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RHONE-POULENC INC			
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INITIAL SUBMISSION: LETTER FROM RHONE-POULENC INC TO USEPA REGARDING A CERIODAPHNIA DUBIA ACUTE/CHRONIC TOXICITY TEST OF CLARIFLOC C9470 DATED 053194			
Chemical Category			
CLARIFLOC C9470			

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RHÔNE-POULENