 F	25	23	32	26	26	26	28	26	24	24	25	25	26
11900 F	32	32	SCHEDULED EUTHANASIA										
11901 F	26	24	a	27	30	25	25	27	27	26	26	25	26
11902 F	33	30	67	54	36	45	36	42	39	28	35	30	34
11903 F	32	31	SCHEDULED EUTHANASIA										

[a]ELIMINATED DUE TO EMPTY WATER BOTTLE.
[b]ELIMINATED DUE TO SPILLED WATER.

APPENDIX H
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL WATER CONSUMPTION DATA (GRAMS/ANIMAL/DAY)

DAY	1- 7	8-14	15-21	22-28	29-35	36-42	43-49	50-56	57-63	64-70	71-77	78-84	85-91
GROUP 1: 0 MG/KG/DAY													
11904 F	34	37	45	47	56	57	55	49	50	49	46	68	46
11905 F	27	29	33	29	32	31	28	29	30	25	24	26	27
MEAN	30	31	41	31	32	33	32	33	34	31	31	32	32
S.D.	4.1	7.5	12.5	7.7	6.8	8.2	7.3	8.2	9.2	7.5	7.4	10.4	8.2
N	29	30	19	20	20	20	20	20	20	19	20	20	19

APPENDIX H
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL WATER CONSUMPTION DATA (GRAMS/ANIMAL/DAY)

DAY	1- 7	8-14	15-21	22-28	29-35	36-42	43-49	50-56	57-63	64-70	71-77	78-84	85-91
GROUP 2: 0.01 MG/KG/DAY													
11906 F	23	23	SCHEDULED EUTHANASIA										
11907 F	26	27	29	27	34	32	28	29	30	30	26	27	26
11908 F	30	28	SCHEDULED EUTHANASIA										
11909 F	31	28	SCHEDULED EUTHANASIA										
11910 F	26	26	25	26	27	26	49	30	28	28	28	26	27
11911 F	28	32	SCHEDULED EUTHANASIA										
11912 F	29	32	SCHEDULED EUTHANASIA										
11913 F	29	25	SCHEDULED EUTHANASIA										
11914 F	25	27	30	27	27	28	32	30	29	33	29	28	36
11915 F	23	21	26	23	22	23	25	25	22	22	20	21	20
11916 F	23	24	24	25	24	23	25	24	26	23	24	20	23
11917 F	26	24	SCHEDULED EUTHANASIA										
11918 F	26	27	28	29	31	28	29	34	30	30	28	29	32
11919 F	41	28	30	35	36	69	45	43	50	56	53	a	55
11920 F	29	35	41	40	42	40	49	40	35	40	39	36	33
11921 F	25	24	SCHEDULED EUTHANASIA										
11922 F	22	24	25	29	29	30	29	29	27	26	25	25	24
11923 F	29	29	SCHEDULED EUTHANASIA										
11924 F	38	40	41	39	40	36	39	36	34	36	35	33	30
11925 F	24	24	SCHEDULED EUTHANASIA										
MEAN	27	27	30	30	31	34	35	32	31	32	31	27	31
S.D.	4.8	4.6	6.1	5.9	6.7	13.5	9.7	6.3	7.7	10.0	9.6	5.1	9.9
N	20	20	10	10	10	10	10	10	10	10	10	9	10

[a]ELIMINATED DUE TO SPILLED WATER.

APPENDIX H
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL WATER CONSUMPTION DATA (GRAMS/ANIMAL/DAY)

DAY	1- 7	8-14	15-21	22-28	29-35	36-42	43-49	50-56	57-63	64-70	71-77	78-84	85-91
GROUP 3: 0.05 MG/KG/DAY													
11926 F	25	24	27	25	31	29	28	29	27	27	26	23	26
11927 F	24	23	27	22	26	26	27	26	30	30	29	31	29
11928 F	31	31	36	41	46	56	56	63	58	62	61	61	a
11929 F	27	25	28	28	30	32	33	34	33	32	33	33	33
11930 F	26	27	SCHEDULED EUTHANASIA										
11931 F	22	22	SCHEDULED EUTHANASIA										
11932 F	30	30	31	29	29	29	37	30	30	30	31	37	34
11933 F	31	31	33	31	40	41	38	36	38	38	34	36	33
11934 F	32	31	SCHEDULED EUTHANASIA										
11935 F	37	43	39	47	51	53	52	52	55	64	50	54	47
11936 F	27	26	25	24	27	27	33	27	31	32	33	30	28
11937 F	21	22	22	22	23	24	24	24	24	25	29	25	30
11938 F	32	30	32	32	35	38	40	37	34	36	33	34	34
11939 F	34	33	35	35	40	43	39	39	37	47	36	39	38
11940 F	28	29	28	28	29	31	35	35	37	38	38	38	38
11941 F	30	30	SCHEDULED EUTHANASIA										
11942 F	32	34	SCHEDULED EUTHANASIA										
11943 F	30	26	25	27	28	27	31	33	35	29	30	31	32
11944 F	a	28	37	36	35	33	36	35	34	33	37	32	28
11945 F	32	33	SCHEDULED EUTHANASIA										
11946 F	31	29	SCHEDULED EUTHANASIA										
11947 F	27	28	29	30	34	34	35	48	60	b	a	32	46
11948 F	26	26	27	29	27	25	27	28	27	24	26	26	23
11949 F	24	23	25	22	24	22	26	25	25	24	26	26	24
11950 F	21	20	20	19	20	20	22	20	21	21	21	21	23
11951 F	31	30	SCHEDULED EUTHANASIA										
11952 F	32	32	SCHEDULED EUTHANASIA										
11953 F	26	26	SCHEDULED EUTHANASIA										

[a]ELIMINATED DUE TO EMPTY WATER BOTTLE.
[b]ELIMINATED DUE TO SPILLED WATER.

APPENDIX H
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL WATER CONSUMPTION DATA (GRAMS/ANIMAL/DAY)

DAY	1- 7	8-14	15-21	22-28	29-35	36-42	43-49	50-56	57-63	64-70	71-77	78-84	85-91
GROUP 3: 0.05 MG/KG/DAY													
11954 F	29	27	29	30	28	27	31	29	29	27	27	27	36
11955 F	36	35	34	34	35	33	33	36	35	34	33	34	36
MEAN	29	28	29	29	32	33	34	34	35	34	33	33	33
S.D.	4.1	4.7	5.1	6.7	7.7	9.6	8.4	10.3	10.8	11.7	9.1	9.7	6.8
N	29	30	20	20	20	20	20	20	20	19	19	20	19

APPENDIX H
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL WATER CONSUMPTION DATA (GRAMS/ANIMAL/DAY)

DAY	1- 7	8-14	15-21	22-28	29-35	36-42	43-49	50-56	57-63	64-70	71-77	78-84	85-91
GROUP 4: 0.2 MG/KG/DAY													
11956 F	31	30	31	27	28	30	26	29	30	26	26	27	28
11957 F	26	28	30	31	37	37	58	54	53	70	26	57	64
11958 F	25	23	24	24	26	26	27	24	27	23	25	25	22
11959 F	17	20	SCHEDULED EUTHANASIA										
11960 F	30	30	SCHEDULED EUTHANASIA										
11961 F	22	23	27	27	26	29	28	27	28	26	26	27	26
11962 F	22	20	SCHEDULED EUTHANASIA										
11963 F	30	30	SCHEDULED EUTHANASIA										
11964 F	19	19	SCHEDULED EUTHANASIA										
11965 F	32	36	38	39	41	40	37	41	39	40	34	39	36
11966 F	27	24	23	23	29	25	28	21	a	b	a	b	a
11967 F	26	26	SCHEDULED EUTHANASIA										
11968 F	33	35	SCHEDULED EUTHANASIA										
11969 F	39	2	55	66	68	57	47	59	66	42	49	55	67
11970 F	34	34	SCHEDULED EUTHANASIA										
11971 F	39	35	SCHEDULED EUTHANASIA										
11972 F	27	26	30	31	33	33	31	34	50	30	28	26	30
11973 F	30	29	30	30	27	29	28	27	27	32	26	27	30
11974 F	24	24	SCHEDULED EUTHANASIA										
11975 F	29	26	25	25	33	32	36	34	34	32	29	30	31
MEAN	28	26	31	32	35	34	35	35	39	36	30	35	37
S.D.	5.8	7.6	9.2	12.6	12.8	9.5	10.5	12.6	14.2	14.2	7.7	12.6	16.7
N	20	20	10	10	10	10	10	10	9	9	9	9	9

[a]ELIMINATED DUE TO EMPTY WATER BOTTLE.
[b]ELIMINATED DUE TO SPILLED WATER.

APPENDIX H
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL WATER CONSUMPTION DATA (GRAMS/ANIMAL/DAY)

DAY	1- 7	8-14	15-21	22-28	29-35	36-42	43-49	50-56	57-63	64-70	71-77	78-84	85-91
GROUP 5: 1.0 MG/KG/DAY													
11976 F	20	20	23	24	23	23	23	24	23	22	20	24	27
11977 F	23	27	SCHEDULED EUTHANASIA										
11978 F	31	29	30	30	29	31	31	34	33	30	30	30	30
11979 F	33	29	31	30	35	31	34	34	40	35	38	33	34
11980 F	24	24	19	22	23	27	25	25	27	24	23	24	29
11981 F	24	24	30	26	25	25	23	24	23	22	25	22	20
11982 F	27	28	SCHEDULED EUTHANASIA										
11983 F	5	31	33	30	37	34	30	34	33	29	33	28	28
11984 F	27	29	SCHEDULED EUTHANASIA										
11985 F	30	27	28	27	30	30	31	33	32	30	25	29	25
11986 F	32	35	32	32	36	39	45	34	36	50	53	49	63
11987 F	23	23	23	22	26	27	26	29	29	26	29	29	27
11988 F	26	28	29	28	41	36	33	28	32	32	30	30	36
11989 F	24	22	SCHEDULED EUTHANASIA										
11990 F	30	27	24	26	28	29	29	31	31	29	22	39	28
11991 F	27	27	SCHEDULED EUTHANASIA										
11992 F	32	31	SCHEDULED EUTHANASIA										
11993 F	34	36	50	42	44	46	46	39	45	45	42	44	42
11994 F	25	27	SCHEDULED EUTHANASIA										
11995 F	30	33	33	32	33	30	31	31	30	33	32	29	31
11996 F	25	24	29	27	30	28	29	33	31	27	25	26	27
11997 F	31	40	33	40	60	48	34	45	a	33	37	44	54
11998 F	26	26	27	22	43	38	30	35	51	30	28	25	29
11999 F	25	23	29	26	28	29	31	33	29	32	32	27	28
12000 F	31	29	31	33	36	35	40	33	40	45	45	45	33
12001 F	24	24	SCHEDULED EUTHANASIA										
12002 F	37	38	36	37	36	37	36	38	36	35	33	35	36
12003 F	25	22	SCHEDULED EUTHANASIA										

[a]ELIMINATED DUE TO EMPTY WATER BOTTLE.

APPENDIX H
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL WATER CONSUMPTION DATA (GRAMS/ANIMAL/DAY)

DAY	1- 7	8-14	15-21	22-28	29-35	36-42	43-49	50-56	57-63	64-70	71-77	78-84	85-91
GROUP 5: 1.0 MG/KG/DAY													
12004 F	23	23	23	23	25	25	24	25	24	24	25	24	25
12005 F	34	36	SCHEDULED EUTHANASIA										
MEAN	27	28	30	29	33	32	31	32	33	32	31	32	33
S.D.	6.0	5.1	6.5	5.8	8.9	6.8	6.5	5.3	7.3	7.5	8.3	8.0	10.2
N	30	30	20	20	20	20	20	20	19	20	20	20	20

APPENDIX H
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL WATER CONSUMPTION DATA (GRAMS/ANIMAL/DAY)

DAY	1- 7	8-14	15-21	22-28	29-35	36-42	43-49	50-56	57-63	64-70	71-77	78-84	85-91
GROUP 6: 10.0 MG/KG/DAY													
12006 F	22	20	22	20	20	23	26	25	26	22	28	32	37
12007 F	33	35	37	32	30	34	31	34	34	34	32	31	29
12008 F	29	27	27	33	39	43	44	37	56	40	51	33	32
12009 F	24	21	22	26	28	26	25	28	29	25	24	25	24
12010 F	31	33	SCHEDULED EUTHANASIA										
12011 F	36	37	38	37	42	38	38	36	36	36	35	32	32
12012 F	25	24	27	27	27	25	26	28	25	26	26	26	26
12013 F	27	26	SCHEDULED EUTHANASIA										
12014 F	24	26	25	28	31	27	28	31	29	28	27	26	27
12015 F	25	25	25	24	26	26	25	27	27	24	25	24	23
12016 F	26	26	SCHEDULED EUTHANASIA										
12017 F	29	27	28	32	34	28	34	32	31	31	31	30	30
12018 F	28	26	25	28	29	28	31	27	30	30	29	25	25
12019 F	33	31	31	31	33	34	36	35	38	37	36	39	34
12020 F	37	39	42	44	42	40	42	45	40	39	39	38	39
12021 F	27	26	SCHEDULED EUTHANASIA										
12022 F	25	a	25	25	27	28	27	30	27	28	28	28	28
12023 F	25	26	SCHEDULED EUTHANASIA										
12024 F	32	33	36	37	38	37	40	38	37	37	38	37	34
12025 F	35	38	43	44	50	52	53	50	50	52	49	47	47
12026 F	26	25	SCHEDULED EUTHANASIA										
12027 F	30	30	31	35	36	33	34	34	35	35	33	32	36
12028 F	28	28	SCHEDULED EUTHANASIA										
12029 F	30	33	36	36	36	39	39	40	37	39	36	38	50
12030 F	23	25	SCHEDULED EUTHANASIA										
12031 F	24	25	SCHEDULED EUTHANASIA										
12032 F	25	26	SCHEDULED EUTHANASIA										
12033 F	29	28	33	34	30	31	34	31	31	29	30	29	39

[a]ELIMINATED DUE TO EMPTY WATER BOTTLE.

APPENDIX H
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL WATER CONSUMPTION DATA (GRAMS/ANIMAL/DAY)

DAY	1- 7	8-14	15-21	22-28	29-35	36-42	43-49	50-56	57-63	64-70	71-77	78-84	85-91
GROUP 6: 10.0 MG/KG/DAY													
12034 F	27	29	28	29	29	29	30	28	29	28	28	26	28
12035 F	36	38	40	44	44	42	46	38	41	41	44	48	44
MEAN	28	29	31	32	34	33	34	34	34	33	33	32	33
S.D.	4.1	5.1	6.6	6.8	7.3	7.5	7.7	6.4	8.0	7.2	7.7	6.9	7.6
N	30	29	20	20	20	20	20	20	20	20	20	20	20

APPENDIX I

Serum Hormone (TSH, T_3 and T_4) Report
(Report Provided by the Sponsor,
Attachment I by SLI)

SLI Study No. 3455.1

A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS WITH AMMONIUM PERCHLORATE
SLI Study No. 3455.1

SERUM HORMONE (TSH, T_3, T_4) REPORT

SUBMITTED TO:

Joseph Siglin, Ph.D., D.A.B.T.

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Spencerville, OH 45887

SUBMITTED BY:

Latha Narayanan Latha Narayanan 05/14/98

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Introduction

Ammonium perchlorate is an oxidizer that has been used as a component of solid rocket fuel. Perchlorate, the dissociated ion of ammonium perchlorate, has recently been recognized as a persistent and pervasive contaminant of water supplies in a number of major metropolitan areas. Current efforts at assessing the health risks of perchlorate have been hampered by a lack of relevant toxicity data and by a lack of understanding of the potential toxic mechanism of action. Perchlorate is known to disrupt thyroid hormone homeostasis in a number of species via an inhibition of iodine uptake into the thyroid gland. Assessment of thyroid hormone (T_3 and T_4) and thyroid stimulating hormone (TSH) levels in circulating blood is the most sensitive endpoint for the effect of perchlorate on an organism. Caldwell *et al.* (1996) measured T_3,T_4 and TSH hormone levels in male and female rats after 14 days of exposure to ammonium perchlorate in drinking water. The values for T_3 and T_4 in both male and female Sprague-Dawley rats decreased while the concentration of TSH increased after 14 days. Thyroid organ weights were not measured but histopathology of the thyroid revealed hypertrophy of follicular cells at the highest concentration levels. One objective of the 90-day study was to determine a NOEL for thyroid effects by perchlorate and to look for other potential target tissues.

SLI Study No. 3455.1

Methods

Compliance Statement: The analyses in the report entitled "Serum Hormone (TSH,T3,T4) Report" were conducted to be in compliance with the Environmental Protection Agency's Good Laboratory Practices Standards, 40 CFR 792.

Sample Collection: Serum samples from control and perchlorate treated male and female rats were received from Springborn Lab, Inc., Ohio. Ammonium perchlorate was administered orally in drinking water to groups of ten male and ten female rats for a period of 14 days or 90 days. The target doses were 0 (control), 0.01, 0.05, 0.2, 1.0 or 10.0 mg/kg/day. Serum samples were collected after 14 or 90 days. The time of blood sampling was recorded for each animal (See attachment 1). Recovery groups included both male and female rats exposed to perchlorate for 90 days (0, 0.05, 1, or 10 mg/kg/day) with serum samples collected at the termination of a 30-day post exposure period. The time of blood sampling was recorded for each animal (See attachment 1). Samples were kept frozen at -80^0 C prior to analysis for serum thyroid hormones.

Hormone Analysis: The following serum thyroid hormone levels were determined in control and perchlorate exposed rats: thyroxine (T4), triiodothyronine (T_3), and thyroid stimulating hormone (TSH). Assays for T_4,T_3, and TSH were performed using radioimmunoassay (RIA) kits according to manufacturer's standard procedures. Samples and standards were run in triplicate. Assay kits from the same batch number and with the same expiration date were used for all thyroid hormone or TSH measurements for each animal termination period (study days 14, 90 or 120). Tracer (^{125}I) radioactivity was measured with a gamma counter (Packard Instrument Co., Meriden, CT). Sources of the RIA kits and antiserum/antibody were: 1) T_3 RIA assay kits were purchased from Diagnostic Product Corp. (Los Angeles, CA) and canine T_3 antibody coated tubes were used; 2) T_4 RIA assay kits were purchased from Diagnostic Product Corp. (Los Angeles, CA) and T_4 antibody coated tubes were used; 3) TSH RIA assay kits were purchased from Amersham Corp. (Arlington Heights, IL) and lyophilized rabbit anti-rat TSH serum and Amerlex-M second antibody (donkey anti-rabbit serum coated onto magnetized polymer particles containing sodium azide) were both used.

Statistical Analysis: Results were analyzed using a one-way analysis of variance with Bonferroni multiple comparisons (Rosner, 1990).

Results

14 Day Study: After 14 days of exposure, a number of statistically significant treatment-and/ or concentration related effects on several thyroid hormone levels were observed (Table 1). Increases in mean TSH were observed in male rats of the 0.2, 1.0 and 10.0 mg/kg/day groups and in female rats of the 0.05, 0.2, 1.0 and 10.0 mg/kg/day groups. Statistically significant decreases in mean T_3 were observed in male rats at all dose levels while female rat levels were not statistically different from the control value at any level of exposure. The levels of T_4 that were statistically significant in male and female rats were only at the 10 mg/kg/day dose.

90 Day Study: After 90 days of exposure, a number of statistically significant treatment-and/ or concentration related effects on several thyroid hormone levels were observed (Table 2). Significant decreases in meanT_3 and T_4 were seen in both male and female rats at all dose levels. Increases in mean TSH were significantly different for male rats at 0.2 mg/kg/day and higher doses, while the mean TSH was significantly elevated for female rats at 10 mg/kg/day only.

30 Day Post Exposure Study: At the end of 30 days post exposure, statistically significant decreases were observed in mean T_4 levels in male rats from the 0.05, 1.0 and 10 mg/kg/day groups (Table 3). Statistically significant increases were seen in mean TSH values in female rats from the 0.05, 1.0 and 10 mg/kg/day AP groups.

Discussion

TSH, released from the anterior pituitary gland, is the major regulator of thyroid function and structure (Larsen and Ingbar, 1992). An increase in TSH levels in the blood results in an increase in the release of T_4 from the thyroid gland. Iodine deficiency leads to a decrease in T_4 production, an increase in thyroid releasing hormone (TRH) from the hypothalamus and an increase in TSH from the pituitary. The initial step in the production of T_4 is the uptake of iodine from plasma by thyroid follicular cells. Perchlorate is one of a number of anions that competitively inhibits iodine transport into the thyroid producing an effect similar to dietary iodine deficiency (Capen, 1997). This ability was the basis for the use of perchlorate salts medicinally for the control of hyperthyroidism. Due to cases of agranulocytosis and aplastic anemia (with fatalities), perchlorates are no longer used medicinally in the United States (Larsen and Ingbar, 1992). Although perchlorate salts were used pharmacologically, a subchronic or chronic dose-response study was never conducted to examine the long-term effects of perchlorate anion on the thyroid.

14 Day Study: Exposure to perchlorate in drinking water significantly altered thyroid hormone and TSH levels in both male and female rats as early as 14 days. At 14 days male and female rats appeared to respond differently with respect to TSH levels. Female rats were an order of magnitude more sensitive than male rats. Caldwell et al. (1996) also saw an order of magnitude difference between the male and female rat level of significance for TSH. Only T_4 levels were significantly different at the same dose for both sexes of rats (10 mg/kg/day). The decrease in T_4 concentration for male rats was 23% while the decrease for female rats was 18%. The data for T_3 is difficult to interpret, due to significant changes at all dose levels for male rats but no significant differences at any dose level for female rats.

90 Day Study: After 90 days of exposure the female rat showed smaller TSH changes than the male rat after continuous exposure to AP in drinking water. The dose level for male rats that was statistically significant stayed the same as the 14 day data. However, the statistically significant increase in TSH in male rats was now 17% greater than controls while the female rat increase was 21% greater, the opposite of the 14 day TSH levels. However, for T_4 and T_3 both male and female rats were equally sensitive to all doses of perchlorate including the lowest exposure dose. It is not clear why serum T_4 was depressed at all doses when TSH levels had no effect levels in both male and female rats.

30 Day Post Exposure Study: Based on Caldwell et al. (1996), who saw significant changes in thyroid parameters such as T_3 and T_4 and TSH levels after 14 days, it was believed that 30 days should be sufficient for the pituitary-thyroid axis to recover from the effects of continuous exposure to AP in drinking water. That was also the reason for the decrease in the number of groups for recovery. Although there appears to be significant differences in hormone levels, in general the hormone data at this time point is indicating recovery is in progress.

Even though the strains were different, the control values for TSH, T_4 and T_3 for Caldwell et al. (1996) were very similar to the control values seen in this study. Pooling control values for TSH, T_4 and T_3 from the 14, 90 and 120-day time points and then reanalyzing all data for statistical significance did not change the overall patterns of significance or make the data easier to interpret.

References

Caldwell, DJ, Kinkead, ER, Wolfe, RE, King, JH, Narayanan, L, Confer, PD, Mattie, DR. (1996). Changes in thyroid hormone levels after fourteen day oral dosing with ammonium perchlorate. *The Toxicologist*, 30(1), Part 2:67.

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Larsen, PR, and Ingbar, SH. (1992). The Thyroid Gland, in Williams Textbook of Endocrinology, Wilson, JD and Foster DW eds, W. B. Saunders Company, Philadelphia, PA

Rosner, B. (1990). Fundamentals of Biostatistics, PWS-Kent, Boston.

TABLE 1

VALUES[a] OF SERUM THYROID HORMONES FOR MALE AND FEMALE RATS FOLLOWING TREATMENT WITH PERCHLORATE FOR 14 DAYS

Parameter	Sex	Control	Group2 (0.01mg/kg/day)	Group3 (0.05mg/kg/day)	Group 4 (0.2mg/kg/day)	Group 5 (1.0mg/kg/day)	Group 6 (10mg/kg/day)
TSH(ng/mL)	M	14.8 ± 1.50	16.4 ± 1.68	16.9 ± 1.32	17.9[c] ± 1.60	18.8[d] ± 1.85	24.0[d] ± 2.44
	F	10.5 ± 0.79	11.7 ± 1.22	12.3[b] ± 1.02	12.4[b] ± 1.32	12.6[c] ± 1.25	16.6[d] ± 1.69
T_4 (ug/dL)	M	5.6 ± 0.59	5.5 ± 0.60	5.2 ± 0.29	5.2 ± 0.41	5.2 ± 0.46	4.3[d] ± 0.39
	F	4.4 ± 0.43	4.3 ± 0.45	4.2 ± 0.40	4.1 ± 0.48	4.1 ± 0.39	3.6[c] ± 0.35
T_3 (ng/dL)	M	200 ± 20	158[d] ± 17	140[d] ± 15	139[d] ± 15	124[d] ± 13	123[d] ± 13
	F	133 ± 15	134 ± 12	133 ± 13	128 ± 11	125 ± 11	124 ± 10

[a]Mean ± SD, N = 9 to 10.
[b]Significantly different from control, $p<0.05$
[c]Significantly different from control, $p<0.01$
[d]Significantly different from control, $p<0.001$

TABLE 2

VALUES[a] OF SERUM THYROID HORMONES FOR MALE AND FEMALE RATS FOLLOWING TREATMENT WITH PERCHLORATE FOR 90 DAYS.

Parameter	Sex	Control	Group2 (0.01mg/kg/day)	Group3 (0.05mg/kg/day)	Group 4 (0.2mg/kg/day)	Group 5 (1.0mg/kg/day)	Group 6 (10mg/kg/day)
TSH(ng/mL)	M	16.2 ± 1.51	16.9 ± 1.75	17.8 ± 1.64	19.0[c] ± 1.73	19.1[c] ± 1.37	19.1[c] ± 1.97
	F	16.5 ± 1.48	16.8 ± 1.83	16.8 ± 1.68	17.4 ± 1.55	17.7 ± 1.58	20.0[d] ± 1.69
T_4 (ug/dL)	M	5.1 ± 0.54	4.4[c] ± 0.47	3.7[d] ± 0.34	3.5[d] ± 0.36	3.5[d] ± 0.35	2.9[d] ± 0.30
	F	4.4 ± 0.44	3.5[d] ± 0.34	3.4[d] ± 0.35	3.4[d] ± 0.34	3.2[d] ± 0.31	3.0[d] ± 0.27
T_3 (ng/dL)	M	180 ± 20	158[b] ± 17	125[d] ± 14	123[d] ± 13	122[d] ± 12	117[d] ± 12
	F	170 ± 18	143[c] ± 15	143[c] ± 16	137[d] ± 15	123[d] ± 9	122[d] ± 12

[a]Mean ± SD, N = 9 to 10.
[b]Significantly different from control, $p<0.05$
[c]Significantly different from control, $p<0.01$
[d]Significantly different from control, $p<0.001$

TABLE 3

VALUES[a] OF SERUM THYROID HORMONES FOR MALE AND FEMALE RATS FOLLOWING TREATMENT WITH PERCHLORATE FOR 90 DAYS AND 30 DAY RECOVERY PERIOD

Parameter	Sex	Control	Group 3 (0.05mg/kg/day)	Group 5 (1.0mg/kg/day)	Group 6 (10mg/kg/day)
TSH(ng/mL)	M	20.9 ± 1.59	21.3 ± 1.86	22.2 ± 1.46	22.8 ± 2.44
	F	13.1 ± 1.33	15.5[c] ± 1.69	15.8[c] ± 1.44	16.0[d] ± 1.44
T_4 (ug/dL)	M	4.9 ± 0.47	4.0[d] ± 0.38	4.0[d] ± 0.29	3.4[d] ± 0.31
	F	3.5 ± 0.33	3.4 ± 0.36	3.3 ± 0.31	3.1 ± 0.34
T_3 (ng/dL)	M	203 ± 22	214 ± 19	212 ± 23	185 ± 17
	F	224 ± 21	216 ± 17	215 ± 20	197[b] ± 21

[a]Mean ± SD, N = 9 to 10.
[b]Significantly different from control, $p<0.05$
[c]Significantly different from control, $p<0.01$
[d]Significantly different from control, $p<0.001$

SLI Study No. 3455.1

QUALITY ASSURANCE

The study, "A 90-Day Drinking Water Toxicity Study in Rats with Ammonium Perchlorate, SLI Study No. 3455.1, Serum Hormone (T_3, T_4, TSH)," was conducted by the ManTech Geo-Centers Joint Venture to be in compliance with the Environmental Protection Agency's Good Laboratory Practices Standards, 40 CFR 792.

The items below were inspected by members of the Quality Assurance Unit. Results of the inspections were reported directly to the Investigator and Study Director at the close of each inspection.

DATE OF INSPECTION	ITEM INSPECTED
April 2-7, 1998	Hormone data
April 8, 1998	Draft investigator report.

The Quality Assurance Unit has determined through review process that this report accurately describes those methods and standard operating procedures required by the protocol and that the reported results accurately reflect the raw data obtained during the course of the study. No discrepancies were found that would alter the interpretations presented in this Final Report.

M G Schneider

M. G. Schneider
QA Coordinator

Date April 10, 1998

Attachment 1
Blood Sample Collection Times
(Day 15)

Group 1 (0 mg/kg/day)		Group 2 (0.01 mg/kg/day)		Group 3 (0.05 mg/kg/day)		Group 4 (0.2 mg/kg/day)		Group 5 (1.0 mg/kg/day)		Group 6 (10.0 mg/kg/day)	
Animal No./Sex	Collection Time	Animal No./Sex	Collection Time	Animal No./Sex	Collection Time	Animal No./Sex	Collection Time	Animal No./Sex	Collection Time	Animal No./Sex	Collection Time
11739 M	0850	11763 M	0849	11786 M	0851	11807 M	0850	11819 M	0957	11861 M	0958
11881 F	0959	11909 F	1025	11931 F	1041	11971 F	1042	12001 F	1052	12021 F	1122
11720 M	1127	11762 M	1135	11789 M	1146	11810 M	1248	11835 M	1249	11870 M	1300
11878 F	1313	11908 F	1328	11930 F	1337	11963 F	1350	12005 F	1411	12010 F	1437
11717 M	1441	11759 M	1452	11778 M	1515	11803 M	1517	11816 M	1545	11848 M	1550

SLI Study No. 3455.1

Attachment 1
Blood Sample Collection Times
(Day 16)

Group 1 (0 mg/kg/day)		Group 2 (0.01 mg/kg/day)		Group 3 (0.05 mg/kg/day)		Group 4 (0.2 mg/kg/day)		Group 5 (1.0 mg/kg/day)		Group 6 (10.0 mg/kg/day)	
Animal No./Sex	Collection Time	Animal No./Sex	Collection Time	Animal No./Sex	Collection Time	Animal No./Sex	Collection Time	Animal No./Sex	Collection Time	Animal No./Sex	Collection Time
11877 F	0841	11911 F	0841	11953 F	0843	11968 F	0839	11977 F	0921	12023 F	0926
11731 M	0934	11758 M	0948	11779 M	1015	11798 M	1015	11831 M	1028	11859 M	1100
11889 F	1058	11912 F	1100	11934 F	1117	11964 F	1145	11989 F	1145	12028 F	1240
11718 M	1240	11751 M	1300	11766 M	1301	11813 M	1328	11839 M	1345	11847 M	1343
11882 F	1350	11913 F	1418	11945 F	1420	11959 F	1431	11994 F	1446	12016 F	1530

SLI Study No. 3455.1

Attachment 1
Blood Sample Collection Times
(Day 17)

Group 1 (0 mg/kg/day)		Group 2 (0.01 mg/kg/day)		Group 3 (0.05 mg/kg/day)		Group 4 (0.2 mg/kg/day)		Group 5 (1.0 mg/kg/day)		Group 6 (10.0 mg/kg/day)	
Animal No./Sex	Collection Time	Animal No./Sex	Collection Time	Animal No./Sex	Collection Time	Animal No./Sex	Collection Time	Animal No./Sex	Collection Time	Animal No./Sex	Collection Time
11745 M	0824	11760 M	0822	11784 M	0822	11801 M	0823	11820 M	0903	11858 M	0905
11893 F	0908	11925 F	0923	11941 F	1001	11960 F	1008	12003 F	1035	12030 F	1030
11725 M	1048	11757 M	1057	11768 M	1111	11804 M	1131	11836 M	1132	11846 M	1148
11884 F	1153	11921 F	1300	11942 F	1310	11962 F	1315	11984 F	1350	12013 F	1354
11728 M	1407	11756 M	1424	11793 M	1431	11808 M	1431	11844 M	1520	11857 M	1525

Blood Sample Collection Times
(Day 18)

Group 1 (0 mg/kg/day)		Group 2 (0.01 mg/kg/day)		Group 3 (0.05 mg/kg/day)		Group 4 (0.2 mg/kg/day)		Group 5 (1.0 mg/kg/day)		Group 6 (10.0 mg/kg/day)	
Animal No./Sex	Collection Time	Animal No./Sex	Collection Time	Animal No./Sex	Collection Time	Animal No./Sex	Collection Time	Animal No./Sex	Collection Time	Animal No./Sex	Collection Time
11900 F	0835	11917 F	0835	11952 F	0839	11967 F	a	11982 F	0920	12032 F	0918
11716 M	0920	11764 M	1008	11772 M	1012	11802 M	1018	11825 M	1020	11863 M	1055
11903 F	1100	11923 F	1101	11951 F	1103	11970 F	1131	11991 F	1140	12026 F	1145
11744 M	1256	11747 M	1258	11771 M	1258	11796 M	1304	11818 M	1337	11853 M	1342
11894 F	1349	11906 F	1350	11946 F	1414	11974 F	1420	11992 F	1425	12031 F	1508

[a]Unable to collect blood sample at necropsy.

Attachment 1
Blood Sample Collection Times
(Day 92)

Group 1 (0 mg/kg/day)		Group 2 (0.01 mg/kg/day)		Group 3 (0.05 mg/kg/day)		Group 4 (0.2 mg/kg/day)		Group 5 (1.0 mg/kg/day)		Group 6 (10.0 mg/kg/day)	
Animal No./Sex	Collection Time	Animal No./Sex	Collection Time	Animal No./Sex	Collection Time	Animal No./Sex	Collection Time	Animal No./Sex	Collection Time	Animal No./Sex	Collection Time
11721 M	0927	11746 M	1035	11769 M	1145	11797 M	1250	11817 M	1350	11851 M	1409
11876 F	1309	11907 F	0942	11927 F	1104	11956 F	0943	11976 F	1113	12006 F	1300
11724 M	1545	11748 M	1657	11774 M	1836	11799 M	1920	11822 M	1940	11852 M	1956
11886 F	1356	11910 F	1446	11929 F	1550	11957 F	1653	11983 F	1650	12007 F	1833
11729 M	2013	11749 M	2037	11776 M	2108	11800 M	2130	11824 M	2147	11854 M	2206

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Attachment 1
Blood Sample Collection Times
(Day 93)

Group 1 (0 mg/kg/day)		Group 2 (0.01 mg/kg/day)		Group 3 (0.05 mg/kg/day)		Group 4 (0.2 mg/kg/day)		Group 5 (1.0 mg/kg/day)		Group 6 (10.0 mg/kg/day)	
Animal No./Sex	Collection Time	Animal No./Sex	Collection Time	Animal No./Sex	Collection Time	Animal No./Sex	Collection Time	Animal No./Sex	Collection Time	Animal No./Sex	Collection Time
11890 F	0836	11914 F	0843	11935 F	1000	11958 F	1117	11988 F	1153	12011 F	1254
11732 M	0946	11750 M	1013	11777 M	1036	11805 M	1055	11827 M	1121	11860 M	1307
11891 F	1310	11915 F	1425	11936 F	1519	11961 F	1519	11990 F	1537	12012 F	1602
11734 M	1336	11752 M	1358	11780 M	1421	11806 M	1442	11830 M	1712	11862 M	1715
11892 F	1604	11916 F	1645	11937 F	1648	11965 F	1704	11993 F	1748	12018 F	1800

SLI Study No. 3455.1

Attachment 1
Blood Sample Collection Times
(Day 94)

Group 1 (0 mg/kg/day)		Group 2 (0.01 mg/kg/day)		Group 3 (0.05 mg/kg/day)		Group 4 (0.2 mg/kg/day)		Group 5 (1.0 mg/kg/day)		Group 6 (10.0 mg/kg/day)	
Animal No./Sex	Collection Time	Animal No./Sex	Collection Time	Animal No./Sex	Collection Time	Animal No./Sex	Collection Time	Animal No./Sex	Collection Time	Animal No./Sex	Collection Time
11735 M	0834	11753 M	0913	11787 M	1010	11809 M	1023	11832 M	1110	11866 M	1127
11895 F	0825	11918 F	1013	11938 F	1120	11966 F	1252	11995 F	1257	12019 F	1345
11736 M	1255	11754 M	1322	11790 M	1400	11811 M	1437	11840 M	1539	11867 M	1556
11896 F	1413	11919 F	1518	11939 F	1602	11969 F	1648	11996 F	1657	12022 F	a
11738 M	1658	11755 M	1836	11791 M	1843	11812 M	1932	11841 M	2012	11871 M	2017

[a]Time of blood collection inadvertently not recorded.

SLI Study No. 3455.1

Attachment 1
Blood Sample Collection Times
(Day 95)

Group 1 (0 mg/kg/day)		Group 2 (0.01 mg/kg/day)		Group 3 (0.05 mg/kg/day)		Group 4 (0.2 mg/kg/day)		Group 5 (1.0 mg/kg/day)		Group 6 (10.0 mg/kg/day)	
Animal No./Sex	Collection Time	Animal No./Sex	Collection Time	Animal No./Sex	Collection Time	Animal No./Sex	Collection Time	Animal No./Sex	Collection Time	Animal No./Sex	Collection Time
11901 F	0843	11920 F	0849	11950 F	0850	11972 F	1010	11997 F	1015	12025 F	1104
11741 M	0858	11761 M	1010	11792 M	1019	11814 M	1055	11842 M	1245	11872 M	1257
11902 F	1113	11922 F	1132	11954 F	1244	11973 F	1347	11998 F	1406	12029 F	1508
11742 M	1335	11765 M	1517	11794 M	1606	11815 M	1623	11845 M	1658	11873 M	1721
11904 F	1514	11924 F	1605	11955 F	1614	11975 F	1658	12000 F	1705	12033 F	1750

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Attachment 1
Blood Sample Collection Times
(Day 121)

Group 1 (0 mg/kg/day)		Group 3 (0.05 mg/kg/day)		Group 5 (1.0 mg/kg/day)		Group 6 (10.0 mg/kg/day)	
Animal No./Sex	Collection Time	Animal No./Sex	Collection Time	Animal No./Sex	Collection Time	Animal No./Sex	Collection Time
11719 M	0833	11767 M	0852	11821 M	1009	11849 M	1019
11879 F	0834	11926 F	0842	11978 F	1009	12008 F	1017
11722 M	1059	11770 M	1114	11823 M	1301	11850 M	1318
11880 F	1107	11928 F	1117	11979 F	1146	12009 F	1250
11723 M	1338	11773 M	1403	11826 M	1416	11855 M	1434
11883 F	1305	11932 F	1405	11980 F	1453	12014 F	1521
11726 M	1522	11775 M	1540	11828 M	1608	--	--

SLI Study No. 3455.1

Attachment 1
Blood Sample Collection Times
(Day 122)

Group 1 (0 mg/kg/day)		Group 3 (0.05 mg/kg/day)		Group 5 (1.0 mg/kg/day)		Group 6 (10.0 mg/kg/day)	
Animal No./Sex	Collection Time	Animal No./Sex	Collection Time	Animal No./Sex	Collection Time	Animal No./Sex	Collection Time
--	--	--	--	--	--	11856 M	0826
11885 F	0825	11933 F	0830	11981 F	0908	12015 F	0923
11727 M	0844	11781 M	0914	11829 M	1017	11864 M	1050
11887 F	0958	11940 F	1017	11985 F	1022	12017 F	1055
11730 M	1112	11782 M	1138	11833 M	1303	11865 M	1333
11888 F	1117	11943 F	1234	11986 F	1240	12020 F	1245
11733 M	1348	11783 M	1444	11834 M	1458	11868 M	1535
11897 F	1336	11944 F	1348	--	--	--	--

SLI Study No. 3455.1

Attachment 1
Blood Sample Collection Times
(Day 123)

Group 1 (0 mg/kg/day)		Group 3 (0.05 mg/kg/day)		Group 5 (1.0 mg/kg/day)		Group 6 (10.0 mg/kg/day)	
Animal No./Sex	Collection Time	Animal No./Sex	Collection Time	Animal No./Sex	Collection Time	Animal No./Sex	Collection Time
--	--	--	--	11987 F	0827	12024 F	0832
11737 M	0823	11785 M	0840	11837 M	0953	11869 M	1008
11898 F	0953	11947 F	0957	11999 F	1044	12027 F	1043
11740 M	1053	11788 M	1105	11838 M	1152	11874 M	1308
11899 F	1131	11949 F	1133	12002 F	1309	12034 F	1317
11743 M	1324	11795 M	1406	11843 M	1420	11875 M	1535
11905 F	1408	--	--	12004 F	1420	12035 F	1534

SLI Study No. 3455.1

SLI Study No. 3455.1

APPENDIX J

Individual Hematology Data

APPENDIX J

SLI STUDY NO.: 3455.1

CLIENT: MANTECH ENVIRONMENTAL

A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL HEMATOLOGY DATA

DAYS 15-18

ANIMAL NO.	ERYTHRO-CYTES 10*6/CMM	HEMO-GLOBIN G/DL	HEMA-TOCRIT %	MEAN CORPUS VOLUME FL	MEAN CORPUS HMGLBN PG	MEAN CORPUS HEMO-CON G/DL	PLATE-LETS 10*3/CMM	NUCLE-ATED RBC'S % WBC	RED CELL MORPHOLOGY
GROUP 1: 0 MG/KG/DAY									
11716 M	7.00	15.1	42.9	61.3	21.6	35.2	740	0	NORMAL
11717 M	7.00	15.0	42.5	60.7	21.4	35.3	830	0	NORMAL[a]
11718 M	7.00	15.0	41.1	58.7	21.4	36.5	930	0	NORMAL
11720 M	6.80	15.0	40.7	59.9	22.1	36.8	810	0	NORMAL
11725 M	6.90	15.0	42.8	62.1	21.7	35.0	990	0	NORMAL
11728 M	6.50	14.7	41.7	64.1	22.6	35.3	820	0	NORMAL
11731 M	b	b	b	b	b	b	b	b	b
11739 M	6.40	15.1	40.4	63.1	23.6	37.4	750	0	NORMAL
11744 M	7.70	15.4	44.0	57.1	20.0	35.0	990	0	NORMAL
11745 M	6.90	14.3	42.1	61.0	20.7	34.0	920	0	NORMAL
MEAN	6.91	15.0	42.0	60.9	21.7	35.6	864	0	
S.D.	0.369	0.30	1.16	2.15	1.04	1.07	95.9	0.0	
N	9	9	9	9	9	9	9	9	

NOTE: THE MEANS AND STANDARD DEVIATIONS WERE CALCULATED USING NONROUNDED VALUES.
[a]PLATELET CLUMPS WERE PRESENT.
[b]BLOOD SAMPLE WAS CLOTTED.

DAYS 15-18

ANIMAL NO.	LEUKO-CYTES 10*3/CMM	SEGD NEUTRO-PHILS 10*3/CMM	NON-SEGD NEUTRO-PHILS 10*3/CMM	LYMPHO-CYTES 10*3/CMM	MONO-CYTES 10*3/CMM	EOSINO-PHILS 10*3/CMM	BASO-PHILS 10*3/CMM
GROUP 1: 0 MG/KG/DAY							
11716 M	13.3	0.7	0.0	12.1	0.3	0.3	0.0
11717 M	13.8	1.0	0.0	12.7	0.1	0.0	0.0
11718 M	13.0	1.3	0.0	11.2	0.4	0.1	0.0
11720 M	12.2	2.4	0.0	9.5	0.1	0.1	0.0
11725 M	12.4	0.5	0.0	11.8	0.1	0.0	0.0
11728 M	19.1	1.3	0.0	17.2	0.6	0.0	0.0
11731 M	a	a	a	a	a	a	a
11739 M	12.5	1.1	0.0	11.1	0.1	0.1	0.0
11744 M	15.6	1.2	0.0	14.2	0.0	0.2	0.0
11745 M	16.9	1.2	0.0	15.5	0.2	0.0	0.0
MEAN	14.3	1.2	0.0	12.8	0.2	0.1	0.0
S.D.	2.39	0.55	0.00	2.41	0.17	0.09	0.00
N	9	9	9	9	9	9	9

NOTE: THE MEANS AND STANDARD DEVIATIONS WERE CALCULATED USING NONROUNDED VALUES.
[a]BLOOD SAMPLE WAS CLOTTED.

DAYS 15-18

ANIMAL NO.	ERYTHRO-CYTES 10*6/CMM	HEMO-GLOBIN G/DL	HEMA-TOCRIT %	MEAN CORPUS VOLUME FL	MEAN CORPUS HMGLBN PG	MEAN CORPUS HEMO-CON G/DL	PLATE-LETS 10*3/CMM	NUCLE-ATED RBC'S % WBC	RED CELL MORPHOLOGY
GROUP 2: 0.01 MG/KG/DAY									
11747 M	7.50	15.9	44.0	58.7	21.2	36.1	880	0	NORMAL
11751 M	7.10	15.0	42.3	59.6	21.1	35.4	860	0	NORMAL
11756 M	7.80	15.2	45.2	58.0	19.5	33.6	890	0	NORMAL
11757 M	7.40	15.1	42.8	57.9	20.4	35.2	570	0	NORMAL[a]
11758 M	7.50	15.7	45.2	60.2	20.9	34.8	860	0	NORMAL
11759 M	7.50	15.7	44.9	59.9	20.9	34.9	770	0	NORMAL
11760 M	6.90	14.9	43.8	63.5	21.6	34.0	810	0	NORMAL
11762 M	6.60	14.7	38.9	59.0	22.3	37.8	550	0	NORMAL[a]
11763 M	b	b	b	b	b	b	b	b	b
11764 M	7.30	15.0	43.9	60.2	20.5	34.1	1030	0	NORMAL
MEAN	7.29	15.2	43.4	59.7	20.9	35.1	802	0	
S.D.	0.366	0.42	1.98	1.68	0.79	1.27	154.5	0.0	
N	9	9	9	9	9	9	9	9	

NOTE: THE MEANS AND STANDARD DEVIATIONS WERE CALCULATED USING NONROUNDED VALUES.
[a]PLATELET CLUMPS WERE PRESENT.
[b]BLOOD SAMPLE WAS CLOTTED.

DAYS 15-18

ANIMAL NO.	LEUKO-CYTES 10*3/CMM	SEGD NEUTRO-PHILS 10*3/CMM	NON-SEGD NEUTRO-PHILS 10*3/CMM	LYMPHO-CYTES 10*3/CMM	MONO-CYTES 10*3/CMM	EOSINO-PHILS 10*3/CMM	BASO-PHILS 10*3/CMM
GROUP 2: 0.01 MG/KG/DAY							
11747 M	12.4	0.7	0.0	11.7	0.0	0.0	0.0
11751 M	12.0	0.6	0.0	11.3	0.1	0.0	0.0
11756 M	12.1	0.6	0.0	11.5	0.0	0.0	0.0
11757 M	18.9	1.7	0.0	16.8	0.4	0.0	0.0
11758 M	15.7	2.4	0.0	13.0	0.3	0.0	0.0
11759 M	16.2	1.1	0.0	14.7	0.2	0.2	0.0
11760 M	20.3	1.4	0.0	18.9	0.0	0.0	0.0
11762 M	13.9	1.5	0.0	12.2	0.1	0.0	0.0
11763 M	a	a	a	a	a	a	a
11764 M	20.2	1.0	0.0	19.0	0.2	0.0	0.0
MEAN	15.7	1.2	0.0	14.3	0.1	0.0	0.0
S.D.	3.40	0.58	0.00	3.15	0.14	0.05	0.00
N	9	9	9	9	9	9	9

NOTE: THE MEANS AND STANDARD DEVIATIONS WERE CALCULATED USING NONROUNDED VALUES.
[a]BLOOD SAMPLE WAS CLOTTED.

DAYS 15-18

ANIMAL NO.	ERYTHRO-CYTES 10*6/CMM	HEMO-GLOBIN G/DL	HEMA-TOCRIT %	MEAN CORPUS VOLUME FL	MEAN CORPUS HMGLBN PG	MEAN CORPUS HEMO-CON G/DL	PLATE-LETS 10*3/CMM	NUCLE-ATED RBC'S % WBC	RED CELL MORPHOLOGY
GROUP 3: 0.05 MG/KG/DAY									
11766 M	6.20	14.1	40.2	64.8	22.7	35.1	1010	0	NORMAL
11768 M	6.80	14.3	41.2	60.6	21.0	34.7	890	0	NORMAL
11771 M	7.50	15.8	44.8	59.8	21.1	35.2	910	0	NORMAL
11772 M	7.10	15.0	43.5	61.2	21.1	34.5	840	0	NORMAL
11778 M	7.20	15.2	44.2	61.4	21.1	34.4	960	0	NORMAL[a]
11779 M	7.30	15.2	43.6	59.7	20.8	34.9	840	0	NORMAL
11784 M	7.50	15.4	44.2	58.9	20.5	34.9	740	0	NORMAL[a]
11786 M	b	b	b	b	b	b	b	b	b
11789 M	6.60	15.2	41.4	62.8	23.0	36.7	720	0	NORMAL
11793 M	7.40	15.1	44.2	59.7	20.4	34.2	890	0	NORMAL
MEAN	7.07	15.0	43.0	61.0	21.3	35.0	867	0	
S.D.	0.447	0.53	1.65	1.85	0.92	0.73	94.3	0.0	
N	9	9	9	9	9	9	9	9	

NOTE: THE MEANS AND STANDARD DEVIATIONS WERE CALCULATED USING NONROUNDED VALUES.
[a]PLATELET CLUMPS WERE PRESENT.
[b]BLOOD SAMPLE WAS CLOTTED.

DAYS 15-18

ANIMAL NO.	LEUKO-CYTES 10*3/CMM	SEGD NEUTRO-PHILS 10*3/CMM	NON-SEGD NEUTRO-PHILS 10*3/CMM	LYMPHO-CYTES 10*3/CMM	MONO-CYTES 10*3/CMM	EOSINO-PHILS 10*3/CMM	BASO-PHILS 10*3/CMM
GROUP 3: 0.05 MG/KG/DAY							
11766 M	9.2	0.7	0.0	8.3	0.1	0.1	0.0
11768 M	16.6	1.0	0.0	15.3	0.2	0.2	0.0
11771 M	13.9	1.1	0.0	12.4	0.3	0.1	0.0
11772 M	15.7	1.9	0.0	13.5	0.3	0.0	0.0
11778 M	14.2	1.3	0.0	12.9	0.0	0.0	0.0
11779 M	16.5	1.2	0.0	15.2	0.0	0.2	0.0
11784 M	18.2	1.8	0.0	16.4	0.0	0.0	0.0
11786 M	a	a	a	a	a	a	a
11789 M	13.5	2.2	0.0	11.3	0.0	0.0	0.0
11793 M	20.3	1.6	0.0	18.3	0.2	0.2	0.0
MEAN	15.3	1.4	0.0	13.7	0.1	0.1	0.0
S.D.	3.17	0.47	0.00	2.96	0.13	0.09	0.00
N	9	9	9	9	9	9	9

NOTE: THE MEANS AND STANDARD DEVIATIONS WERE CALCULATED USING NONROUNDED VALUES.
[a]BLOOD SAMPLE WAS CLOTTED.

INDIVIDUAL HEMATOLOGY DATA

DAYS 15-18

ANIMAL NO.	ERYTHRO-CYTES 10*6/CMM	HEMO-GLOBIN G/DL	HEMA-TOCRIT %	MEAN CORPUS VOLUME FL	MEAN CORPUS HMGLBN PG	MEAN CORPUS HEMO-CON G/DL	PLATE-LETS 10*3/CMM	NUCLE-ATED RBC'S % WBC	RED CELL MORPHOLOGY
GROUP 4: 0.2 MG/KG/DAY									
11796 M	7.00	15.2	42.6	60.9	21.7	35.7	490	0	NORMAL[a]
11798 M	7.30	15.4	45.1	61.8	21.1	34.1	1010	0	NORMAL
11801 M	7.10	15.1	43.7	61.5	21.3	34.6	860	0	NORMAL[a]
11802 M	6.80	15.2	44.4	65.3	22.4	34.2	970	0	NORMAL
11803 M	6.60	14.0	38.6	58.5	21.2	36.3	790	0	NORMAL
11804 M	6.90	15.1	43.0	62.3	21.9	35.1	930	0	NORMAL
11807 M	6.90	15.4	42.4	61.5	22.3	36.3	780	0	NORMAL[a]
11808 M	6.40	14.1	41.6	65.0	22.0	33.9	680	0	NORMAL
11810 M	7.00	15.8	44.5	63.5	22.6	35.5	780	0	NORMAL
11813 M	7.50	15.6	44.2	58.9	20.8	35.3	830	0	NORMAL[a]
MEAN	6.95	15.1	43.0	61.9	21.7	35.1	812	0	
S.D.	0.317	0.59	1.90	2.26	0.61	0.88	150.7	0.0	
N	10	10	10	10	10	10	10	10	

NOTE: THE MEANS AND STANDARD DEVIATIONS WERE CALCULATED USING NONROUNDED VALUES.
[a]PLATELET CLUMPS WERE PRESENT.

DAYS 15-18

ANIMAL NO.	LEUKO-CYTES 10*3/CMM	SEGD NEUTRO-PHILS 10*3/CMM	NON-SEGD NEUTRO-PHILS 10*3/CMM	LYMPHO-CYTES 10*3/CMM	MONO-CYTES 10*3/CMM	EOSINO-PHILS 10*3/CMM	BASO-PHILS 10*3/CMM
GROUP 4: 0.2 MG/KG/DAY							
11796 M	11.8	0.8	0.0	10.9	0.0	0.1	0.0
11798 M	11.7	0.6	0.0	10.8	0.2	0.1	0.0
11801 M	13.8	1.1	0.0	12.3	0.1	0.3	0.0
11802 M	16.9	0.2	0.0	16.7	0.0	0.0	0.0
11803 M	10.5	2.0	0.0	8.4	0.0	0.1	0.0
11804 M	14.8	1.8	0.0	12.4	0.3	0.1	0.1
11807 M	11.8	1.5	0.0	10.0	0.0	0.2	0.0
11808 M	11.9	1.4	0.0	10.2	0.0	0.2	0.0
11810 M	13.5	0.9	0.0	12.6	0.0	0.0	0.0
11813 M	13.5	1.4	0.0	12.0	0.0	0.1	0.0
MEAN	13.0	1.2	0.0	11.6	0.1	0.1	0.0
S.D.	1.87	0.56	0.00	2.22	0.11	0.09	0.05
N	10	10	10	10	10	10	10

NOTE: THE MEANS AND STANDARD DEVIATIONS WERE CALCULATED USING NONROUNDED VALUES.

INDIVIDUAL HEMATOLOGY DATA

DAYS 15-18

ANIMAL NO.	ERYTHRO-CYTES 10*6/CMM	HEMO-GLOBIN G/DL	HEMA-TOCRIT %	MEAN CORPUS VOLUME FL	MEAN CORPUS HMGLBN PG	MEAN CORPUS HEMO-CON G/DL	PLATE-LETS 10*3/CMM	NUCLE-ATED RBC'S % WBC	RED CELL MORPHOLOGY
GROUP 5: 1.0 MG/KG/DAY									
11816 M	6.90	14.7	41.4	60.0	21.3	35.5	820	0	NORMAL
11818 M	7.10	15.0	43.8	61.7	21.1	34.2	930	0	NORMAL
11819 M	5.30	14.2	32.3	61.0	26.8	43.9	470	0	NORMAL
11820 M	6.30	13.9	38.7	61.5	22.1	35.9	1000	0	NORMAL
11825 M	7.00	14.8	42.1	60.2	21.1	35.1	890	0	NORMAL
11831 M	6.90	14.3	41.8	60.6	20.7	34.2	700	0	NORMAL[a]
11835 M	6.70	14.6	39.5	59.0	21.8	36.9	850	0	NORMAL
11836 M	7.30	15.5	43.7	59.9	21.2	35.4	1030	0	NORMAL
11839 M	b	b	b	b	b	b	b	b	b
11844 M	7.20	14.9	45.3	62.9	20.7	32.9	813	0	NORMAL
MEAN	6.74	14.7	41.0	60.8	21.9	36.0	834	0	
S.D.	0.617	0.48	3.85	1.16	1.91	3.18	169.4	0.0	
N	9	9	9	9	9	9	9	9	

NOTE: THE MEANS AND STANDARD DEVIATIONS WERE CALCULATED USING NONROUNDED VALUES.
[a]PLATELET CLUMPS WERE PRESENT.
[b]BLOOD SAMPLE WAS NOT AVAILABLE FOR ANALYSIS.

DAYS 15-18

ANIMAL NO.	LEUKO-CYTES 10*3/CMM	SEGD NEUTRO-PHILS 10*3/CMM	NON-SEGD NEUTRO-PHILS 10*3/CMM	LYMPHO-CYTES 10*3/CMM	MONO-CYTES 10*3/CMM	EOSINO-PHILS 10*3/CMM	BASO-PHILS 10*3/CMM
GROUP 5: 1.0 MG/KG/DAY							
11816 M	12.5	1.0	0.0	11.1	0.4	0.0	0.0
11818 M	16.9	1.7	0.0	14.5	0.7	0.0	0.0
11819 M	13.3	1.9	0.0	11.0	0.0	0.4	0.0
11820 M	13.9	1.5	0.0	12.2	0.1	0.0	0.0
11825 M	18.6	3.2	0.0	15.1	0.0	0.4	0.0
11831 M	17.5	1.2	0.0	16.3	0.0	0.0	0.0
11835 M	20.7	1.2	0.0	19.3	0.2	0.0	0.0
11836 M	12.6	1.1	0.0	11.0	0.4	0.1	0.0
11839 M	a	a	a	a	a	a	a
11844 M	15.2	0.6	0.0	14.4	0.2	0.0	0.0
MEAN	15.7	1.5	0.0	13.9	0.2	0.1	0.0
S.D.	2.90	0.73	0.00	2.82	0.23	0.17	0.00
N	9	9	9	9	9	9	9

NOTE: THE MEANS AND STANDARD DEVIATIONS WERE CALCULATED USING NONROUNDED VALUES.
[a]BLOOD SAMPLE WAS NOT AVAILABLE FOR ANALYSIS.

DAYS 15-18

ANIMAL NO.	ERYTHRO-CYTES 10*6/CMM	HEMO-GLOBIN G/DL	HEMA-TOCRIT %	MEAN CORPUS VOLUME FL	MEAN CORPUS HMGLBN PG	MEAN CORPUS HEMO-CON G/DL	PLATE-LETS 10*3/CMM	NUCLE-ATED RBC'S % WBC	RED CELL MORPHOLOGY
GROUP 6: 10.0 MG/KG/DAY									
11846 M	a	a	a	a	a	a	a	a	a
11847 M	7.40	15.1	45.1	60.9	20.4	33.5	840	0	NORMAL
11848 M	a	a	a	a	a	a	a	a	a
11853 M	6.80	14.8	42.0	61.7	21.8	35.3	660	0	NORMAL
11857 M	7.40	15.2	44.6	60.3	20.5	34.1	1080	0	NORMAL
11858 M	7.10	14.7	42.4	59.7	20.7	34.7	1050	0	NORMAL[b]
11859 M	6.50	14.8	41.5	63.8	22.8	35.7	860	0	NORMAL[b]
11861 M	a	a	a	a	a	a	a	a	a
11863 M	7.10	15.5	44.7	63.0	21.8	34.7	1000	0	NORMAL
11870 M	6.70	15.4	43.1	64.3	23.0	35.7	670	0	NORMAL
MEAN	7.00	15.1	43.3	62.0	21.6	34.8	880	0	
S.D.	0.346	0.31	1.45	1.78	1.08	0.82	172.1	0.0	
N	7	7	7	7	7	7	7	7	

NOTE: THE MEANS AND STANDARD DEVIATIONS WERE CALCULATED USING NONROUNDED VALUES.
[a]BLOOD SAMPLE WAS CLOTTED.
[b]PLATELET CLUMPS WERE PRESENT.

INDIVIDUAL HEMATOLOGY DATA

DAYS 15-18

ANIMAL NO.	LEUKO-CYTES 10*3/CMM	SEGD NEUTRO-PHILS 10*3/CMM	NON-SEGD NEUTRO-PHILS 10*3/CMM	LYMPHO-CYTES 10*3/CMM	MONO-CYTES 10*3/CMM	EOSINO-PHILS 10*3/CMM	BASO-PHILS 10*3/CMM
GROUP 6: 10.0 MG/KG/DAY							
11846 M	a	a	a	a	a	a	a
11847 M	19.2	1.3	0.0	17.5	0.4	0.0	0.0
11848 M	a	a	a	a	a	a	a
11853 M	13.6	1.1	0.0	12.5	0.0	0.0	0.0
11857 M	13.1	0.9	0.0	12.1	0.0	0.1	0.0
11858 M	17.5	1.2	0.0	15.8	0.5	0.0	0.0
11859 M	20.2	1.8	0.0	18.2	0.2	0.0	0.0
11861 M	a	a	a	a	a	a	a
11863 M	15.9	2.1	0.0	13.7	0.2	0.0	0.0
11870 M	13.6	1.8	0.0	11.7	0.1	0.0	0.0
MEAN	16.2	1.5	0.0	14.5	0.2	0.0	0.0
S.D.	2.88	0.43	0.00	2.66	0.19	0.05	0.00
N	7	7	7	7	7	7	7

NOTE: THE MEANS AND STANDARD DEVIATIONS WERE CALCULATED USING NONROUNDED VALUES.
[a]BLOOD SAMPLE WAS CLOTTED.

DAYS 92-95

ANIMAL NO.	ERYTHRO-CYTES 10*6/CMM	HEMO-GLOBIN G/DL	HEMA-TOCRIT %	MEAN CORPUS VOLUME FL	MEAN CORPUS HMGLBN PG	MEAN CORPUS HEMO-CON G/DL	PLATE-LETS 10*3/CMM	NUCLE-ATED RBC'S % WBC	RED CELL MORPHOLOGY
GROUP 1: 0 MG/KG/DAY									
11721 M	8.60	15.8	45.9	53.4	18.4	34.4	1080	0	NORMAL
11724 M	9.00	16.3	48.8	54.2	18.1	33.4	820	0	NORMAL
11729 M	7.70	14.2	40.2	52.2	18.4	35.3	860	0	SANS
11732 M	8.60	15.2	44.7	52.0	17.7	34.0	820	0	NORMAL
11734 M	8.80	16.5	48.7	55.3	18.8	33.9	760	0	NORMAL
11735 M	8.90	16.5	45.9	51.6	18.5	35.9	1070	0	NORMAL[a]
11736 M	8.30	15.3	45.2	54.4	18.4	33.9	1090	0	NORMAL
11738 M	8.50	15.4	45.6	53.7	18.1	33.7	880	0	NORMAL
11741 M	8.80	15.3	44.6	50.7	17.4	34.3	780	0	NORMAL
11742 M	8.30	14.5	44.5	53.6	17.5	32.6	830	0	NORMAL
MEAN	8.55	15.5	45.4	53.1	18.1	34.1	899	0	
S.D.	0.381	0.79	2.40	1.43	0.46	0.93	129.6	0.0	
N	10	10	10	10	10	10	10	10	

NOTE: THE MEANS AND STANDARD DEVIATIONS WERE CALCULATED USING NONROUNDED VALUES.
RED CELL MORPHOLOGY CODE: SANS = SLIGHT ANISOCYTOSIS
[a]PLATELET CLUMPS WERE PRESENT.

DAYS 92-95

ANIMAL NO.	LEUKO-CYTES 10*3/CMM	SEGD NEUTRO-PHILS 10*3/CMM	NON-SEGD NEUTRO-PHILS 10*3/CMM	LYMPHO-CYTES 10*3/CMM	MONO-CYTES 10*3/CMM	EOSINO-PHILS 10*3/CMM	BASO-PHILS 10*3/CMM
GROUP 1: 0 MG/KG/DAY							
11721 M	10.2	1.0	0.0	8.9	0.2	0.1	0.0
11724 M	9.1	1.1	0.0	8.0	0.0	0.0	0.0
11729 M	13.3	2.3	0.0	10.9	0.1	0.0	0.0
11732 M	7.1	0.9	0.0	6.0	0.1	0.1	0.0
11734 M	15.2	2.0	0.0	12.6	0.6	0.0	0.0
11735 M	13.8	0.8	0.0	12.7	0.3	0.0	0.0
11736 M	11.2	1.7	0.0	9.2	0.1	0.2	0.0
11738 M	13.6	1.5	0.0	12.1	0.0	0.0	0.0
11741 M	12.2	2.3	0.0	9.3	0.1	0.5	0.0
11742 M	18.9	0.8	0.0	18.1	0.0	0.0	0.0
MEAN	12.5	1.4	0.0	10.8	0.2	0.1	0.0
S.D.	3.33	0.60	0.00	3.37	0.18	0.16	0.00
N	10	10	10	10	10	10	10

NOTE: THE MEANS AND STANDARD DEVIATIONS WERE CALCULATED USING NONROUNDED VALUES.

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DAYS 92-95

ANIMAL NO.	ERYTHRO-CYTES 10*6/CMM	HEMO-GLOBIN G/DL	HEMA-TOCRIT %	MEAN CORPUS VOLUME FL	MEAN CORPUS HMGLBN PG	MEAN CORPUS HEMO-CON G/DL	PLATE-LETS 10*3/CMM	NUCLE-ATED RBC'S % WBC	RED CELL MORPHOLOGY
GROUP 2: 0.01 MG/KG/DAY									
11746 M	8.80	15.8	46.0	52.3	18.0	34.3	680	0	NORMAL
11748 M	8.10	15.2	45.1	55.7	18.8	33.7	840	0	NORMAL
11749 M	9.80	15.8	46.6	47.6	16.1	33.9	850	0	NORMAL
11750 M	9.20	16.8	49.9	54.2	18.3	33.7	600	0	NORMAL
11752 M	9.50	16.9	49.7	52.3	17.8	34.0	790	0	NORMAL
11753 M	8.20	14.7	42.5	51.8	17.9	34.6	900	0	NORMAL
11754 M	9.70	17.2	51.6	53.2	17.7	33.3	810	0	NORMAL
11755 M	8.30	15.3	44.8	54.0	18.4	34.1	760	0	NORMAL
11761 M	8.60	15.6	44.3	51.5	18.1	35.2	760	0	NORMAL
11765 M	10.20	17.4	52.3	51.3	17.1	33.3	930	0	NORMAL
MEAN	9.04	16.1	47.3	52.4	17.8	34.0	792	0	
S.D.	0.744	0.93	3.36	2.18	0.76	0.58	99.0	0.0	
N	10	10	10	10	10	10	10	10	

NOTE: THE MEANS AND STANDARD DEVIATIONS WERE CALCULATED USING NONROUNDED VALUES.
GROUP 2 MALES WERE EUTHANIZED ON DAYS 15-18 OR DAYS 92-95.

DAYS 92-95

ANIMAL NO.	LEUKO-CYTES 10*3/CMM	SEGD NEUTRO-PHILS 10*3/CMM	NON-SEGD NEUTRO-PHILS 10*3/CMM	LYMPHO-CYTES 10*3/CMM	MONO-CYTES 10*3/CMM	EOSINO-PHILS 10*3/CMM	BASO-PHILS 10*3/CMM
GROUP 2: 0.01 MG/KG/DAY							
11746 M	16.6	2.2	0.0	14.1	0.3	0.0	0.0
11748 M	13.0	0.6	0.0	12.1	0.3	0.0	0.0
11749 M	13.1	0.5	0.0	12.3	0.1	0.1	0.0
11750 M	14.1	1.0	0.0	13.0	0.0	0.1	0.0
11752 M	13.0	1.8	0.0	10.7	0.1	0.4	0.0
11753 M	15.3	0.5	0.0	14.7	0.0	0.2	0.0
11754 M	13.3	1.3	0.0	11.8	0.1	0.0	0.0
11755 M	8.2	0.3	0.0	7.6	0.2	0.1	0.0
11761 M	12.5	1.3	0.0	10.6	0.4	0.3	0.0
11765 M	10.2	0.7	0.0	9.5	0.0	0.0	0.0
MEAN	12.9	1.0	0.0	11.6	0.2	0.1	0.0
S.D.	2.37	0.61	0.00	2.12	0.14	0.13	0.00
N	10	10	10	10	10	10	10

NOTE: THE MEANS AND STANDARD DEVIATIONS WERE CALCULATED USING NONROUNDED VALUES.
GROUP 2 MALES WERE EUTHANIZED ON DAYS 15-18 OR DAYS 92-95.

INDIVIDUAL HEMATOLOGY DATA

DAYS 92-95

ANIMAL NO.	ERYTHRO-CYTES 10*6/CMM	HEMO-GLOBIN G/DL	HEMA-TOCRIT %	MEAN CORPUS VOLUME FL	MEAN CORPUS HMGLBN PG	MEAN CORPUS HEMO-CON G/DL	PLATE-LETS 10*3/CMM	NUCLE-ATED RBC'S % WBC	RED CELL MORPHOLOGY
GROUP 3: 0.05 MG/KG/DAY									
11769 M	8.00	14.7	42.2	52.8	18.4	34.8	1020	0	NORMAL
11774 M	9.10	15.8	48.4	53.2	17.4	32.6	840	0	NORMAL
11776 M	9.00	15.9	47.2	52.5	17.7	33.7	880	0	NORMAL
11777 M	8.20	15.6	45.3	55.3	19.0	34.4	680	1	NORMAL
11780 M	8.00	14.7	42.6	53.3	18.4	34.5	770	0	NORMAL[a]
11787 M	8.70	15.3	44.4	51.0	17.6	34.5	1150	0	NORMAL
11790 M	8.80	16.0	46.0	52.3	18.2	34.8	910	0	NORMAL
11791 M	9.00	15.9	48.3	53.7	17.7	32.9	850	0	NORMAL
11792 M	9.80	17.7	51.4	52.4	18.1	34.5	740	0	NORMAL
11794 M	8.30	14.1	41.3	49.8	17.0	34.1	980	0	NORMAL
MEAN	8.69	15.6	45.7	52.6	18.0	34.1	882	0	
S.D.	0.572	0.99	3.20	1.49	0.58	0.77	140.5	0.3	
N	10	10	10	10	10	10	10	10	

NOTE: THE MEANS AND STANDARD DEVIATIONS WERE CALCULATED USING NONROUNDED VALUES.
[a]PLATELET CLUMPS WERE PRESENT.

DAYS 92-95

ANIMAL NO.	LEUKO-CYTES 10*3/CMM	SEGD NEUTRO-PHILS 10*3/CMM	NON-SEGD NEUTRO-PHILS 10*3/CMM	LYMPHO-CYTES 10*3/CMM	MONO-CYTES 10*3/CMM	EOSINO-PHILS 10*3/CMM	BASO-PHILS 10*3/CMM
GROUP 3: 0.05 MG/KG/DAY							
11769 M	13.1	0.8	0.0	11.9	0.1	0.3	0.0
11774 M	10.2	0.8	0.0	9.4	0.0	0.0	0.0
11776 M	7.8	0.5	0.0	7.1	0.2	0.1	0.0
11777 M	18.5	1.1	0.0	16.8	0.4	0.2	0.0
11780 M	16.4	0.7	0.0	15.4	0.2	0.2	0.0
11787 M	12.0	1.2	0.0	10.7	0.1	0.0	0.0
11790 M	9.2	0.5	0.0	8.3	0.3	0.2	0.0
11791 M	13.8	1.2	0.0	12.3	0.1	0.1	0.0
11792 M	15.0	2.5	0.0	12.1	0.1	0.1	0.0
11794 M	18.7	1.3	0.0	17.4	0.0	0.0	0.0
MEAN	13.5	1.1	0.0	12.1	0.2	0.1	0.0
S.D.	3.76	0.61	0.00	3.50	0.11	0.09	0.00
N	10	10	10	10	10	10	10

NOTE: THE MEANS AND STANDARD DEVIATIONS WERE CALCULATED USING NONROUNDED VALUES.

(4/5)

DAYS 92-95

ANIMAL NO.	ERYTHRO-CYTES 10*6/CMM	HEMO-GLOBIN G/DL	HEMA-TOCRIT %	MEAN CORPUS VOLUME FL	MEAN CORPUS HMGLBN PG	MEAN CORPUS HEMO-CON G/DL	PLATE-LETS 10*3/CMM	NUCLE-ATED RBC'S % WBC	RED CELL MORPHOLOGY
GROUP 4: 0.2 MG/KG/DAY									
11797 M	8.30	14.8	44.2	53.2	17.8	33.5	830	0	NORMAL
11799 M	9.10	15.3	45.5	50.0	16.8	33.6	1000	0	NORMAL
11800 M	8.20	15.2	44.5	54.3	18.5	34.1	750	0	NORMAL
11805 M	8.50	15.7	44.4	52.2	18.5	35.4	700	0	NORMAL
11806 M	a	a	a	a	a	a	a	a	a
11809 M	8.90	15.7	45.5	51.1	17.6	34.5	830	0	NORMAL
11811 M	8.80	15.8	46.9	53.3	18.0	33.7	980	0	NORMAL
11812 M	8.60	15.2	45.7	53.1	17.7	33.3	910	0	NORMAL
11814 M	7.40	14.3	38.9	52.6	19.3	36.7	910	0	NORMAL
11815 M	10.20	18.4	54.5	53.4	18.0	33.8	890	0	NORMAL
MEAN	8.67	15.6	45.6	52.6	18.0	34.3	867	0	
S.D.	0.758	1.15	4.04	1.31	0.70	1.11	99.4	0.0	
N	9	9	9	9	9	9	9	9	

NOTE: THE MEANS AND STANDARD DEVIATIONS WERE CALCULATED USING NONROUNDED VALUES.
GROUP 4 MALES WERE EUTHANIZED ON DAYS 15-18 OR DAYS 92-95.
[a]BLOOD SAMPLE WAS CLOTTED.

DAYS 92-95

ANIMAL NO.	LEUKO-CYTES 10*3/CMM	SEGD NEUTRO-PHILS 10*3/CMM	NON-SEGD NEUTRO-PHILS 10*3/CMM	LYMPHO-CYTES 10*3/CMM	MONO-CYTES 10*3/CMM	EOSINO-PHILS 10*3/CMM	BASO-PHILS 10*3/CMM
GROUP 4: 0.2 MG/KG/DAY							
11797 M	14.1	1.6	0.0	12.4	0.1	0.0	0.0
11799 M	10.1	0.9	0.0	9.2	0.0	0.0	0.0
11800 M	7.4	1.1	0.0	6.1	0.1	0.1	0.0
11805 M	10.3	1.4	0.0	8.4	0.2	0.2	0.0
11806 M	a	a	a	a	a	a	a
11809 M	17.1	0.5	0.0	15.7	0.7	0.2	0.0
11811 M	12.0	2.0	0.0	9.6	0.2	0.1	0.0
11812 M	10.8	1.1	0.0	9.6	0.0	0.1	0.0
11814 M	16.5	1.2	0.0	14.8	0.2	0.3	0.0
11815 M	17.3	1.2	0.0	15.9	0.2	0.0	0.0
MEAN	12.8	1.2	0.0	11.3	0.2	0.1	0.0
S.D.	3.56	0.43	0.00	3.53	0.20	0.11	0.00
N	9	9	9	9	9	9	9

NOTE: THE MEANS AND STANDARD DEVIATIONS WERE CALCULATED USING NONROUNDED VALUES.
GROUP 4 MALES WERE EUTHANIZED ON DAYS 15-18 OR DAYS 92-95.
[a]BLOOD SAMPLE WAS CLOTTED.

DAYS 92-95

ANIMAL NO.	ERYTHRO-CYTES 10*6/CMM	HEMO-GLOBIN G/DL	HEMA-TOCRIT %	MEAN CORPUS VOLUME FL	MEAN CORPUS HMGLBN PG	MEAN CORPUS HEMO-CON G/DL	PLATE-LETS 10*3/CMM	NUCLE-ATED RBC'S % WBC	RED CELL MORPHOLOGY
GROUP 5: 1.0 MG/KG/DAY									
11817 M	8.40	15.1	42.2	50.2	18.0	35.8	780	0	NORMAL
11822 M	8.70	15.7	45.7	52.5	18.0	34.4	870	0	NORMAL
11824 M	8.80	15.6	46.1	52.4	17.7	33.8	770	0	NORMAL
11827 M	8.60	15.1	43.3	50.4	17.6	34.8	720	0	NORMAL
11830 M	8.80	16.9	49.0	55.7	19.2	34.5	720	0	NORMAL
11832 M	8.80	15.9	47.0	53.4	18.1	33.8	890	0	NORMAL
11840 M	7.90	15.4	43.3	54.8	19.5	35.6	850	0	NORMAL
11841 M	8.60	15.5	46.4	54.0	18.0	33.4	1100	0	NORMAL
11842 M	8.90	15.8	47.0	52.8	17.8	33.6	880	0	NORMAL
11845 M	8.50	15.1	45.5	53.5	17.8	33.2	970	0	NORMAL
MEAN	8.60	15.6	45.6	53.0	18.2	34.3	855	0	
S.D.	0.291	0.54	2.07	1.74	0.64	0.90	117.7	0.0	
N	10	10	10	10	10	10	10	10	

NOTE: THE MEANS AND STANDARD DEVIATIONS WERE CALCULATED USING NONROUNDED VALUES.

INDIVIDUAL HEMATOLOGY DATA

DAYS 92-95

ANIMAL NO.	LEUKO-CYTES 10*3/CMM	SEGD NEUTRO-PHILS 10*3/CMM	NON-SEGD NEUTRO-PHILS 10*3/CMM	LYMPHO-CYTES 10*3/CMM	MONO-CYTES 10*3/CMM	EOSINO-PHILS 10*3/CMM	BASO-PHILS 10*3/CMM
GROUP 5: 1.0 MG/KG/DAY							
11817 M	19.2	1.0	0.0	18.2	0.0	0.0	0.0
11822 M	7.4	0.3	0.0	7.0	0.1	0.0	0.0
11824 M	10.9	0.8	0.0	9.8	0.2	0.1	0.0
11827 M	18.3	1.3	0.0	15.7	0.7	0.5	0.0
11830 M	8.6	0.6	0.0	7.8	0.0	0.2	0.0
11832 M	14.2	2.6	0.0	11.5	0.0	0.1	0.0
11840 M	10.7	0.9	0.0	9.8	0.0	0.0	0.0
11841 M	14.3	1.6	0.0	12.3	0.0	0.4	0.0
11842 M	12.9	1.0	0.0	11.6	0.1	0.1	0.0
11845 M	11.5	0.7	0.0	10.7	0.0	0.1	0.0
MEAN	12.8	1.1	0.0	11.5	0.1	0.2	0.0
S.D.	3.83	0.63	0.00	3.40	0.23	0.18	0.00
N	10	10	10	10	10	10	10

NOTE: THE MEANS AND STANDARD DEVIATIONS WERE CALCULATED USING NONROUNDED VALUES.

DAYS 92-95

ANIMAL NO.	ERYTHRO-CYTES 10*6/CMM	HEMO-GLOBIN G/DL	HEMA-TOCRIT %	MEAN CORPUS VOLUME FL	MEAN CORPUS HMGLBN PG	MEAN CORPUS HEMO-CON G/DL	PLATE-LETS 10*3/CMM	NUCLE-ATED RBC'S % WBC	RED CELL MORPHOLOGY
GROUP 6: 10.0 MG/KG/DAY									
11851 M	7.70	14.0	40.0	51.9	18.2	35.0	1050	0	NORMAL
11852 M	7.10	13.3	37.8	53.3	18.7	35.1	1040	0	NORMAL
11854 M	8.30	15.2	44.5	53.6	18.3	34.2	930	0	NORMAL
11860 M	7.80	14.7	41.0	52.6	18.8	35.8	790	0	NORMAL
11862 M	8.10	15.6	45.3	55.9	19.3	34.5	690	0	NORMAL
11866 M	8.60	16.5	47.8	55.6	19.2	34.5	820	0	NORMAL
11867 M	8.60	15.4	46.5	54.1	17.9	33.1	660	0	NORMAL
11871 M	9.50	17.3	50.5	53.2	18.2	34.2	780	0	NORMAL
11872 M	8.70	16.4	46.7	53.7	18.9	35.1	930	0	NORMAL
11873 M	9.90	18.9	55.8	56.4	19.1	33.8	710	0	NORMAL
MEAN	8.43	15.7	45.6	54.0	18.7	34.5	840	0	
S.D.	0.834	1.63	5.27	1.48	0.48	0.77	140.9	0.0	
N	10	10	10	10	10	10	10	10	

NOTE: THE MEANS AND STANDARD DEVIATIONS WERE CALCULATED USING NONROUNDED VALUES.

DAYS 92-95

ANIMAL NO.	LEUKO-CYTES 10*3/CMM	SEGD NEUTRO-PHILS 10*3/CMM	NON-SEGD NEUTRO-PHILS 10*3/CMM	LYMPHO-CYTES 10*3/CMM	MONO-CYTES 10*3/CMM	EOSINO-PHILS 10*3/CMM	BASO-PHILS 10*3/CMM
GROUP 6: 10.0 MG/KG/DAY							
11851 M	21.0	0.8	0.0	19.7	0.4	0.0	0.0
11852 M	13.3	3.2	0.0	10.0	0.1	0.0	0.0
11854 M	7.7	0.6	0.0	6.9	0.0	0.2	0.0
11860 M	12.9	3.7	0.0	9.0	0.1	0.0	0.0
11862 M	15.5	0.6	0.0	14.9	0.0	0.0	0.0
11866 M	12.7	1.1	0.0	10.9	0.3	0.4	0.0
11867 M	10.9	1.4	0.0	9.3	0.0	0.2	0.0
11871 M	8.2	1.1	0.0	6.9	0.0	0.2	0.0
11872 M	12.8	1.7	0.0	10.6	0.3	0.3	0.0
11873 M	13.8	0.7	0.0	13.1	0.0	0.0	0.0
MEAN	12.9	1.5	0.0	11.1	0.1	0.1	0.0
S.D.	3.75	1.10	0.00	3.91	0.15	0.14	0.00
N	10	10	10	10	10	10	10

NOTE: THE MEANS AND STANDARD DEVIATIONS WERE CALCULATED USING NONROUNDED VALUES.

DAYS 121-123

ANIMAL NO.	ERYTHRO-CYTES 10*6/CMM	HEMO-GLOBIN G/DL	HEMA-TOCRIT %	MEAN CORPUS VOLUME FL	MEAN CORPUS HMGLBN PG	MEAN CORPUS HEMO-CON G/DL	PLATE-LETS 10*3/CMM	NUCLE-ATED RBC'S % WBC	RED CELL MORPHOLOGY
GROUP 1: 0 MG/KG/DAY									
11719 M	8.60	15.7	46.5	54.1	18.3	33.7	830	0	NORMAL
11722 M	8.90	15.8	45.0	50.6	17.8	35.1	860	0	NORMAL
11723 M	8.40	15.2	44.2	52.6	18.1	34.4	790	0	NORMAL
11726 M	8.00	14.4	41.0	51.3	18.0	35.1	710	0	NORMAL
11727 M	8.70	15.1	43.1	49.5	17.4	35.1	810	0	NORMAL
11730 M	8.90	16.2	47.9	53.8	18.2	33.8	960	0	NORMAL
11733 M	7.10	12.1	34.6	48.8	17.0	34.9	950	0	NORMAL
11737 M	8.40	14.4	41.2	49.1	17.1	34.9	920	0	NORMAL
11740 M	9.30	16.8	48.8	52.5	18.1	34.4	790	0	NORMAL
11743 M	9.40	15.5	45.9	48.8	16.5	33.8	1010	0	NORMAL
MEAN	8.57	15.1	43.8	51.1	17.7	34.5	863	0	
S.D.	0.667	1.30	4.15	2.05	0.61	0.58	94.2	0.0	
N	10	10	10	10	10	10	10	10	

NOTE: THE MEANS AND STANDARD DEVIATIONS WERE CALCULATED USING NONROUNDED VALUES.

DAYS 121-123

ANIMAL NO.	LEUKO-CYTES 10*3/CMM	SEGD NEUTRO-PHILS 10*3/CMM	NON-SEGD NEUTRO-PHILS 10*3/CMM	LYMPHO-CYTES 10*3/CMM	MONO-CYTES 10*3/CMM	EOSINO-PHILS 10*3/CMM	BASO-PHILS 10*3/CMM
GROUP 1: 0 MG/KG/DAY							
11719 M	12.2	1.0	0.0	11.1	0.1	0.0	0.0
11722 M	13.2	0.8	0.0	12.0	0.4	0.0	0.0
11723 M	11.3	1.2	0.0	9.8	0.1	0.1	0.0
11726 M	15.0	0.6	0.0	14.4	0.0	0.0	0.0
11727 M	12.6	1.1	0.0	11.2	0.1	0.1	0.0
11730 M	14.2	1.4	0.0	12.8	0.0	0.0	0.0
11733 M	8.8	1.1	0.0	7.7	0.0	0.0	0.0
11737 M	11.7	1.1	0.0	10.5	0.1	0.0	0.0
11740 M	20.8	1.9	0.0	18.3	0.2	0.4	0.0
11743 M	15.5	1.5	0.0	13.5	0.3	0.2	0.0
MEAN	13.5	1.2	0.0	12.1	0.1	0.1	0.0
S.D.	3.21	0.37	0.00	2.88	0.13	0.13	0.00
N	10	10	10	10	10	10	10

NOTE: THE MEANS AND STANDARD DEVIATIONS WERE CALCULATED USING NONROUNDED VALUES.

DAYS 121-123

ANIMAL NO.	ERYTHRO-CYTES 10*6/CMM	HEMO-GLOBIN G/DL	HEMA-TOCRIT %	MEAN CORPUS VOLUME FL	MEAN CORPUS HMGLBN PG	MEAN CORPUS HEMO-CON G/DL	PLATE-LETS 10*3/CMM	NUCLE-ATED RBC'S % WBC	RED CELL MORPHOLOGY
GROUP 3: 0.05 MG/KG/DAY									
11767 M	7.60	14.4	40.6	53.4	18.9	35.5	890	0	NORMAL
11770 M	8.50	14.2	41.9	49.3	16.7	33.9	740	0	NORMAL
11773 M	8.70	15.4	45.5	52.3	17.7	33.8	680	0	NORMAL
11775 M	8.30	14.1	41.3	49.7	17.0	34.2	850	0	NORMAL
11781 M	8.60	15.3	44.5	51.8	17.8	34.3	910	0	NORMAL
11782 M	8.90	16.0	45.8	51.5	18.0	34.9	810	0	NORMAL
11783 M	8.70	15.4	47.1	54.1	17.7	32.7	880	0	NORMAL
11785 M	8.40	15.1	43.3	51.6	18.0	34.8	960	0	NORMAL
11788 M	10.40	17.9	53.2	51.2	17.2	33.6	1010	0	NORMAL
11795 M	8.30	14.8	44.6	53.7	17.8	33.2	1090	0	NORMAL
MEAN	8.64	15.3	44.8	51.9	17.7	34.1	882	0	
S.D.	0.712	1.11	3.62	1.59	0.61	0.84	121.9	0.0	
N	10	10	10	10	10	10	10	10	

NOTE: THE MEANS AND STANDARD DEVIATIONS WERE CALCULATED USING NONROUNDED VALUES.

DAYS 121-123

ANIMAL NO.	LEUKO-CYTES 10*3/CMM	SEGD NEUTRO-PHILS 10*3/CMM	NON-SEGD NEUTRO-PHILS 10*3/CMM	LYMPHO-CYTES 10*3/CMM	MONO-CYTES 10*3/CMM	EOSINO-PHILS 10*3/CMM	BASO-PHILS 10*3/CMM
GROUP 3: 0.05 MG/KG/DAY							
11767 M	8.4	1.4	0.0	6.6	0.2	0.3	0.0
11770 M	8.6	1.1	0.0	7.0	0.3	0.2	0.0
11773 M	10.2	0.8	0.0	9.1	0.1	0.2	0.0
11775 M	13.7	2.5	0.0	10.7	0.1	0.4	0.0
11781 M	12.4	0.9	0.0	11.3	0.2	0.0	0.0
11782 M	13.5	1.4	0.0	11.5	0.5	0.1	0.0
11783 M	13.6	1.0	0.0	12.5	0.0	0.1	0.0
11785 M	13.3	1.6	0.0	11.6	0.1	0.0	0.0
11788 M	14.3	1.3	0.0	12.7	0.3	0.0	0.0
11795 M	19.7	1.0	0.0	17.9	0.2	0.6	0.0
MEAN	12.8	1.3	0.0	11.1	0.2	0.2	0.0
S.D.	3.27	0.49	0.00	3.23	0.15	0.19	0.00
N	10	10	10	10	10	10	10

NOTE: THE MEANS AND STANDARD DEVIATIONS WERE CALCULATED USING NONROUNDED VALUES.

DAYS 121-123

ANIMAL NO.	ERYTHRO-CYTES 10*6/CMM	HEMO-GLOBIN G/DL	HEMA-TOCRIT %	MEAN CORPUS VOLUME FL	MEAN CORPUS HMGLBN PG	MEAN CORPUS HEMO-CON G/DL	PLATE-LETS 10*3/CMM	NUCLE-ATED RBC'S % WBC	RED CELL MORPHOLOGY
GROUP 5: 1.0 MG/KG/DAY									
11821 M	8.50	15.7	43.9	51.7	18.5	35.7	760	0	NORMAL
11823 M	9.10	16.2	47.7	52.4	17.8	34.0	910	0	NORMAL
11826 M	8.50	15.5	45.2	53.2	18.2	34.3	880	0	NORMAL
11828 M	8.10	14.4	41.3	51.0	17.8	34.9	980	0	NORMAL
11829 M	7.60	14.1	40.4	53.2	18.6	34.9	1020	0	NORMAL
11833 M	8.60	16.0	45.7	53.1	18.6	35.0	860	0	NORMAL
11834 M	7.60	14.9	43.1	56.7	19.6	34.6	890	0	NORMAL
11837 M	8.70	14.5	42.0	48.3	16.7	34.5	820	0	NORMAL
11838 M	8.90	15.8	47.6	53.5	17.8	33.2	780	0	NORMAL
11843 M	8.60	15.5	45.0	52.3	18.0	34.5	1050	0	NORMAL
MEAN	8.42	15.3	44.2	52.5	18.2	34.6	895	0	
S.D.	0.505	0.73	2.51	2.12	0.75	0.66	97.6	0.0	
N	10	10	10	10	10	10	10	10	

NOTE: THE MEANS AND STANDARD DEVIATIONS WERE CALCULATED USING NONROUNDED VALUES.

INDIVIDUAL HEMATOLOGY DATA

DAYS 121-123

ANIMAL NO.	LEUKO-CYTES 10*3/CMM	SEGD NEUTRO-PHILS 10*3/CMM	NON-SEGD NEUTRO-PHILS 10*3/CMM	LYMPHO-CYTES 10*3/CMM	MONO-CYTES 10*3/CMM	EOSINO-PHILS 10*3/CMM	BASO-PHILS 10*3/CMM
GROUP 5: 1.0 MG/KG/DAY							
11821 M	9.7	0.8	0.0	8.5	0.1	0.3	0.0
11823 M	10.7	0.7	0.0	9.7	0.1	0.1	0.0
11826 M	14.8	2.5	0.0	12.3	0.0	0.0	0.0
11828 M	12.7	2.9	0.0	9.3	0.3	0.3	0.0
11829 M	11.4	1.0	0.0	10.0	0.1	0.2	0.0
11833 M	11.5	0.8	0.0	10.6	0.1	0.0	0.0
11834 M	12.8	1.4	0.0	11.4	0.0	0.0	0.0
11837 M	12.2	1.7	0.0	10.2	0.1	0.1	0.0
11838 M	11.4	1.5	0.0	9.7	0.1	0.1	0.0
11843 M	15.1	0.8	0.0	14.3	0.0	0.0	0.0
MEAN	12.2	1.4	0.0	10.6	0.1	0.1	0.0
S.D.	1.70	0.77	0.00	1.68	0.08	0.11	0.00
N	10	10	10	10	10	10	10

NOTE: THE MEANS AND STANDARD DEVIATIONS WERE CALCULATED USING NONROUNDED VALUES.

INDIVIDUAL HEMATOLOGY DATA

DAYS 121-123

ANIMAL NO.	ERYTHRO-CYTES 10*6/CMM	HEMO-GLOBIN G/DL	HEMA-TOCRIT %	MEAN CORPUS VOLUME FL	MEAN CORPUS HMGLBN PG	MEAN CORPUS HEMO-CON G/DL	PLATE-LETS 10*3/CMM	NUCLE-ATED RBC'S % WBC	RED CELL MORPHOLOGY
GROUP 6: 10.0 MG/KG/DAY									
11849 M	8.70	15.0	43.0	49.4	17.2	34.9	760	0	NORMAL
11850 M	8.10	15.0	43.0	53.1	18.5	34.9	850	0	NORMAL
11855 M	8.40	15.0	43.2	51.4	17.9	34.7	900	0	NORMAL
11856 M	8.70	16.3	46.3	53.2	18.7	35.2	910	0	NORMAL
11864 M	8.80	15.5	43.3	49.2	17.6	35.8	1030	0	NORMAL
11865 M	8.40	14.3	43.9	52.3	17.0	32.6	1050	0	NORMAL
11868 M	9.70	14.1	47.5	49.0	14.5	29.7	930	0	NORMAL
11869 M	9.00	15.6	47.1	52.3	17.3	33.1	840	0	NORMAL
11874 M	8.10	15.0	44.3	54.7	18.5	33.9	660	0	NORMAL
11875 M	9.10	15.2	46.3	50.9	16.7	32.8	930	0	NORMAL
MEAN	8.70	15.1	44.8	51.6	17.4	33.8	886	0	
S.D.	0.490	0.63	1.81	1.92	1.23	1.79	116.7	0.0	
N	10	10	10	10	10	10	10	10	

NOTE: THE MEANS AND STANDARD DEVIATIONS WERE CALCULATED USING NONROUNDED VALUES.

DAYS 121-123

ANIMAL NO.	LEUKO-CYTES 10*3/CMM	SEGD NEUTRO-PHILS 10*3/CMM	NON-SEGD NEUTRO-PHILS 10*3/CMM	LYMPHO-CYTES 10*3/CMM	MONO-CYTES 10*3/CMM	EOSINO-PHILS 10*3/CMM	BASO-PHILS 10*3/CMM
GROUP 6: 10.0 MG/KG/DAY							
11849 M	11.0	1.1	0.0	9.6	0.1	0.2	0.0
11850 M	12.6	1.5	0.0	10.6	0.1	0.4	0.0
11855 M	17.9	1.3	0.0	16.5	0.2	0.0	0.0
11856 M	12.2	1.3	0.0	10.4	0.4	0.1	0.0
11864 M	12.4	2.9	0.0	9.5	0.0	0.0	0.0
11865 M	17.0	0.8	0.0	16.1	0.0	0.0	0.0
11868 M	12.4	1.1	0.0	11.0	0.0	0.2	0.0
11869 M	15.1	1.5	0.0	13.3	0.3	0.0	0.0
11874 M	14.2	1.3	0.0	12.4	0.4	0.1	0.0
11875 M	13.4	0.5	0.0	12.6	0.1	0.1	0.0
MEAN	13.8	1.3	0.0	12.2	0.2	0.1	0.0
S.D.	2.23	0.61	0.00	2.50	0.15	0.13	0.00
N	10	10	10	10	10	10	10

NOTE: THE MEANS AND STANDARD DEVIATIONS WERE CALCULATED USING NONROUNDED VALUES.

DAYS 15-18

ANIMAL NO.	ERYTHRO-CYTES 10*6/CMM	HEMO-GLOBIN G/DL	HEMA-TOCRIT %	MEAN CORPUS VOLUME FL	MEAN CORPUS HMGLBN PG	MEAN CORPUS HEMO-CON G/DL	PLATE-LETS 10*3/CMM	NUCLE-ATED RBC'S % WBC	RED CELL MORPHOLOGY
GROUP 1: 0 MG/KG/DAY									
11877 F	a	a	a	a	a	a	a	a	a
11878 F	a	a	a	a	a	a	a	a	a
11881 F	7.10	14.9	40.9	57.6	21.0	36.4	860	0	NORMAL
11882 F	6.80	14.6	39.4	58.0	21.5	37.0	930	0	NORMAL
11884 F	7.30	15.5	43.7	59.9	21.2	35.4	1030	0	NORMAL
11889 F	7.00	15.5	41.8	59.7	22.1	37.1	850	0	NORMAL
11893 F	7.40	15.2	42.2	57.0	20.5	36.0	770	0	NORMAL
11894 F	7.20	15.5	42.0	58.4	21.5	36.9	940	0	NORMAL
11900 F	6.60	14.2	39.5	59.9	21.5	35.9	930	0	NORMAL
11903 F	6.90	14.8	42.0	60.9	21.4	35.2	1020	0	NORMAL
MEAN	7.04	15.0	41.4	58.9	21.3	36.2	916	0	
S.D.	0.267	0.48	1.45	1.36	0.46	0.73	87.5	0.0	
N	8	8	8	8	8	8	8	8	

NOTE: THE MEANS AND STANDARD DEVIATIONS WERE CALCULATED USING NONROUNDED VALUES.
[a]BLOOD SAMPLE WAS CLOTTED.

DAYS 15-18

ANIMAL NO.	LEUKO-CYTES 10*3/CMM	SEGD NEUTRO-PHILS 10*3/CMM	NON-SEGD NEUTRO-PHILS 10*3/CMM	LYMPHO-CYTES 10*3/CMM	MONO-CYTES 10*3/CMM	EOSINO-PHILS 10*3/CMM	BASO-PHILS 10*3/CMM
GROUP 1: 0 MG/KG/DAY							
11877 F	a	a	a	a	a	a	a
11878 F	a	a	a	a	a	a	a
11881 F	10.0	0.7	0.0	8.9	0.4	0.0	0.0
11882 F	13.6	0.8	0.0	12.8	0.0	0.0	0.0
11884 F	12.6	0.5	0.0	12.1	0.0	0.0	0.0
11889 F	15.1	1.2	0.0	13.0	0.6	0.3	0.0
11893 F	8.1	0.5	0.0	7.5	0.0	0.2	0.0
11894 F	16.9	0.7	0.0	16.1	0.2	0.0	0.0
11900 F	8.0	1.1	0.0	6.7	0.0	0.2	0.0
11903 F	12.1	1.2	0.0	10.5	0.2	0.1	0.0
MEAN	12.1	0.8	0.0	10.9	0.2	0.1	0.0
S.D.	3.20	0.30	0.00	3.15	0.23	0.11	0.00
N	8	8	8	8	8	8	8

NOTE: THE MEANS AND STANDARD DEVIATIONS WERE CALCULATED USING NONROUNDED VALUES.
[a]BLOOD SAMPLE WAS CLOTTED.

INDIVIDUAL HEMATOLOGY DATA

DAYS 15-18

ANIMAL NO.	ERYTHRO-CYTES 10*6/CMM	HEMO-GLOBIN G/DL	HEMA-TOCRIT %	MEAN CORPUS VOLUME FL	MEAN CORPUS HMGLBN PG	MEAN CORPUS HEMO-CON G/DL	PLATE-LETS 10*3/CMM	NUCLE-ATED RBC'S % WBC	RED CELL MORPHOLOGY
GROUP 2: 0.01 MG/KG/DAY									
11906 F	7.20	15.2	42.8	59.5	21.1	35.5	940	0	NORMAL
11908 F	7.40	16.6	45.1	61.0	22.4	36.8	280	0	NORMAL
11909 F	7.00	15.5	41.2	58.9	22.1	37.6	670	0	NORMAL
11911 F	6.90	15.2	42.2	61.1	22.0	36.1	870	0	NORMAL[a]
11912 F	7.30	15.0	41.5	56.8	20.5	36.2	990	0	NORMAL
11913 F	7.70	15.5	44.1	57.3	20.1	35.1	870	0	NORMAL
11917 F	7.10	15.4	42.3	59.6	21.7	36.4	730	0	NORMAL
11921 F	7.50	15.1	42.8	57.0	20.1	35.3	890	0	NORMAL
11923 F	6.80	15.2	42.1	61.9	22.4	36.1	680	0	NORMAL
11925 F	6.90	14.7	41.5	60.2	21.3	35.4	920	0	NORMAL
MEAN	7.18	15.3	42.6	59.3	21.4	36.1	784	0	
S.D.	0.294	0.50	1.22	1.81	0.90	0.77	208.7	0.0	
N	10	10	10	10	10	10	10	10	

NOTE: THE MEANS AND STANDARD DEVIATIONS WERE CALCULATED USING NONROUNDED VALUES.
[a]PLATELET CLUMPS WERE PRESENT.

DAYS 15-18

ANIMAL NO.	LEUKO-CYTES 10*3/CMM	SEGD NEUTRO-PHILS 10*3/CMM	NON-SEGD NEUTRO-PHILS 10*3/CMM	LYMPHO-CYTES 10*3/CMM	MONO-CYTES 10*3/CMM	EOSINO-PHILS 10*3/CMM	BASO-PHILS 10*3/CMM
GROUP 2: 0.01 MG/KG/DAY							
11906 F	13.0	1.4	0.0	11.4	0.0	0.1	0.0
11908 F	13.1	0.8	0.0	12.1	0.0	0.3	0.0
11909 F	15.3	1.7	0.0	13.5	0.2	0.0	0.0
11911 F	11.5	0.7	0.0	10.5	0.2	0.1	0.0
11912 F	10.8	0.9	0.0	9.9	0.0	0.0	0.0
11913 F	13.3	1.5	0.0	11.4	0.4	0.0	0.0
11917 F	11.2	0.8	0.0	10.1	0.3	0.0	0.0
11921 F	17.2	0.2	0.0	16.9	0.2	0.0	0.0
11923 F	16.3	1.0	0.0	15.2	0.2	0.0	0.0
11925 F	13.2	1.7	0.0	11.5	0.0	0.0	0.0
MEAN	13.5	1.1	0.0	12.2	0.2	0.1	0.0
S.D.	2.16	0.50	0.00	2.27	0.15	0.09	0.00
N	10	10	10	10	10	10	10

NOTE: THE MEANS AND STANDARD DEVIATIONS WERE CALCULATED USING NONROUNDED VALUES.

DAYS 15-18

ANIMAL NO.	ERYTHRO-CYTES 10*6/CMM	HEMO-GLOBIN G/DL	HEMA-TOCRIT %	MEAN CORPUS VOLUME FL	MEAN CORPUS HMGLBN PG	MEAN CORPUS HEMO-CON G/DL	PLATE-LETS 10*3/CMM	NUCLE-ATED RBC'S % WBC	RED CELL MORPHOLOGY
GROUP 3: 0.05 MG/KG/DAY									
11930 F	6.70	14.9	41.1	61.3	22.2	36.3	930	0	NORMAL[a]
11931 F	b	b	b	b	b	b	b	b	b
11934 F	6.90	14.9	40.4	58.6	21.6	36.9	710	0	NORMAL
11941 F	7.40	15.0	42.5	57.4	20.3	35.3	930	0	NORMAL
11942 F	6.80	14.4	41.3	60.8	21.2	34.8	980	0	NORMAL
11945 F	7.70	16.1	46.1	59.9	20.9	34.9	720	0	NORMAL[a]
11946 F	7.40	15.8	45.3	61.2	21.4	34.9	760	0	NORMAL[a]
11951 F	6.90	14.7	40.1	58.1	21.3	36.7	1010	0	NORMAL
11952 F	6.90	15.3	41.7	60.4	22.2	36.7	850	0	NORMAL[a]
11953 F	7.40	15.5	42.3	57.1	20.9	36.7	1040	0	NORMAL[a]
MEAN	7.12	15.2	42.3	59.4	21.3	35.9	881	0	
S.D.	0.353	0.54	2.08	1.65	0.62	0.91	126.1	0.0	
N	9	9	9	9	9	9	9	9	

NOTE: THE MEANS AND STANDARD DEVIATIONS WERE CALCULATED USING NONROUNDED VALUES.
[a]PLATELET CLUMPS WERE PRESENT.
[b]BLOOD SAMPLE WAS CLOTTED.

DAYS 15-18

ANIMAL NO.	LEUKO-CYTES 10*3/CMM	SEGD NEUTRO-PHILS 10*3/CMM	NON-SEGD NEUTRO-PHILS 10*3/CMM	LYMPHO-CYTES 10*3/CMM	MONO-CYTES 10*3/CMM	EOSINO-PHILS 10*3/CMM	BASO-PHILS 10*3/CMM
GROUP 3: 0.05 MG/KG/DAY							
11930 F	13.2	1.1	0.0	12.0	0.1	0.0	0.0
11931 F	a	a	a	a	a	a	a
11934 F	10.9	0.4	0.0	10.5	0.0	0.0	0.0
11941 F	16.0	2.2	0.0	13.3	0.3	0.2	0.0
11942 F	12.7	0.9	0.0	11.7	0.1	0.0	0.0
11945 F	18.7	0.6	0.0	17.6	0.6	0.0	0.0
11946 F	16.3	1.6	0.0	14.3	0.0	0.2	0.2
11951 F	10.9	0.8	0.0	10.1	0.0	0.0	0.0
11952 F	14.9	1.0	0.0	13.1	0.4	0.3	0.0
11953 F	10.4	1.4	0.0	8.7	0.2	0.1	0.0
MEAN	13.8	1.1	0.0	12.4	0.2	0.1	0.0
S.D.	2.88	0.56	0.00	2.62	0.20	0.11	0.05
N	9	9	9	9	9	9	9

NOTE: THE MEANS AND STANDARD DEVIATIONS WERE CALCULATED USING NONROUNDED VALUES.
[a]BLOOD SAMPLE WAS CLOTTED.

DAYS 15-18

ANIMAL NO.	ERYTHRO-CYTES 10*6/CMM	HEMO-GLOBIN G/DL	HEMA-TOCRIT %	MEAN CORPUS VOLUME FL	MEAN CORPUS HMGLBN PG	MEAN CORPUS HEMO-CON G/DL	PLATE-LETS 10*3/CMM	NUCLE-ATED RBC'S % WBC	RED CELL MORPHOLOGY
GROUP 4: 0.2 MG/KG/DAY									
11959 F	6.70	14.2	39.9	59.6	21.2	35.6	970	0	NORMAL
11960 F	6.70	15.1	41.4	61.8	22.5	36.5	940	0	NORMAL
11962 F	7.30	15.3	44.8	61.4	21.0	34.1	910	0	NORMAL[a]
11963 F	7.00	15.5	42.3	60.5	22.1	36.6	630	0	NORMAL
11964 F	7.60	16.2	44.7	58.8	21.3	36.3	520	0	NORMAL[a]
11967 F	b	b	b	b	b	b	b	b	b
11968 F	6.80	15.1	41.3	60.7	22.2	36.6	970	0	NORMAL[a]
11970 F	7.00	14.7	39.5	56.5	21.0	37.2	910	0	NORMAL[a]
11971 F	6.50	14.6	39.0	60.0	22.5	37.4	880	0	NORMAL[a]
11974 F	6.70	14.2	40.4	60.3	21.2	35.1	1090	0	NORMAL
MEAN	6.92	15.0	41.5	60.0	21.7	36.2	869	0	
S.D.	0.346	0.65	2.12	1.58	0.64	1.05	179.1	0.0	
N	9	9	9	9	9	9	9	9	

NOTE: THE MEANS AND STANDARD DEVIATIONS WERE CALCULATED USING NONROUNDED VALUES.
[a]PLATELET CLUMPS WERE PRESENT.
[b]BLOOD SAMPLE WAS NOT AVAILABLE FOR ANALYSIS.

DAYS 15-18

ANIMAL NO.	LEUKO-CYTES 10*3/CMM	SEGD NEUTRO-PHILS 10*3/CMM	NON-SEGD NEUTRO-PHILS 10*3/CMM	LYMPHO-CYTES 10*3/CMM	MONO-CYTES 10*3/CMM	EOSINO-PHILS 10*3/CMM	BASO-PHILS 10*3/CMM
GROUP 4: 0.2 MG/KG/DAY							
11959 F	12.9	0.8	0.0	12.0	0.0	0.1	0.0
11960 F	13.7	0.7	0.0	12.7	0.1	0.1	0.0
11962 F	11.2	1.0	0.0	10.1	0.1	0.0	0.0
11963 F	16.2	0.8	0.0	15.2	0.0	0.2	0.0
11964 F	15.2	0.8	0.0	14.1	0.2	0.2	0.0
11967 F	a	a	a	a	a	a	a
11968 F	13.5	1.2	0.0	12.0	0.3	0.0	0.0
11970 F	10.3	1.2	0.0	8.9	0.2	0.0	0.0
11971 F	14.2	1.1	0.0	12.9	0.1	0.0	0.0
11974 F	19.1	0.8	0.0	18.3	0.0	0.0	0.0
MEAN	14.0	0.9	0.0	12.9	0.1	0.1	0.0
S.D.	2.63	0.22	0.00	2.79	0.10	0.08	0.00
N	9	9	9	9	9	9	9

NOTE: THE MEANS AND STANDARD DEVIATIONS WERE CALCULATED USING NONROUNDED VALUES.
[a]BLOOD SAMPLE WAS NOT AVAILABLE FOR ANALYSIS.

DAYS 15-18

ANIMAL NO.	ERYTHRO-CYTES 10*6/CMM	HEMO-GLOBIN G/DL	HEMA-TOCRIT %	MEAN CORPUS VOLUME FL	MEAN CORPUS HMGLBN PG	MEAN CORPUS HEMO-CON G/DL	PLATE-LETS 10*3/CMM	NUCLE-ATED RBC'S % WBC	RED CELL MORPHOLOGY
GROUP 5: 1.0 MG/KG/DAY									
11977 F	a	a	a	a	a	a	a	a	a
11982 F	7.10	15.2	43.0	60.5	21.4	35.4	450	0	NORMAL[b]
11984 F	6.70	14.5	41.1	61.4	21.6	35.2	930	0	NORMAL[b]
11989 F	7.50	16.3	44.0	58.7	21.7	37.0	980	0	NORMAL
11991 F	6.90	14.8	40.4	58.6	21.4	36.6	900	0	NORMAL
11992 F	8.00	16.4	47.4	59.3	20.5	34.6	1030	0	NORMAL
11994 F	7.10	15.0	42.0	59.1	21.1	35.7	1020	0	NORMAL
12001 F	6.30	14.2	38.2	60.7	22.5	37.1	610	0	NORMAL[b]
12003 F	6.90	14.9	40.5	58.7	21.6	36.8	710	0	NORMAL[b]
12005 F	8.10	16.4	46.7	57.6	20.2	35.2	950	0	NORMAL[b]
MEAN	7.18	15.3	42.6	59.4	21.3	36.0	842	0	
S.D.	0.591	0.85	3.02	1.22	0.68	0.93	204.3	0.0	
N	9	9	9	9	9	9	9	9	

NOTE: THE MEANS AND STANDARD DEVIATIONS WERE CALCULATED USING NONROUNDED VALUES.
[a]BLOOD SAMPLE WAS CLOTTED.
[b]PLATELET CLUMPS WERE PRESENT.

DAYS 15-18

ANIMAL NO.	LEUKO-CYTES 10*3/CMM	SEGD NEUTRO-PHILS 10*3/CMM	NON-SEGD NEUTRO-PHILS 10*3/CMM	LYMPHO-CYTES 10*3/CMM	MONO-CYTES 10*3/CMM	EOSINO-PHILS 10*3/CMM	BASO-PHILS 10*3/CMM
GROUP 5: 1.0 MG/KG/DAY							
11977 F	a	a	a	a	a	a	a
11982 F	16.0	0.6	0.0	15.0	0.2	0.2	0.0
11984 F	13.9	1.1	0.0	12.5	0.1	0.1	0.0
11989 F	11.2	0.3	0.0	10.8	0.1	0.0	0.0
11991 F	11.4	0.7	0.0	10.5	0.0	0.2	0.0
11992 F	14.7	0.6	0.0	14.0	0.0	0.1	0.0
11994 F	15.5	0.9	0.0	14.6	0.0	0.0	0.0
12001 F	15.9	1.1	0.0	14.5	0.2	0.2	0.0
12003 F	13.5	1.2	0.0	11.6	0.3	0.4	0.0
12005 F	20.8	3.1	0.0	17.5	0.0	0.2	0.0
MEAN	14.8	1.1	0.0	13.4	0.1	0.2	0.0
S.D.	2.88	0.82	0.00	2.28	0.10	0.12	0.00
N	9	9	9	9	9	9	9

NOTE: THE MEANS AND STANDARD DEVIATIONS WERE CALCULATED USING NONROUNDED VALUES.
[a]BLOOD SAMPLE WAS CLOTTED.

DAYS 15-18

ANIMAL NO.	ERYTHRO-CYTES 10*6/CMM	HEMO-GLOBIN G/DL	HEMA-TOCRIT %	MEAN CORPUS VOLUME FL	MEAN CORPUS HMGLBN PG	MEAN CORPUS HEMO-CON G/DL	PLATE-LETS 10*3/CMM	NUCLE-ATED RBC'S % WBC	RED CELL MORPHOLOGY
GROUP 6: 10.0 MG/KG/DAY									
12010 F	6.90	15.5	42.6	61.8	22.5	36.3	770	0	NORMAL[a]
12013 F	7.10	15.7	44.4	62.5	22.1	35.4	860	0	NORMAL[a]
12016 F	7.20	14.8	43.3	60.1	20.6	34.2	770	0	NORMAL[a]
12021 F	7.20	15.8	42.3	58.7	21.9	37.4	920	0	NORMAL[a]
12023 F	7.20	15.1	40.1	55.7	21.0	37.7	980	0	NORMAL
12026 F	6.70	13.9	38.3	57.2	20.7	36.3	830	0	NORMAL
12028 F	7.40	15.5	42.5	57.4	20.9	36.5	790	0	NORMAL
12030 F	7.20	15.9	42.6	59.2	22.1	37.3	1000	0	NORMAL
12031 F	6.80	14.1	40.4	59.4	20.7	34.9	950	0	NORMAL
12032 F	7.10	15.0	41.8	58.9	21.1	35.9	860	0	NORMAL
MEAN	7.08	15.1	41.8	59.1	21.4	36.2	873	0	
S.D.	0.215	0.69	1.77	2.06	0.71	1.13	85.6	0.0	
N	10	10	10	10	10	10	10	10	

NOTE: THE MEANS AND STANDARD DEVIATIONS WERE CALCULATED USING NONROUNDED VALUES.
[a]PLATELET CLUMPS WERE PRESENT.

DAYS 15-18

ANIMAL NO.	LEUKO-CYTES 10*3/CMM	SEGD NEUTRO-PHILS 10*3/CMM	NON-SEGD NEUTRO-PHILS 10*3/CMM	LYMPHO-CYTES 10*3/CMM	MONO-CYTES 10*3/CMM	EOSINO-PHILS 10*3/CMM	BASO-PHILS 10*3/CMM
GROUP 6: 10.0 MG/KG/DAY							
12010 F	12.7	0.5	0.0	12.2	0.0	0.0	0.0
12013 F	10.7	0.3	0.0	10.4	0.0	0.0	0.0
12016 F	11.7	1.2	0.0	10.5	0.0	0.0	0.0
12021 F	11.0	0.4	0.0	10.2	0.2	0.1	0.0
12023 F	11.8	1.5	0.0	9.7	0.2	0.4	0.0
12026 F	12.1	2.2	0.0	9.9	0.0	0.0	0.0
12028 F	13.5	0.4	0.0	13.0	0.0	0.1	0.0
12030 F	15.1	0.9	0.0	14.0	0.0	0.2	0.0
12031 F	12.9	1.3	0.0	11.5	0.1	0.0	0.0
12032 F	15.5	1.5	0.0	13.2	0.5	0.3	0.0
MEAN	12.7	1.0	0.0	11.5	0.1	0.1	0.0
S.D.	1.61	0.62	0.00	1.55	0.16	0.13	0.00
N	10	10	10	10	10	10	10

NOTE: THE MEANS AND STANDARD DEVIATIONS WERE CALCULATED USING NONROUNDED VALUES.

(505)

DAYS 92-95

ANIMAL NO.	ERYTHRO-CYTES 10*6/CMM	HEMO-GLOBIN G/DL	HEMA-TOCRIT %	MEAN CORPUS VOLUME FL	MEAN CORPUS HMGLBN PG	MEAN CORPUS HEMO-CON G/DL	PLATE-LETS 10*3/CMM	NUCLE-ATED RBC'S % WBC	RED CELL MORPHOLOGY
GROUP 1: 0 MG/KG/DAY									
11876 F	7.90	15.0	44.0	55.7	19.0	34.1	760	0	NORMAL
11886 F	7.60	15.3	43.8	57.6	20.1	35.0	740	0	NORMAL[a]
11890 F	7.30	13.9	39.9	54.7	19.0	34.8	940	0	NORMAL[a]
11891 F	8.50	15.6	45.1	53.1	18.4	34.6	820	0	NORMAL
11892 F	b	b	b	b	b	b	b	b	b
11895 F	7.50	13.5	39.1	52.1	18.0	34.5	990	0	NORMAL
11896 F	8.60	16.5	48.9	56.9	19.2	33.7	810	0	NORMAL
11901 F	8.10	15.5	43.5	53.7	19.1	35.6	870	0	NORMAL[a]
11902 F	7.20	14.2	38.7	53.8	19.7	36.7	920	0	NORMAL
11904 F	8.30	15.8	45.9	55.3	19.0	34.4	920	0	NORMAL
MEAN	7.89	15.0	43.2	54.8	19.1	34.8	863	0	
S.D.	0.518	0.98	3.40	1.79	0.62	0.89	85.9	0.0	
N	9	9	9	9	9	9	9	9	

NOTE: THE MEANS AND STANDARD DEVIATIONS WERE CALCULATED USING NONROUNDED VALUES.
[a]PLATELET CLUMPS WERE PRESENT.
[b]BLOOD SAMPLE WAS CLOTTED.

INDIVIDUAL HEMATOLOGY DATA

DAYS 92-95

ANIMAL NO.	LEUKO-CYTES 10*3/CMM	SEGD NEUTRO-PHILS 10*3/CMM	NON-SEGD NEUTRO-PHILS 10*3/CMM	LYMPHO-CYTES 10*3/CMM	MONO-CYTES 10*3/CMM	EOSINO-PHILS 10*3/CMM	BASO-PHILS 10*3/CMM
GROUP 1: 0 MG/KG/DAY							
11876 F	11.7	1.3	0.0	9.9	0.4	0.1	0.0
11886 F	11.2	0.4	0.0	10.4	0.2	0.1	0.0
11890 F	13.3	1.2	0.0	11.7	0.4	0.0	0.0
11891 F	9.7	0.5	0.0	9.1	0.0	0.1	0.0
11892 F	a	a	a	a	a	a	a
11895 F	9.1	2.1	0.0	6.7	0.2	0.1	0.0
11896 F	12.0	1.2	0.0	10.7	0.1	0.0	0.0
11901 F	12.6	0.4	0.0	11.7	0.3	0.3	0.0
11902 F	12.4	0.7	0.0	11.3	0.2	0.1	0.0
11904 F	13.4	1.6	0.0	11.5	0.1	0.1	0.0
MEAN	11.7	1.0	0.0	10.3	0.2	0.1	0.0
S.D.	1.49	0.58	0.00	1.61	0.12	0.08	0.00
N	9	9	9	9	9	9	9

NOTE: THE MEANS AND STANDARD DEVIATIONS WERE CALCULATED USING NONROUNDED VALUES.
[a]BLOOD SAMPLE WAS CLOTTED.

INDIVIDUAL HEMATOLOGY DATA

DAYS 92-95

ANIMAL NO.	ERYTHRO-CYTES 10*6/CMM	HEMO-GLOBIN G/DL	HEMA-TOCRIT %	MEAN CORPUS VOLUME FL	MEAN CORPUS HMGLBN PG	MEAN CORPUS HEMO-CON G/DL	PLATE-LETS 10*3/CMM	NUCLE-ATED RBC'S % WBC	RED CELL MORPHOLOGY
GROUP 2: 0.01 MG/KG/DAY									
11907 F	8.40	16.0	47.7	56.8	19.0	33.5	1030	0	NORMAL
11910 F	8.00	15.4	43.9	54.9	19.2	35.1	1080	0	NORMAL[a]
11914 F	8.00	15.4	42.6	53.3	19.2	36.1	960	0	NORMAL
11915 F	8.30	14.9	43.5	52.4	18.0	34.3	810	0	NORMAL
11916 F	8.00	15.1	43.3	54.1	18.9	34.9	910	0	NORMAL
11918 F	7.80	14.4	41.9	53.7	18.5	34.4	820	0	NORMAL[a]
11919 F	8.10	15.6	46.3	57.2	19.3	33.7	810	0	NORMAL[a]
11920 F	8.30	15.4	42.7	51.4	18.6	36.1	1180	0	NORMAL
11922 F	8.90	16.7	46.5	52.3	18.8	35.9	770	0	NORMAL
11924 F	7.80	15.0	43.8	56.2	19.2	34.2	840	0	NORMAL
MEAN	8.16	15.4	44.2	54.2	18.9	34.8	921	0	
S.D.	0.331	0.63	1.93	2.00	0.41	0.96	137.5	0.0	
N	10	10	10	10	10	10	10	10	

NOTE: THE MEANS AND STANDARD DEVIATIONS WERE CALCULATED USING NONROUNDED VALUES.
GROUP 2 FEMALES WERE EUTHANIZED ON DAYS 15-18 OR DAYS 92-95.
[a]PLATELET CLUMPS WERE PRESENT.

DAYS 92-95

ANIMAL NO.	LEUKO-CYTES 10*3/CMM	SEGD NEUTRO-PHILS 10*3/CMM	NON-SEGD NEUTRO-PHILS 10*3/CMM	LYMPHO-CYTES 10*3/CMM	MONO-CYTES 10*3/CMM	EOSINO-PHILS 10*3/CMM	BASO-PHILS 10*3/CMM
GROUP 2: 0.01 MG/KG/DAY							
11907 F	14.0	1.3	0.0	12.6	0.0	0.1	0.0
11910 F	12.7	0.4	0.0	12.1	0.3	0.0	0.0
11914 F	13.6	0.5	0.0	13.1	0.0	0.0	0.0
11915 F	13.7	0.3	0.0	13.2	0.1	0.1	0.0
11916 F	7.8	0.5	0.0	7.0	0.1	0.2	0.0
11918 F	14.5	1.9	0.0	12.3	0.1	0.1	0.0
11919 F	15.9	1.6	0.0	14.3	0.0	0.0	0.0
11920 F	9.7	2.4	0.0	6.9	0.3	0.1	0.0
11922 F	11.8	0.6	0.0	11.0	0.0	0.2	0.0
11924 F	9.8	1.1	0.0	8.3	0.2	0.2	0.0
MEAN	12.4	1.1	0.0	11.1	0.1	0.1	0.0
S.D.	2.54	0.72	0.00	2.69	0.11	0.08	0.00
N	10	10	10	10	10	10	10

NOTE: THE MEANS AND STANDARD DEVIATIONS WERE CALCULATED USING NONROUNDED VALUES.
GROUP 2 FEMALES WERE EUTHANIZED ON DAYS 15-18 OR DAYS 92-95.

DAYS 92-95

ANIMAL NO.	ERYTHRO-CYTES 10*6/CMM	HEMO-GLOBIN G/DL	HEMA-TOCRIT %	MEAN CORPUS VOLUME FL	MEAN CORPUS HMGLBN PG	MEAN CORPUS HEMO-CON G/DL	PLATE-LETS 10*3/CMM	NUCLE-ATED RBC'S % WBC	RED CELL MORPHOLOGY
GROUP 3: 0.05 MG/KG/DAY									
11927 F	8.00	15.4	44.4	55.5	19.2	34.7	880	0	NORMAL[a]
11929 F	8.30	15.1	43.2	52.0	18.2	35.0	1300	0	NORMAL[a]
11935 F	b	b	b	b	b	b	b	b	b
11936 F	8.10	14.8	42.8	52.8	18.3	34.6	880	0	NORMAL[a]
11937 F	9.00	17.0	49.8	55.3	18.9	34.2	1030	0	NORMAL
11938 F	9.00	16.8	47.7	53.0	18.7	35.2	1080	0	NORMAL
11939 F	7.70	15.2	42.6	55.3	19.7	35.7	810	0	NORMAL
11950 F	7.70	15.2	41.3	53.7	19.7	36.8	820	0	NORMAL[a]
11954 F	7.50	14.5	40.5	54.0	19.3	35.8	940	0	NORMAL
11955 F	8.60	15.9	46.3	53.8	18.5	34.4	920	0	NORMAL
MEAN	8.21	15.5	44.3	53.9	18.9	35.2	962	0	
S.D.	0.558	0.86	3.07	1.23	0.57	0.82	154.8	0.0	
N	9	9	9	9	9	9	9	9	

NOTE: THE MEANS AND STANDARD DEVIATIONS WERE CALCULATED USING NONROUNDED VALUES.
[a]PLATELET CLUMPS WERE PRESENT.
[b]BLOOD SAMPLE WAS CLOTTED.

DAYS 92-95

ANIMAL NO.	LEUKO-CYTES 10*3/CMM	SEGD NEUTRO-PHILS 10*3/CMM	NON-SEGD NEUTRO-PHILS 10*3/CMM	LYMPHO-CYTES 10*3/CMM	MONO-CYTES 10*3/CMM	EOSINO-PHILS 10*3/CMM	BASO-PHILS 10*3/CMM
GROUP 3: 0.05 MG/KG/DAY							
11927 F	12.0	1.0	0.0	10.9	0.0	0.1	0.0
11929 F	12.2	1.2	0.0	10.7	0.1	0.1	0.0
11935 F	a	a	a	a	a	a	a
11936 F	12.2	0.4	0.0	11.5	0.1	0.2	0.0
11937 F	12.0	0.2	0.0	11.8	0.0	0.0	0.0
11938 F	15.6	0.9	0.0	14.7	0.0	0.0	0.0
11939 F	12.4	1.0	0.0	10.9	0.2	0.2	0.0
11950 F	12.3	0.5	0.0	11.4	0.0	0.4	0.0
11954 F	8.5	0.6	0.0	7.7	0.1	0.1	0.0
11955 F	12.4	0.1	0.0	12.3	0.0	0.0	0.0
MEAN	12.2	0.7	0.0	11.3	0.1	0.1	0.0
S.D.	1.78	0.38	0.00	1.80	0.09	0.13	0.00
N	9	9	9	9	9	9	9

NOTE: THE MEANS AND STANDARD DEVIATIONS WERE CALCULATED USING NONROUNDED VALUES.
[a]BLOOD SAMPLE WAS CLOTTED.

DAYS 92-95

ANIMAL NO.	ERYTHRO-CYTES 10*6/CMM	HEMO-GLOBIN G/DL	HEMA-TOCRIT %	MEAN CORPUS VOLUME FL	MEAN CORPUS HMGLBN PG	MEAN CORPUS HEMO-CON G/DL	PLATE-LETS 10*3/CMM	NUCLE-ATED RBC'S % WBC	RED CELL MORPHOLOGY
GROUP 4: 0.2 MG/KG/DAY									
11956 F	7.70	14.5	39.9	51.8	18.8	36.4	1110	0	NORMAL
11957 F	7.80	14.7	44.5	57.0	18.8	33.1	710	0	NORMAL
11958 F	8.80	16.7	46.1	52.4	19.0	36.2	870	0	NORMAL
11961 F	8.00	14.9	42.9	53.6	18.6	34.7	1000	0	NORMAL
11965 F	8.00	14.7	41.4	51.8	18.4	35.5	740	0	NORMAL
11966 F	8.10	14.5	41.4	51.1	17.9	35.0	1200	0	NORMAL
11969 F	8.10	15.4	44.2	54.6	19.0	34.8	250	0	NORMAL
11972 F	8.10	14.9	41.5	51.2	18.4	35.9	950	0	NORMAL
11973 F	7.90	16.0	44.2	55.9	20.3	36.2	930	0	NORMAL
11975 F	8.30	15.5	43.4	52.3	18.7	35.7	830	0	NORMAL
MEAN	8.08	15.2	43.0	53.2	18.8	35.4	859	0	
S.D.	0.305	0.72	1.88	2.04	0.62	0.99	262.6	0.0	
N	10	10	10	10	10	10	10	10	

NOTE: THE MEANS AND STANDARD DEVIATIONS WERE CALCULATED USING NONROUNDED VALUES.
GROUP 4 FEMALES WERE EUTHANIZED ON DAYS 15-18 OR DAYS 92-95.

DAYS 92-95

ANIMAL NO.	LEUKO-CYTES 10*3/CMM	SEGD NEUTRO-PHILS 10*3/CMM	NON-SEGD NEUTRO-PHILS 10*3/CMM	LYMPHO-CYTES 10*3/CMM	MONO-CYTES 10*3/CMM	EOSINO-PHILS 10*3/CMM	BASO-PHILS 10*3/CMM
GROUP 4: 0.2 MG/KG/DAY							
11956 F	18.7	3.9	0.0	14.4	0.2	0.2	0.0
11957 F	11.3	0.6	0.0	10.5	0.2	0.0	0.0
11958 F	11.3	1.0	0.0	10.2	0.0	0.1	0.0
11961 F	12.9	0.6	0.0	12.1	0.1	0.0	0.0
11965 F	8.9	0.8	0.0	7.9	0.0	0.2	0.0
11966 F	17.0	1.9	0.0	15.0	0.0	0.2	0.0
11969 F	9.1	0.5	0.0	8.6	0.0	0.0	0.0
11972 F	13.8	0.3	0.0	13.5	0.0	0.0	0.0
11973 F	10.6	0.6	0.0	9.9	0.0	0.1	0.0
11975 F	13.1	0.8	0.0	11.8	0.1	0.4	0.0
MEAN	12.7	1.1	0.0	11.4	0.1	0.1	0.0
S.D.	3.19	1.08	0.00	2.39	0.09	0.13	0.00
N	10	10	10	10	10	10	10

NOTE: THE MEANS AND STANDARD DEVIATIONS WERE CALCULATED USING NONROUNDED VALUES.
GROUP 4 FEMALES WERE EUTHANIZED ON DAYS 15-18 OR DAYS 92-95.

INDIVIDUAL HEMATOLOGY DATA

DAYS 92-95

ANIMAL NO.	ERYTHRO-CYTES 10*6/CMM	HEMO-GLOBIN G/DL	HEMA-TOCRIT %	MEAN CORPUS VOLUME FL	MEAN CORPUS HMGLBN PG	MEAN CORPUS HEMO-CON G/DL	PLATE-LETS 10*3/CMM	NUCLE-ATED RBC'S % WBC	RED CELL MORPHOLOGY
GROUP 5: 1.0 MG/KG/DAY									
11976 F	7.80	14.6	40.8	52.3	18.7	35.8	810	0	NORMAL[a]
11983 F	7.80	14.8	42.3	54.2	19.0	35.0	770	0	NORMAL
11988 F	7.80	14.8	39.9	51.2	19.0	37.1	940	0	NORMAL[a]
11990 F	8.20	15.8	45.3	55.2	19.3	34.9	720	0	NORMAL
11993 F	8.90	16.7	49.4	55.5	18.8	33.8	660	0	NORMAL
11995 F	7.30	14.3	39.6	54.2	19.6	36.1	700	0	NORMAL[a]
11996 F	8.50	16.5	47.1	55.4	19.4	35.0	980	0	NORMAL
11997 F	8.30	15.7	43.7	52.7	18.9	35.9	880	0	NORMAL
11998 F	8.30	15.9	46.7	56.3	19.2	34.0	1140	0	NORMAL
12000 F	8.10	15.6	45.4	56.0	19.3	34.4	850	0	NORMAL
MEAN	8.10	15.5	44.0	54.3	19.1	35.2	845	0	
S.D.	0.447	0.81	3.32	1.72	0.29	1.03	146.5	0.0	
N	10	10	10	10	10	10	10	10	

NOTE: THE MEANS AND STANDARD DEVIATIONS WERE CALCULATED USING NONROUNDED VALUES.
[a]PLATELET CLUMPS WERE PRESENT.

DAYS 92-95

ANIMAL NO.	LEUKO-CYTES 10*3/CMM	SEGD NEUTRO-PHILS 10*3/CMM	NON-SEGD NEUTRO-PHILS 10*3/CMM	LYMPHO-CYTES 10*3/CMM	MONO-CYTES 10*3/CMM	EOSINO-PHILS 10*3/CMM	BASO-PHILS 10*3/CMM
GROUP 5: 1.0 MG/KG/DAY							
11976 F	9.0	0.4	0.0	8.5	0.1	0.0	0.0
11983 F	8.3	0.7	0.0	7.5	0.1	0.0	0.0
11988 F	15.6	0.8	0.0	14.5	0.0	0.3	0.0
11990 F	14.7	1.0	0.0	13.4	0.1	0.1	0.0
11993 F	6.8	0.4	0.0	6.3	0.1	0.1	0.0
11995 F	4.9	0.3	0.0	4.6	0.0	0.0	0.0
11996 F	12.6	0.5	0.0	11.8	0.1	0.1	0.0
11997 F	11.4	1.5	0.0	9.8	0.1	0.0	0.0
11998 F	8.0	0.8	0.0	7.0	0.1	0.1	0.0
12000 F	12.4	0.4	0.0	11.8	0.1	0.1	0.0
MEAN	10.4	0.7	0.0	9.5	0.1	0.1	0.0
S.D.	3.51	0.36	0.00	3.28	0.05	0.10	0.00
N	10	10	10	10	10	10	10

NOTE: THE MEANS AND STANDARD DEVIATIONS WERE CALCULATED USING NONROUNDED VALUES.

INDIVIDUAL HEMATOLOGY DATA

DAYS 92-95

ANIMAL NO.	ERYTHRO-CYTES 10*6/CMM	HEMO-GLOBIN G/DL	HEMA-TOCRIT %	MEAN CORPUS VOLUME FL	MEAN CORPUS HMGLBN PG	MEAN CORPUS HEMO-CON G/DL	PLATE-LETS 10*3/CMM	NUCLE-ATED RBC'S % WBC	RED CELL MORPHOLOGY
GROUP 6: 10.0 MG/KG/DAY									
12006 F	9.50	17.6	51.5	54.2	18.5	34.2	960	0	NORMAL
12007 F	8.50	15.7	46.2	54.3	18.5	34.0	1030	0	NORMAL
12011 F	8.30	16.0	45.6	54.9	19.3	35.1	660	0	NORMAL
12012 F	8.30	15.2	44.7	53.8	18.3	34.0	730	0	NORMAL
12018 F	8.20	15.7	45.3	55.3	19.1	34.6	970	0	NORMAL[a]
12019 F	8.50	15.6	46.2	54.3	18.4	33.8	940	0	NORMAL[a]
12022 F	8.30	16.0	46.1	55.5	19.3	34.7	690	0	NORMAL[a]
12025 F	7.80	15.0	40.9	52.4	19.2	36.7	860	0	NORMAL
12029 F	7.60	15.2	42.9	56.5	20.0	35.4	890	0	NORMAL
12033 F	7.90	15.3	44.6	56.4	19.4	34.3	1030	0	NORMAL
MEAN	8.29	15.7	45.4	54.8	19.0	34.7	876	0	
S.D.	0.520	0.74	2.72	1.24	0.55	0.87	137.6	0.0	
N	10	10	10	10	10	10	10	10	

NOTE: THE MEANS AND STANDARD DEVIATIONS WERE CALCULATED USING NONROUNDED VALUES.
[a]PLATELET CLUMPS WERE PRESENT.

DAYS 92-95

ANIMAL NO.	LEUKO-CYTES 10*3/CMM	SEGD NEUTRO-PHILS 10*3/CMM	NON-SEGD NEUTRO-PHILS 10*3/CMM	LYMPHO-CYTES 10*3/CMM	MONO-CYTES 10*3/CMM	EOSINO-PHILS 10*3/CMM	BASO-PHILS 10*3/CMM
GROUP 6: 10.0 MG/KG/DAY							
12006 F	7.3	0.4	0.0	6.8	0.1	0.1	0.0
12007 F	7.8	0.9	0.0	6.7	0.1	0.1	0.0
12011 F	13.6	0.3	0.0	13.2	0.0	0.1	0.0
12012 F	11.6	0.3	0.0	11.1	0.0	0.1	0.0
12018 F	11.6	0.5	0.0	10.9	0.1	0.1	0.0
12019 F	13.4	0.4	0.0	12.7	0.3	0.0	0.0
12022 F	13.4	0.8	0.0	12.5	0.1	0.0	0.0
12025 F	15.2	0.8	0.0	14.3	0.2	0.0	0.0
12029 F	11.5	1.5	0.0	9.7	0.2	0.1	0.0
12033 F	8.1	0.4	0.0	7.6	0.0	0.1	0.0
MEAN	11.4	0.6	0.0	10.6	0.1	0.1	0.0
S.D.	2.75	0.38	0.00	2.75	0.09	0.05	0.00
N	10	10	10	10	10	10	10

NOTE: THE MEANS AND STANDARD DEVIATIONS WERE CALCULATED USING NONROUNDED VALUES.

DAYS 121-123

ANIMAL NO.	ERYTHRO-CYTES 10*6/CMM	HEMO-GLOBIN G/DL	HEMA-TOCRIT %	MEAN CORPUS VOLUME FL	MEAN CORPUS HMGLBN PG	MEAN CORPUS HEMO-CON G/DL	PLATE-LETS 10*3/CMM	NUCLE-ATED RBC'S % WBC	RED CELL MORPHOLOGY
GROUP 1: 0 MG/KG/DAY									
11879 F	7.90	15.1	43.2	54.7	19.1	34.9	1070	0	NORMAL
11880 F	7.60	14.8	42.3	55.6	19.5	35.0	770	0	NORMAL
11883 F	8.60	16.7	48.8	56.8	19.4	34.2	820	0	NORMAL
11885 F	8.10	15.3	42.3	52.2	18.9	36.2	920	0	NORMAL
11887 F	9.00	17.4	49.0	54.5	19.3	35.5	800	0	NORMAL
11888 F	7.80	15.4	44.1	56.5	19.7	34.9	830	0	NORMAL
11897 F	8.10	14.8	43.0	53.1	18.3	34.4	930	0	NORMAL
11898 F	8.00	15.3	45.7	57.1	19.1	33.5	160	0	NORMAL
11899 F	7.80	15.0	43.7	56.0	19.2	34.3	910	0	NORMAL
11905 F	9.20	16.1	49.0	53.3	17.5	32.8	920	0	NORMAL
MEAN	8.21	15.6	45.1	55.0	19.0	34.6	813	0	
S.D.	0.540	0.87	2.81	1.70	0.65	0.97	245.1	0.0	
N	10	10	10	10	10	10	10	10	

NOTE: THE MEANS AND STANDARD DEVIATIONS WERE CALCULATED USING NONROUNDED VALUES.

DAYS 121-123

ANIMAL NO.	LEUKO-CYTES 10*3/CMM	SEGD NEUTRO-PHILS 10*3/CMM	NON-SEGD NEUTRO-PHILS 10*3/CMM	LYMPHO-CYTES 10*3/CMM	MONO-CYTES 10*3/CMM	EOSINO-PHILS 10*3/CMM	BASO-PHILS 10*3/CMM
GROUP 1: 0 MG/KG/DAY							
11879 F	10.4	0.8	0.0	9.4	0.1	0.1	0.0
11880 F	12.7	1.9	0.0	10.7	0.0	0.1	0.0
11883 F	14.1	0.4	0.0	13.5	0.1	0.0	0.0
11885 F	10.3	0.5	0.0	9.5	0.3	0.0	0.0
11887 F	6.3	0.4	0.0	5.7	0.1	0.1	0.0
11888 F	10.3	0.7	0.0	9.5	0.1	0.0	0.0
11897 F	14.0	1.7	0.0	12.3	0.0	0.0	0.0
11898 F	7.3	0.7	0.0	6.4	0.1	0.1	0.0
11899 F	12.3	1.1	0.0	11.1	0.1	0.0	0.0
11905 F	9.1	0.3	0.0	8.7	0.1	0.0	0.0
MEAN	10.7	0.9	0.0	9.7	0.1	0.0	0.0
S.D.	2.64	0.55	0.00	2.42	0.09	0.06	0.00
N	10	10	10	10	10	10	10

NOTE: THE MEANS AND STANDARD DEVIATIONS WERE CALCULATED USING NONROUNDED VALUES.

DAYS 121-123

ANIMAL NO.	ERYTHRO-CYTES 10*6/CMM	HEMO-GLOBIN G/DL	HEMA-TOCRIT %	MEAN CORPUS VOLUME FL	MEAN CORPUS HMGLBN PG	MEAN CORPUS HEMO-CON G/DL	PLATE-LETS 10*3/CMM	NUCLE-ATED RBC'S % WBC	RED CELL MORPHOLOGY
GROUP 3: 0.05 MG/KG/DAY									
11926 F	7.50	14.6	40.9	54.5	19.5	35.7	760	0	NORMAL[a]
11928 F	8.90	16.2	47.1	52.9	18.2	34.4	1210	0	NORMAL
11932 F	8.60	15.6	45.2	52.6	18.1	34.5	950	0	NORMAL
11933 F	8.10	15.1	47.2	58.3	18.6	32.0	860	0	NORMAL
11940 F	8.50	15.9	47.2	55.5	18.7	33.7	820	0	NORMAL
11943 F	8.20	15.8	45.4	55.4	19.3	34.8	950	0	NORMAL
11944 F	8.30	15.5	45.7	55.1	18.7	33.9	650	0	NORMAL[a]
11947 F	10.00	17.7	51.1	51.1	17.7	34.6	930	0	NORMAL
11948 F	FOUND DEAD								
11949 F	8.00	15.5	43.8	54.7	19.4	35.4	870	0	NORMAL
MEAN	8.46	15.8	46.0	54.5	18.7	34.3	889	0	
S.D.	0.702	0.86	2.78	2.07	0.62	1.08	154.9	0.0	
N	9	9	9	9	9	9	9	9	

NOTE: THE MEANS AND STANDARD DEVIATIONS WERE CALCULATED USING NONROUNDED VALUES.
[a]PLATELET CLUMPS WERE PRESENT.

DAYS 121-123

ANIMAL NO.	LEUKO-CYTES 10*3/CMM	SEGD NEUTRO-PHILS 10*3/CMM	NON-SEGD NEUTRO-PHILS 10*3/CMM	LYMPHO-CYTES 10*3/CMM	MONO-CYTES 10*3/CMM	EOSINO-PHILS 10*3/CMM	BASO-PHILS 10*3/CMM
GROUP 3: 0.05 MG/KG/DAY							
11926 F	10.3	2.9	0.0	7.3	0.1	0.0	0.0
11928 F	16.2	2.1	0.0	14.1	0.0	0.0	0.0
11932 F	10.0	0.7	0.0	8.9	0.4	0.0	0.0
11933 F	10.6	0.4	0.0	9.8	0.3	0.1	0.0
11940 F	16.1	2.4	0.0	13.0	0.5	0.2	0.0
11943 F	10.7	1.1	0.0	9.4	0.1	0.1	0.0
11944 F	14.2	1.3	0.0	12.2	0.6	0.1	0.0
11947 F	9.9	0.8	0.0	8.8	0.1	0.2	0.0
11948 F	FOUND DEAD						
11949 F	12.4	1.5	0.0	10.9	0.0	0.0	0.0
MEAN	12.3	1.5	0.0	10.5	0.2	0.1	0.0
S.D.	2.59	0.84	0.00	2.23	0.21	0.08	0.00
N	9	9	9	9	9	9	9

NOTE: THE MEANS AND STANDARD DEVIATIONS WERE CALCULATED USING NONROUNDED VALUES.

INDIVIDUAL HEMATOLOGY DATA

DAYS 121-123

ANIMAL NO.	ERYTHRO-CYTES 10*6/CMM	HEMO-GLOBIN G/DL	HEMA-TOCRIT %	MEAN CORPUS VOLUME FL	MEAN CORPUS HMGLBN PG	MEAN CORPUS HEMO-CON G/DL	PLATE-LETS 10*3/CMM	NUCLE-ATED RBC'S % WBC	RED CELL MORPHOLOGY
GROUP 5: 1.0 MG/KG/DAY									
11978 F	8.80	16.8	49.4	56.1	19.1	34.0	1020	0	NORMAL[a]
11979 F	8.20	14.5	43.0	52.4	17.7	33.7	850	0	NORMAL[a]
11980 F	8.40	15.2	45.2	53.8	18.1	33.6	710	0	NORMAL
11981 F	7.40	15.1	42.0	56.7	20.4	36.0	740	0	NORMAL
11985 F	7.40	14.7	41.4	55.9	19.9	35.5	890	0	NORMAL
11986 F	7.10	13.0	38.1	53.6	18.3	34.2	750	0	NORMAL[a]
11987 F	8.30	15.5	46.5	56.0	18.7	33.3	930	0	NORMAL[a]
11999 F	7.70	14.8	42.4	55.1	19.2	34.9	850	0	NORMAL
12002 F	8.20	15.7	46.7	57.0	19.1	33.6	790	0	NORMAL
12004 F	9.20	17.6	52.7	57.3	19.1	33.4	830	0	NORMAL
MEAN	8.07	15.3	44.7	55.4	19.0	34.2	836	0	
S.D.	0.665	1.26	4.26	1.63	0.81	0.94	94.7	0.0	
N	10	10	10	10	10	10	10	10	

NOTE: THE MEANS AND STANDARD DEVIATIONS WERE CALCULATED USING NONROUNDED VALUES.
[a]PLATELET CLUMPS WERE PRESENT.

DAYS 121-123

ANIMAL NO.	LEUKO-CYTES 10*3/CMM	SEGD NEUTRO-PHILS 10*3/CMM	NON-SEGD NEUTRO-PHILS 10*3/CMM	LYMPHO-CYTES 10*3/CMM	MONO-CYTES 10*3/CMM	EOSINO-PHILS 10*3/CMM	BASO-PHILS 10*3/CMM
GROUP 5: 1.0 MG/KG/DAY							
11978 F	10.7	4.3	0.0	6.2	0.2	0.0	0.0
11979 F	13.0	0.6	0.0	12.2	0.1	0.0	0.0
11980 F	8.9	0.4	0.0	8.2	0.2	0.2	0.0
11981 F	11.1	0.9	0.0	10.2	0.0	0.0	0.0
11985 F	16.7	3.3	0.0	12.9	0.3	0.2	0.0
11986 F	15.4	1.4	0.0	14.0	0.0	0.0	0.0
11987 F	11.8	1.4	0.0	9.9	0.5	0.0	0.0
11999 F	12.3	0.4	0.0	11.9	0.0	0.0	0.0
12002 F	7.1	0.5	0.0	6.5	0.1	0.0	0.0
12004 F	13.8	1.7	0.0	11.9	0.0	0.3	0.0
MEAN	12.1	1.5	0.0	10.4	0.1	0.1	0.0
S.D.	2.87	1.33	0.00	2.68	0.16	0.10	0.00
N	10	10	10	10	10	10	10

NOTE: THE MEANS AND STANDARD DEVIATIONS WERE CALCULATED USING NONROUNDED VALUES.

INDIVIDUAL HEMATOLOGY DATA

DAYS 121-123

ANIMAL NO.	ERYTHRO-CYTES 10*6/CMM	HEMO-GLOBIN G/DL	HEMA-TOCRIT %	MEAN CORPUS VOLUME FL	MEAN CORPUS HMGLBN PG	MEAN CORPUS HEMO-CON G/DL	PLATE-LETS 10*3/CMM	NUCLE-ATED RBC'S % WBC	RED CELL MORPHOLOGY
GROUP 6: 10.0 MG/KG/DAY									
12008 F	8.40	16.5	45.8	54.5	19.6	36.0	700	0	NORMAL
12009 F	8.00	15.3	43.5	54.4	19.1	35.2	790	0	NORMAL
12014 F	8.80	16.5	46.7	53.1	18.8	35.3	740	0	NORMAL
12015 F	8.30	16.0	45.2	54.4	19.3	35.4	720	0	NORMAL
12017 F	7.90	15.0	41.3	52.3	19.0	36.3	680	0	NORMAL
12020 F	8.40	15.6	44.8	53.3	18.6	34.8	730	0	NORMAL
12024 F	7.70	15.1	43.9	57.0	19.6	34.4	670	0	NORMAL
12027 F	7.80	15.4	45.3	58.1	19.7	34.0	740	0	NORMAL
12034 F	8.70	15.9	47.6	54.7	18.3	33.4	1020	0	NORMAL
12035 F	8.70	16.2	48.7	56.0	18.6	33.3	970	0	NORMAL
MEAN	8.27	15.8	45.3	54.8	19.1	34.8	776	0	
S.D.	0.400	0.55	2.12	1.79	0.49	1.03	120.8	0.0	
N	10	10	10	10	10	10	10	10	

NOTE: THE MEANS AND STANDARD DEVIATIONS WERE CALCULATED USING NONROUNDED VALUES.

DAYS 121-123

ANIMAL NO.	LEUKO-CYTES 10*3/CMM	SEGD NEUTRO-PHILS 10*3/CMM	NON-SEGD NEUTRO-PHILS 10*3/CMM	LYMPHO-CYTES 10*3/CMM	MONO-CYTES 10*3/CMM	EOSINO-PHILS 10*3/CMM	BASO-PHILS 10*3/CMM
GROUP 6: 10.0 MG/KG/DAY							
12008 F	9.7	0.5	0.0	8.7	0.3	0.2	0.0
12009 F	8.8	0.5	0.0	8.2	0.0	0.1	0.0
12014 F	11.2	0.3	0.0	10.6	0.1	0.1	0.0
12015 F	6.5	0.9	0.0	5.5	0.1	0.0	0.0
12017 F	15.8	0.5	0.0	15.3	0.0	0.0	0.0
12020 F	9.4	0.6	0.0	8.8	0.0	0.0	0.0
12024 F	7.8	0.4	0.0	7.4	0.0	0.0	0.0
12027 F	9.3	0.4	0.0	8.7	0.0	0.2	0.0
12034 F	9.5	1.0	0.0	8.2	0.1	0.2	0.0
12035 F	10.2	1.5	0.0	8.6	0.1	0.0	0.0
MEAN	9.8	0.7	0.0	9.0	0.1	0.1	0.0
S.D.	2.46	0.38	0.00	2.56	0.09	0.09	0.00
N	10	10	10	10	10	10	10

NOTE: THE MEANS AND STANDARD DEVIATIONS WERE CALCULATED USING NONROUNDED VALUES.

APPENDIX K

Individual Biochemistry Data

SLI STUDY NO.: 3455.1
CLIENT: MANTECH ENVIRONMENTAL

A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL BIOCHEMISTRY DATA

DAYS 15-18

ANIMAL NO.	AST IU/L	ALT IU/L	ALK PHOS 'TASE IU/L	TOTAL BILI-RUBIN MG/DL	TOTAL PROTEIN G/DL	ALBUMIN G/DL	GLOB-ULIN G/DL	A/G RATIO	UREA NITROGEN MG/DL	CREA-TININE MG/DL	GLUCOSE MG/DL	SODIUM MMOL/L
GROUP 1: 0 MG/KG/DAY												
11716 M	171	121	349	0.56	5.81	3.34	2.47	1.35	19	0.49	236	143
11717 M[a]	90	50	248	0.60	6.43	3.57	2.85	1.25	15	0.47	338	149
11718 M[a]	66	35	222	0.48	6.11	3.02	3.09	0.98	16	0.44	245	145
11720 M	80	49	362	0.39	6.12	3.18	2.94	1.08	16	0.54	303	146
11725 M	81	48	485	0.50	6.21	3.08	3.13	0.98	15	0.53	296	144
11728 M	89	55	314	0.50	6.18	3.18	3.00	1.06	17	0.51	236	144
11731 M	b	b	b	b	b	b	b	b	b	b	b	b
11739 M	161	108	438	0.60	6.56	3.41	3.14	1.09	21	0.55	264	147
11744 M	80	44	337	0.46	6.23	3.40	2.83	1.20	13	0.54	474	146
11745 M	91	55	422	0.53	6.51	3.16	3.35	0.94	22	0.54	295	146
MEAN	101	63	353	0.51	6.24	3.26	2.98	1.10	17	0.51	299	146
S.D.	37.7	30.0	86.3	0.066	0.231	0.181	0.251	0.139	2.9	0.039	74.2	1.8
N	9	9	9	9	9	9	9	9	9	9	9	9

NOTE: THE MEANS AND STANDARD DEVIATIONS WERE CALCULATED USING NONROUNDED VALUES.
[a]MINIMAL HEMOLYSIS.
[b]BLOOD SAMPLE WAS CLOTTED.

APPENDIX K
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL BIOCHEMISTRY DATA

SLI STUDY NO.: 3455.1
CLIENT: MANTECH ENVIRONMENTAL

DAYS 15-18

ANIMAL NO.	POTASSIUM MMOL/L	CHLORIDE MMOL/L	CALCIUM MG/DL	CHOLESTEROL MG/DL	PHOSPHORUS MG/DL	GGT, SERUM IU/L	SORBITAL DEHYDROGENASE IU/L	MAGNESIUM MG/DL
GROUP 1: 0 MG/KG/DAY								
11716 M	9.45	101	12.78	44	13.50	3.26	a	3.1
11717 M[b]	6.95	102	13.18	42	22.80	0.60	31.0	3.5
11718 M[b]	5.87	100	13.08	56	11.68	1.14	10.7	3.0
11720 M	6.35	101	13.15	55	8.20	2.86	14.5	3.4
11725 M	6.01	101	13.32	52	12.24	1.72	18.8	3.7
11728 M	6.68	100	13.76	67	12.90	2.68	17.7	3.1
11731 M	c	c	c	c	c	c	c	c
11739 M	7.91	102	13.47	57	11.25	2.29	92.5	4.0
11744 M	6.58	101	14.35	52	13.20	4.07	18.9	4.5
11745 M	6.42	99	14.08	50	12.60	2.77	27.5	3.9
MEAN	6.91	101	13.47	53	13.15	2.38	28.9	3.6
S.D.	1.123	1.0	0.508	7.5	3.948	1.075	26.51	0.50
N	9	9	9	9	9	9	8	9

NOTE: THE MEANS AND STANDARD DEVIATIONS WERE CALCULATED USING NONROUNDED VALUES.
[a]QUANTITY WAS NOT SUFFICIENT FOR ANALYSIS.
[b]MINIMAL HEMOLYSIS.
[c]BLOOD SAMPLE WAS CLOTTED.

DAYS 15-18

ANIMAL NO.	AST IU/L	ALT IU/L	ALK PHOS 'TASE IU/L	TOTAL BILI-RUBIN MG/DL	TOTAL PROTEIN G/DL	ALBUMIN G/DL	GLOB-ULIN G/DL	A/G RATIO	UREA NITROGEN MG/DL	CREA-TININE MG/DL	GLUCOSE MG/DL	SODIUM MMOL/L
GROUP 2: 0.01 MG/KG/DAY												
11747 M	175	105	219	0.43	6.29	3.04	3.25	0.93	15	0.54	315	143
11751 M	86	44	262	0.48	6.37	3.20	3.16	1.01	14	0.49	271	145
11756 M	98	43	327	0.40	6.57	3.07	3.50	0.88	16	0.40	267	145
11757 M	150	76	328	0.58	6.07	3.09	2.98	1.04	19	0.52	256	141
11758 M	85	45	344	0.61	5.71	2.82	2.89	0.97	18	0.45	254	144
11759 M	155	71	364	0.33	6.17	3.20	2.97	1.08	14	0.48	240	145
11760 M	100	42	403	0.62	6.50	3.50	3.00	1.16	22	0.51	253	147
11762 M[a]	161	125	385	0.38	5.80	3.00	2.80	1.07	24	0.49	212	146
11763 M[a]	117	91	678	0.66	6.36	3.34	3.02	1.10	19	0.46	414	147
11764 M	72	38	424	0.64	6.00	3.51	2.49	1.41	19	0.47	262	146
MEAN	120	68	373	0.51	6.18	3.18	3.01	1.07	18	0.48	274	145
S.D.	37.2	30.7	123.9	0.122	0.286	0.219	0.270	0.147	3.2	0.040	55.4	2.0
N	10	10	10	10	10	10	10	10	10	10	10	10

NOTE: THE MEANS AND STANDARD DEVIATIONS WERE CALCULATED USING NONROUNDED VALUES.
[a]MINIMAL HEMOLYSIS.

DAYS 15-18

ANIMAL NO.	POTASSIUM MMOL/L	CHLORIDE MMOL/L	CALCIUM MG/DL	CHOLESTEROL MG/DL	PHOSPHORUS MG/DL	GGT, SERUM IU/L	SORBITAL DEHYDROGENASE IU/L	MAGNESIUM MG/DL
GROUP 2: 0.01 MG/KG/DAY								
11747 M	9.48	101	13.08	44	13.05	2.58	a	3.9
11751 M	6.47	97	13.24	49	12.55	3.39	36.0	3.4
11756 M	6.23	100	13.43	42	12.70	1.86	25.5	3.5
11757 M	10.34	99	12.78	52	16.90	3.29	a	3.3
11758 M	6.57	96	13.22	49	11.95	2.22	17.1	3.5
11759 M	9.15	102	12.15	43	15.20	a	a	3.0
11760 M	6.76	102	13.49	55	12.15	2.96	37.0	3.7
11762 M[b]	9.32	102	12.00	36	10.30	0.76	89.0	2.9
11763 M[b]	6.77	103	13.31	47	12.01	1.18	71.5	4.0
11764 M	6.46	102	13.65	58	13.55	2.39	15.8	3.3
MEAN	7.76	100	13.03	48	13.04	2.29	41.7	3.5
S.D.	1.603	2.3	0.561	6.7	1.848	0.901	28.05	0.36
N	10	10	10	10	10	9	7	10

NOTE: THE MEANS AND STANDARD DEVIATIONS WERE CALCULATED USING NONROUNDED VALUES.
[a]QUANTITY WAS NOT SUFFICIENT FOR ANALYSIS.
[b]MINIMAL HEMOLYSIS.

DAYS 15-18

ANIMAL NO.	AST IU/L	ALT IU/L	ALK PHOS 'TASE IU/L	TOTAL BILI-RUBIN MG/DL	TOTAL PROTEIN G/DL	ALBUMIN G/DL	GLOB-ULIN G/DL	A/G RATIO	UREA NITROGEN MG/DL	CREA-TININE MG/DL	GLUCOSE MG/DL	SODIUM MMOL/L
GROUP 3: 0.05 MG/KG/DAY												
11766 M[a]	b	47	381	b	b	b	b	b	b	b	b	146
11768 M	80	46	328	0.70	6.14	3.00	3.14	0.96	16	0.41	313	145
11771 M	b	b	b	b	b	b	b	b	b	b	b	b
11772 M	88	60	314	0.59	5.77	3.26	2.50	1.30	16	0.58	304	145
11778 M[a]	61	37	528	0.41	6.22	3.24	2.97	1.09	14	0.41	251	149
11779 M[a]	83	50	444	0.56	5.65	3.10	2.55	1.21	16	0.39	248	147
11784 M[c]	153	118	296	0.49	6.34	3.10	3.24	0.96	22	0.57	282	143
11786 M	93	51	513	0.26	5.99	3.46	2.54	1.36	18	0.55	249	147
11789 M[a]	81	40	332	0.41	6.20	2.98	3.22	0.93	14	0.51	293	147
11793 M	137	67	212	0.58	6.29	3.08	3.21	0.96	16	0.55	380	142
MEAN	97	57	372	0.50	6.07	3.15	2.92	1.10	17	0.50	290	146
S.D.	31.4	24.7	104.6	0.136	0.252	0.159	0.335	0.175	2.7	0.080	44.7	2.1
N	8	9	9	8	8	8	8	8	8	8	8	9

NOTE: THE MEANS AND STANDARD DEVIATIONS WERE CALCULATED USING NONROUNDED VALUES.
[a]MINIMAL HEMOLYSIS.
[b]QUANTITY WAS NOT SUFFICIENT FOR ANALYSIS.
[c]MINIMALLY LIPEMIC.

DAYS 15-18

ANIMAL NO.	POTASSIUM MMOL/L	CHLORIDE MMOL/L	CALCIUM MG/DL	CHOLESTEROL MG/DL	PHOSPHORUS MG/DL	GGT, SERUM IU/L	SORBITAL DEHYDROGENASE IU/L	MAGNESIUM MG/DL
GROUP 3: 0.05 MG/KG/DAY								
11766 M[a]	6.26	98	b	b	b	b	b	b
11768 M	4.89	101	13.93	64	14.20	2.30	17.0	3.3
11771 M	b	b	b	b	b	b	b	b
11772 M	5.39	103	13.64	59	12.15	3.35	23.3	3.4
11778 M[a]	5.95	102	12.76	49	15.30	1.79	16.0	3.1
11779 M[a]	5.96	100	13.30	38	11.85	0.40	18.7	3.6
11784 M[c]	8.42	101	13.22	47	12.70	1.82	108.5	4.0
11786 M	8.37	106	12.57	52	11.22	1.35	18.9	3.8
11789 M[a]	6.09	101	13.48	47	6.50	1.82	16.7	3.4
11793 M	8.03	97	13.39	48	14.45	3.40	119.5	3.9
MEAN	6.60	101	13.29	50	12.30	2.03	42.3	3.6
S.D.	1.327	2.7	0.445	7.9	2.737	0.995	44.39	0.33
N	9	9	8	8	8	8	8	8

NOTE: THE MEANS AND STANDARD DEVIATIONS WERE CALCULATED USING NONROUNDED VALUES.
[a]MINIMAL HEMOLYSIS.
[b]QUANTITY WAS NOT SUFFICIENT FOR ANALYSIS.
[c]MINIMALLY LIPEMIC.

DAYS 15-18

ANIMAL NO.	AST IU/L	ALT IU/L	ALK PHOS 'TASE IU/L	TOTAL BILI-RUBIN MG/DL	TOTAL PROTEIN G/DL	ALBUMIN G/DL	GLOB-ULIN G/DL	A/G RATIO	UREA NITROGEN MG/DL	CREA-TININE MG/DL	GLUCOSE MG/DL	SODIUM MMOL/L
GROUP 4: 0.2 MG/KG/DAY												
11796 M	77	41	237	0.61	6.12	3.03	3.08	0.98	14	0.49	325	148
11798 M	74	45	307	0.49	6.41	3.08	3.32	0.93	17	0.55	283	148
11801 M[a]	103	60	369	0.71	6.22	3.29	2.93	1.12	19	0.53	251	145
11802 M	177	108	531	0.61	6.13	3.22	2.91	1.11	19	0.43	270	142
11803 M	82	42	309	0.17	5.67	2.93	2.74	1.07	16	0.51	311	148
11804 M	93	50	369	0.52	6.58	3.12	3.46	0.90	15	0.42	301	146
11807 M[a]	181	72	351	0.60	6.36	3.51	2.85	1.23	21	0.47	273	142
11808 M	109	75	421	0.53	5.68	2.75	2.93	0.94	16	0.49	223	140
11810 M[a]	83	50	353	0.43	6.37	3.53	2.85	1.24	16	0.58	329	148
11813 M	166	97	277	b	b	b	b	b	b	b	b	140
MEAN	114	64	353	0.52	6.17	3.16	3.01	1.06	17	0.50	285	144
S.D.	43.1	23.6	81.8	0.155	0.315	0.256	0.238	0.128	2.1	0.052	35.1	3.3
N	10	10	10	9	9	9	9	9	9	9	9	10

NOTE: THE MEANS AND STANDARD DEVIATIONS WERE CALCULATED USING NONROUNDED VALUES.
[a]MINIMAL HEMOLYSIS.
[b]QUANTITY WAS NOT SUFFICIENT FOR ANALYSIS.

DAYS 15-18

ANIMAL NO.	POTASSIUM MMOL/L	CHLORIDE MMOL/L	CALCIUM MG/DL	CHOLESTEROL MG/DL	PHOSPHORUS MG/DL	GGT, SERUM IU/L	SORBITAL DEHYDROGENASE IU/L	MAGNESIUM MG/DL
GROUP 4: 0.2 MG/KG/DAY								
11796 M	6.54	103	13.47	40	14.40	1.63	20.7	3.3
11798 M	4.99	101	13.73	53	11.97	2.21	16.1	3.5
11801 M[a]	6.20	102	13.17	57	11.88	1.94	b	3.5
11802 M	10.24	101	12.93	57	15.00	3.11	b	3.1
11803 M	6.27	104	13.34	42	13.70	2.29	21.6	3.4
11804 M	6.59	102	13.51	51	15.15	1.45	40.0	3.8
11807 M[a]	11.17	101	13.27	49	9.15	2.76	121.0	3.7
11808 M	9.03	102	13.17	47	13.10	2.64	72.0	3.0
11810 M[a]	5.69	101	13.12	41	6.05	b	33.5	4.2
11813 M	10.25	96	b	b	b	b	b	b
MEAN	7.70	101	13.30	49	12.27	2.26	46.4	3.5
S.D.	2.236	2.2	0.240	6.6	2.993	0.572	37.91	0.37
N	10	10	9	9	9	8	7	9

NOTE: THE MEANS AND STANDARD DEVIATIONS WERE CALCULATED USING NONROUNDED VALUES.
[a]MINIMAL HEMOLYSIS.
[b]QUANTITY WAS NOT SUFFICIENT FOR ANALYSIS.

DAYS 15-18

ANIMAL NO.	AST IU/L	ALT IU/L	ALK PHOS 'TASE IU/L	TOTAL BILI-RUBIN MG/DL	TOTAL PROTEIN G/DL	ALBUMIN G/DL	GLOB-ULIN G/DL	A/G RATIO	UREA NITROGEN MG/DL	CREA-TININE MG/DL	GLUCOSE MG/DL	SODIUM MMOL/L
GROUP 5: 1.0 MG/KG/DAY												
11816 M	a	a	a	a	a	a	a	a	a	a	a	a
11818 M	71	40	279	0.57	5.69	2.93	2.76	1.06	14	0.48	344	145
11819 M	119	80	449	0.35	6.01	2.98	3.03	0.98	21	0.53	258	147
11820 M	88	62	341	0.63	5.94	2.90	3.04	0.96	30	0.64	287	145
11825 M	104	59	524	0.60	6.08	3.11	2.97	1.05	18	0.54	326	146
11831 M	211	124	431	0.49	5.56	2.96	2.60	1.14	17	0.39	257	139
11835 M[b]	91	61	321	0.80	6.62	3.33	3.29	1.01	16	0.64	270	148
11836 M[b]	82	56	250	0.62	6.05	2.90	3.16	0.92	18	0.46	223	145
11839 M	c	c	c	c	c	c	c	c	c	c	c	c
11844 M	75	40	321	0.52	5.92	2.95	2.97	0.99	16	0.43	280	147
MEAN	105	65	364	0.57	5.98	3.01	2.98	1.01	19	0.51	281	145
S.D.	45.7	27.2	93.9	0.129	0.315	0.146	0.217	0.069	4.9	0.093	39.0	2.7
N	8	8	8	8	8	8	8	8	8	8	8	8

NOTE: THE MEANS AND STANDARD DEVIATIONS WERE CALCULATED USING NONROUNDED VALUES.
[a]QUANTITY WAS NOT SUFFICIENT FOR ANALYSIS.
[b]MINIMAL HEMOLYSIS.
[c]BLOOD SAMPLE WAS NOT AVAILABLE FOR ANALYSIS.

DAYS 15-18

ANIMAL NO.	POTASSIUM MMOL/L	CHLORIDE MMOL/L	CALCIUM MG/DL	CHOLESTEROL MG/DL	PHOSPHORUS MG/DL	GGT, SERUM IU/L	SORBITAL DEHYDROGENASE IU/L	MAGNESIUM MG/DL
GROUP 5: 1.0 MG/KG/DAY								
11816 M	a	a	a	a	a	a	a	a
11818 M	6.57	101	13.80	37	13.75	1.49	19.8	3.8
11819 M	7.33	103	13.07	39	11.94	2.62	65.0	3.3
11820 M	6.67	102	14.22	90	12.20	2.76	39.5	4.0
11825 M	5.89	101	13.64	58	16.45	3.03	23.1	3.5
11831 M	10.14	95	12.45	37	10.20	3.27	a	3.3
11835 M[b]	5.61	100	13.68	65	14.25	1.51	35.5	3.8
11836 M[b]	6.71	102	13.09	38	16.20	2.23	21.5	3.5
11839 M	c	c	c	c	c	c	c	c
11844 M	5.64	102	13.86	39	12.80	1.34	12.7	3.3
MEAN	6.82	101	13.48	50	13.47	2.28	31.0	3.6
S.D.	1.468	2.5	0.566	19.1	2.141	0.755	17.62	0.26
N	8	8	8	8	8	8	7	8

NOTE: THE MEANS AND STANDARD DEVIATIONS WERE CALCULATED USING NONROUNDED VALUES.
[a]QUANTITY WAS NOT SUFFICIENT FOR ANALYSIS.
[b]MINIMAL HEMOLYSIS.
[c]BLOOD SAMPLE WAS NOT AVAILABLE FOR ANALYSIS.

DAYS 15-18

ANIMAL NO.	AST IU/L	ALT IU/L	ALK PHOS 'TASE IU/L	TOTAL BILI-RUBIN MG/DL	TOTAL PROTEIN G/DL	ALBUMIN G/DL	GLOB-ULIN G/DL	A/G RATIO	UREA NITROGEN MG/DL	CREA-TININE MG/DL	GLUCOSE MG/DL	SODIUM MMOL/L
GROUP 6: 10.0 MG/KG/DAY												
11846 M	a	a	a	a	a	a	a	a	a	a	a	a
11847 M[b]	67	39	329	0.66	6.23	3.35	2.88	1.16	15	0.47	285	145
11848 M[b]	171	55	310	c	c	c	c	c	c	c	c	150
11853 M	169	88	315	0.49	5.91	2.86	3.05	0.94	12	0.45	301	142
11857 M	69	36	277	0.38	6.40	3.03	3.37	0.90	11	0.47	211	145
11858 M[b]	105	50	473	0.51	6.38	3.12	3.27	0.95	20	0.53	247	144
11859 M[b]	97	57	445	0.52	5.80	3.06	2.74	1.12	15	0.66	333	145
11861 M[b]	126	91	509	0.63	6.22	3.58	2.64	1.35	17	0.47	337	149
11863 M	83	42	376	0.50	6.38	3.22	3.16	1.02	15	0.48	332	146
11870 M	171	102	380	0.37	6.08	3.04	3.04	1.00	15	0.42	257	143
MEAN	117	62	379	0.51	6.18	3.16	3.02	1.06	15	0.50	288	145
S.D.	43.5	24.7	80.5	0.105	0.226	0.222	0.252	0.150	2.8	0.074	46.4	2.5
N	9	9	9	8	8	8	8	8	8	8	8	9

NOTE: THE MEANS AND STANDARD DEVIATIONS WERE CALCULATED USING NONROUNDED VALUES.
[a]BLOOD SAMPLE WAS NOT AVAILABLE FOR ANALYSIS.
[b]MINIMAL HEMOLYSIS.
[c]QUANTITY WAS NOT SUFFICIENT FOR ANALYSIS.

DAYS 15-18

ANIMAL NO.	POTASSIUM MMOL/L	CHLORIDE MMOL/L	CALCIUM MG/DL	CHOLESTEROL MG/DL	PHOSPHORUS MG/DL	GGT, SERUM IU/L	SORBITAL DEHYDROGENASE IU/L	MAGNESIUM MG/DL
GROUP 6: 10.0 MG/KG/DAY								
11846 M[b]	a	a	a	a	a	a	a	a
11847 M[b]	6.23	96	13.81	48	11.40	1.95	15.7	3.3
11848 M[b]	6.39	103	c	c	c	c	18.5	c
11853 M	9.45	103	12.28	42	14.75	2.96	c	3.1
11857 M[b]	5.97	103	13.57	46	12.85	3.10	11.7	3.0
11858 M[b]	6.61	101	13.73	64	12.60	0.45	44.0	3.7
11859 M[b]	5.15	99	13.53	59	11.35	1.19	38.5	3.5
11861 M[b]	5.34	102	13.56	60	11.59	2.64	45.0	3.5
11863 M	5.35	103	13.87	49	13.45	1.87	15.0	3.7
11870 M	11.29	101	11.21	37	7.50	1.45	c	3.4
MEAN	6.86	101	13.19	51	11.94	1.95	26.9	3.4
S.D.	2.102	2.5	0.949	9.5	2.135	0.919	14.85	0.26
N	9	9	8	8	8	8	7	8

NOTE: THE MEANS AND STANDARD DEVIATIONS WERE CALCULATED USING NONROUNDED VALUES.
[a]BLOOD SAMPLE WAS NOT AVAILABLE FOR ANALYSIS.
[b]MINIMAL HEMOLYSIS.
[c]QUANTITY WAS NOT SUFFICIENT FOR ANALYSIS.

DAYS 92-95

ANIMAL NO.	AST IU/L	ALT IU/L	ALK PHOS 'TASE IU/L	TOTAL BILI-RUBIN MG/DL	TOTAL PROTEIN G/DL	ALBUMIN G/DL	GLOB-ULIN G/DL	A/G RATIO	UREA NITROGEN MG/DL	CREA-TININE MG/DL	GLUCOSE MG/DL	SODIUM MMOL/L
GROUP 1: 0 MG/KG/DAY												
11721 M	72	37	181	0.22	6.90	3.59	3.31	1.08	20	0.53	262	147
11724 M	74	42	143	0.33	6.53	3.37	3.16	1.07	16	0.52	233	149
11729 M[a]	74	51	107	0.40	6.62	3.20	3.41	0.94	19	0.56	285	151
11732 M	100	74	131	0.22	6.11	3.08	3.02	1.02	24	0.54	190	149
11734 M	112	91	107	0.43	6.83	3.37	3.45	0.98	17	0.64	217	147
11735 M[b]	104	59	169	0.54	7.07	3.21	3.86	0.83	23	0.63	215	148
11736 M	66	42	121	0.23	6.99	3.45	3.54	0.97	16	0.60	293	149
11738 M	122	85	123	0.52	6.13	3.22	2.91	1.11	19	0.61	238	150
11741 M[a,c]	102	89	126	0.49	7.15	3.95	3.20	1.23	19	0.61	200	146
11742 M	66	33	104	0.31	6.78	3.30	3.48	0.95	15	0.68	267	147
MEAN	89	60	131	0.37	6.71	3.37	3.34	1.02	19	0.59	240	148
S.D.	20.9	22.5	26.1	0.124	0.363	0.247	0.276	0.111	2.8	0.052	35.6	1.5
N	10	10	10	10	10	10	10	10	10	10	10	10

NOTE: THE MEANS AND STANDARD DEVIATIONS WERE CALCULATED USING NONROUNDED VALUES.
[a]MINIMALLY LIPEMIC.
[b]MILD HEMOLYSIS.
[c]MINIMAL HEMOLYSIS.

DAYS 92-95

ANIMAL NO.	POTASSIUM MMOL/L	CHLORIDE MMOL/L	CALCIUM MG/DL	CHOLESTEROL MG/DL	PHOSPHORUS MG/DL	GGT, SERUM IU/L	SORBITAL DEHYDROGENASE IU/L	MAGNESIUM MG/DL
GROUP 1: 0 MG/KG/DAY								
11721 M	5.22	101	12.23	45	6.94	2.48	18.9	3.2
11724 M	5.38	107	11.76	36	8.94	1.74	13.7	3.0
11729 M[a]	5.51	108	12.12	44	9.33	2.56	19.7	3.2
11732 M	7.08	106	11.80	47	9.51	2.55	39.0	3.0
11734 M	7.55	103	12.40	49	9.41	4.03	80.0	3.1
11735 M[b]	5.37	101	12.07	47	8.23	1.55	22.3	3.4
11736 M	5.53	104	13.36	47	9.83	3.24	14.2	3.4
11738 M	6.35	105	12.27	49	10.22	1.83	41.5	3.0
11741 M[a,c]	8.04	100	12.62	42	8.36	3.27	72.5	3.4
11742 M	5.21	105	12.65	48	8.61	3.79	10.4	2.9
MEAN	6.12	104	12.33	45	8.94	2.70	33.2	3.2
S.D.	1.063	2.4	0.469	4.0	0.947	0.861	24.96	0.19
N	10	10	10	10	10	10	10	10

NOTE: THE MEANS AND STANDARD DEVIATIONS WERE CALCULATED USING NONROUNDED VALUES.
[a]MINIMALLY LIPEMIC.
[b]MILD HEMOLYSIS.
[c]MINIMAL HEMOLYSIS.

(340)

DAYS 92-95

ANIMAL NO.	AST IU/L	ALT IU/L	ALK PHOS 'TASE IU/L	TOTAL BILI-RUBIN MG/DL	TOTAL PROTEIN G/DL	ALBUMIN G/DL	GLOB-ULIN G/DL	A/G RATIO	UREA NITROGEN MG/DL	CREA-TININE MG/DL	GLUCOSE MG/DL	SODIUM MMOL/L
GROUP 2: 0.01 MG/KG/DAY												
11746 M	264	320	208	0.40	6.59	3.40	3.18	1.07	18	0.61	249	143
11748 M	110	76	98	0.30	5.91	3.06	2.84	1.08	19	0.65	211	145
11749 M	81	52	148	0.28	6.45	3.41	3.05	1.12	19	0.63	287	149
11750 M	199	293	294	0.35	6.53	3.43	3.10	1.11	22	0.56	296	146
11752 M[a]	110	81	203	0.25	6.31	3.38	2.93	1.16	20	0.55	268	149
11753 M[b,c]	76	55	111	0.65	6.91	3.62	3.29	1.10	20	0.74	236	146
11754 M[d]	127	146	146	0.62	7.03	3.54	3.49	1.02	17	0.54	249	145
11755 M[d]	102	77	132	0.34	6.58	3.70	2.89	1.28	19	0.65	268	145
11761 M	237	329	181	0.38	6.37	3.40	2.97	1.15	19	0.70	240	143
11765 M[a]	70	42	158	0.50	6.66	3.47	3.19	1.09	17	0.64	303	162
MEAN	138	147	168	0.41	6.53	3.44	3.09	1.12	19	0.63	261	147
S.D.	69.9	118.9	57.1	0.138	0.313	0.170	0.200	0.070	1.6	0.063	29.0	5.4
N	10	10	10	10	10	10	10	10	10	10	10	10

NOTE: THE MEANS AND STANDARD DEVIATIONS WERE CALCULATED USING NONROUNDED VALUES.
GROUP 2 MALES WERE EUTHANIZED ON DAYS 15-18 OR DAYS 92-95.

[a]MINIMALLY LIPEMIC.
[b]MILD HEMOLYSIS.
[c]SEVERELY LIPEMIC.
[d]MINIMAL HEMOLYSIS.

DAYS 92-95

ANIMAL NO.	POTASSIUM MMOL/L	CHLORIDE MMOL/L	CALCIUM MG/DL	CHOLESTEROL MG/DL	PHOSPHORUS MG/DL	GGT, SERUM IU/L	SORBITAL DEHYDROGENASE IU/L	MAGNESIUM MG/DL
GROUP 2: 0.01 MG/KG/DAY								
11746 M	9.86	105	11.97	42	10.84	2.63	203.0	3.6
11748 M	9.54	102	11.46	49	10.62	3.18	50.5	3.1
11749 M	6.82	106	11.68	33	8.76	2.72	26.5	3.2
11750 M	9.72	105	11.69	26	11.87	3.11	254.0	3.8
11752 M[a]	7.64	104	12.09	30	10.98	2.55	90.5	3.5
11753 M[b,c]	6.57	102	12.64	88	9.04	1.42	28.5	3.4
11754 M[d]	8.82	106	12.16	34	10.30	2.74	117.5	3.4
11755 M[d]	9.41	100	11.96	52	10.24	1.60	78.5	3.2
11761 M	9.57	102	11.63	31	10.21	3.63	163.0	3.4
11765 M[a]	8.09	114	12.81	30	10.21	2.15	21.6	3.7
MEAN	8.60	105	12.01	42	10.31	2.57	103.4	3.4
S.D.	1.241	3.9	0.438	18.4	0.902	0.690	80.38	0.22
N	10	10	10	10	10	10	10	10

NOTE: THE MEANS AND STANDARD DEVIATIONS WERE CALCULATED USING NONROUNDED VALUES.
GROUP 2 MALES WERE EUTHANIZED ON DAYS 15-18 OR DAYS 92-95.
[a]MINIMALLY LIPEMIC.
[b]MILD HEMOLYSIS.
[c]SEVERELY LIPEMIC.
[d]MINIMAL HEMOLYSIS.

DAYS 92-95

ANIMAL NO.	AST IU/L	ALT IU/L	ALK PHOS 'TASE IU/L	TOTAL BILI-RUBIN MG/DL	TOTAL PROTEIN G/DL	ALBUMIN G/DL	GLOB-ULIN G/DL	A/G RATIO	UREA NITROGEN MG/DL	CREA-TININE MG/DL	GLUCOSE MG/DL	SODIUM MMOL/L
GROUP 3: 0.05 MG/KG/DAY												
11769 M	76	49	205	0.40	6.86	3.14	3.72	0.84	15	0.49	210	146
11774 M	164	150	102	0.33	6.78	3.23	3.55	0.91	18	0.56	250	146
11776 M	273	293	161	0.38	6.59	3.39	3.20	1.06	21	0.57	260	144
11777 M	109	53	181	0.34	6.49	3.34	3.15	1.06	20	0.58	210	150
11780 M	79	34	111	0.39	6.92	3.17	3.75	0.84	19	0.67	277	146
11787 M[a]	70	55	272	0.50	7.24	3.86	3.38	1.14	19	0.55	246	148
11790 M	63	39	139	0.38	6.41	3.23	3.18	1.02	16	0.60	245	148
11791 M	67	31	103	0.35	7.07	3.62	3.45	1.05	20	0.60	273	152
11792 M	94	47	175	0.40	6.26	3.11	3.15	0.99	21	0.60	255	149
11794 M	90	68	264	0.33	6.93	3.26	3.66	0.89	21	0.48	262	159
MEAN	109	82	171	0.38	6.75	3.33	3.42	0.98	19	0.57	249	149
S.D.	64.8	81.6	61.9	0.052	0.310	0.237	0.242	0.102	2.2	0.055	23.0	4.2
N	10	10	10	10	10	10	10	10	10	10	10	10

NOTE: THE MEANS AND STANDARD DEVIATIONS WERE CALCULATED USING NONROUNDED VALUES.
[a]MODERATELY LIPEMIC.

DAYS 92-95

ANIMAL NO.	POTASSIUM MMOL/L	CHLORIDE MMOL/L	CALCIUM MG/DL	CHOLESTEROL MG/DL	PHOSPHORUS MG/DL	GGT, SERUM IU/L	SORBITAL DEHYDROGENASE IU/L	MAGNESIUM MG/DL
GROUP 3: 0.05 MG/KG/DAY								
11769 M	6.77	105	12.04	48	9.58	3.00	33.0	3.1
11774 M	9.89	107	11.72	30	9.66	2.84	104.0	3.1
11776 M	11.45	103	10.93	27	10.23	2.06	154.0	3.6
11777 M	7.14	108	11.99	42	9.94	3.57	73.0	3.2
11780 M	6.38	104	12.66	47	9.63	2.56	43.0	3.0
11787 M[a]	6.79	106	13.28	66	10.00	2.99	28.5	3.2
11790 M	6.71	107	12.34	35	10.29	2.55	17.8	3.0
11791 M	5.29	104	12.13	48	8.23	2.84	22.8	3.0
11792 M	6.62	105	12.73	50	9.70	1.60	17.5	3.3
11794 M	7.78	113	12.41	68	9.64	2.69	41.5	3.2
MEAN	7.48	106	12.22	46	9.69	2.67	53.5	3.2
S.D.	1.829	2.9	0.636	13.7	0.572	0.540	44.53	0.18
N	10	10	10	10	10	10	10	10

NOTE: THE MEANS AND STANDARD DEVIATIONS WERE CALCULATED USING NONROUNDED VALUES.
[a]MODERATELY LIPEMIC.

DAYS 92-95

ANIMAL NO.	AST IU/L	ALT IU/L	ALK PHOS 'TASE IU/L	TOTAL BILI-RUBIN MG/DL	TOTAL PROTEIN G/DL	ALBUMIN G/DL	GLOB-ULIN G/DL	A/G RATIO	UREA NITROGEN MG/DL	CREA-TININE MG/DL	GLUCOSE MG/DL	SODIUM MMOL/L
GROUP 4: 0.2 MG/KG/DAY												
11797 M	121	101	124	0.30	6.53	3.35	3.18	1.05	18	0.63	269	148
11799 M	79	49	123	0.20	6.68	3.57	3.11	1.15	20	0.72	236	150
11800 M	133	100	141	0.47	6.65	3.19	3.46	0.92	20	0.53	321	144
11805 M	97	56	248	0.41	6.66	3.60	3.07	1.17	17	0.64	285	149
11806 M	129	73	139	0.39	6.78	3.70	3.07	1.20	19	0.58	247	148
11809 M	76	64	117	0.17	6.51	3.18	3.33	0.96	20	0.51	217	146
11811 M	108	109	217	0.41	7.22	3.49	3.73	0.93	16	0.61	259	146
11812 M	141	142	224	0.38	6.19	3.12	3.07	1.01	21	0.58	250	146
11814 M[a]	77	40	201	0.48	6.99	3.40	3.59	0.95	18	0.57	246	145
11815 M	71	52	177	0.33	7.02	3.52	3.50	1.01	16	0.59	293	148
MEAN	103	79	171	0.35	6.72	3.41	3.31	1.04	19	0.60	262	147
S.D.	26.7	32.8	48.3	0.106	0.295	0.198	0.246	0.105	1.8	0.059	30.5	1.8
N	10	10	10	10	10	10	10	10	10	10	10	10

NOTE: THE MEANS AND STANDARD DEVIATIONS WERE CALCULATED USING NONROUNDED VALUES.
GROUP 4 MALES WERE EUTHANIZED ON DAYS 15-18 OR DAYS 92-95.
[a]MINIMALLY LIPEMIC.

DAYS 92-95

ANIMAL NO.	POTASSIUM MMOL/L	CHLORIDE MMOL/L	CALCIUM MG/DL	CHOLESTEROL MG/DL	PHOSPHORUS MG/DL	GGT, SERUM IU/L	SORBITAL DEHYDROGENASE IU/L	MAGNESIUM MG/DL
GROUP 4: 0.2 MG/KG/DAY								
11797 M	8.79	105	12.51	52	9.83	2.76	68.5	3.3
11799 M	6.51	105	11.80	57	9.02	1.77	24.6	3.1
11800 M	8.41	105	11.25	46	9.52	1.95	90.5	3.1
11805 M	5.73	103	12.55	51	9.30	2.96	51.5	3.2
11806 M	7.73	104	13.09	59	10.27	1.72	89.5	3.6
11809 M	6.40	104	12.02	47	8.40	3.47	47.5	2.8
11811 M	8.04	98	12.73	48	11.30	2.12	98.0	3.4
11812 M	9.72	107	11.84	34	9.23	2.72	121.0	3.0
11814 M[a]	5.83	98	12.76	77	9.53	2.22	19.1	3.2
11815 M	5.73	100	12.67	39	9.14	2.78	23.8	3.2
MEAN	7.29	103	12.32	51	9.56	2.45	63.4	3.2
S.D.	1.437	3.2	0.567	11.9	0.790	0.578	35.57	0.22
N	10	10	10	10	10	10	10	10

NOTE: THE MEANS AND STANDARD DEVIATIONS WERE CALCULATED USING NONROUNDED VALUES.
GROUP 4 MALES WERE EUTHANIZED ON DAYS 15-18 OR DAYS 92-95.
[a]MINIMALLY LIPEMIC.

DAYS 92-95

ANIMAL NO.	AST IU/L	ALT IU/L	ALK PHOS 'TASE IU/L	TOTAL BILI-RUBIN MG/DL	TOTAL PROTEIN G/DL	ALBUMIN G/DL	GLOB-ULIN G/DL	A/G RATIO	UREA NITROGEN MG/DL	CREA-TININE MG/DL	GLUCOSE MG/DL	SODIUM MMOL/L
GROUP 5: 1.0 MG/KG/DAY												
11817 M	82	65	95	0.36	6.71	3.36	3.35	1.00	19	0.52	264	146
11822 M	81	39	88	0.31	6.83	3.07	3.76	0.82	17	0.50	276	150
11824 M	82	43	173	0.43	6.10	3.31	2.79	1.18	18	0.65	250	147
11827 M	126	104	188	0.30	7.09	3.72	3.38	1.10	17	0.62	278	148
11830 M	164	211	275	0.32	5.98	3.28	2.71	1.21	20	0.60	238	147
11832 M[a,b]	75	46	119	0.54	7.19	3.79	3.40	1.11	18	0.57	296	149
11840 M	86	50	136	0.32	6.02	3.32	2.70	1.23	18	0.62	336	150
11841 M[a,b]	87	52	235	0.57	7.10	3.43	3.67	0.94	20	0.58	305	148
11842 M[b]	101	77	132	0.50	6.82	3.45	3.37	1.02	18	0.52	230	148
11845 M[a,b]	68	39	150	0.61	7.16	3.52	3.64	0.97	20	0.59	257	150
MEAN	95	72	159	0.43	6.70	3.42	3.28	1.06	19	0.58	273	148
S.D.	29.0	52.8	59.7	0.119	0.486	0.212	0.401	0.134	1.1	0.050	32.3	1.3
N	10	10	10	10	10	10	10	10	10	10	10	10

NOTE: THE MEANS AND STANDARD DEVIATIONS WERE CALCULATED USING NONROUNDED VALUES.
[a]MINIMAL HEMOLYSIS.
[b]MINIMALLY LIPEMIC.

DAYS 92-95

ANIMAL NO.	POTASSIUM MMOL/L	CHLORIDE MMOL/L	CALCIUM MG/DL	CHOLESTEROL MG/DL	PHOSPHORUS MG/DL	GGT, SERUM IU/L	SORBITAL DEHYDROGENASE IU/L	MAGNESIUM MG/DL
GROUP 5: 1.0 MG/KG/DAY								
11817 M	5.86	103	12.40	71	9.47	3.08	37.0	3.0
11822 M	5.70	107	11.52	31	9.16	3.45	21.6	3.3
11824 M	6.46	101	11.30	37	8.46	2.52	31.5	2.9
11827 M	7.22	105	12.88	60	10.12	2.77	110.5	3.2
11830 M	10.69	106	11.87	26	11.09	2.82	153.0	3.6
11832 M[a,b]	6.12	105	13.13	52	8.80	1.33	20.7	3.4
11840 M	5.69	106	12.74	33	9.44	2.30	16.3	3.9
11841 M[a,b]	6.87	102	12.23	44	8.75	2.05	37.5	3.3
11842 M[b]	6.42	103	12.94	52	9.66	3.34	34.0	3.2
11845 M[a,b]	5.50	106	12.90	44	9.48	1.18	17.1	3.2
MEAN	6.65	104	12.39	45	9.44	2.48	47.9	3.3
S.D.	1.520	2.0	0.643	14.0	0.756	0.780	45.99	0.29
N	10	10	10	10	10	10	10	10

NOTE: THE MEANS AND STANDARD DEVIATIONS WERE CALCULATED USING NONROUNDED VALUES.
[a]MINIMAL HEMOLYSIS.
[b]MINIMALLY LIPEMIC.

DAYS 92-95

ANIMAL NO.	AST IU/L	ALT IU/L	ALK PHOS 'TASE IU/L	TOTAL BILI-RUBIN MG/DL	TOTAL PROTEIN G/DL	ALBUMIN G/DL	GLOB-ULIN G/DL	A/G RATIO	UREA NITROGEN MG/DL	CREA-TININE MG/DL	GLUCOSE MG/DL	SODIUM MMOL/L
GROUP 6: 10.0 MG/KG/DAY												
11851 M	91	51	129	0.50	6.65	3.16	3.50	0.90	15	0.54	224	146
11852 M	119	54	198	0.34	6.46	3.39	3.07	1.10	31	0.60	230	148
11854 M	73	33	117	0.14	6.18	3.20	2.97	1.08	16	0.52	246	149
11860 M	96	80	235	0.36	6.22	3.08	3.14	0.98	18	0.41	251	147
11862 M[a]	110	84	118	0.33	6.99	3.27	3.72	0.88	19	0.57	254	148
11866 M[a]	135	102	218	0.36	6.51	3.31	3.20	1.03	20	0.63	201	147
11867 M	112	133	340	0.38	7.02	3.47	3.55	0.98	21	0.61	241	148
11871 M	73	42	154	0.13	6.30	3.36	2.94	1.14	21	0.49	231	150
11872 M	98	53	183	0.45	7.34	3.68	3.66	1.01	17	0.68	330	149
11873 M	95	66	213	0.33	6.90	3.95	2.94	1.34	20	0.65	363	148
MEAN	100	70	190	0.33	6.66	3.39	3.27	1.04	20	0.57	257	148
S.D.	19.3	30.6	67.9	0.119	0.390	0.262	0.307	0.134	4.5	0.082	50.2	1.2
N	10	10	10	10	10	10	10	10	10	10	10	10

NOTE: THE MEANS AND STANDARD DEVIATIONS WERE CALCULATED USING NONROUNDED VALUES.
[a]MINIMAL HEMOLYSIS.

DAYS 92-95

ANIMAL NO.	POTASSIUM MMOL/L	CHLORIDE MMOL/L	CALCIUM MG/DL	CHOLESTEROL MG/DL	PHOSPHORUS MG/DL	GGT, SERUM IU/L	SORBITAL DEHYDROGENASE IU/L	MAGNESIUM MG/DL
GROUP 6: 10.0 MG/KG/DAY								
11851 M	6.78	103	11.88	51	9.18	2.76	23.0	3.3
11852 M	6.43	106	11.83	94	8.46	3.55	37.5	2.7
11854 M	5.91	106	11.60	45	8.55	2.84	13.5	2.8
11860 M	7.43	104	12.25	75	10.63	1.64	51.0	3.1
11862 M[a]	8.16	106	12.45	55	10.22	1.52	75.5	3.2
11866 M[a]	6.95	104	12.40	40	10.17	2.57	61.5	3.1
11867 M	9.59	107	12.71	61	10.86	2.94	116.0	3.4
11871 M	5.75	107	11.49	30	8.11	3.46	13.6	3.0
11872 M	5.45	104	14.03	76	10.00	2.60	25.5	3.8
11873 M	6.28	98	12.99	46	9.84	2.19	58.5	3.8
MEAN	6.87	105	12.36	57	9.60	2.61	47.6	3.2
S.D.	1.253	2.6	0.760	19.5	0.966	0.674	32.14	0.38
N	10	10	10	10	10	10	10	10

NOTE: THE MEANS AND STANDARD DEVIATIONS WERE CALCULATED USING NONROUNDED VALUES.
[a]MINIMAL HEMOLYSIS.

DAYS 121-123

ANIMAL NO.	AST IU/L	ALT IU/L	ALK PHOS 'TASE IU/L	TOTAL BILI-RUBIN MG/DL	TOTAL PROTEIN G/DL	ALBUMIN G/DL	GLOB-ULIN G/DL	A/G RATIO	UREA NITROGEN MG/DL	CREA-TININE MG/DL	GLUCOSE MG/DL	SODIUM MMOL/L
GROUP 1: 0 MG/KG/DAY												
11719 M	129	106	276	0.34	6.58	3.47	3.11	1.12	21	0.71	221	146
11722 M	71	52	84	0.42	6.90	3.74	3.16	1.18	17	0.63	265	144
11723 M	74	33	111	0.29	6.42	3.39	3.04	1.12	17	0.43	250	146
11726 M	86	49	97	0.29	6.74	3.29	3.45	0.95	15	0.44	289	148
11727 M[a]	108	67	154	0.43	6.94	3.59	3.35	1.07	22	0.77	296	148
11730 M	70	43	154	0.22	6.91	3.38	3.52	0.96	18	0.56	244	149
11733 M	b	b	b	b	b	b	b	b	b	b	b	b
11737 M	143	122	279	0.39	7.03	3.62	3.41	1.06	20	0.59	289	147
11740 M	84	58	145	0.46	6.66	3.29	3.37	0.98	22	0.47	264	146
11743 M	73	32	111	0.30	7.11	3.84	3.27	1.18	19	0.49	266	150
MEAN	93	62	157	0.35	6.81	3.51	3.30	1.07	19	0.56	265	147
S.D.	27.4	31.6	72.7	0.078	0.224	0.197	0.166	0.089	2.3	0.121	24.2	1.9
N	9	9	9	9	9	9	9	9	9	9	9	9

NOTE: THE MEANS AND STANDARD DEVIATIONS WERE CALCULATED USING NONROUNDED VALUES.
[a]MINIMALLY LIPEMIC.
[b]QUANTITY WAS NOT SUFFICIENT FOR ANALYSIS.

DAYS 121-123

ANIMAL NO.	POTASSIUM MMOL/L	CHLORIDE MMOL/L	CALCIUM MG/DL	CHOLESTEROL MG/DL	PHOSPHORUS MG/DL	GGT, SERUM IU/L	SORBITAL DEHYDROGENASE IU/L	MAGNESIUM MG/DL
GROUP 1: 0 MG/KG/DAY								
11719 M	5.97	103	11.62	30	7.66	3.94	71.0	3.1
11722 M	6.48	100	12.19	43	7.84	2.01	29.0	3.3
11723 M	5.76	99	11.81	47	9.14	3.45	12.8	2.9
11726 M	5.86	104	12.21	47	9.37	3.32	26.0	2.9
11727 M[a]	5.37	103	12.87	55	8.31	2.55	71.0	3.7
11730 M	5.62	105	12.45	34	9.10	1.83	14.2	3.1
11733 M	b	b	b	b	b	b	b	b
11737 M	6.11	100	12.35	48	8.46	2.85	51.0	3.5
11740 M	8.90	102	12.47	41	9.89	2.14	25.0	3.7
11743 M	5.42	107	12.14	39	10.08	2.86	11.5	2.7
MEAN	6.17	103	12.24	43	8.87	2.77	34.6	3.2
S.D.	1.080	2.6	0.368	7.8	0.858	0.711	23.82	0.35
N	9	9	9	9	9	9	9	9

NOTE: THE MEANS AND STANDARD DEVIATIONS WERE CALCULATED USING NONROUNDED VALUES.
[a]MINIMALLY LIPEMIC.
[b]QUANTITY WAS NOT SUFFICIENT FOR ANALYSIS.

DAYS 121-123

ANIMAL NO.	AST IU/L	ALT IU/L	ALK PHOS 'TASE IU/L	TOTAL BILI-RUBIN MG/DL	TOTAL PROTEIN G/DL	ALBUMIN G/DL	GLOB-ULIN G/DL	A/G RATIO	UREA NITROGEN MG/DL	CREA-TININE MG/DL	GLUCOSE MG/DL	SODIUM MMOL/L
GROUP 3: 0.05 MG/KG/DAY												
11767 M	96	68	254	0.49	6.99	3.69	3.30	1.12	18	0.56	261	147
11770 M	74	54	93	0.32	6.64	3.25	3.38	0.96	16	0.45	193	147
11773 M	83	67	123	0.46	6.66	3.62	3.04	1.19	17	0.55	209	146
11775 M	69	48	116	0.37	6.48	3.22	3.25	0.99	18	0.52	254	152
11781 M	77	39	88	0.31	6.68	3.30	3.38	0.97	19	0.58	209	147
11782 M	95	60	119	0.36	6.51	3.38	3.12	1.08	16	0.62	229	145
11783 M[a,b]	64	39	118	0.22	6.63	3.58	3.05	1.17	15	0.58	240	146
11785 M	80	38	210	0.43	7.03	3.42	3.62	0.94	23	0.49	239	148
11788 M	66	33	129	0.42	6.81	3.51	3.31	1.06	18	0.67	172	150
11795 M	82	50	173	0.44	7.11	3.67	3.44	1.07	16	0.53	280	147
MEAN	79	50	142	0.38	6.75	3.46	3.29	1.06	18	0.56	229	147
S.D.	10.9	12.4	53.4	0.083	0.223	0.174	0.182	0.088	2.3	0.064	33.0	2.1
N	10	10	10	10	10	10	10	10	10	10	10	10

NOTE: THE MEANS AND STANDARD DEVIATIONS WERE CALCULATED USING NONROUNDED VALUES.
[a]MINIMAL HEMOLYSIS.
[b]MINIMALLY LIPEMIC.

DAYS 121-123

ANIMAL NO.	POTASSIUM MMOL/L	CHLORIDE MMOL/L	CALCIUM MG/DL	CHOLESTEROL MG/DL	PHOSPHORUS MG/DL	GGT, SERUM IU/L	SORBITAL DEHYDROGENASE IU/L	MAGNESIUM MG/DL
GROUP 3: 0.05 MG/KG/DAY								
11767 M	6.36	106	11.76	56	7.28	2.14	32.0	3.5
11770 M	6.03	104	11.95	46	8.93	2.50	23.1	2.7
11773 M	7.66	103	11.91	31	9.43	3.48	37.0	3.0
11775 M	6.14	108	11.78	37	8.48	2.08	17.8	2.9
11781 M	6.44	105	11.79	38	8.18	2.12	18.7	3.2
11782 M	7.54	100	11.72	32	9.65	2.84	32.0	3.4
11783 M[a,b]	6.19	103	12.31	45	8.82	0.76	18.1	3.0
11785 M	7.74	107	12.71	67	9.58	0.93	21.2	3.3
11788 M	6.09	105	11.89	41	8.89	2.36	14.1	3.3
11795 M	5.53	101	12.83	69	9.10	2.12	23.1	2.9
MEAN	6.57	104	12.07	46	8.83	2.13	23.7	3.1
S.D.	0.781	2.5	0.407	13.5	0.716	0.805	7.50	0.25
N	10	10	10	10	10	10	10	10

NOTE: THE MEANS AND STANDARD DEVIATIONS WERE CALCULATED USING NONROUNDED VALUES.
[a]MINIMAL HEMOLYSIS.
[b]MINIMALLY LIPEMIC.

DAYS 121-123

ANIMAL NO.	AST IU/L	ALT IU/L	ALK PHOS 'TASE IU/L	TOTAL BILI-RUBIN MG/DL	TOTAL PROTEIN G/DL	ALBUMIN G/DL	GLOB-ULIN G/DL	A/G RATIO	UREA NITROGEN MG/DL	CREA-TININE MG/DL	GLUCOSE MG/DL	SODIUM MMOL/L
GROUP 5: 1.0 MG/KG/DAY												
11821 M	86	62	186	0.44	6.84	3.10	3.74	0.83	18	0.57	246	149
11823 M	66	38	96	0.34	7.22	3.40	3.83	0.89	16	0.69	217	147
11826 M[a,b]	74	60	110	0.77	7.17	3.71	3.46	1.07	18	0.50	272	145
11828 M[a]	55	29	109	0.47	7.08	3.40	3.68	0.92	17	0.49	270	150
11829 M	77	52	140	0.25	7.03	3.23	3.80	0.85	19	0.54	221	146
11833 M	111	117	140	0.39	6.73	3.45	3.28	1.05	20	0.71	305	148
11834 M	93	52	203	0.18	6.77	3.34	3.43	0.98	20	0.54	263	146
11837 M	106	105	115	0.49	6.81	3.58	3.23	1.11	21	0.60	258	148
11838 M	121	125	275	0.40	6.13	3.27	2.86	1.14	19	0.52	273	148
11843 M	70	38	149	0.26	7.16	3.50	3.66	0.96	18	0.54	262	152
MEAN	86	68	152	0.40	6.89	3.40	3.50	0.98	19	0.57	259	148
S.D.	21.6	34.8	55.1	0.164	0.322	0.175	0.307	0.110	1.6	0.075	25.7	2.1
N	10	10	10	10	10	10	10	10	10	10	10	10

NOTE: THE MEANS AND STANDARD DEVIATIONS WERE CALCULATED USING NONROUNDED VALUES.
[a]MINIMALLY LIPEMIC.
[b]MILD HEMOLYSIS.

DAYS 121-123

ANIMAL NO.	POTASSIUM MMOL/L	CHLORIDE MMOL/L	CALCIUM MG/DL	CHOLESTEROL MG/DL	PHOSPHORUS MG/DL	GGT, SERUM IU/L	SORBITAL DEHYDROGENASE IU/L	MAGNESIUM MG/DL
GROUP 5: 1.0 MG/KG/DAY								
11821 M	5.19	104	12.19	44	7.78	2.40	15.8	3.1
11823 M	5.01	102	12.34	55	8.63	2.47	8.9	2.8
11826 M[a,b]	5.54	102	12.91	76	9.01	1.63	19.0	3.1
11828 M[a]	6.03	106	12.36	69	9.05	2.14	15.8	2.9
11829 M	5.75	98	12.31	81	8.45	2.41	18.7	3.1
11833 M	6.77	104	12.19	48	9.78	2.38	87.0	3.4
11834 M	5.74	105	12.05	57	9.20	2.93	24.7	3.1
11837 M	7.53	107	12.48	42	10.00	2.69	78.0	3.3
11838 M	7.77	106	12.08	60	9.90	3.10	73.0	3.1
11843 M	5.22	108	12.95	60	8.44	3.31	15.6	2.9
MEAN	6.05	104	12.39	59	9.02	2.55	35.6	3.1
S.D.	0.979	3.0	0.314	13.1	0.723	0.487	30.59	0.18
N	10	10	10	10	10	10	10	10

NOTE: THE MEANS AND STANDARD DEVIATIONS WERE CALCULATED USING NONROUNDED VALUES.
[a]MINIMALLY LIPEMIC.
[b]MILD HEMOLYSIS.

DAYS 121-123

ANIMAL NO.	AST IU/L	ALT IU/L	ALK PHOS 'TASE IU/L	TOTAL BILI-RUBIN MG/DL	TOTAL PROTEIN G/DL	ALBUMIN G/DL	GLOB-ULIN G/DL	A/G RATIO	UREA NITROGEN MG/DL	CREA-TININE MG/DL	GLUCOSE MG/DL	SODIUM MMOL/L
GROUP 6: 10.0 MG/KG/DAY												
11849 M	102	89	131	0.45	6.48	3.21	3.26	0.99	18	0.63	242	147
11850 M[a]	82	45	190	0.29	6.81	3.33	3.49	0.95	14	0.58	247	147
11855 M	70	36	112	0.29	6.04	3.31	2.73	1.21	13	0.34	259	148
11856 M	185	162	138	0.43	6.25	3.62	2.63	1.38	19	0.72	346	144
11864 M	81	53	236	0.38	6.96	3.41	3.55	0.96	17	0.71	201	150
11865 M	79	45	107	0.29	7.10	3.50	3.60	0.97	18	0.49	260	149
11868 M	79	38	89	0.27	6.60	3.34	3.27	1.02	16	0.58	242	148
11869 M	87	65	192	0.36	6.53	3.39	3.15	1.08	18	0.49	269	150
11874 M	122	101	124	0.38	6.72	3.34	3.37	0.99	17	0.48	261	147
11875 M	80	50	97	0.50	6.46	3.25	3.21	1.01	15	0.58	305	148
MEAN	97	68	142	0.36	6.60	3.37	3.23	1.06	17	0.56	263	148
S.D.	34.5	39.3	48.2	0.077	0.319	0.119	0.324	0.136	2.1	0.115	38.9	1.9
N	10	10	10	10	10	10	10	10	10	10	10	10

NOTE: THE MEANS AND STANDARD DEVIATIONS WERE CALCULATED USING NONROUNDED VALUES.
[a]MINIMAL HEMOLYSIS.

DAYS 121-123

ANIMAL NO.	POTASSIUM MMOL/L	CHLORIDE MMOL/L	CALCIUM MG/DL	CHOLESTEROL MG/DL	PHOSPHORUS MG/DL	GGT, SERUM IU/L	SORBITAL DEHYDROGENASE IU/L	MAGNESIUM MG/DL
GROUP 6: 10.0 MG/KG/DAY								
11849 M	7.17	105	11.72	37	8.75	3.14	47.0	2.9
11850 M[a]	5.84	104	12.16	49	8.88	1.54	19.8	3.0
11855 M	5.92	105	11.81	29	9.04	2.03	14.7	3.1
11856 M	10.15	100	12.26	35	9.76	2.05	88.0	4.3
11864 M	4.37	105	12.42	60	8.65	1.61	13.6	2.8
11865 M	5.24	104	12.46	50	7.90	2.41	19.2	3.0
11868 M	5.72	101	11.48	27	8.37	3.35	16.5	2.9
11869 M	6.00	108	12.32	41	8.25	2.44	25.0	3.0
11874 M	7.07	101	12.18	39	10.00	2.38	94.0	3.3
11875 M	7.00	100	12.16	48	9.09	2.23	31.0	3.2
MEAN	6.45	103	12.10	42	8.87	2.32	36.9	3.2
S.D.	1.567	2.6	0.322	10.4	0.650	0.582	30.20	0.43
N	10	10	10	10	10	10	10	10

NOTE: THE MEANS AND STANDARD DEVIATIONS WERE CALCULATED USING NONROUNDED VALUES.
[a]MINIMAL HEMOLYSIS.

DAYS 15-18

ANIMAL NO.	AST IU/L	ALT IU/L	ALK PHOS 'TASE IU/L	TOTAL BILI-RUBIN MG/DL	TOTAL PROTEIN G/DL	ALBUMIN G/DL	GLOB-ULIN G/DL	A/G RATIO	UREA NITROGEN MG/DL	CREA-TININE MG/DL	GLUCOSE MG/DL	SODIUM MMOL/L
GROUP 1: 0 MG/KG/DAY												
11877 F[a]	101	59	333	0.65	6.54	3.54	3.00	1.18	b	0.50	262	142
11878 F[a]	75	39	263	0.50	6.15	3.18	2.97	1.07	13	0.47	266	148
11881 F	126	62	265	b	b	b	b	b	b	b	b	143
11882 F	68	32	193	0.31	6.51	2.91	3.60	0.81	15	0.45	238	146
11884 F[a]	94	51	189	0.57	6.33	2.79	3.54	0.79	b	0.56	299	144
11889 F[a]	66	50	197	0.75	6.01	3.05	2.96	1.03	17	0.44	215	143
11893 F	100	48	176	0.60	6.35	3.19	3.15	1.01	21	0.51	238	141
11894 F[a]	74	33	180	0.68	6.18	3.10	3.09	1.00	13	0.56	250	145
11900 F	86	39	398	0.44	5.67	3.08	2.59	1.19	17	0.56	276	144
11903 F	74	39	225	0.26	6.01	3.08	2.93	1.05	19	0.62	234	146
MEAN	86	45	242	0.53	6.19	3.10	3.09	1.01	16	0.52	253	144
S.D.	19.0	10.5	74.2	0.165	0.276	0.207	0.313	0.140	2.8	0.063	25.2	2.0
N	10	10	10	9	9	9	9	9	7	9	9	10

NOTE: THE MEANS AND STANDARD DEVIATIONS WERE CALCULATED USING NONROUNDED VALUES.
[a]MINIMAL HEMOLYSIS.
[b]QUANTITY WAS NOT SUFFICIENT FOR ANALYSIS.

DAYS 15-18

ANIMAL NO.	POTASSIUM MMOL/L	CHLORIDE MMOL/L	CALCIUM MG/DL	CHOLESTEROL MG/DL	PHOSPHORUS MG/DL	GGT, SERUM IU/L	SORBITAL DEHYDROGENASE IU/L	MAGNESIUM MG/DL
GROUP 1: 0 MG/KG/DAY								
11877 F[a]	5.77	98	13.16	44	10.02	1.89	22.5	3.7
11878 F[a]	6.32	104	12.74	51	12.38	1.96	20.5	3.6
11881 F	8.71	99	b	b	b	b	b	b
11882 F	6.17	99	13.89	42	11.78	2.95	14.3	3.2
11884 F[a]	5.78	100	13.74	67	11.89	2.29	b	3.9
11889 F[a]	5.82	97	13.26	62	11.69	1.79	13.4	3.2
11893 F	7.06	100	12.71	45	10.95	3.46	68.5	3.5
11894 F[a]	6.11	104	13.44	55	12.05	1.59	21.0	3.5
11900 F	6.09	101	12.82	47	10.93	3.60	27.0	3.6
11903 F	6.11	103	13.63	46	12.55	2.11	15.1	3.5
MEAN	6.39	101	13.27	51	11.58	2.40	25.3	3.5
S.D.	0.896	2.4	0.443	8.6	0.807	0.747	18.07	0.22
N	10	10	9	9	9	9	8	9

NOTE: THE MEANS AND STANDARD DEVIATIONS WERE CALCULATED USING NONROUNDED VALUES.
[a]MINIMAL HEMOLYSIS.
[b]QUANTITY WAS NOT SUFFICIENT FOR ANALYSIS.

DAYS 15-18

ANIMAL NO.	AST IU/L	ALT IU/L	ALK PHOS 'TASE IU/L	TOTAL BILI-RUBIN MG/DL	TOTAL PROTEIN G/DL	ALBUMIN G/DL	GLOB-ULIN G/DL	A/G RATIO	UREA NITROGEN MG/DL	CREA-TININE MG/DL	GLUCOSE MG/DL	SODIUM MMOL/L
GROUP 2: 0.01 MG/KG/DAY												
11906 F	a	a	a	a	a	a	a	a	a	a	a	a
11908 F	a	a	a	a	a	a	a	a	a	a	a	a
11909 F[b]	81	40	295	0.44	6.23	3.29	2.94	1.12	16	0.44	220	146
11911 F[b]	95	38	279	0.64	6.35	3.59	2.76	1.30	21	0.63	268	146
11912 F	74	35	174	0.54	6.25	3.21	3.04	1.06	14	0.41	274	144
11913 F	a	a	a	a	a	a	a	a	a	a	a	a
11917 F	a	a	242	a	a	a	a	a	a	a	a	142
11921 F[b]	75	37	219	0.37	5.98	2.75	3.23	0.85	13	0.55	233	144
11923 F	100	42	203	0.64	5.52	2.78	2.74	1.01	17	0.54	212	143
11925 F	74	30	197	0.19	5.97	3.24	2.74	1.18	23	0.49	220	143
MEAN	83	37	230	0.47	6.05	3.14	2.91	1.09	18	0.51	238	144
S.D.	11.6	4.5	44.6	0.172	0.301	0.324	0.202	0.154	3.9	0.082	26.5	1.7
N	6	6	7	6	6	6	6	6	6	6	6	7

NOTE: THE MEANS AND STANDARD DEVIATIONS WERE CALCULATED USING NONROUNDED VALUES.
[a]QUANTITY WAS NOT SUFFICIENT FOR ANALYSIS.
[b]MINIMAL HEMOLYSIS.

(100)

DAYS 15-18

ANIMAL NO.	POTASSIUM MMOL/L	CHLORIDE MMOL/L	CALCIUM MG/DL	CHOLESTEROL MG/DL	PHOSPHORUS MG/DL	GGT, SERUM IU/L	SORBITAL DEHYDROGENASE IU/L	MAGNESIUM MG/DL
GROUP 2: 0.01 MG/KG/DAY								
11906 F	a	a	a	a	a	a	a	a
11908 F	a	a	a	a	a	a	a	a
11909 F[b]	6.62	101	13.17	51	11.57	3.04	18.0	3.4
11911 F[b]	6.43	101	13.80	37	11.55	1.43	41.5	4.0
11912 F	6.03	98	13.52	55	11.58	3.64	15.4	3.5
11913 F	a	a	a	a	a	a	a	a
11917 F	6.74	105	a	a	a	a	a	a
11921 F[b]	6.14	101	13.27	50	15.00	2.71	15.8	3.1
11923 F	8.22	102	12.14	48	12.12	2.82	65.0	3.0
11925 F	6.36	104	12.91	29	10.14	1.70	14.0	2.9
MEAN	6.65	102	13.14	45	11.99	2.56	28.3	3.3
S.D.	0.736	2.3	0.576	9.8	1.614	0.838	20.75	0.41
N	7	7	6	6	6	6	6	6

NOTE: THE MEANS AND STANDARD DEVIATIONS WERE CALCULATED USING NONROUNDED VALUES.
[a]QUANTITY WAS NOT SUFFICIENT FOR ANALYSIS.
[b]MINIMAL HEMOLYSIS.

DAYS 15-18

ANIMAL NO.	AST IU/L	ALT IU/L	ALK PHOS 'TASE IU/L	TOTAL BILI-RUBIN MG/DL	TOTAL PROTEIN G/DL	ALBUMIN G/DL	GLOB-ULIN G/DL	A/G RATIO	UREA NITROGEN MG/DL	CREA-TININE MG/DL	GLUCOSE MG/DL	SODIUM MMOL/L
GROUP 3: 0.05 MG/KG/DAY												
11930 F[a]	65	30	194	0.50	5.99	3.16	2.83	1.12	14	0.38	251	147
11931 F[a]	85	39	241	0.00	6.30	3.39	2.92	1.16	18	0.55	246	148
11934 F	b	b	b	b	b	b	b	b	b	b	b	139
11941 F	76	36	362	0.62	6.20	3.04	3.16	0.96	17	0.54	235	144
11942 F[a]	59	29	155	0.68	6.34	3.12	3.23	0.97	17	0.53	207	142
11945 F	b	b	b	b	b	b	b	b	b	b	b	b
11946 F	97	46	212	0.29	6.94	3.44	3.50	0.98	b	0.36	290	144
11951 F[a]	79	44	254	0.56	6.45	3.13	3.33	0.94	17	0.51	243	147
11952 F	77	44	261	b	b	b	b	b	b	b	b	143
11953 F	92	39	307	0.55	6.10	3.36	2.75	1.22	20	0.57	202	145
MEAN	79	38	248	0.46	6.33	3.23	3.10	1.05	17	0.49	239	144
S.D.	12.8	6.5	64.9	0.235	0.308	0.157	0.278	0.114	1.7	0.084	29.3	2.8
N	8	8	8	7	7	7	7	7	6	7	7	9

NOTE: THE MEANS AND STANDARD DEVIATIONS WERE CALCULATED USING NONROUNDED VALUES.
[a]MINIMAL HEMOLYSIS.
[b]QUANTITY WAS NOT SUFFICIENT FOR ANALYSIS.

DAYS 15-18

ANIMAL NO.	POTASSIUM MMOL/L	CHLORIDE MMOL/L	CALCIUM MG/DL	CHOLESTEROL MG/DL	PHOSPHORUS MG/DL	GGT, SERUM IU/L	SORBITAL DEHYDROGENASE IU/L	MAGNESIUM MG/DL
GROUP 3: 0.05 MG/KG/DAY								
11930 F[a]	5.69	101	13.13	42	12.75	2.10	14.7	3.2
11931 F[a]	6.61	106	12.91	36	12.45	1.80	14.0	3.2
11934 F	11.39	97	b	b	b	b	b	b
11941 F	6.78	103	13.37	54	12.20	2.49	20.2	3.4
11942 F[a]	6.32	98	13.22	56	12.65	2.14	14.5	3.1
11945 F	b	b	b	b	b	b	b	b
11946 F	6.37	101	13.69	44	11.90	2.40	b	3.8
11951 F[a]	6.76	104	13.42	59	12.46	1.52	14.5	3.7
11952 F	7.31	106	b	b	b	b	18.9	b
11953 F	5.74	102	12.74	36	9.95	2.07	20.2	3.4
MEAN	7.00	102	13.21	47	12.05	2.08	16.7	3.4
S.D.	1.724	3.4	0.320	9.4	0.969	0.332	2.90	0.27
N	9	9	7	7	7	7	7	7

NOTE: THE MEANS AND STANDARD DEVIATIONS WERE CALCULATED USING NONROUNDED VALUES.
[a]MINIMAL HEMOLYSIS.
[b]QUANTITY WAS NOT SUFFICIENT FOR ANALYSIS.

APPENDIX K
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL BIOCHEMISTRY DATA

DAYS 15-18

ANIMAL NO.	AST IU/L	ALT IU/L	ALK PHOS 'TASE IU/L	TOTAL BILI-RUBIN MG/DL	TOTAL PROTEIN G/DL	ALBUMIN G/DL	GLOB-ULIN G/DL	A/G RATIO	UREA NITROGEN MG/DL	CREA-TININE MG/DL	GLUCOSE MG/DL	SODIUM MMOL/L
GROUP 4: 0.2 MG/KG/DAY												
11959 F[a]	68	36	118	0.59	6.39	3.20	3.19	1.00	16	0.46	187	144
11960 F	81	b	212	b	b	b	b	b	b	b	b	143
11962 F	58	22	175	0.53	6.45	3.14	3.31	0.95	11	0.56	290	143
11963 F	b	b	b	b	b	b	b	b	b	b	b	b
11964 F	74	29	202	0.72	5.98	3.05	2.93	1.04	b	0.44	250	148
11967 F	c	c	c	c	c	c	c	c	c	c	c	c
11968 F[a]	160	66	340	0.77	6.13	3.47	2.66	1.31	19	0.60	255	140
11970 F[a]	81	37	348	0.71	6.53	3.19	3.34	0.96	15	0.51	250	144
11971 F	64	32	162	b	b	3.27	b	b	b	b	295	146
11974 F	83	32	154	b	b	2.81	b	b	b	b	b	140
MEAN	84	36	214	0.66	6.30	3.16	3.09	1.05	15	0.51	255	143
S.D.	32.1	14.0	85.3	0.097	0.231	0.203	0.287	0.147	3.4	0.065	38.6	2.7
N	8	7	8	5	5	7	5	5	4	5	6	8

NOTE: THE MEANS AND STANDARD DEVIATIONS WERE CALCULATED USING NONROUNDED VALUES.
[a]MINIMAL HEMOLYSIS.
[b]QUANTITY WAS NOT SUFFICIENT FOR ANALYSIS.
[c]BLOOD SAMPLE WAS NOT AVAILABLE FOR ANALYSIS.

APPENDIX K
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL BIOCHEMISTRY DATA

DAYS 15-18

ANIMAL NO.	POTASSIUM MMOL/L	CHLORIDE MMOL/L	CALCIUM MG/DL	CHOLESTEROL MG/DL	PHOSPHORUS MG/DL	GGT, SERUM IU/L	SORBITAL DEHYDROGENASE IU/L	MAGNESIUM MG/DL
GROUP 4: 0.2 MG/KG/DAY								
11959 F[a]	6.11	99	12.94	53	12.09	1.90	14.4	3.1
11960 F	5.91	103	b	b	b	b	b	b
11962 F	5.43	102	12.88	40	11.63	2.60	16.3	3.4
11963 F	b	b	b	b	b	b	b	b
11964 F	5.96	101	13.12	41	10.97	2.65	14.7	3.6
11967 F	c	c	c	c	c	c	c	c
11968 F[a]	8.33	99	12.61	45	10.75	3.98	b	4.0
11970 F[a]	6.12	101	13.81	55	11.93	2.40	25.0	3.8
11971 F	5.80	104	b	38	b	b	13.5	b
11974 F	9.23	105	b	44	b	b	b	b
MEAN	6.61	102	13.07	45	11.47	2.70	16.8	3.6
S.D.	1.377	2.1	0.452	6.4	0.590	0.772	4.70	0.34
N	8	8	5	7	5	5	5	5

NOTE: THE MEANS AND STANDARD DEVIATIONS WERE CALCULATED USING NONROUNDED VALUES.
[a]MINIMAL HEMOLYSIS.
[b]QUANTITY WAS NOT SUFFICIENT FOR ANALYSIS.
[c]BLOOD SAMPLE WAS NOT AVAILABLE FOR ANALYSIS.

(gqc)

DAYS 15-18

ANIMAL NO.	AST IU/L	ALT IU/L	ALK PHOS 'TASE IU/L	TOTAL BILI-RUBIN MG/DL	TOTAL PROTEIN G/DL	ALBUMIN G/DL	GLOB-ULIN G/DL	A/G RATIO	UREA NITROGEN MG/DL	CREA-TININE MG/DL	GLUCOSE MG/DL	SODIUM MMOL/L
GROUP 5: 1.0 MG/KG/DAY												
11977 F	71	39	237	0.66	6.28	3.19	3.09	1.03	15	0.57	304	145
11982 F[a]	98	65	229	0.70	6.62	3.27	3.35	0.98	18	0.46	381	142
11984 F[a]	67	35	307	0.38	6.16	3.08	3.08	1.00	13	0.47	249	141
11989 F	66	25	206	b	b	b	b	b	b	b	b	146
11991 F	106	49	221	0.57	5.88	3.29	2.59	1.27	16	0.54	188	143
11992 F	79	29	194	0.48	6.49	3.31	3.18	1.04	12	0.58	245	148
11994 F	69	30	149	0.49	5.84	2.88	2.95	0.98	12	0.46	192	144
12001 F	b	b	b	b	b	b	b	b	b	b	b	b
12003 F[a]	89	40	230	0.62	6.51	3.23	3.28	0.98	b	0.49	223	147
12005 F	119	46	265	b	7.01	3.82	3.20	1.19	b	b	237	151
MEAN	85	40	226	0.56	6.35	3.26	3.09	1.06	14	0.51	252	145
S.D.	19.1	12.5	44.1	0.112	0.393	0.266	0.236	0.111	2.8	0.052	63.5	3.1
N	9	9	9	7	8	8	8	8	6	7	8	9

NOTE: THE MEANS AND STANDARD DEVIATIONS WERE CALCULATED USING NONROUNDED VALUES.
[a]MINIMAL HEMOLYSIS.
[b]QUANTITY WAS NOT SUFFICIENT FOR ANALYSIS.

DAYS 15-18

ANIMAL NO.	POTASSIUM MMOL/L	CHLORIDE MMOL/L	CALCIUM MG/DL	CHOLESTEROL MG/DL	PHOSPHORUS MG/DL	GGT, SERUM IU/L	SORBITAL DEHYDROGENASE IU/L	MAGNESIUM MG/DL
GROUP 5: 1.0 MG/KG/DAY								
11977 F	5.47	100	13.44	47	8.60	3.61	16.1	3.5
11982 F[a]	7.08	101	14.60	53	12.95	1.14	43.5	3.8
11984 F[a]	5.55	100	13.62	56	12.55	2.35	16.2	3.4
11989 F	5.08	102	b	b	b	b	11.4	b
11991 F	10.01	102	12.47	45	13.10	1.63	79.5	3.5
11992 F	5.92	103	13.25	44	11.52	2.37	21.0	3.4
11994 F	5.74	99	12.68	42	10.71	3.42	15.7	3.3
12001 F	b	b	b	b	b	b	b	b
12003 F[a]	5.76	102	12.80	65	11.48	3.22	19.0	3.1
12005 F	7.07	106	b	62	b	b	16.0	b
MEAN	6.41	102	13.27	52	11.56	2.53	26.5	3.4
S.D.	1.515	2.2	0.723	8.7	1.570	0.934	21.95	0.20
N	9	9	7	8	7	7	9	7

NOTE: THE MEANS AND STANDARD DEVIATIONS WERE CALCULATED USING NONROUNDED VALUES.
[a]MINIMAL HEMOLYSIS.
[b]QUANTITY WAS NOT SUFFICIENT FOR ANALYSIS.

DAYS 15-18

ANIMAL NO.	AST IU/L	ALT IU/L	ALK PHOS 'TASE IU/L	TOTAL BILI-RUBIN MG/DL	TOTAL PROTEIN G/DL	ALBUMIN G/DL	GLOB-ULIN G/DL	A/G RATIO	UREA NITROGEN MG/DL	CREA-TININE MG/DL	GLUCOSE MG/DL	SODIUM MMOL/L
GROUP 6: 10.0 MG/KG/DAY												
12010 F[b]	65	28	217	a	a	3.08	a	a	a	a	256	146
12013 F[b]	70	33	165	0.69	6.03	3.16	2.86	1.11	13	0.49	321	143
12016 F[b]	70	31	182	0.54	6.22	3.30	2.92	1.13	15	0.41	264	143
12021 F	a	a	a	a	a	a	a	a	a	a	a	143
12023 F[b]	75	42	378	0.47	6.63	3.66	2.97	1.23	18	0.54	228	145
12026 F	86	53	187	0.52	6.04	2.74	3.30	0.83	19	0.45	213	147
12028 F	a	a	a	a	a	a	a	a	a	a	a	a
12030 F[b]	68	37	254	0.44	6.28	3.09	3.18	0.97	a	0.51	205	143
12031 F	67	31	218	0.58	6.36	3.11	3.25	0.96	17	0.48	238	146
12032 F[b]	89	35	247	0.51	5.80	3.18	2.62	1.22	17	0.52	327	146
MEAN	74	36	231	0.53	6.19	3.17	3.02	1.06	16	0.49	256	144
S.D.	9.0	7.9	66.8	0.085	0.269	0.256	0.244	0.148	2.1	0.045	46.2	1.7
N	8	8	8	7	7	8	7	7	6	7	8	9

NOTE: THE MEANS AND STANDARD DEVIATIONS WERE CALCULATED USING NONROUNDED VALUES.
[a]QUANTITY WAS NOT SUFFICIENT FOR ANALYSIS.
[b]MINIMAL HEMOLYSIS.

DAYS 15-18

ANIMAL NO.	POTASSIUM MMOL/L	CHLORIDE MMOL/L	CALCIUM MG/DL	CHOLESTEROL MG/DL	PHOSPHORUS MG/DL	GGT, SERUM IU/L	SORBITAL DEHYDROGENASE IU/L	MAGNESIUM MG/DL
GROUP 6: 10.0 MG/KG/DAY								
12010 F[b]	6.02	103	a	59	a	a	16.6	a
12013 F[b]	6.55	100	13.91	42	12.60	2.38	14.8	4.1
12016 F[b]	5.83	99	13.32	43	12.19	2.22	12.0	3.2
12021 F[b]	6.59	100	a	a	a	a	a	a
12023 F[b]	5.55	101	12.95	53	9.10	2.40	16.5	3.2
12026 F	7.04	105	12.71	48	11.65	2.26	20.4	3.2
12028 F[b]	a	a	a	a	a	a	a	a
12030 F[b]	6.14	100	12.59	46	12.06	1.44	13.1	3.0
12031 F[b]	5.90	107	12.56	46	9.89	3.07	11.2	3.1
12032 F[b]	5.87	106	12.97	60	12.21	1.94	30.5	3.6
MEAN	6.17	102	13.00	50	11.39	2.24	16.9	3.3
S.D.	0.471	3.1	0.479	6.7	1.340	0.494	6.25	0.38
N	9	9	7	8	7	7	8	7

NOTE: THE MEANS AND STANDARD DEVIATIONS WERE CALCULATED USING NONROUNDED VALUES.
[a]QUANTITY WAS NOT SUFFICIENT FOR ANALYSIS.
[b]MINIMAL HEMOLYSIS.

DAYS 92-95

ANIMAL NO.	AST IU/L	ALT IU/L	ALK PHOS 'TASE IU/L	TOTAL BILI-RUBIN MG/DL	TOTAL PROTEIN G/DL	ALBUMIN G/DL	GLOB-ULIN G/DL	A/G RATIO	UREA NITROGEN MG/DL	CREA-TININE MG/DL	GLUCOSE MG/DL	SODIUM MMOL/L
GROUP 1: 0 MG/KG/DAY												
11876 F	152	137	147	0.33	7.63	4.02	3.61	1.11	16	0.54	265	146
11886 F[a,b]	126	72	73	0.52	7.15	3.94	3.21	1.23	20	0.55	237	144
11890 F[b,c]	80	37	80	0.44	7.93	4.50	3.43	1.31	17	0.57	264	145
11891 F[b]	88	66	74	0.56	7.33	3.93	3.40	1.16	18	0.47	221	146
11892 F	66	34	57	0.41	6.77	3.67	3.10	1.19	15	0.60	228	147
11895 F	111	78	105	0.34	7.57	3.80	3.77	1.01	22	0.66	230	144
11896 F	65	36	52	0.32	7.22	3.71	3.51	1.06	17	0.59	208	146
11901 F	88	54	115	0.51	6.92	4.15	2.78	1.49	d	d	209	146
11902 F	86	61	168	0.28	6.64	3.12	3.51	0.89	16	0.53	265	144
11904 F[e]	92	54	190	0.42	6.99	3.58	3.41	1.05	21	0.69	263	162
MEAN	95	63	106	0.41	7.22	3.84	3.37	1.15	18	0.58	239	147
S.D.	27.1	30.4	48.1	0.095	0.407	0.367	0.282	0.170	2.6	0.067	23.4	5.4
N	10	10	10	10	10	10	10	10	9	9	10	10

NOTE: THE MEANS AND STANDARD DEVIATIONS WERE CALCULATED USING NONROUNDED VALUES.
[a]MILD HEMOLYSIS.
[b]MINIMALLY LIPEMIC.
[c]MINIMAL HEMOLYSIS.
[d]QUANTITY WAS NOT SUFFICIENT FOR ANALYSIS.
[e]MILDLY LIPEMIC.

DAYS 92-95

ANIMAL NO.	POTASSIUM MMOL/L	CHLORIDE MMOL/L	CALCIUM MG/DL	CHOLESTEROL MG/DL	PHOSPHORUS MG/DL	GGT, SERUM IU/L	SORBITAL DEHYDROGENASE IU/L	MAGNESIUM MG/DL
GROUP 1: 0 MG/KG/DAY								
11876 F	5.99	108	12.82	49	8.89	2.42	60.0	3.6
11886 F[a,b]	7.11	102	12.53	66	8.40	1.35	34.5	3.5
11890 F[b,c]	6.42	102	12.87	60	8.07	1.57	23.2	3.8
11891 F[b]	6.81	104	12.93	59	9.24	2.38	21.5	3.5
11892 F	6.98	106	12.65	49	9.98	2.54	12.8	3.3
11895 F	5.50	103	12.88	86	7.81	2.17	24.0	3.6
11896 F	5.83	106	12.95	51	9.03	2.87	12.0	3.4
11901 F	5.79	106	12.49	53	5.67	2.57	23.7	3.4
11902 F	7.02	105	12.64	56	9.51	4.07	45.5	3.2
11904 F[d]	6.92	114	13.21	78	9.86	2.61	29.5	3.7
MEAN	6.44	106	12.80	61	8.65	2.46	28.7	3.5
S.D.	0.609	3.6	0.222	12.6	1.267	0.739	14.74	0.18
N	10	10	10	10	10	10	10	10

NOTE: THE MEANS AND STANDARD DEVIATIONS WERE CALCULATED USING NONROUNDED VALUES.
[a]MILD HEMOLYSIS.
[b]MINIMALLY LIPEMIC.
[c]MINIMAL HEMOLYSIS.
[d]MILDLY LIPEMIC.

DAYS 92-95

ANIMAL NO.	AST IU/L	ALT IU/L	ALK PHOS 'TASE IU/L	TOTAL BILI-RUBIN MG/DL	TOTAL PROTEIN G/DL	ALBUMIN G/DL	GLOB-ULIN G/DL	A/G RATIO	UREA NITROGEN MG/DL	CREA-TININE MG/DL	GLUCOSE MG/DL	SODIUM MMOL/L
GROUP 2: 0.01 MG/KG/DAY												
11907 F[a]	103	56	227	0.44	7.58	3.90	3.68	1.06	16	0.53	266	147
11910 F	72	34	77	0.38	6.78	3.47	3.31	1.05	15	0.64	236	143
11914 F	110	60	117	0.43	6.31	3.23	3.08	1.05	22	0.60	215	146
11915 F[a,b]	61	38	55	0.40	6.71	3.52	3.19	1.10	17	0.53	217	147
11916 F[a]	87	40	91	0.31	6.61	3.26	3.34	0.98	20	0.48	242	147
11918 F	77	39	93	0.29	7.80	3.78	4.01	0.94	19	0.66	220	144
11919 F	83	37	115	0.41	6.83	3.28	3.55	0.93	19	0.67	201	149
11920 F[a,b]	62	41	222	0.36	6.68	3.36	3.32	1.01	20	0.67	193	145
11922 F	58	37	81	0.37	7.46	3.93	3.53	1.11	16	0.59	230	143
11924 F	121	74	66	0.43	8.03	4.06	3.97	1.02	15	0.60	279	156
MEAN	83	46	114	0.38	7.08	3.58	3.50	1.03	18	0.60	230	147
S.D.	21.8	13.2	61.2	0.051	0.584	0.312	0.312	0.062	2.4	0.064	27.2	3.8
N	10	10	10	10	10	10	10	10	10	10	10	10

NOTE: THE MEANS AND STANDARD DEVIATIONS WERE CALCULATED USING NONROUNDED VALUES.
GROUP 2 FEMALES WERE EUTHANIZED ON DAYS 15-18 OR DAYS 92-95.
[a]MINIMAL HEMOLYSIS.
[b]MINIMALLY LIPEMIC.

DAYS 92-95

ANIMAL NO.	POTASSIUM MMOL/L	CHLORIDE MMOL/L	CALCIUM MG/DL	CHOLESTEROL MG/DL	PHOSPHORUS MG/DL	GGT, SERUM IU/L	SORBITAL DEHYDROGENASE IU/L	MAGNESIUM MG/DL
GROUP 2: 0.01 MG/KG/DAY								
11907 F[a]	6.86	108	12.45	47	8.31	2.47	38.0	3.6
11910 F	6.55	104	12.00	41	9.30	1.89	13.4	3.3
11914 F	6.75	104	12.72	51	9.23	3.40	27.0	3.6
11915 F[a,b]	5.76	106	11.84	51	8.07	2.69	11.0	2.9
11916 F[a]	6.32	102	12.30	53	7.87	2.71	23.5	3.5
11918 F	6.28	107	13.12	108	8.26	2.50	15.9	3.5
11919 F	6.25	107	12.76	46	9.43	3.21	14.8	3.5
11920 F[a,b]	6.00	104	12.62	67	8.53	2.27	12.7	3.4
11922 F	5.83	103	13.12	49	8.81	3.34	10.5	3.5
11924 F	6.86	113	13.26	63	8.84	2.11	31.0	3.5
MEAN	6.35	106	12.62	58	8.67	2.66	19.8	3.4
S.D.	0.403	3.1	0.480	19.2	0.542	0.520	9.53	0.21
N	10	10	10	10	10	10	10	10

NOTE: THE MEANS AND STANDARD DEVIATIONS WERE CALCULATED USING NONROUNDED VALUES.
GROUP 2 FEMALES WERE EUTHANIZED ON DAYS 15-18 OR DAYS 92-95.
[a]MINIMAL HEMOLYSIS.
[b]MINIMALLY LIPEMIC.

(417)

DAYS 92-95

ANIMAL NO.	AST IU/L	ALT IU/L	ALK PHOS 'TASE IU/L	TOTAL BILI-RUBIN MG/DL	TOTAL PROTEIN G/DL	ALBUMIN G/DL	GLOB-ULIN G/DL	A/G RATIO	UREA NITROGEN MG/DL	CREA-TININE MG/DL	GLUCOSE MG/DL	SODIUM MMOL/L
GROUP 3: 0.05 MG/KG/DAY												
11927 F	83	31	112	0.32	7.13	3.70	3.43	1.08	13	0.53	234	145
11929 F	81	32	84	0.38	7.20	3.62	3.58	1.01	18	0.51	295	157
11935 F	85	45	94	0.32	6.95	3.78	3.17	1.19	17	0.56	200	149
11936 F	64	25	54	0.18	6.68	3.27	3.40	0.96	16	0.59	217	149
11937 F	76	45	82	0.26	6.82	3.78	3.05	1.24	19	0.64	203	148
11938 F	71	42	109	0.36	6.96	3.23	3.74	0.86	14	0.50	235	145
11939 F	100	73	73	0.57	8.03	4.19	3.84	1.09	19	0.64	265	147
11950 F	76	35	137	0.16	6.93	3.71	3.23	1.15	22	0.66	215	144
11954 F	94	53	235	0.46	6.66	3.26	3.40	0.96	18	0.63	271	144
11955 F	82	40	72	0.42	7.16	3.87	3.29	1.18	16	0.60	212	147
MEAN	81	42	105	0.34	7.05	3.64	3.41	1.07	17	0.59	235	148
S.D.	10.4	13.6	51.2	0.126	0.390	0.308	0.249	0.121	2.6	0.058	32.0	3.9
N	10	10	10	10	10	10	10	10	10	10	10	10

NOTE: THE MEANS AND STANDARD DEVIATIONS WERE CALCULATED USING NONROUNDED VALUES.

DAYS 92-95

ANIMAL NO.	POTASSIUM MMOL/L	CHLORIDE MMOL/L	CALCIUM MG/DL	CHOLESTEROL MG/DL	PHOSPHORUS MG/DL	GGT, SERUM IU/L	SORBITAL DEHYDROGENASE IU/L	MAGNESIUM MG/DL
GROUP 3: 0.05 MG/KG/DAY								
11927 F	6.74	107	12.65	40	9.67	3.13	19.6	3.5
11929 F	6.26	107	12.69	48	10.67	2.81	12.1	4.1
11935 F	6.25	106	12.63	51	9.81	3.43	19.9	3.4
11936 F	6.43	102	12.27	41	8.90	3.50	14.2	3.1
11937 F	5.92	107	12.24	52	8.18	3.17	12.9	3.1
11938 F	6.26	102	12.75	50	8.83	3.32	13.6	3.6
11939 F	5.75	105	13.56	89	8.29	2.12	30.5	3.6
11950 F	7.43	106	12.71	66	8.48	2.88	19.6	3.4
11954 F	5.76	103	12.86	59	9.39	3.28	27.5	3.6
11955 F	5.80	104	12.34	42	7.96	2.42	23.0	3.3
MEAN	6.26	105	12.67	54	9.02	3.01	19.3	3.5
S.D.	0.521	2.1	0.379	14.6	0.856	0.452	6.31	0.29
N	10	10	10	10	10	10	10	10

NOTE: THE MEANS AND STANDARD DEVIATIONS WERE CALCULATED USING NONROUNDED VALUES.

(a/c)

DAYS 92-95

ANIMAL NO.	AST IU/L	ALT IU/L	ALK PHOS 'TASE IU/L	TOTAL BILI-RUBIN MG/DL	TOTAL PROTEIN G/DL	ALBUMIN G/DL	GLOB-ULIN G/DL	A/G RATIO	UREA NITROGEN MG/DL	CREA-TININE MG/DL	GLUCOSE MG/DL	SODIUM MMOL/L
GROUP 4: 0.2 MG/KG/DAY												
11956 F	84	43	128	0.23	6.51	3.19	3.32	0.96	17	0.64	203	147
11957 F[a,b]	62	36	159	0.46	6.32	3.39	2.93	1.15	21	0.55	250	148
11958 F	64	35	139	0.25	6.83	3.41	3.42	1.00	13	0.58	219	150
11961 F	76	37	83	0.35	6.77	3.52	3.24	1.09	14	0.42	225	147
11965 F	69	33	73	0.37	7.48	3.88	3.60	1.08	20	0.54	236	147
11966 F	67	37	138	0.38	6.54	3.31	3.23	1.02	17	0.61	201	146
11969 F[c]	73	45	148	0.56	6.31	3.58	2.73	1.31	20	0.58	230	148
11972 F	71	47	248	0.43	7.18	3.80	3.38	1.13	18	0.71	228	146
11973 F	110	50	119	0.37	6.60	3.58	3.02	1.18	17	0.73	219	154
11975 F	61	33	98	0.45	6.41	3.00	3.42	0.88	12	0.51	242	144
MEAN	74	40	133	0.38	6.70	3.47	3.23	1.08	17	0.59	225	148
S.D.	14.5	6.2	49.2	0.100	0.381	0.267	0.261	0.123	3.1	0.091	15.6	2.8
N	10	10	10	10	10	10	10	10	10	10	10	10

NOTE: THE MEANS AND STANDARD DEVIATIONS WERE CALCULATED USING NONROUNDED VALUES.
GROUP 4 FEMALES WERE EUTHANIZED ON DAYS 15-18 OR DAYS 92-95.
[a]MINIMAL HEMOLYSIS.
[b]MINIMALLY LIPEMIC.
[c]MILDLY LIPEMIC.

APPENDIX K
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL BIOCHEMISTRY DATA

DAYS 92-95

ANIMAL NO.	POTASSIUM MMOL/L	CHLORIDE MMOL/L	CALCIUM MG/DL	CHOLESTEROL MG/DL	PHOSPHORUS MG/DL	GGT, SERUM IU/L	SORBITAL DEHYDROGENASE IU/L	MAGNESIUM MG/DL
GROUP 4: 0.2 MG/KG/DAY								
11956 F	5.80	104	12.68	43	10.39	3.33	14.9	3.3
11957 F[a,b]	6.45	105	12.08	48	9.15	2.46	20.0	3.4
11958 F	6.15	108	12.20	44	8.63	3.18	11.0	3.3
11961 F	6.78	108	12.69	43	8.84	2.85	12.9	3.3
11965 F	5.64	106	12.60	58	8.01	2.52	14.1	3.4
11966 F	6.57	105	12.67	51	8.86	1.50	14.5	3.4
11969 F[c]	6.52	102	12.85	63	10.22	2.54	30.5	3.5
11972 F	6.61	106	12.52	53	9.20	2.44	23.8	3.3
11973 F	9.58	109	12.52	39	10.50	2.97	66.5	3.9
11975 F	6.54	105	11.75	47	9.07	3.33	20.4	3.1
MEAN	6.66	106	12.46	49	9.29	2.71	22.9	3.4
S.D.	1.091	2.1	0.340	7.5	0.822	0.552	16.42	0.20
N	10	10	10	10	10	10	10	10

NOTE: THE MEANS AND STANDARD DEVIATIONS WERE CALCULATED USING NONROUNDED VALUES.
GROUP 4 FEMALES WERE EUTHANIZED ON DAYS 15-18 OR DAYS 92-95.
[a]MINIMAL HEMOLYSIS.
[b]MINIMALLY LIPEMIC.
[c]MILDLY LIPEMIC.

DAYS 92-95

ANIMAL NO.	AST IU/L	ALT IU/L	ALK PHOS 'TASE IU/L	TOTAL BILI-RUBIN MG/DL	TOTAL PROTEIN G/DL	ALBUMIN G/DL	GLOB-ULIN G/DL	A/G RATIO	UREA NITROGEN MG/DL	CREA-TININE MG/DL	GLUCOSE MG/DL	SODIUM MMOL/L
GROUP 5: 1.0 MG/KG/DAY												
11976 F	60	37	108	0.44	6.82	3.23	3.60	0.90	14	0.55	252	143
11983 F	72	46	128	0.51	8.15	4.37	3.78	1.16	22	0.61	185	148
11988 F[a]	84	45	97	0.56	6.54	3.44	3.10	1.11	16	0.55	209	146
11990 F	66	37	56	0.37	6.64	3.49	3.15	1.11	15	0.44	228	147
11993 F	110	71	96	0.47	6.79	3.60	3.20	1.13	21	0.52	211	146
11995 F	b	b	b	b	b	b	b	b	b	b	b	b
11996 F	86	35	79	0.33	6.38	3.35	3.03	1.11	19	0.56	228	148
11997 F	72	54	102	0.42	7.35	3.87	3.49	1.11	19	0.51	255	148
11998 F	67	36	52	0.43	7.53	4.10	3.43	1.19	13	0.48	241	155
12000 F	81	43	82	0.49	6.96	3.40	3.55	0.96	15	0.46	277	146
MEAN	78	45	89	0.45	7.02	3.65	3.37	1.09	17	0.52	232	147
S.D.	15.0	11.6	24.4	0.069	0.563	0.383	0.260	0.095	3.2	0.056	27.9	3.4
N	9	9	9	9	9	9	9	9	9	9	9	9

NOTE: THE MEANS AND STANDARD DEVIATIONS WERE CALCULATED USING NONROUNDED VALUES.
[a]MILD HEMOLYSIS.
[b]BLOOD SAMPLE WAS NOT AVAILABLE FOR ANALYSIS.

DAYS 92-95

ANIMAL NO.	POTASSIUM MMOL/L	CHLORIDE MMOL/L	CALCIUM MG/DL	CHOLESTEROL MG/DL	PHOSPHORUS MG/DL	GGT, SERUM IU/L	SORBITAL DEHYDROGENASE IU/L	MAGNESIUM MG/DL
GROUP 5: 1.0 MG/KG/DAY								
11976 F	5.79	104	12.59	43	9.11	4.05	10.7	3.1
11983 F	6.09	104	12.48	63	7.97	3.41	19.2	3.1
11988 F[a]	6.08	102	12.13	47	10.03	1.89	24.4	3.6
11990 F	5.72	108	12.26	33	9.15	2.21	10.6	3.1
11993 F	6.41	102	11.55	76	7.46	3.78	23.0	2.9
11995 F	b	b	b	b	b	b	b	b
11996 F	6.07	108	11.86	44	8.90	1.67	14.7	3.2
11997 F	5.65	109	12.91	55	9.09	1.75	23.2	3.6
11998 F	7.08	112	12.94	47	9.10	3.08	13.8	3.5
12000 F	6.13	107	12.05	40	7.74	3.04	35.0	3.4
MEAN	6.11	106	12.31	50	8.73	2.77	19.4	3.3
S.D.	0.433	3.3	0.466	13.2	0.827	0.906	7.93	0.23
N	9	9	9	9	9	9	9	9

NOTE: THE MEANS AND STANDARD DEVIATIONS WERE CALCULATED USING NONROUNDED VALUES.
[a]MILD HEMOLYSIS.
[b]BLOOD SAMPLE WAS NOT AVAILABLE FOR ANALYSIS.

INDIVIDUAL BIOCHEMISTRY DATA

DAYS 92-95

ANIMAL NO.	AST IU/L	ALT IU/L	ALK PHOS 'TASE IU/L	TOTAL BILI-RUBIN MG/DL	TOTAL PROTEIN G/DL	ALBUMIN G/DL	GLOB-ULIN G/DL	A/G RATIO	UREA NITROGEN MG/DL	CREA-TININE MG/DL	GLUCOSE MG/DL	SODIUM MMOL/L
GROUP 6: 10.0 MG/KG/DAY												
12006 F	63	33	49	0.45	7.06	3.77	3.30	1.14	14	0.54	208	148
12007 F	54	23	57	0.41	6.40	3.36	3.04	1.10	17	0.48	233	145
12011 F[a,b]	71	50	87	0.59	7.34	4.25	3.09	1.38	16	0.57	266	145
12012 F	60	30	51	0.44	6.70	3.40	3.30	1.03	13	0.49	216	147
12018 F	67	27	105	0.32	6.92	3.53	3.39	1.04	17	0.54	201	149
12019 F[a]	82	53	80	0.36	7.20	3.60	3.60	1.00	18	0.62	267	148
12022 F[b]	61	35	130	0.43	6.59	3.78	2.81	1.34	19	0.50	178	150
12025 F	86	48	106	0.31	6.62	3.39	3.24	1.05	18	0.62	268	145
12029 F	230	134	195	0.43	6.74	3.40	3.34	1.02	20	0.69	292	154
12033 F	59	34	86	0.44	6.79	3.60	3.19	1.13	25	0.53	215	147
MEAN	83	47	95	0.42	6.84	3.61	3.23	1.12	18	0.56	234	148
S.D.	52.5	32.4	43.8	0.078	0.292	0.273	0.216	0.134	3.3	0.068	36.8	2.8
N	10	10	10	10	10	10	10	10	10	10	10	10

NOTE: THE MEANS AND STANDARD DEVIATIONS WERE CALCULATED USING NONROUNDED VALUES.
[a]MINIMAL HEMOLYSIS.
[b]MINIMALLY LIPEMIC.

DAYS 92-95

ANIMAL NO.	POTASSIUM MMOL/L	CHLORIDE MMOL/L	CALCIUM MG/DL	CHOLESTEROL MG/DL	PHOSPHORUS MG/DL	GGT, SERUM IU/L	SORBITAL DEHYDROGENASE IU/L	MAGNESIUM MG/DL
GROUP 6: 10.0 MG/KG/DAY								
12006 F	5.97	109	12.43	49	8.14	2.75	9.4	3.3
12007 F	7.01	108	11.51	47	9.16	2.69	10.4	3.0
12011 F[a,b]	6.31	104	12.95	64	9.48	1.36	29.5	3.4
12012 F	6.45	106	12.60	42	8.58	2.46	11.8	3.0
12018 F	5.93	105	11.92	56	8.73	1.77	12.9	3.1
12019 F[a]	5.48	104	13.07	51	9.29	2.42	36.5	3.8
12022 F[b]	6.82	108	13.02	39	10.55	1.52	11.1	3.2
12025 F	6.27	103	12.67	57	9.01	2.52	34.5	3.6
12029 F	10.58	110	12.60	51	11.84	3.01	250.0	4.0
12033 F	6.88	104	11.94	44	9.02	1.33	12.8	3.3
MEAN	6.77	106	12.47	50	9.38	2.18	41.9	3.4
S.D.	1.420	2.6	0.523	7.6	1.074	0.626	73.89	0.35
N	10	10	10	10	10	10	10	10

NOTE: THE MEANS AND STANDARD DEVIATIONS WERE CALCULATED USING NONROUNDED VALUES.
[a]MINIMAL HEMOLYSIS.
[b]MINIMALLY LIPEMIC.

INDIVIDUAL BIOCHEMISTRY DATA

DAYS 121-123

ANIMAL NO.	AST IU/L	ALT IU/L	ALK PHOS 'TASE IU/L	TOTAL BILI-RUBIN MG/DL	TOTAL PROTEIN G/DL	ALBUMIN G/DL	GLOB-ULIN G/DL	A/G RATIO	UREA NITROGEN MG/DL	CREA-TININE MG/DL	GLUCOSE MG/DL	SODIUM MMOL/L
GROUP 1: 0 MG/KG/DAY												
11879 F[a]	150	107	103	0.54	7.53	4.06	3.47	1.17	22	0.54	211	145
11880 F	81	45	137	0.30	7.08	4.15	2.93	1.42	18	0.65	242	144
11883 F	109	58	60	0.39	6.71	3.34	3.37	0.99	20	0.44	218	144
11885 F	100	69	84	0.31	7.49	3.75	3.75	1.00	19	0.61	383	144
11887 F	91	63	182	0.33	7.74	4.20	3.55	1.18	18	0.53	186	147
11888 F	155	110	109	0.47	7.17	3.62	3.55	1.02	17	0.49	239	148
11897 F	55	26	61	0.40	6.54	3.32	3.23	1.03	15	0.49	207	147
11898 F	88	54	101	0.58	8.12	4.34	3.78	1.15	22	0.64	226	149
11899 F	69	38	149	0.38	7.06	3.63	3.43	1.06	15	0.66	230	148
11905 F[b]	207	112	154	0.41	8.10	4.21	3.89	1.08	25	0.58	272	148
MEAN	110	68	114	0.41	7.36	3.86	3.50	1.11	19	0.57	241	147
S.D.	46.6	31.2	40.9	0.093	0.539	0.378	0.283	0.129	3.3	0.076	55.0	1.9
N	10	10	10	10	10	10	10	10	10	10	10	10

NOTE: THE MEANS AND STANDARD DEVIATIONS WERE CALCULATED USING NONROUNDED VALUES.
[a]MINIMAL HEMOLYSIS.
[b]MINIMALLY LIPEMIC.

DAYS 121-123

ANIMAL NO.	POTASSIUM MMOL/L	CHLORIDE MMOL/L	CALCIUM MG/DL	CHOLESTEROL MG/DL	PHOSPHORUS MG/DL	GGT, SERUM IU/L	SORBITAL DEHYDROGENASE IU/L	MAGNESIUM MG/DL
GROUP 1: 0 MG/KG/DAY								
11879 F[a]	5.49	106	12.25	51	5.49	1.51	23.0	3.3
11880 F	5.38	103	12.97	72	7.83	2.01	28.0	3.4
11883 F	7.84	105	12.32	36	10.57	1.93	32.0	3.1
11885 F	8.77	108	12.40	38	8.32	3.26	39.0	4.6
11887 F	6.05	107	12.40	57	7.81	2.92	23.2	3.4
11888 F	5.68	107	12.43	50	8.87	3.37	58.0	3.3
11897 F	6.20	109	12.15	51	9.31	3.35	8.4	3.1
11898 F	5.75	108	13.25	41	7.86	2.41	21.5	3.4
11899 F	5.95	108	12.65	45	9.15	2.23	14.0	3.5
11905 F[b]	7.02	104	13.46	70	9.34	2.37	79.0	3.5
MEAN	6.41	106	12.63	51	8.46	2.54	32.6	3.5
S.D.	1.119	2.0	0.448	12.4	1.358	0.656	21.33	0.42
N	10	10	10	10	10	10	10	10

NOTE: THE MEANS AND STANDARD DEVIATIONS WERE CALCULATED USING NONROUNDED VALUES.
[a]MINIMAL HEMOLYSIS.
[b]MINIMALLY LIPEMIC.

DAYS 121-123

ANIMAL NO.	AST IU/L	ALT IU/L	ALK PHOS 'TASE IU/L	TOTAL BILI-RUBIN MG/DL	TOTAL PROTEIN G/DL	ALBUMIN G/DL	GLOB-ULIN G/DL	A/G RATIO	UREA NITROGEN MG/DL	CREA-TININE MG/DL	GLUCOSE MG/DL	SODIUM MMOL/L
GROUP 3: 0.05 MG/KG/DAY												
11926 F	105	59	85	0.47	7.30	3.81	3.49	1.09	22	0.64	198	145
11928 F[a]	70	28	154	0.43	6.70	3.37	3.32	1.02	15	0.65	232	147
11932 F	69	40	57	0.25	7.27	3.65	3.62	1.01	17	0.63	234	144
11933 F[b]	158	104	118	0.56	7.36	3.97	3.39	1.17	24	0.63	273	145
11940 F	319	186	165	0.34	7.55	3.89	3.65	1.07	18	0.65	323	146
11943 F	116	82	53	0.43	7.34	3.80	3.54	1.07	13	0.59	262	147
11944 F	138	72	64	0.54	7.82	4.49	3.33	1.35	14	0.46	278	145
11947 F	96	64	123	0.42	7.85	4.04	3.81	1.06	20	0.55	235	148
11948 F	FOUND DEAD											
11949 F	63	30	51	0.38	6.74	3.58	3.16	1.13	15	0.62	289	149
MEAN	126	74	97	0.42	7.32	3.84	3.48	1.11	18	0.60	258	146
S.D.	79.4	48.9	44.7	0.094	0.406	0.318	0.202	0.104	3.6	0.062	37.3	1.6
N	9	9	9	9	9	9	9	9	9	9	9	9

NOTE: THE MEANS AND STANDARD DEVIATIONS WERE CALCULATED USING NONROUNDED VALUES.
[a]MINIMAL HEMOLYSIS.
[b]MINIMALLY LIPEMIC.

DAYS 121-123

ANIMAL NO.	POTASSIUM MMOL/L	CHLORIDE MMOL/L	CALCIUM MG/DL	CHOLESTEROL MG/DL	PHOSPHORUS MG/DL	GGT, SERUM IU/L	SORBITAL DEHYDROGENASE IU/L	MAGNESIUM MG/DL
GROUP 3: 0.05 MG/KG/DAY								
11926 F	5.86	105	12.26	49	7.16	1.57	28.0	3.2
11928 F[a]	5.99	108	12.35	51	8.62	3.37	10.4	3.3
11932 F	6.27	104	12.30	49	8.55	2.64	11.1	3.5
11933 F[b]	6.99	103	12.38	67	7.56	2.66	87.0	3.9
11940 F	6.19	105	13.05	71	6.57	3.73	109.0	4.3
11943 F	6.02	104	12.76	50	8.07	3.07	21.7	4.0
11944 F	6.58	104	12.76	35	8.27	2.04	88.0	3.5
11947 F	6.01	108	12.49	66	7.70	2.68	19.4	3.5
11948 F	FOUND DEAD							
11949 F	5.68	108	12.86	41	8.98	3.00	19.9	3.8
MEAN	6.18	105	12.58	53	7.94	2.75	43.8	3.7
S.D.	0.399	1.9	0.285	12.2	0.771	0.654	38.99	0.36
N	9	9	9	9	9	9	9	9

NOTE: THE MEANS AND STANDARD DEVIATIONS WERE CALCULATED USING NONROUNDED VALUES.
[a]MINIMAL HEMOLYSIS.
[b]MINIMALLY LIPEMIC.

DAYS 121-123

ANIMAL NO.	AST IU/L	ALT IU/L	ALK PHOS 'TASE IU/L	TOTAL BILI-RUBIN MG/DL	TOTAL PROTEIN G/DL	ALBUMIN G/DL	GLOB-ULIN G/DL	A/G RATIO	UREA NITROGEN MG/DL	CREA-TININE MG/DL	GLUCOSE MG/DL	SODIUM MMOL/L
GROUP 5: 1.0 MG/KG/DAY												
11978 F[a]	111	53	101	0.77	8.17	4.13	4.04	1.02	16	0.55	235	147
11979 F[a]	67	42	85	0.33	7.99	4.11	3.87	1.06	15	0.60	234	144
11980 F	136	79	71	0.48	6.64	3.62	3.02	1.20	15	0.51	283	146
11981 F	101	49	94	0.27	6.88	3.52	3.36	1.05	24	0.57	248	147
11985 F	141	84	84	0.44	6.78	3.40	3.38	1.01	15	0.63	271	145
11986 F	148	96	61	0.40	6.86	3.75	3.11	1.20	20	0.46	216	146
11987 F	96	57	92	0.31	8.00	4.30	3.70	1.16	21	0.68	255	146
11999 F	82	48	70	0.49	6.94	3.28	3.67	0.89	14	0.48	231	147
12002 F	103	37	81	0.40	7.16	3.66	3.50	1.05	18	0.64	235	146
12004 F	59	41	60	0.53	8.02	4.42	3.61	1.22	17	0.58	324	149
MEAN	104	58	80	0.44	7.34	3.82	3.53	1.09	18	0.57	253	146
S.D.	30.4	20.5	14.1	0.142	0.618	0.394	0.320	0.107	3.1	0.072	32.0	1.2
N	10	10	10	10	10	10	10	10	10	10	10	10

NOTE: THE MEANS AND STANDARD DEVIATIONS WERE CALCULATED USING NONROUNDED VALUES.
[a]MINIMAL HEMOLYSIS.

DAYS 121-123

ANIMAL NO.	POTASSIUM MMOL/L	CHLORIDE MMOL/L	CALCIUM MG/DL	CHOLESTEROL MG/DL	PHOSPHORUS MG/DL	GGT, SERUM IU/L	SORBITAL DEHYDROGENASE IU/L	MAGNESIUM MG/DL
GROUP 5: 1.0 MG/KG/DAY								
11978 F[a]	6.69	100	12.98	89	9.06	2.44	20.4	4.2
11979 F[a]	5.73	102	12.80	59	8.00	3.63	14.7	3.4
11980 F	6.11	106	12.58	39	9.58	1.81	25.0	3.4
11981 F	6.83	106	12.48	44	9.65	2.90	32.0	3.6
11985 F	7.60	106	12.25	44	10.57	3.12	59.0	3.7
11986 F	6.16	105	12.62	82	8.07	4.51	33.0	3.2
11987 F	5.68	105	12.74	53	6.55	2.82	19.4	3.5
11999 F	6.52	104	12.33	47	8.77	2.62	17.8	3.3
12002 F	8.79	106	12.12	30	10.06	3.57	64.0	3.8
12004 F	4.85	106	13.73	59	8.53	2.00	14.4	3.9
MEAN	6.49	105	12.66	55	8.88	2.94	30.0	3.6
S.D.	1.097	2.0	0.457	18.6	1.171	0.810	17.84	0.31
N	10	10	10	10	10	10	10	10

NOTE: THE MEANS AND STANDARD DEVIATIONS WERE CALCULATED USING NONROUNDED VALUES.
[a]MINIMAL HEMOLYSIS.

DAYS 121-123

ANIMAL NO.	AST IU/L	ALT IU/L	ALK PHOS 'TASE IU/L	TOTAL BILI-RUBIN MG/DL	TOTAL PROTEIN G/DL	ALBUMIN G/DL	GLOB-ULIN G/DL	A/G RATIO	UREA NITROGEN MG/DL	CREA-TININE MG/DL	GLUCOSE MG/DL	SODIUM MMOL/L
GROUP 6: 10.0 MG/KG/DAY												
12008 F	155	101	95	0.38	7.35	3.91	3.45	1.13	14	0.52	252	145
12009 F	72	35	52	0.26	8.09	4.03	4.06	0.99	17	0.56	220	145
12014 F[a]	80	56	45	0.46	6.83	3.74	3.09	1.21	11	0.50	272	149
12015 F	91	54	154	0.44	7.79	4.31	3.49	1.24	19	0.62	236	145
12017 F	125	59	69	0.48	6.94	3.68	3.26	1.13	18	0.65	312	144
12020 F	61	33	62	0.37	6.81	3.77	3.05	1.24	12	0.45	244	145
12024 F	155	100	111	0.35	8.09	4.62	3.47	1.33	24	0.67	231	147
12027 F	109	59	148	0.53	7.94	4.28	3.66	1.17	18	0.57	299	147
12034 F	80	50	148	0.44	7.13	3.98	3.15	1.26	19	0.61	309	146
12035 F	98	59	57	0.51	7.12	3.87	3.26	1.19	14	0.61	245	149
MEAN	103	61	94	0.42	7.41	4.02	3.39	1.19	17	0.58	262	146
S.D.	32.9	23.0	43.2	0.083	0.519	0.300	0.305	0.092	3.8	0.069	33.7	1.7
N	10	10	10	10	10	10	10	10	10	10	10	10

NOTE: THE MEANS AND STANDARD DEVIATIONS WERE CALCULATED USING NONROUNDED VALUES.
[a]MINIMAL HEMOLYSIS.

DAYS 121-123

ANIMAL NO.	POTASSIUM MMOL/L	CHLORIDE MMOL/L	CALCIUM MG/DL	CHOLESTEROL MG/DL	PHOSPHORUS MG/DL	GGT, SERUM IU/L	SORBITAL DEHYDROGENASE IU/L	MAGNESIUM MG/DL
GROUP 6: 10.0 MG/KG/DAY								
12008 F	6.03	105	12.79	58	9.76	3.48	30.0	3.6
12009 F	6.52	105	12.86	38	9.16	3.46	14.2	3.3
12014 F[a]	6.07	104	12.19	36	9.53	1.57	17.0	3.4
12015 F	7.30	108	12.59	61	7.40	2.35	29.0	3.5
12017 F	7.71	107	12.31	67	8.98	4.26	85.0	3.4
12020 F	6.25	106	12.49	44	9.20	3.04	16.2	3.4
12024 F	5.06	106	13.08	99	6.79	3.58	35.0	3.4
12027 F	8.23	109	13.61	58	9.43	2.32	37.0	4.0
12034 F	8.28	107	13.70	49	10.96	1.94	14.9	4.2
12035 F	5.04	103	12.73	50	9.28	2.92	21.3	3.4
MEAN	6.65	106	12.83	56	9.05	2.89	30.0	3.6
S.D.	1.187	1.9	0.505	18.1	1.175	0.840	21.12	0.31
N	10	10	10	10	10	10	10	10

NOTE: THE MEANS AND STANDARD DEVIATIONS WERE CALCULATED USING NONROUNDED VALUES.
[a]MINIMAL HEMOLYSIS.

APPENDIX L

SLI Clinical Pathology Historical Control Data

CLINICAL PATHOLOGY HISTORICAL CONTROL DATA

HEMATOLOGY

August 7, 1997

Species/Strain: Rat/Sprague-Dawley
Source: Charles River Sex: Male

Parameter	Age Range 6 - 12 Weeks		Age Range 13 - 24 Weeks	
WBC (10^3/CMM)	Range Mean	9.6 - 16.2 12.57	Range Mean	8.2 - 15.4 11.44
RBC (10^6/CMM)	Range Mean	6.90 - 8.30 7.604	Range Mean	7.80 - 9.20 8.588
HGB (G/DL)	Range Mean	15.1 - 16.8 16.04	Range Mean	14.3 - 16.9 15.82
HCT (%)	Range Mean	42.8 - 48.7 45.81	Range Mean	42.1 - 49.3 45.94
MCV	Range Mean	56.1 - 64.4 60.45	Range Mean	50.4 - 58.7 53.55
MCH	Range Mean	19.5 - 22.8 21.17	Range Mean	17.4 - 20.1 18.44
MCHC	Range Mean	34.1 - 36.1 35.04	Range Mean	33.7 - 35.3 34.44
PLATELETS (10^3/CMM)	Range Mean	830 - 1350 1136.5	Range Mean	710 - 1090 898.3
MPV (FL)	Range Mean	N/A N/A	Range Mean	6.0 - 6.8 6.38
SEG NEUT (% WBC)	Range Mean	9 - 24 15.8	Range Mean	10 - 30 17.7
LYMP (% WBC)	Range Mean	73 - 91 82.5	Range Mean	67 - 88 79.9
MONO (% WBC)	Range Mean	0 - 3 0.8	Range Mean	0 - 3 1.4
BASO (% WBC)	Range Mean	0 - 0 0.0	Range Mean	0 - 0 0.0
EOS (% WBC)	Range Mean	0 - 2 0.9	Range Mean	0 - 2 1.0
NON SEG NEUT (% WBC)	Range Mean	0 - 0 0.0	Range Mean	0 - 0 0.0
NRBC (% WBC)	Range Mean	0 - 1 0.2	Range Mean	0 - 0 0.0
RETIC (% RBC)	Range Mean	1.4 - 6.8 4.50	Range Mean	0.6 - 2.1 1.49
PROTHROMBIN TIME (SEC)	Range Mean	N/A N/A	Range Mean	16.6 - 18.4 17.37
APTT (SEC)	Range Mean	N/A N/A	Range Mean	13.7 - 19.5 17.14

N/A = Not Available

CLINICAL PATHOLOGY HISTORICAL CONTROL DATA

HEMATOLOGY

August 7, 1997

Species/Strain: Rat/Sprague-Dawley
Source: Charles River Sex: Male

Parameter	Age Range 6 - 12 Weeks		Age Range 13 - 24 Weeks	
METHEMOGLOBIN (%)	Range Mean	0.3 - 0.6 0.46	Range Mean	N/A N/A
SEG NEUT (10^3/cmm)	Range Mean	0.9 - 3.0 1.95	Range Mean	1.0 - 3.9 2.36
LYMPH (10^3/cmm)	Range Mean	7.5 - 12.9 10.26	Range Mean	6.6 - 12.3 9.61
MONO (10^3/cmm)	Range Mean	0.0 - 0.2 0.09	Range Mean	0.0 - 0.5 0.18
BASO (10^3/cmm)	Range Mean	0.0 - 0.0 0.00	Range Mean	0.0 - 0.0 0.0
EOS (10^3/cmm)	Range Mean	0.0 - 0.2 0.10	Range Mean	0.0 - 0.3 0.15
NON SEG NEUT (10^3/cmm)	Range Mean	0.0 - 0.0 0.00	Range Mean	0.0 - 0.0 0.00

N/A = Not Available

CLINICAL PATHOLOGY HISTORICAL CONTROL DATA

HEMATOLOGY

August 7, 1997

Species/Strain: Rat/Sprague-Dawley
Source: Charles River Sex: Female

Parameter	Age Range 6 - 12 Weeks		Age Range 13 - 24 Weeks	
WBC (10^3/CMM)	Range Mean	6.5 - 13.3 9.61	Range Mean	4.9 - 11.9 7.99
RBC (10^6/CMM)	Range Mean	7.20 - 8.40 7.714	Range Mean	7.20 - 8.80 8.097
HGB (G/DL)	Range Mean	15.2 - 16.8 16.08	Range Mean	14.1 - 16.5 15.56
HCT (%)	Range Mean	42.3 - 48.1 45.14	Range Mean	39.6 - 47.7 44.49
MCV	Range Mean	54.9 - 61.6 58.63	Range Mean	53.0 - 57.4 54.97
MCH	Range Mean	19.5 - 22.3 20.91	Range Mean	18.3 - 20.1 19.24
MCHC	Range Mean	34.2 - 37.0 35.65	Range Mean	34.0 - 35.8 35.00
PLATELETS (10^3/CMM)	Range Mean	930 - 1450 1205.3	Range Mean	760 - 1090 936.3
MPV (FL)	Range Mean	N/A N/A	Range Mean	5.9 - 6.6 6.32
SEG NEUT (% WBC)	Range Mean	7 - 23 15.0	Range Mean	9 - 25 17.9
LYMP (% WBC)	Range Mean	74 - 92 83.4	Range Mean	70 - 88 79.6
MONO (% WBC)	Range Mean	0 - 1 0.5	Range Mean	0 - 2 1.0
BASO (% WBC)	Range Mean	0 - 0 0.0	Range Mean	0 - 0 0.0
EOS (% WBC)	Range Mean	0 - 3 1.2	Range Mean	0 - 4 1.5
NON SEG NEUT (% WBC)	Range Mean	0 - 0 0.0	Range Mean	0 - 0 0.0
NRBC (% WBC)	Range Mean	0 - 0 0.1	Range Mean	0 - 0 0.0
RETIC (% RBC)	Range Mean	1.5 - 4.6 2.77	Range Mean	0.6 - 2.0 1.28
PROTHROMBIN TIME (SEC)	Range Mean	N/A N/A	Range Mean	16.5 - 18.2 17.35
APTT (SEC)	Range Mean	N/A N/A	Range Mean	11.8 - 16.7 14.44

N/A = Not Available

CLINICAL PATHOLOGY HISTORICAL CONTROL DATA

HEMATOLOGY

August 7, 1997

Species/Strain: Rat/Sprague-Dawley
Source: Charles River Sex: Female

Parameter	Age Range 6 - 12 Weeks		Age Range 13 - 24 Weeks	
METHEMOGLOBIN (%)	Range Mean	0.2 - 0.5 0.38	Range Mean	N/A N/A
SEG NEUT (10^3/cmm)	Range Mean	0.5 - 2.3 1.38	Range Mean	0.7 - 2.4 1.55
LYMPH (10^3/cmm)	Range Mean	5.3 - 10.5 7.66	Range Mean	4.3 - 10.4 6.85
MONO (10^3/cmm)	Range Mean	0.0 - 0.1 0.03	Range Mean	0.0 - 0.2 0.07
BASO (10^3/cmm)	Range Mean	0.0 - 0.0 0.00	Range Mean	0.0 - 0.0 0.00
EOS (10^3/cmm)	Range Mean	0.0 - 0.3 0.11	Range Mean	0.0 - 0.3 0.12
NON SEG NEUT (10^3/cmm)	Range Mean	0.0 - 0.0 0.00	Range Mean	0.0 - 0.0 0.00

N/A = Not Available

CLINICAL PATHOLOGY HISTORICAL CONTROL DATA

BIOCHEMISTRY

August 7, 1997

Species/Strain: Rat/Sprague-Dawley
Source: Charles River Sex: Male

Parameter	Age Range 6 - 12 Weeks		Age Range 13 - 24 Weeks	
A/G RATIO	Range Mean	0.97 - 1.17 1.051	Range Mean	0.86 - 1.11 0.965
ALBUMIN (G/DL)	Range Mean	2.89 - 3.26 3.068	Range Mean	2.93 - 3.59 3.263
ALP (IU/L)	Range Mean	173 - 286 236.4	Range Mean	67 - 163 116.9
BUN (MG/DL)	Range Mean	10 - 17 13.7	Range Mean	12 - 19 15.7
CALCIUM (MG/DL)	Range Mean	9.70 - 11.07 10.380	Range Mean	9.75 - 11.11 10.388
CHLORIDE (MMOL/L)	Range Mean	102 - 107 104.5	Range Mean	104 - 111 107.3
CREATININE (MG/DL)	Range Mean	0.35 - 0.51 0.428	Range Mean	0.41 - 0.60 0.522
GGT (IU/L)	Range Mean	0.42 - 1.62 1.232	Range Mean	0.44 - 1.53 1.144
GLOBULIN (G/DL)	Range Mean	2.65 - 3.16 2.932	Range Mean	2.92 - 3.82 3.406
GLUCOSE (MG/DL)	Range Mean	89 - 121 104.4	Range Mean	103 - 143 120.4
AST (IU/L)	Range Mean	67 - 123 90.4	Range Mean	68 - 113 92.2
ALT (IU/L)	Range Mean	25 - 41 34.7	Range Mean	24 - 47 34.3
POTASSIUM (MMOL/L)	Range Mean	4.44 - 5.26 4.823	Range Mean	4.41 - 5.58 4.908
SODIUM (MMOL/L)	Range Mean	140 - 144 142.0	Range Mean	140 - 149 144.1
PHOSPHORUS (MG/DL)	Range Mean	7.07 - 9.86 8.464	Range Mean	5.56 - 8.20 6.644
T. BILIRUBIN (MG/DL)	Range Mean	0.42 - 0.67 0.572	Range Mean	0.43 - 0.67 0.533
T. PROTEIN (G/DL)	Range Mean	5.64 - 6.41 6.00	Range Mean	6.09 - 7.32 6.668
CHOLESTEROL (MG/DL)	Range Mean	24 - 45 35.2	Range Mean	23 - 53 39.2
TRIGLYCERIDE (MG/DL)	Range Mean	29 - 82 54.0	Range Mean	19 - 55 31.2

CLINICAL PATHOLOGY HISTORICAL CONTROL DATA

BIOCHEMISTRY

August 7, 1997

Species/Strain: Rat/Sprague-Dawley
Source: Charles River Sex: Female

Parameter	Age Range 6 - 12 Weeks		Age Range 13 - 24 Weeks	
A/G RATIO	Range Mean	0.96 - 1.25 1.084	Range Mean	0.90 - 1.13 1.002
ALBUMIN (G/DL)	Range Mean	3.08 - 3.65 3.325	Range Mean	3.02 - 3.80 3.459
ALP (IU/L)	Range Mean	105 - 206 156.4	Range Mean	46 - 115 81.5
BUN (MG/DL)	Range Mean	12 - 18 15.0	Range Mean	13 - 20 16.5
CALCIUM (MG/DL)	Range Mean	9.72 - 11.27 10.619	Range Mean	9.78 - 10.96 10.468
CHLORIDE (MMOL/L)	Range Mean	105 - 110 106.9	Range Mean	105 - 112 108.3
CREATININE (MG/DL)	Range Mean	0.38 - 0.57 0.463	Range Mean	0.44 - 0.62 0.522
GGT (IU/L)	Range Mean	0.90 - 2.79 1.701	Range Mean	0.80 - 2.44 1.607
GLOBULIN (G/DL)	Range Mean	2.67 - 3.49 3.091	Range Mean	3.10 - 3.80 3.463
GLUCOSE (MG/DL)	Range Mean	89 - 124 103.4	Range Mean	99 - 144 119.9
AST (IU/L)	Range Mean	71 - 117 92.1	Range Mean	69 - 111 94.1
ALT (IU/L)	Range Mean	22 - 37 29.2	Range Mean	25 - 51 38.8
POTASSIUM (MMOL/L)	Range Mean	4.24 - 5.34 4.790	Range Mean	3.98 - 5.13 4.523
SODIUM (MMOL/L)	Range Mean	140 - 144 141.9	Range Mean	140 - 145 142.7
PHOSPHORUS (MG/DL)	Range Mean	6.37 - 9.01 7.824	Range Mean	4.42 - 6.49 5.463
T. BILIRUBIN (MG/DL)	Range Mean	0.46 - 0.69 0.552	Range Mean	0.46 - 0.72 0.584
T. PROTEIN (G/DL)	Range Mean	5.89 - 6.90 6.416	Range Mean	6.29 - 7.51 6.923
CHOLESTEROL (MG/DL)	Range Mean	23 - 47 34.1	Range Mean	32 - 51 40.6
TRIGLYCERIDE (MG/DL)	Range Mean	17 - 41 28.6	Range Mean	11 - 31 21.9

SLI Study No. 3455.1

APPENDIX M

Ophthalmology Reports

SLI Study No. 3455.1

OPHTHALMOLOGY CODES

OD - Right Eye

OS - Left Eye

OU - Both Eyes

Ophthalmology Report

David A. Wilkie DVM, MS
Diplomate ACVO

Introduction

The following are results of ocular examinations. All ocular examinations were performed by the above noted Board-Certified Veterinary Ophthalmologist.

Materials and Methods

The eyes of all rats were examined by Dr. David Wilkie DVM, MS, Dip. ACVO on Study Day -1. Examinations included:

1. Biomicroscopic examination, using a Zeiss HSO-10 biomicroscope, following dilation of the pupils with 0.5% tropicamide (Mydriacyl®).
2. Indirect ophthalmoscopic examination, using a 30 diopter lens, following dilation of the pupils with 0.5% tropicamide (Mydriacyl®).

Discussion of Results

Day -1

Ocular abnormalities noted:

LESION & SEVERITY	EYE	GROUP	ANIMAL
Corneal crystals - slight	OU	Pretest	8478/M, 8490/M, 8492/M, 8572/M, 8579/M, 8597/M, 8603/M, 8642/M, 8663/F, 8700/F, 8718/F, 8743/F, 8755/F, 8762/F, 8787/F, 8794/F, 8797/F, 8807/F
Persistent hyaloid remnant	OS	Pretest	8483/M, 8535/M
Vitreous hemorrhage-moderate	OD	Pretest	8576/M
Synechia-anterior	OD	Pretest	8511/M
Retinal hemorrhage-moderate	OD	Pretest	8752/F
Hemorrhage-slight	OD	Pretest	8725/F
Cataract-slight	OD	Pretest	8483/M
Cataract-slight	OU	Pretest	8535/M
Cataract-moderate	OU	Pretest	8635/M
Cataract-moderate	OD	Pretest	8680/F

Conclusions

Corneal crystals, also termed corneal dystrophy are seen in the Sprague-Dawley rat and are inherited. The corneal crystals may progress and additional animals are expected to be affected with this finding. They will not interfere with the study. The persistent hyaloid remnant is a congenital lesion. The animals 8483/M, 8511/M, 8535/M, 8576/M, 8635/M, 8680/F, 8752/F should be eliminated from the study.

Date: 9/10/97

David A. Wilkie DVM, MS
Diplomate ACVO

SLS Study No. 3455.1
Study Day No. 85

Examination Date: December 2, 1997

Ophthalmology Report

Brian C. Gilger, DVM, MS
Diplomate ACVO

Introduction

The following are results of ocular examinations. All ocular examinations were performed by the above noted Board Certified Veterinary Ophthalmologist.

Materials and Methods

The eyes of all rats were examined by Brian C. Gilger, DVM, MS, Dipl. ACVO on study day 85. Examinations included:

1. Biomicroscopic examination, using a Zeiss HSO-10 biomicroscope, after dilation of the pupils with 0.5% tropicamide (Mydriacyl®).

2. Indirect ophthalmoscopic examination, using a 30 diopter lens, after dilation of the pupils with 0.5% tropicamide (Mydriacyl®).

Results

Group 1:

Ocular abnormalities noted:

Lesion	Eye(s) involved	Animal #
Slight corneal crystals	OU	11723/M
"	"	11726/M
"	"	11735/M
"	"	11905/F

Group 3:

Ocular abnormalities noted:

Lesion	Eye(s) involved	Animal #
Moderate conjunctival exudate	OS	11780/M
"	"	11785/M
Slight corneal crystals	OU	11927/F
"	"	11938/F

SLI Study No. 3455.1

Group 4:

Ocular abnormalities noted:

Lesion	Eye(s) involved	Animal #
Slight corneal crystals	OU	11811/M
"	OS	11815/M

Group 5:

Ocular abnormalities noted:

Lesion	Eye(s) involved	Animal #
Moderate conjunctival exudate	OD	11841/M
"	"	11990/F
Slight corneal crystals	OU	11842/M
"	"	11855/M

Group 6:

Ocular abnormalities noted:

Lesion	Eye(s) involved	Animal #
Slight corneal crystals	OU	12024/F

The remainder of the rats had normal ophthalmic examinations

Conclusions:

The slight corneal crystals are compatible with the species and age of the rats. The unilateral conjunctival exudate seen in several rats is consistent with trauma and unlikely to be a treatment effect. No significant differences were seen among the groups or sexes of the animals.

5-15-98

Date

Brian C. Gilger, DVM, MS
Diplomate, ACVO
Associate Professor
Comparative Ophthalmology
Department of Companion Animal and Special Species Medicine
North Carolina State University
4700 Hillsborough Street
Raleigh, NC 27606

Ophthalmology Report

David A. Wilkie DVM, MS
Diplomate ACVO

Introduction

The following are results of ocular examinations. All ocular examinations were performed by the above noted Board-Certified Veterinary Ophthalmologist.

Materials and Methods

The eyes of all rats were examined by Dr. David Wilkie DVM, MS, Dip. ACVO on Study Day 119. Examinations included:

1. Biomicroscopic examination, using a Zeiss HSO-10 biomicroscope, following dilation of the pupils with 0.5% tropicamide (Mydriacyl®).
2. Indirect ophthalmoscopic examination, using a 30 diopter lens, following dilation of the pupils with 0.5% tropicamide (Mydriacyl®).

Discussion of Results

Day 119

Ocular abnormalities noted:

LESION & SEVERITY	EYE	GROUP	ANIMAL
Corneal crystals - slight	OU	1	11726/M, 11727/M, 11899/F, 11905/F
Corneal crystals - slight	OU	3	11785/M, 11928/F
Corneal crystals - slight	OU	5	11999/F
Corneal crystals - slight	OU	6	12014/F, 12017/F
Conjunctivitis - moderate	OD	6	11850/M

Conclusions

Corneal crystals, also termed corneal dystrophy are seen in the Sprague-Dawley rat and are inherited. Conjunctivits may be the result of infectious or environmental factors, the cause is not apparent. There are no treatment-related ocular findings.

Date: 1/10/98

David A. Wilkie DVM, MS
Diplomate ACVO

SLI Study No. 3455.1

CROSS REFERENCE OF TEMPORARY/PERMANENT ANIMAL NUMBERS
FOR OPHTHALMOLOGY

GROUP	INDIVIDUAL TEMPORARY IDENTIFICATION	PERMANENT STUDY IDENTIFICATION
1	8597 M	11721
1	8603 M	11736
2	8478 M	11758
4	8490 M	11798
4	8572 M	11811
4	8579 M	11814
5	8492 M	11822
5	8642 M	11842
--	8483 M	NA
--	8535 M	NA
--	8576 M	NA
--	8511 M	NA
--	8483 M	NA
--	8535 M	NA
--	8635 M	NA
1	8743 F	11880
1	8762 F	11893
1	8787 F	11899
3	8797 F	11949
3	8755 F	11944
5	8663 F	11995
5	8807 F	12005
6	8700 F	12017
6	8718 F	12010

NA = NOT ASSIGNED TO STUDY

SLI Study No. 3455.1

CROSS REFERENCE OF TEMPORARY/PERMANENT ANIMAL NUMBERS
FOR OPHTHALMOLOGY

GROUP	INDIVIDUAL TEMPORARY IDENTIFICATION	PERMANENT STUDY IDENTIFICATION
6	8794 F	12032
--	8752 F	NA
--	8725 F	NA
--	8680 F	NA

NA = NOT ASSIGNED TO STUDY

A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS WITH AMMONIUM PERCHLORATE

FINAL REPORT
Volume 3 of 3

Author

Joseph C. Siglin, Ph.D., DABT

Study Completed on

May 18, 1998

Performing Laboratory

Springborn Laboratories, Inc. (SLI)
Health and Environmental Sciences
640 North Elizabeth Street
Spencerville, OH 45887

SLI Study No.

3455.1

Submitted to:

ManTech Environmental Technology
P. O. Box 31009
Dayton, Ohio 45437-0009

Springborn Laboratories

APPENDIX N

Individual Estrous Cyclicity Data

APPENDIX N
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL ESTROUS CYCLICITY DATA

	CYCLING YES	CYCLING NO	CYCLE LENGTH (DAYS)	MEAN CYCLE LENGTH
GROUP 1: 0 MG/KG/DAY				
11876 F	X		4, 4, 4, 4	4.00
11886 F	X		4, 4, 4, 4, 5	4.20
11890 F	X		4, 4, 4, 4	4.00
11891 F	X		4, 4, 4, 4	4.00
11892 F	X		5, 5, 4	4.67
11895 F	X		5, 5, 3, 5	4.50
11896 F	X		4, 4, 4, 4	4.00
11901 F	X		4, 4, 4, 4	4.00
11902 F	X		5, 4, 4	4.33
11904 F	X		8, 4, 4	5.33
MEAN				4.30
S.D.				0.434
N				10

NOTE: CYCLING = FEMALES WERE CONSIDERED TO BE CYCLING IF THEY HAD AT LEAST THREE ESTROUS CYCLES DURING THE 21-DAY EVALUATION PERIOD. CYCLE LENGTH (DAYS) = THE NUMBER OF DAYS FROM THE FIRST TO THE SECOND OBSERVED ESTROUS, FROM THE SECOND TO THIRD OBSERVED ESTROUS, ETC.

GROUP 1: 0 MG/KG/DAY

FEMALE NO.	DETERMINATION DAY: 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
11876	D	P	E	D	D	D	E	D	D	P	E	D	D	D	E	D	D	P	E	M	D
11886	E	D	D	P	E	D	D	D	E	D	D	D	E	D	D	D	E	E	D	D	D
11890	D	D	P	E	D	D	D	E	D	D	D	E	D	D	D	E	M	D	D	E	M
11891	D	D	E	D	D	D	E	D	D	P	E	D	D	D	E	D	D	P	E	D	D
11892	M	D	P	E	D	D	D	P	E	M	D	D	P	E	D	D	D	E	D	D	D
11895	D	D	E	M	D	D	D	E	D	D	D	D	E	D	D	E	E	D	D	D	E
11896	D	D	D	E	D	D	D	E	D	D	D	E	D	D	D	E	D	D	D	E	M
11901	D	D	D	E	D	D	D	E	D	D	D	E	D	D	D	E	D	D	D	E	D
11902	E	M	D	D	P	E	M	D	D	E	M	D	D	E	M	D	D	D	D	D	D
11904	D	E	M	D	D	D	D	D	D	E	M	D	D	E	D	D	D	E	D	D	D

ESTRUS STAGE CODE: E = ESTRUS, D = DIESTRUS, M = METESTRUS, P = PROESTRUS, N = NOT ENTERED, + = SMEARED POSITIVE, C = COPULATORY PLUG OBSERVED, - = SMEARED NEGATIVE

APPENDIX N
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL ESTROUS CYCLICITY DATA

	CYCLING YES	CYCLING NO	CYCLE LENGTH (DAYS)	MEAN CYCLE LENGTH
GROUP 2: 0.01 MG/KG/DAY				
11907 F	X		8, 4, 4	5.33
11910 F	X		4, 5, 5	4.67
11914 F	X		4, 4, 4	4.00
11915 F	X		4, 4, 4, 4, 4	4.00
11916 F	X		5, 4, 5, 4	4.50
11918 F	X		4, 5, 4	4.33
11919 F	X		5, 5, 5	5.00
11920 F	X		4, 4, 4, 4, 4	4.00
11922 F	X		4, 4, 4, 4	4.00
11924 F	X		4, 4, 4, 4, 4	4.00
MEAN				4.38
S.D.				0.484
N				10

NOTE: CYCLING = FEMALES WERE CONSIDERED TO BE CYCLING IF THEY HAD AT LEAST THREE ESTROUS CYCLES DURING THE 21-DAY EVALUATION PERIOD. CYCLE LENGTH (DAYS) = THE NUMBER OF DAYS FROM THE FIRST TO THE SECOND OBSERVED ESTROUS, FROM THE SECOND TO THIRD OBSERVED ESTROUS, ETC. FEMALES IN GROUP 2 WERE EUTHANIZED ON DAYS 15-18 OR DAYS 92-95.

APPENDIX N
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL ESTROUS CYCLICITY DATA

GROUP 2: 0.01 MG/KG/DAY

FEMALE NO.	DETERMINATION DAY: 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
11907	D	D	E	D	D	D	D	D	D	D	E	D	D	D	E	D	D	D	E	M	D
11910	P	E	D	D	D	E	E	D	D	D	E	D	D	D	D	E	E	D	D	D	P
11914	D	E	D	D	D	E	D	D	D	E	D	D	D	E	D	D	D	D	D	D	D
11915	E	D	D	D	E	M	D	D	E	D	D	D	E	D	D	D	E	M	D	D	E
11916	P	E	D	D	D	D	E	D	D	D	E	D	D	D	D	E	P	D	P	E	D
11918	D	D	P	E	M	D	D	E	D	D	D	P	E	M	D	D	E	E	D	D	D
11919	D	E	E	D	D	D	E	E	D	D	D	E	E	D	D	D	E	E	D	D	D
11920	E	M	D	D	E	D	D	D	E	D	D	D	E	M	D	D	E	M	D	D	E
11922	D	D	D	E	D	D	D	E	D	D	D	E	D	D	D	E	M	D	D	E	D
11924	E	D	D	D	E	D	D	D	E	D	D	D	E	D	D	D	E	M	D	D	E

ESTRUS STAGE CODE: E = ESTRUS, D = DIESTRUS, M = METESTRUS, P = PROESTRUS, N = NOT ENTERED, + = SMEARED POSITIVE, C = COPULATORY PLUG OBSERVED, - = SMEARED NEGATIVE

NOTE: FEMALES IN GROUP 2 WERE EUTHANIZED ON DAYS 15-18 OR DAYS 92-95.

APPENDIX N
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL ESTROUS CYCLICITY DATA

	CYCLING YES	CYCLING NO	CYCLE LENGTH (DAYS)	MEAN CYCLE LENGTH
GROUP 3: 0.05 MG/KG/DAY				
11927 F	X		4, 4, 6	4.67
11929 F	X		4, 4, 4, 4	4.00
11935 F	X		6, 4, 6	5.33
11936 F	X		4, 4, 4, 4	4.00
11937 F	X		4, 5, 6, 5	5.00
11938 F	X		5, 6, 5	5.33
11939 F		X		
11950 F	X		4, 4, 4, 4	4.00
11954 F	X		4, 4, 4	4.00
11955 F	X		4, 4, 4, 4	4.00
MEAN				4.48
S.D.				0.602
N				9

NOTE: CYCLING = FEMALES WERE CONSIDERED TO BE CYCLING IF THEY HAD AT LEAST THREE ESTROUS CYCLES DURING THE 21-DAY EVALUATION PERIOD. CYCLE LENGTH (DAYS) = THE NUMBER OF DAYS FROM THE FIRST TO THE SECOND OBSERVED ESTROUS, FROM THE SECOND TO THIRD OBSERVED ESTROUS, ETC.

(012)

APPENDIX N
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL ESTROUS CYCLICITY DATA

GROUP 3: 0.05 MG/KG/DAY

FEMALE NO.	DETERMINATION DAY: 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
11927	D	D	E	D	D	D	E	D	D	D	E	D	D	D	D	D	E	E	D	D	D
11929	D	D	E	D	D	D	E	D	D	D	E	D	D	D	E	D	D	D	E	D	D
11935	D	E	E	M	D	D	P	E	D	D	P	E	D	D	D	D	P	E	M	D	D
11936	D	E	D	D	D	E	D	D	D	E	D	D	D	E	D	D	D	E	E	D	D
11937	E	D	D	D	E	E	D	D	D	E	E	D	D	D	P	E	D	D	D	P	E
11938	D	D	D	P	E	E	D	D	D	E	E	D	D	D	P	E	D	D	D	P	E
11939	D	D	D	P	E	D	D	D	P	E	D	D	D	E	E	E	E	E	E	E	E
11950	D	E	M	D	D	E	D	D	D	E	D	D	D	E	D	D	D	E	D	D	D
11954	E	M	D	D	E	M	D	D	E	M	D	D	E	M	D	D	D	D	D	D	D
11955	M	D	P	E	M	D	P	E	D	D	P	E	D	D	D	E	M	D	D	E	M

ESTRUS STAGE CODE: E = ESTRUS, D = DIESTRUS, M = METESTRUS, P = PROESTRUS, N = NOT ENTERED, + = SMEARED POSITIVE, C = COPULATORY PLUG OBSERVED, - = SMEARED NEGATIVE

APPENDIX N
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL ESTROUS CYCLICITY DATA

	CYCLING YES	CYCLING NO	CYCLE LENGTH (DAYS)	MEAN CYCLE LENGTH
GROUP 4: 0.2 MG/KG/DAY				
11956 F	X		5, 4, 4	4.33
11957 F	X		4, 4, 4	4.00
11958 F	X		4, 4, 4, 4, 4	4.00
11961 F	X		7, 2, 6, 5	5.00
11965 F	X		6, 5, 5	5.33
11966 F	X		5, 4, 7	5.33
11969 F		X		
11972 F	X		6, 4, 6	5.33
11973 F	X		4, 5, 4	4.33
11975 F	X		4, 4, 4, 6	4.50
MEAN				4.68
S.D.				0.567
N				9

NOTE: CYCLING = FEMALES WERE CONSIDERED TO BE CYCLING IF THEY HAD AT LEAST THREE ESTROUS CYCLES DURING THE 21-DAY EVALUATION PERIOD. CYCLE LENGTH (DAYS) = THE NUMBER OF DAYS FROM THE FIRST TO THE SECOND OBSERVED ESTROUS, FROM THE SECOND TO THIRD OBSERVED ESTROUS, ETC. FEMALES IN GROUP 4 WERE EUTHANIZED ON DAYS 15-18 OR DAYS 92-95.

FEMALE NO.	DETERMINATION DAY: 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
GROUP 4: 0.2 MG/KG/DAY																					
11956	D	D	D	E	M	D	D	D	E	M	D	D	E	M	D	D	E	M	D	D	D
11957	E	D	D	D	E	D	D	D	E	D	D	D	E	D	D	D	D	D	D	D	D
11958	E	D	D	D	E	M	D	D	E	D	D	D	E	D	D	D	E	M	D	D	E
11961	E	M	D	P	M	D	D	E	D	E	E	D	D	D	P	E	D	D	D	P	E
11965	D	E	E	D	D	D	P	E	D	D	D	P	E	D	D	D	P	E	D	D	D
11966	D	D	E	D	D	D	P	E	D	D	P	E	D	D	D	D	D	D	E	M	D
11969	D	P	E	M	D	D	P	E	D	D	D	D	E	D	D	D	D	D	D	D	D
11972	D	D	D	E	E	D	D	D	P	E	D	D	P	E	E	D	D	D	P	E	M
11973	D	E	D	D	D	E	M	D	D	P	E	D	D	D	E	E	M	D	D	D	D
11975	D	E	D	D	D	E	D	D	D	E	D	D	D	E	D	D	D	D	D	E	D

ESTRUS STAGE CODE: E = ESTRUS, D = DIESTRUS, M = METESTRUS, P = PROESTRUS, N = NOT ENTERED, + = SMEARED POSITIVE, C = COPULATORY PLUG OBSERVED, - = SMEARED NEGATIVE

NOTE: FEMALES IN GROUP 4 WERE EUTHANIZED ON DAYS 15-18 OR DAYS 92-95.

APPENDIX N
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL ESTROUS CYCLICITY DATA

	CYCLING YES	CYCLING NO	CYCLE LENGTH (DAYS)	MEAN CYCLE LENGTH
GROUP 5: 1.0 MG/KG/DAY				
11976 F	X		4, 4, 4	4.00
11983 F		X		
11988 F	X		4, 4, 4, 4	4.00
11990 F		X		
11993 F	X		5, 4, 4, 5	4.50
11995 F	X		4, 4, 4, 4	4.00
11996 F	X		4, 4, 4, 4	4.00
11997 F	X		4, 4, 4, 4	4.00
11998 F	X		4, 4, 4, 4	4.00
12000 F	X		4, 4, 4, 4	4.00
MEAN				4.06
S.D.				0.177
N				8

NOTE: CYCLING = FEMALES WERE CONSIDERED TO BE CYCLING IF THEY HAD AT LEAST THREE ESTROUS CYCLES DURING THE 21-DAY EVALUATION PERIOD. CYCLE LENGTH (DAYS) = THE NUMBER OF DAYS FROM THE FIRST TO THE SECOND OBSERVED ESTROUS, FROM THE SECOND TO THIRD OBSERVED ESTROUS, ETC.

APPENDIX N
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL ESTROUS CYCLICITY DATA

FEMALE NO.	DETERMINATION DAY: 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
GROUP 5: 1.0 MG/KG/DAY																					
11976	E	D	D	D	E	D	D	D	E	D	D	D	E	D	D	D	D	D	D	D	D
11983	E	E	D	D	P	E	E	E	E	E	E	E	E	E	E	E	E	D	E	E	
11988	D	D	E	D	D	D	E	D	D	D	E	M	D	D	E	D	D	D	E	D	D
11990	D	D	P	E	D	D	D	D	D	D	D	D	D	D	D	D	D	E	D	D	E
11993	D	E	E	M	D	D	E	D	D	D	E	M	D	P	E	M	D	D	P	E	M
11995	M	D	D	E	M	D	D	E	D	D	D	E	M	D	D	E	M	D	D	E	M
11996	D	D	D	E	D	D	D	E	D	D	D	E	D	D	D	E	D	D	D	E	D
11997	D	P	E	D	D	D	E	D	D	P	E	D	D	P	E	D	D	P	E	D	D
11998	D	E	D	M	D	E	D	D	P	E	M	D	D	E	D	D	D	E	D	D	D
12000	D	D	D	E	M	D	D	E	D	D	D	E	D	D	D	E	D	D	D	E	M

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C = COPULATORY PLUG OBSERVED, - = SMEARED NEGATIVE

APPENDIX N
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL ESTROUS CYCLICITY DATA

	CYCLING YES	CYCLING NO	CYCLE LENGTH (DAYS)	MEAN CYCLE LENGTH
GROUP 6: 10.0 MG/KG/DAY				
12006 F	X		4, 5, 5, 5	4.75
12007 F	X		4, 5, 4, 5	4.50
12011 F	X		4, 4, 3, 5	4.00
12012 F	X		4, 4, 4, 4, 4	4.00
12018 F	X		4, 4, 4, 4	4.00
12019 F	X		4, 4, 4, 4	4.00
12022 F	X		5, 5, 5	5.00
12025 F	X		4, 4, 4, 4	4.00
12029 F	X		4, 4, 4	4.00
12033 F	X		4, 4, 4	4.00
MEAN				4.22
S.D.				0.381
N				10

NOTE: CYCLING = FEMALES WERE CONSIDERED TO BE CYCLING IF THEY HAD AT LEAST THREE ESTROUS CYCLES DURING THE 21-DAY EVALUATION PERIOD. CYCLE LENGTH (DAYS) = THE NUMBER OF DAYS FROM THE FIRST TO THE SECOND OBSERVED ESTROUS, FROM THE SECOND TO THIRD OBSERVED ESTROUS, ETC.

APPENDIX N
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL ESTROUS CYCLICITY DATA

FEMALE NO.	DETERMINATION DAY: 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
GROUP 6: 10.0 MG/KG/DAY																					
12006	E	D	D	D	E	E	D	D	D	E	M	D	D	P	E	D	D	D	D	E	D
12007	E	D	D	D	E	E	D	D	D	E	D	D	D	E	D	D	D	D	E	D	D
12011	D	D	E	D	D	D	E	D	D	D	E	D	D	E	E	D	D	D	E	D	D
12012	E	M	D	D	E	D	D	D	E	D	D	D	E	D	D	D	E	M	D	D	E
12018	D	D	D	E	D	D	D	E	D	D	D	E	D	D	D	E	M	D	D	E	M
12019	D	D	E	D	D	D	E	D	D	D	E	D	D	D	E	D	D	D	E	D	D
12022	D	P	E	E	M	D	P	E	E	D	D	P	E	E	D	D	P	E	E	D	D
12025	D	P	E	M	D	P	E	D	D	P	E	D	D	P	E	M	D	P	E	D	D
12029	D	E	M	D	D	E	M	D	D	E	D	D	D	E	D	D	D	D	M	D	D
12033	E	M	D	D	E	D	D	D	E	D	D	P	E	D	D	D	D	D	D	D	D

ESTRUS STAGE CODE: E = ESTRUS, D = DIESTRUS, M = METESTRUS, P = PROESTRUS, N = NOT ENTERED, + = SMEARED POSITIVE,
C = COPULATORY PLUG OBSERVED, - = SMEARED NEGATIVE

APPENDIX N
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL ESTROUS CYCLICITY DATA
(RECOVERY PHASE)

	CYCLING		CYCLE LENGTH (DAYS)	MEAN CYCLE LENGTH
	YES	NO		
GROUP 1: 0 MG/KG/DAY				
11879 F		X		
11880 F	X		4, 4, 4, 4, 4	4.00
11883 F		X		
11885 F		X		
11887 F	X		8, 5, 4	5.67
11888 F	X		4, 4, 4, 4, 4	4.00
11897 F		X		
11898 F		X		
11899 F	X		5, 4, 4, 4	4.25
11905 F	X		4, 4, 4, 4	4.00
MEAN				4.38
S.D.				0.727
N				5

NOTE: CYCLING = FEMALES WERE CONSIDERED TO BE CYCLING IF THEY HAD AT LEAST THREE ESTROUS CYCLES DURING THE 21-DAY EVALUATION PERIOD. CYCLE LENGTH (DAYS) = THE NUMBER OF DAYS FROM THE FIRST TO THE SECOND OBSERVED ESTROUS, FROM THE SECOND TO THIRD OBSERVED ESTROUS, ETC.

APPENDIX N
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL ESTROUS CYCLICITY DATA
(RECOVERY PHASE)

GROUP 1: 0 MG/KG/DAY

FEMALE NO.	DETERMINATION DAY: 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
11879	D	D	P	P	P	D	P	P	P	D	D	D	E	D	D	D	D	P	M	D	D
11880	E	D	D	D	E	D	D	D	E	D	D	D	E	D	D	D	E	D	D	D	E
11883	D	D	E	D	D	D	D	D	D	D	D	D	D	D	D	E	E	D	D	E	D
11885	D	D	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D
11887	E	M	D	D	D	D	D	D	E	D	D	D	P	E	D	D	D	E	M	D	D
11888	E	D	D	D	E	D	D	D	E	D	D	P	E	M	D	D	E	M	D	D	E
11897	D	D	E	E	D	D	D	D	D	D	D	D	D	D	M	D	D	D	E	D	D
11898	E	M	D	D	D	D	D	D	D	P	D	D	D	D	P	P	D	E	E	D	D
11899	D	D	E	E	D	D	D	E	D	D	D	E	D	D	D	E	D	D	D	E	D
11905	P	E	M	D	D	E	D	D	D	E	D	D	D	E	M	D	P	E	M	D	P

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APPENDIX N
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL ESTROUS CYCLICITY DATA
(RECOVERY PHASE)

	CYCLING YES	CYCLING NO	CYCLE LENGTH (DAYS)	MEAN CYCLE LENGTH
GROUP 3: 0.05 MG/KG/DAY				
11926 F	X		7, 4, 3, 5	4.75
11928 F	X		4, 4, 4	4.00
11932 F	X		4, 4, 4, 4	4.00
11933 F	X		5, 4, 4, 4	4.25
11940 F		X		
11943 F	X		4, 4, 4, 4	4.00
11944 F	X		4, 4, 4, 4	4.00
11947 F	X		4, 4, 4, 4, 4	4.00
11948 F	FOUND DEAD			
11949 F		X		
MEAN				4.14
S.D.				0.283
N				7

NOTE: CYCLING = FEMALES WERE CONSIDERED TO BE CYCLING IF THEY HAD AT LEAST THREE ESTROUS CYCLES DURING THE 21-DAY EVALUATION PERIOD. CYCLE LENGTH (DAYS) = THE NUMBER OF DAYS FROM THE FIRST TO THE SECOND OBSERVED ESTROUS, FROM THE SECOND TO THIRD OBSERVED ESTROUS, ETC.

APPENDIX N
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL ESTROUS CYCLICITY DATA
(RECOVERY PHASE)

GROUP 3: 0.05 MG/KG/DAY

FEMALE NO.	DETERMINATION DAY: 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
11926	E	D	D	D	D	D	P	E	D	D	P	E	D	D	E	E	D	D	D	E	D
11928	D	D	D	D	D	E	D	D	D	E	D	D	D	E	D	D	D	E	D	D	D
11932	D	D	P	E	D	D	D	E	D	D	D	E	D	D	D	E	D	D	D	E	D
11933	D	P	E	M	D	D	D	E	D	D	D	E	D	D	D	E	D	D	D	E	M
11940	D	D	D	E	M	D	D	D	D	D	D	D	D	D	D	D	D	E	E	D	D
11943	D	E	D	D	D	E	D	D	D	E	D	D	P	E	M	D	D	E	M	D	D
11944	D	D	E	M	D	D	E	D	D	D	E	D	D	D	E	D	D	D	E	D	D
11947	E	D	D	D	E	D	D	D	E	D	D	D	E	D	D	D	E	D	D	D	E
11948	FOUND DEAD																				
11949	D	P	E	M	D	D	D	D	D	D	D	D	D	D	D	D	D	D	M	D	P

ESTRUS STAGE CODE: E = ESTRUS, D = DIESTRUS, M = METESTRUS, P = PROESTRUS, N = NOT ENTERED, + = SMEARED POSITIVE, C = COPULATORY PLUG OBSERVED, - = SMEARED NEGATIVE

NOTE: ODD SHAPED NARROW ELONGATED CELLS, SOME WITH A TAIL-LIKE STRUCTURE LOOKING ALMOST LIKE SPERM IN THE VAGINAL SMEAR WERE PRESENT ON DAY 18.

APPENDIX N
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL ESTROUS CYCLICITY DATA
(RECOVERY PHASE)

	CYCLING YES	CYCLING NO	CYCLE LENGTH (DAYS)	MEAN CYCLE LENGTH
GROUP 5: 1.0 MG/KG/DAY				
11978 F	X		4, 8, 4	5.33
11979 F	X		5, 4, 4, 4	4.25
11980 F		X		
11981 F		X		
11985 F		X		
11986 F	X		4, 4, 4, 4, 4	4.00
11987 F	X		4, 4, 4, 4	4.00
11999 F	X		4, 4, 4, 4	4.00
12002 F		X		
12004 F	X		4, 4, 4, 4	4.00
MEAN				4.26
S.D.				0.532
N				6

NOTE: CYCLING = FEMALES WERE CONSIDERED TO BE CYCLING IF THEY HAD AT LEAST THREE ESTROUS CYCLES DURING THE 21-DAY EVALUATION PERIOD. CYCLE LENGTH (DAYS) = THE NUMBER OF DAYS FROM THE FIRST TO THE SECOND OBSERVED ESTROUS, FROM THE SECOND TO THIRD OBSERVED ESTROUS, ETC.

APPENDIX N
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL ESTROUS CYCLICITY DATA
(RECOVERY PHASE)

FEMALE NO.	DETERMINATION DAY: 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
GROUP 5: 1.0 MG/KG/DAY																					
11978	D	D	E	M	D	D	E	M	D	D	P	D	D	D	E	M	D	D	E	D	D
11979	D	E	M	D	D	P	E	M	D	D	E	D	D	D	E	M	D	D	E	D	D
11980	D	E	D	D	D	D	D	D	D	D	D	D	D	D	E	M	D	D	E	D	D
11981	D	D	E	M	D	D	D	D	D	D	D	D	P	D	D	D	D	D	D	E	E
11985	E	D	D	D	D	D	D	D	D	D	D	D	D	E	E	D	D	D	E	D	D
11986	E	M	D	D	E	M	D	D	E	D	D	D	E	M	D	D	E	M	D	D	E
11987	D	E	D	D	D	E	D	D	D	E	D	D	D	E	M	D	D	E	D	D	D
11999	D	D	D	E	D	D	D	E	D	D	D	E	D	D	D	E	D	D	D	E	D
12002	D	D	E	E	D	P	D	D	D	D	D	D	D	D	D	D	D	E	E	D	D
12004	D	E	M	D	D	E	M	D	D	E	D	D	M	E	D	D	D	E	M	D	D

ESTRUS STAGE CODE: E = ESTRUS, D = DIESTRUS, M = METESTRUS, P = PROESTRUS, N = NOT ENTERED, + = SMEARED POSITIVE, C = COPULATORY PLUG OBSERVED, - = SMEARED NEGATIVE

APPENDIX N
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL ESTROUS CYCLICITY DATA
(RECOVERY PHASE)

	CYCLING YES	CYCLING NO	CYCLE LENGTH (DAYS)	MEAN CYCLE LENGTH
GROUP 6: 10.0 MG/KG/DAY				
12008 F	X		4, 8, 4, 4	5.00
12009 F	X		4, 4, 4, 4	4.00
12014 F		X		
12015 F	X		4, 6, 4, 4	4.50
12017 F	X		9, 4, 4	5.67
12020 F		X		
12024 F	X		5, 6, 6	5.67
12027 F		X		
12034 F		X		
12035 F	X		4, 4, 4, 4	4.00
MEAN				4.81
S.D.				0.765
N				6

NOTE: CYCLING = FEMALES WERE CONSIDERED TO BE CYCLING IF THEY HAD AT LEAST THREE ESTROUS CYCLES DURING THE 21-DAY EVALUATION PERIOD. CYCLE LENGTH (DAYS) = THE NUMBER OF DAYS FROM THE FIRST TO THE SECOND OBSERVED ESTROUS, FROM THE SECOND TO THIRD OBSERVED ESTROUS, ETC.

APPENDIX N
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL ESTROUS CYCLICITY DATA
(RECOVERY PHASE)

FEMALE NO.	DETERMINATION DAY: 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
GROUP 6: 10.0 MG/KG/DAY																					
12008	E	M	D	D	E	D	D	D	P	D	D	D	E	D	D	D	E	D	D	D	E
12009	D	E	M	D	D	E	D	D	D	E	D	D	D	E	M	D	D	E	D	D	D
12014	P	E	M	D	D	D	D	D	D	D	D	D	D	E	D	D	D	E	E	M	D
12015	P	E	M	D	D	E	E	E	M	D	D	E	D	D	D	E	M	D	D	E	M
12017	P	E	M	D	D	D	P	D	D	D	E	D	D	D	E	M	D	D	E	M	D
12020	E	D	D	D	P	D	D	D	D	D	D	D	D	D	D	D	E	E	D	D	E
12024	D	E	E	M	D	D	E	E	E	D	D	D	E	E	E	D	D	D	E	M	D
12027	E	M	D	D	D	D	D	D	D	D	D	D	D	D	P	E	D	D	P	E	D
12034	E	M	D	D	D	D	D	D	D	D	D	M	D	D	E	M	D	P	E	M	D
12035	D	D	E	D	D	D	E	D	D	D	E	D	D	P	E	D	D	P	E	D	D

ESTRUS STAGE CODE: E = ESTRUS, D = DIESTRUS, M = METESTRUS, P = PROESTRUS, N = NOT ENTERED, + = SMEARED POSITIVE, C = COPULATORY PLUG OBSERVED, - = SMEARED NEGATIVE

APPENDIX O

Individual Absolute and Relative Organ Weight Data

APPENDIX O
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL ABSOLUTE AND RELATIVE ORGAN WEIGHT DATA

SCHEDULED EUTHANASIA - DAYS 15-18

ANIMAL NO.	FINAL BODY WEIGHT (g)	BRAIN ABS. (g)	BRAIN REL. %FBW	PITUITARY ABS. (g)	PITUITARY REL. %FBW	PITUITARY REL. %BRW	KIDNEYS ABS. (g)	KIDNEYS REL. %FBW	KIDNEYS REL. %BRW	TESTES ABS. (g)	TESTES REL. %FBW	TESTES REL. %BRW
GROUP 1: 0 MG/KG/DAY												
11716 M	310	1.98	0.64	0.0118	0.0038	0.5960	3.18	1.03	160.61	2.75	0.89	138.89
11717 M	292	2.03	0.70	0.0113	0.0039	0.5567	2.94	1.01	144.83	2.96	1.01	145.81
11718 M	287	2.09	0.73	0.0102	0.0036	0.4880	2.61	0.91	124.88	2.64	0.92	126.32
11720 M	301	2.02	0.67	0.0121	0.0040	0.5990	2.81	0.93	139.11	2.93	0.97	145.05
11725 M	305	2.15	0.70	0.0097	0.0032	0.4512	2.93	0.96	136.28	3.26	1.07	151.63
11728 M	348	2.10	0.60	0.0133	0.0038	0.6333	2.94	0.84	140.00	2.85	0.82	135.71
11731 M	324	2.11	0.65	0.0104	0.0032	0.4929	3.24	1.00	153.55	3.08	0.95	145.97
11739 M	322	2.07	0.64	0.0115	0.0036	0.5556	3.03	0.94	146.38	2.84	0.88	137.20
11744 M	349	2.18	0.62	0.0124	0.0036	0.5688	3.94	1.13	180.73	3.47	0.99	159.17
11745 M	345	2.17	0.63	0.0160	0.0046	0.7373	3.46	1.00	159.45	3.35	0.97	154.38
MEAN	318	2.09	0.66	0.0119	0.0037	0.5679	3.11	0.98	148.58	3.01	0.95	144.01
S.D.	23.1	0.066	0.040	0.00181	0.00042	0.08209	0.376	0.077	15.694	0.271	0.073	9.765
N	10	10	10	10	10	10	10	10	10	10	10	10

NOTE: REL. % FINAL BODY WEIGHT (FBW) = (ORGAN WEIGHT/FBW) X 100; REL. % BRAIN WEIGHT (BRW) = (ORGAN WEIGHT/BRW) X 100.

APPENDIX O
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL ABSOLUTE AND RELATIVE ORGAN WEIGHT DATA

SCHEDULED EUTHANASIA - DAYS 15-18

ANIMAL NO.	FINAL BODY WEIGHT (g)	HEART ABS. (g)	HEART REL. %FBW	HEART REL. %BRW	LUNGS ABS. (g)	LUNGS REL. %FBW	LUNGS REL. %BRW	LIVER ABS. (g)	LIVER REL. %FBW	LIVER REL. %BRW	SPLEEN ABS. (g)	SPLEEN REL. %FBW	SPLEEN REL. %BRW
GROUP 1: 0 MG/KG/DAY													
11716 M	310	1.30	0.42	65.66	1.41	0.45	71.21	15.40	4.97	777.78	0.68	0.22	34.34
11717 M	292	1.29	0.44	63.55	1.56	0.53	76.85	14.11	4.83	695.07	0.55	0.19	27.09
11718 M	287	1.14	0.40	54.55	1.43	0.50	68.42	13.56	4.72	648.80	0.61	0.21	29.19
11720 M	301	1.13	0.38	55.94	1.20	0.40	59.41	13.46	4.47	666.34	0.56	0.19	27.72
11725 M	305	1.27	0.42	59.07	1.49	0.49	69.30	14.36	4.71	667.91	0.77	0.25	35.81
11728 M	348	1.24	0.36	59.05	1.48	0.43	70.48	14.96	4.30	712.38	0.83	0.24	39.52
11731 M	324	1.32	0.41	62.56	1.42	0.44	67.30	17.34	5.35	821.80	0.71	0.22	33.65
11739 M	322	1.41	0.44	68.12	1.52	0.47	73.43	16.55	5.14	799.52	0.94	0.29	45.41
11744 M	349	1.42	0.41	65.14	2.15	0.62	98.62	16.46	4.72	755.05	0.75	0.21	34.40
11745 M	345	1.46	0.42	67.28	1.77	0.51	81.57	17.62	5.11	811.98	0.89	0.26	41.01
MEAN	318	1.30	0.41	62.09	1.54	0.48	73.66	15.38	4.83	735.66	0.73	0.23	34.82
S.D.	23.1	0.111	0.026	4.722	0.256	0.062	10.552	1.536	0.319	65.491	0.133	0.033	5.937
N	10	10	10	10	10	10	10	10	10	10	10	10	10

NOTE: REL. % FINAL BODY WEIGHT (FBW) = (ORGAN WEIGHT/FBW) X 100; REL. % BRAIN WEIGHT (BRW) = (ORGAN WEIGHT/BRW) X 100.

APPENDIX O
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL ABSOLUTE AND RELATIVE ORGAN WEIGHT DATA

SCHEDULED EUTHANASIA - DAYS 15-18

ANIMAL NO.	FINAL BODY WEIGHT (g)	EPIDIDYMIS ABS. (g)	EPIDIDYMIS REL. %FBW	EPIDIDYMIS REL. %BRW	THYROID/PARATHYROID ABS. (g)	THYROID/PARATHYROID REL. %FBW	THYROID/PARATHYROID REL. %BRW
GROUP 1: 0 MG/KG/DAY							
11716 M	310	0.52	0.17	26.26	0.0164	0.0053	0.8283
11717 M	292	0.62	0.21	30.54	0.0221	0.0076	1.0887
11718 M	287	0.70	0.24	33.49	0.0173	0.0060	0.8278
11720 M	301	0.67	0.22	33.17	0.0197	0.0065	0.9752
11725 M	305	0.72	0.24	33.49	0.0172	0.0056	0.8000
11728 M	348	0.71	0.20	33.81	0.0223	0.0064	1.0619
11731 M	324	0.71	0.22	33.65	0.0240	0.0074	1.1374
11739 M	322	0.64	0.20	30.92	0.0204	0.0063	0.9855
11744 M	349	0.81	0.23	37.16	0.0206	0.0059	0.9450
11745 M	345	0.82	0.24	37.79	0.0258	0.0075	1.1889
MEAN	318	0.69	0.22	33.03	0.0206	0.0065	0.9839
S.D.	23.1	0.088	0.023	3.292	0.00307	0.00080	0.13609
N	10	10	10	10	10	10	10

NOTE: REL. % FINAL BODY WEIGHT (FBW) = (ORGAN WEIGHT/FBW) X 100; REL. % BRAIN WEIGHT (BRW) = (ORGAN WEIGHT/BRW) X 100.

APPENDIX O
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL ABSOLUTE AND RELATIVE ORGAN WEIGHT DATA

SCHEDULED EUTHANASIA - DAYS 15-18

ANIMAL NO.	FINAL BODY WEIGHT (g)	BRAIN ABS. (g)	BRAIN REL. %FBW	PITUITARY ABS. (g)	PITUITARY REL. %FBW	PITUITARY REL. %BRW	KIDNEYS ABS. (g)	KIDNEYS REL. %FBW	KIDNEYS REL. %BRW	TESTES ABS. (g)	TESTES REL. %FBW	TESTES REL. %BRW
GROUP 2: 0.01 MG/KG/DAY												
11747 M	303	2.05	0.68	0.0140	0.0046	0.6829	2.95	0.97	143.90	0.81	0.27	39.51
11751 M	296	2.03	0.69	0.0098	0.0033	0.4828	2.94	0.99	144.83	2.98	1.01	146.80
11756 M	321	2.12	0.66	0.0114	0.0036	0.5377	3.03	0.94	142.92	3.16	0.98	149.06
11757 M	355	1.90	0.54	0.0158	0.0045	0.8316	3.00	0.85	157.89	2.90	0.82	152.63
11758 M	326	2.01	0.62	0.0133	0.0041	0.6617	3.06	0.94	152.24	2.95	0.90	146.77
11759 M	327	2.13	0.65	0.0129	0.0039	0.6056	2.85	0.87	133.80	3.00	0.92	140.85
11760 M	326	2.10	0.64	0.0128	0.0039	0.6095	3.14	0.96	149.52	2.71	0.83	129.05
11762 M	264	2.06	0.78	0.0112	0.0042	0.5437	2.78	1.05	134.95	2.88	1.09	139.81
11763 M	308	2.10	0.68	0.0095	0.0031	0.4524	3.20	1.04	152.38	2.84	0.92	135.24
11764 M	350	2.05	0.59	0.0140	0.0040	0.6829	3.58	1.02	174.63	3.49	1.00	170.24
MEAN	318	2.05	0.65	0.0125	0.0039	0.6091	3.05	0.96	148.71	2.77	0.87	134.99
S.D.	26.5	0.067	0.065	0.00198	0.00048	0.11209	0.223	0.068	11.861	0.721	0.229	35.338
N	10	10	10	10	10	10	10	10	10	10	10	10

NOTE: REL. % FINAL BODY WEIGHT (FBW) = (ORGAN WEIGHT/FBW) X 100; REL. % BRAIN WEIGHT (BRW) = (ORGAN WEIGHT/BRW) X 100.

APPENDIX O
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL ABSOLUTE AND RELATIVE ORGAN WEIGHT DATA

SCHEDULED EUTHANASIA - DAYS 15-18

ANIMAL NO.	FINAL BODY WEIGHT (g)	HEART ABS. (g)	HEART REL. %FBW	HEART REL. %BRW	LUNGS ABS. (g)	LUNGS REL. %FBW	LUNGS REL. %BRW	LIVER ABS. (g)	LIVER REL. %FBW	LIVER REL. %BRW	SPLEEN ABS. (g)	SPLEEN REL. %FBW	SPLEEN REL. %BRW
GROUP 2: 0.01 MG/KG/DAY													
11747 M	303	1.15	0.38	56.10	1.43	0.47	69.76	14.30	4.72	697.56	0.57	0.19	27.80
11751 M	296	1.13	0.38	55.67	1.36	0.46	67.00	14.54	4.91	716.26	0.69	0.23	33.99
11756 M	321	1.25	0.39	58.96	1.36	0.42	64.15	14.22	4.43	670.75	0.67	0.21	31.60
11757 M	355	1.42	0.40	74.74	1.70	0.48	89.47	17.37	4.89	914.21	0.92	0.26	48.42
11758 M	326	1.10	0.34	54.73	1.53	0.47	76.12	14.89	4.57	740.80	0.67	0.21	33.33
11759 M	327	1.20	0.37	56.34	1.59	0.49	74.65	14.91	4.56	700.00	0.85	0.26	39.91
11760 M	326	1.38	0.42	65.71	1.47	0.45	70.00	16.98	5.21	808.57	0.87	0.27	41.43
11762 M	264	1.14	0.43	55.34	1.82	0.69	88.35	13.90	5.27	674.76	0.70	0.27	33.98
11763 M	308	1.26	0.41	60.00	1.30	0.42	61.90	15.37	4.99	731.90	0.77	0.25	36.67
11764 M	350	1.56	0.45	76.10	1.79	0.51	87.32	18.57	5.31	905.85	0.98	0.28	47.80
MEAN	318	1.26	0.40	61.37	1.54	0.49	74.87	15.51	4.89	756.07	0.77	0.24	37.49
S.D.	26.5	0.150	0.032	8.085	0.185	0.076	10.254	1.578	0.313	90.099	0.131	0.031	6.817
N	10	10	10	10	10	10	10	10	10	10	10	10	10

NOTE: REL. % FINAL BODY WEIGHT (FBW) = (ORGAN WEIGHT/FBW) X 100; REL. % BRAIN WEIGHT (BRW) = (ORGAN WEIGHT/BRW) X 100.

APPENDIX O
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL ABSOLUTE AND RELATIVE ORGAN WEIGHT DATA

SCHEDULED EUTHANASIA - DAYS 15-18

ANIMAL NO.	FINAL BODY WEIGHT (g)	EPIDIDYMIS ABS. (g)	EPIDIDYMIS REL. %FBW	EPIDIDYMIS REL. %BRW	THYROID/PARATHYROID ABS. (g)	THYROID/PARATHYROID REL. %FBW	THYROID/PARATHYROID REL. %BRW
GROUP 2: 0.01 MG/KG/DAY							
11747 M	303	0.41	0.14	20.00	0.0189	0.0062	0.9220
11751 M	296	0.72	0.24	35.47	0.0204	0.0069	1.0049
11756 M	321	0.73	0.23	34.43	0.0234	0.0073	1.1038
11757 M	355	0.55	0.15	28.95	0.0204	0.0057	1.0737
11758 M	326	0.69	0.21	34.33	0.0181	0.0056	0.9005
11759 M	327	0.58	0.18	27.23	0.0216	0.0066	1.0141
11760 M	326	0.69	0.21	32.86	0.0220	0.0067	1.0476
11762 M	264	0.65	0.25	31.55	0.0164	0.0062	0.7961
11763 M	308	0.59	0.19	28.10	0.0228	0.0074	1.0857
11764 M	350	0.76	0.22	37.07	0.0233	0.0067	1.1366
MEAN	318	0.64	0.20	31.00	0.0207	0.0065	1.0085
S.D.	26.5	0.106	0.037	5.070	0.00235	0.00061	0.10621
N	10	10	10	10	10	10	10

NOTE: REL. % FINAL BODY WEIGHT (FBW) = (ORGAN WEIGHT/FBW) X 100; REL. % BRAIN WEIGHT (BRW) = (ORGAN WEIGHT/BRW) X 100.

APPENDIX O
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL ABSOLUTE AND RELATIVE ORGAN WEIGHT DATA

SCHEDULED EUTHANASIA - DAYS 15-18

ANIMAL NO.	FINAL BODY WEIGHT (g)	BRAIN ABS. (g)	BRAIN REL. %FBW	PITUITARY ABS. (g)	PITUITARY REL. %FBW	PITUITARY REL. %BRW	KIDNEYS ABS. (g)	KIDNEYS REL. %FBW	KIDNEYS REL. %BRW	TESTES ABS. (g)	TESTES REL. %FBW	TESTES REL. %BRW
GROUP 3: 0.05 MG/KG/DAY												
11766 M	285	2.03	0.71	0.0117	0.0041	0.5764	2.76	0.97	135.96	2.91	1.02	143.35
11768 M	298	2.20	0.74	0.0105	0.0035	0.4773	2.87	0.96	130.45	2.89	0.97	131.36
11771 M	292	2.04	0.70	0.0101	0.0035	0.4951	2.79	0.96	136.76	3.42	1.17	167.65
11772 M	316	2.25	0.71	0.0106	0.0034	0.4711	2.99	0.95	132.89	3.01	0.95	133.78
11778 M	319	2.26	0.71	0.0110	0.0034	0.4867	3.02	0.95	133.63	2.90	0.91	128.32
11779 M	305	2.13	0.70	0.0106	0.0035	0.4977	3.15	1.03	147.89	3.21	1.05	150.70
11784 M	344	1.97	0.57	0.0131	0.0038	0.6650	3.21	0.93	162.94	2.90	0.84	147.21
11786 M	263	1.98	0.75	0.0090	0.0034	0.4545	2.80	1.06	141.41	2.67	1.02	134.85
11789 M	275	2.05	0.75	0.0111	0.0040	0.5415	2.86	1.04	139.51	2.73	0.99	133.17
11793 M	343	2.13	0.62	0.0195	0.0057	0.9155	3.31	0.97	155.40	3.01	0.88	141.31
MEAN	304	2.10	0.70	0.0117	0.0038	0.5581	2.98	0.98	141.69	2.97	0.98	141.17
S.D.	27.0	0.106	0.057	0.00293	0.00070	0.14036	0.193	0.046	10.586	0.219	0.094	11.800
N	10	10	10	10	10	10	10	10	10	10	10	10

NOTE: REL. % FINAL BODY WEIGHT (FBW) = (ORGAN WEIGHT/FBW) X 100; REL. % BRAIN WEIGHT (BRW) = (ORGAN WEIGHT/BRW) X 100.

APPENDIX O
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL ABSOLUTE AND RELATIVE ORGAN WEIGHT DATA

SCHEDULED EUTHANASIA - DAYS 15-18

ANIMAL NO.	FINAL BODY WEIGHT (g)	HEART ABS. (g)	HEART REL. %FBW	HEART REL. %BRW	LUNGS ABS. (g)	LUNGS REL. %FBW	LUNGS REL. %BRW	LIVER ABS. (g)	LIVER REL. %FBW	LIVER REL. %BRW	SPLEEN ABS. (g)	SPLEEN REL. %FBW	SPLEEN REL. %BRW
GROUP 3: 0.05 MG/KG/DAY													
11766 M	285	1.13	0.40	55.67	1.38	0.48	67.98	11.89	4.17	585.71	0.68	0.24	33.50
11768 M	298	1.17	0.39	53.18	1.34	0.45	60.91	13.83	4.64	628.64	0.70	0.23	31.82
11771 M	292	1.24	0.42	60.78	1.42	0.49	69.61	12.65	4.33	620.10	0.68	0.23	33.33
11772 M	316	1.27	0.40	56.44	2.06	0.65	91.56	15.26	4.83	678.22	0.74	0.23	32.89
11778 M	319	1.34	0.42	59.29	1.43	0.45	63.27	15.34	4.81	678.76	0.74	0.23	32.74
11779 M	305	1.17	0.38	54.93	1.33	0.44	62.44	14.58	4.78	684.51	0.72	0.24	33.80
11784 M	344	1.36	0.40	69.04	1.47	0.43	74.62	16.25	4.72	824.87	0.63	0.18	31.98
11786 M	263	1.16	0.44	58.59	1.34	0.51	67.68	13.51	5.14	682.32	0.59	0.22	29.80
11789 M	275	1.11	0.40	54.15	1.37	0.50	66.83	13.02	4.73	635.12	0.73	0.27	35.61
11793 M	343	1.47	0.43	69.01	1.63	0.48	76.53	15.58	4.54	731.46	0.98	0.29	46.01
MEAN	304	1.24	0.41	59.11	1.48	0.49	70.14	14.19	4.67	674.97	0.72	0.24	34.15
S.D.	27.0	0.117	0.019	5.734	0.223	0.064	9.025	1.431	0.271	67.118	0.104	0.026	4.430
N	10	10	10	10	10	10	10	10	10	10	10	10	10

NOTE: REL. % FINAL BODY WEIGHT (FBW) = (ORGAN WEIGHT/FBW) X 100; REL. % BRAIN WEIGHT (BRW) = (ORGAN WEIGHT/BRW) X 100.

APPENDIX O
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL ABSOLUTE AND RELATIVE ORGAN WEIGHT DATA

SCHEDULED EUTHANASIA - DAYS 15-18

ANIMAL NO.	FINAL BODY WEIGHT (g)	EPIDIDYMIS ABS. (g)	EPIDIDYMIS REL. %FBW	EPIDIDYMIS REL. %BRW	THYROID/PARATHYROID ABS. (g)	THYROID/PARATHYROID REL. %FBW	THYROID/PARATHYROID REL. %BRW
GROUP 3: 0.05 MG/KG/DAY							
11766 M	285	0.65	0.23	32.02	0.0206	0.0072	1.0148
11768 M	298	0.65	0.22	29.55	0.0192	0.0064	0.8727
11771 M	292	0.87	0.30	42.65	0.0265	0.0091	1.2990
11772 M	316	0.91	0.29	40.44	0.0161	0.0051	0.7156
11778 M	319	0.67	0.21	29.65	0.0180	0.0056	0.7965
11779 M	305	0.68	0.22	31.92	0.0240	0.0079	1.1268
11784 M	344	0.62	0.18	31.47	0.0213	0.0062	1.0812
11786 M	263	0.75	0.29	37.88	0.0134	0.0051	0.6768
11789 M	275	0.64	0.23	31.22	0.0159	0.0058	0.7756
11793 M	343	0.75	0.22	35.21	0.0242	0.0071	1.1362
MEAN	304	0.72	0.24	34.20	0.0199	0.0065	0.9495
S.D.	27.0	0.100	0.039	4.638	0.00419	0.00127	0.21048
N	10	10	10	10	10	10	10

NOTE: REL. % FINAL BODY WEIGHT (FBW) = (ORGAN WEIGHT/FBW) X 100; REL. % BRAIN WEIGHT (BRW) = (ORGAN WEIGHT/BRW) X 100.

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APPENDIX O
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL ABSOLUTE AND RELATIVE ORGAN WEIGHT DATA

SCHEDULED EUTHANASIA - DAYS 15-18

ANIMAL NO.	FINAL BODY WEIGHT (g)	BRAIN ABS. (g)	BRAIN REL. %FBW	PITUITARY ABS. (g)	PITUITARY REL. %FBW	PITUITARY REL. %BRW	KIDNEYS ABS. (g)	KIDNEYS REL. %FBW	KIDNEYS REL. %BRW	TESTES ABS. (g)	TESTES REL. %FBW	TESTES REL. %BRW
GROUP 4: 0.2 MG/KG/DAY												
11796 M	311	2.09	0.67	0.0129	0.0041	0.6172	2.98	0.96	142.58	2.74	0.88	131.10
11798 M	313	2.04	0.65	0.0114	0.0036	0.5588	3.01	0.96	147.55	2.67	0.85	130.88
11801 M	316	2.22	0.70	0.0135	0.0043	0.6081	3.10	0.98	139.64	2.59	0.82	116.67
11802 M	343	2.12	0.62	0.0113	0.0033	0.5330	3.12	0.91	147.17	3.11	0.91	146.70
11803 M	304	1.98	0.65	0.0121	0.0040	0.6111	2.72	0.89	137.37	3.01	0.99	152.02
11804 M	327	2.08	0.64	0.0129	0.0039	0.6202	3.00	0.92	144.23	2.79	0.85	134.13
11807 M	318	2.08	0.65	0.0118	0.0037	0.5673	4.25	1.34	204.33	2.84	0.89	136.54
11808 M	338	2.06	0.61	0.0184	0.0054	0.8932	3.19	0.94	154.85	2.59	0.77	125.73
11810 M	324	2.20	0.68	0.0139	0.0043	0.6318	3.40	1.05	154.55	2.58	0.80	117.27
11813 M	339	2.04	0.60	0.0108	0.0032	0.5294	3.24	0.96	158.82	2.86	0.84	140.20
MEAN	323	2.09	0.65	0.0129	0.0040	0.6170	3.20	0.99	153.11	2.78	0.86	133.12
S.D.	13.2	0.073	0.032	0.00218	0.00064	0.10393	0.410	0.129	19.281	0.182	0.063	11.498
N	10	10	10	10	10	10	10	10	10	10	10	10

NOTE: REL. % FINAL BODY WEIGHT (FBW) = (ORGAN WEIGHT/FBW) X 100; REL. % BRAIN WEIGHT (BRW) = (ORGAN WEIGHT/BRW) X 100.

APPENDIX O
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL ABSOLUTE AND RELATIVE ORGAN WEIGHT DATA

SCHEDULED EUTHANASIA - DAYS 15-18

ANIMAL NO.	FINAL BODY WEIGHT (g)	HEART ABS. (g)	HEART REL. %FBW	HEART REL. %BRW	LUNGS ABS. (g)	LUNGS REL. %FBW	LUNGS REL. %BRW	LIVER ABS. (g)	LIVER REL. %FBW	LIVER REL. %BRW	SPLEEN ABS. (g)	SPLEEN REL. %FBW	SPLEEN REL. %BRW
GROUP 4: 0.2 MG/KG/DAY													
11796 M	311	1.29	0.41	61.72	1.39	0.45	66.51	12.30	3.95	588.52	0.58	0.19	27.75
11798 M	313	1.16	0.37	56.86	1.73	0.55	84.80	15.33	4.90	751.47	0.67	0.21	32.84
11801 M	316	1.28	0.41	57.66	1.54	0.49	69.37	14.88	4.71	670.27	0.78	0.25	35.14
11802 M	343	1.43	0.42	67.45	1.60	0.47	75.47	17.42	5.08	821.70	0.81	0.24	38.21
11803 M	304	1.35	0.44	68.18	1.58	0.52	79.80	13.77	4.53	695.45	0.66	0.22	33.33
11804 M	327	1.21	0.37	58.17	1.41	0.43	67.79	14.51	4.44	697.60	0.56	0.17	26.92
11807 M	318	1.28	0.40	61.54	1.76	0.55	84.62	18.60	5.85	894.23	0.76	0.24	36.54
11808 M	338	1.79	0.53	86.89	1.83	0.54	88.83	17.09	5.06	829.61	0.81	0.24	39.32
11810 M	324	1.41	0.44	64.09	1.67	0.52	75.91	16.86	5.20	766.36	0.77	0.24	35.00
11813 M	339	1.32	0.39	64.71	2.20	0.65	107.84	14.79	4.36	725.00	0.73	0.22	35.78
MEAN	323	1.35	0.42	64.73	1.67	0.52	80.09	15.56	4.81	744.02	0.71	0.22	34.08
S.D.	13.2	0.174	0.046	8.725	0.234	0.064	12.379	1.908	0.531	88.803	0.091	0.025	4.066
N	10	10	10	10	10	10	10	10	10	10	10	10	10

NOTE: REL. % FINAL BODY WEIGHT (FBW) = (ORGAN WEIGHT/FBW) X 100; REL. % BRAIN WEIGHT (BRW) = (ORGAN WEIGHT/BRW) X 100.

APPENDIX O
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL ABSOLUTE AND RELATIVE ORGAN WEIGHT DATA

SCHEDULED EUTHANASIA - DAYS 15-18

ANIMAL NO.	FINAL BODY WEIGHT (g)	EPIDIDYMIS ABS. (g)	EPIDIDYMIS REL. %FBW	EPIDIDYMIS REL. %BRW	THYROID/PARATHYROID ABS. (g)	THYROID/PARATHYROID REL. %FBW	THYROID/PARATHYROID REL. %BRW
GROUP 4: 0.2 MG/KG/DAY							
11796 M	311	0.63	0.20	30.14	0.0183	0.0059	0.8756
11798 M	313	0.72	0.23	35.29	0.0263	0.0084	1.2892
11801 M	316	0.77	0.24	34.68	0.0159	0.0050	0.7162
11802 M	343	0.69	0.20	32.55	0.0209	0.0061	0.9858
11803 M	304	0.67	0.22	33.84	0.0259	0.0085	1.3081
11804 M	327	0.71	0.22	34.13	0.0187	0.0057	0.8990
11807 M	318	0.65	0.20	31.25	0.0210	0.0066	1.0096
11808 M	338	0.55	0.16	26.70	0.0228	0.0067	1.1068
11810 M	324	0.64	0.20	29.09	0.0261	0.0081	1.1864
11813 M	339	0.71	0.21	34.80	0.0241	0.0071	1.1814
MEAN	323	0.67	0.21	32.25	0.0220	0.0068	1.0558
S.D.	13.2	0.061	0.022	2.870	0.00364	0.00120	0.19234
N	10	10	10	10	10	10	10

NOTE: REL. % FINAL BODY WEIGHT (FBW) = (ORGAN WEIGHT/FBW) X 100; REL. % BRAIN WEIGHT (BRW) = (ORGAN WEIGHT/BRW) X 100.

APPENDIX O
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL ABSOLUTE AND RELATIVE ORGAN WEIGHT DATA

SCHEDULED EUTHANASIA - DAYS 15-18

ANIMAL NO.	FINAL BODY WEIGHT (g)	BRAIN ABS. (g)	BRAIN REL. %FBW	PITUITARY ABS. (g)	PITUITARY REL. %FBW	PITUITARY REL. %BRW	KIDNEYS ABS. (g)	KIDNEYS REL. %FBW	KIDNEYS REL. %BRW	TESTES ABS. (g)	TESTES REL. %FBW	TESTES REL. %BRW
GROUP 5: 1.0 MG/KG/DAY												
11816 M	275	2.09	0.76	0.0091	0.0033	0.4354	2.86	1.04	136.84	2.46	0.89	117.70
11818 M	328	2.12	0.65	0.0108	0.0033	0.5094	2.94	0.90	138.68	2.87	0.88	135.38
11819 M	293	2.18	0.74	0.0107	0.0037	0.4908	2.73	0.93	125.23	3.00	1.02	137.61
11820 M	317	2.07	0.65	0.0089	0.0028	0.4300	2.37	0.75	114.49	2.53	0.80	122.22
11825 M	323	2.18	0.67	0.0114	0.0035	0.5229	2.79	0.86	127.98	3.06	0.95	140.37
11831 M	345	2.18	0.63	0.0119	0.0034	0.5459	3.55	1.03	162.84	3.03	0.88	138.99
11835 M	362	2.18	0.60	0.0141	0.0039	0.6468	3.28	0.91	150.46	3.23	0.89	148.17
11836 M	295	1.93	0.65	0.0133	0.0045	0.6891	2.84	0.96	147.15	2.81	0.95	145.60
11839 M	295	2.12	0.72	0.0133	0.0045	0.6274	3.41	1.16	160.85	3.06	1.04	144.34
11844 M	322	2.03	0.63	0.0139	0.0043	0.6847	3.22	1.00	158.62	2.86	0.89	140.89
MEAN	316	2.11	0.67	0.0117	0.0037	0.5582	3.00	0.95	142.31	2.89	0.92	137.13
S.D.	26.4	0.082	0.052	0.00189	0.00057	0.09754	0.359	0.112	16.449	0.242	0.073	9.868
N	10	10	10	10	10	10	10	10	10	10	10	10

NOTE: REL. % FINAL BODY WEIGHT (FBW) = (ORGAN WEIGHT/FBW) X 100; REL. % BRAIN WEIGHT (BRW) = (ORGAN WEIGHT/BRW) X 100.

APPENDIX O
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL ABSOLUTE AND RELATIVE ORGAN WEIGHT DATA

SCHEDULED EUTHANASIA - DAYS 15-18

ANIMAL NO.	FINAL BODY WEIGHT (g)	HEART ABS. (g)	HEART REL. %FBW	HEART REL. %BRW	LUNGS ABS. (g)	LUNGS REL. %FBW	LUNGS REL. %BRW	LIVER ABS. (g)	LIVER REL. %FBW	LIVER REL. %BRW	SPLEEN ABS. (g)	SPLEEN REL. %FBW	SPLEEN REL. %BRW
GROUP 5: 1.0 MG/KG/DAY													
11816 M	275	1.06	0.39	50.72	1.42	0.52	67.94	13.02	4.73	622.97	0.71	0.26	33.97
11818 M	328	1.38	0.42	65.09	1.80	0.55	84.91	15.11	4.61	712.74	0.90	0.27	42.45
11819 M	293	1.36	0.46	62.39	1.52	0.52	69.72	13.17	4.49	604.13	0.81	0.28	37.16
11820 M	317	1.27	0.40	61.35	1.42	0.45	68.60	15.96	5.03	771.01	0.73	0.23	35.27
11825 M	323	1.23	0.38	56.42	1.53	0.47	70.18	13.97	4.33	640.83	0.79	0.24	36.24
11831 M	345	1.27	0.37	58.26	1.70	0.49	77.98	16.56	4.80	759.63	0.88	0.26	40.37
11835 M	362	1.42	0.39	65.14	1.63	0.45	74.77	18.75	5.18	860.09	0.77	0.21	35.32
11836 M	295	1.16	0.39	60.10	1.41	0.48	73.06	13.52	4.58	700.52	0.71	0.24	36.79
11839 M	295	1.16	0.39	54.72	1.55	0.53	73.11	12.47	4.23	588.21	0.66	0.22	31.13
11844 M	322	1.28	0.40	63.05	1.66	0.52	81.77	14.68	4.56	723.15	0.89	0.28	43.84
MEAN	316	1.26	0.40	59.72	1.56	0.50	74.21	14.72	4.65	698.33	0.78	0.25	37.25
S.D.	26.4	0.111	0.026	4.695	0.132	0.034	5.733	1.934	0.295	85.650	0.084	0.023	3.906
N	10	10	10	10	10	10	10	10	10	10	10	10	10

NOTE: REL. % FINAL BODY WEIGHT (FBW) = (ORGAN WEIGHT/FBW) X 100; REL. % BRAIN WEIGHT (BRW) = (ORGAN WEIGHT/BRW) X 100.

APPENDIX O
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL ABSOLUTE AND RELATIVE ORGAN WEIGHT DATA

SCHEDULED EUTHANASIA - DAYS 15-18

ANIMAL NO.	FINAL BODY WEIGHT (g)	EPIDIDYMIS ABS. (g)	EPIDIDYMIS REL. %FBW	EPIDIDYMIS REL. %BRW	THYROID/PARATHYROID ABS. (g)	THYROID/PARATHYROID REL. %FBW	THYROID/PARATHYROID REL. %BRW
GROUP 5: 1.0 MG/KG/DAY							
11816 M	275	0.61	0.22	29.19	0.0184	0.0067	0.8804
11818 M	328	0.69	0.21	32.55	0.0218	0.0066	1.0283
11819 M	293	0.61	0.21	27.98	0.0167	0.0057	0.7661
11820 M	317	0.60	0.19	28.99	0.0212	0.0067	1.0242
11825 M	323	0.66	0.20	30.28	0.0174	0.0054	0.7982
11831 M	345	0.63	0.18	28.90	0.0302	0.0088	1.3853
11835 M	362	0.75	0.21	34.40	0.0214	0.0059	0.9817
11836 M	295	0.72	0.24	37.31	0.0217	0.0074	1.1244
11839 M	295	0.72	0.24	33.96	0.0193	0.0065	0.9104
11844 M	322	0.64	0.20	31.53	0.0183	0.0057	0.9015
MEAN	316	0.66	0.21	31.51	0.0206	0.0065	0.9800
S.D.	26.4	0.054	0.021	3.011	0.00385	0.00099	0.17925
N	10	10	10	10	10	10	10

NOTE: REL. % FINAL BODY WEIGHT (FBW) = (ORGAN WEIGHT/FBW) X 100; REL. % BRAIN WEIGHT (BRW) = (ORGAN WEIGHT/BRW) X 100.

APPENDIX O
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL ABSOLUTE AND RELATIVE ORGAN WEIGHT DATA

SCHEDULED EUTHANASIA - DAYS 15-18

ANIMAL NO.	FINAL BODY WEIGHT (g)	BRAIN ABS. (g)	BRAIN REL. %FBW	PITUITARY ABS. (g)	PITUITARY REL. %FBW	PITUITARY REL. %BRW	KIDNEYS ABS. (g)	KIDNEYS REL. %FBW	KIDNEYS REL. %BRW	TESTES ABS. (g)	TESTES REL. %FBW	TESTES REL. %BRW
GROUP 6: 10.0 MG/KG/DAY												
11846 M	293	2.12	0.72	0.0110	0.0038	0.5189	2.92	1.00	137.74	2.77	0.95	130.66
11847 M	322	2.15	0.67	0.0123	0.0038	0.5721	2.99	0.93	139.07	2.92	0.91	135.81
11848 M	299	2.18	0.73	0.0109	0.0036	0.5000	2.97	0.99	136.24	2.68	0.90	122.94
11853 M	342	2.16	0.63	0.0128	0.0037	0.5926	3.08	0.90	142.59	3.17	0.93	146.76
11857 M	320	2.16	0.68	0.0143	0.0045	0.6620	3.30	1.03	152.78	3.18	0.99	147.22
11858 M	330	2.07	0.63	0.0117	0.0035	0.5652	2.90	0.88	140.10	2.65	0.80	128.02
11859 M	338	2.13	0.63	0.0133	0.0039	0.6244	3.07	0.91	144.13	3.02	0.89	141.78
11861 M	325	2.18	0.67	0.0115	0.0035	0.5275	2.95	0.91	135.32	2.97	0.91	136.24
11863 M	315	2.12	0.67	0.0102	0.0032	0.4811	2.83	0.90	133.49	2.90	0.92	136.79
11870 M	306	1.92	0.63	0.0111	0.0036	0.5781	3.10	1.01	161.46	3.02	0.99	157.29
MEAN	319	2.12	0.67	0.0119	0.0037	0.5622	3.01	0.95	142.29	2.93	0.92	138.35
S.D.	16.0	0.077	0.038	0.00126	0.00032	0.05641	0.133	0.056	8.688	0.184	0.053	10.202
N	10	10	10	10	10	10	10	10	10	10	10	10

NOTE: REL. % FINAL BODY WEIGHT (FBW) = (ORGAN WEIGHT/FBW) X 100; REL. % BRAIN WEIGHT (BRW) = (ORGAN WEIGHT/BRW) X 100.

APPENDIX O
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL ABSOLUTE AND RELATIVE ORGAN WEIGHT DATA

SCHEDULED EUTHANASIA - DAYS 15-18

ANIMAL NO.	FINAL BODY WEIGHT (g)	HEART ABS. (g)	HEART REL. %FBW	HEART REL. %BRW	LUNGS ABS. (g)	LUNGS REL. %FBW	LUNGS REL. %BRW	LIVER ABS. (g)	LIVER REL. %FBW	LIVER REL. %BRW	SPLEEN ABS. (g)	SPLEEN REL. %FBW	SPLEEN REL. %BRW
GROUP 6: 10.0 MG/KG/DAY													
11846 M	293	1.26	0.43	59.43	1.59	0.54	75.00	15.82	5.40	746.23	0.77	0.26	36.32
11847 M	322	1.26	0.39	58.60	1.49	0.46	69.30	15.91	4.94	740.00	0.81	0.25	37.67
11848 M	299	1.14	0.38	52.29	1.36	0.45	62.39	13.72	4.59	629.36	0.61	0.20	27.98
11853 M	342	1.26	0.37	58.33	1.44	0.42	66.67	15.74	4.60	728.70	0.72	0.21	33.33
11857 M	320	1.32	0.41	61.11	1.64	0.51	75.93	13.17	4.12	609.72	0.68	0.21	31.48
11858 M	330	1.23	0.37	59.42	1.50	0.45	72.46	16.09	4.88	777.29	0.78	0.24	37.68
11859 M	338	1.29	0.38	60.56	2.06	0.61	96.71	15.59	4.61	731.92	0.76	0.22	35.68
11861 M	325	1.23	0.38	56.42	1.36	0.42	62.39	14.86	4.57	681.65	0.81	0.25	37.16
11863 M	315	1.17	0.37	55.19	1.24	0.39	58.49	13.85	4.40	653.30	0.70	0.22	33.02
11870 M	306	1.34	0.44	69.79	1.91	0.62	99.48	13.84	4.52	720.83	0.66	0.22	34.38
MEAN	319	1.25	0.39	59.12	1.56	0.49	73.88	14.86	4.66	701.90	0.73	0.23	34.47
S.D.	16.0	0.062	0.025	4.599	0.255	0.080	13.977	1.109	0.346	55.389	0.067	0.020	3.111
N	10	10	10	10	10	10	10	10	10	10	10	10	10

NOTE: REL. % FINAL BODY WEIGHT (FBW) = (ORGAN WEIGHT/FBW) X 100; REL. % BRAIN WEIGHT (BRW) = (ORGAN WEIGHT/BRW) X 100.

APPENDIX O
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL ABSOLUTE AND RELATIVE ORGAN WEIGHT DATA

SCHEDULED EUTHANASIA - DAYS 15-18

ANIMAL NO.	FINAL BODY WEIGHT (g)	EPIDIDYMIS ABS. (g)	EPIDIDYMIS REL. %FBW	EPIDIDYMIS REL. %BRW	THYROID/PARATHYROID ABS. (g)	THYROID/PARATHYROID REL. %FBW	THYROID/PARATHYROID REL. %BRW
GROUP 6: 10.0 MG/KG/DAY							
11846 M	293	0.70	0.24	33.02	0.0271	0.0092	1.2783
11847 M	322	0.76	0.24	35.35	0.0241	0.0075	1.1209
11848 M	299	0.62	0.21	28.44	0.0269	0.0090	1.2339
11853 M	342	0.62	0.18	28.70	0.0310	0.0091	1.4352
11857 M	320	0.82	0.26	37.96	0.0261	0.0082	1.2083
11858 M	330	0.61	0.18	29.47	0.0225	0.0068	1.0870
11859 M	338	0.62	0.18	29.11	0.0234	0.0069	1.0986
11861 M	325	0.60	0.18	27.52	0.0214	0.0066	0.9817
11863 M	315	0.72	0.23	33.96	0.0250	0.0079	1.1792
11870 M	306	0.68	0.22	35.42	0.0280	0.0092	1.4583
MEAN	319	0.68	0.21	31.90	0.0256	0.0080	1.2081
S.D.	16.0	0.074	0.028	3.675	0.00286	0.00105	0.15135
N	10	10	10	10	10	10	10

NOTE: REL. % FINAL BODY WEIGHT (FBW) = (ORGAN WEIGHT/FBW) X 100; REL. % BRAIN WEIGHT (BRW) = (ORGAN WEIGHT/BRW) X 100.

APPENDIX O
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL ABSOLUTE AND RELATIVE ORGAN WEIGHT DATA

SCHEDULED EUTHANASIA - DAYS 92-95

ANIMAL NO.	FINAL BODY WEIGHT (g)	BRAIN ABS. (g)	BRAIN REL. %FBW	PITUITARY ABS. (g)	PITUITARY REL. %FBW	PITUITARY REL. %BRW	KIDNEYS ABS. (g)	KIDNEYS REL. %FBW	KIDNEYS REL. %BRW	TESTES ABS. (g)	TESTES REL. %FBW	TESTES REL. %BRW
GROUP 1: 0 MG/KG/DAY												
11721 M	561	2.36	0.42	0.0114	0.0020	0.4831	4.22	0.75	178.81	3.50	0.62	148.31
11724 M	501	2.15	0.43	0.0122	0.0024	0.5674	3.67	0.73	170.70	4.09	0.82	190.23
11729 M	555	2.19	0.39	0.0126	0.0023	0.5753	3.80	0.68	173.52	3.38	0.61	154.34
11732 M	503	2.33	0.46	0.0149	0.0030	0.6395	3.56	0.71	152.79	4.27	0.85	183.26
11734 M	593	2.51	0.42	0.0136	0.0023	0.5418	4.19	0.71	166.93	3.69	0.62	147.01
11735 M	597	2.39	0.40	0.0164	0.0027	0.6862	4.23	0.71	176.99	3.47	0.58	145.19
11736 M	598	2.45	0.41	0.0124	0.0021	0.5061	4.16	0.70	169.80	3.56	0.60	145.31
11738 M	609	2.18	0.36	0.0151	0.0025	0.6927	4.24	0.70	194.50	3.71	0.61	170.18
11741 M	581	2.30	0.40	0.0156	0.0027	0.6783	4.51	0.78	196.09	3.86	0.66	167.83
11742 M	575	2.45	0.43	0.0140	0.0024	0.5714	3.80	0.66	155.10	3.79	0.66	154.69
MEAN	567	2.33	0.41	0.0138	0.0024	0.5942	4.04	0.71	173.52	3.73	0.66	160.63
S.D.	38.3	0.125	0.028	0.00166	0.00029	0.07581	0.307	0.034	14.234	0.282	0.093	16.388
N	10	10	10	10	10	10	10	10	10	10	10	10

NOTE: REL. % FINAL BODY WEIGHT (FBW) = (ORGAN WEIGHT/FBW) X 100; REL. % BRAIN WEIGHT (BRW) = (ORGAN WEIGHT/BRW) X 100.

APPENDIX O
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL ABSOLUTE AND RELATIVE ORGAN WEIGHT DATA

SCHEDULED EUTHANASIA - DAYS 92-95

ANIMAL NO.	FINAL BODY WEIGHT (g)	HEART ABS. (g)	HEART REL. %FBW	HEART REL. %BRW	LUNGS ABS. (g)	LUNGS REL. %FBW	LUNGS REL. %BRW	LIVER ABS. (g)	LIVER REL. %FBW	LIVER REL. %BRW	SPLEEN ABS. (g)	SPLEEN REL. %FBW	SPLEEN REL. %BRW
GROUP 1: 0 MG/KG/DAY													
11721 M	561	1.60	0.29	67.80	1.75	0.31	74.15	21.30	3.80	902.54	0.73	0.13	30.93
11724 M	501	1.53	0.31	71.16	1.68	0.34	78.14	16.59	3.31	771.63	0.72	0.14	33.49
11729 M	555	1.61	0.29	73.52	1.68	0.30	76.71	18.92	3.41	863.93	0.75	0.14	34.25
11732 M	503	1.52	0.30	65.24	2.02	0.40	86.70	18.15	3.61	778.97	0.64	0.13	27.47
11734 M	593	1.85	0.31	73.71	2.12	0.36	84.46	20.83	3.51	829.88	0.95	0.16	37.85
11735 M	597	1.73	0.29	72.38	1.74	0.29	72.80	21.86	3.66	914.64	0.93	0.16	38.91
11736 M	598	2.03	0.34	82.86	1.87	0.31	76.33	22.78	3.81	929.80	0.87	0.15	35.51
11738 M	609	1.90	0.31	87.16	1.82	0.30	83.49	19.33	3.17	886.70	1.05	0.17	48.17
11741 M	581	1.80	0.31	78.26	1.90	0.33	82.61	24.33	4.19	1057.83	0.98	0.17	42.61
11742 M	575	1.73	0.30	70.61	2.11	0.37	86.12	18.30	3.18	746.94	0.97	0.17	39.59
MEAN	567	1.73	0.30	74.27	1.87	0.33	80.15	20.24	3.57	868.29	0.86	0.15	36.88
S.D.	38.3	0.168	0.016	6.722	0.166	0.035	5.107	2.387	0.317	92.442	0.139	0.017	5.934
N	10	10	10	10	10	10	10	10	10	10	10	10	10

NOTE: REL. % FINAL BODY WEIGHT (FBW) = (ORGAN WEIGHT/FBW) X 100; REL. % BRAIN WEIGHT (BRW) = (ORGAN WEIGHT/BRW) X 100.

APPENDIX O
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL ABSOLUTE AND RELATIVE ORGAN WEIGHT DATA

SCHEDULED EUTHANASIA - DAYS 92-95

ANIMAL NO.	FINAL BODY WEIGHT (g)	EPIDIDYMIS ABS. (g)	EPIDIDYMIS REL. %FBW	EPIDIDYMIS REL. %BRW	THYROID/PARATHYROID ABS. (g)	THYROID/PARATHYROID REL. %FBW	THYROID/PARATHYROID REL. %BRW
GROUP 1: 0 MG/KG/DAY							
11721 M	561	1.39	0.25	58.90	0.0280	0.0050	1.1864
11724 M	501	1.49	0.30	69.30	0.0343	0.0068	1.5953
11729 M	555	1.47	0.26	67.12	0.0262	0.0047	1.1963
11732 M	503	1.81	0.36	77.68	0.0305	0.0061	1.3090
11734 M	593	1.51	0.25	60.16	0.0357	0.0060	1.4223
11735 M	597	1.57	0.26	65.69	0.0235	0.0039	0.9833
11736 M	598	1.50	0.25	61.22	0.0306	0.0051	1.2490
11738 M	609	1.42	0.23	65.14	0.0228	0.0037	1.0459
11741 M	581	1.53	0.26	66.52	0.0353	0.0061	1.5348
11742 M	575	1.51	0.26	61.63	0.0274	0.0048	1.1184
MEAN	567	1.52	0.27	65.34	0.0294	0.0052	1.2641
S.D.	38.3	0.114	0.036	5.495	0.00466	0.00100	0.20238
N	10	10	10	10	10	10	10

NOTE: REL. % FINAL BODY WEIGHT (FBW) = (ORGAN WEIGHT/FBW) X 100; REL. % BRAIN WEIGHT (BRW) = (ORGAN WEIGHT/BRW) X 100.

APPENDIX O
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL ABSOLUTE AND RELATIVE ORGAN WEIGHT DATA

SCHEDULED EUTHANASIA - DAYS 92-95

ANIMAL NO.	FINAL BODY WEIGHT (g)	BRAIN ABS. (g)	BRAIN REL. %FBW	PITUITARY ABS. (g)	PITUITARY REL. %FBW	PITUITARY REL. %BRW	KIDNEYS ABS. (g)	KIDNEYS REL. %FBW	KIDNEYS REL. %BRW	TESTES ABS. (g)	TESTES REL. %FBW	TESTES REL. %BRW
GROUP 2: 0.01 MG/KG/DAY												
11746 M	516	2.28	0.44	0.0112	0.0022	0.4912	3.74	0.72	164.04	3.47	0.67	152.19
11748 M	469	2.22	0.47	0.0135	0.0029	0.6081	2.62	0.56	118.02	2.94	0.63	132.43
11749 M	499	2.16	0.43	0.0118	0.0024	0.5463	4.12	0.83	190.74	3.51	0.70	162.50
11750 M	457	2.12	0.46	0.0112	0.0025	0.5283	3.32	0.73	156.60	2.75	0.60	129.72
11752 M	520	2.35	0.45	0.0141	0.0027	0.6000	4.64	0.89	197.45	3.46	0.67	147.23
11753 M	575	2.18	0.38	0.0121	0.0021	0.5550	4.18	0.73	191.74	3.55	0.62	162.84
11754 M	481	2.14	0.44	0.0129	0.0027	0.6028	4.13	0.86	192.99	3.52	0.73	164.49
11755 M	598	2.30	0.38	0.0122	0.0020	0.5304	4.55	0.76	197.83	3.62	0.61	157.39
11761 M	553	2.29	0.41	0.0132	0.0024	0.5764	3.98	0.72	173.80	3.43	0.62	149.78
11765 M	598	2.16	0.36	0.0157	0.0026	0.7269	4.40	0.74	203.70	3.30	0.55	152.78
MEAN	527	2.22	0.42	0.0128	0.0024	0.5765	3.97	0.75	178.69	3.36	0.64	151.14
S.D.	52.1	0.080	0.038	0.00140	0.00028	0.06493	0.611	0.093	26.397	0.285	0.053	12.078
N	10	10	10	10	10	10	10	10	10	10	10	10

NOTE: REL. % FINAL BODY WEIGHT (FBW) = (ORGAN WEIGHT/FBW) X 100; REL. % BRAIN WEIGHT (BRW) = (ORGAN WEIGHT/BRW) X 100.
GROUP 2 MALES WERE EUTHANIZED ON DAYS 15-18 OR DAYS 92-95.

APPENDIX O
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL ABSOLUTE AND RELATIVE ORGAN WEIGHT DATA

SCHEDULED EUTHANASIA - DAYS 92-95

ANIMAL NO.	FINAL BODY WEIGHT (g)	HEART ABS. (g)	HEART REL. %FBW	HEART REL. %BRW	LUNGS ABS. (g)	LUNGS REL. %FBW	LUNGS REL. %BRW	LIVER ABS. (g)	LIVER REL. %FBW	LIVER REL. %BRW	SPLEEN ABS. (g)	SPLEEN REL. %FBW	SPLEEN REL. %BRW
GROUP 2: 0.01 MG/KG/DAY													
11746 M	516	1.70	0.33	74.56	2.09	0.41	91.67	19.92	3.86	873.68	0.85	0.16	37.28
11748 M	469	1.30	0.28	58.56	1.42	0.30	63.96	15.11	3.22	680.63	0.73	0.16	32.88
11749 M	499	1.65	0.33	76.39	1.56	0.31	72.22	18.47	3.70	855.09	0.78	0.16	36.11
11750 M	457	1.45	0.32	68.40	1.93	0.42	91.04	15.98	3.50	753.77	0.65	0.14	30.66
11752 M	520	1.97	0.38	83.83	1.86	0.36	79.15	19.55	3.76	831.91	0.84	0.16	35.74
11753 M	575	1.66	0.29	76.15	2.28	0.40	104.59	25.67	4.46	1177.52	0.79	0.14	36.24
11754 M	481	1.67	0.35	78.04	1.85	0.38	86.45	18.82	3.91	879.44	0.66	0.14	30.84
11755 M	598	1.75	0.29	76.09	1.71	0.29	74.35	18.59	3.11	808.26	0.87	0.15	37.83
11761 M	553	1.73	0.31	75.55	1.71	0.31	74.67	18.93	3.42	826.64	0.76	0.14	33.19
11765 M	598	1.76	0.29	81.48	2.28	0.38	105.56	20.13	3.37	931.94	1.13	0.19	52.31
MEAN	527	1.66	0.32	74.90	1.87	0.36	84.37	19.12	3.63	861.89	0.81	0.15	36.31
S.D.	52.1	0.181	0.031	7.055	0.286	0.049	13.926	2.819	0.397	131.058	0.136	0.016	6.174
N	10	10	10	10	10	10	10	10	10	10	10	10	10

NOTE: REL. % FINAL BODY WEIGHT (FBW) = (ORGAN WEIGHT/FBW) X 100; REL. % BRAIN WEIGHT (BRW) = (ORGAN WEIGHT/BRW) X 100.
GROUP 2 MALES WERE EUTHANIZED ON DAYS 15-18 OR DAYS 92-95.

APPENDIX O
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL ABSOLUTE AND RELATIVE ORGAN WEIGHT DATA

SCHEDULED EUTHANASIA - DAYS 92-95

ANIMAL NO.	FINAL BODY WEIGHT (g)	EPIDIDYMIS ABS. (g)	EPIDIDYMIS REL. %FBW	EPIDIDYMIS REL. %BRW	THYROID/PARATHYROID ABS. (g)	THYROID/PARATHYROID REL. %FBW	THYROID/PARATHYROID REL. %BRW
GROUP 2: 0.01 MG/KG/DAY							
11746 M	516	1.30	0.25	57.02	0.0245	0.0047	1.0746
11748 M	469	1.42	0.30	63.96	0.0281	0.0060	1.2658
11749 M	499	1.28	0.26	59.26	0.0236	0.0047	1.0926
11750 M	457	1.32	0.29	62.26	0.0212	0.0046	1.0000
11752 M	520	1.50	0.29	63.83	0.0322	0.0062	1.3702
11753 M	575	1.40	0.24	64.22	0.0308	0.0054	1.4128
11754 M	481	1.37	0.28	64.02	0.0240	0.0050	1.1215
11755 M	598	1.41	0.24	61.30	0.0287	0.0048	1.2478
11761 M	553	1.39	0.25	60.70	0.0285	0.0052	1.2445
11765 M	598	1.52	0.25	70.37	0.0328	0.0055	1.5185
MEAN	527	1.39	0.27	62.69	0.0274	0.0052	1.2348
S.D.	52.1	0.079	0.023	3.590	0.00394	0.00054	0.16520
N	10	10	10	10	10	10	10

NOTE: REL. % FINAL BODY WEIGHT (FBW) = (ORGAN WEIGHT/FBW) X 100; REL. % BRAIN WEIGHT (BRW) = (ORGAN WEIGHT/BRW) X 100.
GROUP 2 MALES WERE EUTHANIZED ON DAYS 15-18 OR DAYS 92-95.

APPENDIX O
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL ABSOLUTE AND RELATIVE ORGAN WEIGHT DATA

SCHEDULED EUTHANASIA - DAYS 92-95

ANIMAL NO.	FINAL BODY WEIGHT (g)	BRAIN ABS. (g)	BRAIN REL. %FBW	PITUITARY ABS. (g)	PITUITARY REL. %FBW	PITUITARY REL. %BRW	KIDNEYS ABS. (g)	KIDNEYS REL. %FBW	KIDNEYS REL. %BRW	TESTES ABS. (g)	TESTES REL. %FBW	TESTES REL. %BRW
GROUP 3: 0.05 MG/KG/DAY												
11769 M	503	2.16	0.43	0.0172[a]	a	a	3.67	0.73	169.91	3.27	0.65	151.39
11774 M	498	2.22	0.45	0.0159	0.0032	0.7162	4.18	0.84	188.29	3.43	0.69	154.50
11776 M	454	2.20	0.48	0.0130	0.0029	0.5909	3.57	0.79	162.27	3.36	0.74	152.73
11777 M	587	2.23	0.38	0.0147	0.0025	0.6592	4.10	0.70	183.86	3.09	0.53	138.57
11780 M	570	2.44	0.43	0.0191	0.0034	0.7828	4.21	0.74	172.54	3.64	0.64	149.18
11787 M	597	2.18	0.37	0.0122	0.0020	0.5596	4.09	0.69	187.61	3.56	0.60	163.30
11790 M	551	2.07	0.38	0.0160	0.0029	0.7729	4.06	0.74	196.14	3.61	0.66	174.40
11791 M	577	2.25	0.39	0.0149	0.0026	0.6622	4.13	0.72	183.56	3.31	0.57	147.11
11792 M	553	2.45	0.44	0.0147	0.0027	0.6000	3.93	0.71	160.41	3.73	0.67	152.24
11794 M	536	2.37	0.44	0.0134	0.0025	0.5654	3.57	0.67	150.63	3.41	0.64	143.88
MEAN	543	2.26	0.42	0.0149	0.0027	0.6566	3.95	0.73	175.52	3.44	0.64	152.73
S.D.	45.3	0.124	0.039	0.00203	0.00040	0.08536	0.253	0.050	14.651	0.195	0.061	10.053
N	10	10	10	9	9	9	10	10	10	10	10	10

NOTE: REL. % FINAL BODY WEIGHT (FBW) = (ORGAN WEIGHT/FBW) X 100; REL. % BRAIN WEIGHT (BRW) = (ORGAN WEIGHT/BRW) X 100.
[a]WEIGHT WAS COLLECTED FOLLOWING FIXATION. VALUE WAS NOT INCLUDED IN CALCULATION OF THE MEAN AND STANDARD DEVIATION.

APPENDIX O
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL ABSOLUTE AND RELATIVE ORGAN WEIGHT DATA

SCHEDULED EUTHANASIA - DAYS 92-95

ANIMAL NO.	FINAL BODY WEIGHT (g)	HEART ABS. (g)	HEART REL. %FBW	HEART REL. %BRW	LUNGS ABS. (g)	LUNGS REL. %FBW	LUNGS REL. %BRW	LIVER ABS. (g)	LIVER REL. %FBW	LIVER REL. %BRW	SPLEEN ABS. (g)	SPLEEN REL. %FBW	SPLEEN REL. %BRW
GROUP 3: 0.05 MG/KG/DAY													
11769 M	503	1.37	0.27	63.43	1.89	0.38	87.50	19.03	3.78	881.02	0.85	0.17	39.35
11774 M	498	1.94	0.39	87.39	1.98	0.40	89.19	15.64	3.14	704.50	0.75	0.15	33.78
11776 M	454	1.38	0.30	62.73	1.51	0.33	68.64	13.72	3.02	623.64	0.63	0.14	28.64
11777 M	587	1.74	0.30	78.03	1.87	0.32	83.86	19.69	3.35	882.96	0.95	0.16	42.60
11780 M	570	1.73	0.30	70.90	1.83	0.32	75.00	19.32	3.39	791.80	0.88	0.15	36.07
11787 M	597	1.89	0.32	86.70	1.58	0.26	72.48	25.29	4.24	1160.09	0.94	0.16	43.12
11790 M	551	1.67	0.30	80.68	1.70	0.31	82.13	18.58	3.37	897.58	0.67	0.12	32.37
11791 M	577	1.74	0.30	77.33	2.31	0.40	102.67	20.53	3.56	912.44	1.02	0.18	45.33
11792 M	553	1.89	0.34	77.14	1.99	0.36	81.22	17.21	3.11	702.45	0.88	0.16	35.92
11794 M	536	1.57	0.29	66.24	1.53	0.29	64.56	17.24	3.22	727.43	1.02	0.19	43.04
MEAN	543	1.69	0.31	75.06	1.82	0.34	80.72	18.63	3.42	828.39	0.86	0.16	38.02
S.D.	45.3	0.201	0.032	8.942	0.248	0.046	11.152	3.104	0.365	153.584	0.137	0.019	5.514
N	10	10	10	10	10	10	10	10	10	10	10	10	10

NOTE: REL. % FINAL BODY WEIGHT (FBW) = (ORGAN WEIGHT/FBW) X 100; REL. % BRAIN WEIGHT (BRW) = (ORGAN WEIGHT/BRW) X 100.

APPENDIX O
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL ABSOLUTE AND RELATIVE ORGAN WEIGHT DATA

SCHEDULED EUTHANASIA - DAYS 92-95

ANIMAL NO.	FINAL BODY WEIGHT (g)	EPIDIDYMIS ABS. (g)	EPIDIDYMIS REL. %FBW	EPIDIDYMIS REL. %BRW	THYROID/PARATHYROID ABS. (g)	THYROID/PARATHYROID REL. %FBW	THYROID/PARATHYROID REL. %BRW
GROUP 3: 0.05 MG/KG/DAY							
11769 M	503	1.27	0.25	58.80	0.0216	0.0043	1.0000
11774 M	498	1.51	0.30	68.02	0.0292	0.0059	1.3153
11776 M	454	1.26	0.28	57.27	0.0205	0.0045	0.9318
11777 M	587	1.33	0.23	59.64	0.0298	0.0051	1.3363
11780 M	570	1.69	0.30	69.26	0.0241	0.0042	0.9877
11787 M	597	1.39	0.23	63.76	0.0333	0.0056	1.5275
11790 M	551	1.62	0.29	78.26	0.0302	0.0055	1.4589
11791 M	577	1.47	0.25	65.33	0.0286	0.0050	1.2711
11792 M	553	1.51	0.27	61.63	0.0251	0.0045	1.0245
11794 M	536	1.30	0.24	54.85	0.0228	0.0043	0.9620
MEAN	543	1.44	0.27	63.68	0.0265	0.0049	1.1815
S.D.	45.3	0.149	0.027	6.901	0.00427	0.00060	0.22417
N	10	10	10	10	10	10	10

NOTE: REL. % FINAL BODY WEIGHT (FBW) = (ORGAN WEIGHT/FBW) X 100; REL. % BRAIN WEIGHT (BRW) = (ORGAN WEIGHT/BRW) X 100.

APPENDIX O
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL ABSOLUTE AND RELATIVE ORGAN WEIGHT DATA

SCHEDULED EUTHANASIA - DAYS 92-95

ANIMAL NO.	FINAL BODY WEIGHT (g)	BRAIN ABS. (g)	BRAIN REL. %FBW	PITUITARY ABS. (g)	PITUITARY REL. %FBW	PITUITARY REL. %BRW	KIDNEYS ABS. (g)	KIDNEYS REL. %FBW	KIDNEYS REL. %BRW	TESTES ABS. (g)	TESTES REL. %FBW	TESTES REL. %BRW
GROUP 4: 0.2 MG/KG/DAY												
11797 M	547	2.34	0.43	0.0142	0.0026	0.6068	4.10	0.75	175.21	3.37	0.62	144.02
11799 M	552	2.14	0.39	0.0110	0.0020	0.5140	4.10	0.74	191.59	3.02	0.55	141.12
11800 M	a	2.32	a	0.0160	a	0.6897	4.35	a	187.50	3.27	a	140.95
11805 M	564	2.14	0.38	0.0155	0.0027	0.7243	3.99	0.71	186.45	3.59	0.64	167.76
11806 M	528	2.20	0.42	0.0134	0.0025	0.6091	3.74	0.71	170.00	3.23	0.61	146.82
11809 M	601	2.27	0.38	0.0139	0.0023	0.6123	4.47	0.74	196.92	3.44	0.57	151.54
11811 M	567	2.31	0.41	0.0122	0.0022	0.5281	4.05	0.71	175.32	3.70	0.65	160.17
11812 M	471	2.34	0.50	0.0144	0.0031	0.6154	4.01	0.85	171.37	2.97	0.63	126.92
11814 M	659	2.37	0.36	0.0160	0.0024	0.6751	4.33	0.66	182.70	3.54	0.54	149.37
11815 M	574	2.24	0.39	0.0171	0.0030	0.7634	3.95	0.69	176.34	3.77	0.66	168.30
MEAN	563	2.27	0.40	0.0144	0.0025	0.6338	4.11	0.73	181.34	3.39	0.61	149.70
S.D.	51.1	0.084	0.040	0.00186	0.00036	0.07990	0.218	0.054	9.070	0.271	0.044	12.888
N	9	10	9	10	9	10	10	9	10	10	9	10

NOTE: REL. % FINAL BODY WEIGHT (FBW) = (ORGAN WEIGHT/FBW) X 100; REL. % BRAIN WEIGHT (BRW) = (ORGAN WEIGHT/BRW) X 100.
GROUP 4 MALES WERE EUTHANIZED ON DAYS 15-18 OR DAYS 92-95.
[a]FINAL BODY WEIGHT WAS INADVERTENTLY NOT COLLECTED.

APPENDIX O
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL ABSOLUTE AND RELATIVE ORGAN WEIGHT DATA

SCHEDULED EUTHANASIA - DAYS 92-95

ANIMAL NO.	FINAL BODY WEIGHT (g)	EPIDIDYMIS ABS. (g)	EPIDIDYMIS REL. %FBW	EPIDIDYMIS REL. %BRW	THYROID/PARATHYROID ABS. (g)	THYROID/PARATHYROID REL. %FBW	THYROID/PARATHYROID REL. %BRW
GROUP 4: 0.2 MG/KG/DAY							
11797 M	547	1.39	0.25	59.40	0.0237	0.0043	1.0128
11799 M	552	1.26	0.23	58.88	0.0243	0.0044	1.1355
11800 M	a	1.51	a	65.09	0.0315	a	1.3578
11805 M	564	1.35	0.24	63.08	0.0283	0.0050	1.3224
11806 M	528	0.94	0.18	42.73	0.0301	0.0057	1.3682
11809 M	601	1.39	0.23	61.23	0.0266	0.0044	1.1718
11811 M	567	1.56	0.28	67.53	0.0303	0.0053	1.3117
11812 M	471	1.27	0.27	54.27	0.0250	0.0053	1.0684
11814 M	659	1.51	0.23	63.71	0.0296	0.0045	1.2489
11815 M	574	1.54	0.27	68.75	0.0292	0.0051	1.3036
MEAN	563	1.37	0.24	60.47	0.0279	0.0049	1.2301
S.D.	51.1	0.186	0.030	7.561	0.00277	0.00050	0.12561
N	9	10	9	10	10	9	10

NOTE: REL. % FINAL BODY WEIGHT (FBW) = (ORGAN WEIGHT/FBW) X 100; REL. % BRAIN WEIGHT (BRW) = (ORGAN WEIGHT/BRW) X 100.
GROUP 4 MALES WERE EUTHANIZED ON DAYS 15-18 OR DAYS 92-95.
[a]FINAL BODY WEIGHT WAS INADVERTENTLY NOT COLLECTED.

APPENDIX O
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL ABSOLUTE AND RELATIVE ORGAN WEIGHT DATA

SCHEDULED EUTHANASIA - DAYS 92-95

ANIMAL NO.	FINAL BODY WEIGHT (g)	BRAIN ABS. (g)	BRAIN REL. %FBW	PITUITARY ABS. (g)	PITUITARY REL. %FBW	PITUITARY REL. %BRW	KIDNEYS ABS. (g)	KIDNEYS REL. %FBW	KIDNEYS REL. %BRW	TESTES ABS. (g)	TESTES REL. %FBW	TESTES REL. %BRW
GROUP 5: 1.0 MG/KG/DAY												
11817 M	528	2.34	0.44	0.0140	0.0027	0.5983	3.87	0.73	165.38	3.44	0.65	147.01
11822 M	523	2.21	0.42	0.0137	0.0026	0.6199	4.08	0.78	184.62	3.09	0.59	139.82
11824 M	500	2.08	0.42	0.0112	0.0022	0.5385	3.64	0.73	175.00	2.93	0.59	140.87
11827 M	697	2.48	0.36	0.0133	0.0019	0.5363	4.68	0.67	188.71	3.90	0.56	157.26
11830 M	504	1.97	0.39	0.0113	0.0022	0.5736	3.89	0.77	197.46	3.51	0.70	178.17
11832 M	604	2.42	0.40	0.0123	0.0020	0.5083	3.98	0.66	164.46	3.76	0.62	155.37
11840 M	569	2.22	0.39	0.0113	0.0020	0.5090	4.19	0.74	188.74	3.71	0.65	167.12
11841 M	529	2.34	0.44	0.0132	0.0025	0.5641	4.27	0.81	182.48	3.41	0.64	145.73
11842 M	545	2.25	0.41	0.0140	0.0026	0.6222	3.74	0.69	166.22	3.22	0.59	143.11
11845 M	560	2.28	0.41	0.0147	0.0026	0.6447	3.84	0.69	168.42	3.78	0.68	165.79
MEAN	556	2.26	0.41	0.0129	0.0023	0.5715	4.02	0.73	178.15	3.47	0.63	154.02
S.D.	58.6	0.152	0.026	0.00129	0.00029	0.04864	0.303	0.050	11.805	0.321	0.044	12.985
N	10	10	10	10	10	10	10	10	10	10	10	10

NOTE: REL. % FINAL BODY WEIGHT (FBW) = (ORGAN WEIGHT/FBW) X 100; REL. % BRAIN WEIGHT (BRW) = (ORGAN WEIGHT/BRW) X 100.

APPENDIX O
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL ABSOLUTE AND RELATIVE ORGAN WEIGHT DATA

SCHEDULED EUTHANASIA - DAYS 92-95

ANIMAL NO.	FINAL BODY WEIGHT (g)	HEART ABS. (g)	HEART REL. %FBW	HEART REL. %BRW	LUNGS ABS. (g)	LUNGS REL. %FBW	LUNGS REL. %BRW	LIVER ABS. (g)	LIVER REL. %FBW	LIVER REL. %BRW	SPLEEN ABS. (g)	SPLEEN REL. %FBW	SPLEEN REL. %BRW
GROUP 5: 1.0 MG/KG/DAY													
11817 M	528	1.51	0.29	64.53	1.26	0.24	53.85	19.98	3.78	853.85	0.79	0.15	33.76
11822 M	523	1.62	0.31	73.30	1.62	0.31	73.30	16.71	3.20	756.11	0.71	0.14	32.13
11824 M	500	1.57	0.31	75.48	1.58	0.32	75.96	17.13	3.43	823.56	0.89	0.18	42.79
11827 M	697	1.98	0.28	79.84	2.41	0.35	97.18	27.28	3.91	1100.00	1.25	0.18	50.40
11830 M	504	1.41	0.28	71.57	1.61	0.32	81.73	16.01	3.18	812.69	0.77	0.15	39.09
11832 M	604	1.66	0.27	68.60	1.98	0.33	81.82	21.91	3.63	905.37	0.90	0.15	37.19
11840 M	569	1.55	0.27	69.82	1.90	0.33	85.59	18.19	3.20	819.37	0.98	0.17	44.14
11841 M	529	1.73	0.33	73.93	1.67	0.32	71.37	19.68	3.72	841.03	0.93	0.18	39.74
11842 M	545	1.84	0.34	81.78	1.64	0.30	72.89	19.12	3.51	849.78	0.85	0.16	37.78
11845 M	560	1.71	0.31	75.00	1.90	0.34	83.33	22.93	4.09	1005.70	0.96	0.17	42.11
MEAN	556	1.66	0.30	73.39	1.76	0.31	77.70	19.89	3.56	876.74	0.90	0.16	39.91
S.D.	58.6	0.166	0.023	5.129	0.309	0.030	11.358	3.403	0.320	102.521	0.149	0.015	5.293
N	10	10	10	10	10	10	10	10	10	10	10	10	10

NOTE: REL. % FINAL BODY WEIGHT (FBW) = (ORGAN WEIGHT/FBW) X 100; REL. % BRAIN WEIGHT (BRW) = (ORGAN WEIGHT/BRW) X 100.

APPENDIX O
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL ABSOLUTE AND RELATIVE ORGAN WEIGHT DATA

SCHEDULED EUTHANASIA - DAYS 92-95

ANIMAL NO.	FINAL BODY WEIGHT (g)	EPIDIDYMIS ABS. (g)	EPIDIDYMIS REL. %FBW	EPIDIDYMIS REL. %BRW	THYROID/PARATHYROID ABS. (g)	THYROID/PARATHYROID REL. %FBW	THYROID/PARATHYROID REL. %BRW
GROUP 5: 1.0 MG/KG/DAY							
11817 M	528	1.43	0.27	61.11	0.0328	0.0062	1.4017
11822 M	523	1.22	0.23	55.20	0.0270	0.0052	1.2217
11824 M	500	1.20	0.24	57.69	0.0316	0.0063	1.5192
11827 M	697	1.85	0.27	74.60	0.0381	0.0055	1.5363
11830 M	504	1.43	0.28	72.59	0.0265	0.0053	1.3452
11832 M	604	1.75	0.29	72.31	0.0335	0.0055	1.3843
11840 M	569	1.59	0.28	71.62	0.0400	0.0070	1.8018
11841 M	529	1.42	0.27	60.68	0.0307	0.0058	1.3120
11842 M	545	1.48	0.27	65.78	0.0282	0.0052	1.2533
11845 M	560	1.41	0.25	61.84	0.0329	0.0059	1.4430
MEAN	556	1.48	0.27	65.34	0.0321	0.0058	1.4219
S.D.	58.6	0.206	0.018	6.989	0.00443	0.00060	0.16853
N	10	10	10	10	10	10	10

NOTE: REL. % FINAL BODY WEIGHT (FBW) = (ORGAN WEIGHT/FBW) X 100; REL. % BRAIN WEIGHT (BRW) = (ORGAN WEIGHT/BRW) X 100.

APPENDIX O
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL ABSOLUTE AND RELATIVE ORGAN WEIGHT DATA

SCHEDULED EUTHANASIA - DAYS 92-95

ANIMAL NO.	FINAL BODY WEIGHT (g)	BRAIN ABS. (g)	BRAIN REL. %FBW	PITUITARY ABS. (g)	PITUITARY REL. %FBW	PITUITARY REL. %BRW	KIDNEYS ABS. (g)	KIDNEYS REL. %FBW	KIDNEYS REL. %BRW	TESTES ABS. (g)	TESTES REL. %FBW	TESTES REL. %BRW
GROUP 6: 10.0 MG/KG/DAY												
11851 M	501	2.39	0.48	0.0135	0.0027	0.5649	4.09	0.82	171.13	3.62	0.72	151.46
11852 M	480	2.18	0.45	0.0143	0.0030	0.6560	9.07	1.89	416.06	3.07	0.64	140.83
11854 M	543	2.26	0.42	0.0132	0.0024	0.5841	4.45	0.82	196.90	3.08	0.57	136.28
11860 M	591	2.22	0.38	0.0151	0.0026	0.6802	4.23	0.72	190.54	3.43	0.58	154.50
11862 M	579	2.26	0.39	0.0135	0.0023	0.5973	4.65	0.80	205.75	3.37	0.58	149.12
11866 M	472	2.20	0.47	0.0139	0.0029	0.6318	3.36	0.71	152.73	2.93	0.62	133.18
11867 M	476	2.15	0.45	0.0082	0.0017	0.3814	3.41	0.72	158.60	3.49	0.73	162.33
11871 M	515	2.47	0.48	0.0160	0.0031	0.6478	3.51	0.68	142.11	3.39	0.66	137.25
11872 M	561	2.27	0.40	0.0164	0.0029	0.7225	4.26	0.76	187.67	3.42	0.61	150.66
11873 M	591	2.22	0.38	0.0178	0.0030	0.8018	3.92	0.66	176.58	3.31	0.56	149.10
MEAN	531	2.26	0.43	0.0142	0.0027	0.6268	4.50	0.86	199.81	3.31	0.63	146.47
S.D.	48.1	0.098	0.041	0.00258	0.00043	0.11090	1.667	0.367	78.631	0.216	0.062	9.247
N	10	10	10	10	10	10	10	10	10	10	10	10

NOTE: REL. % FINAL BODY WEIGHT (FBW) = (ORGAN WEIGHT/FBW) X 100; REL. % BRAIN WEIGHT (BRW) = (ORGAN WEIGHT/BRW) X 100.

APPENDIX O
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL ABSOLUTE AND RELATIVE ORGAN WEIGHT DATA

SCHEDULED EUTHANASIA - DAYS 92-95

ANIMAL NO.	FINAL BODY WEIGHT (g)	HEART ABS. (g)	HEART REL. %FBW	HEART REL. %BRW	LUNGS ABS. (g)	LUNGS REL. %FBW	LUNGS REL. %BRW	LIVER ABS. (g)	LIVER REL. %FBW	LIVER REL. %BRW	SPLEEN ABS. (g)	SPLEEN REL. %FBW	SPLEEN REL. %BRW
GROUP 6: 10.0 MG/KG/DAY													
11851 M	501	1.68	0.34	70.29	1.75	0.35	73.22	17.81	3.55	745.19	1.16	0.23	48.54
11852 M	480	1.44	0.30	66.06	2.47	0.51	113.30	20.91	4.36	959.17	0.95	0.20	43.58
11854 M	543	1.58	0.29	69.91	1.51	0.28	66.81	19.05	3.51	842.92	0.84	0.15	37.17
11860 M	591	1.73	0.29	77.93	2.44	0.41	109.91	22.50	3.81	1013.51	0.94	0.16	42.34
11862 M	579	1.66	0.29	73.45	1.99	0.34	88.05	19.59	3.38	866.81	0.70	0.12	30.97
11866 M	472	1.35	0.29	61.36	1.87	0.40	85.00	16.32	3.46	741.82	0.64	0.14	29.09
11867 M	476	1.45	0.30	67.44	1.57	0.33	73.02	17.63	3.70	820.00	0.70	0.15	32.56
11871 M	515	1.50	0.29	60.73	1.69	0.33	68.42	15.17	2.95	614.17	0.63	0.12	25.51
11872 M	561	1.92	0.34	84.58	1.94	0.35	85.46	20.47	3.65	901.76	0.88	0.16	38.77
11873 M	591	1.92	0.32	86.49	1.91	0.32	86.04	20.07	3.40	904.05	0.82	0.14	36.94
MEAN	531	1.62	0.31	71.82	1.91	0.36	84.92	18.95	3.58	840.94	0.83	0.16	36.55
S.D.	48.1	0.196	0.021	8.874	0.325	0.065	16.055	2.228	0.361	116.892	0.166	0.034	7.123
N	10	10	10	10	10	10	10	10	10	10	10	10	10

NOTE: REL. % FINAL BODY WEIGHT (FBW) = (ORGAN WEIGHT/FBW) X 100; REL. % BRAIN WEIGHT (BRW) = (ORGAN WEIGHT/BRW) X 100.

APPENDIX O
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL ABSOLUTE AND RELATIVE ORGAN WEIGHT DATA

SCHEDULED EUTHANASIA - DAYS 92-95

ANIMAL NO.	FINAL BODY WEIGHT (g)	EPIDIDYMIS ABS. (g)	EPIDIDYMIS REL. %FBW	EPIDIDYMIS REL. %BRW	THYROID/PARATHYROID ABS. (g)	THYROID/PARATHYROID REL. %FBW	THYROID/PARATHYROID REL. %BRW
GROUP 6: 10.0 MG/KG/DAY							
11851 M	501	1.68	0.34	70.29	0.0286	0.0057	1.1967
11852 M	480	1.52	0.32	69.72	0.0479	0.0100	2.1972
11854 M	543	1.25	0.23	55.31	0.0351	0.0065	1.5531
11860 M	591	1.50	0.25	67.57	0.0416	0.0070	1.8739
11862 M	579	1.26	0.22	55.75	0.0423	0.0073	1.8717
11866 M	472	1.31	0.28	59.55	0.0293	0.0062	1.3318
11867 M	476	1.29	0.27	60.00	0.0344	0.0072	1.6000
11871 M	515	1.53	0.30	61.94	0.0420	0.0082	1.7004
11872 M	561	1.71	0.30	75.33	0.0405	0.0072	1.7841
11873 M	591	1.40	0.24	63.06	0.0367	0.0062	1.6532
MEAN	531	1.44	0.27	63.85	0.0378	0.0072	1.6762
S.D.	48.1	0.169	0.039	6.648	0.00613	0.00122	0.28501
N	10	10	10	10	10	10	10

NOTE: REL. % FINAL BODY WEIGHT (FBW) = (ORGAN WEIGHT/FBW) X 100; REL. % BRAIN WEIGHT (BRW) = (ORGAN WEIGHT/BRW) X 100.

APPENDIX O
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL ABSOLUTE AND RELATIVE ORGAN WEIGHT DATA

SCHEDULED EUTHANASIA - DAYS 121-123

ANIMAL NO.	FINAL BODY WEIGHT (g)	BRAIN ABS. (g)	BRAIN REL. %FBW	PITUITARY ABS. (g)	PITUITARY REL. %FBW	PITUITARY REL. %BRW	KIDNEYS ABS. (g)	KIDNEYS REL. %FBW	KIDNEYS REL. %BRW	TESTES ABS. (g)	TESTES REL. %FBW	TESTES REL. %BRW
GROUP 1: 0 MG/KG/DAY												
11719 M	580	2.27	0.39	0.0143	0.0025	0.6300	4.12	0.71	181.50	3.18	0.55	140.09
11722 M	585	2.19	0.37	0.0123	0.0021	0.5616	3.96	0.68	180.82	3.46	0.59	157.99
11723 M	546	2.31	0.42	0.0107	0.0020	0.4632	3.46	0.63	149.78	3.50	0.64	151.52
11726 M	610	2.49	0.41	0.0159	0.0026	0.6386	4.48	0.73	179.92	3.79	0.62	152.21
11727 M	690	2.37	0.34	0.0140	0.0020	0.5907	5.38	0.78	227.00	3.31	0.48	139.66
11730 M	550	2.35	0.43	0.0114	0.0021	0.4851	4.16	0.76	177.02	3.58	0.65	152.34
11733 M	669	2.42	0.36	0.0144	0.0022	0.5950	4.68	0.70	193.39	3.62	0.54	149.59
11737 M	521	2.35	0.45	0.0124	0.0024	0.5277	3.68	0.71	156.60	3.80	0.73	161.70
11740 M	518	2.08	0.40	0.0116	0.0022	0.5577	4.53	0.87	217.79	3.54	0.68	170.19
11743 M	491	2.41	0.49	0.0098	0.0020	0.4066	3.79	0.77	157.26	3.59	0.73	148.96
MEAN	576	2.32	0.41	0.0127	0.0022	0.5456	4.22	0.73	182.11	3.54	0.62	152.42
S.D.	65.1	0.119	0.044	0.00191	0.00022	0.07507	0.563	0.066	25.302	0.192	0.083	9.242
N	10	10	10	10	10	10	10	10	10	10	10	10

NOTE: REL. % FINAL BODY WEIGHT (FBW) = (ORGAN WEIGHT/FBW) X 100; REL. % BRAIN WEIGHT (BRW) = (ORGAN WEIGHT/BRW) X 100.

APPENDIX O
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL ABSOLUTE AND RELATIVE ORGAN WEIGHT DATA

SCHEDULED EUTHANASIA - DAYS 121-123

ANIMAL NO.	FINAL BODY WEIGHT (g)	HEART ABS. (g)	HEART REL. %FBW	HEART REL. %BRW	LUNGS ABS. (g)	LUNGS REL. %FBW	LUNGS REL. %BRW	LIVER ABS. (g)	LIVER REL. %FBW	LIVER REL. %BRW	SPLEEN ABS. (g)	SPLEEN REL. %FBW	SPLEEN REL. %BRW
GROUP 1: 0 MG/KG/DAY													
11719 M	580	1.91	0.33	84.14	1.67	0.29	73.57	19.68	3.39	866.96	0.93	0.16	40.97
11722 M	585	1.85	0.32	84.47	2.24	0.38	102.28	21.25	3.63	970.32	0.85	0.15	38.81
11723 M	546	1.91	0.35	82.68	1.91	0.35	82.68	19.39	3.55	839.39	0.98	0.18	42.42
11726 M	610	1.60	0.26	64.26	1.92	0.31	77.11	20.50	3.36	823.29	0.94	0.15	37.75
11727 M	690	2.77	0.40	116.88	2.36	0.34	99.58	32.28	4.68	1362.03	1.15	0.17	48.52
11730 M	550	1.86	0.34	79.15	1.79	0.33	76.17	18.91	3.44	804.68	0.90	0.16	38.30
11733 M	669	1.78	0.27	73.55	1.66	0.25	68.60	23.54	3.52	972.73	0.97	0.14	40.08
11737 M	521	1.60	0.31	68.09	1.68	0.32	71.49	18.74	3.60	797.45	0.77	0.15	32.77
11740 M	518	1.60	0.31	76.92	1.88	0.36	90.38	20.28	3.92	975.00	0.78	0.15	37.50
11743 M	491	1.55	0.32	64.32	1.66	0.34	68.88	17.43	3.55	723.24	0.74	0.15	30.71
MEAN	576	1.84	0.32	79.45	1.88	0.33	81.07	21.20	3.66	913.51	0.90	0.16	38.78
S.D.	65.1	0.355	0.040	15.234	0.248	0.038	12.355	4.225	0.389	179.195	0.123	0.011	4.933
N	10	10	10	10	10	10	10	10	10	10	10	10	10

NOTE: REL. % FINAL BODY WEIGHT (FBW) = (ORGAN WEIGHT/FBW) X 100; REL. % BRAIN WEIGHT (BRW) = (ORGAN WEIGHT/BRW) X 100.

APPENDIX O
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL ABSOLUTE AND RELATIVE ORGAN WEIGHT DATA

SCHEDULED EUTHANASIA - DAYS 121-123

ANIMAL NO.	FINAL BODY WEIGHT (g)	EPIDIDYMIS ABS. (g)	EPIDIDYMIS REL. %FBW	EPIDIDYMIS REL. %BRW	THYROID/PARATHYROID ABS. (g)	THYROID/PARATHYROID REL. %FBW	THYROID/PARATHYROID REL. %BRW
GROUP 1: 0 MG/KG/DAY							
11719 M	580	1.83	0.32	80.62	0.0370	0.0064	1.6300
11722 M	585	1.38	0.24	63.01	0.0266	0.0045	1.2146
11723 M	546	1.48	0.27	64.07	0.0301	0.0055	1.3030
11726 M	610	1.49	0.24	59.84	0.0252	0.0041	1.0120
11727 M	690	1.70	0.25	71.73	0.0373	0.0054	1.5738
11730 M	550	1.59	0.29	67.66	0.0300	0.0055	1.2766
11733 M	669	1.47	0.22	60.74	0.0370	0.0055	1.5289
11737 M	521	1.65	0.32	70.21	0.0214	0.0041	0.9106
11740 M	518	1.54	0.30	74.04	0.0314	0.0061	1.5096
11743 M	491	1.58	0.32	65.56	0.0315	0.0064	1.3071
MEAN	576	1.57	0.28	67.75	0.0308	0.0054	1.3266
S.D.	65.1	0.130	0.037	6.493	0.00536	0.00085	0.23933
N	10	10	10	10	10	10	10

NOTE: REL. % FINAL BODY WEIGHT (FBW) = (ORGAN WEIGHT/FBW) X 100; REL. % BRAIN WEIGHT (BRW) = (ORGAN WEIGHT/BRW) X 100.

APPENDIX O
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL ABSOLUTE AND RELATIVE ORGAN WEIGHT DATA

SCHEDULED EUTHANASIA - DAYS 121-123

ANIMAL NO.	FINAL BODY WEIGHT (g)	BRAIN ABS. (g)	BRAIN REL. %FBW	PITUITARY ABS. (g)	PITUITARY REL. %FBW	PITUITARY REL. %BRW	KIDNEYS ABS. (g)	KIDNEYS REL. %FBW	KIDNEYS REL. %BRW	TESTES ABS. (g)	TESTES REL. %FBW	TESTES REL. %BRW
GROUP 3: 0.05 MG/KG/DAY												
11767 M	520	2.34	0.45	0.0118	0.0023	0.5043	3.93	0.76	167.95	3.26	0.63	139.32
11770 M	569	2.26	0.40	0.0147	0.0026	0.6504	4.60	0.81	203.54	3.97	0.70	175.66
11773 M	492	2.18	0.44	0.0116	0.0024	0.5321	3.45	0.70	158.26	3.22	0.65	147.71
11775 M	524	2.50	0.48	0.0153	0.0029	0.6120	3.99	0.76	159.60	3.30	0.63	132.00
11781 M	586	2.33	0.40	0.0141	0.0024	0.6052	4.61	0.79	197.85	3.95	0.67	169.53
11782 M	546	2.42	0.44	0.0144	0.0026	0.5950	4.54	0.83	187.60	3.86	0.71	159.50
11783 M	631	2.27	0.36	0.0142	0.0023	0.6256	4.80	0.76	211.45	3.57	0.57	157.27
11785 M	648	2.45	0.38	0.0128	0.0020	0.5224	3.83	0.59	156.33	3.42	0.53	139.59
11788 M	517	2.27	0.44	0.0124	0.0024	0.5463	4.05	0.78	178.41	3.72	0.72	163.88
11795 M	672	2.52	0.38	0.0135	0.0020	0.5357	4.46	0.66	176.98	3.90	0.58	154.76
MEAN	571	2.35	0.42	0.0135	0.0024	0.5729	4.23	0.74	179.80	3.62	0.64	153.92
S.D.	62.0	0.114	0.039	0.00127	0.00029	0.05039	0.435	0.073	19.793	0.300	0.064	14.128
N	10	10	10	10	10	10	10	10	10	10	10	10

NOTE: REL. % FINAL BODY WEIGHT (FBW) = (ORGAN WEIGHT/FBW) X 100; REL. % BRAIN WEIGHT (BRW) = (ORGAN WEIGHT/BRW) X 100.

APPENDIX O
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL ABSOLUTE AND RELATIVE ORGAN WEIGHT DATA

SCHEDULED EUTHANASIA - DAYS 121-123

ANIMAL NO.	FINAL BODY WEIGHT (g)	HEART ABS. (g)	HEART REL. %FBW	HEART REL. %BRW	LUNGS ABS. (g)	LUNGS REL. %FBW	LUNGS REL. %BRW	LIVER ABS. (g)	LIVER REL. %FBW	LIVER REL. %BRW	SPLEEN ABS. (g)	SPLEEN REL. %FBW	SPLEEN REL. %BRW
GROUP 3: 0.05 MG/KG/DAY													
11767 M	520	1.98	0.38	84.62	1.74	0.33	74.36	19.65	3.78	839.74	0.85	0.16	36.32
11770 M	569	1.62	0.28	71.68	2.00	0.35	88.50	19.96	3.51	883.19	0.69	0.12	30.53
11773 M	492	1.60	0.33	73.39	1.94	0.39	88.99	15.33	3.12	703.21	0.77	0.16	35.32
11775 M	524	1.61	0.31	64.40	1.80	0.34	72.00	17.85	3.41	714.00	0.94	0.18	37.60
11781 M	586	1.95	0.33	83.69	1.82	0.31	78.11	20.44	3.49	877.25	1.10	0.19	47.21
11782 M	546	1.83	0.34	75.62	1.99	0.36	82.23	17.38	3.18	718.18	0.97	0.18	40.08
11783 M	631	2.12	0.34	93.39	1.94	0.31	85.46	25.95	4.11	1143.17	0.76	0.12	33.48
11785 M	648	1.84	0.28	75.10	1.97	0.30	80.41	23.71	3.66	967.76	1.11	0.17	45.31
11788 M	517	1.73	0.33	76.21	2.20	0.43	96.92	19.64	3.80	865.20	0.78	0.15	34.36
11795 M	672	1.86	0.28	73.81	1.88	0.28	74.60	25.62	3.81	1016.67	1.15	0.17	45.63
MEAN	571	1.81	0.32	77.19	1.93	0.34	82.16	20.55	3.59	872.84	0.91	0.16	38.59
S.D.	62.0	0.175	0.032	8.079	0.129	0.045	7.861	3.519	0.307	142.196	0.166	0.023	5.745
N	10	10	10	10	10	10	10	10	10	10	10	10	10

NOTE: REL. % FINAL BODY WEIGHT (FBW) = (ORGAN WEIGHT/FBW) X 100; REL. % BRAIN WEIGHT (BRW) = (ORGAN WEIGHT/BRW) X 100.

APPENDIX O
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL ABSOLUTE AND RELATIVE ORGAN WEIGHT DATA

SCHEDULED EUTHANASIA - DAYS 121-123

ANIMAL NO.	FINAL BODY WEIGHT (g)	EPIDIDYMIS ABS. (g)	EPIDIDYMIS REL. %FBW	EPIDIDYMIS REL. %BRW	THYROID/PARATHYROID ABS. (g)	THYROID/PARATHYROID REL. %FBW	THYROID/PARATHYROID REL. %BRW
GROUP 3: 0.05 MG/KG/DAY							
11767 M	520	1.26	0.24	53.85	0.0281	0.0054	1.2009
11770 M	569	1.59	0.28	70.35	0.0308	0.0054	1.3628
11773 M	492	1.22	0.25	55.96	0.0296	0.0060	1.3578
11775 M	524	1.55	0.30	62.00	0.0291	0.0056	1.1640
11781 M	586	1.54	0.26	66.09	0.0323	0.0055	1.3863
11782 M	546	1.67	0.31	69.01	0.0254	0.0047	1.0496
11783 M	631	1.54	0.24	67.84	0.0412	0.0065	1.8150
11785 M	648	1.42	0.22	57.96	0.0272	0.0042	1.1102
11788 M	517	1.52	0.29	66.96	0.0233	0.0045	1.0264
11795 M	672	1.51	0.22	59.92	0.0392	0.0058	1.5556
MEAN	571	1.48	0.26	62.99	0.0306	0.0054	1.3029
S.D.	62.0	0.142	0.031	5.851	0.00568	0.00072	0.24654
N	10	10	10	10	10	10	10

NOTE: REL. % FINAL BODY WEIGHT (FBW) = (ORGAN WEIGHT/FBW) X 100; REL. % BRAIN WEIGHT (BRW) = (ORGAN WEIGHT/BRW) X 100.

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APPENDIX O
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL ABSOLUTE AND RELATIVE ORGAN WEIGHT DATA

SCHEDULED EUTHANASIA - DAYS 121-123

ANIMAL NO.	FINAL BODY WEIGHT (g)	BRAIN ABS. (g)	BRAIN REL. %FBW	PITUITARY ABS. (g)	PITUITARY REL. %FBW	PITUITARY REL. %BRW	KIDNEYS ABS. (g)	KIDNEYS REL. %FBW	KIDNEYS REL. %BRW	TESTES ABS. (g)	TESTES REL. %FBW	TESTES REL. %BRW
GROUP 5: 1.0 MG/KG/DAY												
11821 M	478	2.43	0.51	0.0107	0.0022	0.4403	3.73	0.78	153.50	3.61	0.76	148.56
11823 M	559	2.37	0.42	0.0152	0.0027	0.6414	4.09	0.73	172.57	3.60	0.64	151.90
11826 M	644	2.44	0.38	0.0148	0.0023	0.6066	4.26	0.66	174.59	3.40	0.53	139.34
11828 M	644	2.45	0.38	0.0139	0.0022	0.5673	4.02	0.62	164.08	3.37	0.52	137.55
11829 M	647	2.50	0.39	0.0155	0.0024	0.6200	5.14	0.79	205.60	3.53	0.55	141.20
11833 M	615	2.28	0.37	0.0122	0.0020	0.5351	4.28	0.70	187.72	3.46	0.56	151.75
11834 M	636	2.45	0.39	0.0145	0.0023	0.5918	3.97	0.62	162.04	3.58	0.56	146.12
11837 M	489	2.33	0.48	0.0116	0.0024	0.4979	4.03	0.82	172.96	3.49	0.71	149.79
11838 M	509	2.09	0.41	0.0110	0.0022	0.5263	4.02	0.79	192.34	2.90	0.57	138.76
11843 M	584	2.36	0.40	0.0145	0.0025	0.6144	4.23	0.72	179.24	3.78	0.65	160.17
MEAN	581	2.37	0.41	0.0134	0.0023	0.5641	4.18	0.73	176.46	3.47	0.61	146.51
S.D.	67.7	0.119	0.046	0.00183	0.00020	0.06341	0.375	0.072	15.475	0.233	0.081	7.289
N	10	10	10	10	10	10	10	10	10	10	10	10

NOTE: REL. % FINAL BODY WEIGHT (FBW) = (ORGAN WEIGHT/FBW) X 100; REL. % BRAIN WEIGHT (BRW) = (ORGAN WEIGHT/BRW) X 100.

APPENDIX O
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL ABSOLUTE AND RELATIVE ORGAN WEIGHT DATA

SCHEDULED EUTHANASIA - DAYS 121-123

ANIMAL NO.	FINAL BODY WEIGHT (g)	HEART ABS. (g)	HEART REL. %FBW	HEART REL. %BRW	LUNGS ABS. (g)	LUNGS REL. %FBW	LUNGS REL. %BRW	LIVER ABS. (g)	LIVER REL. %FBW	LIVER REL. %BRW	SPLEEN ABS. (g)	SPLEEN REL. %FBW	SPLEEN REL. %BRW
GROUP 5: 1.0 MG/KG/DAY													
11821 M	478	1.55	0.32	63.79	1.73	0.36	71.19	15.51	3.24	638.27	0.69	0.14	28.40
11823 M	559	1.72	0.31	72.57	1.64	0.29	69.20	21.36	3.82	901.27	0.90	0.16	37.97
11826 M	644	1.68	0.26	68.85	1.76	0.27	72.13	26.62	4.13	1090.98	1.04	0.16	42.62
11828 M	644	1.81	0.28	73.88	2.25	0.35	91.84	24.98	3.88	1019.59	1.18	0.18	48.16
11829 M	647	2.11	0.33	84.40	1.95	0.30	78.00	26.99	4.17	1079.60	0.94	0.15	37.60
11833 M	615	1.83	0.30	80.26	2.32	0.38	101.75	21.20	3.45	929.82	0.84	0.14	36.84
11834 M	636	2.09	0.33	85.31	2.23	0.35	91.02	22.14	3.48	903.67	1.12	0.18	45.71
11837 M	489	1.54	0.31	66.09	1.70	0.35	72.96	18.25	3.73	783.26	0.74	0.15	31.76
11838 M	509	1.62	0.32	77.51	1.82	0.36	87.08	15.78	3.10	755.02	0.78	0.15	37.32
11843 M	584	1.63	0.28	69.07	1.69	0.29	71.61	21.01	3.60	890.25	1.04	0.18	44.07
MEAN	581	1.76	0.30	74.17	1.91	0.33	80.68	21.38	3.66	899.18	0.93	0.16	39.05
S.D.	67.7	0.204	0.023	7.505	0.262	0.037	11.355	4.059	0.355	144.212	0.166	0.016	6.175
N	10	10	10	10	10	10	10	10	10	10	10	10	10

NOTE: REL. % FINAL BODY WEIGHT (FBW) = (ORGAN WEIGHT/FBW) X 100; REL. % BRAIN WEIGHT (BRW) = (ORGAN WEIGHT/BRW) X 100.

APPENDIX O
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL ABSOLUTE AND RELATIVE ORGAN WEIGHT DATA

SCHEDULED EUTHANASIA - DAYS 121-123

ANIMAL NO.	FINAL BODY WEIGHT (g)	EPIDIDYMIS ABS. (g)	EPIDIDYMIS REL. %FBW	EPIDIDYMIS REL. %BRW	THYROID/PARATHYROID ABS. (g)	THYROID/PARATHYROID REL. %FBW	THYROID/PARATHYROID REL. %BRW
GROUP 5: 1.0 MG/KG/DAY							
11821 M	478	1.52	0.32	62.55	0.0256	0.0054	1.0535
11823 M	559	1.69	0.30	71.31	0.0309	0.0055	1.3038
11826 M	644	1.33	0.21	54.51	0.0281	0.0044	1.1516
11828 M	644	1.47	0.23	60.00	0.0296	0.0046	1.2082
11829 M	647	1.40	0.22	56.00	0.0340	0.0053	1.3600
11833 M	615	1.59	0.26	69.74	0.0261	0.0042	1.1447
11834 M	636	1.56	0.25	63.67	0.0285	0.0045	1.1633
11837 M	489	1.44	0.29	61.80	0.0244	0.0050	1.0472
11838 M	509	1.32	0.26	63.16	0.0247	0.0049	1.1818
11843 M	584	1.54	0.26	65.25	0.0373	0.0064	1.5805
MEAN	581	1.49	0.26	62.80	0.0289	0.0050	1.2195
S.D.	67.7	0.117	0.037	5.284	0.00420	0.00065	0.15962
N	10	10	10	10	10	10	10

NOTE: REL. % FINAL BODY WEIGHT (FBW) = (ORGAN WEIGHT/FBW) X 100; REL. % BRAIN WEIGHT (BRW) = (ORGAN WEIGHT/BRW) X 100.

APPENDIX O
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL ABSOLUTE AND RELATIVE ORGAN WEIGHT DATA

SCHEDULED EUTHANASIA - DAYS 121-123

ANIMAL NO.	FINAL BODY WEIGHT (g)	BRAIN ABS. (g)	BRAIN REL. %FBW	PITUITARY ABS. (g)	PITUITARY REL. %FBW	PITUITARY REL. %BRW	KIDNEYS ABS. (g)	KIDNEYS REL. %FBW	KIDNEYS REL. %BRW	TESTES ABS. (g)	TESTES REL. %FBW	TESTES REL. %BRW
GROUP 6: 10.0 MG/KG/DAY												
11849 M	528	2.37	0.45	0.0158	0.0030	0.6667	4.11	0.78	173.42	3.52	0.67	148.52
11850 M	574	2.36	0.41	0.0119	0.0021	0.5042	3.96	0.69	167.80	3.86	0.67	163.56
11855 M	548	2.34	0.43	0.0151	0.0028	0.6453	3.88	0.71	165.81	3.56	0.65	152.14
11856 M	488	2.52	0.52	0.0137	0.0028	0.5437	3.94	0.81	156.35	3.43	0.70	136.11
11864 M	600	2.23	0.37	0.0184	0.0031	0.8251	4.17	0.70	187.00	3.41	0.57	152.91
11865 M	617	2.41	0.39	0.0170	0.0028	0.7054	5.15	0.83	213.69	4.15	0.67	172.20
11868 M	476	2.40	0.50	0.0120	0.0025	0.5000	3.80	0.80	158.33	3.41	0.72	142.08
11869 M	454	2.34	0.52	0.0102	0.0022	0.4359	3.52	0.78	150.43	3.21	0.71	137.18
11874 M	600	2.40	0.40	0.0147	0.0025	0.6125	4.68	0.78	195.00	3.55	0.59	147.92
11875 M	607	2.39	0.39	0.0130	0.0021	0.5439	4.77	0.79	199.58	3.68	0.61	153.97
MEAN	549	2.38	0.44	0.0142	0.0026	0.5983	4.20	0.77	176.74	3.58	0.66	150.66
S.D.	59.9	0.073	0.055	0.00251	0.00035	0.11587	0.507	0.050	21.038	0.266	0.051	11.194
N	10	10	10	10	10	10	10	10	10	10	10	10

NOTE: REL. % FINAL BODY WEIGHT (FBW) = (ORGAN WEIGHT/FBW) X 100; REL. % BRAIN WEIGHT (BRW) = (ORGAN WEIGHT/BRW) X 100.

APPENDIX O
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL ABSOLUTE AND RELATIVE ORGAN WEIGHT DATA

SCHEDULED EUTHANASIA - DAYS 121-123

ANIMAL NO.	FINAL BODY WEIGHT (g)	HEART ABS. (g)	HEART REL. %FBW	HEART REL. %BRW	LUNGS ABS. (g)	LUNGS REL. %FBW	LUNGS REL. %BRW	LIVER ABS. (g)	LIVER REL. %FBW	LIVER REL. %BRW	SPLEEN ABS. (g)	SPLEEN REL. %FBW	SPLEEN REL. %BRW
GROUP 6: 10.0 MG/KG/DAY													
11849 M	528	1.73	0.33	73.00	1.74	0.33	73.42	19.08	3.61	805.06	0.89	0.17	37.55
11850 M	574	2.67	0.47	113.14	2.24	0.39	94.92	20.38	3.55	863.56	0.99	0.17	41.95
11855 M	548	1.64	0.30	70.09	1.97	0.36	84.19	17.20	3.14	735.04	0.94	0.17	40.17
11856 M	488	1.72	0.35	68.25	1.88	0.39	74.60	15.37	3.15	609.92	0.93	0.19	36.90
11864 M	600	1.89	0.31	84.75	1.83	0.31	82.06	22.88	3.81	1026.01	0.94	0.16	42.15
11865 M	617	1.94	0.31	80.50	1.99	0.32	82.57	21.99	3.56	912.45	1.00	0.16	41.49
11868 M	476	1.66	0.35	69.17	1.74	0.37	72.50	14.06	2.95	585.83	0.69	0.14	28.75
11869 M	454	1.52	0.33	64.96	1.90	0.42	81.20	15.42	3.40	658.97	0.78	0.17	33.33
11874 M	600	1.82	0.30	75.83	1.95	0.33	81.25	19.59	3.27	816.25	0.75	0.13	31.25
11875 M	607	1.87	0.31	78.24	1.97	0.32	82.43	20.36	3.35	851.88	0.89	0.15	37.24
MEAN	549	1.85	0.34	77.79	1.92	0.35	80.91	18.63	3.38	786.50	0.88	0.16	37.08
S.D.	59.9	0.317	0.049	13.830	0.145	0.037	6.499	2.989	0.261	139.454	0.105	0.018	4.669
N	10	10	10	10	10	10	10	10	10	10	10	10	10

NOTE: REL. % FINAL BODY WEIGHT (FBW) = (ORGAN WEIGHT/FBW) X 100; REL. % BRAIN WEIGHT (BRW) = (ORGAN WEIGHT/BRW) X 100.

APPENDIX O
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL ABSOLUTE AND RELATIVE ORGAN WEIGHT DATA

SCHEDULED EUTHANASIA - DAYS 121-123

ANIMAL NO.	FINAL BODY WEIGHT (g)	EPIDIDYMIS ABS. (g)	EPIDIDYMIS REL. %FBW	EPIDIDYMIS REL. %BRW	THYROID/PARATHYROID ABS. (g)	THYROID/PARATHYROID REL. %FBW	THYROID/PARATHYROID REL. %BRW
GROUP 6: 10.0 MG/KG/DAY							
11849 M	528	1.54	0.29	64.98	0.0363	0.0069	1.5316
11850 M	574	1.44	0.25	61.02	0.0382	0.0067	1.6186
11855 M	548	1.50	0.27	64.10	0.0219[a]	0.0040	0.9359
11856 M	488	1.55	0.32	61.51	0.0347	0.0071	1.3770
11864 M	600	1.34	0.22	60.09	0.0371	0.0062	1.6637
11865 M	617	1.73	0.28	71.78	0.0260	0.0042	1.0788
11868 M	476	1.38	0.29	57.50	0.0362	0.0076	1.5083
11869 M	454	1.21	0.27	51.71	0.0295	0.0065	1.2607
11874 M	600	1.39	0.23	57.92	0.0320	0.0053	1.3333
11875 M	607	1.54	0.25	64.44	0.0286	0.0047	1.1967
MEAN	549	1.46	0.27	61.50	0.0321	0.0059	1.3505
S.D.	59.9	0.143	0.029	5.377	0.00541	0.00127	0.23714
N	10	10	10	10	10	10	10

NOTE: REL. % FINAL BODY WEIGHT (FBW) = (ORGAN WEIGHT/FBW) X 100; REL. % BRAIN WEIGHT (BRW) = (ORGAN WEIGHT/BRW) X 100.
[a]NO LEFT THYROID, ISTHMUS ENDS PROXIMAL TO RIGHT THYROID GLAND.

APPENDIX O
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL ABSOLUTE AND RELATIVE ORGAN WEIGHT DATA

SCHEDULED EUTHANASIA - DAYS 15-18

ANIMAL NO.	FINAL BODY WEIGHT (g)	BRAIN ABS. (g)	BRAIN REL. %FBW	PITUITARY ABS. (g)	PITUITARY REL. %FBW	PITUITARY REL. %BRW	OVARIES ABS. (g)	OVARIES REL. %FBW	OVARIES REL. %BRW	KIDNEYS ABS. (g)	KIDNEYS REL. %FBW	KIDNEYS REL. %BRW
GROUP 1: 0 MG/KG/DAY												
11877 F	191	1.88	0.98	0.0112	0.0059	0.5957	0.0908	0.0475	4.8298	2.14	1.12	113.83
11878 F	201	1.90	0.95	0.0137	0.0068	0.7211	0.0843	0.0419	4.4368	1.99	0.99	104.74
11881 F	191	1.96	1.03	0.0105	0.0055	0.5357	0.0743	0.0389	3.7908	1.93	1.01	98.47
11882 F	218	2.02	0.93	0.0137	0.0063	0.6782	0.1065	0.0489	5.2723	2.27	1.04	112.38
11884 F	215	2.02	0.94	0.0160	0.0074	0.7921	0.0892	0.0415	4.4158	1.97	0.92	97.52
11889 F	224	2.00	0.89	0.0160	0.0071	0.8000	0.1015	0.0453	5.0750	2.15	0.96	107.50
11893 F	244	2.02	0.83	0.0154	0.0063	0.7624	0.1084	0.0444	5.3663	2.34	0.96	115.84
11894 F	235	2.01	0.86	0.0117	0.0050	0.5821	0.1108	0.0471	5.5124	2.21	0.94	109.95
11900 F	214	2.05	0.96	0.0099	0.0046	0.4829	0.1169	0.0546	5.7024	2.04	0.95	99.51
11903 F	249	2.03	0.82	0.0146	0.0059	0.7192	0.1207	0.0485	5.9458	2.24	0.90	110.34
MEAN	218	1.99	0.92	0.0133	0.0061	0.6669	0.1003	0.0459	5.0348	2.13	0.98	107.01
S.D.	20.4	0.057	0.068	0.00229	0.00091	0.11136	0.01510	0.00450	0.66682	0.140	0.065	6.647
N	10	10	10	10	10	10	10	10	10	10	10	10

NOTE: REL. % FINAL BODY WEIGHT (FBW) = (ORGAN WEIGHT/FBW) X 100; REL. % BRAIN WEIGHT (BRW) = (ORGAN WEIGHT/BRW) X 100.

APPENDIX O
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL ABSOLUTE AND RELATIVE ORGAN WEIGHT DATA

SCHEDULED EUTHANASIA - DAYS 15-18

ANIMAL NO.	FINAL BODY WEIGHT (g)	HEART ABS. (g)	HEART REL. %FBW	HEART REL. %BRW	LUNGS ABS. (g)	LUNGS REL. %FBW	LUNGS REL. %BRW	LIVER ABS. (g)	LIVER REL. %FBW	LIVER REL. %BRW	SPLEEN ABS. (g)	SPLEEN REL. %FBW	SPLEEN REL. %BRW
GROUP 1: 0 MG/KG/DAY													
11877 F	191	1.00	0.52	53.19	1.37	0.72	72.87	9.32	4.88	495.74	0.44	0.23	23.40
11878 F	201	0.93	0.46	48.95	1.12	0.56	58.95	8.74	4.35	460.00	0.52	0.26	27.37
11881 F	191	0.91	0.48	46.43	1.08	0.57	55.10	8.91	4.66	454.59	0.39	0.20	19.90
11882 F	218	0.99	0.45	49.01	1.37	0.63	67.82	10.67	4.89	528.22	0.64	0.29	31.68
11884 F	215	0.96	0.45	47.52	1.09	0.51	53.96	11.16	5.19	552.48	0.68	0.32	33.66
11889 F	224	0.90	0.40	45.00	1.13	0.50	56.50	11.18	4.99	559.00	0.60	0.27	30.00
11893 F	244	1.04	0.43	51.49	1.23	0.50	60.89	12.69	5.20	628.22	0.53	0.22	26.24
11894 F	235	1.03	0.44	51.24	1.24	0.53	61.69	9.92	4.22	493.53	0.57	0.24	28.36
11900 F	214	0.80	0.37	39.02	1.25	0.58	60.98	10.15	4.74	495.12	0.52	0.24	25.37
11903 F	249	1.10	0.44	54.19	1.36	0.55	67.00	13.05	5.24	642.86	0.61	0.24	30.05
MEAN	218	0.97	0.44	48.60	1.22	0.56	61.58	10.58	4.84	530.98	0.55	0.25	27.60
S.D.	20.4	0.085	0.041	4.453	0.116	0.067	6.050	1.477	0.351	65.003	0.089	0.034	4.077
N	10	10	10	10	10	10	10	10	10	10	10	10	10

NOTE: REL. % FINAL BODY WEIGHT (FBW) = (ORGAN WEIGHT/FBW) X 100; REL. % BRAIN WEIGHT (BRW) = (ORGAN WEIGHT/BRW) X 100.

APPENDIX O
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL ABSOLUTE AND RELATIVE ORGAN WEIGHT DATA

SCHEDULED EUTHANASIA - DAYS 15-18

ANIMAL NO.	FINAL BODY WEIGHT (g)	UTERUS ABS. (g)	UTERUS REL. %FBW	UTERUS REL. %BRW	THYROID/PARATHYROID ABS. (g)	THYROID/PARATHYROID REL. %FBW	THYROID/PARATHYROID REL. %BRW
GROUP 1: 0 MG/KG/DAY							
11877 F	191	0.45	0.24	23.94	0.0161	0.0084	0.8564
11878 F	201	0.41	0.20	21.58	0.0186	0.0093	0.9789
11881 F	191	0.34	0.18	17.35	0.0178	0.0093	0.9082
11882 F	218	0.37	0.17	18.32	0.0214	0.0098	1.0594
11884 F	215	0.44	0.20	21.78	0.0190	0.0088	0.9406
11889 F	224	0.69	0.31	34.50	0.0192	0.0086	0.9600
11893 F	244	0.36	0.15	17.82	0.0161	0.0066	0.7970
11894 F	235	0.35	0.15	17.41	0.0145	0.0062	0.7214
11900 F	214	0.51	0.24	24.88	0.0217	0.0101	1.0585
11903 F	249	0.38	0.15	18.72	0.0236	0.0095	1.1626
MEAN	218	0.43	0.20	21.63	0.0188	0.0087	0.9443
S.D.	20.4	0.106	0.051	5.287	0.00284	0.00131	0.13158
N	10	10	10	10	10	10	10

NOTE: REL. % FINAL BODY WEIGHT (FBW) = (ORGAN WEIGHT/FBW) X 100; REL. % BRAIN WEIGHT (BRW) = (ORGAN WEIGHT/BRW) X 100.

APPENDIX O
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL ABSOLUTE AND RELATIVE ORGAN WEIGHT DATA

SCHEDULED EUTHANASIA - DAYS 15-18

ANIMAL NO.	FINAL BODY WEIGHT (g)	BRAIN ABS. (g)	BRAIN REL. %FBW	PITUITARY ABS. (g)	PITUITARY REL. %FBW	PITUITARY REL. %BRW	OVARIES ABS. (g)	OVARIES REL. %FBW	OVARIES REL. %BRW	KIDNEYS ABS. (g)	KIDNEYS REL. %FBW	KIDNEYS REL. %BRW
GROUP 2: 0.01 MG/KG/DAY												
11906 F	191	2.00	1.05	0.0201	0.0105	1.0050	0.1228	0.0643	6.1400	1.91	1.00	95.50
11908 F	193	1.95	1.01	0.0101	0.0052	0.5179	0.0852	0.0441	4.3692	1.95	1.01	100.00
11909 F	203	2.04	1.00	0.0102	0.0050	0.5000	0.1027	0.0506	5.0343	2.15	1.06	105.39
11911 F	215	1.89	0.88	0.0122	0.0057	0.6455	0.1160	0.0540	6.1376	2.05	0.95	108.47
11912 F	215	1.93	0.90	0.0143	0.0067	0.7409	0.1061	0.0493	5.4974	2.12	0.99	109.84
11913 F	203	1.93	0.95	0.0124	0.0061	0.6425	0.0809	0.0399	4.1917	1.95	0.96	101.04
11917 F	222	2.09	0.94	0.0126	0.0057	0.6029	0.0961	0.0433	4.5981	2.04	0.92	97.61
11921 F	233	1.78	0.76	0.0145	0.0062	0.8146	0.0996	0.0427	5.5955	2.08	0.89	116.85
11923 F	231	1.99	0.86	0.0122	0.0053	0.6131	0.1067	0.0462	5.3618	2.40	1.04	120.60
11925 F	238	1.99	0.84	0.0182	0.0076	0.9146	0.1627	0.0684	8.1759	2.31	0.97	116.08
MEAN	214	1.96	0.92	0.0137	0.0064	0.6997	0.1079	0.0503	5.5102	2.10	0.98	107.14
S.D.	16.7	0.086	0.088	0.00325	0.00164	0.16676	0.02303	0.00947	1.15586	0.158	0.051	8.707
N	10	10	10	10	10	10	10	10	10	10	10	10

NOTE: REL. % FINAL BODY WEIGHT (FBW) = (ORGAN WEIGHT/FBW) X 100; REL. % BRAIN WEIGHT (BRW) = (ORGAN WEIGHT/BRW) X 100.

APPENDIX O
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL ABSOLUTE AND RELATIVE ORGAN WEIGHT DATA

SCHEDULED EUTHANASIA - DAYS 15-18

ANIMAL NO.	FINAL BODY WEIGHT (g)	HEART ABS. (g)	HEART REL. %FBW	HEART REL. %BRW	LUNGS ABS. (g)	LUNGS REL. %FBW	LUNGS REL. %BRW	LIVER ABS. (g)	LIVER REL. %FBW	LIVER REL. %BRW	SPLEEN ABS. (g)	SPLEEN REL. %FBW	SPLEEN REL. %BRW
GROUP 2: 0.01 MG/KG/DAY													
11906 F	191	0.94	0.49	47.00	1.25	0.65	62.50	8.69	4.55	434.50	0.55	0.29	27.50
11908 F	193	0.85	0.44	43.59	1.12	0.58	57.44	8.22	4.26	421.54	0.47	0.24	24.10
11909 F	203	0.86	0.42	42.16	1.16	0.57	56.86	10.55	5.20	517.16	0.54	0.27	26.47
11911 F	215	0.97	0.45	51.32	1.23	0.57	65.08	10.51	4.89	556.08	0.56	0.26	29.63
11912 F	215	0.95	0.44	49.22	1.12	0.52	58.03	9.73	4.53	504.15	0.55	0.26	28.50
11913 F	203	0.95	0.47	49.22	1.26	0.62	65.28	9.41	4.64	487.56	0.58	0.29	30.05
11917 F	222	0.93	0.42	44.50	1.21	0.55	57.89	11.69	5.27	559.33	0.62	0.28	29.67
11921 F	233	0.88	0.38	49.44	1.23	0.53	69.10	10.39	4.46	583.71	0.58	0.25	32.58
11923 F	231	1.01	0.44	50.75	1.36	0.59	68.34	10.98	4.75	551.76	0.61	0.26	30.65
11925 F	238	0.99	0.42	49.75	1.27	0.53	63.82	10.71	4.50	538.19	0.64	0.27	32.16
MEAN	214	0.93	0.44	47.70	1.22	0.57	62.44	10.09	4.70	515.40	0.57	0.27	29.13
S.D.	16.7	0.054	0.031	3.209	0.073	0.043	4.624	1.068	0.326	54.111	0.048	0.015	2.587
N	10	10	10	10	10	10	10	10	10	10	10	10	10

NOTE: REL. % FINAL BODY WEIGHT (FBW) = (ORGAN WEIGHT/FBW) X 100; REL. % BRAIN WEIGHT (BRW) = (ORGAN WEIGHT/BRW) X 100.

APPENDIX O
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL ABSOLUTE AND RELATIVE ORGAN WEIGHT DATA

SCHEDULED EUTHANASIA - DAYS 15-18

ANIMAL NO.	FINAL BODY WEIGHT (g)	UTERUS ABS. (g)	UTERUS REL. %FBW	UTERUS REL. %BRW	THYROID/PARATHYROID ABS. (g)	THYROID/PARATHYROID REL. %FBW	THYROID/PARATHYROID REL. %BRW
GROUP 2: 0.01 MG/KG/DAY							
11906 F	191	0.49	0.26	24.50	0.0209	0.0109	1.0450
11908 F	193	0.39	0.20	20.00	0.0165	0.0085	0.8462
11909 F	203	0.98	0.48	48.04	0.0203	0.0100	0.9951
11911 F	215	0.57	0.27	30.16	0.0169	0.0079	0.8942
11912 F	215	0.52	0.24	26.94	0.0190	0.0088	0.9845
11913 F	203	0.28	0.14	14.51	0.0138	0.0068	0.7150
11917 F	222	0.40	0.18	19.14	0.0180	0.0081	0.8612
11921 F	233	0.39	0.17	21.91	0.0181	0.0078	1.0169
11923 F	231	0.48	0.21	24.12	0.0164	0.0071	0.8241
11925 F	238	0.57	0.24	28.64	0.0175	0.0074	0.8794
MEAN	214	0.51	0.24	25.80	0.0177	0.0083	0.9062
S.D.	16.7	0.190	0.095	9.117	0.00205	0.00130	0.10291
N	10	10	10	10	10	10	10

NOTE: REL. % FINAL BODY WEIGHT (FBW) = (ORGAN WEIGHT/FBW) X 100; REL. % BRAIN WEIGHT (BRW) = (ORGAN WEIGHT/BRW) X 100.

APPENDIX O
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL ABSOLUTE AND RELATIVE ORGAN WEIGHT DATA

SCHEDULED EUTHANASIA - DAYS 15-18

ANIMAL NO.	FINAL BODY WEIGHT (g)	BRAIN ABS. (g)	BRAIN REL. %FBW	PITUITARY ABS. (g)	PITUITARY REL. %FBW	PITUITARY REL. %BRW	OVARIES ABS. (g)	OVARIES REL. %FBW	OVARIES REL. %BRW	KIDNEYS ABS. (g)	KIDNEYS REL. %FBW	KIDNEYS REL. %BRW
GROUP 3: 0.05 MG/KG/DAY												
11930 F	194	1.83	0.94	0.0123	0.0063	0.6721	0.1139	0.0587	6.2240	2.08	1.07	113.66
11931 F	204	1.99	0.98	0.0125	0.0061	0.6281	0.1070	0.0525	5.3769	1.92	0.94	96.48
11934 F	216	2.14	0.99	0.0104	0.0048	0.4860	0.0834	0.0386	3.8972	2.15	1.00	100.47
11941 F	226	1.77	0.78	0.0118	0.0052	0.6667	0.0999	0.0442	5.6441	1.89	0.84	106.78
11942 F	253	2.02	0.80	0.0200	0.0079	0.9901	0.1175	0.0464	5.8168	2.24	0.89	110.89
11945 F	242	2.07	0.86	0.0127	0.0052	0.6135	0.1039	0.0429	5.0193	2.28	0.94	110.14
11946 F	195	2.01	1.03	0.0133	0.0068	0.6617	0.0836	0.0429	4.1592	2.17	1.11	107.96
11951 F	219	1.94	0.89	0.0121	0.0055	0.6237	0.1418	0.0647	7.3093	2.02	0.92	104.12
11952 F	244	1.77	0.73	0.0107	0.0044	0.6045	0.1052	0.0431	5.9435	1.97	0.81	111.30
11953 F	220	2.00	0.91	0.0127	0.0058	0.6350	0.1217	0.0553	6.0850	2.00	0.91	100.00
MEAN	221	1.95	0.89	0.0129	0.0058	0.6581	0.1078	0.0489	5.5475	2.07	0.94	106.18
S.D.	20.4	0.126	0.099	0.00267	0.00103	0.12806	0.01747	0.00844	1.00267	0.134	0.096	5.703
N	10	10	10	10	10	10	10	10	10	10	10	10

NOTE: REL. % FINAL BODY WEIGHT (FBW) = (ORGAN WEIGHT/FBW) X 100; REL. % BRAIN WEIGHT (BRW) = (ORGAN WEIGHT/BRW) X 100.

APPENDIX O
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL ABSOLUTE AND RELATIVE ORGAN WEIGHT DATA

SCHEDULED EUTHANASIA - DAYS 15-18

ANIMAL NO.	FINAL BODY WEIGHT (g)	HEART ABS. (g)	HEART REL. %FBW	HEART REL. %BRW	LUNGS ABS. (g)	LUNGS REL. %FBW	LUNGS REL. %BRW	LIVER ABS. (g)	LIVER REL. %FBW	LIVER REL. %BRW	SPLEEN ABS. (g)	SPLEEN REL. %FBW	SPLEEN REL. %BRW
GROUP 3: 0.05 MG/KG/DAY													
11930 F	194	0.90	0.46	49.18	1.20	0.62	65.57	9.74	5.02	532.24	0.67	0.35	36.61
11931 F	204	0.91	0.45	45.73	1.17	0.57	58.79	9.70	4.75	487.44	0.53	0.26	26.63
11934 F	216	1.04	0.48	48.60	1.16	0.54	54.21	10.90	5.05	509.35	0.54	0.25	25.23
11941 F	226	0.92	0.41	51.98	1.24	0.55	70.06	11.27	4.99	636.72	0.48	0.21	27.12
11942 F	253	1.04	0.41	51.49	1.41	0.56	69.80	12.67	5.01	627.23	0.76	0.30	37.62
11945 F	242	1.13	0.47	54.59	1.39	0.57	67.15	11.23	4.64	542.51	0.69	0.29	33.33
11946 F	195	0.92	0.47	45.77	1.42	0.73	70.65	8.79	4.51	437.31	0.61	0.31	30.35
11951 F	219	0.92	0.42	47.42	1.28	0.58	65.98	10.26	4.68	528.87	0.71	0.32	36.60
11952 F	244	0.95	0.39	53.67	1.20	0.49	67.80	11.75	4.82	663.84	0.58	0.24	32.77
11953 F	220	0.88	0.40	44.00	1.24	0.56	62.00	9.69	4.40	484.50	0.49	0.22	24.50
MEAN	221	0.96	0.44	49.24	1.27	0.58	65.20	10.60	4.79	545.00	0.61	0.28	31.08
S.D.	20.4	0.081	0.034	3.595	0.100	0.062	5.353	1.170	0.228	74.213	0.098	0.045	5.003
N	10	10	10	10	10	10	10	10	10	10	10	10	10

NOTE: REL. % FINAL BODY WEIGHT (FBW) = (ORGAN WEIGHT/FBW) X 100; REL. % BRAIN WEIGHT (BRW) = (ORGAN WEIGHT/BRW) X 100.

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APPENDIX O
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL ABSOLUTE AND RELATIVE ORGAN WEIGHT DATA

SCHEDULED EUTHANASIA - DAYS 15-18

ANIMAL NO.	FINAL BODY WEIGHT (g)	UTERUS ABS. (g)	UTERUS REL. %FBW	UTERUS REL. %BRW	THYROID/PARATHYROID ABS. (g)	THYROID/PARATHYROID REL. %FBW	THYROID/PARATHYROID REL. %BRW
GROUP 3: 0.05 MG/KG/DAY							
11930 F	194	0.45	0.23	24.59	0.0223	0.0115	1.2186
11931 F	204	0.33	0.16	16.58	0.0173	0.0085	0.8693
11934 F	216	0.62	0.29	28.97	0.0195	0.0090	0.9112
11941 F	226	0.43	0.19	24.29	0.0165	0.0073	0.9322
11942 F	253	0.58	0.23	28.71	0.0199	0.0079	0.9851
11945 F	242	0.47	0.19	22.71	0.0256	0.0106	1.2367
11946 F	195	0.52	0.27	25.87	0.0229	0.0117	1.1393
11951 F	219	0.47	0.21	24.23	0.0139	0.0063	0.7165
11952 F	244	0.38	0.16	21.47	0.0181	0.0074	1.0226
11953 F	220	0.56	0.25	28.00	0.0180	0.0082	0.9000
MEAN	221	0.48	0.22	24.54	0.0194	0.0088	0.9932
S.D.	20.4	0.090	0.044	3.758	0.00343	0.00185	0.16445
N	10	10	10	10	10	10	10

NOTE: REL. % FINAL BODY WEIGHT (FBW) = (ORGAN WEIGHT/FBW) X 100; REL. % BRAIN WEIGHT (BRW) = (ORGAN WEIGHT/BRW) X 100.

APPENDIX O
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL ABSOLUTE AND RELATIVE ORGAN WEIGHT DATA

SCHEDULED EUTHANASIA - DAYS 15-18

ANIMAL NO.	FINAL BODY WEIGHT (g)	BRAIN ABS. (g)	BRAIN REL. %FBW	PITUITARY ABS. (g)	PITUITARY REL. %FBW	PITUITARY REL. %BRW	OVARIES ABS. (g)	OVARIES REL. %FBW	OVARIES REL. %BRW	KIDNEYS ABS. (g)	KIDNEYS REL. %FBW	KIDNEYS REL. %BRW
GROUP 4: 0.2 MG/KG/DAY												
11959 F	187	1.92	1.03	0.0121	0.0065	0.6302	0.0824	0.0441	4.2917	1.78	0.95	92.71
11960 F	203	1.89	0.93	0.0137	0.0067	0.7249	0.0966	0.0476	5.1111	1.96	0.97	103.70
11962 F	205	1.91	0.93	0.0127	0.0062	0.6649	0.1097	0.0535	5.7435	1.98	0.97	103.66
11963 F	204	2.02	0.99	0.0097	0.0048	0.4802	0.1104	0.0541	5.4653	2.13	1.04	105.45
11964 F	184	1.98	1.08	0.0148	0.0080	0.7475	0.0965	0.0524	4.8737	1.84	1.00	92.93
11967 F	215	1.98	0.92	0.0172	0.0080	0.8687	0.1105	0.0514	5.5808	2.07	0.96	104.55
11968 F	210	2.06	0.98	0.0112	0.0053	0.5437	0.1025	0.0488	4.9757	2.21	1.05	107.28
11970 F	243	2.05	0.84	0.0112	0.0046	0.5463	0.1049	0.0432	5.1171	2.46	1.01	120.00
11971 F	216	1.68	0.78	0.0110	0.0051	0.6548	0.0680	0.0315	4.0476	2.11	0.98	125.60
11974 F	237	2.02	0.85	0.0192	0.0081	0.9505	0.1003	0.0423	4.9653	2.28	0.96	112.87
MEAN	210	1.95	0.93	0.0133	0.0063	0.6812	0.0982	0.0469	5.0172	2.08	0.99	106.87
S.D.	18.8	0.112	0.090	0.00301	0.00138	0.14721	0.01361	0.00692	0.53294	0.205	0.036	10.445
N	10	10	10	10	10	10	10	10	10	10	10	10

NOTE: REL. % FINAL BODY WEIGHT (FBW) = (ORGAN WEIGHT/FBW) X 100; REL. % BRAIN WEIGHT (BRW) = (ORGAN WEIGHT/BRW) X 100.

APPENDIX O
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL ABSOLUTE AND RELATIVE ORGAN WEIGHT DATA

SCHEDULED EUTHANASIA - DAYS 15-18

ANIMAL NO.	FINAL BODY WEIGHT (g)	HEART ABS. (g)	HEART REL. %FBW	HEART REL. %BRW	LUNGS ABS. (g)	LUNGS REL. %FBW	LUNGS REL. %BRW	LIVER ABS. (g)	LIVER REL. %FBW	LIVER REL. %BRW	SPLEEN ABS. (g)	SPLEEN REL. %FBW	SPLEEN REL. %BRW
GROUP 4: 0.2 MG/KG/DAY													
11959 F	187	0.88	0.47	45.83	1.14	0.61	59.38	9.35	5.00	486.98	0.55	0.29	28.65
11960 F	203	0.87	0.43	46.03	1.48	0.73	78.31	10.58	5.21	559.79	0.66	0.33	34.92
11962 F	205	1.00	0.49	52.36	1.07	0.52	56.02	9.60	4.68	502.62	0.59	0.29	30.89
11963 F	204	0.88	0.43	43.56	1.25	0.61	61.88	10.84	5.31	536.63	0.69	0.34	34.16
11964 F	184	0.88	0.48	44.44	1.01	0.55	51.01	7.73	4.20	390.40	0.46	0.25	23.23
11967 F	215	0.99	0.46	50.00	1.35	0.63	68.18	11.51	5.35	581.31	0.62	0.29	31.31
11968 F	210	0.87	0.41	42.23	1.67	0.80	81.07	9.96	4.74	483.50	0.57	0.27	27.67
11970 F	243	1.26	0.52	61.46	1.46	0.60	71.22	11.84	4.87	577.56	0.66	0.27	32.20
11971 F	216	0.91	0.42	54.17	1.29	0.60	76.79	10.72	4.96	638.10	0.66	0.31	39.29
11974 F	237	1.00	0.42	49.50	1.24	0.52	61.39	10.90	4.60	539.60	0.58	0.24	28.71
MEAN	210	0.95	0.45	48.96	1.30	0.62	66.52	10.30	4.89	529.65	0.60	0.29	31.10
S.D.	18.8	0.121	0.035	5.864	0.202	0.087	10.168	1.195	0.356	68.193	0.069	0.030	4.443
N	10	10	10	10	10	10	10	10	10	10	10	10	10

NOTE: REL. % FINAL BODY WEIGHT (FBW) = (ORGAN WEIGHT/FBW) X 100; REL. % BRAIN WEIGHT (BRW) = (ORGAN WEIGHT/BRW) X 100.

APPENDIX O
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL ABSOLUTE AND RELATIVE ORGAN WEIGHT DATA

SCHEDULED EUTHANASIA - DAYS 15-18

ANIMAL NO.	FINAL BODY WEIGHT (g)	UTERUS ABS. (g)	UTERUS REL. %FBW	UTERUS REL. %BRW	THYROID/PARATHYROID ABS. (g)	THYROID/PARATHYROID REL. %FBW	THYROID/PARATHYROID REL. %BRW
GROUP 4: 0.2 MG/KG/DAY							
11959 F	187	0.37	0.20	19.27	0.0149	0.0080	0.7760
11960 F	203	0.48	0.24	25.40	0.0201	0.0099	1.0635
11962 F	205	0.82	0.40	42.93	0.0183	0.0089	0.9581
11963 F	204	0.33	0.16	16.34	0.0211	0.0103	1.0446
11964 F	184	0.48	0.26	24.24	0.0138	0.0075	0.6970
11967 F	215	0.50	0.23	25.25	0.0220	0.0102	1.1111
11968 F	210	0.48	0.23	23.30	0.0217	0.0103	1.0534
11970 F	243	0.41	0.17	20.00	0.0209	0.0086	1.0195
11971 F	216	0.44	0.20	26.19	0.0152	0.0070	0.9048
11974 F	237	1.06	0.45	52.48	0.0189	0.0080	0.9356
MEAN	210	0.54	0.25	27.54	0.0187	0.0089	0.9564
S.D.	18.8	0.226	0.095	11.303	0.00304	0.00125	0.13313
N	10	10	10	10	10	10	10

NOTE: REL. % FINAL BODY WEIGHT (FBW) = (ORGAN WEIGHT/FBW) X 100; REL. % BRAIN WEIGHT (BRW) = (ORGAN WEIGHT/BRW) X 100.

APPENDIX O
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL ABSOLUTE AND RELATIVE ORGAN WEIGHT DATA

SCHEDULED EUTHANASIA - DAYS 15-18

ANIMAL NO.	FINAL BODY WEIGHT (g)	BRAIN ABS. (g)	BRAIN REL. %FBW	PITUITARY ABS. (g)	PITUITARY REL. %FBW	PITUITARY REL. %BRW	OVARIES ABS. (g)	OVARIES REL. %FBW	OVARIES REL. %BRW	KIDNEYS ABS. (g)	KIDNEYS REL. %FBW	KIDNEYS REL. %BRW
GROUP 5: 1.0 MG/KG/DAY												
11977 F	204	1.82	0.89	0.0115	0.0056	0.6319	0.0812	0.0398	4.4615	1.97	0.97	108.24
11982 F	220	1.95	0.89	0.0110	0.0050	0.5641	0.0983	0.0447	5.0410	2.23	1.01	114.36
11984 F	226	2.00	0.88	0.0125	0.0055	0.6250	0.1362	0.0603	6.8100	2.17	0.96	108.50
11989 F	193	1.99	1.03	0.0130	0.0067	0.6533	0.1085	0.0562	5.4523	2.04	1.06	102.51
11991 F	223	1.90	0.85	0.0117	0.0052	0.6158	0.0953	0.0427	5.0158	2.11	0.95	111.05
11992 F	236	1.94	0.82	0.0090	0.0038	0.4639	0.0954	0.0404	4.9175	2.10	0.89	108.25
11994 F	229	2.00	0.87	0.0175	0.0076	0.8750	0.0940	0.0410	4.7000	2.25	0.98	112.50
12001 F	216	2.01	0.93	0.0152	0.0070	0.7562	0.0800	0.0370	3.9801	2.24	1.04	111.44
12003 F	210	1.96	0.93	0.0142	0.0068	0.7245	0.0860	0.0410	4.3878	2.14	1.02	109.18
12005 F	215	2.00	0.93	0.0096	0.0045	0.4800	0.0793	0.0369	3.9650	1.80	0.84	90.00
MEAN	217	1.96	0.90	0.0125	0.0058	0.6390	0.0954	0.0440	4.8731	2.11	0.97	107.60
S.D.	12.6	0.059	0.057	0.00258	0.00122	0.12440	0.01710	0.00791	0.82963	0.140	0.068	6.962
N	10	10	10	10	10	10	10	10	10	10	10	10

NOTE: REL. % FINAL BODY WEIGHT (FBW) = (ORGAN WEIGHT/FBW) X 100; REL. % BRAIN WEIGHT (BRW) = (ORGAN WEIGHT/BRW) X 100.

APPENDIX O
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL ABSOLUTE AND RELATIVE ORGAN WEIGHT DATA

SCHEDULED EUTHANASIA - DAYS 15-18

ANIMAL NO.	FINAL BODY WEIGHT (g)	HEART ABS. (g)	HEART REL. %FBW	HEART REL. %BRW	LUNGS ABS. (g)	LUNGS REL. %FBW	LUNGS REL. %BRW	LIVER ABS. (g)	LIVER REL. %FBW	LIVER REL. %BRW	SPLEEN ABS. (g)	SPLEEN REL. %FBW	SPLEEN REL. %BRW
GROUP 5: 1.0 MG/KG/DAY													
11977 F	204	0.94	0.46	51.65	1.21	0.59	66.48	9.12	4.47	501.10	0.50	0.25	27.47
11982 F	220	0.91	0.41	46.67	1.12	0.51	57.44	9.87	4.49	506.15	0.59	0.27	30.26
11984 F	226	0.86	0.38	43.00	1.20	0.53	60.00	11.32	5.01	566.00	0.66	0.29	33.00
11989 F	193	0.83	0.43	41.71	2.34[a]	a	a	9.03	4.68	453.77	0.49	0.25	24.62
11991 F	223	1.00	0.45	52.63	3.59[a]	a	a	10.48	4.70	551.58	0.60	0.27	31.58
11992 F	236	0.96	0.41	49.48	1.23	0.52	63.40	11.09	4.70	571.65	0.53	0.22	27.32
11994 F	229	0.90	0.39	45.00	1.19	0.52	59.50	9.20	4.02	460.00	0.59	0.26	29.50
12001 F	216	0.94	0.44	46.77	1.44	0.67	71.64	11.01	5.10	547.76	0.65	0.30	32.34
12003 F	210	0.81	0.39	41.33	1.16	0.55	59.18	9.38	4.47	478.57	0.47	0.22	23.98
12005 F	215	0.93	0.43	46.50	1.16	0.54	58.00	8.57	3.99	428.50	0.48	0.22	24.00
MEAN	217	0.91	0.42	46.47	1.21	0.55	61.96	9.91	4.56	506.51	0.56	0.26	28.41
S.D.	12.6	0.059	0.027	3.906	0.098	0.052	4.928	0.994	0.363	50.942	0.071	0.028	3.442
N	10	10	10	10	8	8	8	10	10	10	10	10	10

NOTE: REL. % FINAL BODY WEIGHT (FBW) = (ORGAN WEIGHT/FBW) X 100; REL. % BRAIN WEIGHT (BRW) = (ORGAN WEIGHT/BRW) X 100.
[a]WEIGHT WAS COLLECTED FOLLOWING INFUSION WITH FIXATIVE. VALUE WAS NOT INCLUDED IN CALCULATION OF THE MEAN AND STANDARD DEVIATION.

APPENDIX O
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL ABSOLUTE AND RELATIVE ORGAN WEIGHT DATA

SCHEDULED EUTHANASIA - DAYS 15-18

ANIMAL NO.	FINAL BODY WEIGHT (g)	BRAIN ABS. (g)	BRAIN REL. %FBW	PITUITARY ABS. (g)	PITUITARY REL. %FBW	PITUITARY REL. %BRW	OVARIES ABS. (g)	OVARIES REL. %FBW	OVARIES REL. %BRW	KIDNEYS ABS. (g)	KIDNEYS REL. %FBW	KIDNEYS REL. %BRW
GROUP 6: 10.0 MG/KG/DAY												
12010 F	215	1.93	0.90	0.0142	0.0066	0.7358	0.2264	0.1053	11.7306	1.90	0.88	98.45
12013 F	219	1.89	0.86	0.0128	0.0058	0.6772	0.0968	0.0442	5.1217	2.31	1.05	122.22
12016 F	213	1.92	0.90	0.0153	0.0072	0.7969	0.1033	0.0485	5.3802	2.07	0.97	107.81
12021 F	217	1.99	0.92	0.0109	0.0050	0.5477	0.0722	0.0333	3.6281	2.01	0.93	101.01
12023 F	223	2.02	0.91	0.0132	0.0059	0.6535	0.0895	0.0401	4.4307	2.05	0.92	101.49
12026 F	202	1.80	0.89	0.0109	0.0054	0.6056	0.0872	0.0432	4.8444	2.13	1.05	118.33
12028 F	197	1.97	1.00	0.0114	0.0058	0.5787	0.0939	0.0477	4.7665	1.89	0.96	95.94
12030 F	222	1.83	0.82	0.0141	0.0064	0.7705	0.1137	0.0512	6.2131	2.12	0.95	115.85
12031 F	193	1.93	1.00	0.0180	0.0093	0.9326	0.1068	0.0553	5.5337	2.16	1.12	111.92
12032 F	223	2.09	0.94	0.0121	0.0054	0.5789	0.0869	0.0390	4.1579	2.41	1.08	115.31
MEAN	212	1.94	0.91	0.0133	0.0063	0.6877	0.1077	0.0508	5.5807	2.11	0.99	108.83
S.D.	11.1	0.086	0.055	0.00222	0.00124	0.12129	0.04333	0.02019	2.28128	0.163	0.079	9.193
N	10	10	10	10	10	10	10	10	10	10	10	10

NOTE: REL. % FINAL BODY WEIGHT (FBW) = (ORGAN WEIGHT/FBW) X 100; REL. % BRAIN WEIGHT (BRW) = (ORGAN WEIGHT/BRW) X 100.

APPENDIX O
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL ABSOLUTE AND RELATIVE ORGAN WEIGHT DATA

SCHEDULED EUTHANASIA - DAYS 15-18

ANIMAL NO.	FINAL BODY WEIGHT (g)	HEART ABS. (g)	HEART REL. %FBW	HEART REL. %BRW	LUNGS ABS. (g)	LUNGS REL. %FBW	LUNGS REL. %BRW	LIVER ABS. (g)	LIVER REL. %FBW	LIVER REL. %BRW	SPLEEN ABS. (g)	SPLEEN REL. %FBW	SPLEEN REL. %BRW
GROUP 6: 10.0 MG/KG/DAY													
12010 F	215	0.91	0.42	47.15	1.10	0.51	56.99	10.85	5.05	562.18	0.48	0.22	24.87
12013 F	219	1.05	0.48	55.56	1.46	0.67	77.25	9.73	4.44	514.81	0.52	0.24	27.51
12016 F	213	0.96	0.45	50.00	1.61	0.76	83.85	10.03	4.71	522.40	0.60	0.28	31.25
12021 F	217	0.95	0.44	47.74	1.24	0.57	62.31	10.28	4.74	516.58	0.47	0.22	23.62
12023 F	223	0.98	0.44	48.51	1.20	0.54	59.41	9.88	4.43	489.11	0.65	0.29	32.18
12026 F	202	0.75	0.37	41.67	1.02	0.50	56.67	9.17	4.54	509.44	0.51	0.25	28.33
12028 F	197	0.88	0.45	44.67	1.08	0.55	54.82	8.77	4.45	445.18	0.52	0.26	26.40
12030 F	222	0.96	0.43	52.46	1.24	0.56	67.76	10.13	4.56	553.55	0.55	0.25	30.05
12031 F	193	0.93	0.48	48.19	1.16	0.60	60.10	9.23	4.78	478.24	0.73	0.38	37.82
12032 F	223	0.95	0.43	45.45	1.57	0.70	75.12	10.47	4.70	500.96	0.62	0.28	29.67
MEAN	212	0.93	0.44	48.14	1.27	0.60	65.43	9.85	4.64	509.24	0.56	0.27	29.17
S.D.	11.1	0.078	0.031	3.938	0.208	0.085	10.074	0.642	0.193	34.260	0.083	0.046	4.079
N	10	10	10	10	10	10	10	10	10	10	10	10	10

NOTE: REL. % FINAL BODY WEIGHT (FBW) = (ORGAN WEIGHT/FBW) X 100; REL. % BRAIN WEIGHT (BRW) = (ORGAN WEIGHT/BRW) X 100.

APPENDIX O
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL ABSOLUTE AND RELATIVE ORGAN WEIGHT DATA

SCHEDULED EUTHANASIA - DAYS 15-18

ANIMAL NO.	FINAL BODY WEIGHT (g)	UTERUS ABS. (g)	UTERUS REL. %FBW	UTERUS REL. %BRW	THYROID/PARATHYROID ABS. (g)	THYROID/PARATHYROID REL. %FBW	THYROID/PARATHYROID REL. %BRW
GROUP 6: 10.0 MG/KG/DAY							
12010 F	215	0.65	0.30	33.68	0.0199	0.0093	1.0311
12013 F	219	0.38	0.17	20.11	0.0178	0.0081	0.9418
12016 F	213	0.46	0.22	23.96	0.0210	0.0099	1.0938
12021 F	217	0.38	0.18	19.10	0.0166	0.0076	0.8342
12023 F	223	0.39	0.17	19.31	0.0209	0.0094	1.0347
12026 F	202	0.55	0.27	30.56	0.0209	0.0103	1.1611
12028 F	197	0.36	0.18	18.27	0.0177	0.0090	0.8985
12030 F	222	0.50	0.23	27.32	0.0176	0.0079	0.9617
12031 F	193	0.62	0.32	32.12	0.0208	0.0108	1.0777
12032 F	223	0.53	0.24	25.36	0.0223	0.0100	1.0670
MEAN	212	0.48	0.23	24.98	0.0195	0.0092	1.0102
S.D.	11.1	0.105	0.055	5.774	0.00194	0.00106	0.09948
N	10	10	10	10	10	10	10

NOTE: REL. % FINAL BODY WEIGHT (FBW) = (ORGAN WEIGHT/FBW) X 100; REL. % BRAIN WEIGHT (BRW) = (ORGAN WEIGHT/BRW) X 100.

APPENDIX O
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL ABSOLUTE AND RELATIVE ORGAN WEIGHT DATA

SCHEDULED EUTHANASIA - DAYS 92-95

ANIMAL NO.	FINAL BODY WEIGHT (g)	BRAIN ABS. (g)	BRAIN REL. %FBW	PITUITARY ABS. (g)	PITUITARY REL. %FBW	PITUITARY REL. %BRW	OVARIES ABS. (g)	OVARIES REL. %FBW	OVARIES REL. %BRW	KIDNEYS ABS. (g)	KIDNEYS REL. %FBW	KIDNEYS REL. %BRW
GROUP 1: 0 MG/KG/DAY												
11876 F	300	2.14	0.71	0.0165	0.0055	0.7710	0.0715	0.0238	3.3411	2.48	0.83	115.89
11886 F	291	2.17	0.75	0.0149	0.0051	0.6866	0.0431	0.0148	1.9862	1.83	0.63	84.33
11890 F	306	1.99	0.65	0.0203	0.0066	1.0201	0.0986	0.0322	4.9548	2.21	0.72	111.06
11891 F	326	2.18	0.67	0.0158	0.0048	0.7248	0.0939	0.0288	4.3073	2.29	0.70	105.05
11892 F	327	2.00	0.61	0.0169	0.0052	0.8450	0.0896	0.0274	4.4800	2.28	0.70	114.00
11895 F	327	1.98	0.61	0.0221	0.0068	1.1162	0.0501	0.0153	2.5303	2.41	0.74	121.72
11896 F	289	2.04	0.71	0.0162	0.0056	0.7941	0.0838	0.0290	4.1078	2.06	0.71	100.98
11901 F	308	2.13	0.69	0.0158	0.0051	0.7418	0.1181	0.0383	5.5446	2.53	0.82	118.78
11902 F	346	2.22	0.64	0.0181	0.0052	0.8153	0.0805	0.0233	3.6261	2.72	0.79	122.52
11904 F	372	2.18	0.59	0.0185	0.0050	0.8486	0.0827	0.0222	3.7936	2.40	0.65	110.09
MEAN	319	2.10	0.66	0.0175	0.0055	0.8364	0.0812	0.0255	3.8672	2.32	0.73	110.44
S.D.	25.9	0.091	0.052	0.00226	0.00067	0.13441	0.02216	0.00725	1.06924	0.251	0.067	11.478
N	10	10	10	10	10	10	10	10	10	10	10	10

NOTE: REL. % FINAL BODY WEIGHT (FBW) = (ORGAN WEIGHT/FBW) X 100; REL. % BRAIN WEIGHT (BRW) = (ORGAN WEIGHT/BRW) X 100.

APPENDIX O
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL ABSOLUTE AND RELATIVE ORGAN WEIGHT DATA

SCHEDULED EUTHANASIA - DAYS 92-95

ANIMAL NO.	FINAL BODY WEIGHT (g)	HEART ABS. (g)	HEART REL. %FBW	HEART REL. %BRW	LUNGS ABS. (g)	LUNGS REL. %FBW	LUNGS REL. %BRW	LIVER ABS. (g)	LIVER REL. %FBW	LIVER REL. %BRW	SPLEEN ABS. (g)	SPLEEN REL. %FBW	SPLEEN REL. %BRW
GROUP 1: 0 MG/KG/DAY													
11876 F	300	1.13	0.38	52.80	1.72	0.57	80.37	10.95	3.65	511.68	0.66	0.22	30.84
11886 F	291	0.96	0.33	44.24	1.85	0.64	85.25	9.80	3.37	451.61	0.56	0.19	25.81
11890 F	306	1.10	0.36	55.28	1.98	0.65	99.50	13.01	4.25	653.77	0.54	0.18	27.14
11891 F	326	1.17	0.36	53.67	1.38	0.42	63.30	11.43	3.51	524.31	0.62	0.19	28.44
11892 F	327	1.08	0.33	54.00	1.39	0.43	69.50	10.05	3.07	502.50	0.60	0.18	30.00
11895 F	327	1.15	0.35	58.08	1.45	0.44	73.23	14.05	4.30	709.60	0.68	0.21	34.34
11896 F	289	1.07	0.37	52.45	1.24	0.43	60.78	10.44	3.61	511.76	0.57	0.20	27.94
11901 F	308	1.06	0.34	49.77	1.57	0.51	73.71	12.16	3.95	570.89	0.78	0.25	36.62
11902 F	346	1.28	0.37	57.66	1.30	0.38	58.56	12.47	3.60	561.71	0.69	0.20	31.08
11904 F	372	1.04	0.28	47.71	1.29	0.35	59.17	11.65	3.13	534.40	0.73	0.20	33.49
MEAN	319	1.10	0.35	52.57	1.52	0.48	72.34	11.60	3.64	553.22	0.64	0.20	30.57
S.D.	25.9	0.086	0.029	4.318	0.255	0.106	13.157	1.354	0.418	76.360	0.078	0.022	3.431
N	10	10	10	10	10	10	10	10	10	10	10	10	10

NOTE: REL. % FINAL BODY WEIGHT (FBW) = (ORGAN WEIGHT/FBW) X 100; REL. % BRAIN WEIGHT (BRW) = (ORGAN WEIGHT/BRW) X 100.

APPENDIX O
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL ABSOLUTE AND RELATIVE ORGAN WEIGHT DATA

SCHEDULED EUTHANASIA - DAYS 92-95

ANIMAL NO.	FINAL BODY WEIGHT (g)	UTERUS ABS. (g)	UTERUS REL. %FBW	UTERUS REL. %BRW	THYROID/PARATHYROID ABS. (g)	THYROID/PARATHYROID REL. %FBW	THYROID/PARATHYROID REL. %BRW
GROUP 1: 0 MG/KG/DAY							
11876 F	300	0.62	0.21	28.97	0.0252	0.0084	1.1776
11886 F	291	0.53	0.18	24.42	0.0195	0.0067	0.8986
11890 F	306	0.42	0.14	21.11	0.0191	0.0062	0.9598
11891 F	326	0.53	0.16	24.31	0.0242	0.0074	1.1101
11892 F	327	0.67	0.20	33.50	0.0190	0.0058	0.9500
11895 F	327	0.58	0.18	29.29	0.0163	0.0050	0.8232
11896 F	289	0.53	0.18	25.98	0.0230	0.0080	1.1275
11901 F	308	0.44	0.14	20.66	0.0242	0.0079	1.1362
11902 F	346	0.69	0.20	31.08	0.0270	0.0078	1.2162
11904 F	372	0.53	0.14	24.31	0.0237	0.0064	1.0872
MEAN	319	0.55	0.17	26.36	0.0221	0.0070	1.0486
S.D.	25.9	0.088	0.026	4.231	0.00341	0.00110	0.13114
N	10	10	10	10	10	10	10

NOTE: REL. % FINAL BODY WEIGHT (FBW) = (ORGAN WEIGHT/FBW) X 100; REL. % BRAIN WEIGHT (BRW) = (ORGAN WEIGHT/BRW) X 100.

APPENDIX O
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL ABSOLUTE AND RELATIVE ORGAN WEIGHT DATA

SCHEDULED EUTHANASIA - DAYS 92-95

ANIMAL NO.	FINAL BODY WEIGHT (g)	BRAIN ABS. (g)	BRAIN REL. %FBW	PITUITARY ABS. (g)	PITUITARY REL. %FBW	PITUITARY REL. %BRW	OVARIES ABS. (g)	OVARIES REL. %FBW	OVARIES REL. %BRW	KIDNEYS ABS. (g)	KIDNEYS REL. %FBW	KIDNEYS REL. %BRW
GROUP 2: 0.01 MG/KG/DAY												
11907 F	289	1.96	0.68	0.0194	0.0067	0.9898	0.0834	0.0289	4.2551	2.29	0.79	116.84
11910 F	296	2.12	0.72	0.0136	0.0046	0.6415	0.0905	0.0306	4.2689	2.20	0.74	103.77
11914 F	327	2.22	0.68	0.0207	0.0063	0.9324	0.0898	0.0275	4.0450	2.30	0.70	103.60
11915 F	263	2.14	0.81	0.0167	0.0063	0.7804	0.0787	0.0299	3.6776	2.07	0.79	96.73
11916 F	281	1.94	0.69	0.0137	0.0049	0.7062	0.0657	0.0234	3.3866	2.24	0.80	115.46
11918 F	295	2.10	0.71	0.0184	0.0062	0.8762	0.0633	0.0215	3.0143	2.01	0.68	95.71
11919 F	263	1.94	0.74	0.0154	0.0059	0.7938	0.1001	0.0381	5.1598	1.87	0.71	96.39
11920 F	353	2.13	0.60	0.0171	0.0048	0.8028	0.0825	0.0234	3.8732	2.49	0.71	116.90
11922 F	306	2.15	0.70	0.0145	0.0047	0.6744	0.0900	0.0294	4.1860	2.47	0.81	114.88
11924 F	336	2.10	0.62	0.0151	0.0045	0.7190	0.0921	0.0274	4.3857	2.37	0.71	112.86
MEAN	301	2.08	0.70	0.0165	0.0055	0.7917	0.0836	0.0280	4.0252	2.23	0.74	107.32
S.D.	30.0	0.098	0.058	0.00244	0.00087	0.11321	0.01169	0.00472	0.58968	0.199	0.048	9.001
N	10	10	10	10	10	10	10	10	10	10	10	10

NOTE: REL. % FINAL BODY WEIGHT (FBW) = (ORGAN WEIGHT/FBW) X 100; REL. % BRAIN WEIGHT (BRW) = (ORGAN WEIGHT/BRW) X 100.
GROUP 2 FEMALES WERE EUTHANIZED ON DAYS 15-18 OR DAYS 92-95.

APPENDIX O
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL ABSOLUTE AND RELATIVE ORGAN WEIGHT DATA

SCHEDULED EUTHANASIA - DAYS 92-95

ANIMAL NO.	FINAL BODY WEIGHT (g)	HEART ABS. (g)	HEART REL. %FBW	HEART REL. %BRW	LUNGS ABS. (g)	LUNGS REL. %FBW	LUNGS REL. %BRW	LIVER ABS. (g)	LIVER REL. %FBW	LIVER REL. %BRW	SPLEEN ABS. (g)	SPLEEN REL. %FBW	SPLEEN REL. %BRW
GROUP 2: 0.01 MG/KG/DAY													
11907 F	289	1.00	0.35	51.02	1.22	0.42	62.24	10.05	3.48	512.76	0.56	0.19	28.57
11910 F	296	1.11	0.38	52.36	1.49	0.50	70.28	9.24	3.12	435.85	0.56	0.19	26.42
11914 F	327	1.07	0.33	48.20	1.25	0.38	56.31	12.38	3.79	557.66	0.70	0.21	31.53
11915 F	263	0.93	0.35	43.46	1.26	0.48	58.88	8.61	3.27	402.34	0.64	0.24	29.91
11916 F	281	0.91	0.32	46.91	1.36	0.48	70.10	8.16	2.90	420.62	0.48	0.17	24.74
11918 F	295	0.96	0.33	45.71	1.45	0.49	69.05	10.16	3.44	483.81	0.55	0.19	26.19
11919 F	263	1.00	0.38	51.55	1.27	0.48	65.46	8.39	3.19	432.47	0.45	0.17	23.20
11920 F	353	1.19	0.34	55.87	1.45	0.41	68.08	13.45	3.81	631.46	0.82	0.23	38.50
11922 F	306	1.05	0.34	48.84	1.22	0.40	56.74	10.69	3.49	497.21	0.66	0.22	30.70
11924 F	336	1.01	0.30	48.10	1.36	0.40	64.76	11.40	3.39	542.86	0.62	0.18	29.52
MEAN	301	1.02	0.34	49.20	1.33	0.45	64.19	10.25	3.39	491.70	0.60	0.20	28.93
S.D.	30.0	0.085	0.024	3.590	0.103	0.046	5.399	1.760	0.282	72.034	0.109	0.025	4.309
N	10	10	10	10	10	10	10	10	10	10	10	10	10

NOTE: REL. % FINAL BODY WEIGHT (FBW) = (ORGAN WEIGHT/FBW) X 100; REL. % BRAIN WEIGHT (BRW) = (ORGAN WEIGHT/BRW) X 100.
GROUP 2 FEMALES WERE EUTHANIZED ON DAYS 15-18 OR DAYS 92-95.

APPENDIX O
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL ABSOLUTE AND RELATIVE ORGAN WEIGHT DATA

SCHEDULED EUTHANASIA - DAYS 92-95

ANIMAL NO.	FINAL BODY WEIGHT (g)	UTERUS ABS. (g)	UTERUS REL. %FBW	UTERUS REL. %BRW	THYROID/PARATHYROID ABS. (g)	THYROID/PARATHYROID REL. %FBW	THYROID/PARATHYROID REL. %BRW
GROUP 2: 0.01 MG/KG/DAY							
11907 F	289	1.68	0.58	85.71	0.0255	0.0088	1.3010
11910 F	296	0.52	0.18	24.53	0.0173	0.0058	0.8160
11914 F	327	0.50	0.15	22.52	0.0196	0.0060	0.8829
11915 F	263	0.64	0.24	29.91	0.0189	0.0072	0.8832
11916 F	281	1.16	0.41	59.79	0.0274	0.0098	1.4124
11918 F	295	0.61	0.21	29.05	0.0230	0.0078	1.0952
11919 F	263	0.52	0.20	26.80	0.0173	0.0066	0.8918
11920 F	353	0.62	0.18	29.11	0.0261	0.0074	1.2254
11922 F	306	0.52	0.17	24.19	0.0204	0.0067	0.9488
11924 F	336	0.61	0.18	29.05	0.0227	0.0068	1.0810
MEAN	301	0.74	0.25	36.07	0.0218	0.0073	1.0538
S.D.	30.0	0.383	0.138	20.430	0.00367	0.00123	0.20377
N	10	10	10	10	10	10	10

NOTE: REL. % FINAL BODY WEIGHT (FBW) = (ORGAN WEIGHT/FBW) X 100; REL. % BRAIN WEIGHT (BRW) = (ORGAN WEIGHT/BRW) X 100.
GROUP 2 FEMALES WERE EUTHANIZED ON DAYS 15-18 OR DAYS 92-95.

APPENDIX O
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL ABSOLUTE AND RELATIVE ORGAN WEIGHT DATA

SCHEDULED EUTHANASIA - DAYS 92-95

ANIMAL NO.	FINAL BODY WEIGHT (g)	BRAIN ABS. (g)	BRAIN REL. %FBW	PITUITARY ABS. (g)	PITUITARY REL. %FBW	PITUITARY REL. %BRW	OVARIES ABS. (g)	OVARIES REL. %FBW	OVARIES REL. %BRW	KIDNEYS ABS. (g)	KIDNEYS REL. %FBW	KIDNEYS REL. %BRW
GROUP 3: 0.05 MG/KG/DAY												
11927 F	260	1.96	0.75	0.0183	0.0070	0.9337	0.0890	0.0342	4.5408	2.33	0.90	118.88
11929 F	264	1.99	0.75	0.0144	0.0055	0.7236	0.0727	0.0275	3.6533	1.96	0.74	98.49
11935 F	296	2.31	0.78	0.0175	0.0059	0.7576	0.0904	0.0305	3.9134	2.40	0.81	103.90
11936 F	277	1.91	0.69	0.0153	0.0055	0.8010	0.0935	0.0338	4.8953	2.02	0.73	105.76
11937 F	293	1.96	0.67	0.0180	0.0061	0.9184	0.0759	0.0259	3.8724	2.08	0.71	106.12
11938 F	285	1.98	0.69	0.0196	0.0069	0.9899	0.0776	0.0272	3.9192	2.33	0.82	117.68
11939 F	295	2.15	0.73	0.0177	0.0060	0.8233	0.0389	0.0132	1.8093	2.32	0.79	107.91
11950 F	272	2.05	0.75	0.0208	0.0076	1.0146	0.0990	0.0364	4.8293	2.08	0.76	101.46
11954 F	341	2.08	0.61	0.0130	0.0038	0.6250	0.0675	0.0198	3.2452	2.27	0.67	109.13
11955 F	318	2.13	0.67	0.0177	0.0056	0.8310	0.0650	0.0204	3.0516	2.23	0.70	104.69
MEAN	290	2.05	0.71	0.0172	0.0060	0.8418	0.0769	0.0269	3.7730	2.20	0.76	107.40
S.D.	24.8	0.120	0.053	0.00236	0.00106	0.12306	0.01759	0.00735	0.92407	0.154	0.068	6.490
N	10	10	10	10	10	10	10	10	10	10	10	10

NOTE: REL. % FINAL BODY WEIGHT (FBW) = (ORGAN WEIGHT/FBW) X 100; REL. % BRAIN WEIGHT (BRW) = (ORGAN WEIGHT/BRW) X 100.

APPENDIX O
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL ABSOLUTE AND RELATIVE ORGAN WEIGHT DATA

SCHEDULED EUTHANASIA - DAYS 92-95

ANIMAL NO.	FINAL BODY WEIGHT (g)	HEART ABS. (g)	HEART REL. %FBW	HEART REL. %BRW	LUNGS ABS. (g)	LUNGS REL. %FBW	LUNGS REL. %BRW	LIVER ABS. (g)	LIVER REL. %FBW	LIVER REL. %BRW	SPLEEN ABS. (g)	SPLEEN REL. %FBW	SPLEEN REL. %BRW
GROUP 3: 0.05 MG/KG/DAY													
11927 F	260	1.07	0.41	54.59	1.32	0.51	67.35	9.80	3.77	500.00	0.53	0.20	27.04
11929 F	264	1.01	0.38	50.75	1.60	0.61	80.40	7.26	2.75	364.82	0.63	0.24	31.66
11935 F	296	1.20	0.41	51.95	1.48	0.50	64.07	11.71	3.96	506.93	0.65	0.22	28.14
11936 F	277	0.93	0.34	48.69	1.40	0.51	73.30	8.78	3.17	459.69	0.51	0.18	26.70
11937 F	293	0.94	0.32	47.96	1.57	0.54	80.10	9.52	3.25	485.71	0.62	0.21	31.63
11938 F	285	1.15	0.40	58.08	1.85	0.65	93.43	9.78	3.43	493.94	0.61	0.21	30.81
11939 F	295	1.07	0.36	49.77	1.68	0.57	78.14	11.01	3.73	512.09	0.58	0.20	26.98
11950 F	272	0.94	0.35	45.85	1.22	0.45	59.51	10.16	3.74	495.61	0.54	0.20	26.34
11954 F	341	1.13	0.33	54.33	2.03	0.60	97.60	12.07	3.54	580.29	0.65	0.19	31.25
11955 F	318	1.04	0.33	48.83	1.29	0.41	60.56	10.00	3.14	469.48	0.65	0.20	30.52
MEAN	290	1.05	0.36	51.08	1.54	0.53	75.45	10.01	3.45	486.86	0.60	0.21	29.11
S.D.	24.8	0.094	0.035	3.686	0.257	0.074	13.093	1.397	0.370	53.750	0.054	0.016	2.249
N	10	10	10	10	10	10	10	10	10	10	10	10	10

NOTE: REL. % FINAL BODY WEIGHT (FBW) = (ORGAN WEIGHT/FBW) X 100; REL. % BRAIN WEIGHT (BRW) = (ORGAN WEIGHT/BRW) X 100.

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APPENDIX O
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL ABSOLUTE AND RELATIVE ORGAN WEIGHT DATA

SCHEDULED EUTHANASIA - DAYS 92-95

ANIMAL NO.	FINAL BODY WEIGHT (g)	UTERUS ABS. (g)	UTERUS REL. %FBW	UTERUS REL. %BRW	THYROID/PARATHYROID ABS. (g)	THYROID/PARATHYROID REL. %FBW	THYROID/PARATHYROID REL. %BRW
GROUP 3: 0.05 MG/KG/DAY							
11927 F	260	0.67	0.26	34.18	0.0181	0.0070	0.9235
11929 F	264	0.60	0.23	30.15	0.0192	0.0073	0.9648
11935 F	296	0.70	0.24	30.30	0.0255	0.0086	1.1039
11936 F	277	0.42	0.15	21.99	0.0160	0.0058	0.8377
11937 F	293	0.85	0.29	43.37	0.0195	0.0067	0.9949
11938 F	285	1.05	0.37	53.03	0.0194	0.0068	0.9798
11939 F	295	0.49	0.17	22.79	0.0225	0.0076	1.0465
11950 F	272	0.57	0.21	27.80	0.0183	0.0067	0.8927
11954 F	341	0.33	0.10	15.87	0.0186	0.0055	0.8942
11955 F	318	0.70	0.22	32.86	0.0197	0.0062	0.9249
MEAN	290	0.64	0.22	31.23	0.0197	0.0068	0.9563
S.D.	24.8	0.209	0.076	10.752	0.00261	0.00091	0.07893
N	10	10	10	10	10	10	10

NOTE: REL. % FINAL BODY WEIGHT (FBW) = (ORGAN WEIGHT/FBW) X 100; REL. % BRAIN WEIGHT (BRW) = (ORGAN WEIGHT/BRW) X 100.

APPENDIX O
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL ABSOLUTE AND RELATIVE ORGAN WEIGHT DATA

SCHEDULED EUTHANASIA - DAYS 92-95

ANIMAL NO.	FINAL BODY WEIGHT (g)	BRAIN ABS. (g)	BRAIN REL. %FBW	PITUITARY ABS. (g)	PITUITARY REL. %FBW	PITUITARY REL. %BRW	OVARIES ABS. (g)	OVARIES REL. %FBW	OVARIES REL. %BRW	KIDNEYS ABS. (g)	KIDNEYS REL. %FBW	KIDNEYS REL. %BRW
GROUP 4: 0.2 MG/KG/DAY												
11956 F	320	2.19	0.68	0.0200	0.0062	0.9132	0.1107	0.0346	5.0548	2.18	0.68	99.54
11957 F	338	2.11	0.62	0.0131	0.0039	0.6209	0.0639	0.0189	3.0284	2.27	0.67	107.58
11958 F	252	2.11	0.84	0.0153	0.0061	0.7251	0.0770	0.0306	3.6493	2.21	0.88	104.74
11961 F	295	2.06	0.70	0.0111	0.0038	0.5388	0.0832	0.0282	4.0388	2.35	0.80	114.08
11965 F	288	2.25	0.78	0.0194	0.0067	0.8622	0.0958	0.0333	4.2578	2.50	0.87	111.11
11966 F	276	1.95	0.71	0.0185	0.0067	0.9487	0.0673	0.0244	3.4513	2.47	0.89	126.67
11969 F	451	2.31	0.51	0.0155	0.0034	0.6710	0.1070	0.0237	4.6320	2.72	0.60	117.75
11972 F	275	2.17	0.79	0.0198	0.0072	0.9124	0.0752	0.0273	3.4654	2.32	0.84	106.91
11973 F	339	2.28	0.67	0.0151	0.0045	0.6623	0.1089	0.0321	4.7763	2.58	0.76	113.16
11975 F	306	2.10	0.69	0.0186	0.0061	0.8857	0.0753	0.0246	3.5857	2.14	0.70	101.90
MEAN	314	2.15	0.70	0.0166	0.0055	0.7740	0.0864	0.0278	3.9940	2.37	0.77	110.34
S.D.	55.7	0.110	0.092	0.00307	0.00142	0.14666	0.01773	0.00495	0.66731	0.189	0.102	8.044
N	10	10	10	10	10	10	10	10	10	10	10	10

NOTE: REL. % FINAL BODY WEIGHT (FBW) = (ORGAN WEIGHT/FBW) X 100; REL. % BRAIN WEIGHT (BRW) = (ORGAN WEIGHT/BRW) X 100.
GROUP 4 FEMALES WERE EUTHANIZED ON DAYS 15-18 OR DAYS 92-95.

APPENDIX O
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL ABSOLUTE AND RELATIVE ORGAN WEIGHT DATA

SCHEDULED EUTHANASIA - DAYS 92-95

ANIMAL NO.	FINAL BODY WEIGHT (g)	HEART ABS. (g)	HEART REL. %FBW	HEART REL. %BRW	LUNGS ABS. (g)	LUNGS REL. %FBW	LUNGS REL. %BRW	LIVER ABS. (g)	LIVER REL. %FBW	LIVER REL. %BRW	SPLEEN ABS. (g)	SPLEEN REL. %FBW	SPLEEN REL. %BRW
GROUP 4: 0.2 MG/KG/DAY													
11956 F	320	1.09	0.34	49.77	1.46	0.46	66.67	11.53	3.60	526.48	0.70	0.22	31.96
11957 F	338	1.08	0.32	51.18	1.40	0.41	66.35	10.71	3.17	507.58	0.62	0.18	29.38
11958 F	252	1.04	0.41	49.29	1.53	0.61	72.51	9.17	3.64	434.60	0.53	0.21	25.12
11961 F	295	1.05	0.36	50.97	1.44	0.49	69.90	8.99	3.05	436.41	0.56	0.19	27.18
11965 F	288	0.98	0.34	43.56	1.41	0.49	62.67	10.28	3.57	456.89	0.62	0.22	27.56
11966 F	276	1.09	0.39	55.90	1.70	0.62	87.18	10.36	3.75	531.28	0.60	0.22	30.77
11969 F	451	1.20	0.27	51.95	1.53	0.34	66.23	13.82	3.06	598.27	0.64	0.14	27.71
11972 F	275	1.02	0.37	47.00	1.38	0.50	63.59	11.16	4.06	514.29	0.75	0.27	34.56
11973 F	339	1.24	0.37	54.39	2.21	0.65	96.93	11.66	3.44	511.40	0.70	0.21	30.70
11975 F	306	1.02	0.33	48.57	1.74	0.57	82.86	8.90	2.91	423.81	0.60	0.20	28.57
MEAN	314	1.08	0.35	50.26	1.58	0.51	73.49	10.66	3.43	494.10	0.63	0.21	29.35
S.D.	55.7	0.082	0.041	3.537	0.253	0.098	11.565	1.503	0.367	55.142	0.068	0.033	2.728
N	10	10	10	10	10	10	10	10	10	10	10	10	10

NOTE: REL. % FINAL BODY WEIGHT (FBW) = (ORGAN WEIGHT/FBW) X 100; REL. % BRAIN WEIGHT (BRW) = (ORGAN WEIGHT/BRW) X 100.
GROUP 4 FEMALES WERE EUTHANIZED ON DAYS 15-18 OR DAYS 92-95.

APPENDIX O
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL ABSOLUTE AND RELATIVE ORGAN WEIGHT DATA

SCHEDULED EUTHANASIA - DAYS 92-95

ANIMAL NO.	FINAL BODY WEIGHT (g)	UTERUS ABS. (g)	UTERUS REL. %FBW	UTERUS REL. %BRW	THYROID/PARATHYROID ABS. (g)	THYROID/PARATHYROID REL. %FBW	THYROID/PARATHYROID REL. %BRW
GROUP 4: 0.2 MG/KG/DAY							
11956 F	320	0.43	0.13	19.63	0.0196	0.0061	0.8950
11957 F	338	0.39	0.12	18.48	0.0231	0.0068	1.0948
11958 F	252	1.52	0.60	72.04	0.0162	0.0064	0.7678
11961 F	295	0.64	0.22	31.07	0.0203	0.0069	0.9854
11965 F	288	0.68	0.24	30.22	0.0236	0.0082	1.0489
11966 F	276	0.52	0.19	26.67	0.0165	0.0060	0.8462
11969 F	451	0.54	0.12	23.38	0.0235[a]	0.0052	1.0173
11972 F	275	0.80	0.29	36.87	0.0208	0.0076	0.9585
11973 F	339	0.73	0.22	32.02	0.0198	0.0058	0.8684
11975 F	306	0.41	0.13	19.52	0.0189	0.0062	0.9000
MEAN	314	0.67	0.23	30.99	0.0202	0.0065	0.9382
S.D.	55.7	0.331	0.145	15.687	0.00265	0.00087	0.10077
N	10	10	10	10	10	10	10

NOTE: REL. % FINAL BODY WEIGHT (FBW) = (ORGAN WEIGHT/FBW) X 100; REL. % BRAIN WEIGHT (BRW) = (ORGAN WEIGHT/BRW) X 100.
GROUP 4 FEMALES WERE EUTHANIZED ON DAYS 15-18 OR DAYS 92-95.
[a]ISTHMUS ENDS WITH NO APPARENT THYROID ON RIGHT SIDE, LEFT APPEARS NORMAL. APPARENT THYROID TISSUE EXTENDS CRANIALLY FROM MEDIAL PORTION OF ISTHMUS.

APPENDIX O
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL ABSOLUTE AND RELATIVE ORGAN WEIGHT DATA

SCHEDULED EUTHANASIA - DAYS 92-95

ANIMAL NO.	FINAL BODY WEIGHT (g)	BRAIN ABS. (g)	BRAIN REL. %FBW	PITUITARY ABS. (g)	PITUITARY REL. %FBW	PITUITARY REL. %BRW	OVARIES ABS. (g)	OVARIES REL. %FBW	OVARIES REL. %BRW	KIDNEYS ABS. (g)	KIDNEYS REL. %FBW	KIDNEYS REL. %BRW
GROUP 5: 1.0 MG/KG/DAY												
11976 F	338	1.97	0.58	0.0205	0.0061	1.0406	0.0658	0.0195	3.3401	2.50	0.74	126.90
11983 F	284	1.98	0.70	0.0166	0.0058	0.8384	0.0476	0.0168	2.4040	2.06	0.73	104.04
11988 F	286	2.05	0.72	0.0155	0.0054	0.7561	0.1040	0.0364	5.0732	2.17	0.76	105.85
11990 F	328	2.16	0.66	0.0195	0.0059	0.9028	0.1064	0.0324	4.9259	2.39	0.73	110.65
11993 F	332	2.16	0.65	0.0142	0.0043	0.6574	0.0753	0.0227	3.4861	2.15	0.65	99.54
11995 F	321	2.05	0.64	0.0153	0.0048	0.7463	0.0890	0.0277	4.3415	1.99	0.62	97.07
11996 F	292	2.05	0.70	0.0161	0.0055	0.7854	0.0861	0.0295	4.2000	2.12	0.73	103.41
11997 F	279	2.22	0.80	0.0156	0.0056	0.7027	0.0622	0.0223	2.8018	2.03	0.73	91.44
11998 F	298	2.05	0.69	0.0208	0.0070	1.0146	0.0911	0.0306	4.4439	2.40	0.81	117.07
12000 F	293	2.02	0.69	0.0126	0.0043	0.6238	0.0557	0.0190	2.7574	1.85	0.63	91.58
MEAN	305	2.07	0.68	0.0167	0.0055	0.8068	0.0783	0.0257	3.7774	2.17	0.71	104.76
S.D.	22.2	0.082	0.056	0.00273	0.00084	0.14198	0.02019	0.00654	0.94830	0.205	0.059	11.143
N	10	10	10	10	10	10	10	10	10	10	10	10

NOTE: REL. % FINAL BODY WEIGHT (FBW) = (ORGAN WEIGHT/FBW) X 100; REL. % BRAIN WEIGHT (BRW) = (ORGAN WEIGHT/BRW) X 100.

APPENDIX O
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL ABSOLUTE AND RELATIVE ORGAN WEIGHT DATA

SCHEDULED EUTHANASIA - DAYS 92-95

ANIMAL NO.	FINAL BODY WEIGHT (g)	HEART ABS. (g)	HEART REL. %FBW	HEART REL. %BRW	LUNGS ABS. (g)	LUNGS REL. %FBW	LUNGS REL. %BRW	LIVER ABS. (g)	LIVER REL. %FBW	LIVER REL. %BRW	SPLEEN ABS. (g)	SPLEEN REL. %FBW	SPLEEN REL. %BRW
GROUP 5: 1.0 MG/KG/DAY													
11976 F	338	1.10	0.33	55.84	1.15	0.34	58.38	11.89	3.52	603.55	0.62	0.18	31.47
11983 F	284	1.22	0.43	61.62	1.15	0.40	58.08	10.03	3.53	506.57	0.53	0.19	26.77
11988 F	286	0.99	0.35	48.29	1.41	0.49	68.78	11.47	4.01	559.51	0.56	0.20	27.32
11990 F	328	1.14	0.35	52.78	2.71	0.83	125.46	10.41	3.17	481.94	0.75	0.23	34.72
11993 F	332	1.26	0.38	58.33	1.77	0.53	81.94	10.06	3.03	465.74	0.65	0.20	30.09
11995 F	321	1.10	0.34	53.66	1.37	0.43	66.83	10.84	3.38	528.78	0.66	0.21	32.20
11996 F	292	1.09	0.37	53.17	1.17	0.40	57.07	8.73	2.99	425.85	0.63	0.22	30.73
11997 F	279	1.00	0.36	45.05	1.71	0.61	77.03	10.11	3.62	455.41	0.57	0.20	25.68
11998 F	298	1.16	0.39	56.59	1.59	0.53	77.56	11.26	3.78	549.27	0.63	0.21	30.73
12000 F	293	0.95	0.32	47.03	1.23	0.42	60.89	8.52	2.91	421.78	0.54	0.18	26.73
MEAN	305	1.10	0.36	53.23	1.53	0.50	73.20	10.33	3.39	499.84	0.61	0.20	29.64
S.D.	22.2	0.100	0.032	5.214	0.475	0.140	20.444	1.101	0.365	60.247	0.067	0.015	2.908
N	10	10	10	10	10	10	10	10	10	10	10	10	10

NOTE: REL. % FINAL BODY WEIGHT (FBW) = (ORGAN WEIGHT/FBW) X 100; REL. % BRAIN WEIGHT (BRW) = (ORGAN WEIGHT/BRW) X 100.

APPENDIX O
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL ABSOLUTE AND RELATIVE ORGAN WEIGHT DATA

SCHEDULED EUTHANASIA - DAYS 92-95

ANIMAL NO.	FINAL BODY WEIGHT (g)	UTERUS ABS. (g)	UTERUS REL. %FBW	UTERUS REL. %BRW	THYROID/PARATHYROID ABS. (g)	THYROID/PARATHYROID REL. %FBW	THYROID/PARATHYROID REL. %BRW
GROUP 5: 1.0 MG/KG/DAY							
11976 F	338	0.48	0.14	24.37	0.0165	0.0049	0.8376
11983 F	284	0.64	0.23	32.32	0.0259	0.0091	1.3081
11988 F	286	0.53	0.19	25.85	0.0205	0.0072	1.0000
11990 F	328	0.80	0.24	37.04	0.0232	0.0071	1.0741
11993 F	332	1.23	0.37	56.94	0.0218	0.0066	1.0093
11995 F	321	0.48	0.15	23.41	0.0191	0.0060	0.9317
11996 F	292	0.44	0.15	21.46	0.0183	0.0063	0.8927
11997 F	279	0.72	0.26	32.43	0.0163	0.0058	0.7342
11998 F	298	0.68	0.23	33.17	0.0173	0.0058	0.8439
12000 F	293	0.61	0.21	30.20	0.0145	0.0049	0.7178
MEAN	305	0.66	0.22	31.72	0.0193	0.0064	0.9349
S.D.	22.2	0.231	0.068	10.179	0.00352	0.00124	0.17491
N	10	10	10	10	10	10	10

NOTE: REL. % FINAL BODY WEIGHT (FBW) = (ORGAN WEIGHT/FBW) X 100; REL. % BRAIN WEIGHT (BRW) = (ORGAN WEIGHT/BRW) X 100.

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APPENDIX O
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL ABSOLUTE AND RELATIVE ORGAN WEIGHT DATA

SCHEDULED EUTHANASIA - DAYS 92-95

ANIMAL NO.	FINAL BODY WEIGHT (g)	BRAIN ABS. (g)	BRAIN REL. %FBW	PITUITARY ABS. (g)	PITUITARY REL. %FBW	PITUITARY REL. %BRW	OVARIES ABS. (g)	OVARIES REL. %FBW	OVARIES REL. %BRW	KIDNEYS ABS. (g)	KIDNEYS REL. %FBW	KIDNEYS REL. %BRW
GROUP 6: 10.0 MG/KG/DAY												
12006 F	254	2.03	0.80	0.0145	0.0057	0.7143	0.0726	0.0286	3.5764	2.04	0.80	100.49
12007 F	270	1.92	0.71	0.0167	0.0062	0.8698	0.0696	0.0258	3.6250	2.07	0.77	107.81
12011 F	350	2.32	0.66	0.0135	0.0039	0.5819	0.0845	0.0241	3.6422	2.31	0.66	99.57
12012 F	331	2.21	0.67	0.0182	0.0055	0.8235	0.0702	0.0212	3.1765	2.39	0.72	108.14
12018 F	296	1.86	0.63	0.0139	0.0047	0.7473	0.0824	0.0278	4.4301	2.15	0.73	115.59
12019 F	308	1.97	0.64	0.0126	0.0041	0.6396	0.0795	0.0258	4.0355	2.23	0.72	113.20
12022 F	299	1.96	0.66	0.0151	0.0051	0.7704	0.0933	0.0312	4.7602	2.10	0.70	107.14
12025 F	330	2.28	0.69	0.0164	0.0050	0.7193	0.1027	0.0311	4.5044	2.53	0.77	110.96
12029 F	345	2.16	0.63	0.0138	0.0040	0.6389	0.0933	0.0270	4.3194	2.35	0.68	108.80
12033 F	324	2.00	0.62	0.0170	0.0052	0.8500	0.0885	0.0273	4.4250	2.30	0.71	115.00
MEAN	311	2.07	0.67	0.0152	0.0049	0.7355	0.0837	0.0270	4.0495	2.25	0.73	108.67
S.D.	31.5	0.160	0.054	0.00182	0.00077	0.09608	0.01102	0.00303	0.51673	0.158	0.043	5.444
N	10	10	10	10	10	10	10	10	10	10	10	10

NOTE: REL. % FINAL BODY WEIGHT (FBW) = (ORGAN WEIGHT/FBW) X 100; REL. % BRAIN WEIGHT (BRW) = (ORGAN WEIGHT/BRW) X 100.

APPENDIX O
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL ABSOLUTE AND RELATIVE ORGAN WEIGHT DATA

SCHEDULED EUTHANASIA - DAYS 92-95

ANIMAL NO.	FINAL BODY WEIGHT (g)	HEART ABS. (g)	HEART REL. %FBW	HEART REL. %BRW	LUNGS ABS. (g)	LUNGS REL. %FBW	LUNGS REL. %BRW	LIVER ABS. (g)	LIVER REL. %FBW	LIVER REL. %BRW	SPLEEN ABS. (g)	SPLEEN REL. %FBW	SPLEEN REL. %BRW
GROUP 6: 10.0 MG/KG/DAY													
12006 F	254	1.08	0.43	53.20	1.30	0.51	64.04	8.28	3.26	407.88	0.41	0.16	20.20
12007 F	270	1.01	0.37	52.60	1.33	0.49	69.27	7.67	2.84	399.48	0.40	0.15	20.83
12011 F	350	1.18	0.34	50.86	1.60	0.46	68.97	12.51	3.57	539.22	0.52	0.15	22.41
12012 F	331	1.04	0.31	47.06	1.48	0.45	66.97	9.52	2.88	430.77	0.55	0.17	24.89
12018 F	296	1.03	0.35	55.38	1.32	0.45	70.97	9.95	3.36	534.95	0.50	0.17	26.88
12019 F	308	1.07	0.35	54.31	1.58	0.51	80.20	10.89	3.54	552.79	0.57	0.19	28.93
12022 F	299	0.97	0.32	49.49	1.24	0.41	63.27	9.00	3.01	459.18	0.52	0.17	26.53
12025 F	330	1.18	0.36	51.75	1.68	0.51	73.68	10.85	3.29	475.88	0.68	0.21	29.82
12029 F	345	1.08	0.31	50.00	2.09	0.61	96.76	12.15	3.52	562.50	0.68	0.20	31.48
12033 F	324	1.15	0.35	57.50	1.34	0.41	67.00	10.19	3.15	509.50	0.55	0.17	27.50
MEAN	311	1.08	0.35	52.22	1.50	0.48	72.11	10.10	3.24	487.22	0.54	0.17	25.95
S.D.	31.5	0.072	0.033	3.063	0.256	0.058	9.948	1.563	0.269	61.046	0.094	0.019	3.816
N	10	10	10	10	10	10	10	10	10	10	10	10	10

NOTE: REL. % FINAL BODY WEIGHT (FBW) = (ORGAN WEIGHT/FBW) X 100; REL. % BRAIN WEIGHT (BRW) = (ORGAN WEIGHT/BRW) X 100.

APPENDIX O
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL ABSOLUTE AND RELATIVE ORGAN WEIGHT DATA

SCHEDULED EUTHANASIA - DAYS 92-95

ANIMAL NO.	FINAL BODY WEIGHT (g)	UTERUS ABS. (g)	UTERUS REL. %FBW	UTERUS REL. %BRW	THYROID/PARATHYROID ABS. (g)	THYROID/PARATHYROID REL. %FBW	THYROID/PARATHYROID REL. %BRW
GROUP 6: 10.0 MG/KG/DAY							
12006 F	254	1.12	0.44	55.17	0.0231	0.0091	1.1379
12007 F	270	0.55	0.20	28.65	0.0249	0.0092	1.2969
12011 F	350	0.56	0.16	24.14	0.0287	0.0082	1.2371
12012 F	331	0.82	0.25	37.10	0.0309	0.0093	1.3982
12018 F	296	0.54	0.18	29.03	0.0232	0.0078	1.2473
12019 F	308	0.42	0.14	21.32	0.0193	0.0063	0.9797
12022 F	299	0.56	0.19	28.57	0.0273	0.0091	1.3929
12025 F	330	0.83	0.25	36.40	0.0301	0.0091	1.3202
12029 F	345	0.59	0.17	27.31	0.0373	0.0108	1.7269
12033 F	324	0.86	0.27	43.00	0.0254	0.0078	1.2700
MEAN	311	0.69	0.22	33.07	0.0270	0.0087	1.3007
S.D.	31.5	0.213	0.087	10.119	0.00505	0.00122	0.19361
N	10	10	10	10	10	10	10

NOTE: REL. % FINAL BODY WEIGHT (FBW) = (ORGAN WEIGHT/FBW) X 100; REL. % BRAIN WEIGHT (BRW) = (ORGAN WEIGHT/BRW) X 100.

APPENDIX O
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL ABSOLUTE AND RELATIVE ORGAN WEIGHT DATA

SCHEDULED EUTHANASIA - DAYS 121-123

ANIMAL NO.	FINAL BODY WEIGHT (g)	BRAIN ABS. (g)	BRAIN REL. %FBW	PITUITARY ABS. (g)	PITUITARY REL. %FBW	PITUITARY REL. %BRW	OVARIES ABS. (g)	OVARIES REL. %FBW	OVARIES REL. %BRW	KIDNEYS ABS. (g)	KIDNEYS REL. %FBW	KIDNEYS REL. %BRW
GROUP 1: 0 MG/KG/DAY												
11879 F	324	2.19	0.68	0.0293	0.0090	1.3379	0.0614	0.0190	2.8037	2.31	0.71	105.48
11880 F	378	2.23	0.59	0.0144	0.0038	0.6457	0.1030	0.0272	4.6188	2.66	0.70	119.28
11883 F	300	2.30	0.77	0.0161	0.0054	0.7000	0.1100	0.0367	4.7826	2.19	0.73	95.22
11885 F	292	2.08	0.71	0.0175	0.0060	0.8413	0.1043	0.0357	5.0144	2.29	0.78	110.10
11887 F	320	2.20	0.69	0.0143	0.0045	0.6500	0.0980	0.0306	4.4545	2.56	0.80	116.36
11888 F	345	2.04	0.59	0.0125	0.0036	0.6127	0.0792	0.0230	3.8824	2.41	0.70	118.14
11897 F	319	2.20	0.69	0.0176	0.0055	0.8000	0.1208	0.0379	5.4909	2.35	0.74	106.82
11898 F	312	2.07	0.66	0.0127	0.0041	0.6135	0.1070	0.0343	5.1691	2.22	0.71	107.25
11899 F	316	2.21	0.70	0.0144	0.0046	0.6516	0.1140	0.0361	5.1584	2.58	0.82	116.74
11905 F	301	2.07	0.69	0.0105	0.0035	0.5072	0.0648	0.0215	3.1304	2.13	0.71	102.90
MEAN	321	2.16	0.68	0.0159	0.0050	0.7360	0.0963	0.0302	4.4505	2.37	0.74	109.83
S.D.	25.0	0.087	0.053	0.00520	0.00166	0.23189	0.02063	0.00704	0.90271	0.179	0.044	7.783
N	10	10	10	10	10	10	10	10	10	10	10	10

NOTE: REL. % FINAL BODY WEIGHT (FBW) = (ORGAN WEIGHT/FBW) X 100; REL. % BRAIN WEIGHT (BRW) = (ORGAN WEIGHT/BRW) X 100.

APPENDIX O
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL ABSOLUTE AND RELATIVE ORGAN WEIGHT DATA

SCHEDULED EUTHANASIA - DAYS 121-123

ANIMAL NO.	FINAL BODY WEIGHT (g)	HEART ABS. (g)	HEART REL. %FBW	HEART REL. %BRW	LUNGS ABS. (g)	LUNGS REL. %FBW	LUNGS REL. %BRW	LIVER ABS. (g)	LIVER REL. %FBW	LIVER REL. %BRW	SPLEEN ABS. (g)	SPLEEN REL. %FBW	SPLEEN REL. %BRW
GROUP 1: 0 MG/KG/DAY													
11879 F	324	1.13	0.35	51.60	1.47	0.45	67.12	11.96	3.69	546.12	0.56	0.17	25.57
11880 F	378	1.36	0.36	60.99	1.49	0.39	66.82	14.48	3.83	649.33	0.87	0.23	39.01
11883 F	300	1.05	0.35	45.65	1.44	0.48	62.61	10.17	3.39	442.17	0.60	0.20	26.09
11885 F	292	1.06	0.36	50.96	1.55	0.53	74.52	10.17	3.48	488.94	0.55	0.19	26.44
11887 F	320	1.27	0.40	57.73	1.31	0.41	59.55	12.29	3.84	558.64	0.64	0.20	29.09
11888 F	345	1.18	0.34	57.84	1.25	0.36	61.27	11.94	3.46	585.29	0.54	0.16	26.47
11897 F	319	1.20	0.38	54.55	1.32	0.41	60.00	10.70	3.35	486.36	0.66	0.21	30.00
11898 F	312	1.29	0.41	62.32	1.36	0.44	65.70	11.13	3.57	537.68	0.67	0.21	32.37
11899 F	316	1.12	0.35	50.68	1.52	0.48	68.78	11.30	3.58	511.31	0.68	0.22	30.77
11905 F	301	1.21	0.40	58.45	2.27	0.75	109.66	10.54	3.50	509.18	0.52	0.17	25.12
MEAN	321	1.19	0.37	55.08	1.50	0.47	69.60	11.47	3.57	531.50	0.63	0.20	29.09
S.D.	25.0	0.100	0.025	5.280	0.289	0.111	14.796	1.299	0.170	58.214	0.103	0.023	4.267
N	10	10	10	10	10	10	10	10	10	10	10	10	10

NOTE: REL. % FINAL BODY WEIGHT (FBW) = (ORGAN WEIGHT/FBW) X 100; REL. % BRAIN WEIGHT (BRW) = (ORGAN WEIGHT/BRW) X 100.

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APPENDIX O
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL ABSOLUTE AND RELATIVE ORGAN WEIGHT DATA

SCHEDULED EUTHANASIA - DAYS 121-123

ANIMAL NO.	FINAL BODY WEIGHT (g)	UTERUS ABS. (g)	UTERUS REL. %FBW	UTERUS REL. %BRW	THYROID/PARATHYROID ABS. (g)	THYROID/PARATHYROID REL. %FBW	THYROID/PARATHYROID REL. %BRW
GROUP 1: 0 MG/KG/DAY							
11879 F	324	0.52	0.16	23.74	0.0202	0.0062	0.9224
11880 F	378	0.59	0.16	26.46	0.0315	0.0083	1.4126
11883 F	300	0.41	0.14	17.83	0.0178	0.0059	0.7739
11885 F	292	0.44	0.15	21.15	0.0210	0.0072	1.0096
11887 F	320	0.48	0.15	21.82	0.0221	0.0069	1.0045
11888 F	345	0.49	0.14	24.02	0.0206	0.0060	1.0098
11897 F	319	0.46	0.14	20.91	0.0177	0.0055	0.8045
11898 F	312	0.47	0.15	22.71	0.0250	0.0080	1.2077
11899 F	316	0.63	0.20	28.51	0.0244	0.0077	1.1041
11905 F	301	0.55	0.18	26.57	0.0191	0.0063	0.9227
MEAN	321	0.50	0.16	23.37	0.0219	0.0068	1.0172
S.D.	25.0	0.069	0.019	3.185	0.00416	0.00096	0.18937
N	10	10	10	10	10	10	10

NOTE: REL. % FINAL BODY WEIGHT (FBW) = (ORGAN WEIGHT/FBW) X 100; REL. % BRAIN WEIGHT (BRW) = (ORGAN WEIGHT/BRW) X 100.

APPENDIX O
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL ABSOLUTE AND RELATIVE ORGAN WEIGHT DATA

SCHEDULED EUTHANASIA - DAYS 121-123

ANIMAL NO.	FINAL BODY WEIGHT (g)	BRAIN ABS. (g)	BRAIN REL. %FBW	PITUITARY ABS. (g)	PITUITARY REL. %FBW	PITUITARY REL. %BRW	OVARIES ABS. (g)	OVARIES REL. %FBW	OVARIES REL. %BRW	KIDNEYS ABS. (g)	KIDNEYS REL. %FBW	KIDNEYS REL. %BRW
GROUP 3: 0.05 MG/KG/DAY												
11926 F	298	2.20	0.74	0.0172	0.0058	0.7818	0.0944	0.0317	4.2909	2.19	0.73	99.55
11928 F	286	2.25	0.79	0.0131	0.0046	0.5822	0.1186	0.0415	5.2711	2.29	0.80	101.78
11932 F	253	2.04	0.81	0.0139	0.0055	0.6814	0.0657	0.0260	3.2206	2.05	0.81	100.49
11933 F	369	2.37	0.64	0.0168	0.0046	0.7089	0.0941	0.0255	3.9705	2.62	0.71	110.55
11940 F	352	2.48	0.70	0.0152	0.0043	0.6129	0.1134	0.0322	4.5726	2.52	0.72	101.61
11943 F	271	2.23	0.82	0.0155	0.0057	0.6951	0.0819	0.0302	3.6726	2.16	0.80	96.86
11944 F	359	2.22	0.62	0.0174	0.0048	0.7838	0.0874	0.0243	3.9369	2.51	0.70	113.06
11947 F	263	2.17	0.83	0.0169	0.0064	0.7788	0.0713	0.0271	3.2857	2.13	0.81	98.16
11948 F	FOUND DEAD											
11949 F	311	2.21	0.71	0.0140	0.0045	0.6335	0.1036	0.0333	4.6878	2.25	0.72	101.81
MEAN	307	2.24	0.74	0.0156	0.0051	0.6954	0.0923	0.0302	4.1010	2.30	0.76	102.65
S.D.	43.7	0.124	0.077	0.00161	0.00074	0.07588	0.01786	0.00532	0.67446	0.200	0.047	5.493
N	9	9	9	9	9	9	9	9	9	9	9	9

NOTE: REL. % FINAL BODY WEIGHT (FBW) = (ORGAN WEIGHT/FBW) X 100; REL. % BRAIN WEIGHT (BRW) = (ORGAN WEIGHT/BRW) X 100.

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APPENDIX O
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL ABSOLUTE AND RELATIVE ORGAN WEIGHT DATA

SCHEDULED EUTHANASIA - DAYS 121-123

ANIMAL NO.	FINAL BODY WEIGHT (g)	HEART ABS. (g)	HEART REL. %FBW	HEART REL. %BRW	LUNGS ABS. (g)	LUNGS REL. %FBW	LUNGS REL. %BRW	LIVER ABS. (g)	LIVER REL. %FBW	LIVER REL. %BRW	SPLEEN ABS. (g)	SPLEEN REL. %FBW	SPLEEN REL. %BRW
GROUP 3: 0.05 MG/KG/DAY													
11926 F	298	1.08	0.36	49.09	1.25	0.42	56.82	10.34	3.47	470.00	0.62	0.21	28.18
11928 F	286	0.92	0.32	40.89	1.21	0.42	53.78	9.41	3.29	418.22	0.64	0.22	28.44
11932 F	253	1.00	0.40	49.02	1.28	0.51	62.75	8.67	3.43	425.00	0.54	0.21	26.47
11933 F	369	1.14	0.31	48.10	1.32	0.36	55.70	12.81	3.47	540.51	0.55	0.15	23.21
11940 F	352	1.16	0.33	46.77	1.66	0.47	66.94	11.69	3.32	471.37	0.68	0.19	27.42
11943 F	271	1.11	0.41	49.78	1.33	0.49	59.64	9.68	3.57	434.08	0.54	0.20	24.22
11944 F	359	1.19	0.33	53.60	1.76	0.49	79.28	12.52	3.49	563.96	0.65	0.18	29.28
11947 F	263	0.94	0.36	43.32	1.58	0.60	72.81	9.31	3.54	429.03	0.55	0.21	25.35
11948 F	FOUND DEAD												
11949 F	311	1.16	0.37	52.49	1.39	0.45	62.90	10.14	3.26	458.82	0.61	0.20	27.60
MEAN	307	1.08	0.35	48.12	1.42	0.47	63.40	10.51	3.43	467.89	0.60	0.20	26.68
S.D.	43.7	0.101	0.034	4.044	0.197	0.068	8.391	1.484	0.111	51.915	0.054	0.022	2.046
N	9	9	9	9	9	9	9	9	9	9	9	9	9

NOTE: REL. % FINAL BODY WEIGHT (FBW) = (ORGAN WEIGHT/FBW) X 100; REL. % BRAIN WEIGHT (BRW) = (ORGAN WEIGHT/BRW) X 100.

APPENDIX O
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL ABSOLUTE AND RELATIVE ORGAN WEIGHT DATA

SCHEDULED EUTHANASIA - DAYS 121-123

ANIMAL NO.	FINAL BODY WEIGHT (g)	UTERUS ABS. (g)	UTERUS REL. %FBW	UTERUS REL. %BRW	THYROID/PARATHYROID ABS. (g)	THYROID/PARATHYROID REL. %FBW	THYROID/PARATHYROID REL. %BRW
GROUP 3: 0.05 MG/KG/DAY							
11926 F	298	0.46	0.15	20.91	0.0199	0.0067	0.9045
11928 F	286	0.60	0.21	26.67	0.0269	0.0094	1.1956
11932 F	253	0.52	0.21	25.49	0.0198	0.0078	0.9706
11933 F	369	0.53	0.14	22.36	0.0242	0.0066	1.0211
11940 F	352	0.42	0.12	16.94	0.0214	0.0061	0.8629
11943 F	271	0.38	0.14	17.04	0.0180	0.0066	0.8072
11944 F	359	0.53	0.15	23.87	0.0300	0.0084	1.3514
11947 F	263	1.04	0.40	47.93	0.0214	0.0081	0.9862
11948 F	FOUND DEAD						
11949 F	311	0.42	0.14	19.00	0.0149	0.0048	0.6742
MEAN	307	0.54	0.18	24.47	0.0218	0.0072	0.9748
S.D.	43.7	0.198	0.085	9.456	0.00460	0.00139	0.20271
N	9	9	9	9	9	9	9

NOTE: REL. % FINAL BODY WEIGHT (FBW) = (ORGAN WEIGHT/FBW) X 100; REL. % BRAIN WEIGHT (BRW) = (ORGAN WEIGHT/BRW) X 100.

APPENDIX O
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL ABSOLUTE AND RELATIVE ORGAN WEIGHT DATA

SCHEDULED EUTHANASIA - DAYS 121-123

ANIMAL NO.	FINAL BODY WEIGHT (g)	BRAIN ABS. (g)	BRAIN REL. %FBW	PITUITARY ABS. (g)	PITUITARY REL. %FBW	PITUITARY REL. %BRW	OVARIES ABS. (g)	OVARIES REL. %FBW	OVARIES REL. %BRW	KIDNEYS ABS. (g)	KIDNEYS REL. %FBW	KIDNEYS REL. %BRW
GROUP 5: 1.0 MG/KG/DAY												
11978 F	287	2.16	0.75	0.0128	0.0045	0.5926	0.0784	0.0273	3.6296	1.80	0.63	83.33
11979 F	296	2.14	0.72	0.0140	0.0047	0.6542	0.0943	0.0319	4.4065	2.41	0.81	112.62
11980 F	347	2.18	0.63	0.0179	0.0052	0.8211	0.1132	0.0326	5.1927	2.71	0.78	124.31
11981 F	291	2.18	0.75	0.0148	0.0051	0.6789	0.0836	0.0287	3.8349	2.36	0.81	108.26
11985 F	311	2.08	0.67	0.0100	0.0032	0.4808	0.1151	0.0370	5.5337	2.27	0.73	109.13
11986 F	360	2.20	0.61	0.0110	0.0031	0.5000	0.1024	0.0284	4.6545	2.37	0.66	107.73
11987 F	285	2.16	0.76	0.0127	0.0045	0.5880	0.0866	0.0304	4.0093	2.10	0.74	97.22
11999 F	304	2.19	0.72	0.0104	0.0034	0.4749	0.0850	0.0280	3.8813	2.42	0.80	110.50
12002 F	344	2.16	0.63	0.0167	0.0049	0.7731	0.1070	0.0311	4.9537	2.31	0.67	106.94
12004 F	359	2.10	0.58	0.0227	0.0063	1.0810	0.1011	0.0282	4.8143	2.64	0.74	125.71
MEAN	318	2.16	0.68	0.0143	0.0045	0.6645	0.0967	0.0304	4.4910	2.34	0.74	108.58
S.D.	30.7	0.039	0.066	0.00393	0.00101	0.18793	0.01300	0.00295	0.64190	0.257	0.066	12.162
N	10	10	10	10	10	10	10	10	10	10	10	10

NOTE: REL. % FINAL BODY WEIGHT (FBW) = (ORGAN WEIGHT/FBW) X 100; REL. % BRAIN WEIGHT (BRW) = (ORGAN WEIGHT/BRW) X 100.

APPENDIX O
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL ABSOLUTE AND RELATIVE ORGAN WEIGHT DATA

SCHEDULED EUTHANASIA - DAYS 121-123

ANIMAL NO.	FINAL BODY WEIGHT (g)	HEART ABS. (g)	HEART REL. %FBW	HEART REL. %BRW	LUNGS ABS. (g)	LUNGS REL. %FBW	LUNGS REL. %BRW	LIVER ABS. (g)	LIVER REL. %FBW	LIVER REL. %BRW	SPLEEN ABS. (g)	SPLEEN REL. %FBW	SPLEEN REL. %BRW
GROUP 5: 1.0 MG/KG/DAY													
11978 F	287	1.10	0.38	50.93	1.39	0.48	64.35	8.00	2.79	370.37	0.47	0.16	21.76
11979 F	296	1.04	0.35	48.60	1.67	0.56	78.04	11.68	3.95	545.79	0.66	0.22	30.84
11980 F	347	1.29	0.37	59.17	1.61	0.46	73.85	11.13	3.21	510.55	0.61	0.18	27.98
11981 F	291	1.13	0.39	51.83	1.50	0.52	68.81	10.29	3.54	472.02	0.58	0.20	26.61
11985 F	311	1.10	0.35	52.88	1.26	0.41	60.58	11.40	3.67	548.08	0.53	0.17	25.48
11986 F	360	1.29	0.36	58.64	1.63	0.45	74.09	12.00	3.33	545.45	0.85	0.24	38.64
11987 F	285	1.05	0.37	48.61	1.22	0.43	56.48	10.63	3.73	492.13	0.68	0.24	31.48
11999 F	304	1.13	0.37	51.60	1.32	0.43	60.27	10.46	3.44	477.63	0.67	0.22	30.59
12002 F	344	1.16	0.34	53.70	2.54	0.74	117.59	10.69	3.11	494.91	0.49	0.14	22.69
12004 F	359	1.26	0.35	60.00	1.72	0.48	81.90	13.23	3.69	630.00	0.86	0.24	40.95
MEAN	318	1.15	0.36	53.60	1.59	0.50	73.60	10.95	3.44	508.69	0.64	0.20	29.70
S.D.	30.7	0.094	0.016	4.244	0.379	0.096	17.553	1.359	0.343	67.417	0.135	0.036	6.275
N	10	10	10	10	10	10	10	10	10	10	10	10	10

NOTE: REL. % FINAL BODY WEIGHT (FBW) = (ORGAN WEIGHT/FBW) X 100; REL. % BRAIN WEIGHT (BRW) = (ORGAN WEIGHT/BRW) X 100.

APPENDIX O
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL ABSOLUTE AND RELATIVE ORGAN WEIGHT DATA

SCHEDULED EUTHANASIA - DAYS 121-123

ANIMAL NO.	FINAL BODY WEIGHT (g)	UTERUS ABS. (g)	UTERUS REL. %FBW	UTERUS REL. %BRW	THYROID/PARATHYROID ABS. (g)	THYROID/PARATHYROID REL. %FBW	THYROID/PARATHYROID REL. %BRW
GROUP 5: 1.0 MG/KG/DAY							
11978 F	287	0.78	0.27	36.11	0.0197	0.0069	0.9120
11979 F	296	0.74	0.25	34.58	0.0238	0.0080	1.1121
11980 F	347	0.91	0.26	41.74	0.0279	0.0080	1.2798
11981 F	291	0.39	0.13	17.89	0.0184	0.0063	0.8440
11985 F	311	0.60	0.19	28.85	0.0206	0.0066	0.9904
11986 F	360	0.57	0.16	25.91	0.0218	0.0061	0.9909
11987 F	285	0.61	0.21	28.24	0.0191	0.0067	0.8843
11999 F	304	0.55	0.18	25.11	0.0261	0.0086	1.1918
12002 F	344	0.49	0.14	22.69	0.0201	0.0058	0.9306
12004 F	359	0.58	0.16	27.62	0.0193	0.0054	0.9190
MEAN	318	0.62	0.20	28.87	0.0217	0.0068	1.0055
S.D.	30.7	0.150	0.050	6.947	0.00322	0.00105	0.14312
N	10	10	10	10	10	10	10

NOTE: REL. % FINAL BODY WEIGHT (FBW) = (ORGAN WEIGHT/FBW) X 100; REL. % BRAIN WEIGHT (BRW) = (ORGAN WEIGHT/BRW) X 100.

APPENDIX O
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL ABSOLUTE AND RELATIVE ORGAN WEIGHT DATA

SCHEDULED EUTHANASIA - DAYS 121-123

ANIMAL NO.	FINAL BODY WEIGHT (g)	BRAIN ABS. (g)	BRAIN REL. %FBW	PITUITARY ABS. (g)	PITUITARY REL. %FBW	PITUITARY REL. %BRW	OVARIES ABS. (g)	OVARIES REL. %FBW	OVARIES REL. %BRW	KIDNEYS ABS. (g)	KIDNEYS REL. %FBW	KIDNEYS REL. %BRW
GROUP 6: 10.0 MG/KG/DAY												
12008 F	298	2.20	0.74	0.0146	0.0049	0.6636	0.0718	0.0241	3.2636	2.13	0.71	96.82
12009 F	319	1.99	0.62	0.0164	0.0051	0.8241	0.0916	0.0287	4.6030	2.28	0.71	114.57
12014 F	348	1.97	0.57	0.0183	0.0053	0.9289	0.1343	0.0386	6.8173	2.62	0.75	132.99
12015 F	295	2.25	0.76	0.0140	0.0047	0.6222	0.0850	0.0288	3.7778	2.32	0.79	103.11
12017 F	299	2.23	0.75	0.0118	0.0039	0.5291	0.0844	0.0282	3.7848	2.18	0.73	97.76
12020 F	316	2.29	0.72	0.0162	0.0051	0.7074	0.0892	0.0282	3.8952	2.82	0.89	123.14
12024 F	376	2.09	0.56	0.0161	0.0043	0.7703	0.0953	0.0253	4.5598	2.42	0.64	115.79
12027 F	321	2.22	0.69	0.0189	0.0059	0.8514	0.1050	0.0327	4.7297	2.13	0.66	95.95
12034 F	321	2.08	0.65	0.0137	0.0043	0.6587	0.1079	0.0336	5.1875	2.41	0.75	115.87
12035 F	307	2.25	0.73	0.0138	0.0045	0.6133	0.1007	0.0328	4.4756	2.40	0.78	106.67
MEAN	320	2.16	0.68	0.0154	0.0048	0.7169	0.0965	0.0301	4.5094	2.37	0.74	110.27
S.D.	25.1	0.115	0.076	0.00221	0.00058	0.12412	0.01705	0.00432	0.99088	0.219	0.070	12.335
N	10	10	10	10	10	10	10	10	10	10	10	10

NOTE: REL. % FINAL BODY WEIGHT (FBW) = (ORGAN WEIGHT/FBW) X 100; REL. % BRAIN WEIGHT (BRW) = (ORGAN WEIGHT/BRW) X 100.

APPENDIX O
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL ABSOLUTE AND RELATIVE ORGAN WEIGHT DATA

SCHEDULED EUTHANASIA - DAYS 121-123

ANIMAL NO.	FINAL BODY WEIGHT (g)	HEART ABS. (g)	HEART REL. %FBW	HEART REL. %BRW	LUNGS ABS. (g)	LUNGS REL. %FBW	LUNGS REL. %BRW	LIVER ABS. (g)	LIVER REL. %FBW	LIVER REL. %BRW	SPLEEN ABS. (g)	SPLEEN REL. %FBW	SPLEEN REL. %BRW
GROUP 6: 10.0 MG/KG/DAY													
12008 F	298	0.94	0.32	42.73	1.84	0.62	83.64	9.74	3.27	442.73	0.61	0.20	27.73
12009 F	319	1.18	0.37	59.30	1.31	0.41	65.83	10.35	3.24	520.10	0.56	0.18	28.14
12014 F	348	1.35	0.39	68.53	1.28	0.37	64.97	10.50	3.02	532.99	0.73	0.21	37.06
12015 F	295	1.10	0.37	48.89	2.23	0.76	99.11	11.87	4.02	527.56	0.62	0.21	27.56
12017 F	299	1.24	0.41	55.61	1.68	0.56	75.34	10.43	3.49	467.71	0.69	0.23	30.94
12020 F	316	1.24	0.39	54.15	1.73	0.55	75.55	11.28	3.57	492.58	0.58	0.18	25.33
12024 F	376	1.52	0.40	72.73	2.11	0.56	100.96	14.87	3.95	711.48	0.77	0.20	36.84
12027 F	321	1.20	0.37	54.05	1.60	0.50	72.07	11.81	3.68	531.98	0.57	0.18	25.68
12034 F	321	1.16	0.36	55.77	1.53	0.48	73.56	10.84	3.38	521.15	0.56	0.17	26.92
12035 F	307	1.27	0.41	56.44	1.31	0.43	58.22	10.23	3.33	454.67	0.68	0.22	30.22
MEAN	320	1.22	0.38	56.82	1.66	0.52	76.92	11.19	3.50	520.30	0.64	0.20	29.64
S.D.	25.1	0.152	0.030	8.662	0.329	0.113	14.023	1.465	0.319	75.101	0.076	0.020	4.227
N	10	10	10	10	10	10	10	10	10	10	10	10	10

NOTE: REL. % FINAL BODY WEIGHT (FBW) = (ORGAN WEIGHT/FBW) X 100; REL. % BRAIN WEIGHT (BRW) = (ORGAN WEIGHT/BRW) X 100.

APPENDIX O
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL ABSOLUTE AND RELATIVE ORGAN WEIGHT DATA

SCHEDULED EUTHANASIA - DAYS 121-123

ANIMAL NO.	FINAL BODY WEIGHT (g)	UTERUS ABS. (g)	UTERUS REL. %FBW	UTERUS REL. %BRW	THYROID/PARATHYROID ABS. (g)	THYROID/PARATHYROID REL. %FBW	THYROID/PARATHYROID REL. %BRW
GROUP 6: 10.0 MG/KG/DAY							
12008 F	298	0.51	0.17	23.18	0.0198	0.0066	0.9000
12009 F	319	0.48	0.15	24.12	0.0260	0.0082	1.3065
12014 F	348	0.64	0.18	32.49	0.0274	0.0079	1.3909
12015 F	295	0.75	0.25	33.33	0.0188	0.0064	0.8356
12017 F	299	0.46	0.15	20.63	0.0250	0.0084	1.1211
12020 F	316	0.58	0.18	25.33	0.0266	0.0084	1.1616
12024 F	376	0.50	0.13	23.92	0.0270	0.0072	1.2919
12027 F	321	0.48	0.15	21.62	0.0214	0.0067	0.9640
12034 F	321	0.54	0.17	25.96	0.0231	0.0072	1.1106
12035 F	307	0.60	0.20	26.67	0.0213	0.0069	0.9467
MEAN	320	0.55	0.17	25.73	0.0236	0.0074	1.1029
S.D.	25.1	0.090	0.034	4.214	0.00317	0.00076	0.18865
N	10	10	10	10	10	10	10

NOTE: REL. % FINAL BODY WEIGHT (FBW) = (ORGAN WEIGHT/FBW) X 100; REL. % BRAIN WEIGHT (BRW) = (ORGAN WEIGHT/BRW) X 100.

APPENDIX P

Bone Marrow Micronuclei Report
(as Provided by the Sponsor)

SLI Study No. 3455.1

TESTING FOR INDUCTION OF MICRONUCLEI BY AMMONIUM PERCHLORATE IN BONE MARROW POLYCHROMATIC ERYTHROCYTES OF SPRAGUE-DAWLEY RATS

Final Report

January 26, 1998 through February 20, 1998

SLI STUDY #3455.1
MANTECH STUDY # 1096-25F (AP Study)

Date Prepared: February 26, 1998

Submitted to:

Darol Dodd, Ph.D.
Program Manager
Toxic Hazards Research Unit
ManTech Environmental Technology, Inc.
Dayton, Ohio 45433

Prepared by:

Sheela Sharma M.S., Ph.D. 5/14/98

Pu Gao, M.D. 5/14/98

Cellular & Molecular Toxicology Program
ManTech Environmental Technology, Inc.
Research Triangle Park, NC 27709

SLI Study No. 3455.1

I. PURPOSE:

To investigate the mutagenicity of **Ammonium Perchlorate (AP)** for micronuclei induction in the bone marrow polychromatic erythrocytes of Sprague-Dawley (SD) rats in a 90-day drinking water toxicity study.

II. METHODS:

Animal treatment and the preparation of bone marrow smears were conducted by the staff at Springborn Laboratories, Inc. (SLI) in Spencerville, Ohio. Animals were treated with ammonium perchlorate in drinking RO water for 90 days (male and female) at target doses of 0.01, 0.05, 0.2, 1.0 and 10 mg/kg/day (groups 2 - 6). The positive control animals (males, group k) were administered cyclophosphamide (CP) once at a concentration of 20 mg/kg dissolved in physiological saline. The negative control (vehicle control) animals (group 1) received RO water alone. Though animals were sacrificed at Study Day 14, Study Day 90 , and Study Day 120 (30 days recovery), bone marrow smears from animals of the 90-day sacrifice only were evaluated for induction of micronuclei. Bone marrow cells were obtained from the femur and cell smears were prepared and stained. Slides, animal numbers, sex identification, and group numbers were delivered to Toxic Hazards Research, ManTech Environmental, Wright-Patterson AFB, OH. Sample slides were evaluated for micronuclei (MN) induction at Cellular & Molecular Toxicology Program ManTech Environmental, Inc., RTP, N.C.

Slides were observed microscopically under 100 X magnification. The frequency of micronucleated cells was evaluated by random observation of 1000 polychromatic erythrocytes (PCE) per slide, and data were presented as percentage (mean $\pm$ standard deviation). The ratio between PCE and NCE (normochromatic erythrocytes) was also determined by scoring about 1000 erythrocytes as an indicator for the toxicity of the test agent.

The data on micronuclei induction and PCE/NCE ratio changes were statistically analyzed by comparing groups using the Chi-square analysis and one-way analysis of variance (ANOVA).

III. RESULTS:

The results of the micronuclei scoring in male and female rats including the data of PCE/NCE ratio from the 90-day study is presented in Table 1. A summary of the statistical analysis using the ANOVA one way t-test is shown in Table 2.

The results indicate that ammonium perchlorate at the highest dose did not show any induction of micronuclei formation in both male and female rats. Statistical analysis of the data using the ANOVA one way t-test, by comparing control with all treated groups in both male and female rats, indicated that there was no significant difference between the various groups ($p > 0.1$).

The toxicity of the test agent is indicated by the reduction of PCE/NCE ratio in the test animals. Results in Table 2 show that ammonium perchlorate at 10 mg/kg/day for 90 days did not cause any reduction of the PCE/NCE ratio in male or female rats indicating that there is no toxicity to the bone marrow cells of the test animals at this dose. Overall, the study data demonstrates that ammonium perchlorate is not mutagenic in mammalian cells.

Male rats treated with CP had an approximate 10-fold increase in micronuclei formation compared to the means of vehicle-only (water-only) control animals (Table 2). However, the PCE/NCE ratio of the CP-treated animals was similar to vehicle-only control values, indicating no toxicity in the bone marrow cells of the positive control group.

IV. CONCLUSIONS:

1. Ammonium perchlorate at doses of 10 mg/kg/day treated for 90 days was not mutagenic to the bone marrow cells of SD rats.

2. Ammonium perchlorate at doses of 10 mg/kg/day, treated for 90 days did not cause any reduction of the PCE/NCE ratio in male or female rats indicating that there is no toxicity to the bone marrow cells of the test animals at this dose.

3. No statistically significant differences were found between males and females in their response to the micronuclei induction by ammonium perchlorate.

V. GOOD LABORATORY PRACTICE AND QUALITY ASSURANCE:

All the procedures were performed in accordance with the provision of the United States

SLI Study No. 3455.1

Environmental Protection Agency / Toxic Substances Control Acts (EPA/ TSCA) Good Laboratory Practice (GLP) Standards as defined in the federal Register (40 CFR, Part 792, 1992) and the TSCA Test Guideline (40 CFR 798.5265,1992). The Quality Assurance Coordinator, Ms. Betty Wilkinson, documented inspections on micronuclei scoring and evaluation.

Date of inspection	Item / Activity Inspection
February 9, 1998	Scoring of PCE, NCE and micronucleated PCE with the aid of a microscope (Nikon Diaphot) a. Observed adjustment and focusing using 100X mangnification for reading slides. b. Tested randomly the identification of PCE and NCE cells. c. Observed micronucleated PCE's . d. Observed recording of PCE, NCE and micronucleated PCE counts onto a pre-designed form, reviewed the numbers with matching slides by checking the identification number.

B P Wilkinson
Betty Wilkinson
Quality Assurance Auditor

4/15/98
Date

SLI Study No. 3455.1

Table 1

Micronuclei scoring results for Ammonium Perchlorate in rats

02-23-98

Group	Slice number	Number of PCE	Number of NCE	Ratio (PCE/NCE)	MN in 1000 PCE	% MPCE
K	R/12036/M	268	799	0.33	22/1022	2.15
K	R/12037/M	369	660	0.56	18/1007	1.78
K	R/12041/M	257	751	0.34	20/1007	1.98
1	R/11721/M	231	961	0.24	1/1011	0.098
1	R/11724/M	444	1074	0.41	3/1034	0.27
1	R/11729/M	330	684	0.48	2/1000	0.2
1	R/11732/M	283	739	0.38	2/1000	0.2
1	R/11739/M	264	1000	0.27	1/1006	0.099
1	R/11738/M	329	698	0.47	1/1000	0.1
1	R/11741/M	323	693	0.47	1/1000	0.1
1	R/11742/M	447	595	0.75	1/1005	0.099
1	R/11735/M	127	930	0.13	1/1000	0.1
1	R/11736/M	262	748	0.35	1/1015	0.098
1	R/11876/F	417	800	0.52	1/1011	0.098
1	R/11886/F	523	726	0.72	3/1034	0.29
1	R/11890/F	466	544	0.85	4/1014	0.39
1	R/11891/F	222	800	0.27	1/1000	0.1
1	R/11892/F	332	670	0.49	1/1000	0.1
1	R/11895/F	398	643	0.62	2/1049	0.19

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Table 1 (continued)

1	R/11904/F	434	759	0.57	4/1049	0.38
1	R/11901/F	205	877	0.23	1/1008	0.099
1	R/11902/F	404	646	0.63	1/1001	0.099
1	R/11896/F	187	856	0.22	1/1002	0.099
6	R/11851/M	273	808	0.337	2/1008	0.198
6	R/11854/M	418	708	0.59	2/1005	0.199
6	R/11852/M	586	597	0.98	3/1052	0.28
6	R/11860/M	474	632	0.74	2/1006	0.19
6	R/11871/M	456	673	0.67	1/1071	0.093
6	R/11866/M	433	1168	0.37	1/1197	0.084
6	R/11872/M	478	551	0.86	1/1050	0.095
6	R/11876/M	402	640	0.63	1/1007	0.0993
6	R/11873/M	540	527	1.024	1/1014	0.098
6	R/11862/M	369	568	0.56	1/1004	0.099
6	R/12006/F	194	1089	0.18	1/1001	0.099
6	R/12007/F	272	796	0.34	2/1100	0.18
6	R/12011/F	393	611	0.64	1/1001	0.1
6	R/12018/F	371	796	0.46	5/1009	0.49
6	R/12019/F	242	871	0.28	2/1002	0.199
6	R/12033/F	266	748	0.36	4/1025	0.39
6	R/12025/F	194	813	0.24	1/1039	0.096
6	R/12029/F	493	775	0.64	2/1049	0.19
6	R/12012/F	294	814	0.36	1/1010	0.099
6	R/12022/F	443	572	0.77	4/1016	0.39

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Table 2

Micronuclei Scoring results - male and female rats - Ammonium Perchlorate 90-day study

Positive control, males (CP 20 mg/kg)

Animal #	Ratio (PCE:NCE)	MPCE %
R/12036/M	0.33	2.15
R/12037/M	0.56	1.78
R/12041/M	0.34	1.98
Mean	**0.41**	**1.97**
SD	**0.13**	**0.185**

Vehicle-only Control (males)

Animal #	Ratio (PCE:NCE)	MPCE%
R/11721/M	0.24	0.098
R/11724/M	0.41	0.27
R/11729/M	0.48	0.2
R/11732/M	0.38	0.2
R/11739/M	0.27	0.099
R/11738/M	0.47	0.1
R/11741/M	0.47	0.1
R/11742/M	0.75	0.099
R/11735/M	0.13	0.1
R/11736/M	0.35	0.098
Mean	**0.395**	**0.136**
SD	**0.169**	**0.063**

Vehicle-only Control (females)

Animal #	Ratio (PCE:NCE)	MPCE%
R/11876/F	0.52	0.098
R/11886/F	0.72	0.29
R/11890/F	0.85	0.39
R/11891/F	0.27	0.1
R/11892/F	0.49	0.1
R/11895/F	0.62	0.19
R/11904/F	0.57	0.38
R/11901/F	0.23	0.099
R/11902/F	0.63	0.099
R/11896/F	0.22	0.099
Mean	**0.512**	**0.185**
SD	**0.214**	**0.123**

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Table 2 (continued)

AP Treatment, males (10 mg/kg/day)

Animal#	Ratio (PCE:NCE)	MPCE%
R/11851/M	0.04	0.198
R/11854/M	0.59	0.199
R/11852/M	0.98	0.28
R/11860M	0.74	0.19
R/11871/M	0.67	0.093
R/11866/M	0.37	0.084
R/11872/M	0.86	0.095
R/11876/M	0.63	0.099
R/11873/M	1.02	0.098
R/11862/M	0.56	0.099
Mean	**0.646**	**0.144**
SD	**0.291**	**0.068**

AP Treatment, females (10 mg/kg/day)

Animale #	Ratio (PCE:NCE)	MPCE%
R/12006/F	0.18	0.099
R/12007/F	0.34	0.18
R/12011/F	0.64	0.1
R/12018/F	0.46	0.49
R/12019/F	0.28	0.199
R/12033/F	0.36	0.39
R/12025/F	0.24	0.096
R/12029/F	0.64	0.19
R/12012/F	0.36	0.099
R/12022/F	0.77	0.39
Mean	**0.427**	**0.223**
SD	**0.195**	**0.146**

P value from group comparisons

Groups	P value
Positive vs control (male)	0.0025
Positive vs control (female)	0.0013
Positive vs treatment (male)	0.0025
Positive vs treatment (female)	0.0006
Treatment vs control (male)	0.92
Treatment vs control (female)	0.529
Male vs female (control)	0.81
Male vs female (treatment)	0.12

APPENDIX Q

Histopathology Report

PATHOLOGY REPORT
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS WITH AMMONIUM PERCHLORATE
SLI STUDY NO. 3455.1

Prepared by:
Paul K. Hildebrandt, DVM
Diplomate, American College of
Veterinary Pathologists

PATHCO, Inc
10075 Tyler Place, Suite 16
Ijamsville, MD 21754

Submitted to:
Springborn Laboratories, Inc.
640 N. Elizabeth Street
Spencerville, OH 45887

May 07, 1998

QUALITY ASSURANCE UNIT STATEMENT

Study: SLI Study No. 3455.1

Species: Male and Female Rats

PATHCO Project Pathologist: Paul K. Hildebrandt D.V.M.

Client: Springborn Laboratories, Inc.

Project Title: A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS WITH AMMONIUM PERCHLORATE

This histopathology Project has been conducted in accordance with the study protocol and the Good Laboratory Practice Regulations promulgated by the U.S. Food and Drug Administration and the U.S. Environmental Protection Agency. The following phases of this project have been inspected and the findings reported to management and the project pathologist as appropriate:

Phase Inspected	Date Inspected	Date Report Submitted to Management
Review of draft final report	03/19/98	03/19/98
Review of final report	05/07/98	05/07/98

Mary A. Kraner

Quality Assurance Monitor

May 07, 1998

Date

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90-Day Male - Groups 1 through 6
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120-Day Male - Groups 1, 3, 5 and 6
120-Day Female - Groups 1, 3, 5 and 6

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120-Day Male - Groups 1, 3, 5 and 6
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Code Table
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14-Day Male - Groups 1 through 6
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APPENDIX E

Code Table
Tabulated Animal Data

90-Day Male - Groups 1 through 6
90-Day Female - Groups 1 through 6

APPENDIX F

Code Table
Tabulated Animal Data

120-Day Male - Groups 1, 3, 5 and 6
120-Day Female - Groups 1, 3, 5 and 6

PATHOLOGY REPORT
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS WITH AMMONIUM PERCHLORATE
SLI STUDY NO. 3455.1

I. INTRODUCTION

Male and female Sprague-Dawley rats were administered Ammonium Perchlorate via dose water. The toxicity study was performed at Springborn Laboratories, Inc. Histology preparation was completed and slides were forwarded to PATHCO, Inc. Paul K. Hildebrandt, D.V.M., Diplomate, American College of Veterinary Pathologists evaluated the tissues. Histopathology data was collected and stored on the computerized Labcat Software, Pathology Module, Version 3.22.

A. Study Group Design

The study design consisted of 6 treatment groups per sex. Treatment groups were as follows:

Group	No. of Animals		Dosage Material	Target Dosage Level (mg/kg/day)	Euthanasia Schedule (No. of Animals-Male/Female)		
	Male	Female			Day 14	Day 90	Day 120[a] (recovery)
1	30	30	Vehicle[b]	0	10/10	10/10	10/10
2	20	20	Test Article[c]	0.01	10/10	10/10	-
3	30	30	Test Article[c]	0.05	10/10	10/10	10/10
4	20	20	Test Article[c]	0.2	10/10	10/10	-
5	30	30	Test Article[c]	1.0	10/10	10/10	10/10
6	30	30	Test Article[c]	10.0	10/10	10/10	10/10

a) 90 days of treatment and allowed to recover for 30 days
b) RO water only
c) Ammonium perchlorate in RO water

At study termination all surviving rats were euthanized by carbon dioxide inhalation and exsanguination. Complete necropsies were performed in accordance with the Standard Operation Procedures of the test facility. Full protocol required tissues and gross lesions were processed with histopathologic evaluation on all rats of both sexes in control and high dose groups (groups 1 and 6,) as well as thyroids, parathyroids, lungs, liver and kidneys, plus gross lesions in the intermediate dose groups (groups 2, 3, 4, and 5) of the 14-day and 90-day scheduled sacrifice animals. Thyroids, parathyroids, lungs, liver, and kidneys were processed with histopathologic evaluation for dose groups 1, 3, 5 and 6 of both sexes in the 120-day (recovery) group. Also, all tissues from one animal that died on study were processed with histopathologic evaluation.

B. Survival

One Group 3 female from the 120-day (recovery group) died on day 97. The cause of death was not determined. All other rats survived to scheduled sacrifice.

II. RESULTS

A. Gross Lesions

The only possible treatment-related lesion identified at necropsy was reddened thyroids in a few rats in the high dose groups.

B. Microscopic Findings

1. Thyroid

There appears to be a treatment effect in the thyroids of high dose male and female rats. The change observed in these thyroids was diagnosed as follicular cell hyperplasia. This hyperplasia was minimal in most cases with only an occasional thyroid with a severity grade of mild.

The hyperplasia was characterized by an increased number of small follicles in the central portion of the thyroid compared to thyroids of control rats. The epithelium of the smaller follicles in treated thyroids was somewhat taller than that of controls. At the periphery of

control thyroids, larger follicles were commonly observed, many of which had a very low or flattened epithelium. In treated thyroids, these follicles at the periphery had slightly taller epithelium compared to controls. There was no piling-up of follicular epithelium nor an increase in mitotic activity. Occasionally, small secondary follicles were noted within larger follicles. The degree of follicular cell hyperplasia was subtle in most thyroids. The thyroids were re-read in a blind fashion (slides of controls and high dose thyroids mixed and read without knowledge of dose group). There were a few thyroids that could not be distinguished from controls and an occasional control thyroid appeared to be just as active as a treated thyroid.

The change present in many of these high dose thyroids was difficult to differentiate from increased activity or an "active" thyroid. Because of the increased number of small follicles in the central portion of the thyroid, the term follicular cell hyperplasia was utilized. The hyperplasia was recognized in male and female rats of the 14-day study and the 90-day study. When the thyroids of the 120-day study were read in a "blind" fashion, the thyroids from treated rats could not be separated from controls.

The reddened thyroids noted on gross examination had minimal congestion of blood vessels which most likely accounted for the red appearance. No pigment was observed in any thyroids.

2. Miscellaneous Lesions

A few spontaneous lesions were observed and occurred with essentially equal incidence and severity in all dose groups including controls. Several of these are briefly discussed.

a) Liver

Minimal extramedullary hematopoiesis was frequently observed in the livers of rats in all dose groups and in both sexes. The extramedullary hematopoiesis consisted of small clusters or accumulations of blood forming elements in sinusoids near central veins. This is a common finding in young rodents and is not considered compound related in this study.

b) Lung

Minimal chronic inflammation was diagnosed in a number of rats in all dose groups including controls. This inflammation was characterized by a small cluster of mononuclear inflammatory cells in alveoli, usually located in the subpleural region. Occasionally, a few thickened septal walls radiated from the cluster of inflammatory cells. These lesions were almost all graded minimal in degree of severity and often only a single cluster of inflammatory cells was present in the entire section of lung.

c) Kidney

Minimal nephropathy was observed in a few rats across all dose groups and in both sexes. The lesions were focal, usually involving a single tubule in which tubular epithelial cells were more basophilic than normal, and had large vesicular nuclei. A few kidneys were diagnosed with hydronephrosis. These were almost all unilateral and were characterized by a dilated renal pelvis with little or no compression of kidney parenchyma. An occasional kidney was diagnosed with mineralization which consisted of a few small mineral deposits in renal tubules near the corticomedullary junction. These renal changes are commonly seen in young rats and not considered compound related.

d) Heart

Chronic inflammation was diagnosed in the hearts of a few control and treated rats in both sexes. The lesion consisted of a small focus of chronic inflammatory cells within and among muscle fibers, usually near the lower portion of the septal wall. These were very minimal lesions and are commonly observed in rats. No compound affect is considered to be present in the heart.

III. SUMMARY

A compound effect was recognized in the thyroid gland of high dose (10.0 mg/kg/day) male and female rats in the 14-day and 90-day scheduled sacrificed animals. The thyroid lesion was diagnosed as follicular cell hyperplasia. The change was minimal in degree of severity and in some cases was little more than an "active" thyroid gland. No compound effect was recognized in lower dose group (groups 2, 3, 4 and 5) in either sex. No compound effect was recognized in any organ/tissue of the 120-day recovery study (treated for 90-days with a 30-day recovery period).

Paul K. Hildebrandt

Paul K. Hildebrandt, D.V.M.
Diplomate, American College of
Veterinary Pathologists

ABBREVIATIONS

Acu	Acute
Cellular Infil	Cellular Infiltrate
Centrilo Cytopl Vacu	Centrilobular Cytoplasmic Vacuolization
Ch	Chronic
Degen	Degeneration
Hyperp	Hyperplasia
Infl, a/c	Inflammation, active/chronic
Infl, acu	Inflammation, acute
Lt	Left
LN	Lymph Node
Lymp	Lymphoid
Rt	Right
Seminif Tubu	Seminiferous Tubule
Sq Epith	Squamous Epithelium

A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS WITH AMMONIUM PERCHLORATE SLI STUDY NO. 3455.1

Project Summary Table

SUMMARY: Incidence of NEOPLASTIC and NON-NEOPLASTIC Microscopic Findings

PROJECT ID. NO: 34551 FATES: ALL DAYS: 15-18 SEX: MALE

GROUP:		Group 1	Group 2	Group 3	Group 4	Group 5	Group 6
NUMBER OF ANIMALS:		10	10	10	10	10	10
		#	#	#	#	#	#
Brain	# Ex	10	0	0	0	0	10
Pituitary Gland	# Ex	10	0	0	0	0	10
Sciatic Nerve	# Ex	10	0	0	0	0	10
Perineural Tissue - Infl, a/c		1	0	0	0	0	0
Perineural Tissue - Infl, acu		0	0	0	0	0	1
Spinal Cord, Cervical	# Ex	10	0	0	0	0	10
Spinal Cord, Thoracic	# Ex	10	0	0	0	0	10
Spinal Cord, Lumbar	# Ex	10	0	0	0	0	10
Eye A	# Ex	10	0	0	0	0	10
Eye B	# Ex	10	0	0	0	0	10
Cornea - Inflammation, chronic		0	0	0	0	0	1
Lacrimal Gland	# Ex	10	0	0	0	0	10
Inflammation, chronic		0	0	0	0	0	1
Mediastinal LN	# Ex	10	0	0	0	0	8
Congestion		2	0	0	0	0	0
Thyroid	# Ex	8	10	10	10	10	10
Hyperplasia, follicular cell		1	0	1	0	0	10
Ectopic Thymus		0	1	0	0	1	1
Cellular Infil, lymphocyte		0	0	0	1	0	0

A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS WITH AMMONIUM PERCHLORATE SLI STUDY NO. 3455.1

Project Summary Table

SUMMARY: Incidence of NEOPLASTIC and NON-NEOPLASTIC Microscopic Findings

PROJECT ID. NO: 34551 FATES: ALL DAYS: 15-18 SEX: MALE

GROUP:		Group 1	Group 2	Group 3	Group 4	Group 5	Group 6
NUMBER OF ANIMALS:		10	10	10	10	10	10
		#	#	#	#	#	#
Parathyroid	# Ex	8	10	10	10	10	10
Trachea	# Ex	10	0	0	0	0	10
Inflammation, chronic		3	0	0	0	0	2
Esophagus	# Ex	10	0	0	0	0	10
Thymus	# Ex	10	0	0	0	0	10
Tongue	# Ex	10	0	0	0	0	10
Pancreas	# Ex	10	0	0	0	0	10
Islets of Pancreas	# Ex	10	0	0	0	0	10
Salivary Gland	# Ex	10	0	0	0	0	10
Mandibular LN	# Ex	10	0	0	0	0	10
Lungs/Bronchi	# Ex	10	10	10	10	10	10
Inflammation, chronic		6	5	6	8	3	7
Hemorrhage		0	0	0	0	1	0
Heart	# Ex	10	0	0	0	0	10
Inflammation, chronic		6	0	0	0	0	4
Aorta	# Ex	10	0	0	0	0	10

A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS WITH AMMONIUM PERCHLORATE SLI STUDY NO. 3455.1

Project Summary Table

SUMMARY: Incidence of NEOPLASTIC and NON-NEOPLASTIC Microscopic Findings

PROJECT ID. NO: 34551 FATES: ALL DAYS: 15-18 SEX: MALE

GROUP:		Group 1	Group 2	Group 3	Group 4	Group 5	Group 6
NUMBER OF ANIMALS:		10	10	10	10	10	10
		#	#	#	#	#	#
Liver	# Ex	10	10	10	10	10	10
Cytoplasmic Vacuolization		1	0	0	1	0	0
Extramedullary Hematopoiesis		9	8	6	7	7	8
Congestion		0	0	0	0	0	1
Bile Duct - Hyperplasia		0	0	0	1	0	0
Spleen	# Ex	10	0	0	0	0	10
Rt Kidney	# Ex	10	10	10	10	9	10
Cellular Infil, lymphocyte		2	2	0	1	0	0
Nephropathy		0	2	2	2	3	1
Cyst		0	0	0	1	0	0
Hydronephrosis		0	1	0	0	0	0
Lt Kidney	# Ex	10	10	10	10	10	10
Cellular Infil, lymphocyte		1	2	1	0	0	3
Nephropathy		0	2	4	3	4	2
Cyst		0	0	1	2	0	0
Adrenal Medulla	# Ex	10	0	0	0	0	10
Adrenal Cortex	# Ex	10	0	0	0	0	10
Stomach, Forestomach	# Ex	10	0	0	0	0	10
Stomach, Glandular	# Ex	10	0	0	0	0	10
Duodenum	# Ex	10	0	0	0	0	10
Jejunum	# Ex	10	0	0	0	0	10

A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS WITH AMMONIUM PERCHLORATE SLI STUDY NO. 3455.1

Project Summary Table

SUMMARY: Incidence of NEOPLASTIC and NON-NEOPLASTIC Microscopic Findings

PROJECT ID. NO: 34551 FATES: ALL DAYS: 15-18 SEX: MALE

GROUP:		Group 1	Group 2	Group 3	Group 4	Group 5	Group 6
NUMBER OF ANIMALS:		10	10	10	10	10	10
		#	#	#	#	#	#
Ileum	# Ex	10	0	0	0	0	10
Cecum	# Ex	10	0	0	0	0	10
Colon	# Ex	10	0	0	0	0	10
Rectum	# Ex	10	0	0	0	0	10
Mesenteric LN	# Ex	10	0	0	0	0	10
Skin	# Ex	10	0	0	0	0	10
Mammary Gland	# Ex	10	0	0	0	0	10
Hyperplasia		0	0	0	0	0	1
Muscle	# Ex	10	0	0	0	0	9
Bone/Femur	# Ex	10	0	0	0	0	10
Bone Marrow/Femur	# Ex	10	0	0	0	0	10
Bone/Sternum	# Ex	10	0	0	0	0	10
Bone Marrow/Sternum	# Ex	10	0	0	0	0	10
Nose	# Ex	10	0	0	0	0	9

A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS WITH AMMONIUM PERCHLORATE SLI STUDY NO. 3455.1

Project Summary Table

SUMMARY: Incidence of NEOPLASTIC and NON-NEOPLASTIC Microscopic Findings

PROJECT ID. NO: 34551 FATES: ALL DAYS: 15-18 SEX: MALE

GROUP:		Group 1	Group 2	Group 3	Group 4	Group 5	Group 6
NUMBER OF ANIMALS:		10	10	10	10	10	10
		#	#	#	#	#	#
Pharynx	# Ex	10	0	0	0	0	10
Inflammation, chronic		1	0	0	0	0	2
Larynx	# Ex	10	0	0	0	0	10
Inflammation, chronic		3	0	0	0	0	4
Lt Testis	# Ex	10	0	0	0	0	10
Rt Testis	# Ex	10	0	0	0	0	10
Lt Epididymis	# Ex	10	0	0	0	0	10
Rt Epididymis	# Ex	10	0	0	0	0	10
Seminal Vesicles	# Ex	10	0	0	0	0	10
Prostate	# Ex	10	0	0	0	0	10
Inflammation, chronic		1	0	0	0	0	1
Urinary Bladder	# Ex	10	0	0	0	0	10
Eosinophilic Coagulum		0	0	0	0	0	1

A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS WITH AMMONIUM PERCHLORATE SLI STUDY NO. 3455.1

Project Summary Table

SUMMARY: Incidence of NEOPLASTIC and NON-NEOPLASTIC Microscopic Findings

PROJECT ID. NO: 34551 FATES: ALL DAYS: 15-18 SEX: MALE

GROUP:	Group 1	Group 2	Group 3	Group 4	Group 5	Group 6
NUMBER OF ANIMALS:	10	10	10	10	10	10
	#	#	#	#	#	#
OTHER TISSUES AND LESIONS:						
Skin - Infl, a/c	2	0	0	0	0	0
Skin - Hyperplasia, sq epith	1	0	0	1	0	0
Skin, Dermis - Infl, a/c	0	0	0	1	0	0
Fat - Embryonic	0	0	0	0	1	0
Urinary Bladder - Normal	0	0	0	1	0	0
Testes - Seminif Tubu - Degen	0	1	0	0	0	0

A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS WITH AMMONIUM PERCHLORATE SLI STUDY NO. 3455.1

Project Summary Table

SUMMARY: Incidence of NEOPLASTIC and NON-NEOPLASTIC Microscopic Findings

PROJECT ID. NO: 34551 FATES: ALL DAYS: 15-18 SEX: FEMALE

GROUP:		Group 1	Group 2	Group 3	Group 4	Group 5	Group 6
NUMBER OF ANIMALS:		10	10	10	10	10	10
		#	#	#	#	#	#
Brain	# Ex	10	0	0	0	0	10
Pituitary Gland	# Ex	10	0	0	0	0	10
Sciatic Nerve	# Ex	10	0	0	0	0	10
Spinal Cord, Cervical	# Ex	10	0	0	0	0	10
Spinal Cord, Thoracic	# Ex	10	0	0	0	0	10
Spinal Cord, Lumbar	# Ex	10	0	0	0	0	10
Eye A	# Ex	10	0	0	0	0	10
Eye B	# Ex	10	0	0	0	0	10
Lacrimal Gland	# Ex	10	0	0	0	0	10
Mediastinal LN	# Ex	10	0	0	0	0	10
Congestion		1	0	0	0	0	0
Thyroid	# Ex	10	10	10	10	10	10
Hyperplasia, follicular cell		0	0	0	0	0	7
Ectopic Thymus		0	0	1	0	0	0
Cellular Infil, lymphocyte		0	1	0	0	0	0
Parathyroid	# Ex	9	9	10	10	10	10

A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS WITH AMMONIUM PERCHLORATE SLI STUDY NO. 3455.1

Project Summary Table

SUMMARY: Incidence of NEOPLASTIC and NON-NEOPLASTIC Microscopic Findings

PROJECT ID. NO: 34551 FATES: ALL DAYS: 15-18 SEX: FEMALE

GROUP:		Group 1	Group 2	Group 3	Group 4	Group 5	Group 6
NUMBER OF ANIMALS:		10	10	10	10	10	10
		#	#	#	#	#	#
Trachea	# Ex	10	0	0	0	0	10
Inflammation, chronic		2	0	0	0	0	0
Esophagus	# Ex	10	0	0	0	0	10
Thymus	# Ex	10	0	0	0	0	10
Tongue	# Ex	10	0	0	0	0	10
Pancreas	# Ex	10	0	0	0	0	10
Islets of Pancreas	# Ex	10	0	0	0	0	10
Salivary Gland	# Ex	10	0	0	0	0	10
Mandibular LN	# Ex	10	0	0	0	0	10
Lungs/Bronchi	# Ex	10	10	10	10	10	10
Inflammation, chronic		5	3	7	2	4	2
Heart	# Ex	10	0	0	0	0	10
Inflammation, chronic		1	0	0	0	0	4
Aorta	# Ex	10	0	0	0	0	10
Liver	# Ex	10	10	10	10	10	10
Extramedullary Hematopoiesis		8	5	8	3	9	7
Inflammation, acute		0	1	0	0	0	0

A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS WITH AMMONIUM PERCHLORATE SLI STUDY NO. 3455.1

Project Summary Table

SUMMARY: Incidence of NEOPLASTIC and NON-NEOPLASTIC Microscopic Findings

PROJECT ID. NO: 34551 FATES: ALL DAYS: 15-18 SEX: FEMALE

GROUP:		Group 1	Group 2	Group 3	Group 4	Group 5	Group 6
NUMBER OF ANIMALS:		10	10	10	10	10	10
		#	#	#	#	#	#
Spleen	# Ex	10	0	0	0	0	10
Rt Kidney	# Ex	10	10	10	10	10	10
Nephropathy		0	0	2	0	0	1
Mineralization		1	0	0	1	1	0
Cyst		1	0	0	0	0	0
Lt Kidney	# Ex	10	10	10	10	10	10
Cellular Infil, lymphocyte		0	0	0	1	1	0
Nephropathy		2	2	1	2	0	1
Mineralization		1	1	0	1	1	2
Cyst		1	0	1	0	1	0
Adrenal Medulla	# Ex	10	0	0	0	0	10
Adrenal Cortex	# Ex	10	0	0	0	0	10
Hypertrophy		0	0	0	0	0	1
Stomach, Forestomach	# Ex	10	0	0	0	0	10
Stomach, Glandular	# Ex	10	0	0	0	0	10
Duodenum	# Ex	10	0	0	0	0	10
Jejunum	# Ex	10	0	0	0	0	10
Ileum	# Ex	10	0	0	0	0	10
Cecum	# Ex	10	0	0	0	0	10

A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS WITH AMMONIUM PERCHLORATE SLI STUDY NO. 3455.1

Project Summary Table

SUMMARY: Incidence of NEOPLASTIC and NON-NEOPLASTIC Microscopic Findings

PROJECT ID. NO: 34551 FATES: ALL DAYS: 15-18 SEX: FEMALE

GROUP:		Group 1	Group 2	Group 3	Group 4	Group 5	Group 6
NUMBER OF ANIMALS:		10	10	10	10	10	10
		#	#	#	#	#	#
Colon	# Ex	10	0	0	0	0	10
Rectum	# Ex	10	0	0	0	0	9
Mesenteric LN	# Ex	10	0	0	0	0	10
Skin	# Ex	10	0	0	0	0	10
Mammary Gland	# Ex	10	0	0	0	0	10
Muscle	# Ex	10	0	0	0	0	9
Bone/Femur	# Ex	10	0	0	0	0	10
Bone Marrow/Femur	# Ex	10	0	0	0	0	10
Bone/Sternum	# Ex	10	0	0	0	0	10
Bone Marrow/Sternum	# Ex	10	0	0	0	0	10
Nose	# Ex	10	0	0	0	0	10
Pharynx	# Ex	10	0	0	0	0	10
Inflammation, chronic		1	0	0	0	0	0
Larynx	# Ex	10	0	0	0	0	10
Inflammation, acute		0	0	0	0	0	1
Inflammation, chronic		2	0	0	0	0	1
Inflammation, acute/chronic		0	0	0	0	0	1

A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS WITH AMMONIUM PERCHLORATE SLI STUDY NO. 3455.1

Project Summary Table

SUMMARY: Incidence of NEOPLASTIC and NON-NEOPLASTIC Microscopic Findings

PROJECT ID. NO: 34551 FATES: ALL DAYS: 15-18 SEX: FEMALE

GROUP:		Group 1	Group 2	Group 3	Group 4	Group 5	Group 6
NUMBER OF ANIMALS:		10	10	10	10	10	10
		#	#	#	#	#	#
Lt Ovary	# Ex	10	0	0	0	0	10
Cyst		0	0	0	0	0	1
Rt Ovary	# Ex	10	0	0	0	0	10
Uterus	# Ex	10	0	0	0	0	10
Cervix	# Ex	10	0	0	0	0	10
Vagina	# Ex	10	0	0	0	0	10
Urinary Bladder	# Ex	10	0	0	0	0	9

A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS WITH AMMONIUM PERCHLORATE SLI STUDY NO. 3455.1

Project Summary Table

SUMMARY: Incidence of NEOPLASTIC and NON-NEOPLASTIC Microscopic Findings

PROJECT ID. NO: 34551 FATES: ALL DAYS: 15-18 SEX: FEMALE

GROUP:	Group 1	Group 2	Group 3	Group 4	Group 5	Group 6
NUMBER OF ANIMALS:	10	10	10	10	10	10
	#	#	#	#	#	#
OTHER TISSUES AND LESIONS:						
Uterus - Dilatation	0	0	0	0	1	0

A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS WITH AMMONIUM PERCHLORATE SLI STUDY NO. 3455.1

Project Summary Table

SUMMARY: Incidence of NEOPLASTIC and NON-NEOPLASTIC Microscopic Findings

PROJECT ID. NO: 34551 FATES: ALL DAYS: 92-95 SEX: MALE

GROUP:		Group 1	Group 2	Group 3	Group 4	Group 5	Group 6
NUMBER OF ANIMALS:		10	10	10	10	10	10
		#	#	#	#	#	#
Brain	# Ex	10	0	0	0	0	10
Pituitary Gland	# Ex	10	0	0	0	0	10
Sciatic Nerve	# Ex	10	0	0	0	0	10
Spinal Cord, Cervical	# Ex	10	0	0	0	0	10
Spinal Cord, Thoracic	# Ex	10	0	0	0	0	10
Spinal Cord, Lumbar	# Ex	10	0	0	0	0	10
Eye A	# Ex	10	0	0	0	0	10
Eye B	# Ex	10	0	0	0	0	10
Cornea - Inflammation, chronic		0	0	0	0	0	1
Lacrimal Gland	# Ex	10	0	0	0	0	10
Inflammation, chronic		3	0	0	0	0	3
Mediastinal LN	# Ex	10	0	0	0	0	10
Congestion		2	0	0	0	0	0
Inflammation, chronic		0	0	0	0	0	1
Thyroid	# Ex	10	10	10	10	10	10
Hyperplasia, follicular cell		2	0	0	0	1	8
Ectopic Thymus		0	0	1	0	0	0
Congestion		0	0	0	0	0	3

A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS WITH AMMONIUM PERCHLORATE SLI STUDY NO. 3455.1

Project Summary Table

SUMMARY: Incidence of NEOPLASTIC and NON-NEOPLASTIC Microscopic Findings

PROJECT ID. NO: 34551 FATES: ALL DAYS: 92-95 SEX: MALE

GROUP:		Group 1	Group 2	Group 3	Group 4	Group 5	Group 6
NUMBER OF ANIMALS:		10	10	10	10	10	10
		#	#	#	#	#	#
Parathyroid	# Ex	10	10	10	10	10	10
Trachea	# Ex	10	0	0	0	0	10
Inflammation, chronic		3	0	0	0	0	1
Esophagus	# Ex	10	0	0	0	0	10
Thymus	# Ex	10	0	0	0	0	10
Congestion		1	0	0	0	0	0
Tongue	# Ex	10	0	0	0	0	10
Pancreas	# Ex	10	0	0	0	0	10
Inflammation, chronic		4	0	0	0	0	6
Islets of Pancreas	# Ex	10	0	0	0	0	10
Inflammation, chronic		0	0	0	0	0	1
Salivary Gland	# Ex	10	0	0	0	0	9
Mandibular LN	# Ex	10	0	0	0	0	9
Lungs/Bronchi	# Ex	10	10	10	10	10	10
Inflammation, chronic		2	4	6	5	4	6
Heart	# Ex	10	0	0	0	0	10
Inflammation, chronic		2	0	0	0	0	5
Aorta	# Ex	10	0	0	0	0	10

A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS WITH AMMONIUM PERCHLORATE SLI STUDY NO. 3455.1

Project Summary Table

SUMMARY: Incidence of NEOPLASTIC and NON-NEOPLASTIC Microscopic Findings

PROJECT ID. NO: 34551 FATES: ALL DAYS: 92-95 SEX: MALE

GROUP:		Group 1	Group 2	Group 3	Group 4	Group 5	Group 6
NUMBER OF ANIMALS:		10	10	10	10	10	10
		#	#	#	#	#	#
Liver	# Ex	10	10	10	10	10	10
Extramedullary Hematopoiesis		8	5	8	6	3	7
Congestion		0	1	0	1	0	0
Bile Duct - Hyperplasia		0	0	0	0	0	1
Fibrous Adhesion		0	0	1	0	0	0
Angiectasis		0	1	0	0	0	0
Centrilo - Cytopl Vacu		0	0	0	0	1	0
Spleen	# Ex	10	0	0	0	0	10
Rt Kidney	# Ex	10	10	10	10	10	10
Cellular Infil, lymphocyte		0	1	0	0	1	1
Nephropathy		2	2	2	3	2	1
Mineralization		1	0	0	0	0	0
Cyst		0	0	0	0	0	1
Hydronephrosis		0	0	1	0	1	0
Lt Kidney	# Ex	10	10	10	10	10	10
Cellular Infil, lymphocyte		0	0	1	2	0	0
Nephropathy		3	1	3	3	3	5
Cyst		0	0	0	0	0	1
Adrenal Medulla	# Ex	10	0	0	0	0	10
Adrenal Cortex	# Ex	10	0	0	0	0	10
Cytoplasmic Vacuolization		1	0	0	0	0	0
Stomach, Forestomach	# Ex	10	0	0	0	0	10
Stomach, Glandular	# Ex	10	0	0	0	0	10
Duodenum	# Ex	10	0	0	0	0	10

A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS WITH AMMONIUM PERCHLORATE SLI STUDY NO. 3455.1

Project Summary Table

SUMMARY: Incidence of NEOPLASTIC and NON-NEOPLASTIC Microscopic Findings

PROJECT ID. NO: 34551 FATES: ALL DAYS: 92-95 SEX: MALE

GROUP:		Group 1	Group 2	Group 3	Group 4	Group 5	Group 6
NUMBER OF ANIMALS:		10	10	10	10	10	10
		#	#	#	#	#	#
Jejunum	# Ex	10	0	0	0	0	10
Ileum	# Ex	10	0	0	0	0	10
Cecum	# Ex	10	0	0	0	0	10
Colon	# Ex	10	0	0	0	0	10
Rectum	# Ex	10	0	0	0	0	10
Mesenteric LN	# Ex	10	0	0	0	0	10
Skin	# Ex	9	0	0	0	0	9
Mammary Gland	# Ex	9	0	0	0	0	9
Hyperplasia		2	0	0	0	0	0
Muscle	# Ex	10	0	0	0	0	10
Inflammation, chronic		0	0	0	0	0	1
Bone/Femur	# Ex	10	0	0	0	0	10
Bone Marrow/Femur	# Ex	10	0	0	0	0	10
Bone/Sternum	# Ex	9	0	0	0	0	9
Bone Marrow/Sternum	# Ex	9	0	0	0	0	9

A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS WITH AMMONIUM PERCHLORATE SLI STUDY NO. 3455.1

Project Summary Table

SUMMARY: Incidence of NEOPLASTIC and NON-NEOPLASTIC Microscopic Findings

PROJECT ID. NO: 34551 FATES: ALL DAYS: 92-95 SEX: MALE

GROUP:		Group 1	Group 2	Group 3	Group 4	Group 5	Group 6
NUMBER OF ANIMALS:		10	10	10	10	10	10
		#	#	#	#	#	#
Nose	# Ex	10	0	0	0	0	10
Pharynx	# Ex	10	0	0	0	0	10
Inflammation, chronic		5	0	0	0	0	3
Larynx	# Ex	10	0	0	0	0	10
Inflammation, chronic		6	0	0	0	0	6
Lt Testis	# Ex	10	0	0	0	0	10
Seminif Tubule, Degeneration		0	0	0	0	0	1
Rt Testis	# Ex	10	0	0	0	0	10
Seminif Tubule, Degeneration		0	0	0	0	0	1
Lt Epididymis	# Ex	10	0	0	0	0	10
Rt Epididymis	# Ex	10	0	0	0	0	10
Seminal Vesicles	# Ex	10	0	0	0	0	10
Prostate	# Ex	10	0	0	0	0	10
Inflammation, chronic		6	0	0	0	0	4
Urinary Bladder	# Ex	10	0	0	0	0	10

A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS WITH AMMONIUM PERCHLORATE SLI STUDY NO. 3455.1

Project Summary Table

SUMMARY: Incidence of NEOPLASTIC and NON-NEOPLASTIC Microscopic Findings

PROJECT ID. NO: 34551 FATES: ALL DAYS: 92-95 SEX: MALE

GROUP:	Group 1	Group 2	Group 3	Group 4	Group 5	Group 6
NUMBER OF ANIMALS:	10	10	10	10	10	10
	#	#	#	#	#	#
OTHER TISSUES AND LESIONS:						
Skin, Pinna - Infl, a/c	0	0	1	0	0	0
Skin - Normal	0	0	0	1	1	0
Muscle - Disrupted Continuity	0	0	0	1	1	0

A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS WITH AMMONIUM PERCHLORATE SLI STUDY NO. 3455.1

Project Summary Table

SUMMARY: Incidence of NEOPLASTIC and NON-NEOPLASTIC Microscopic Findings

PROJECT ID. NO: 34551 FATES: ALL DAYS: 92-95 SEX: FEMALE

GROUP:		Group 1	Group 2	Group 3	Group 4	Group 5	Group 6
NUMBER OF ANIMALS:		10	10	10	10	10	10
		#	#	#	#	#	#
Brain	# Ex	10	0	0	0	0	10
Pituitary Gland	# Ex	10	0	0	0	0	10
Sciatic Nerve	# Ex	10	0	0	0	0	10
Perineural Tissue - Infl, ch		1	0	0	0	0	0
Spinal Cord, Cervical	# Ex	10	0	0	0	0	10
Spinal Cord, Thoracic	# Ex	10	0	0	0	0	10
Spinal Cord, Lumbar	# Ex	10	0	0	0	0	10
Eye A	# Ex	10	0	0	0	0	10
Eye B	# Ex	10	0	0	0	0	10
Lacrimal Gland	# Ex	10	0	0	0	0	10
Inflammation, chronic		1	0	0	0	0	0
Mediastinal LN	# Ex	10	0	0	0	0	10
Congestion		0	0	0	0	0	1
Thyroid	# Ex	10	10	10	10	10	10
Hyperplasia, follicular cell		0	0	0	0	0	9
Inflammation, chronic		0	0	0	1	0	0
Ultimobranchial Cyst		0	1	0	0	0	0
Parathyroid	# Ex	10	10	10	10	10	10

A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS WITH AMMONIUM PERCHLORATE SLI STUDY NO. 3455.1

Project Summary Table

SUMMARY: Incidence of NEOPLASTIC and NON-NEOPLASTIC Microscopic Findings

PROJECT ID. NO: 34551 FATES: ALL DAYS: 92-95 SEX: FEMALE

GROUP:		Group 1	Group 2	Group 3	Group 4	Group 5	Group 6
NUMBER OF ANIMALS:		10	10	10	10	10	10
		#	#	#	#	#	#
Trachea	# Ex	10	0	0	0	0	10
Esophagus	# Ex	10	0	0	0	0	10
Thymus	# Ex	10	0	0	0	0	10
Tongue	# Ex	10	0	0	0	0	10
Pancreas	# Ex	10	0	0	0	0	10
Islets of Pancreas	# Ex	10	0	0	0	0	10
Salivary Gland	# Ex	9	0	0	0	0	10
Inflammation, chronic		1	0	0	0	0	0
Mandibular LN	# Ex	9	0	0	0	0	10
Lungs/Bronchi	# Ex	10	10	10	10	10	10
Inflammation, chronic		3	2	1	2	4	4
Heart	# Ex	10	0	0	0	0	10
Inflammation, chronic		2	0	0	0	0	2
Aorta	# Ex	10	0	0	0	0	10
Liver	# Ex	10	10	10	10	10	10
Extramedullary Hematopoiesis		8	5	7	10	8	8
Inflammation, chronic		1	1	0	0	0	1

A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS WITH AMMONIUM PERCHLORATE SLI STUDY NO. 3455.1

Project Summary Table

SUMMARY: Incidence of NEOPLASTIC and NON-NEOPLASTIC Microscopic Findings

PROJECT ID. NO: 34551 FATES: ALL DAYS: 92-95 SEX: FEMALE

GROUP:		Group 1	Group 2	Group 3	Group 4	Group 5	Group 6
NUMBER OF ANIMALS:		10	10	10	10	10	10
		#	#	#	#	#	#
Spleen	# Ex	10	0	0	0	0	10
Rt Kidney	# Ex	10	10	10	10	10	10
Nephropathy		1	0	0	0	0	0
Mineralization		1	0	0	0	1	0
Hydronephrosis		0	1	0	0	0	1
Inflammation, acute		0	1	0	0	0	0
Lt Kidney	# Ex	10	10	10	10	10	10
Cellular Infil, lymphocyte		2	1	0	0	0	1
Nephropathy		0	0	0	0	1	0
Mineralization		1	0	0	0	1	0
Hydronephrosis		0	0	0	0	0	1
Adrenal Medulla	# Ex	10	0	0	0	0	10
Adrenal Cortex	# Ex	10	0	0	0	0	10
Stomach, Forestomach	# Ex	10	0	0	0	0	10
Stomach, Glandular	# Ex	10	0	0	0	0	10
Duodenum	# Ex	10	0	0	0	0	10
Jejunum	# Ex	10	0	0	0	0	10
Ileum	# Ex	10	0	0	0	0	10
Cecum	# Ex	10	0	0	0	0	10

A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS WITH AMMONIUM PERCHLORATE SLI STUDY NO. 3455.1

Project Summary Table

SUMMARY: Incidence of NEOPLASTIC and NON-NEOPLASTIC Microscopic Findings

PROJECT ID. NO: 34551 FATES: ALL DAYS: 92-95 SEX: FEMALE

GROUP:		Group 1	Group 2	Group 3	Group 4	Group 5	Group 6
NUMBER OF ANIMALS:		10	10	10	10	10	10
		#	#	#	#	#	#
Colon	# Ex	10	0	0	0	0	10
Rectum	# Ex	9	0	0	0	0	10
Mesenteric LN	# Ex	10	0	0	0	0	10
Skin	# Ex	10	0	0	0	0	10
Mammary Gland	# Ex	10	0	0	0	0	10
Muscle	# Ex	10	0	0	0	0	10
Bone/Femur	# Ex	10	0	0	0	0	10
Bone Marrow/Femur	# Ex	10	0	0	0	0	10
Bone/Sternum	# Ex	9	0	0	0	0	10
Bone Marrow/Sternum	# Ex	9	0	0	0	0	10
Nose	# Ex	10	0	0	0	0	10
Inflammation, acute/chronic		1	0	0	0	0	0
Tooth - Dystropy		1	0	0	0	0	0
Pharynx	# Ex	9	0	0	0	0	10
Inflammation, chronic		2	0	0	0	0	1
Larynx	# Ex	10	0	0	0	0	10
Inflammation, chronic		4	0	0	0	0	4

A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS WITH AMMONIUM PERCHLORATE SLI STUDY NO. 3455.1

Project Summary Table

SUMMARY: Incidence of NEOPLASTIC and NON-NEOPLASTIC Microscopic Findings

PROJECT ID. NO: 34551 FATES: ALL DAYS: 92-95 SEX: FEMALE

GROUP:		Group 1	Group 2	Group 3	Group 4	Group 5	Group 6
NUMBER OF ANIMALS:		10	10	10	10	10	10
		#	#	#	#	#	#
Lt Ovary	# Ex	10	0	0	0	0	10
Rt Ovary	# Ex	10	0	0	0	0	10
Uterus	# Ex	10	0	0	0	0	10
Dilatation		0	0	0	0	0	3
Cervix	# Ex	9	0	0	0	0	10
Vagina	# Ex	9	0	0	0	0	10
Urinary Bladder	# Ex	9	0	0	0	0	10

A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS WITH AMMONIUM PERCHLORATE SLI STUDY NO. 3455.1

Project Summary Table

SUMMARY: Incidence of NEOPLASTIC and NON-NEOPLASTIC Microscopic Findings

PROJECT ID. NO: 34551 FATES: ALL DAYS: 92-95 SEX: FEMALE

GROUP:	Group 1	Group 2	Group 3	Group 4	Group 5	Group 6
NUMBER OF ANIMALS:	10	10	10	10	10	10
	#	#	#	#	#	#
OTHER TISSUES AND LESIONS:						
Uterus - Dilatation	0	2	0	0	0	0
Skin, Pinna - Infl, a/c	1	1	1	0	0	0
Skin - Normal	0	0	0	0	0	1
Muscle - Disrupted Continuity	0	0	0	0	0	1
Ovaries - Normal	0	0	0	0	1	0
Mandibular LN - Congestion	0	1	0	0	0	0
Mandibular LN - Hyperp, lymp	0	1	0	0	0	0

A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS WITH AMMONIUM PERCHLORATE SLI STUDY NO. 3455.1

Project Summary Table

SUMMARY: Incidence of NEOPLASTIC and NON-NEOPLASTIC Microscopic Findings

PROJECT ID. NO: 34551 FATES: ALL DAYS: 97-123 SEX: MALE

GROUP:		Group 1	Group 2	Group 3	Group 4	Group 5	Group 6
NUMBER OF ANIMALS:		10	0	10	0	10	10
		#	#	#	#	#	#
Brain	# Ex	0	0	0	0	0	0
Pituitary Gland	# Ex	0	0	0	0	0	0
Sciatic Nerve	# Ex	0	0	0	0	0	0
Spinal Cord, Cervical	# Ex	0	0	0	0	0	0
Spinal Cord, Thoracic	# Ex	0	0	0	0	0	0
Spinal Cord, Lumbar	# Ex	0	0	0	0	0	0
Eye A	# Ex	0	0	0	0	0	0
Eye B	# Ex	0	0	0	0	0	0
Lacrimal Gland	# Ex	0	0	0	0	0	0
Mediastinal LN	# Ex	0	0	0	0	0	0
Thyroid	# Ex	10	0	10	0	10	10
Ectopic Thymus		1	0	0	0	0	0
Ultimobranchial Cyst		0	0	0	0	2	0
Parathyroid	# Ex	9	0	10	0	10	10
Trachea	# Ex	0	0	0	0	0	0

A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS WITH AMMONIUM PERCHLORATE SLI STUDY NO. 3455.1

Project Summary Table

SUMMARY: Incidence of NEOPLASTIC and NON-NEOPLASTIC Microscopic Findings

PROJECT ID. NO: 34551 FATES: ALL DAYS: 97-123 SEX: MALE

GROUP:		Group 1	Group 2	Group 3	Group 4	Group 5	Group 6
NUMBER OF ANIMALS:		10	0	10	0	10	10
		#	#	#	#	#	#
Esophagus	# Ex	0	0	0	0	0	0
Thymus	# Ex	0	0	0	0	0	0
Tongue	# Ex	0	0	0	0	0	0
Pancreas	# Ex	0	0	0	0	0	0
Islets of Pancreas	# Ex	0	0	0	0	0	0
Salivary Gland	# Ex	0	0	0	0	0	0
Mandibular LN	# Ex	0	0	0	0	0	0
Lungs/Bronchi	# Ex	10	0	10	0	10	10
Inflammation, chronic		4	0	6	0	5	4
Congestion		0	0	0	0	0	1
Hyperplasia, lymphoid		1	0	0	0	0	0
Heart	# Ex	0	0	0	0	0	0
Aorta	# Ex	0	0	0	0	0	0
Liver	# Ex	10	0	10	0	10	10
Extramedullary Hematopoiesis		8	0	7	0	4	6
Spleen	# Ex	0	0	0	0	0	0

A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS WITH AMMONIUM PERCHLORATE SLI STUDY NO. 3455.1

Project Summary Table

SUMMARY: Incidence of NEOPLASTIC and NON-NEOPLASTIC Microscopic Findings

PROJECT ID. NO: 34551 FATES: ALL DAYS: 97-123 SEX: MALE

GROUP:		Group 1	Group 2	Group 3	Group 4	Group 5	Group 6
NUMBER OF ANIMALS:		10	0	10	0	10	10
		#	#	#	#	#	#
Rt Kidney	# Ex	10	0	10	0	10	10
Cellular Infil, lymphocyte		1	0	1	0	1	0
Nephropathy		1	0	1	0	3	5
Cyst		0	0	1	0	0	0
Hydronephrosis		0	0	0	0	1	0
Lt Kidney	# Ex	10	0	10	0	10	10
Cellular Infil, lymphocyte		1	0	0	0	1	2
Nephropathy		7	0	3	0	4	3
Cyst		0	0	0	0	1	0
Abscess		0	0	1	0	0	0
Adrenal Medulla	# Ex	0	0	0	0	0	0
Adrenal Cortex	# Ex	0	0	0	0	0	0
Stomach, Forestomach	# Ex	0	0	0	0	0	0
Stomach, Glandular	# Ex	0	0	0	0	0	0
Duodenum	# Ex	0	0	0	0	0	0
Jejunum	# Ex	0	0	0	0	0	0
Ileum	# Ex	0	0	0	0	0	0
Cecum	# Ex	0	0	0	0	0	0
Colon	# Ex	0	0	0	0	0	0

A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS WITH AMMONIUM PERCHLORATE SLI STUDY NO. 3455.1

Project Summary Table

SUMMARY: Incidence of NEOPLASTIC and NON-NEOPLASTIC Microscopic Findings

PROJECT ID. NO: 34551 FATES: ALL DAYS: 97-123 SEX: MALE

GROUP:		Group 1	Group 2	Group 3	Group 4	Group 5	Group 6
NUMBER OF ANIMALS:		10	0	10	0	10	10
		#	#	#	#	#	#
Rectum	# Ex	0	0	0	0	0	0
Mesenteric LN	# Ex	0	0	0	0	0	0
Skin	# Ex	0	0	0	0	0	0
Mammary Gland	# Ex	0	0	0	0	0	0
Muscle	# Ex	0	0	0	0	0	0
Bone/Femur	# Ex	0	0	0	0	0	0
Bone Marrow/Femur	# Ex	0	0	0	0	0	0
Bone/Sternum	# Ex	0	0	0	0	0	0
Bone Marrow/Sternum	# Ex	0	0	0	0	0	0
Nose	# Ex	0	0	0	0	0	0
Pharynx	# Ex	0	0	0	0	0	0
Larynx	# Ex	0	0	0	0	0	0
Lt Testis	# Ex	0	0	0	0	0	0
Rt Testis	# Ex	0	0	0	0	0	0

A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS WITH AMMONIUM PERCHLORATE SLI STUDY NO. 3455.1

Project Summary Table

SUMMARY: Incidence of NEOPLASTIC and NON-NEOPLASTIC Microscopic Findings

PROJECT ID. NO: 34551 FATES: ALL DAYS: 97-123 SEX: MALE

GROUP:		Group 1	Group 2	Group 3	Group 4	Group 5	Group 6
NUMBER OF ANIMALS:		10	0	10	0	10	10
		#	#	#	#	#	#
Lt Epididymis	# Ex	0	0	0	0	0	0
Rt Epididymis	# Ex	0	0	0	0	0	0
Seminal Vesicles	# Ex	0	0	0	0	0	0
Prostate	# Ex	0	0	0	0	0	0
Urinary Bladder	# Ex	0	0	0	0	0	0

A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS WITH AMMONIUM PERCHLORATE SLI STUDY NO. 3455.1

Project Summary Table

SUMMARY: Incidence of NEOPLASTIC and NON-NEOPLASTIC Microscopic Findings

PROJECT ID. NO: 34551 FATES: ALL DAYS: 97-123 SEX: MALE

GROUP:	Group 1	Group 2	Group 3	Group 4	Group 5	Group 6
NUMBER OF ANIMALS:	10	0	10	0	10	10
	#	#	#	#	#	#
OTHER TISSUES AND LESIONS:						
Thymus - Congestion	1	0	0	0	0	0
Spleen - Capsule - Cyst	0	0	0	0	0	1

A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS WITH AMMONIUM PERCHLORATE SLI STUDY NO. 3455.1

Project Summary Table

SUMMARY: Incidence of NEOPLASTIC and NON-NEOPLASTIC Microscopic Findings

PROJECT ID. NO: 34551 FATES: ALL DAYS: 97-123 SEX: FEMALE

GROUP:		Group 1	Group 2	Group 3	Group 4	Group 5	Group 6
NUMBER OF ANIMALS:		10	0	10	0	10	10
		#	#	#	#	#	#
Brain	# Ex	0	0	1	0	0	0
Pituitary Gland	# Ex	0	0	1	0	0	0
Sciatic Nerve	# Ex	0	0	1	0	0	0
Spinal Cord, Cervical	# Ex	0	0	1	0	0	0
Spinal Cord, Thoracic	# Ex	0	0	1	0	0	0
Spinal Cord, Lumbar	# Ex	0	0	1	0	0	0
Eye A	# Ex	0	0	1	0	0	0
Eye B	# Ex	0	0	1	0	0	0
Lacrimal Gland	# Ex	0	0	1	0	0	0
Mediastinal LN	# Ex	0	0	1	0	0	0
Thyroid	# Ex	10	0	10	0	10	10
Ultimobranchial Cyst		0	0	1	0	0	0
Parathyroid	# Ex	10	0	10	0	10	10
Trachea	# Ex	0	0	1	0	0	0

A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS WITH AMMONIUM PERCHLORATE SLI STUDY NO. 3455.1

Project Summary Table

SUMMARY: Incidence of NEOPLASTIC and NON-NEOPLASTIC Microscopic Findings

PROJECT ID. NO: 34551 FATES: ALL DAYS: 97-123 SEX: FEMALE

GROUP:		Group 1	Group 2	Group 3	Group 4	Group 5	Group 6
NUMBER OF ANIMALS:		10	0	10	0	10	10
		#	#	#	#	#	#
Esophagus	# Ex	0	0	1	0	0	0
Thymus	# Ex	0	0	1	0	0	0
Congestion		0	0	1	0	0	0
Tongue	# Ex	0	0	1	0	0	0
Pancreas	# Ex	0	0	1	0	0	0
Islets of Pancreas	# Ex	0	0	1	0	0	0
Salivary Gland	# Ex	0	0	1	0	0	0
Mandibular LN	# Ex	0	0	1	0	0	0
Lungs/Bronchi	# Ex	10	0	10	0	10	10
Inflammation, chronic		4	0	4	0	5	3
Congestion		0	0	1	0	0	0
Heart	# Ex	0	0	1	0	0	0
Aorta	# Ex	0	0	1	0	0	0
Liver	# Ex	10	0	10	0	10	10
Extramedullary Hematopoiesis		10	0	7	0	8	8
Congestion		0	0	1	0	0	0
Inflammation, chronic		0	0	0	0	0	1
Spleen	# Ex	0	0	1	0	0	0

A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS WITH AMMONIUM PERCHLORATE SLI STUDY NO. 3455.1

Project Summary Table

SUMMARY: Incidence of NEOPLASTIC and NON-NEOPLASTIC Microscopic Findings

PROJECT ID. NO: 34551 FATES: ALL DAYS: 97-123 SEX: FEMALE

GROUP:		Group 1	Group 2	Group 3	Group 4	Group 5	Group 6
NUMBER OF ANIMALS:		10	0	10	0	10	10
		#	#	#	#	#	#
Rt Kidney	# Ex	10	0	10	0	10	10
Nephropathy		0	0	0	0	1	0
Mineralization		0	0	1	0	0	0
Lt Kidney	# Ex	10	0	10	0	10	10
Cellular Infil, lymphocyte		2	0	1	0	0	0
Nephropathy		0	0	0	0	1	1
Mineralization		1	0	2	0	0	0
Hydronephrosis		0	0	0	0	0	1
Adrenal Medulla	# Ex	0	0	1	0	0	0
Adrenal Cortex	# Ex	0	0	1	0	0	0
Stomach, Forestomach	# Ex	0	0	1	0	0	0
Stomach, Glandular	# Ex	0	0	1	0	0	0
Duodenum	# Ex	0	0	1	0	0	0
Jejunum	# Ex	0	0	1	0	0	0
Autolysis		0	0	1	0	0	0
Ileum	# Ex	0	0	1	0	0	0
Autolysis		0	0	1	0	0	0
Cecum	# Ex	0	0	1	0	0	0
Autolysis		0	0	1	0	0	0
Colon	# Ex	0	0	1	0	0	0
Autolysis		0	0	1	0	0	0

A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS WITH AMMONIUM PERCHLORATE SLI STUDY NO. 3455.1

Project Summary Table

SUMMARY: Incidence of NEOPLASTIC and NON-NEOPLASTIC Microscopic Findings

PROJECT ID. NO: 34551 FATES: ALL DAYS: 97-123 SEX: FEMALE

GROUP:		Group 1	Group 2	Group 3	Group 4	Group 5	Group 6
NUMBER OF ANIMALS:		10	0	10	0	10	10
		#	#	#	#	#	#
Rectum	# Ex	0	0	1	0	0	0
Autolysis		0	0	1	0	0	0
Mesenteric LN	# Ex	0	0	1	0	0	0
Skin	# Ex	0	0	1	0	0	0
Mammary Gland	# Ex	0	0	1	0	0	0
Muscle	# Ex	0	0	1	0	0	0
Bone/Femur	# Ex	0	0	1	0	0	0
Bone Marrow/Femur	# Ex	0	0	1	0	0	0
Bone/Sternum	# Ex	0	0	0	0	0	0
Bone Marrow/Sternum	# Ex	0	0	0	0	0	0
Nose	# Ex	0	0	0	0	0	0
Pharynx	# Ex	0	0	1	0	0	0
Larynx	# Ex	0	0	1	0	0	0
Lt Ovary	# Ex	0	0	1	0	0	0
Congestion		0	0	1	0	0	0

A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS WITH AMMONIUM PERCHLORATE SLI STUDY NO. 3455.1

Project Summary Table

SUMMARY: Incidence of NEOPLASTIC and NON-NEOPLASTIC Microscopic Findings

PROJECT ID. NO: 34551 FATES: ALL DAYS: 97-123 SEX: FEMALE

GROUP:		Group 1	Group 2	Group 3	Group 4	Group 5	Group 6
NUMBER OF ANIMALS:		10	0	10	0	10	10
		#	#	#	#	#	#
Rt Ovary	# Ex	0	0	1	0	0	0
Congestion		0	0	1	0	0	0
Uterus	# Ex	0	0	1	0	0	0
Cervix	# Ex	0	0	1	0	0	0
Vagina	# Ex	0	0	1	0	0	0
Urinary Bladder	# Ex	0	0	1	0	0	0

A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS WITH AMMONIUM PERCHLORATE SLI STUDY NO. 3455.1

Project Summary Table

SUMMARY: Incidence of NEOPLASTIC and NON-NEOPLASTIC Microscopic Findings

PROJECT ID. NO: 34551 FATES: ALL DAYS: 97-123 SEX: FEMALE

GROUP:	Group 1	Group 2	Group 3	Group 4	Group 5	Group 6
NUMBER OF ANIMALS:	10	0	10	0	10	10
	#	#	#	#	#	#
OTHER TISSUES AND LESIONS:						
Uterus - Dilatation	0	0	0	0	0	1
Skin, Pinna - Infl, a/c	1	0	1	0	2	0
Pinna - Bone - Metaplasia	1	0	0	0	0	0

APPENDIX A

Gross-Micro Correlation

14-Day Male - Groups 1 through 6
14-Day Female - Groups 1 through 6

A 90-DAY DRINKING WATER TOXICITY STUDY
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SLI STUDY NO. 3455.1

Correlation of Gross & Micro Findings

PROJECT ID: 34551 GROUP: Group 1 SEX: MALE DAYS: 15-18

ANIMAL ID: 11716 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:18

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

ANIMAL ID: 11717 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:15

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

ANIMAL ID: 11718 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:16

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

ANIMAL ID: 11720 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:15

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

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Correlation of Gross & Micro Findings

PROJECT ID: 34551 GROUP: Group 1 SEX: MALE DAYS: 15-18

ANIMAL ID: 11725 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:17

REFERENCE TO NECROPSY RECORD:	RELATED HISTOPATHOLOGY:
>Skin - Scabbing; right lateral neck	Skin - Inflammation, a/c

ANIMAL ID: 11728 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:17

REFERENCE TO NECROPSY RECORD:	RELATED HISTOPATHOLOGY:
>Skin - Scabbing; right lateral head	Skin - Inflammation, a/c

ANIMAL ID: 11731 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:16

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

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IN RATS WITH AMMONIUM PERCHLORATE
SLI STUDY NO. 3455.1

Correlation of Gross & Micro Findings

PROJECT ID: 34551 GROUP: Group 1 SEX: MALE DAYS: 15-18

ANIMAL ID: 11739 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:15

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

ANIMAL ID: 11744 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:18

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

ANIMAL ID: 11745 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:17

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

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IN RATS WITH AMMONIUM PERCHLORATE
SLI STUDY NO. 3455.1

Correlation of Gross & Micro Findings

PROJECT ID: 34551 GROUP: Group 2 SEX: MALE DAYS: 15-18

ANIMAL ID: 11747
ANIMAL FATE: Terminal
PATHOLOGIST: PKH
DAYS ON TEST:18

REFERENCE TO NECROPSY RECORD:	RELATED HISTOPATHOLOGY:
>Testes - Small; bilateral; each approximately 1.3 x 0.7 x 0.6 cm	Testes - Seminif Tubu - Degen

ANIMAL ID: 11751
ANIMAL FATE: Terminal
PATHOLOGIST: PKH
DAYS ON TEST:16

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

ANIMAL ID: 11756
ANIMAL FATE: Terminal
PATHOLOGIST: PKH
DAYS ON TEST:17

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

ANIMAL ID: 11757
ANIMAL FATE: Terminal
PATHOLOGIST: PKH
DAYS ON TEST:17

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

A 90-DAY DRINKING WATER TOXICITY STUDY
IN RATS WITH AMMONIUM PERCHLORATE
SLI STUDY NO. 3455.1

Correlation of Gross & Micro Findings

PROJECT ID: 34551 GROUP: Group 2 SEX: MALE DAYS: 15-18

ANIMAL ID: 11758 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:16

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

ANIMAL ID: 11759 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:15

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

ANIMAL ID: 11760 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:17

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

ANIMAL ID: 11762 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:15

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

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SLI STUDY NO. 3455.1

Correlation of Gross & Micro Findings

PROJECT ID: 34551 GROUP: Group 2 SEX: MALE DAYS: 15-18

ANIMAL ID: 11763 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:15

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

ANIMAL ID: 11764 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:18

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

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SLI STUDY NO. 3455.1

Correlation of Gross & Micro Findings

PROJECT ID: 34551 GROUP: Group 3 SEX: MALE DAYS: 15-18

ANIMAL ID: 11766 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:16

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

ANIMAL ID: 11768 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:17

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

ANIMAL ID: 11771 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:18

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

ANIMAL ID: 11772 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:18

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

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SLI STUDY NO. 3455.1

Correlation of Gross & Micro Findings

PROJECT ID: 34551 GROUP: Group 3 SEX: MALE DAYS: 15-18

ANIMAL ID: 11778 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:15

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

ANIMAL ID: 11779 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:16

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

ANIMAL ID: 11784 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:17

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

ANIMAL ID: 11786 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:15

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

A 90-DAY DRINKING WATER TOXICITY STUDY
IN RATS WITH AMMONIUM PERCHLORATE
SLI STUDY NO. 3455.1

Correlation of Gross & Micro Findings

PROJECT ID: 34551 GROUP: Group 3 SEX: MALE DAYS: 15-18

ANIMAL ID: 11789 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:15

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

ANIMAL ID: 11793 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:17

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

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SLI STUDY NO. 3455.1

Correlation of Gross & Micro Findings

PROJECT ID: 34551 GROUP: Group 4 SEX: MALE DAYS: 15-18

ANIMAL ID: 11796 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:18

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

ANIMAL ID: 11798 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:16

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

>Urinary Bladder - Lesion; anterior bladder wall; cyst-like structure; 0.4 cm diameter; clear yellow fluid filled

No corollary change detected

ANIMAL ID: 11801 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:17

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

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Correlation of Gross & Micro Findings

PROJECT ID: 34551 GROUP: Group 4 SEX: MALE DAYS: 15-18

ANIMAL ID: 11802 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:18

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

ANIMAL ID: 11803 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:15

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

ANIMAL ID: 11804 PATHOLOGY ID. NO: PKH PATHOLOGIST:
ANIMAL FATE: Terminal
DAYS ON TEST:17

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

ANIMAL ID: 11807 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:15

REFERENCE TO NECROPSY RECORD:	RELATED HISTOPATHOLOGY:
>Kidney - Cyst(s); bilateral; cut surface; multiple; pinpoint to 0.5 cm in diameter; clear fluid filled	Rt Kidney- Cyst, Lt Kidney- Cyst

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Correlation of Gross & Micro Findings

PROJECT ID: 34551 GROUP: Group 4 SEX: MALE DAYS: 15-18

ANIMAL ID: 11808
ANIMAL FATE: Terminal
PATHOLOGIST: PKH
DAYS ON TEST:17

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

ANIMAL ID: 11810
ANIMAL FATE: Terminal
PATHOLOGIST: PKH
DAYS ON TEST:15

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

ANIMAL ID: 11813
ANIMAL FATE: Terminal
PATHOLOGIST: PKH
DAYS ON TEST:16

REFERENCE TO NECROPSY RECORD:	RELATED HISTOPATHOLOGY:
>Skin - Scabbing; right shoulder	Skin, Dermis - Infl, a/c

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Correlation of Gross & Micro Findings

PROJECT ID: 34551 GROUP: Group 5 SEX: MALE DAYS: 15-18

ANIMAL ID: 11816
ANIMAL FATE: Terminal
PATHOLOGIST: PKH
DAYS ON TEST:15

REFERENCE TO NECROPSY RECORD:
RELATED HISTOPATHOLOGY:

ANIMAL ID: 11818
ANIMAL FATE: Terminal
PATHOLOGIST: PKH
DAYS ON TEST:18

REFERENCE TO NECROPSY RECORD:
RELATED HISTOPATHOLOGY:

ANIMAL ID: 11819
ANIMAL FATE: Terminal
PATHOLOGIST: PKH
DAYS ON TEST:15

REFERENCE TO NECROPSY RECORD:
RELATED HISTOPATHOLOGY:

ANIMAL ID: 11820
ANIMAL FATE: Terminal
PATHOLOGIST: PKH
DAYS ON TEST:17

REFERENCE TO NECROPSY RECORD:

>Kidney - Lesion; right; possible hypoplasia; 0.3 cm in diameter; yellowish-tan; firm; adhered to inferior portion of right liver lobe; right ureter appears normal

RELATED HISTOPATHOLOGY:

Kidney, Rt - Missing, Fat - Embryonic (Misidentified lesion)

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Correlation of Gross & Micro Findings

PROJECT ID: 34551 GROUP: Group 5 SEX: MALE DAYS: 15-18

ANIMAL ID: 11825 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:18

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

ANIMAL ID: 11831 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:16

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

>Haircoat - Hairloss; left forepaw Not applicable

ANIMAL ID: 11835 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:15

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

ANIMAL ID: 11836 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:17

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

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Correlation of Gross & Micro Findings

PROJECT ID: 34551 GROUP: Group 5 SEX: MALE DAYS: 15-18

ANIMAL ID: 11839 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:16

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

ANIMAL ID: 11844 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:17

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

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Correlation of Gross & Micro Findings

PROJECT ID: 34551 GROUP: Group 6 SEX: MALE DAYS: 15-18

ANIMAL ID: 11846 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:17

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

ANIMAL ID: 11847 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:16

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

ANIMAL ID: 11848 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:15

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

ANIMAL ID: 11853 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:18

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

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Correlation of Gross & Micro Findings

PROJECT ID: 34551 GROUP: Group 6 SEX: MALE DAYS: 15-18

ANIMAL ID: 11857 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:17

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

ANIMAL ID: 11858 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:17

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

ANIMAL ID: 11859 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:16

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

ANIMAL ID: 11861 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:15

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

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Correlation of Gross & Micro Findings

PROJECT ID: 34551 GROUP: Group 6 SEX: MALE DAYS: 15-18

ANIMAL ID: 11863 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:18

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

ANIMAL ID: 11870 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:15

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

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Correlation of Gross & Micro Findings

PROJECT ID: 34551 GROUP: Group 1 SEX: FEMALE DAYS: 15-18

ANIMAL ID: 11877 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:16

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

ANIMAL ID: 11878 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:15

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

ANIMAL ID: 11881 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:15

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

ANIMAL ID: 11882 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:16

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

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Correlation of Gross & Micro Findings

PROJECT ID: 34551 GROUP: Group 1 SEX: FEMALE DAYS: 15-18

ANIMAL ID: 11884 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:17

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

ANIMAL ID: 11889 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:16

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

ANIMAL ID: 11893 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:17

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

ANIMAL ID: 11894 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:18

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

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Correlation of Gross & Micro Findings

PROJECT ID: 34551 GROUP: Group 1 SEX: FEMALE DAYS: 15-18

ANIMAL ID: 11900 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:18

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

ANIMAL ID: 11903 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:18

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

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Correlation of Gross & Micro Findings

PROJECT ID: 34551 GROUP: Group 2 SEX: FEMALE DAYS: 15-18

ANIMAL ID: 11906 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:18

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

ANIMAL ID: 11908 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:15

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

ANIMAL ID: 11909 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:15

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

>Skin - Scabbing; right shoulder with associated hairloss (Tissue unavailable)

ANIMAL ID: 11911 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:16

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

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Correlation of Gross & Micro Findings

PROJECT ID: 34551 GROUP: Group 2 SEX: FEMALE DAYS: 15-18

ANIMAL ID: 11912 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:16

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

ANIMAL ID: 11913 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:16

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

ANIMAL ID: 11917 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:18

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

ANIMAL ID: 11921 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:17

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

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Correlation of Gross & Micro Findings

PROJECT ID: 34551 GROUP: Group 2 SEX: FEMALE DAYS: 15-18

ANIMAL ID: 11923 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:18

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

ANIMAL ID: 11925 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:17

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

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Correlation of Gross & Micro Findings

PROJECT ID: 34551 GROUP: Group 3 SEX: FEMALE DAYS: 15-18

ANIMAL ID: 11930 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:15

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

ANIMAL ID: 11931 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:15

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

ANIMAL ID: 11934 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:16

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

ANIMAL ID: 11941 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:17

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

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Correlation of Gross & Micro Findings

PROJECT ID: 34551 GROUP: Group 3 SEX: FEMALE DAYS: 15-18

ANIMAL ID: 11942 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:17

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

ANIMAL ID: 11945 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:16

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

ANIMAL ID: 11946 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:18

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

ANIMAL ID: 11951 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:18

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

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Correlation of Gross & Micro Findings

PROJECT ID: 34551 GROUP: Group 3 SEX: FEMALE DAYS: 15-18

ANIMAL ID: 11952
ANIMAL FATE: Terminal
PATHOLOGIST: PKH
DAYS ON TEST:18

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

ANIMAL ID: 11953
ANIMAL FATE: Terminal
PATHOLOGIST: PKH
DAYS ON TEST:16

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

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Correlation of Gross & Micro Findings

PROJECT ID: 34551 GROUP: Group 4 SEX: FEMALE DAYS: 15-18

ANIMAL ID: 11959 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:16

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

ANIMAL ID: 11960 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:17

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

ANIMAL ID: 11962 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:17

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

ANIMAL ID: 11963 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:15

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

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Correlation of Gross & Micro Findings

PROJECT ID: 34551 GROUP: Group 4 SEX: FEMALE DAYS: 15-18

ANIMAL ID: 11964 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:16

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

ANIMAL ID: 11967 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:18

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

ANIMAL ID: 11968 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:16

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

ANIMAL ID: 11970 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:18

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

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Correlation of Gross & Micro Findings

PROJECT ID: 34551 GROUP: Group 4 SEX: FEMALE DAYS: 15-18

ANIMAL ID: 11971 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:15

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

ANIMAL ID: 11974 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:18

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

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Correlation of Gross & Micro Findings

PROJECT ID: 34551 GROUP: Group 5 SEX: FEMALE DAYS: 15-18

ANIMAL ID: 11977 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:16

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

ANIMAL ID: 11982 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:18

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

ANIMAL ID: 11984 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:17

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

ANIMAL ID: 11989 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:16

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

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Correlation of Gross & Micro Findings

PROJECT ID: 34551 GROUP: Group 5 SEX: FEMALE DAYS: 15-18

ANIMAL ID: 11991 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:18

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

ANIMAL ID: 11992 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:18

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

ANIMAL ID: 11994 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:16

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

ANIMAL ID: 12001 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:15

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

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Correlation of Gross & Micro Findings

PROJECT ID: 34551 GROUP: Group 5 SEX: FEMALE DAYS: 15-18

ANIMAL ID: 12003 PATHOLOGIST: PKH
ANIMAL FATE: Terminal

DAYS ON TEST:17

REFERENCE TO NECROPSY RECORD:	RELATED HISTOPATHOLOGY:
>Uterus - Distended; slight; both horns	Uterus - Dilatation

ANIMAL ID: 12005 PATHOLOGIST: PKH
ANIMAL FATE: Terminal

DAYS ON TEST:15

REFERENCE TO NECROPSY RECORD:	RELATED HISTOPATHOLOGY:

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IN RATS WITH AMMONIUM PERCHLORATE
SLI STUDY NO. 3455.1

Correlation of Gross & Micro Findings

PROJECT ID: 34551 GROUP: Group 6 SEX: FEMALE DAYS: 15-18

ANIMAL ID: 12010
ANIMAL FATE: Terminal
PATHOLOGIST: PKH
DAYS ON TEST:15

REFERENCE TO NECROPSY RECORD:	RELATED HISTOPATHOLOGY:
>Ovary - Cyst(s); left; one around ovary; 1.0 x 0.7 x 0.4 cm; red fluid filled	Lt Ovary- Cyst

ANIMAL ID: 12013
ANIMAL FATE: Terminal
PATHOLOGIST: PKH
DAYS ON TEST:17

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

ANIMAL ID: 12016
ANIMAL FATE: Terminal
PATHOLOGIST: PKH
DAYS ON TEST:16

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

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Correlation of Gross & Micro Findings

PROJECT ID: 34551 GROUP: Group 6 SEX: FEMALE DAYS: 15-18

ANIMAL ID: 12021 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:15

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

ANIMAL ID: 12023 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:16

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

ANIMAL ID: 12026 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:18

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

ANIMAL ID: 12028 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:16

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

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Correlation of Gross & Micro Findings

PROJECT ID: 34551 GROUP: Group 6 SEX: FEMALE DAYS: 15-18

ANIMAL ID: 12030 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:17

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

ANIMAL ID: 12031 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:18

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

ANIMAL ID: 12032 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:18

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

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APPENDIX B

Gross-Micro Correlation

90-Day Male - Groups 1 through 6
90-Day Female - Groups 1 through 6

A 90-DAY DRINKING WATER TOXICITY STUDY
IN RATS WITH AMMONIUM PERCHLORATE
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Correlation of Gross & Micro Findings

PROJECT ID: 34551 GROUP: Group 1 SEX: MALE DAYS: 92-95

ANIMAL ID: 11721 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:92

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

ANIMAL ID: 11724 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:92

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

ANIMAL ID: 11729 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:92

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

ANIMAL ID: 11732 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:93

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

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IN RATS WITH AMMONIUM PERCHLORATE
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Correlation of Gross & Micro Findings

PROJECT ID: 34551 GROUP: Group 1 SEX: MALE DAYS: 92-95

ANIMAL ID: 11734 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:93

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

ANIMAL ID: 11735 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:94

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

ANIMAL ID: 11736 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:94

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

ANIMAL ID: 11738 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:94

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

A 90-DAY DRINKING WATER TOXICITY STUDY
IN RATS WITH AMMONIUM PERCHLORATE
SLI STUDY NO. 3455.1

Correlation of Gross & Micro Findings

PROJECT ID: 34551 GROUP: Group 1 SEX: MALE DAYS: 92-95

ANIMAL ID: 11741 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:95

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

ANIMAL ID: 11742 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:95

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

A 90-DAY DRINKING WATER TOXICITY STUDY
IN RATS WITH AMMONIUM PERCHLORATE
SLI STUDY NO. 3455.1

Correlation of Gross & Micro Findings

PROJECT ID: 34551 GROUP: Group 2 SEX: MALE DAYS: 92-95

ANIMAL ID: 11746
ANIMAL FATE: Terminal

PATHOLOGIST: PKH

DAYS ON TEST:92

REFERENCE TO NECROPSY RECORD:

RELATED HISTOPATHOLOGY:

ANIMAL ID: 11748
ANIMAL FATE: Terminal

PATHOLOGIST: PKH

DAYS ON TEST:92

REFERENCE TO NECROPSY RECORD:

>Oral Cavity - Incisor - Malaligned; uppers

RELATED HISTOPATHOLOGY:

Not applicable

ANIMAL ID: 11749
ANIMAL FATE: Terminal

PATHOLOGIST: PKH

DAYS ON TEST:92

REFERENCE TO NECROPSY RECORD:

>Abdominal Cavity - Adhesion; involving caudate liver lobe and adipose tissue

RELATED HISTOPATHOLOGY:

Liver- Angiectasis

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Correlation of Gross & Micro Findings

PROJECT ID: 34551 GROUP: Group 2 SEX: MALE DAYS: 92-95

ANIMAL ID: 11750 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:93

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

ANIMAL ID: 11752 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:93

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

ANIMAL ID: 11753 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:94

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

ANIMAL ID: 11754 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:94

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

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SLI STUDY NO. 3455.1

Correlation of Gross & Micro Findings

PROJECT ID: 34551 GROUP: Group 2 SEX: MALE DAYS: 92-95

ANIMAL ID: 11755 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:94

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

>Oral Cavity - Incisor - Absent; left; upper Not applicable

ANIMAL ID: 11761 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:95

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

ANIMAL ID: 11765 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:95

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

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IN RATS WITH AMMONIUM PERCHLORATE
SLI STUDY NO. 3455.1

Correlation of Gross & Micro Findings

PROJECT ID: 34551 GROUP: Group 3 SEX: MALE DAYS: 92-95

ANIMAL ID: 11769
ANIMAL FATE: Terminal
PATHOLOGIST: PKH
DAYS ON TEST:92

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

ANIMAL ID: 11774
ANIMAL FATE: Terminal
PATHOLOGIST: PKH
DAYS ON TEST:92

REFERENCE TO NECROPSY RECORD:	RELATED HISTOPATHOLOGY:
>Kidney - Dilated pelvis; slight; right	Rt Kidney- Hydronephrosis
>Liver - Adhesion; involving left and caudate lobes	Liver- Fibrous Adhesion

ANIMAL ID: 11776
ANIMAL FATE: Terminal
PATHOLOGIST: PKH
DAYS ON TEST:92

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

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IN RATS WITH AMMONIUM PERCHLORATE
SLI STUDY NO. 3455.1

Correlation of Gross & Micro Findings

PROJECT ID: 34551 GROUP: Group 3 SEX: MALE DAYS: 92-95

ANIMAL ID: 11777 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:93

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

ANIMAL ID: 11780 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:93

REFERENCE TO NECROPSY RECORD:	RELATED HISTOPATHOLOGY:
>Haircoat - Dark material; around left eye; dark red	Not applicable
>Oral Cavity - Incisor - Malaligned; uppers	Not applicable

ANIMAL ID: 11787 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:94

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

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IN RATS WITH AMMONIUM PERCHLORATE
SLI STUDY NO. 3455.1

Correlation of Gross & Micro Findings

PROJECT ID: 34551 GROUP: Group 3 SEX: MALE DAYS: 92-95

ANIMAL ID: 11790 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:94

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

ANIMAL ID: 11791 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:94

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

ANIMAL ID: 11792 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:95

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

ANIMAL ID: 11794 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:95

REFERENCE TO NECROPSY RECORD:	RELATED HISTOPATHOLOGY:
>Ext. Appearance - Pinna(e) - Thickened; bilateral	Skin, Pinna - Infl, a/c

A 90-DAY DRINKING WATER TOXICITY STUDY
IN RATS WITH AMMONIUM PERCHLORATE
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Correlation of Gross & Micro Findings

PROJECT ID: 34551 GROUP: Group 4 SEX: MALE DAYS: 92-95

ANIMAL ID: 11797 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:92

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

ANIMAL ID: 11799 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:92

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

ANIMAL ID: 11800 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:92

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

ANIMAL ID: 11805 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:93

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

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SLI STUDY NO. 3455.1

Correlation of Gross & Micro Findings

PROJECT ID: 34551 GROUP: Group 4 SEX: MALE DAYS: 92-95

ANIMAL ID: 11806 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:93

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

ANIMAL ID: 11809 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:94

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

ANIMAL ID: 11811 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:94

REFERENCE TO NECROPSY RECORD:	RELATED HISTOPATHOLOGY:
>Abdominal Cavity - Umbilical hernia; opening in musculature in area of umbilicus; 0.3 cm diameter	Muscle - Disrupted Continuity
>Haircoat - Dark material; around eyes; red	Not applicable
>Oral Cavity - Incisor - Malaligned; upper left	Not applicable
>Oral Cavity - Incisor - Absent; upper right	Not applicable

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Correlation of Gross & Micro Findings

PROJECT ID: 34551 GROUP: Group 4 SEX: MALE DAYS: 92-95

ANIMAL ID: 11812 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:94

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

ANIMAL ID: 11814 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:95

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

ANIMAL ID: 11815 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:95

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

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Correlation of Gross & Micro Findings

PROJECT ID: 34551 GROUP: Group 5 SEX: MALE DAYS: 92-95

ANIMAL ID: 11817 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:92

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

>Haircoat - Hairloss; forelimbs Not applicable

ANIMAL ID: 11822 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:92

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

ANIMAL ID: 11824 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:92

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

ANIMAL ID: 11827 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:93

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

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Correlation of Gross & Micro Findings

PROJECT ID: 34551 GROUP: Group 5 SEX: MALE DAYS: 92-95

ANIMAL ID: 11830 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:93

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

ANIMAL ID: 11832 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:94

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

ANIMAL ID: 11840 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:94

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

ANIMAL ID: 11841 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:94

REFERENCE TO NECROPSY RECORD:	RELATED HISTOPATHOLOGY:
>Haircoat - Dark material; around right eye; red	Not applicable
>Oral Cavity - Incisor - Malaligned; both upper	Not applicable

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SLI STUDY NO. 3455.1

Correlation of Gross & Micro Findings

PROJECT ID: 34551 GROUP: Group 5 SEX: MALE DAYS: 92-95

ANIMAL ID: 11842
ANIMAL FATE: Terminal

PATHOLOGIST: PKH

DAYS ON TEST:95

REFERENCE TO NECROPSY RECORD:	RELATED HISTOPATHOLOGY:
>Abdominal Cavity - Umbilical hernia; opening in musculature in area of umbilicus; 0.5 x 0.5 cm	Muscle - Disrupted Continuity

ANIMAL ID: 11845
ANIMAL FATE: Terminal

PATHOLOGIST: PKH

DAYS ON TEST:95

REFERENCE TO NECROPSY RECORD:	RELATED HISTOPATHOLOGY:

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Correlation of Gross & Micro Findings

PROJECT ID: 34551 GROUP: Group 6 SEX: MALE DAYS: 92-95

ANIMAL ID: 11851
ANIMAL FATE: Terminal
PATHOLOGIST: PKH
DAYS ON TEST:92

REFERENCE TO NECROPSY RECORD:	RELATED HISTOPATHOLOGY:
>Thyroid Gland - Reddened; bilateral	Thyroid- Congestion

ANIMAL ID: 11852
ANIMAL FATE: Terminal
PATHOLOGIST: PKH
DAYS ON TEST:92

REFERENCE TO NECROPSY RECORD:	RELATED HISTOPATHOLOGY:
>Kidney - Cyst(s); bilateral; cortical and cut surfaces; multiple; up to 0.4 cm in diameter; appear clear fluid filled	Rt Kidney- Cyst, Lt Kidney- Cyst
>Kidney - Enlarged; bilateral; each approximately 2.8 x 2.0 x 1.2 cm	Rt Kidney- Cyst, Lt Kidney- Cyst
>Kidney - Foci; bilateral; several; up to 0.1 cm in diameter; tan	Rt Kidney- Cyst, Lt Kidney- Cyst
>Liver - Mottled; all lobes; red and dark red	Liver- Bile Duct - Hyperplasia

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Correlation of Gross & Micro Findings

PROJECT ID: 34551 GROUP: Group 6 SEX: MALE DAYS: 92-95

ANIMAL ID: 11854 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:92

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

ANIMAL ID: 11860 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:93

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

>Thyroid Gland - Reddened; bilateral Thyroid- Congestion

ANIMAL ID: 11862 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:93

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

ANIMAL ID: 11866 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:94

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

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Correlation of Gross & Micro Findings

PROJECT ID: 34551 GROUP: Group 6 SEX: MALE DAYS: 92-95

ANIMAL ID: 11867 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:94

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

ANIMAL ID: 11871 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:94

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

ANIMAL ID: 11872 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:95

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

>Thyroid Gland - Reddened; bilateral Thyroid- Congestion

ANIMAL ID: 11873 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:95

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

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Correlation of Gross & Micro Findings

PROJECT ID: 34551 GROUP: Group 1 SEX: FEMALE DAYS: 92-95

ANIMAL ID: 11876 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:92

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

ANIMAL ID: 11886 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:92

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

ANIMAL ID: 11890 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:93

REFERENCE TO NECROPSY RECORD:	RELATED HISTOPATHOLOGY:
>Lung - Foci; both diaphragmatic lobes; several; white; pinpoint	No corollary change detected

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ANIMAL ID: 11891 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:93

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

A 90-DAY DRINKING WATER TOXICITY STUDY
IN RATS WITH AMMONIUM PERCHLORATE
SLI STUDY NO. 3455.1

Correlation of Gross & Micro Findings

PROJECT ID: 34551 GROUP: Group 1 SEX: FEMALE DAYS: 92-95

ANIMAL ID: 11892 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:93

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

>General Comment - Final clinical observation not apparent postmortem malalignment

Not applicable

ANIMAL ID: 11895 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:94

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

ANIMAL ID: 11896 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:94

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

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Correlation of Gross & Micro Findings

PROJECT ID: 34551 GROUP: Group 1 SEX: FEMALE DAYS: 92-95

ANIMAL ID: 11901
ANIMAL FATE: Terminal
PATHOLOGIST: PKH
DAYS ON TEST:95

REFERENCE TO NECROPSY RECORD:	RELATED HISTOPATHOLOGY:

ANIMAL ID: 11902
ANIMAL FATE: Terminal
PATHOLOGIST: PKH
DAYS ON TEST:95

REFERENCE TO NECROPSY RECORD:	RELATED HISTOPATHOLOGY:
>Lung - Reddened; all lobes	No corollary change detected
>Oral Cavity - Incisor - Malaligned; upper; bilateral	Nose- Tooth - Dystropy

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ANIMAL ID: 11904
ANIMAL FATE: Terminal
PATHOLOGIST: PKH
DAYS ON TEST:95

REFERENCE TO NECROPSY RECORD:	RELATED HISTOPATHOLOGY:
>Ext. Appearance - Pinna(e); - Thickened; bilateral	Skin, Pinna - Infl, a/c

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A 90-DAY DRINKING WATER TOXICITY STUDY
IN RATS WITH AMMONIUM PERCHLORATE
SLI STUDY NO. 3455.1

Correlation of Gross & Micro Findings

PROJECT ID: 34551 GROUP: Group 2 SEX: FEMALE DAYS: 92-95

ANIMAL ID: 11907 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:92

REFERENCE TO NECROPSY RECORD:	RELATED HISTOPATHOLOGY:
>Mandibular Lymph - Reddened; bilateral; few	Mandibular LN - Congestion
>Uterus - Distended; slight; both horns; clear fluid filled	Uterus - Dilatation

ANIMAL ID: 11910 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:92

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

ANIMAL ID: 11914 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:93

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

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SLI STUDY NO. 3455.1

Correlation of Gross & Micro Findings

PROJECT ID: 34551 GROUP: Group 2 SEX: FEMALE DAYS: 92-95

ANIMAL ID: 11915
ANIMAL FATE: Terminal
PATHOLOGIST: PKH
DAYS ON TEST:93

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

ANIMAL ID: 11916
ANIMAL FATE: Terminal
PATHOLOGIST: PKH
DAYS ON TEST:93

REFERENCE TO NECROPSY RECORD:	RELATED HISTOPATHOLOGY:
>Kidney - Dilated pelvis; slight; right	Rt Kidney- Hydronephrosis
>Uterus - Distended; slight; both horns; clear fluid filled	Uterus - Dilatation

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ANIMAL ID: 11918
ANIMAL FATE: Terminal
PATHOLOGIST: PKH
DAYS ON TEST:94

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

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IN RATS WITH AMMONIUM PERCHLORATE
SLI STUDY NO. 3455.1

Correlation of Gross & Micro Findings

PROJECT ID: 34551 GROUP: Group 2 SEX: FEMALE DAYS: 92-95

ANIMAL ID: 11919
ANIMAL FATE: Terminal
PATHOLOGIST: PKH
DAYS ON TEST:94

REFERENCE TO NECROPSY RECORD:
RELATED HISTOPATHOLOGY:

ANIMAL ID: 11920
ANIMAL FATE: Terminal
PATHOLOGIST: PKH
DAYS ON TEST:95

REFERENCE TO NECROPSY RECORD:	RELATED HISTOPATHOLOGY:
>Ext. Appearance - Pinna(e) - Thickened; bilateral	Skin, Pinna - Infl, a/c

ANIMAL ID: 11922
ANIMAL FATE: Terminal
PATHOLOGIST: PKH
DAYS ON TEST:95

REFERENCE TO NECROPSY RECORD:
RELATED HISTOPATHOLOGY:

ANIMAL ID: 11924
ANIMAL FATE: Terminal
PATHOLOGIST: PKH
DAYS ON TEST:95

REFERENCE TO NECROPSY RECORD:	RELATED HISTOPATHOLOGY:
>Oral Cavity - Incisor - Malaligned; both upper	Not applicable

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Correlation of Gross & Micro Findings

PROJECT ID: 34551 GROUP: Group 3 SEX: FEMALE DAYS: 92-95

ANIMAL ID: 11927
ANIMAL FATE: Terminal
PATHOLOGIST: PKH
DAYS ON TEST:92

REFERENCE TO NECROPSY RECORD:	RELATED HISTOPATHOLOGY:
>Haircoat - Hairloss; right lateral abdomen and right hindlimb	Not applicable

ANIMAL ID: 11929
ANIMAL FATE: Terminal
PATHOLOGIST: PKH
DAYS ON TEST:92

REFERENCE TO NECROPSY RECORD:	RELATED HISTOPATHOLOGY:
>Ext. Appearance - Pinna(e) - Thickened; bilateral	Skin, Pinna - Infl, a/c

ANIMAL ID: 11935
ANIMAL FATE: Terminal
PATHOLOGIST: PKH
DAYS ON TEST:93

REFERENCE TO NECROPSY RECORD:	RELATED HISTOPATHOLOGY:

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SLI STUDY NO. 3455.1

Correlation of Gross & Micro Findings

PROJECT ID: 34551 GROUP: Group 3 SEX: FEMALE DAYS: 92-95

ANIMAL ID: 11936
ANIMAL FATE: Terminal
PATHOLOGIST: PKH
DAYS ON TEST:93

REFERENCE TO NECROPSY RECORD:

>General Comment - Final clinical observation not apparent postmortem malalignment

RELATED HISTOPATHOLOGY:

Not applicable

ANIMAL ID: 11937
ANIMAL FATE: Terminal
PATHOLOGIST: PKH
DAYS ON TEST:93

REFERENCE TO NECROPSY RECORD:

RELATED HISTOPATHOLOGY:

ANIMAL ID: 11938
ANIMAL FATE: Terminal
PATHOLOGIST: PKH
DAYS ON TEST:94

REFERENCE TO NECROPSY RECORD:

RELATED HISTOPATHOLOGY:

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SLI STUDY NO. 3455.1

Correlation of Gross & Micro Findings

PROJECT ID: 34551 GROUP: Group 3 SEX: FEMALE DAYS: 92-95

ANIMAL ID: 11939 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:94

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

ANIMAL ID: 11950 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:95

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

ANIMAL ID: 11954 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:95

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

ANIMAL ID: 11955 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:95

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

>Haircoat - Hairloss; abdominal area Not applicable

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SLI STUDY NO. 3455.1

Correlation of Gross & Micro Findings

PROJECT ID: 34551 GROUP: Group 4 SEX: FEMALE DAYS: 92-95

ANIMAL ID: 11956 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:92

REFERENCE TO NECROPSY RECORD:	RELATED HISTOPATHOLOGY:
>Haircoat - Dark material; around right eye; red	Not applicable
>Oral Cavity - Incisor - Malaligned; uppers	Not applicable

ANIMAL ID: 11957 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:92

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

ANIMAL ID: 11958 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:93

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

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IN RATS WITH AMMONIUM PERCHLORATE
SLI STUDY NO. 3455.1

Correlation of Gross & Micro Findings

PROJECT ID: 34551 GROUP: Group 4 SEX: FEMALE DAYS: 92-95

ANIMAL ID: 11961 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:93

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

ANIMAL ID: 11965 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:93

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

>Oral Cavity - Incisor - Broken; left upper — Not applicable

ANIMAL ID: 11966 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:94

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

ANIMAL ID: 11969 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:94

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

A 90-DAY DRINKING WATER TOXICITY STUDY
IN RATS WITH AMMONIUM PERCHLORATE
SLI STUDY NO. 3455.1

Correlation of Gross & Micro Findings

PROJECT ID: 34551 GROUP: Group 4 SEX: FEMALE DAYS: 92-95

ANIMAL ID: 11972
ANIMAL FATE: Terminal
PATHOLOGIST: PKH
DAYS ON TEST:95

REFERENCE TO NECROPSY RECORD:	RELATED HISTOPATHOLOGY:
>Haircoat - Dark material; around nose; red	Not applicable

ANIMAL ID: 11973
ANIMAL FATE: Terminal
PATHOLOGIST: PKH
DAYS ON TEST:95

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

ANIMAL ID: 11975
ANIMAL FATE: Terminal
PATHOLOGIST: PKH
DAYS ON TEST:95

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

A 90-DAY DRINKING WATER TOXICITY STUDY
IN RATS WITH AMMONIUM PERCHLORATE
SLI STUDY NO. 3455.1

Correlation of Gross & Micro Findings

PROJECT ID: 34551 GROUP: Group 5 SEX: FEMALE DAYS: 92-95

ANIMAL ID: 11976 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:92

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

ANIMAL ID: 11983 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:92

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

ANIMAL ID: 11988 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:93

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

ANIMAL ID: 11990 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:93

REFERENCE TO NECROPSY RECORD:	RELATED HISTOPATHOLOGY:
>Haircoat - Dark material; around nose and right eye; dark red	Not applicable
>Oral Cavity - Incisor - Malaligned; uppers	Not applicable

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Correlation of Gross & Micro Findings

PROJECT ID: 34551 GROUP: Group 5 SEX: FEMALE DAYS: 92-95

ANIMAL ID: 11993
ANIMAL FATE: Terminal
PATHOLOGIST: PKH
DAYS ON TEST:93

REFERENCE TO NECROPSY RECORD:
RELATED HISTOPATHOLOGY:

ANIMAL ID: 11995
ANIMAL FATE: Terminal
PATHOLOGIST: PKH
DAYS ON TEST:94

REFERENCE TO NECROPSY RECORD:
RELATED HISTOPATHOLOGY:

>Ovary - Cyst(s); surrounding left ovary; 1.0 x 0.8 x 0.7 cm; red fluid filled; ruptured upon removal

No corollary change detected

ANIMAL ID: 11996
ANIMAL FATE: Terminal
PATHOLOGIST: PKH
DAYS ON TEST:94

REFERENCE TO NECROPSY RECORD:
RELATED HISTOPATHOLOGY:

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Correlation of Gross & Micro Findings

PROJECT ID: 34551 GROUP: Group 5 SEX: FEMALE DAYS: 92-95

ANIMAL ID: 11997
ANIMAL FATE: Terminal
PATHOLOGIST: PKH
DAYS ON TEST:95

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

ANIMAL ID: 11998
ANIMAL FATE: Terminal
PATHOLOGIST: PKH
DAYS ON TEST:95

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

ANIMAL ID: 12000
ANIMAL FATE: Terminal
PATHOLOGIST: PKH
DAYS ON TEST:92

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

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Correlation of Gross & Micro Findings

PROJECT ID: 34551 GROUP: Group 6 SEX: FEMALE DAYS: 92-95

ANIMAL ID: 12006 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:92

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

ANIMAL ID: 12007 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:92

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

ANIMAL ID: 12011 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:93

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

ANIMAL ID: 12012 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:93

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

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Correlation of Gross & Micro Findings

PROJECT ID: 34551 GROUP: Group 6 SEX: FEMALE DAYS: 92-95

ANIMAL ID: 12018 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:93

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

ANIMAL ID: 12019 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:94

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

ANIMAL ID: 12022 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:94

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

ANIMAL ID: 12025 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:95

REFERENCE TO NECROPSY RECORD:	RELATED HISTOPATHOLOGY:
>Kidney - Dilated pelvis; slight; bilataeral	Rt Kidney- Hydronephrosis, Lt Kidney- Hydronephrosis

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Correlation of Gross & Micro Findings

PROJECT ID: 34551 GROUP: Group 6 SEX: FEMALE DAYS: 92-95

ANIMAL ID: 12029
ANIMAL FATE: Terminal

PATHOLOGIST: PKH

DAYS ON TEST:95

REFERENCE TO NECROPSY RECORD:

>Abdominal Cavity - Umbilical hernia; small opening in musculature of abdominal wall in area of umbilicus; 0.6 x 0.4 x 0.2 cm

RELATED HISTOPATHOLOGY:

Muscle - Disrupted Continuity

ANIMAL ID: 12033
ANIMAL FATE: Terminal

PATHOLOGIST: PKH

DAYS ON TEST:95

REFERENCE TO NECROPSY RECORD:

RELATED HISTOPATHOLOGY:

SLI Study No. 3455.1

APPENDIX C

Gross-Micro Correlation

120-Day Male - Groups 1, 3, 5 and 6
120-Day Female - Groups 1, 3, 5 and 6

A 90-DAY DRINKING WATER TOXICITY STUDY
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Correlation of Gross & Micro Findings

PROJECT ID: 34551 GROUP: Group 1 SEX: MALE DAYS: 97-123

ANIMAL ID: 11719 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:121

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

ANIMAL ID: 11722 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:121

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

>Thymus - Reddened; both lobes Thymus - Congestion

ANIMAL ID: 11723 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:121

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

ANIMAL ID: 11726 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:121

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

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Correlation of Gross & Micro Findings

PROJECT ID: 34551 GROUP: Group 1 SEX: MALE DAYS: 97-123

ANIMAL ID: 11727 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:122

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

ANIMAL ID: 11730 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:122

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

ANIMAL ID: 11733 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:122

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

ANIMAL ID: 11737 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:123

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

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Correlation of Gross & Micro Findings

PROJECT ID: 34551 GROUP: Group 1 SEX: MALE DAYS: 97-123

ANIMAL ID: 11740 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:123

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

ANIMAL ID: 11743 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:123

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

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Correlation of Gross & Micro Findings

PROJECT ID: 34551 GROUP: Group 3 SEX: MALE DAYS: 97-123

ANIMAL ID: 11767 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:121

REFERENCE TO NECROPSY RECORD:	RELATED HISTOPATHOLOGY:
>Haircoat - Dark material; around left eye; red	Not applicable

ANIMAL ID: 11770 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:121

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

ANIMAL ID: 11773 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:121

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

ANIMAL ID: 11775 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:121

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

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SLI STUDY NO. 3455.1

Correlation of Gross & Micro Findings

PROJECT ID: 34551 GROUP: Group 3 SEX: MALE DAYS: 97-123

ANIMAL ID: 11781 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:122

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

ANIMAL ID: 11782 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:122

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

ANIMAL ID: 11783 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:122

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

ANIMAL ID: 11785 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:123

REFERENCE TO NECROPSY RECORD:	RELATED HISTOPATHOLOGY:
>Haircoat - Dark material; around eyes; red	Not applicable
>Oral Cavity - Incisor - Malaligned; uppers	Not applicable

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Correlation of Gross & Micro Findings

PROJECT ID: 34551 GROUP: Group 3 SEX: MALE DAYS: 97-123

ANIMAL ID: 11788 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:123

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

ANIMAL ID: 11795 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:123

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

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Correlation of Gross & Micro Findings

PROJECT ID: 34551 GROUP: Group 5 SEX: MALE DAYS: 97-123

ANIMAL ID: 11821 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:121

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

ANIMAL ID: 11823 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:121

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

ANIMAL ID: 11826 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:121

REFERENCE TO NECROPSY RECORD:	RELATED HISTOPATHOLOGY:
>Haircoat - Dark material; around eyes; red	Not applicable
>Oral Cavity - Incisor - Malaligned; uppers	Not applicable

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Correlation of Gross & Micro Findings

PROJECT ID: 34551 GROUP: Group 5 SEX: MALE DAYS: 97-123

ANIMAL ID: 11828 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:121

REFERENCE TO NECROPSY RECORD:	RELATED HISTOPATHOLOGY:
>Haircoat - Dark material; around right eye; red	Not applicable

ANIMAL ID: 11829 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:122

REFERENCE TO NECROPSY RECORD:	RELATED HISTOPATHOLOGY:

ANIMAL ID: 11833 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:122

REFERENCE TO NECROPSY RECORD:	RELATED HISTOPATHOLOGY:

ANIMAL ID: 11834 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:122

REFERENCE TO NECROPSY RECORD:	RELATED HISTOPATHOLOGY:
>Kidney - Pitted; right; cortical surface; two; both approximately 0.2 cm in diameter	Rt Kidney- Nephropathy

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SLI STUDY NO. 3455.1

Correlation of Gross & Micro Findings

PROJECT ID: 34551 GROUP: Group 5 SEX: MALE DAYS: 97-123

ANIMAL ID: 11837
ANIMAL FATE: Terminal
PATHOLOGIST: PKH
DAYS ON TEST:123

REFERENCE TO NECROPSY RECORD:
RELATED HISTOPATHOLOGY:

ANIMAL ID: 11838
ANIMAL FATE: Terminal
PATHOLOGIST: PKH
DAYS ON TEST:123

REFERENCE TO NECROPSY RECORD:
RELATED HISTOPATHOLOGY:

ANIMAL ID: 11843
ANIMAL FATE: Terminal
PATHOLOGIST: PKH
DAYS ON TEST:123

REFERENCE TO NECROPSY RECORD:	RELATED HISTOPATHOLOGY:
>Kidney - Cyst(s); left; cortical surface; one; 0.1 cm in diameter; clear fluid filled	Lt Kidney- Cyst

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IN RATS WITH AMMONIUM PERCHLORATE
SLI STUDY NO. 3455.1

Correlation of Gross & Micro Findings

PROJECT ID: 34551 GROUP: Group 6 SEX: MALE DAYS: 97-123

ANIMAL ID: 11849 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:121

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

ANIMAL ID: 11850 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:121

REFERENCE TO NECROPSY RECORD:	RELATED HISTOPATHOLOGY:
>Haircoat - Dark material; around eyes; red	Not applicable
>Oral Cavity - Incisor - Malaligned; uppers	Not applicable

ANIMAL ID: 11855 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:121

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

A 90-DAY DRINKING WATER TOXICITY STUDY
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SLI STUDY NO. 3455.1

Correlation of Gross & Micro Findings

PROJECT ID: 34551 GROUP: Group 6 SEX: MALE DAYS: 97-123

ANIMAL ID: 11856 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:122

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

ANIMAL ID: 11864 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:122

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

ANIMAL ID: 11865 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:122

REFERENCE TO NECROPSY RECORD:	RELATED HISTOPATHOLOGY:
>Kidney - Pitted; right; cortical surface; one; 0.1 cm in diameter	Rt Kidney- Nephropathy
>Spleen - Cyst(s); on periphery of capsular surface; one; 0.3 x 0.1 x 0.1 cm; clear fluid filled	Spleen - Capsule - Cyst

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IN RATS WITH AMMONIUM PERCHLORATE
SLI STUDY NO. 3455.1

Correlation of Gross & Micro Findings

PROJECT ID: 34551 GROUP: Group 6 SEX: MALE DAYS: 97-123

ANIMAL ID: 11868 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:122

REFERENCE TO NECROPSY RECORD:	RELATED HISTOPATHOLOGY:
>Haircoat - Hairloss; left forelimb	Not applicable

ANIMAL ID: 11869 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:123

REFERENCE TO NECROPSY RECORD:	RELATED HISTOPATHOLOGY:
>Haircoat - Hairloss; right shoulder area	Not applicable
>Oral Cavity - Incisor - Broken; uppers	Not applicable

ANIMAL ID: 11874 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:123

REFERENCE TO NECROPSY RECORD:	RELATED HISTOPATHOLOGY:

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SLI STUDY NO. 3455.1

Correlation of Gross & Micro Findings

PROJECT ID: 34551 GROUP: Group 6 SEX: MALE DAYS: 97-123

ANIMAL ID: 11875 PATHOLOGIST: PKH
ANIMAL FATE: Terminal

DAYS ON TEST:123

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

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IN RATS WITH AMMONIUM PERCHLORATE
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Correlation of Gross & Micro Findings

PROJECT ID: 34551 GROUP: Group 1 SEX: FEMALE DAYS: 97-123

ANIMAL ID: 11879 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:121

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

ANIMAL ID: 11880 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:121

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

ANIMAL ID: 11883 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:121

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

ANIMAL ID: 11885 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:122

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

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Correlation of Gross & Micro Findings

PROJECT ID: 34551 GROUP: Group 1 SEX: FEMALE DAYS: 97-123

ANIMAL ID: 11887 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:122

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

ANIMAL ID: 11888 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:122

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

ANIMAL ID: 11897 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:122

REFERENCE TO NECROPSY RECORD:	RELATED HISTOPATHOLOGY:
>Ext. Appearance - Pinna(e) - Thickened; bilateral	Skin, Pinna - Infl, a/c, Pinna - Bone - Metaplasia

ANIMAL ID: 11898 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:123

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

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Correlation of Gross & Micro Findings

PROJECT ID: 34551 GROUP: Group 1 SEX: FEMALE DAYS: 97-123

ANIMAL ID: 11899 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:123

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

ANIMAL ID: 11905 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:123

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

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Correlation of Gross & Micro Findings

PROJECT ID: 34551 GROUP: Group 3 SEX: FEMALE DAYS: 97-123

ANIMAL ID: 11926 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:121

REFERENCE TO NECROPSY RECORD:	RELATED HISTOPATHOLOGY:
>Haircoat - Dark material; around right eye; red	Not applicable
>Oral Cavity - Incisor - Malaligned; both upper	Not applicable

ANIMAL ID: 11928 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:121

REFERENCE TO NECROPSY RECORD:	RELATED HISTOPATHOLOGY:
>Ext. Appearance - Pinna(e) - Thickened; bilateral	Skin, Pinna - Infl, a/c

ANIMAL ID: 11932 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:121

REFERENCE TO NECROPSY RECORD:	RELATED HISTOPATHOLOGY:

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Correlation of Gross & Micro Findings

PROJECT ID: 34551 GROUP: Group 3 SEX: FEMALE DAYS: 97-123

ANIMAL ID: 11933 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:122

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

ANIMAL ID: 11940 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:122

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

ANIMAL ID: 11943 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:122

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

ANIMAL ID: 11944 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:122

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

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Correlation of Gross & Micro Findings

PROJECT ID: 34551 GROUP: Group 3 SEX: FEMALE DAYS: 97-123

ANIMAL ID: 11947
ANIMAL FATE: Terminal
PATHOLOGIST: PKH
DAYS ON TEST:123

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

ANIMAL ID: 11948
ANIMAL FATE: Died on Study
PATHOLOGIST: PKH
DAYS ON TEST:97

REFERENCE TO NECROPSY RECORD:	RELATED HISTOPATHOLOGY:
>Lung - Reddened; all lobes	Lungs/Bronchi- Congestion
>Thyroid Gland - Reddened; bilateral	No corollary change detected

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ANIMAL ID: 11949
ANIMAL FATE: Terminal
PATHOLOGIST: PKH
DAYS ON TEST:123

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

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Correlation of Gross & Micro Findings

PROJECT ID: 34551 GROUP: Group 5 SEX: FEMALE DAYS: 97-123

ANIMAL ID: 11978 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:121

REFERENCE TO NECROPSY RECORD:	RELATED HISTOPATHOLOGY:
>Ext. Appearance - Pinna(e) - Thickened; bilateral	Skin, Pinna - Infl, a/c
>Haircoat - Dark material; around eyes and nose; red	Not applicable
>Haircoat - Wet matting; around mouth, ventral neck and forelimbs; light red	Not applicable
>Trachea - Content abnormal; caudal portion; light yellow viscous material	(Tissue unavailable)

ANIMAL ID: 11979 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:121

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

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IN RATS WITH AMMONIUM PERCHLORATE
SLI STUDY NO. 3455.1

Correlation of Gross & Micro Findings

PROJECT ID: 34551 GROUP: Group 5 SEX: FEMALE DAYS: 97-123

ANIMAL ID: 11980 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:121

REFERENCE TO NECROPSY RECORD:	RELATED HISTOPATHOLOGY:
>Haircoat - Hairloss; ventral thorax	Not applicable
>Haircoat - Dark material; around nose; red	Not applicable

ANIMAL ID: 11981 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:122

REFERENCE TO NECROPSY RECORD:	RELATED HISTOPATHOLOGY:

ANIMAL ID: 11985 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:122

REFERENCE TO NECROPSY RECORD:	RELATED HISTOPATHOLOGY:
>Oral Cavity - Incisor - Malaligned; upper; bilateral	Not applicable

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Correlation of Gross & Micro Findings

PROJECT ID: 34551 GROUP: Group 5 SEX: FEMALE DAYS: 97-123

ANIMAL ID: 11986
ANIMAL FATE: Terminal
PATHOLOGIST: PKH
DAYS ON TEST:122

REFERENCE TO NECROPSY RECORD:	RELATED HISTOPATHOLOGY:
>Ext. Appearance - Pinna(e) -Thickened; right	Skin, Pinna - Infl, a/c

ANIMAL ID: 11987
ANIMAL FATE: Terminal
PATHOLOGIST: PKH
DAYS ON TEST:123

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

ANIMAL ID: 11999
ANIMAL FATE: Terminal
PATHOLOGIST: PKH
DAYS ON TEST:123

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

ANIMAL ID: 12002
ANIMAL FATE: Terminal
PATHOLOGIST: PKH
DAYS ON TEST:123

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

A 90-DAY DRINKING WATER TOXICITY STUDY
IN RATS WITH AMMONIUM PERCHLORATE
SLI STUDY NO. 3455.1

Correlation of Gross & Micro Findings

PROJECT ID: 34551 GROUP: Group 5 SEX: FEMALE DAYS: 97-123

ANIMAL ID: 12004
ANIMAL FATE: Terminal

PATHOLOGIST: PKH

DAYS ON TEST:123

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

A 90-DAY DRINKING WATER TOXICITY STUDY
IN RATS WITH AMMONIUM PERCHLORATE
SLI STUDY NO. 3455.1

Correlation of Gross & Micro Findings

PROJECT ID: 34551 GROUP: Group 6 SEX: FEMALE DAYS: 97-123

ANIMAL ID: 12008 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:121

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

ANIMAL ID: 12009 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:121

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

ANIMAL ID: 12014 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:121

REFERENCE TO NECROPSY RECORD:	RELATED HISTOPATHOLOGY:
>Uterus - Distended; slight; both horns; clear fluid filled	Uterus - Dilatation

ANIMAL ID: 12015 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:122

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

A 90-DAY DRINKING WATER TOXICITY STUDY
IN RATS WITH AMMONIUM PERCHLORATE
SLI STUDY NO. 3455.1

Correlation of Gross & Micro Findings

PROJECT ID: 34551 GROUP: Group 6 SEX: FEMALE DAYS: 97-123

ANIMAL ID: 12017 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:122

REFERENCE TO NECROPSY RECORD:	RELATED HISTOPATHOLOGY:

ANIMAL ID: 12020 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:122

REFERENCE TO NECROPSY RECORD:	RELATED HISTOPATHOLOGY:
>Haircoat - Hairloss; forelimbs	Not applicable

ANIMAL ID: 12024 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:123

REFERENCE TO NECROPSY RECORD:	RELATED HISTOPATHOLOGY:
>Trachea - Content abnormal; white foam	(Tissue unavailable)

A 90-DAY DRINKING WATER TOXICITY STUDY
IN RATS WITH AMMONIUM PERCHLORATE
SLI STUDY NO. 3455.1

Correlation of Gross & Micro Findings

PROJECT ID: 34551 GROUP: Group 6 SEX: FEMALE DAYS: 97-123

ANIMAL ID: 12027 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:123

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

ANIMAL ID: 12034 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:123

REFERENCE TO NECROPSY RECORD: RELATED HISTOPATHOLOGY:

ANIMAL ID: 12035 PATHOLOGIST: PKH
ANIMAL FATE: Terminal
DAYS ON TEST:123

REFERENCE TO NECROPSY RECORD:	RELATED HISTOPATHOLOGY:
>Kidney - Dilated pelvis; slight; left	Lt Kidney- Hydronephrosis

APPENDIX D

Code Table
Tabulated Animal Data

14-Day Male - Groups 1 through 6
14-Day Female - Groups 1 through 6

A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS WITH AMMONIUM PERCHLORATE SLI STUDY NO. 3455.1

Reports Code Table

N	Tissues within normal histological limits
A	Autolysis precluding adequate evaluation
U	Tissues unsuitable for complete evaluation
S	Tissues not applicable to animal
*	Tissues unavailable for evaluation

1	minimal
2	mild
3	moderate
4	marked
()	focal
[]	locally extensive
<>	multifocal
P	Present
B	Neoplasm, Benign
M	Neoplasm, Malignant without Metastasis
C	Neoplasm, Malignant with Metastasis
X	Metastatic Site (+)
-	No data entered

A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS WITH AMMONIUM PERCHLORATE SLI STUDY NO. 3455.1

Tabulated Animal Data

PROJECT ID: 34551 GROUP: Group 1 SEX: MALE
DAYS: 15-18 FATES: ALL

ANIMAL ID:	11716	11717	11718	11720	11725	11728	11731	11739	11744	11745
Brain	N	N	N	N	N	N	N	N	N	N
Pituitary Gland	N	N	N	N	N	N	N	N	N	N
Sciatic Nerve	N	N	N	N		N	N	N	N	N
Perineural Tissue - Infl, a/c	-	-	-	-	2	-	-	-	-	-
Spinal Cord, Cervical	N	N	N	N	N	N	N	N	N	N
Spinal Cord, Thoracic	N	N	N	N	N	N	N	N	N	N
Spinal Cord, Lumbar	N	N	N	N	N	N	N	N	N	N
Eye A	N	N	N	N	N	N	N	N	N	N
Eye B	N	N	N	N	N	N	N	N	N	N
Lacrimal Gland	N	N	N	N	N	N	N	N	N	N
Mediastinal LN	N	N	N		N	N	N		N	N
Congestion	-	-	-	2	-	-	-	2	-	-
Thyroid	*	*	N	N	N	N		N	N	N
Hyperplasia, follicular cell	-	-	-	-	-	-	1	-	-	-

A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS WITH AMMONIUM PERCHLORATE SLI STUDY NO. 3455.1

Tabulated Animal Data

PROJECT ID: 34551 GROUP: Group 1 SEX: MALE
DAYS: 15-18 FATES: ALL

ANIMAL ID:	11716	11717	11718	11720	11725	11728	11731	11739	11744	11745
Parathyroid	*	*	N	N	N	N	N	N	N	N
Trachea	N	N	N	N	N	N			N	
Inflammation, chronic	-	-	-	-	-	-	1	1	-	1
Esophagus	N	N	N	N	N	N	N	N	N	N
Thymus	N	N	N	N	N	N	N	N	N	N
Tongue	N	N	N	N	N	N	N	N	N	N
Pancreas	N	N	N	N	N	N	N	N	N	N
Islets of Pancreas	N	N	N	N	N	N	N	N	N	N
Salivary Gland	N	N	N	N	N	N	N	N	N	N
Mandibular LN	N	N	N	N	N	N	N	N	N	N
Lungs/Bronchi	N	N							N	N
Inflammation, chronic	-	-	1	1	1	1	1	1	-	-
Heart		N	N		N				N	
Inflammation, chronic	1	-	-	1	-	1	1	2	-	1

A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS WITH AMMONIUM PERCHLORATE SLI STUDY NO. 3455.1

Tabulated Animal Data

PROJECT ID: 34551 GROUP: Group 1 SEX: MALE
DAYS: 15-18 FATES: ALL

ANIMAL ID:	11716	11717	11718	11720	11725	11728	11731	11739	11744	11745
Aorta	N	N	N	N	N	N	N	N	N	N
Liver							N			
Cytoplasmic Vacuolization	1	-	-	-	-	-	-	-	-	-
Extramedullary Hematopoiesis	1	1	1	1	1	1	-	1	1	1
Spleen	N	N	N	N	N	N	N	N	N	N
Rt Kidney	N	N		N	N		N	N	N	N
Cellular Infil, lymphocyte	-	-	1	-	-	1	-	-	-	-
Lt Kidney	N	N	N	N	N	N	N	N		N
Cellular Infil, lymphocyte	-	-	-	-	-	-	-	-	1	-
Adrenal Medulla	N	N	N	N	N	N	N	N	N	N
Adrenal Cortex	N	N	N	N	N	N	N	N	N	N
Stomach, Forestomach	N	N	N	N	N	N	N	N	N	N
Stomach, Glandular	N	N	N	N	N	N	N	N	N	N
Duodenum	N	N	N	N	N	N	N	N	N	N

A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS WITH AMMONIUM PERCHLORATE SLI STUDY NO. 3455.1

Tabulated Animal Data

PROJECT ID: 34551 GROUP: Group 1 SEX: MALE
DAYS: 15-18 FATES: ALL

ANIMAL ID:	11716	11717	11718	11720	11725	11728	11731	11739	11744	11745
Jejunum	N	N	N	N	N	N	N	N	N	N
Ileum	N	N	N	N	N	N	N	N	N	N
Cecum	N	N	N	N	N	N	N	N	N	N
Colon	N	N	N	N	N	N	N	N	N	N
Rectum	N	N	N	N	N	N	N	N	N	N
Mesenteric LN	N	N	N	N	N	N	N	N	N	N
Skin	N	N	N	N	N	N	N	N	N	N
Mammary Gland	N	N	N	N	N	N	N	N	N	N
Muscle	N	N	N	N	N	N	N	N	N	N
Bone/Femur	N	N	N	N	N	N	N	N	N	N
Bone Marrow/Femur	N	N	N	N	N	N	N	N	N	N
Bone/Sternum	N	N	N	N	N	N	N	N	N	N

A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS WITH AMMONIUM PERCHLORATE SLI STUDY NO. 3455.1

Tabulated Animal Data

PROJECT ID: 34551 GROUP: Group 1 SEX: MALE
DAYS: 15-18 FATES: ALL

ANIMAL ID:	11716	11717	11718	11720	11725	11728	11731	11739	11744	11745
Bone Marrow/Sternum	N	N	N	N	N	N	N	N	N	N
Nose	N	N	N	N	N	N	N	N	N	N
Pharynx	N	N	N	N	N	N		N	N	N
Inflammation, chronic	-	-	-	-	-	-	1	-	-	-
Larynx		N			N	N	N	N	N	N
Inflammation, chronic	1	-	1	1	-	-	-	-	-	-
Lt Testis	N	N	N	N	N	N	N	N	N	N
Rt Testis	N	N	N	N	N	N	N	N	N	N
Lt Epididymis	N	N	N	N	N	N	N	N	N	N
Rt Epididymis	N	N	N	N	N	N	N	N	N	N
Seminal Vesicles	N	N	N	N	N	N	N	N	N	N
Prostate	N	N	N	N	N	N	N	N	N	
Inflammation, chronic	-	-	-	-	-	-	-	-	-	1
Urinary Bladder	N	N	N	N	N	N	N	N	N	N

A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS WITH AMMONIUM PERCHLORATE SLI STUDY NO. 3455.1

Tabulated Animal Data

PROJECT ID: 34551 GROUP: Group 1 SEX: MALE
DAYS: 15-18 FATES: ALL

ANIMAL ID:	11716	11717	11718	11720	11725	11728	11731	11739	11744	11745
OTHER TISSUES AND LESIONS:										
Skin - Infl, a/c	-	-	-	-	(3)	(2)	-	-	-	-
Skin - Hyperplasia, sq epith	-	-	-	-	-	(3)	-	-	-	-

A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS WITH AMMONIUM PERCHLORATE SLI STUDY NO. 3455.1

Tabulated Animal Data

PROJECT ID: 34551 GROUP: Group 2 SEX: MALE
DAYS: 15-18 FATES: ALL

ANIMAL ID:	11747	11751	11756	11757	11758	11759	11760	11762	11763	11764
Thyroid	N	N	N		N	N	N	N	N	N
Ectopic Thymus	-	-	-	P	-	-	-	-	-	-
Parathyroid	N	N	N	N	N	N	N	N	N	N
Lungs/Bronchi	N		N	N	N			N		
Inflammation, chronic	-	1	-	-	-	1	1	-	1	1
Liver						N		N		
Extramedullary Hematopoiesis	1	1	1	1	1	-	1	-	1	1
Rt Kidney			N		N		N		N	N
Cellular Infil, lymphocyte	1	-	-	1	-	-	-	-	-	-
Nephropathy	-	-	-	-	-	1	-	1	-	-
Hydronephrosis	-	1	-	-	-	-	-	-	-	-
Lt Kidney		N		N	N	N			N	N
Cellular Infil, lymphocyte	1	-	1	-	-	-	-	-	-	-
Nephropathy	-	-	-	-	-	-	1	1	-	-

A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS WITH AMMONIUM PERCHLORATE SLI STUDY NO. 3455.1

Tabulated Animal Data

PROJECT ID: 34551 GROUP: Group 2 SEX: MALE
DAYS: 15-18 FATES: ALL

ANIMAL ID:	11747	11751	11756	11757	11758	11759	11760	11762	11763	11764
OTHER TISSUES AND LESIONS:										
Testes - Seminif Tubu - Degen	3	-	-	-	-	-	-	-	-	-

A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS WITH AMMONIUM PERCHLORATE SLI STUDY NO. 3455.1

Tabulated Animal Data

PROJECT ID: 34551 GROUP: Group 3 SEX: MALE
DAYS: 15-18 FATES: ALL

ANIMAL ID:	11766	11768	11771	11772	11778	11779	11784	11786	11789	11793
Thyroid	N	N	N	N	N	N	N	N		N
Hyperplasia, follicular cell	-	-	-	-	-	-	-	-	1	-
Parathyroid	N	N	N	N	N	N	N	N	N	N
Lungs/Bronchi			N		N			N		N
Inflammation, chronic	1	1	-	1	-	1	1	-	1	-
Liver					N	N	N		N	
Extramedullary Hematopoiesis	1	1	1	1	-	-	-	1	-	1
Rt Kidney	N	N	N	N	N		N	N		N
Nephropathy	-	-	-	-	-	1	-	-	1	-
Lt Kidney		N	N		N			N		
Cellular Infil, lymphocyte	-	-	-	-	-	-	-	-	-	1
Nephropathy	1	-	-	1	-	1	1	-	-	-
Cyst	-	-	-	-	-	-	-	-	2	-

A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS WITH AMMONIUM PERCHLORATE SLI STUDY NO. 3455.1

Tabulated Animal Data

PROJECT ID: 34551 GROUP: Group 4 SEX: MALE
DAYS: 15-18 FATES: ALL

ANIMAL ID:	11796	11798	11801	11802	11803	11804	11807	11808	11810	11813
Thyroid	N	N	N	N	N	N	N	N	N	
Cellular Infil, lymphocyte	-	-	-	-	-	-	-	-	-	1
Parathyroid	N	N	N	N	N	N	N	N	N	N
Lungs/Bronchi					N		N			
Inflammation, chronic	1	1	1	1	-	1	-	1	1	1
Liver		N								
Cytoplasmic Vacuolization	-	-	1	-	-	-	-	-	-	-
Extramedullary Hematopoiesis	1	-	-	1	1	1	-	1	1	1
Bile Duct - Hyperplasia	-	-	-	-	-	-	3	-	-	-
Rt Kidney	N	N	N	N	N			N	N	
Cellular Infil, lymphocyte	-	-	-	-	-	-	-	-	-	1
Nephropathy	-	-	-	-	-	1	2	-	-	-
Cyst	-	-	-	-	-	-	3	-	-	-
Lt Kidney		N	N	N	N				N	N
Nephropathy	1	-	-	-	-	-	2	1	-	-
Cyst	-	-	-	-	-	1	3	-	-	-

A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS WITH AMMONIUM PERCHLORATE SLI STUDY NO. 3455.1

Tabulated Animal Data

PROJECT ID: 34551 GROUP: Group 4 SEX: MALE
DAYS: 15-18 FATES: ALL

ANIMAL ID:	11796	11798	11801	11802	11803	11804	11807	11808	11810	11813
OTHER TISSUES AND LESIONS:										
Skin - Hyperplasia, sq epith	-	-	-	-	-	-	-	-	-	2
Skin, Dermis - Infl, a/c	-	-	-	-	-	-	-	-	-	2
Urinary Bladder - Normal	-	P	-	-	-	-	-	-	-	-

A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS WITH AMMONIUM PERCHLORATE SLI STUDY NO. 3455.1

Tabulated Animal Data

PROJECT ID: 34551 GROUP: Group 5 SEX: MALE
DAYS: 15-18 FATES: ALL

ANIMAL ID:	11816	11818	11819	11820	11825	11831	11835	11836	11839	11844
Thyroid	N	N	N		N	N	N	N	N	N
Ectopic Thymus	-	-	-	P	-	-	-	-	-	-
Parathyroid	N	N	N	N	N	N	N	N	N	N
Lungs/Bronchi	N				N	N	N		N	N
Inflammation, chronic	-	1	1	-	-	-	-	1	-	-
Hemorrhage	-	-	-	1	-	-	-	-	-	-
Liver		N		N				N		
Extramedullary Hematopoiesis	1	-	1	-	1	1	1	-	1	1
Rt Kidney			N	*		N	N	N	N	N
Nephropathy	1	1	-	-	1	-	-	-	-	-
Lt Kidney		N	N		N	N		N		N
Nephropathy	1	-	-	2	-	-	1	-	1	-

A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS WITH AMMONIUM PERCHLORATE SLI STUDY NO. 3455.1

Tabulated Animal Data

PROJECT ID: 34551 GROUP: Group 5 SEX: MALE
DAYS: 15-18 FATES: ALL

ANIMAL ID:	11816	11818	11819	11820	11825	11831	11835	11836	11839	11844
OTHER TISSUES AND LESIONS:										
Fat - Embryonic	-	-	-	P	-	-	-	-	-	-

A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS WITH AMMONIUM PERCHLORATE SLI STUDY NO. 3455.1

Tabulated Animal Data

PROJECT ID: 34551 GROUP: Group 6 SEX: MALE
DAYS: 15-18 FATES: ALL

ANIMAL ID:	11846	11847	11848	11853	11857	11858	11859	11861	11863	11870
Brain	N	N	N	N	N	N	N	N	N	N
Pituitary Gland	N	N	N	N	N	N	N	N	N	N
Sciatic Nerve	N		N	N	N	N	N	N	N	N
Perineural Tissue - Infl, acu	-	1	-	-	-	-	-	-	-	-
Spinal Cord, Cervical	N	N	N	N	N	N	N	N	N	N
Spinal Cord, Thoracic	N	N	N	N	N	N	N	N	N	N
Spinal Cord, Lumbar	N	N	N	N	N	N	N	N	N	N
Eye A	N	N	N	N	N	N	N	N	N	N
Eye B	N		N	N	N	N	N	N	N	N
Cornea - Inflammation, chronic	-	1	-	-	-	-	-	-	-	-
Lacrimal Gland	N	N	N	N		N	N	N	N	N
Inflammation, chronic	-	-	-	-	1	-	-	-	-	-
Mediastinal LN	N	*	N	N	*	N	N	N	N	N

A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS WITH AMMONIUM PERCHLORATE SLI STUDY NO. 3455.1

Tabulated Animal Data

PROJECT ID: 34551 GROUP: Group 6 SEX: MALE
DAYS: 15-18 FATES: ALL

ANIMAL ID:	11846	11847	11848	11853	11857	11858	11859	11861	11863	11870
Thyroid										
Hyperplasia, follicular cell	3	3	3	3	2	2	3	3	3	1
Ectopic Thymus	-	-	-	-	-	-	-	P	-	-
Parathyroid	N	N	N	N	N	N	N	N	N	N
Trachea	N	N	N	N		N	N	N		N
Inflammation, chronic	-	-	-	-	1	-	-	-	1	-
Esophagus	N	N	N	N	N	N	N	N	N	N
Thymus	N	N	N	N	N	N	N	N	N	N
Tongue	N	N	N	N	N	N	N	N	N	N
Pancreas	N	N	N	N	N	N	N	N	N	N
Islets of Pancreas	N	N	N	N	N	N	N	N	N	N
Salivary Gland	N	N	N	N	N	N	N	N	N	N
Mandibular LN	N	N	N	N	N	N	N	N	N	N

A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS WITH AMMONIUM PERCHLORATE SLI STUDY NO. 3455.1

Tabulated Animal Data

PROJECT ID: 34551 GROUP: Group 6 SEX: MALE
DAYS: 15-18 FATES: ALL

ANIMAL ID:	11846	11847	11848	11853	11857	11858	11859	11861	11863	11870
Lungs/Bronchi		N				N			N	
Inflammation, chronic	1	-	1	1	1	-	1	1	-	1
Heart	N			N		N	N	N	N	
Inflammation, chronic	-	1	1	-	1	-	-	-	-	1
Aorta	N	N	N	N	N	N	N	N	N	N
Liver				N						
Extramedullary Hematopoiesis	1	1	1	-	1	1	1	1	1	-
Congestion	-	-	-	-	-	-	-	-	-	1
Spleen	N	N	N	N	N	N	N	N	N	N
Rt Kidney	N	N	N	N	N		N	N	N	N
Nephropathy	-	-	-	-	-	1	-	-	-	-
Lt Kidney	N		N	N		N				N
Cellular Infil, lymphocyte	-	1	-	-	-	-	1	1	-	-
Nephropathy	-	-	-	-	1	-	-	-	1	-
Adrenal Medulla	N	N	N	N	N	N	N	N	N	N
Adrenal Cortex	N	N	N	N	N	N	N	N	N	N

A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS WITH AMMONIUM PERCHLORATE SLI STUDY NO. 3455.1

Tabulated Animal Data

PROJECT ID: 34551 GROUP: Group 6 SEX: MALE
DAYS: 15-18 FATES: ALL

ANIMAL ID:	11846	11847	11848	11853	11857	11858	11859	11861	11863	11870
Stomach, Forestomach	N	N	N	N	N	N	N	N	N	N
Stomach, Glandular	N	N	N	N	N	N	N	N	N	N
Duodenum	N	N	N	N	N	N	N	N	N	N
Jejunum	N	N	N	N	N	N	N	N	N	N
Ileum	N	N	N	N	N	N	N	N	N	N
Cecum	N	N	N	N	N	N	N	N	N	N
Colon	N	N	N	N	N	N	N	N	N	N
Rectum	N	N	N	N	N	N	N	N	N	N
Mesenteric LN	N	N	N	N	N	N	N	N	N	N
Skin	N	N	N	N	N	N	N	N	N	N
Mammary Gland	N	N	N	N		N	N	N	N	N
Hyperplasia	-	-	-	-	2	-	-	-	-	-

A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS WITH AMMONIUM PERCHLORATE SLI STUDY NO. 3455.1

Tabulated Animal Data

PROJECT ID: 34551 GROUP: Group 6 SEX: MALE
DAYS: 15-18 FATES: ALL

ANIMAL ID:	11846	11847	11848	11853	11857	11858	11859	11861	11863	11870
Muscle	N	N	N	N	N	N	N	N	*	N
Bone/Femur	N	N	N	N	N	N	N	N	N	N
Bone Marrow/Femur	N	N	N	N	N	N	N	N	N	N
Bone/Sternum	N	N	N	N	N	N	N	N	N	N
Bone Marrow/Sternum	N	N	N	N	N	N	N	N	N	N
Nose	N	N	*	N	N	N	N	N	N	N
Pharynx		N	N	N	N	N		N	N	N
Inflammation, chronic	1	-	-	-	-	-	1	-	-	-
Hyperplasia, sq epith	1	-	-	-	-	-	-	-	-	-
Larynx	N	N	N	N	N			N		
Inflammation, chronic	-	-	-	-	-	1	1	-	1	1
Lt Testis	N	N	N	N	N	N	N	N	N	N
Rt Testis	N	N	N	N	N	N	N	N	N	N
Lt Epididymis	N	N	N	N	N	N	N	N	N	N

A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS WITH AMMONIUM PERCHLORATE SLI STUDY NO. 3455.1

Tabulated Animal Data

PROJECT ID: 34551 GROUP: Group 6 SEX: MALE
DAYS: 15-18 FATES: ALL

ANIMAL ID:	11846	11847	11848	11853	11857	11858	11859	11861	11863	11870
Rt Epididymis	N	N	N	N	N	N	N	N	N	N
Seminal Vesicles	N	N	N	N	N	N	N	N	N	N
Prostate	N	N	N	N	N	N	N		N	N
Inflammation, chronic	-	-	-	-	-	-	-	1	-	-
Urinary Bladder	N	N	N	N	N	N	N	N		N
Eosinophilic Coagulum	-	-	-	-	-	-	-	-	P	-

A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS WITH AMMONIUM PERCHLORATE SLI STUDY NO. 3455.1

Tabulated Animal Data

PROJECT ID: 34551 GROUP: Group 1 SEX: FEMALE
DAYS: 15-18 FATES: ALL

ANIMAL ID:	11877	11878	11881	11882	11884	11889	11893	11894	11900	11903
Brain	N	N	N	N	N	N	N	N	N	N
Pituitary Gland	N	N	N	N	N	N	N	N	N	N
Sciatic Nerve	N	N	N	N	N	N	N	N	N	N
Spinal Cord, Cervical	N	N	N	N	N	N	N	N	N	N
Spinal Cord, Thoracic	N	N	N	N	N	N	N	N	N	N
Spinal Cord, Lumbar	N	N	N	N	N	N	N	N	N	N
Eye A	N	N	N	N	N	N	N	N	N	N
Eye B	N	N	N	N	N	N	N	N	N	N
Lacrimal Gland	N	N	N	N	N	N	N	N	N	N
Mediastinal LN	N	N	N	N	N	N	N	N		N
Congestion	-	-	-	-	-	-	-	-	1	-
Thyroid	N	N	N	N	N	N	N	N	N	N

A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS WITH AMMONIUM PERCHLORATE SLI STUDY NO. 3455.1

Tabulated Animal Data

PROJECT ID: 34551 GROUP: Group 1 SEX: FEMALE
DAYS: 15-18 FATES: ALL

ANIMAL ID:	11877	11878	11881	11882	11884	11889	11893	11894	11900	11903
Parathyroid	N	*	N	N	N	N	N	N	N	N
Trachea	N			N	N	N	N	N	N	N
Inflammation, chronic	-	1	1	-	-	-	-	-	-	-
Esophagus	N	N	N	N	N	N	N	N	N	N
Thymus	N	N	N	N	N	N	N	N	N	N
Tongue	N	N	N	N	N	N	N	N	N	N
Pancreas	N	N	N	N	N	N	N	N	N	N
Islets of Pancreas	N	N	N	N	N	N	N	N	N	N
Salivary Gland	N	N	N	N	N	N	N	N	N	N
Mandibular LN	N	N	N	N	N	N	N	N	N	N
Lungs/Bronchi		N			N		N	N		N
Inflammation, chronic	1	-	1	1	-	1	-	-	1	-
Heart	N	N	N	N	N	N	N	N		N
Inflammation, chronic	-	-	-	-	-	-	-	-	1	-

A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS WITH AMMONIUM PERCHLORATE SLI STUDY NO. 3455.1

Tabulated Animal Data

PROJECT ID: 34551 GROUP: Group 1 SEX: FEMALE
DAYS: 15-18 FATES: ALL

ANIMAL ID:	11877	11878	11881	11882	11884	11889	11893	11894	11900	11903
Aorta	N	N	N	N	N	N	N	N	N	N
Liver			N			N				
Extramedullary Hematopoiesis	1	1	-	1	1	-	1	1	1	1
Spleen	N	N	N	N	N	N	N	N	N	N
Rt Kidney	N	N	N	N	N	N	N	N		N
Mineralization	-	-	-	-	-	-	-	-	1	-
Cyst	-	-	-	-	-	-	-	-	1	-
Lt Kidney	N	N	N	N	N			N		
Nephropathy	-	-	-	-	-	-	1	-	-	1
Mineralization	-	-	-	-	-	-	-	-	1	-
Cyst	-	-	-	-	-	1	-	-	-	-
Adrenal Medulla	N	N	N	N	N	N	N	N	N	N
Adrenal Cortex	N	N	N	N	N	N	N	N	N	N
Stomach, Forestomach	N	N	N	N	N	N	N	N	N	N
Stomach, Glandular	N	N	N	N	N	N	N	N	N	N
Duodenum	N	N	N	N	N	N	N	N	N	N

A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS WITH AMMONIUM PERCHLORATE SLI STUDY NO. 3455.1

Tabulated Animal Data

PROJECT ID: 34551 GROUP: Group 1 SEX: FEMALE
DAYS: 15-18 FATES: ALL

ANIMAL ID:	11877	11878	11881	11882	11884	11889	11893	11894	11900	11903
Jejunum	N	N	N	N	N	N	N	N	N	N
Ileum	N	N	N	N	N	N	N	N	N	N
Cecum	N	N	N	N	N	N	N	N	N	N
Colon	N	N	N	N	N	N	N	N	N	N
Rectum	N	N	N	N	N	N	N	N	N	N
Mesenteric LN	N	N	N	N	N	N	N	N	N	N
Skin	N	N	N	N	N	N	N	N	N	N
Mammary Gland	N	N	N	N	N	N	N	N	N	N
Muscle	N	N	N	N	N	N	N	N	N	N
Bone/Femur	N	N	N	N	N	N	N	N	N	N
Bone Marrow/Femur	N	N	N	N	N	N	N	N	N	N
Bone/Sternum	N	N	N	N	N	N	N	N	N	N

A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS WITH AMMONIUM PERCHLORATE SLI STUDY NO. 3455.1

Tabulated Animal Data

PROJECT ID: 34551 GROUP: Group 1 SEX: FEMALE
DAYS: 15-18 FATES: ALL

ANIMAL ID:	11877	11878	11881	11882	11884	11889	11893	11894	11900	11903
Bone Marrow/Sternum	N	N	N	N	N	N	N	N	N	N
Nose	N	N	N	N	N	N	N	N	N	N
Pharynx	N	N	N	N	N	N		N	N	N
Inflammation, chronic	-	-	-	-	-	-	1	-	-	-
Larynx	N	N	N	N	N	N	N	N		
Inflammation, chronic	-	-	-	-	-	-	-	-	1	1
Lt Ovary	N	N	N	N	N	N	N	N	N	N
Rt Ovary	N	N	N	N	N	N	N	N	N	N
Uterus	N	N	N	N	N	N	N	N	N	N
Cervix	N	N	N	N	N	N	N	N	N	N
Vagina	N	N	N	N	N	N	N	N	N	N
Urinary Bladder	N	N	N	N	N	N	N	N	N	N

A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS WITH AMMONIUM PERCHLORATE SLI STUDY NO. 3455.1

Tabulated Animal Data

PROJECT ID: 34551 GROUP: Group 2 SEX: FEMALE
DAYS: 15-18 FATES: ALL

ANIMAL ID:	11906	11908	11909	11911	11912	11913	11917	11921	11923	11925
Thyroid	N	N	N		N	N	N	N	N	N
Cellular Infil, lymphocyte	-	-	-	1	-	-	-	-	-	-
Parathyroid	*	N	N	N	N	N	N	N	N	N
Lungs/Bronchi	N		N	N	N		N	N		N
Inflammation, chronic	-	1	-	-	-	1	-	-	1	-
Liver	N		N		N			N		
Extramedullary Hematopoiesis	-	1	-	1	-	1	1	-	1	-
Inflammation, acute	-	-	-	-	-	-	-	-	-	1
Rt Kidney	N	N	N	N	N	N	N	N	N	N
Lt Kidney	N	N	N	N	N		N			N
Nephropathy	-	-	-	-	-	-	-	1	1	-
Mineralization	-	-	-	-	-	1	-	-	-	-

A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS WITH AMMONIUM PERCHLORATE SLI STUDY NO. 3455.1

Tabulated Animal Data

PROJECT ID: 34551 GROUP: Group 3 SEX: FEMALE
DAYS: 15-18 FATES: ALL

ANIMAL ID:	11930	11931	11934	11941	11942	11945	11946	11951	11952	11953
Thyroid	N	N	N	N	N		N	N	N	N
Ectopic Thymus	-	-	-	-	-	P	-	-	-	-
Parathyroid	N	N	N	N	N	N	N	N	N	N
Lungs/Bronchi					N		N			N
Inflammation, chronic	1	1	1	1	-	1	-	1	1	-
Liver			N							N
Extramedullary Hematopoiesis	1	1	-	1	1	1	1	1	1	-
Rt Kidney	N	N	N	N	N	N	N	N		
Nephropathy	-	-	-	-	-	-	-	-	1	1
Lt Kidney		N	N	N	N	N		N	N	N
Nephropathy	-	-	-	-	-	-	1	-	-	-
Cyst	1	-	-	-	-	-	-	-	-	-

A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS WITH AMMONIUM PERCHLORATE SLI STUDY NO. 3455.1

Tabulated Animal Data

PROJECT ID: 34551 GROUP: Group 4 SEX: FEMALE
DAYS: 15-18 FATES: ALL

ANIMAL ID:	11959	11960	11962	11963	11964	11967	11968	11970	11971	11974
Thyroid	N	N	N	N	N	N	N	N	N	N
Parathyroid	N	N	N	N	N	N	N	N	N	N
Lungs/Bronchi	N	N	N	N	N	N	N		N	
Inflammation, chronic	-	-	-	-	-	-	-	1	-	1
Liver		N		N	N	N	N	N		N
Extramedullary Hematopoiesis	1	-	1	-	-	-	-	-	1	-
Rt Kidney	N	N	N	N	N	N	N	N		N
Mineralization	-	-	-	-	-	-	-	-	1	-
Lt Kidney	N	N	N	N			N			N
Cellular Infil, lymphocyte	-	-	-	-	-	1	-	-	-	-
Nephropathy	-	-	-	-	1	-	-	1	-	-
Mineralization	-	-	-	-	-	-	-	-	1	-

A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS WITH AMMONIUM PERCHLORATE SLI STUDY NO. 3455.1

Tabulated Animal Data

PROJECT ID: 34551 GROUP: Group 5 SEX: FEMALE
DAYS: 15-18 FATES: ALL

ANIMAL ID:	11977	11982	11984	11989	11991	11992	11994	12001	12003	12005
Thyroid	N	N	N	N	N	N	N	N	N	N
Parathyroid	N	N	N	N	N	N	N	N	N	N
Lungs/Bronchi	N			N	N	N		N		N
Inflammation, chronic	-	1	1	-	-	-	1	-	1	-
Liver								N		
Extramedullary Hematopoiesis	1	1	1	1	1	1	1	-	1	1
Rt Kidney	N	N	N	N	N	N	N	N	N	
Mineralization	-	-	-	-	-	-	-	-	-	1
Lt Kidney	N	N		N	N	N	N	N		
Cellular Infil, lymphocyte	-	-	-	-	-	-	-	-	1	-
Mineralization	-	-	-	-	-	-	-	-	-	1
Cyst	-	-	1	-	-	-	-	-	-	-

A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS WITH AMMONIUM PERCHLORATE SLI STUDY NO. 3455.1

Tabulated Animal Data

PROJECT ID: 34551 GROUP: Group 5 SEX: FEMALE
DAYS: 15-18 FATES: ALL

ANIMAL ID:	11977	11982	11984	11989	11991	11992	11994	12001	12003	12005
OTHER TISSUES AND LESIONS:										
Uterus - Dilatation	-	-	-	-	-	-	-	-	2	-

A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS WITH AMMONIUM PERCHLORATE SLI STUDY NO. 3455.1

Tabulated Animal Data

PROJECT ID: 34551 GROUP: Group 6 SEX: FEMALE
DAYS: 15-18 FATES: ALL

ANIMAL ID:	12010	12013	12016	12021	12023	12026	12028	12030	12031	12032
Brain	N	N	N	N	N	N	N	N	N	N
Pituitary Gland	N	N	N	N	N	N	N	N	N	N
Sciatic Nerve	N	N	N	N	N	N	N	N	N	N
Spinal Cord, Cervical	N	N	N	N	N	N	N	N	N	N
Spinal Cord, Thoracic	N	N	N	N	N	N	N	N	N	N
Spinal Cord, Lumbar	N	N	N	N	N	N	N	N	N	N
Eye A	N	N	N	N	N	N	N	N	N	N
Eye B	N	N	N	N	N	N	N	N	N	N
Lacrimal Gland	N	N	N	N	N	N	N	N	N	N
Mediastinal LN	N	N	N	N	N	N	N	N	N	N
Thyroid					N	N		N		
Hyperplasia, follicular cell	2	1	1	1	-	-	2	-	1	2

A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS WITH AMMONIUM PERCHLORATE SLI STUDY NO. 3455.1

Tabulated Animal Data

PROJECT ID: 34551 GROUP: Group 6 SEX: FEMALE
DAYS: 15-18 FATES: ALL

ANIMAL ID:	12010	12013	12016	12021	12023	12026	12028	12030	12031	12032
Parathyroid	N	N	N	N	N	N	N	N	N	N
Trachea	N	N	N	N	N	N	N	N	N	N
Esophagus	N	N	N	N	N	N	N	N	N	N
Thymus	N	N	N	N	N	N	N	N	N	N
Tongue	N	N	N	N	N	N	N	N	N	N
Pancreas	N	N	N	N	N	N	N	N	N	N
Islets of Pancreas	N	N	N	N	N	N	N	N	N	N
Salivary Gland	N	N	N	N	N	N	N	N	N	N
Mandibular LN	N	N	N	N	N	N	N	N	N	N
Lungs/Bronchi	N	N	N		N	N		N	N	N
Inflammation, chronic	-	-	-	1	-	-	1	-	-	-
Heart			N	N	N		N	N		N
Inflammation, chronic	1	1	-	-	-	1	-	-	1	-

A 90-DAY DRINKING WATER TOXICITY STUDY
IN RATS WITH AMMONIUM PERCHLORATE
SLI STUDY NO. 3455.1

Tabulated Animal Data

PROJECT ID: 34551 GROUP: Group 6 SEX: FEMALE
DAYS: 15-18 FATES: ALL

ANIMAL ID:	12010	12013	12016	12021	12023	12026	12028	12030	12031	12032
Aorta	N	N	N	N	N	N	N	N	N	N
Liver					N			N		N
Extramedullary Hematopoiesis	1	1	1	1	-	1	1	-	1	-
Spleen	N	N	N	N	N	N	N	N	N	N
Rt Kidney	N	N	N	N		N	N	N	N	N
Nephropathy	-	-	-	-	1	-	-	-	-	-
Lt Kidney	N	N		N	N	N	N		N	
Nephropathy	-	-	-	-	-	-	-	1	-	-
Mineralization	-	-	1	-	-	-	-	-	-	1
Adrenal Medulla	N	N	N	N	N	N	N	N	N	N
Adrenal Cortex	N	N	N	N	N	N	N	N	N	
Hypertrophy	-	-	-	-	-	-	-	-	-	(1)
Stomach, Forestomach	N	N	N	N	N	N	N	N	N	N
Stomach, Glandular	N	N	N	N	N	N	N	N	N	N
Duodenum	N	N	N	N	N	N	N	N	N	N

A 90-DAY DRINKING WATER TOXICITY STUDY
IN RATS WITH AMMONIUM PERCHLORATE
SLI STUDY NO. 3455.1

Tabulated Animal Data

PROJECT ID: 34551 GROUP: Group 6 SEX: FEMALE
DAYS: 15-18 FATES: ALL

ANIMAL ID:	12010	12013	12016	12021	12023	12026	12028	12030	12031	12032
Jejunum	N	N	N	N	N	N	N	N	N	N
Ileum	N	N	N	N	N	N	N	N	N	N
Cecum	N	N	N	N	N	N	N	N	N	N
Colon	N	N	N	N	N	N	N	N	N	N
Rectum	N	N	N	N	N	N	N	N	N	*
Mesenteric LN	N	N	N	N	N	N	N	N	N	N
Skin	N	N	N	N	N	N	N	N	N	N
Mammary Gland	N	N	N	N	N	N	N	N	N	N
Muscle	N	*	N	N	N	N	N	N	N	N
Bone/Femur	N	N	N	N	N	N	N	N	N	N
Bone Marrow/Femur	N	N	N	N	N	N	N	N	N	N
Bone/Sternum	N	N	N	N	N	N	N	N	N	N

A 90-DAY DRINKING WATER TOXICITY STUDY
IN RATS WITH AMMONIUM PERCHLORATE
SLI STUDY NO. 3455.1

Tabulated Animal Data

PROJECT ID: 34551 GROUP: Group 6 SEX: FEMALE
DAYS: 15-18 FATES: ALL

ANIMAL ID:	12010	12013	12016	12021	12023	12026	12028	12030	12031	12032
Bone Marrow/Sternum	N	N	N	N	N	N	N	N	N	N
Nose	N	N	N	N	N	N	N	N	N	N
Pharynx	N	N	N	N	N	N	N	N	N	N
Larynx	N	N		N	N	N			N	N
Inflammation, acute	-	-	1	-	-	-	-	-	-	-
Inflammation, chronic	-	-	-	-	-	-	1	-	-	-
Inflammation, acute/chronic	-	-	-	-	-	-	-	1	-	-
Lt Ovary		N	N	N	N	N	N	N	N	N
Cyst	2	-	-	-	-	-	-	-	-	-
Rt Ovary	N	N	N	N	N	N	N	N	N	N
Uterus	N	N	N	N	N	N	N	N	N	N
Cervix	N	N	N	N	N	N	N	N	N	N
Vagina	N	N	N	N	N	N	N	N	N	N
Urinary Bladder	N	N	N	N	N	N	N	N	N	*

APPENDIX E

Code Table
Tabulated Animal Data

90-Day Male - Groups 1 through 6
90-Day Female - Groups 1 through 6

A 90-DAY DRINKING WATER TOXICITY STUDY
IN RATS WITH AMMONIUM PERCHLORATE
SLI STUDY NO. 3455.1

Reports Code Table

N	Tissues within normal histological limits
A	Autolysis precluding adequate evaluation
U	Tissues unsuitable for complete evaluation
S	Tissues not applicable to animal
*	Tissues unavailable for evaluation

1	minimal
2	mild
3	moderate
4	marked
()	focal
[]	locally extensive
<>	multifocal
P	Present
B	Neoplasm, Benign
M	Neoplasm, Malignant without Metastasis
C	Neoplasm, Malignant with Metastasis
X	Metastatic Site (+)
-	No data entered

A 90-DAY DRINKING WATER TOXICITY STUDY
IN RATS WITH AMMONIUM PERCHLORATE
SLI STUDY NO. 3455.1

Tabulated Animal Data

PROJECT ID: 34551 GROUP: Group 1 SEX: MALE
DAYS: 92-95 FATES: ALL

ANIMAL ID:	11721	11724	11729	11732	11734	11735	11736	11738	11741	11742
Brain	N	N	N	N	N	N	N	N	N	N
Pituitary Gland	N	N	N	N	N	N	N	N	N	N
Sciatic Nerve	N	N	N	N	N	N	N	N	N	N
Spinal Cord, Cervical	N	N	N	N	N	N	N	N	N	N
Spinal Cord, Thoracic	N	N	N	N	N	N	N	N	N	N
Spinal Cord, Lumbar	N	N	N	N	N	N	N	N	N	N
Eye A	N	N	N	N	N	N	N	N	N	N
Eye B	N	N	N	N	N	N	N	N	N	N
Lacrimal Gland	N	N	N	N			N	N		N
Inflammation, chronic	-	-	-	-	1	1	-	-	1	-
Mediastinal LN	N	N	N	N	N		N	N		N
Congestion	-	-	-	-	-	1	-	-	1	-
Thyroid	N	N	N	N	N	N			N	N
Hyperplasia, follicular cell	-	-	-	-	-	-	1	1	-	-

A 90-DAY DRINKING WATER TOXICITY STUDY
IN RATS WITH AMMONIUM PERCHLORATE
SLI STUDY NO. 3455.1

Tabulated Animal Data

PROJECT ID: 34551 GROUP: Group 1 SEX: MALE
DAYS: 92-95 FATES: ALL

ANIMAL ID:	11721	11724	11729	11732	11734	11735	11736	11738	11741	11742
Parathyroid	N	N	N	N	N	N	N	N	N	N
Trachea		N	N	N	N	N	N		N	
Inflammation, chronic	1	-	-	-	-	-	-	1	-	1
Esophagus	N	N	N	N	N	N	N	N	N	N
Thymus	N	N	N	N	N		N	N	N	N
Congestion	-	-	-	-	-	1	-	-	-	-
Tongue	N	N	N	N	N	N	N	N	N	N
Pancreas			N	N	N	N		N		N
Inflammation, chronic	1	2	-	-	-	-	1	-	1	-
Islets of Pancreas	N	N	N	N	N	N	N	N	N	N
Salivary Gland	N	N	N	N	N	N	N	N	N	N
Mandibular LN	N	N	N	N	N	N	N	N	N	N
Lungs/Bronchi	N	N	N		N	N	N	N		N
Inflammation, chronic	-	-	-	1	-	-	-	-	1	-

A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS WITH AMMONIUM PERCHLORATE SLI STUDY NO. 3455.1

Tabulated Animal Data

PROJECT ID: 34551 GROUP: Group 1 SEX: MALE
DAYS: 92-95 FATES: ALL

ANIMAL ID:	11721	11724	11729	11732	11734	11735	11736	11738	11741	11742
Heart	N	N	N	N	N	N		N	N	
Inflammation, chronic	-	-	-	-	-	-	1	-	-	1
Aorta	N	N	N	N	N	N	N	N	N	N
Liver		N								N
Extramedullary Hematopoiesis	1	-	1	1	1	1	1	1	1	-
Spleen	N	N	N	N	N	N	N	N	N	N
Rt Kidney	N	N	N			N	N		N	N
Nephropathy	-	-	-	1	1	-	-	-	-	-
Mineralization	-	-	-	-	-	-	-	1	-	-
Lt Kidney	N	N	N				N	N	N	N
Nephropathy	-	-	-	1	1	1	-	-	-	-
Adrenal Medulla	N	N	N	N	N	N	N	N	N	N
Adrenal Cortex	N		N	N	N	N	N	N	N	N
Cytoplasmic Vacuolization	-	2	-	-	-	-	-	-	-	-
Stomach, Forestomach	N	N	N	N	N	N	N	N	N	N
Stomach, Glandular	N	N	N	N	N	N	N	N	N	N

A 90-DAY DRINKING WATER TOXICITY STUDY
IN RATS WITH AMMONIUM PERCHLORATE
SLI STUDY NO. 3455.1

Tabulated Animal Data

PROJECT ID: 34551 GROUP: Group 1 SEX: MALE
DAYS: 92-95 FATES: ALL

ANIMAL ID:	11721	11724	11729	11732	11734	11735	11736	11738	11741	11742
Duodenum	N	N	N	N	N	N	N	N	N	N
Jejunum	N	N	N	N	N	N	N	N	N	N
Ileum	N	N	N	N	N	N	N	N	N	N
Cecum	N	N	N	N	N	N	N	N	N	N
Colon	N	N	N	N	N	N	N	N	N	N
Rectum	N	N	N	N	N	N	N	N	N	N
Mesenteric LN	N	N	N	N	N	N	N	N	N	N
Skin	N	N	N	N	N	N	*	N	N	N
Mammary Gland	N	N	N		N		*	N	N	N
Hyperplasia	-	-	-	1	-	1	-	-	-	-
Muscle	N	N	N	N	N	N	N	N	N	N
Bone/Femur	N	N	N	N	N	N	N	N	N	N

A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS WITH AMMONIUM PERCHLORATE SLI STUDY NO. 3455.1

Tabulated Animal Data

PROJECT ID: 34551 GROUP: Group 1 SEX: MALE
DAYS: 92-95 FATES: ALL

ANIMAL ID:	11721	11724	11729	11732	11734	11735	11736	11738	11741	11742
Bone Marrow/Femur	N	N	N	N	N	N	N	N	N	N
Bone/Sternum	N	N	N	N	N	*	N	N	N	N
Bone Marrow/Sternum	N	N	N	N	N	*	N	N	N	N
Nose	N	N	N	N	N	N	N	N	N	N
Pharynx				N	N	N		N	N	
Inflammation, chronic	1	1	1	-	-	-	1	-	-	1
Larynx	N		N	N		N				
Inflammation, chronic	-	1	-	-	1	-	1	1	1	1
Lt Testis	N	N	N	N	N	N	N	N	N	N
Rt Testis	N	N	N	N	N	N	N	N	N	N
Lt Epididymis	N	N	N	N	N	N	N	N	N	N
Rt Epididymis	N	N	N	N	N	N	N	N	N	N
Seminal Vesicles	N	N	N	N	N	N	N	N	N	N

A 90-DAY DRINKING WATER TOXICITY STUDY
IN RATS WITH AMMONIUM PERCHLORATE
SLI STUDY NO. 3455.1

Tabulated Animal Data

PROJECT ID: 34551 GROUP: Group 1 SEX: MALE
DAYS: 92-95 FATES: ALL

ANIMAL ID:	11721	11724	11729	11732	11734	11735	11736	11738	11741	11742
Prostate	N		N		N		N			
Inflammation, chronic	-	1	-	1	-	2	-	1	1	1
Urinary Bladder	N	N	N	N	N	N	N	N	N	N

A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS WITH AMMONIUM PERCHLORATE SLI STUDY NO. 3455.1

Tabulated Animal Data

PROJECT ID: 34551 GROUP: Group 2 SEX: MALE
DAYS: 92-95 FATES: ALL

ANIMAL ID:	11746	11748	11749	11750	11752	11753	11754	11755	11761	11765
Thyroid	N	N	N	N	N	N	N	N	N	N
Parathyroid	N	N	N	N	N	N	N	N	N	N
Lungs/Bronchi	N		N		N		N		N	N
Inflammation, chronic	-	1	-	1	-	1	-	1	-	-
Liver			N		N		N			N
Extramedullary Hematopoiesis	1	1	-	1	-	1	-	1	-	-
Congestion	-	-	-	-	-	-	-	-	1	-
Angiectasis	-	-	2	-	-	-	-	-	-	-
Rt Kidney	N		N	N	N		N	N		N
Cellular Infil, lymphocyte	-	-	-	-	-	-	-	-	1	-
Nephropathy	-	1	-	-	-	1	-	-	-	-
Lt Kidney	N	N	N	N	N		N	N	N	N
Nephropathy	-	-	-	-	-	1	-	-	-	-

A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS WITH AMMONIUM PERCHLORATE SLI STUDY NO. 3455.1

Tabulated Animal Data

PROJECT ID: 34551 GROUP: Group 3 SEX: MALE
DAYS: 92-95 FATES: ALL

ANIMAL ID:	11769	11774	11776	11777	11780	11787	11790	11791	11792	11794
Thyroid	N	N	N		N	N	N	N	N	N
Ectopic Thymus	-	-	-	P	-	-	-	-	-	-
Parathyroid	N	N	N	N	N	N	N	N	N	N
Lungs/Bronchi			N		N			N		N
Inflammation, chronic	1	1	-	1	-	1	1	-	1	-
Liver								N	N	
Extramedullary Hematopoiesis	1	1	1	1	1	1	1	-	-	1
Fibrous Adhesion	-	1	-	-	-	-	-	-	-	-
Rt Kidney			N	N	N	N	N	N	N	
Nephropathy	1	-	-	-	-	-	-	-	-	1
Hydronephrosis	-	1	-	-	-	-	-	-	-	-
Lt Kidney	N		N	N			N	N	N	
Cellular Infil, lymphocyte	-	-	-	-	-	-	-	-	-	1
Nephropathy	-	1	-	-	1	1	-	-	-	-

A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS WITH AMMONIUM PERCHLORATE SLI STUDY NO. 3455.1

Tabulated Animal Data

PROJECT ID: 34551 GROUP: Group 3 SEX: MALE
DAYS: 92-95 FATES: ALL

ANIMAL ID:	11769	11774	11776	11777	11780	11787	11790	11791	11792	11794
OTHER TISSUES AND LESIONS:										
Skin, Pinna - Infl, a/c	-	-	-	-	-	-	-	-	-	3

A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS WITH AMMONIUM PERCHLORATE SLI STUDY NO. 3455.1

Tabulated Animal Data

PROJECT ID: 34551 GROUP: Group 4 SEX: MALE
DAYS: 92-95 FATES: ALL

ANIMAL ID:	11797	11799	11800	11805	11806	11809	11811	11812	11814	11815
Thyroid	N	N	N	N	N	N	N	N	N	N
Parathyroid	N	N	N	N	N	N	N	N	N	N
Lungs/Bronchi			N	N		N		N		N
Inflammation, chronic	1	1	-	-	1	-	1	-	1	-
Liver			N		N	N	N			
Extramedullary Hematopoiesis	1	1	-	1	-	-	-	1	1	1
Congestion	-	-	-	-	-	-	-	1	-	-
Rt Kidney	N		N	N		N	N	N		N
Nephropathy	-	1	-	-	1	-	-	-	1	-
Lt Kidney						N	N	N	N	N
Cellular Infil, lymphocyte	1	-	1	-	-	-	-	-	-	-
Nephropathy	-	1	-	1	1	-	-	-	-	-

A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS WITH AMMONIUM PERCHLORATE SLI STUDY NO. 3455.1

Tabulated Animal Data

PROJECT ID: 34551 GROUP: Group 4 SEX: MALE
DAYS: 92-95 FATES: ALL

ANIMAL ID:	11797	11799	11800	11805	11806	11809	11811	11812	11814	11815
OTHER TISSUES AND LESIONS:										
Skin - Normal	-	-	-	-	-	-	P	-	-	-
Muscle - Disrupted Continuity	-	-	-	-	-	-	P	-	-	-

A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS WITH AMMONIUM PERCHLORATE SLI STUDY NO. 3455.1

Tabulated Animal Data

PROJECT ID: 34551 GROUP: Group 5 SEX: MALE
DAYS: 92-95 FATES: ALL

ANIMAL ID:	11817	11822	11824	11827	11830	11832	11840	11841	11842	11845
Thyroid	N	N	N	N	N		N	N	N	N
Hyperplasia, follicular cell	-	-	-	-	-	1	-	-	-	-
Parathyroid	N	N	N	N	N	N	N	N	N	N
Lungs/Bronchi			N		N	N	N	N	N	
Inflammation, chronic	1	1	-	1	-	-	-	-	-	1
Liver		N	N	N	N	N	N			
Extramedullary Hematopoiesis	1	-	-	-	-	-	-	-	1	1
Centrilo - Cytopl Vacu	-	-	-	-	-	-	-	1	-	-
Rt Kidney			N	N		N	N		N	N
Cellular Infil, lymphocyte	-	-	-	-	-	-	-	1	-	-
Nephropathy	1	1	-	-	-	-	-	-	-	-
Hydronephrosis	-	-	-	-	1	-	-	-	-	-
Lt Kidney	N		N		N	N	N	N	N	
Nephropathy	-	1	-	1	-	-	-	-	-	1

A 90-DAY DRINKING WATER TOXICITY STUDY
IN RATS WITH AMMONIUM PERCHLORATE
SLI STUDY NO. 3455.1

Tabulated Animal Data

PROJECT ID: 34551 GROUP: Group 5 SEX: MALE
DAYS: 92-95 FATES: ALL

ANIMAL ID:	11817	11822	11824	11827	11830	11832	11840	11841	11842	11845
OTHER TISSUES AND LESIONS:										
Skin - Normal	-	-	-	-	-	-	-	-	P	-
Muscle - Disrupted Continuity	-	-	-	-	-	-	-	-	P	-

A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS WITH AMMONIUM PERCHLORATE SLI STUDY NO. 3455.1

Tabulated Animal Data

PROJECT ID: 34551 GROUP: Group 6 SEX: MALE
DAYS: 92-95 FATES: ALL

ANIMAL ID:	11851	11852	11854	11860	11862	11866	11867	11871	11872	11873
Brain	N	N	N	N	N	N	N	N	N	N
Pituitary Gland	N	N	N	N	N	N	N	N	N	N
Sciatic Nerve	N	N	N	N	N	N	N	N	N	N
Spinal Cord, Cervical	N	N	N	N	N	N	N	N	N	N
Spinal Cord, Thoracic	N	N	N	N	N	N	N	N	N	N
Spinal Cord, Lumbar	N	N	N	N	N	N	N	N	N	N
Eye A	N	N	N	N	N	N	N	N	N	N
Eye B	N	N		N	N	N	N	N	N	N
Cornea - Inflammation, chronic	-	-	1	-	-	-	-	-	-	-
Lacrimal Gland	N	N			N	N		N	N	N
Inflammation, chronic	-	-	1	1	-	-	1	-	-	-
Mediastinal LN		N	N	N	N	N	N	N	N	N
Inflammation, chronic	1	-	-	-	-	-	-	-	-	-

A 90-DAY DRINKING WATER TOXICITY STUDY
IN RATS WITH AMMONIUM PERCHLORATE
SLI STUDY NO. 3455.1

Tabulated Animal Data

PROJECT ID: 34551 GROUP: Group 6 SEX: MALE
DAYS: 92-95 FATES: ALL

ANIMAL ID:	11851	11852	11854	11860	11862	11866	11867	11871	11872	11873
Thyroid			N		N					
Hyperplasia, follicular cell	2	2	-	2	-	2	2	2	2	1
Congestion	1	-	-	1	-	-	-	-	1	-
Parathyroid	N	N	N	N	N	N	N	N	N	N
Trachea	N	N	N	N	N	N	N	N		N
Inflammation, chronic	-	-	-	-	-	-	-	-	1	-
Esophagus	N	N	N	N	N	N	N	N	N	N
Thymus	N	N	N	N	N	N	N	N	N	N
Tongue	N	N	N	N	N	N	N	N	N	N
Pancreas				N	N		N			N
Inflammation, chronic	1	2	1	-	-	1	-	1	1	-
Islets of Pancreas		N	N	N	N	N	N	N	N	N
Inflammation, chronic	2	-	-	-	-	-	-	-	-	-
Salivary Gland	N	N	N	N	N	N	N	*	N	N
Mandibular LN	N	N	N	N	N	N	N	*	N	N

A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS WITH AMMONIUM PERCHLORATE SLI STUDY NO. 3455.1

Tabulated Animal Data

PROJECT ID: 34551 GROUP: Group 6 SEX: MALE
DAYS: 92-95 FATES: ALL

ANIMAL ID:	11851	11852	11854	11860	11862	11866	11867	11871	11872	11873
Lungs/Bronchi		N	N	N				N		
Inflammation, chronic	1	-	-	-	1	1	1	-	1	1
Heart	N	N	N		N				N	
Inflammation, chronic	-	-	-	2	-	1	1	1	-	1
Aorta	N	N	N	N	N	N	N	N	N	N
Liver				N					N	
Extramedullary Hematopoiesis	1	-	1	-	1	1	1	1	-	1
Bile Duct - Hyperplasia	-	3	-	-	-	-	-	-	-	-
Spleen	N	N	N	N	N	N	N	N	N	N
Rt Kidney	N		N			N	N	N	N	N
Cellular Infil, lymphocyte	-	-	-	-	1	-	-	-	-	-
Nephropathy	-	-	-	1	-	-	-	-	-	-
Cyst	-	3	-	-	-	-	-	-	-	-
Lt Kidney					N		N	N	N	
Nephropathy	1	-	1	1	-	1	-	-	-	1
Cyst	-	3	-	-	-	-	-	-	-	-
Adrenal Medulla	N	N	N	N	N	N	N	N	N	N
Adrenal Cortex	N	N	N	N	N	N	N	N	N	N

A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS WITH AMMONIUM PERCHLORATE SLI STUDY NO. 3455.1

Tabulated Animal Data

PROJECT ID: 34551 GROUP: Group 6 SEX: MALE
DAYS: 92-95 FATES: ALL

ANIMAL ID:	11851	11852	11854	11860	11862	11866	11867	11871	11872	11873
Stomach, Forestomach	N	N	N	N	N	N	N	N	N	N
Stomach, Glandular	N	N	N	N	N	N	N	N	N	N
Duodenum	N	N	N	N	N	N	N	N	N	N
Jejunum	N	N	N	N	N	N	N	N	N	N
Ileum	N	N	N	N	N	N	N	N	N	N
Cecum	N	N	N	N	N	N	N	N	N	N
Colon	N	N	N	N	N	N	N	N	N	N
Rectum	N	N	N	N	N	N	N	N	N	N
Mesenteric LN	N	N	N	N	N	N	N	N	N	N
Skin	N	N	N	N	N	*	N	N	N	N
Mammary Gland	N	N	N	N	N	*	N	N	N	N

A 90-DAY DRINKING WATER TOXICITY STUDY
IN RATS WITH AMMONIUM PERCHLORATE
SLI STUDY NO. 3455.1

Tabulated Animal Data

PROJECT ID: 34551 GROUP: Group 6 SEX: MALE
DAYS: 92-95 FATES: ALL

ANIMAL ID:	11851	11852	11854	11860	11862	11866	11867	11871	11872	11873
Muscle	N	N		N	N	N	N	N	N	N
Inflammation, chronic	-	-	1	-	-	-	-	-	-	-
Bone/Femur	N	N	N	N	N	N	N	N	N	N
Bone Marrow/Femur	N	N	N	N	N	N	N	N	N	N
Bone/Sternum	N	N	N	N	N	N	N	*	N	N
Bone Marrow/Sternum	N	N	N	N	N	N	N	*	N	N
Nose	N	N	N	N	N	N	N	N	N	N
Pharynx	N	N	N		N	N	N	N		
Inflammation, chronic	-	-	-	2	-	-	-	-	1	1
Larynx		N					N	N		N
Inflammation, chronic	2	-	1	1	1	1	-	-	1	-
Lt Testis	N		N	N	N	N	N	N	N	N
Seminif Tubule, Degeneration	-	1	-	-	-	-	-	-	-	-
Rt Testis	N		N	N	N	N	N	N	N	N
Seminif Tubule, Degeneration	-	1	-	-	-	-	-	-	-	-

A 90-DAY DRINKING WATER TOXICITY STUDY
IN RATS WITH AMMONIUM PERCHLORATE
SLI STUDY NO. 3455.1

Tabulated Animal Data

PROJECT ID: 34551 GROUP: Group 6 SEX: MALE
DAYS: 92-95 FATES: ALL

ANIMAL ID:	11851	11852	11854	11860	11862	11866	11867	11871	11872	11873
Lt Epididymis	N	N	N	N	N	N	N	N	N	N
Rt Epididymis	N	N	N	N	N	N	N	N	N	N
Seminal Vesicles	N	N	N	N	N	N	N	N	N	N
Prostate	N	N		N	N	N		N		
Inflammation, chronic	-	-	1	-	-	-	1	-	1	1
Urinary Bladder	N	N	N	N	N	N	N	N	N	N

A 90-DAY DRINKING WATER TOXICITY STUDY
IN RATS WITH AMMONIUM PERCHLORATE
SLI STUDY NO. 3455.1

Tabulated Animal Data

PROJECT ID: 34551 GROUP: Group 1 SEX: FEMALE
DAYS: 92-95 FATES: ALL

ANIMAL ID:	11876	11886	11890	11891	11892	11895	11896	11901	11902	11904
Brain	N	N	N	N	N	N	N	N	N	N
Pituitary Gland	N	N	N	N	N	N	N	N	N	N
Sciatic Nerve	N		N	N	N	N	N	N	N	N
Perineural Tissue - Infl, ch	-	1	-	-	-	-	-	-	-	-
Spinal Cord, Cervical	N	N	N	N	N	N	N	N	N	N
Spinal Cord, Thoracic	N	N	N	N	N	N	N	N	N	N
Spinal Cord, Lumbar	N	N	N	N	N	N	N	N	N	N
Eye A	N	N	N	N	N	N	N	N	N	N
Eye B	N	N	N	N	N	N	N	N	N	N
Lacrimal Gland	N	N	N	N	N		N	N	N	N
Inflammation, chronic	-	-	-	-	-	1	-	-	-	-
Mediastinal LN	N	N	N	N	N	N	N	N	N	N
Thyroid	N	N	N	N	N	N	N	N	N	N

A 90-DAY DRINKING WATER TOXICITY STUDY
IN RATS WITH AMMONIUM PERCHLORATE
SLI STUDY NO. 3455.1

Tabulated Animal Data

PROJECT ID: 34551 GROUP: Group 1 SEX: FEMALE
DAYS: 92-95 FATES: ALL

ANIMAL ID:	11876	11886	11890	11891	11892	11895	11896	11901	11902	11904
Parathyroid	N	N	N	N	N	N	N	N	N	N
Trachea	N	N	N	N	N	N	N	N	N	N
Esophagus	N	N	N	N	N	N	N	N	N	N
Thymus	N	N	N	N	N	N	N	N	N	N
Tongue	N	N	N	N	N	N	N	N	N	N
Pancreas	N	N	N	N	N	N	N	N	N	N
Islets of Pancreas	N	N	N	N	N	N	N	N	N	N
Salivary Gland	N	N	N		N	N	*	N	N	N
Inflammation, chronic	-	-	-	1	-	-	-	-	-	-
Mandibular LN	N	N	N	N	N	N	*	N	N	N
Lungs/Bronchi	N		N		N	N		N	N	N
Inflammation, chronic	-	1	-	1	-	-	1	-	-	-
Heart	N	N	N	N		N		N	N	N
Inflammation, chronic	-	-	-	-	1	-	1	-	-	-

A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS WITH AMMONIUM PERCHLORATE SLI STUDY NO. 3455.1

Tabulated Animal Data

PROJECT ID: 34551 GROUP: Group 1 SEX: FEMALE
DAYS: 92-95 FATES: ALL

ANIMAL ID:	11876	11886	11890	11891	11892	11895	11896	11901	11902	11904
Aorta	N	N	N	N	N	N	N	N	N	N
Liver					N					
Extramedullary Hematopoiesis	1	-	1	1	-	1	1	1	1	1
Inflammation, chronic	-	1	-	-	-	-	-	-	-	-
Spleen	N	N	N	N	N	N	N	N	N	N
Rt Kidney	N	N		N	N		N	N	N	N
Nephropathy	-	-	1	-	-	-	-	-	-	-
Mineralization	-	-	-	-	-	1	-	-	-	-
Lt Kidney	N		N	N	N		N		N	N
Cellular Infil, lymphocyte	-	1	-	-	-	-	-	1	-	-
Mineralization	-	-	-	-	-	1	-	-	-	-
Adrenal Medulla	N	N	N	N	N	N	N	N	N	N
Adrenal Cortex	N	N	N	N	N	N	N	N	N	N
Stomach, Forestomach	N	N	N	N	N	N	N	N	N	N
Stomach, Glandular	N	N	N	N	N	N	N	N	N	N
Duodenum	N	N	N	N	N	N	N	N	N	N

A 90-DAY DRINKING WATER TOXICITY STUDY
IN RATS WITH AMMONIUM PERCHLORATE
SLI STUDY NO. 3455.1

Tabulated Animal Data

PROJECT ID: 34551 GROUP: Group 1 SEX: FEMALE
DAYS: 92-95 FATES: ALL

ANIMAL ID:	11876	11886	11890	11891	11892	11895	11896	11901	11902	11904
Jejunum	N	N	N	N	N	N	N	N	N	N
Ileum	N	N	N	N	N	N	N	N	N	N
Cecum	N	N	N	N	N	N	N	N	N	N
Colon	N	N	N	N	N	N	N	N	N	N
Rectum	N	N	N	N	N	N	N	*	N	N
Mesenteric LN	N	N	N	N	N	N	N	N	N	N
Skin	N	N	N	N	N	N	N	N	N	N
Mammary Gland	N	N	N	N	N	N	N	N	N	N
Muscle	N	N	N	N	N	N	N	N	N	N
Bone/Femur	N	N	N	N	N	N	N	N	N	N
Bone Marrow/Femur	N	N	N	N	N	N	N	N	N	N
Bone/Sternum	N	N	N	N	N	N	*	N	N	N

A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS WITH AMMONIUM PERCHLORATE SLI STUDY NO. 3455.1

Tabulated Animal Data

PROJECT ID: 34551 GROUP: Group 1 SEX: FEMALE
DAYS: 92-95 FATES: ALL

ANIMAL ID:	11876	11886	11890	11891	11892	11895	11896	11901	11902	11904
Bone Marrow/Sternum	N	N	N	N	N	N	*	N	N	N
Nose	N	N	N	N		N	N	N		N
Inflammation, acute/chronic	-	-	-	-	1	-	-	-	-	-
Tooth - Dystropy	-	-	-	-	-	-	-	-	P	-
Pharynx	N	N	N		U	N		N	N	N
Inflammation, chronic	-	-	-	1	-	-	1	-	-	-
Larynx	N			N	N	N	N	N		
Inflammation, chronic	-	2	1	-	-	-	-	-	1	1
Lt Ovary	N	N	N	N	N	N	N	N	N	N
Rt Ovary	N	N	N	N	N	N	N	N	N	N
Uterus	N	N	N	N	N	N	N	N	N	N
Cervix	N	N	N	N	N	N	N	*	N	N
Vagina	N	N	N	N	N	N	N	*	N	N
Urinary Bladder	N	N	N	N	N	N	N	*	N	N

A 90-DAY DRINKING WATER TOXICITY STUDY
IN RATS WITH AMMONIUM PERCHLORATE
SLI STUDY NO. 3455.1

Tabulated Animal Data

PROJECT ID: 34551 GROUP: Group 1 SEX: FEMALE
DAYS: 92-95 FATES: ALL

ANIMAL ID:	11876	11886	11890	11891	11892	11895	11896	11901	11902	11904
OTHER TISSUES AND LESIONS:										
Skin, Pinna - Infl, a/c	-	-	-	-	-	-	-	-	-	3

A 90-DAY DRINKING WATER TOXICITY STUDY
IN RATS WITH AMMONIUM PERCHLORATE
SLI STUDY NO. 3455.1

Tabulated Animal Data

PROJECT ID: 34551 GROUP: Group 2 SEX: FEMALE
DAYS: 92-95 FATES: ALL

ANIMAL ID:	11907	11910	11914	11915	11916	11918	11919	11920	11922	11924
Thyroid	N	N	N	N	N	N	N	N	N	
Ultimobranchial Cyst	-	-	-	-	-	-	-	-	-	2
Parathyroid	N	N	N	N	N	N	N	N	N	N
Lungs/Bronchi	N	N	N		N	N	N	N	N	
Inflammation, chronic	-	-	-	1	-	-	-	-	-	1
Liver	N				N		N		N	
Extramedullary Hematopoiesis	-	1	-	1	-	1	-	1	-	1
Inflammation, chronic	-	-	1	-	-	-	-	-	-	-
Rt Kidney	N	N	N	N			N	N	N	N
Hydronephrosis	-	-	-	-	1	-	-	-	-	-
Inflammation, acute	-	-	-	-	-	1	-	-	-	-
Lt Kidney	N	N	N	N	N		N	N	N	N
Cellular Infil, lymphocyte	-	-	-	-	-	1	-	-	-	-

A 90-DAY DRINKING WATER TOXICITY STUDY
IN RATS WITH AMMONIUM PERCHLORATE
SLI STUDY NO. 3455.1

Tabulated Animal Data

PROJECT ID: 34551 GROUP: Group 2 SEX: FEMALE
DAYS: 92-95 FATES: ALL

ANIMAL ID:	11907	11910	11914	11915	11916	11918	11919	11920	11922	11924
OTHER TISSUES AND LESIONS:										
Uterus - Dilatation	2	-	-	-	1	-	-	-	-	-
Skin, Pinna - Infl, a/c	-	-	-	-	-	-	-	3	-	-
Mandibular LN - Congestion	1	-	-	-	-	-	-	-	-	-
Mandibular LN - Hyperp, lymp	1	-	-	-	-	-	-	-	-	-

A 90-DAY DRINKING WATER TOXICITY STUDY
IN RATS WITH AMMONIUM PERCHLORATE
SLI STUDY NO. 3455.1

Tabulated Animal Data

PROJECT ID: 34551 GROUP: Group 3 SEX: FEMALE
DAYS: 92-95 FATES: ALL

ANIMAL ID:	11927	11929	11935	11936	11937	11938	11939	11950	11954	11955
Thyroid	N	N	N	N	N	N	N	N	N	N
Parathyroid	N	N	N	N	N	N	N	N	N	N
Lungs/Bronchi	N	N	N	N	N	N	N	N	N	
Inflammation, chronic	-	-	-	-	-	-	-	-	-	1
Liver							N	N	N	
Extramedullary Hematopoiesis	1	1	1	1	1	1	-	-	-	1
Rt Kidney	N	N	N	N	N	N	N	N	N	N
Lt Kidney	N	N	N	N	N	N	N	N	N	N

A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS WITH AMMONIUM PERCHLORATE SLI STUDY NO. 3455.1

Tabulated Animal Data

PROJECT ID: 34551 GROUP: Group 3 SEX: FEMALE
DAYS: 92-95 FATES: ALL

ANIMAL ID:	11927	11929	11935	11936	11937	11938	11939	11950	11954	11955
OTHER TISSUES AND LESIONS:										
Skin, Pinna - Infl, a/c	-	3	-	-	-	-	-	-	-	-

A 90-DAY DRINKING WATER TOXICITY STUDY
IN RATS WITH AMMONIUM PERCHLORATE
SLI STUDY NO. 3455.1

Tabulated Animal Data

PROJECT ID: 34551 GROUP: Group 4 SEX: FEMALE
DAYS: 92-95 FATES: ALL

ANIMAL ID:	11956	11957	11958	11961	11965	11966	11969	11972	11973	11975
Thyroid	N	N	N		N	N	N	N	N	N
Inflammation, chronic	-	-	-	1	-	-	-	-	-	-
Parathyroid	N	N	N	N	N	N	N	N	N	N
Lungs/Bronchi	N	N	N	N		N	N	N		N
Inflammation, chronic	-	-	-	-	1	-	-	-	1	-
Liver										
Extramedullary Hematopoiesis	1	1	1	1	1	1	1	1	1	1
Rt Kidney	N	N	N	N	N	N	N	N	N	N
Lt Kidney	N	N	N	N	N	N	N	N	N	N

A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS WITH AMMONIUM PERCHLORATE SLI STUDY NO. 3455.1

Tabulated Animal Data

PROJECT ID: 34551 GROUP: Group 5 SEX: FEMALE
DAYS: 92-95 FATES: ALL

ANIMAL ID:	11976	11983	11988	11990	11993	11995	11996	11997	11998	12000
Thyroid	N	N	N	N	N	N	N	N	N	N
Parathyroid	N	N	N	N	N	N	N	N	N	N
Lungs/Bronchi	N		N			N	N	N	N	
Inflammation, chronic	-	1	-	1	1	-	-	-	-	1
Liver								N		N
Extramedullary Hematopoiesis	1	1	1	1	1	1	1	-	1	-
Rt Kidney	N	N	N	N		N	N	N	N	N
Mineralization	-	-	-	-	1	-	-	-	-	-
Lt Kidney	N	N	N	N		N	N	N	N	N
Nephropathy	-	-	-	-	1	-	-	-	-	-
Mineralization	-	-	-	-	1	-	-	-	-	-

A 90-DAY DRINKING WATER TOXICITY STUDY
IN RATS WITH AMMONIUM PERCHLORATE
SLI STUDY NO. 3455.1

Tabulated Animal Data

PROJECT ID: 34551 GROUP: Group 5 SEX: FEMALE
DAYS: 92-95 FATES: ALL

ANIMAL ID:	11976	11983	11988	11990	11993	11995	11996	11997	11998	12000
OTHER TISSUES AND LESIONS:										
Ovaries - Normal	-	-	-	-	-	P	-	-	-	-

A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS WITH AMMONIUM PERCHLORATE SLI STUDY NO. 3455.1

Tabulated Animal Data

PROJECT ID: 34551 GROUP: Group 6 SEX: FEMALE
DAYS: 92-95 FATES: ALL

ANIMAL ID:	12006	12007	12011	12012	12018	12019	12022	12025	12029	12033
Brain	N	N	N	N	N	N	N	N	N	N
Pituitary Gland	N	N	N	N	N	N	N	N	N	N
Sciatic Nerve	N	N	N	N	N	N	N	N	N	N
Spinal Cord, Cervical	N	N	N	N	N	N	N	N	N	N
Spinal Cord, Thoracic	N	N	N	N	N	N	N	N	N	N
Spinal Cord, Lumbar	N	N	N	N	N	N	N	N	N	N
Eye A	N	N	N	N	N	N	N	N	N	N
Eye B	N	N	N	N	N	N	N	N	N	N
Lacrimal Gland	N	N	N	N	N	N	N	N	N	N
Mediastinal LN	N	N	N	N	N	N	N	N		N
Congestion	-	-	-	-	-	-	-	-	1	-
Thyroid									N	
Hyperplasia, follicular cell	1	1	2	1	1	2	1	1	-	2

A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS WITH AMMONIUM PERCHLORATE SLI STUDY NO. 3455.1

Tabulated Animal Data

PROJECT ID: 34551 GROUP: Group 6 SEX: FEMALE
DAYS: 92-95 FATES: ALL

ANIMAL ID:	12006	12007	12011	12012	12018	12019	12022	12025	12029	12033
Parathyroid	N	N	N	N	N	N	N	N	N	N
Trachea	N	N	N	N	N	N	N	N	N	N
Esophagus	N	N	N	N	N	N	N	N	N	N
Thymus	N	N	N	N	N	N	N	N	N	N
Tongue	N	N	N	N	N	N	N	N	N	N
Pancreas	N	N	N	N	N	N	N	N	N	N
Islets of Pancreas	N	N	N	N	N	N	N	N	N	N
Salivary Gland	N	N	N	N	N	N	N	N	N	N
Mandibular LN	N	N	N	N	N	N	N	N	N	N
Lungs/Bronchi		N	N	N	N			N	N	
Inflammation, chronic	1	-	-	-	-	1	1	-	-	1
Heart	N	N	N	N		N	N	N		N
Inflammation, chronic	-	-	-	-	1	-	-	-	1	-

A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS WITH AMMONIUM PERCHLORATE SLI STUDY NO. 3455.1

Tabulated Animal Data

PROJECT ID: 34551 GROUP: Group 6 SEX: FEMALE
DAYS: 92-95 FATES: ALL

ANIMAL ID:	12006	12007	12011	12012	12018	12019	12022	12025	12029	12033
Aorta	N	N	N	N	N	N	N	N	N	N
Liver			N			N				
Extramedullary Hematopoiesis	1	1	-	1	1	-	1	1	1	1
Inflammation, chronic	1	-	-	-	-	-	-	-	-	-
Spleen	N	N	N	N	N	N	N	N	N	N
Rt Kidney	N	N	N	N	N	N	N		N	N
Hydronephrosis	-	-	-	-	-	-	-	1	-	-
Lt Kidney		N	N	N	N	N	N		N	N
Cellular Infil, lymphocyte	1	-	-	-	-	-	-	-	-	-
Hydronephrosis	-	-	-	-	-	-	-	3	-	-
Adrenal Medulla	N	N	N	N	N	N	N	N	N	N
Adrenal Cortex	N	N	N	N	N	N	N	N	N	N
Stomach, Forestomach	N	N	N	N	N	N	N	N	N	N
Stomach, Glandular	N	N	N	N	N	N	N	N	N	N
Duodenum	N	N	N	N	N	N	N	N	N	N

A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS WITH AMMONIUM PERCHLORATE SLI STUDY NO. 3455.1

Tabulated Animal Data

PROJECT ID: 34551 GROUP: Group 6 SEX: FEMALE
DAYS: 92-95 FATES: ALL

ANIMAL ID:	12006	12007	12011	12012	12018	12019	12022	12025	12029	12033
Jejunum	N	N	N	N	N	N	N	N	N	N
Ileum	N	N	N	N	N	N	N	N	N	N
Cecum	N	N	N	N	N	N	N	N	N	N
Colon	N	N	N	N	N	N	N	N	N	N
Rectum	N	N	N	N	N	N	N	N	N	N
Mesenteric LN	N	N	N	N	N	N	N	N	N	N
Skin	N	N	N	N	N	N	N	N	N	N
Mammary Gland	N	N	N	N	N	N	N	N	N	N
Muscle	N	N	N	N	N	N	N	N	N	N
Bone/Femur	N	N	N	N	N	N	N	N	N	N
Bone Marrow/Femur	N	N	N	N	N	N	N	N	N	N
Bone/Sternum	N	N	N	N	N	N	N	N	N	N

A 90-DAY DRINKING WATER TOXICITY STUDY
IN RATS WITH AMMONIUM PERCHLORATE
SLI STUDY NO. 3455.1

Tabulated Animal Data

PROJECT ID: 34551 GROUP: Group 6 SEX: FEMALE
DAYS: 92-95 FATES: ALL

ANIMAL ID:	12006	12007	12011	12012	12018	12019	12022	12025	12029	12033
Bone Marrow/Sternum	N	N	N	N	N	N	N	N	N	N
Nose	N	N	N	N	N	N	N	N	N	N
Pharynx	N	N		N	N	N	N	N	N	N
Inflammation, chronic	-	-	1	-	-	-	-	-	-	-
Larynx	N	N	N	N		N	N			
Inflammation, chronic	-	-	-	-	1	-	-	1	1	1
Lt Ovary	N	N	N	N	N	N	N	N	N	N
Rt Ovary	N	N	N	N	N	N	N	N	N	N
Uterus	N		N		N	N	N	N	N	
Dilatation	-	2	-	1	-	-	-	-	-	1
Cervix	N	N	N	N	N	N	N	N	N	N
Vagina	N	N	N	N	N	N	N	N	N	N
Urinary Bladder	N	N	N	N	N	N	N	N	N	N

A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS WITH AMMONIUM PERCHLORATE SLI STUDY NO. 3455.1

Tabulated Animal Data

PROJECT ID: 34551 GROUP: Group 6 SEX: FEMALE
DAYS: 92-95 FATES: ALL

ANIMAL ID:	12006	12007	12011	12012	12018	12019	12022	12025	12029	12033
OTHER TISSUES AND LESIONS:										
Skin - Normal	-	-	-	-	-	-	-	-	P	-
Muscle - Disrupted Continuity	-	-	-	-	-	-	-	-	P	-

APPENDIX F

Code Table
Tabulated Animal Data

120-Day Male - Groups 1, 3, 5 and 6
120-Day Female - Groups 1, 3, 5 and 6

A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS WITH AMMONIUM PERCHLORATE SLI STUDY NO. 3455.1

Reports Code Table

N	Tissues within normal histological limits
A	Autolysis precluding adequate evaluation
U	Tissues unsuitable for complete evaluation
S	Tissues not applicable to animal
*	Tissues unavailable for evaluation

1	minimal
2	mild
3	moderate
4	marked
()	focal
[]	locally extensive
<>	multifocal
P	Present
B	Neoplasm, Benign
M	Neoplasm, Malignant without Metastasis
C	Neoplasm, Malignant with Metastasis
X	Metastatic Site (+)
-	No data entered

A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS WITH AMMONIUM PERCHLORATE SLI STUDY NO. 3455.1

Tabulated Animal Data

PROJECT ID: 34551 GROUP: Group 1 SEX: MALE
DAYS: 97-123 FATES: ALL

ANIMAL ID:	11719	11722	11723	11726	11727	11730	11733	11737	11740	11743
Thyroid	N	N	N	N	N		N	N	N	N
Ectopic Thymus	-	-	-	-	-	P	-	-	-	-
Parathyroid	N	N	N	N	*	N	N	N	N	N
Lungs/Bronchi			N	N		N		N	N	
Inflammation, chronic	1	-	-	-	2	-	1	-	-	1
Hyperplasia, lymphoid	-	1	-	-	-	-	-	-	-	-
Liver					N				N	
Extramedullary Hematopoiesis	1	1	1	1	-	1	1	1	-	1
Rt Kidney	N		N	N		N	N	N	N	N
Cellular Infil, lymphocyte	-	1	-	-	-	-	-	-	-	-
Nephropathy	-	-	-	-	1	-	-	-	-	-
Lt Kidney						N	N			
Cellular Infil, lymphocyte	1	-	-	-	-	-	-	-	-	-
Nephropathy	-	1	1	1	1	-	-	1	1	1

A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS WITH AMMONIUM PERCHLORATE SLI STUDY NO. 3455.1

Tabulated Animal Data

PROJECT ID: 34551 GROUP: Group 1 SEX: MALE
DAYS: 97-123 FATES: ALL

ANIMAL ID:	11719	11722	11723	11726	11727	11730	11733	11737	11740	11743
OTHER TISSUES AND LESIONS:										
Thymus - Congestion	-	1	-	-	-	-	-	-	-	-

A 90-DAY DRINKING WATER TOXICITY STUDY
IN RATS WITH AMMONIUM PERCHLORATE
SLI STUDY NO. 3455.1

Tabulated Animal Data

PROJECT ID: 34551 GROUP: Group 3 SEX: MALE
DAYS: 97-123 FATES: ALL

ANIMAL ID:	11767	11770	11773	11775	11781	11782	11783	11785	11788	11795
Thyroid	N	N	N	N	N	N	N	N	N	N
Parathyroid	N	N	N	N	N	N	N	N	N	N
Lungs/Bronchi			N	N	N				N	
Inflammation, chronic	1	1	-	-	-	1	1	1	-	1
Liver				N			N		N	
Extramedullary Hematopoiesis	1	1	1	-	1	1	-	1	-	1
Rt Kidney	N		N	N	N	N	N	N		
Cellular Infil, lymphocyte	-	-	-	-	-	-	-	-	1	-
Nephropathy	-	1	-	-	-	-	-	-	-	-
Cyst	-	-	-	-	-	-	-	-	-	1
Lt Kidney	N		N	N	N	N			N	
Nephropathy	-	1	-	-	-	-	1	-	-	1
Abscess	-	-	-	-	-	-	-	1	-	-

A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS WITH AMMONIUM PERCHLORATE SLI STUDY NO. 3455.1

Tabulated Animal Data

PROJECT ID: 34551 GROUP: Group 5 SEX: MALE
DAYS: 97-123 FATES: ALL

ANIMAL ID:	11821	11823	11826	11828	11829	11833	11834	11837	11838	11843
Thyroid	N	N	N		N	N	N	N	N	
Ultimobranchial Cyst	-	-	-	2	-	-	-	-	-	2
Parathyroid	N	N	N	N	N	N	N	N	N	N
Lungs/Bronchi	N	N		N		N		N		
Inflammation, chronic	-	-	1	-	1	-	1	-	1	1
Liver			N		N	N		N	N	N
Extramedullary Hematopoiesis	1	1	-	1	-	-	1	-	-	-
Rt Kidney	N				N	N		N		N
Cellular Infil, lymphocyte	-	-	-	1	-	-	-	-	-	-
Nephropathy	-	1	1	-	-	-	2	-	-	-
Hydronephrosis	-	-	-	-	-	-	-	-	2	-
Lt Kidney	N					N	N	N	N	
Cellular Infil, lymphocyte	-	-	-	1	-	-	-	-	-	-
Nephropathy	-	1	1	-	1	-	-	-	-	1
Cyst	-	-	-	-	-	-	-	-	-	2

A 90-DAY DRINKING WATER TOXICITY STUDY
IN RATS WITH AMMONIUM PERCHLORATE
SLI STUDY NO. 3455.1

Tabulated Animal Data

PROJECT ID: 34551 GROUP: Group 6 SEX: MALE
DAYS: 97-123 FATES: ALL

ANIMAL ID:	11849	11850	11855	11856	11864	11865	11868	11869	11874	11875
Thyroid	N	N	N	N	N	N	N	N	N	N
Parathyroid	N	N	N	N	N	N	N	N	N	N
Lungs/Bronchi			N	N		N	N		N	
Inflammation, chronic	1	1	-	-	1	-	-	-	-	1
Congestion	-	-	-	-	-	-	-	1	-	-
Liver	N	N		N		N				
Extramedullary Hematopoiesis	-	-	1	-	1	-	1	1	1	1
Rt Kidney	N	N		N			N			N
Nephropathy	-	-	1	-	1	1	-	1	1	-
Lt Kidney	N	N	N	N			N			
Cellular Infil, lymphocyte	-	-	-	-	-	-	-	1	-	1
Nephropathy	-	-	-	-	1	1	-	-	1	-

A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS WITH AMMONIUM PERCHLORATE SLI STUDY NO. 3455.1

Tabulated Animal Data

PROJECT ID: 34551 GROUP: Group 6 SEX: MALE
DAYS: 97-123 FATES: ALL

ANIMAL ID:	11849	11850	11855	11856	11864	11865	11868	11869	11874	11875
OTHER TISSUES AND LESIONS:										
Spleen - Capsule - Cyst	-	-	-	-	-	1	-	-	-	-

A 90-DAY DRINKING WATER TOXICITY STUDY
IN RATS WITH AMMONIUM PERCHLORATE
SLI STUDY NO. 3455.1

Tabulated Animal Data

PROJECT ID: 34551 GROUP: Group 1 SEX: FEMALE
DAYS: 97-123 FATES: ALL

ANIMAL ID:	11879	11880	11883	11885	11887	11888	11897	11898	11899	11905
Thyroid	N	N	N	N	N	N	N	N	N	N
Parathyroid	N	N	N	N	N	N	N	N	N	N
Lungs/Bronchi	N	N	N		N	N				N
Inflammation, chronic	-	-	-	1	-	-	1	1	1	-
Liver										
Extramedullary Hematopoiesis	1	1	1	1	1	1	1	1	1	1
Rt Kidney	N	N	N	N	N	N	N	N	N	N
Lt Kidney	N			N	N		N	N	N	N
Cellular Infil, lymphocyte	-	1	1	-	-	-	-	-	-	-
Mineralization	-	-	-	-	-	1	-	-	-	-

A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS WITH AMMONIUM PERCHLORATE SLI STUDY NO. 3455.1

Tabulated Animal Data

PROJECT ID: 34551 GROUP: Group 1 SEX: FEMALE
DAYS: 97-123 FATES: ALL

ANIMAL ID:	11879	11880	11883	11885	11887	11888	11897	11898	11899	11905
OTHER TISSUES AND LESIONS:										
Skin, Pinna - Infl, a/c	-	-	-	-	-	-	3	-	-	-
Pinna - Bone - Metaplasia	-	-	-	-	-	-	1	-	-	-

A 90-DAY DRINKING WATER TOXICITY STUDY
IN RATS WITH AMMONIUM PERCHLORATE
SLI STUDY NO. 3455.1

Tabulated Animal Data

PROJECT ID: 34551 GROUP: Group 3 SEX: FEMALE
DAYS: 97-123 FATES: ALL

ANIMAL ID:	11926	11928	11932	11933	11940	11943	11944	11947	11948	11949
Brain									N	
Pituitary Gland									N	
Sciatic Nerve									N	
Spinal Cord, Cervical									N	
Spinal Cord, Thoracic									N	
Spinal Cord, Lumbar									N	
Eye A									N	
Eye B									N	
Lacrimal Gland									N	
Mediastinal LN									N	
Thyroid	N	N	N	N	N	N		N	N	N
Ultimobranchial Cyst	-	-	-	-	-	-	2	-	-	-

A 90-DAY DRINKING WATER TOXICITY STUDY
IN RATS WITH AMMONIUM PERCHLORATE
SLI STUDY NO. 3455.1

Tabulated Animal Data

PROJECT ID: 34551 GROUP: Group 3 SEX: FEMALE
DAYS: 97-123 FATES: ALL

ANIMAL ID:	11926	11928	11932	11933	11940	11943	11944	11947	11948	11949
Parathyroid	N	N	N	N	N	N	N	N	N	N
Trachea									N	
Esophagus									N	
Thymus										
Congestion	-	-	-	-	-	-	-	-	1	-
Tongue									N	
Pancreas									N	
Islets of Pancreas									N	
Salivary Gland									N	
Mandibular LN									N	
Lungs/Bronchi	N		N	N		N				N
Inflammation, chronic	-	1	-	-	1	-	1	1	-	-
Congestion	-	-	-	-	-	-	-	-	1	-
Heart									N	

A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS WITH AMMONIUM PERCHLORATE SLI STUDY NO. 3455.1

Tabulated Animal Data

PROJECT ID: 34551 GROUP: Group 3 SEX: FEMALE
DAYS: 97-123 FATES: ALL

ANIMAL ID:	11926	11928	11932	11933	11940	11943	11944	11947	11948	11949
Aorta									N	
Liver				N						N
Extramedullary Hematopoiesis	1	1	1	-	1	1	1	1	-	-
Congestion	-	-	-	-	-	-	-	-	1	-
Spleen									N	
Rt Kidney	N	N	N	N	N	N	N		N	N
Mineralization	-	-	-	-	-	-	-	2	-	-
Lt Kidney	N		N	N	N	N	N		N	
Cellular Infil, lymphocyte	-	-	-	-	-	-	-	-	-	1
Mineralization	-	1	-	-	-	-	-	1	-	-
Adrenal Medulla									N	
Adrenal Cortex									N	
Stomach, Forestomach									N	
Stomach, Glandular									N	
Duodenum									N	

A 90-DAY DRINKING WATER TOXICITY STUDY
IN RATS WITH AMMONIUM PERCHLORATE
SLI STUDY NO. 3455.1

Tabulated Animal Data

PROJECT ID: 34551 GROUP: Group 3 SEX: FEMALE
DAYS: 97-123 FATES: ALL

ANIMAL ID:	11926	11928	11932	11933	11940	11943	11944	11947	11948	11949
Jejunum										
Autolysis	-	-	-	-	-	-	-	-	3	-
Ileum										
Autolysis	-	-	-	-	-	-	-	-	2	-
Cecum										
Autolysis	-	-	-	-	-	-	-	-	2	-
Colon										
Autolysis	-	-	-	-	-	-	-	-	2	-
Rectum										
Autolysis	-	-	-	-	-	-	-	-	2	-
Mesenteric LN									N	
Skin									N	
Mammary Gland									N	
Muscle									N	
Bone/Femur									N	

A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS WITH AMMONIUM PERCHLORATE SLI STUDY NO. 3455.1

Tabulated Animal Data

PROJECT ID: 34551 GROUP: Group 3 SEX: FEMALE
DAYS: 97-123 FATES: ALL

ANIMAL ID:	11926	11928	11932	11933	11940	11943	11944	11947	11948	11949
Bone Marrow/Femur									N	
Bone/Sternum									*	
Bone Marrow/Sternum									*	
Nose									*	
Pharynx									N	
Larynx									N	
Lt Ovary										
Congestion	-	-	-	-	-	-	-	-	1	-
Rt Ovary										
Congestion	-	-	-	-	-	-	-	-	1	-
Uterus									N	
Cervix									N	
Vagina									N	

A 90-DAY DRINKING WATER TOXICITY STUDY
IN RATS WITH AMMONIUM PERCHLORATE
SLI STUDY NO. 3455.1

Tabulated Animal Data

PROJECT ID: 34551 GROUP: Group 3 SEX: FEMALE
DAYS: 97-123 FATES: ALL

ANIMAL ID:	11926	11928	11932	11933	11940	11943	11944	11947	11948	11949
Urinary Bladder									N	

A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS WITH AMMONIUM PERCHLORATE SLI STUDY NO. 3455.1

Tabulated Animal Data

PROJECT ID: 34551 GROUP: Group 3 SEX: FEMALE
DAYS: 97-123 FATES: ALL

ANIMAL ID:	11926	11928	11932	11933	11940	11943	11944	11947	11948	11949
OTHER TISSUES AND LESIONS:										
Skin, Pinna - Infl, a/c	-	3	-	-	-	-	-	-	-	-

A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS WITH AMMONIUM PERCHLORATE SLI STUDY NO. 3455.1

Tabulated Animal Data

PROJECT ID: 34551 GROUP: Group 5 SEX: FEMALE
DAYS: 97-123 FATES: ALL

ANIMAL ID:	11978	11979	11980	11981	11985	11986	11987	11999	12002	12004
Thyroid	N	N	N	N	N	N	N	N	N	N
Parathyroid	N	N	N	N	N	N	N	N	N	N
Lungs/Bronchi			N				N	N	N	N
Inflammation, chronic	1	1	-	1	1	1	-	-	-	-
Liver					N				N	
Extramedullary Hematopoiesis	1	1	1	1	-	1	1	1	-	1
Rt Kidney	N	N		N	N	N	N	N	N	N
Nephropathy	-	-	1	-	-	-	-	-	-	-
Lt Kidney	N	N	N	N		N	N	N	N	N
Nephropathy	-	-	-	-	1	-	-	-	-	-

A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS WITH AMMONIUM PERCHLORATE SLI STUDY NO. 3455.1

Tabulated Animal Data

PROJECT ID: 34551 GROUP: Group 5 SEX: FEMALE
DAYS: 97-123 FATES: ALL

ANIMAL ID:	11978	11979	11980	11981	11985	11986	11987	11999	12002	12004
OTHER TISSUES AND LESIONS:										
Skin, Pinna - Infl, a/c	3	-	-	-	-	3	-	-	-	-

A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS WITH AMMONIUM PERCHLORATE SLI STUDY NO. 3455.1

Tabulated Animal Data

PROJECT ID: 34551 GROUP: Group 6 SEX: FEMALE
DAYS: 97-123 FATES: ALL

ANIMAL ID:	12008	12009	12014	12015	12017	12020	12024	12027	12034	12035
Thyroid	N	N	N	N	N	N	N	N	N	N
Parathyroid	N	N	N	N	N	N	N	N	N	N
Lungs/Bronchi	N	N	N	N			N	N	N	
Inflammation, chronic	-	-	-	-	1	1	-	-	-	1
Liver	N									
Extramedullary Hematopoiesis	-	1	1	1	1	1	1	-	1	1
Inflammation, chronic	-	-	-	-	-	-	-	1	-	-
Rt Kidney	N	N	N	N	N	N	N	N	N	N
Lt Kidney	N	N	N	N		N	N	N	N	
Nephropathy	-	-	-	-	1	-	-	-	-	-
Hydronephrosis	-	-	-	-	-	-	-	-	-	1

A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS WITH AMMONIUM PERCHLORATE SLI STUDY NO. 3455.1

Tabulated Animal Data

PROJECT ID: 34551 GROUP: Group 6 SEX: FEMALE
DAYS: 97-123 FATES: ALL

ANIMAL ID:	12008	12009	12014	12015	12017	12020	12024	12027	12034	12035
OTHER TISSUES AND LESIONS:										
Uterus - Dilatation	-	-	1	-	-	-	-	-	-	-

APPENDIX R

Individual Semen Analysis Data

APPENDIX R
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL SEMEN ANALYSIS DATA

SCHEDULED EUTHANASIA - DAYS 92-95

ANIMAL NO.	LEFT CAUDA EPIDIDYMIS (G)	SPERM MOTILITY (%)	SPERM CONCENTRATION (M/ML)	TOTAL SPERM COUNT (M/G)	SPERM MORPHOLOGY (% NORMAL)
GROUP 1: 0 MG/KG/DAY					
11721 M	0.36	31[a]	2.7	525.00	97.5
11724 M	0.37	40[a]	5.3	995.41	98.5
11729 M	0.30	72	5.1	1189.33	72.0
11732 M	0.37	30[b]	5.1	969.46	90.5
11734 M	0.27	82	5.2	1342.96	94.0
11735 M	0.33	72	5.6	1192.12	96.0
11736 M	0.30	40	4.0	945.00	95.5
11738 M	0.30	81	3.6	835.67	92.5
11741 M	0.30	78	5.6	1311.33	97.5
11742 M	0.32	74	5.6	1223.44	98.0
MEAN	0.32	71	4.8	1053.0	93.2
S.D.	0.035	14.4	1.00	250.73	7.88
N	10	7	10	10	10

NOTE: G = GRAMS; M = MILLION; ML = MILLILITER.
[a]NOT INCLUDED IN CALCULATION OF THE MEAN AND STANDARD DEVIATION DUE TO TECHNICAL DIFFICULTIES IN THE SAMPLE PREPARATIONS.
[b]NOT INCLUDED IN CALCULATION OF THE MEAN AND STANDARD DEVIATION. SAMPLE APPEARED HEAT-SHOCKED WITH CELLS IN CURVED POSITION DUE TO PROBABLE SAMPLE PREPARATION ERROR.

APPENDIX R
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL SEMEN ANALYSIS DATA

SCHEDULED EUTHANASIA - DAYS 92-95

ANIMAL NO.	LEFT CAUDA EPIDIDYMIS (G)	SPERM MOTILITY (%)	SPERM CONCENTRATION (M/ML)	TOTAL SPERM COUNT (M/G)	SPERM MORPHOLOGY (% NORMAL)
GROUP 2: 0.01 MG/KG/DAY					
11746 M	0.26	24[a]	5.4	1446.54	99.0
11748 M	0.32	32[a]	3.2	705.00	97.0
11749 M	0.29	70	4.4	1064.14	98.0
11750 M	0.30	87	4.8	1112.00	95.0
11752 M	0.33	88	5.1	1086.97	93.5
11753 M	0.30	72	3.5	822.67	97.5
11754 M	0.33	69	5.1	1075.15	93.5
11755 M	0.29	88	4.6	1117.24	95.0
11761 M	0.30	88	5.2	1208.33	97.0
11765 M	0.27	77	4.5	1154.81	87.5
MEAN	0.30	80	4.6	1079.3	95.3
S.D.	0.023	8.7	0.73	201.66	3.32
N	10	8	10	10	10

NOTE: G = GRAMS; M = MILLION; ML = MILLILITER. MALES IN GROUP 2 WERE EUTHANIZED ON DAYS 15-18 OR DAYS 92-95.
[a]NOT INCLUDED IN CALCULATION OF THE MEAN AND STANDARD DEVIATION DUE TO TECHNICAL DIFFICULTIES IN THE SAMPLE PREPARATIONS.

APPENDIX R
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL SEMEN ANALYSIS DATA

SCHEDULED EUTHANASIA - DAYS 92-95

ANIMAL NO.	LEFT CAUDA EPIDIDYMIS (G)	SPERM MOTILITY (%)	SPERM CONCENTRATION (M/ML)	TOTAL SPERM COUNT (M/G)	SPERM MORPHOLOGY (% NORMAL)
GROUP 3: 0.05 MG/KG/DAY					
11769 M	0.27	51[a]	4.2	1080.00	93.5
11774 M	0.30	34[a]	3.0	708.67	80.5
11776 M	0.24	82	4.3	1240.42	98.0
11777 M	0.25	84	3.8	1052.80	94.5
11780 M	0.29	82	4.3	1047.24	95.0
11787 M	0.32	65	6.0	1303.44	91.5
11790 M	0.34	74	3.9	810.00	91.0
11791 M	0.36	84	6.1	1186.94	77.5
11792 M	0.30	85	4.6	1073.33	92.0
11794 M	0.26	67	3.3	880.00	97.0
MEAN	0.29	78	4.4	1038.3	91.1
S.D.	0.039	8.1	1.02	189.25	6.78
N	10	8	10	10	10

NOTE: G = GRAMS; M = MILLION; ML = MILLILITER.
[a]NOT INCLUDED IN CALCULATION OF THE MEAN AND STANDARD DEVIATION DUE TO TECHNICAL DIFFICULTIES IN THE SAMPLE PREPARATIONS.

APPENDIX R
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL SEMEN ANALYSIS DATA

SCHEDULED EUTHANASIA - DAYS 92-95

ANIMAL NO.	LEFT CAUDA EPIDIDYMIS (G)	SPERM MOTILITY (%)	SPERM CONCENTRATION (M/ML)	TOTAL SPERM COUNT (M/G)	SPERM MORPHOLOGY (% NORMAL)
GROUP 4: 0.2 MG/KG/DAY					
11797 M	0.31	63[a]	5.0	1123.55	97.0
11799 M	0.29	34[a]	4.8	1166.21	96.5
11800 M	0.31	62	3.6	822.90	95.0
11805 M	0.24	77	3.1	937.08	91.0
11806 M	0.20	5	1.9	678.50	16.0
11809 M	0.29	63	5.2	1263.79	95.5
11811 M	0.32	67	4.7	1018.75	97.5
11812 M	0.27	80	5.8	1492.59	92.5
11814 M	0.30	81	3.6	830.33	95.5
11815 M	0.32	75	4.8	1044.06	91.5
MEAN	0.29	63	4.3	1037.8	86.8
S.D.	0.039	24.9	1.17	238.19	24.98
N	10	8	10	10	10

NOTE: G = GRAMS; M = MILLION; ML = MILLILITER. MALES IN GROUP 4 WERE EUTHANIZED ON DAYS 15-18 OR DAYS 92-95.
[a]NOT INCLUDED IN CALCULATION OF THE MEAN AND STANDARD DEVIATION DUE TO TECHNICAL DIFFICULTIES IN THE SAMPLE PREPARATIONS.

APPENDIX R
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL SEMEN ANALYSIS DATA

SCHEDULED EUTHANASIA - DAYS 92-95

ANIMAL NO.	LEFT CAUDA EPIDIDYMIS (G)	SPERM MOTILITY (%)	SPERM CONCENTRATION (M/ML)	TOTAL SPERM COUNT (M/G)	SPERM MORPHOLOGY (% NORMAL)
GROUP 5: 1.0 MG/KG/DAY					
11817 M	0.28	52[a]	4.7	1178.93	98.0
11822 M	0.23	31[a]	4.0	1206.09	93.0
11824 M	0.27	78	3.7	960.00	93.0
11827 M	0.30	86	6.4	1491.67	93.5
11830 M	0.28	86	4.5	1135.36	91.5
11832 M	0.38	50	6.0	1113.68	90.5
11840 M	0.33	76	5.8	1239.39	94.5
11841 M	0.29	52	4.5	1082.41	90.0
11842 M	0.32	81	5.0	1094.69	93.0
11845 M	0.28	83	3.6	889.64	96.0
MEAN	0.30	74	4.8	1139.2	93.3
S.D.	0.040	14.6	0.97	163.50	2.43
N	10	8	10	10	10

NOTE: G = GRAMS; M = MILLION; ML = MILLILITER.
[a]NOT INCLUDED IN CALCULATION OF THE MEAN AND STANDARD DEVIATION DUE TO TECHNICAL DIFFICULTIES IN THE SAMPLE PREPARATIONS.

APPENDIX R
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL SEMEN ANALYSIS DATA

SCHEDULED EUTHANASIA - DAYS 92-95

ANIMAL NO.	LEFT CAUDA EPIDIDYMIS (G)	SPERM MOTILITY (%)	SPERM CONCENTRATION (M/ML)	TOTAL SPERM COUNT (M/G)	SPERM MORPHOLOGY (% NORMAL)
GROUP 6: 10.0 MG/KG/DAY					
11851 M	0.35	34[a]	5.6	1116.57	87.7
11852 M	0.29	83	4.8	1152.07	85.0
11854 M	0.28	83	3.4	853.21	83.0
11860 M	0.30	88	5.0	1161.00	94.0
11862 M	0.30	79	5.3	1235.33	95.0
11866 M	0.28	55	4.3	1070.36	95.5
11867 M	0.24	76	3.8	1113.75	91.5
11871 M	0.36	74	5.8	1119.44	93.0
11872 M	0.32	80	4.7	1025.00	99.0
11873 M	0.30	74	3.7	857.33	97.5
MEAN	0.30	77	4.6	1070.4	92.1
S.D.	0.035	9.4	0.82	126.11	5.31
N	10	9	10	10	10

NOTE: G = GRAMS; M = MILLION; ML = MILLILITER.
[a]NOT INCLUDED IN CALCULATION OF THE MEAN AND STANDARD DEVIATION DUE TO TECHNICAL DIFFICULTIES IN THE SAMPLE PREPARATIONS.

APPENDIX R
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL SEMEN ANALYSIS DATA

SCHEDULED EUTHANASIA - DAYS 121-123

ANIMAL NO.	LEFT CAUDA EPIDIDYMIS (G)	SPERM MOTILITY (%)	SPERM CONCENTRATION (M/ML)	TOTAL SPERM COUNT (M/G)	SPERM MORPHOLOGY (% NORMAL)
GROUP 1: 0 MG/KG/DAY					
11719 M	0.33	84	3.7	783.03	97.5
11722 M	0.35	88	5.8	1168.00	93.5
11723 M	0.33	87	6.8	1449.39	91.0
11726 M	0.36	79	5.4	1055.28	96.0
11727 M	0.32	91	4.4	958.13	95.5
11730 M	0.37	81	5.8	1099.73	96.5
11733 M	0.32	93	5.6	1229.38	91.0
11737 M	0.36	89	4.2	808.89	95.5
11740 M	0.33	80	5.3	1127.88	96.0
11743 M	0.32	87	4.8	1048.75	95.5
MEAN	0.34	86	5.2	1072.9	94.8
S.D.	0.019	4.7	0.92	196.30	2.24
N	10	10	10	10	10

NOTE: G = GRAMS; M = MILLION; ML = MILLILITER.

APPENDIX R
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL SEMEN ANALYSIS DATA

SCHEDULED EUTHANASIA - DAYS 121-123

ANIMAL NO.	LEFT CAUDA EPIDIDYMIS (G)	SPERM MOTILITY (%)	SPERM CONCENTRATION (M/ML)	TOTAL SPERM COUNT (M/G)	SPERM MORPHOLOGY (% NORMAL)
GROUP 3: 0.05 MG/KG/DAY					
11767 M	0.32	92	4.1	904.06	100.0
11770 M	0.39	84	8.8	1572.56	87.5
11773 M	0.30	90	5.4	1266.33	83.5
11775 M	0.33	76	3.8	812.42	97.0
11781 M	0.34	50	6.1	1253.53	96.0
11782 M	0.33	74	4.5	952.42	93.0
11783 M	0.37	78	6.3	1217.03	94.5
11785 M	0.30	52	3.6	829.33	71.4
11788 M	0.32	83	6.2	1361.88	91.5
11795 M	0.29	81	4.7	1137.24	93.0
MEAN	0.33	76	5.4	1130.7	90.7
S.D.	0.031	14.3	1.57	250.54	8.26
N	10	10	10	10	10

NOTE: G = GRAMS; M = MILLION; ML = MILLILITER.

APPENDIX R
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL SEMEN ANALYSIS DATA

SCHEDULED EUTHANASIA - DAYS 121-123

ANIMAL NO.	LEFT CAUDA EPIDIDYMIS (G)	SPERM MOTILITY (%)	SPERM CONCENTRATION (M/ML)	TOTAL SPERM COUNT (M/G)	SPERM MORPHOLOGY (% NORMAL)
GROUP 5: 1.0 MG/KG/DAY					
11821 M	0.27	65	4.3	1121.48	90.5
11823 M	0.33	77	4.6	981.82	92.5
11826 M	0.30	38	5.6	1317.67	93.5
11828 M	0.27	0	5.2	1335.56	82.4
11829 M	0.30	71	3.6	835.67	95.5
11833 M	0.31	76	5.7	1287.74	95.5
11834 M	0.35	77	4.2	837.34	93.0
11837 M	0.34	85	7.8	1610.88	94.0
11838 M	0.28	74	4.7	1170.71	97.0
11843 M	0.33	86	3.4	724.55	91.5
MEAN	0.31	65	4.9	1122.3	92.5
S.D.	0.029	26.5	1.27	277.56	4.07
N	10	10	10	10	10

NOTE: G = GRAMS; M = MILLION; ML = MILLILITER.

APPENDIX R
A 90-DAY DRINKING WATER TOXICITY STUDY IN RATS
WITH AMMONIUM PERCHLORATE
INDIVIDUAL SEMEN ANALYSIS DATA

SCHEDULED EUTHANASIA - DAYS 121-123

ANIMAL NO.	LEFT CAUDA EPIDIDYMIS (G)	SPERM MOTILITY (%)	SPERM CONCENTRATION (M/ML)	TOTAL SPERM COUNT (M/G)	SPERM MORPHOLOGY (% NORMAL)
GROUP 6: 10.0 MG/KG/DAY					
11849 M	0.35	93	5.8	1151.43	93.0
11850 M	0.29	76	7.4	1794.48	91.5
11855 M	0.35	86	5.6	1110.86	92.0
11856 M	0.36	73	4.1	793.06	86.5
11864 M	0.17	22	1.3	524.12	18.5
11865 M	0.37	90	5.8	1089.19	97.0
11868 M	0.30	84	4.3	999.00	95.0
11869 M	0.25	87	2.6	717.20	96.5
11874 M	0.30	81	3.3	758.67	93.5
11875 M	0.34	80	5.2	1077.65	92.5
MEAN	0.31	77	4.5	1001.6	85.6
S.D.	0.061	20.3	1.79	347.67	23.76
N	10	10	10	10	10

NOTE: G = GRAMS; M = MILLION; ML = MILLILITER.

APPENDIX S

SLI Personnel Responsibilities

SLI Study No. 3455.1

SLI PERSONNEL RESPONSIBILITIES

Joseph C. Siglin, Ph.D., DABT	Study Director/Director of Toxicology
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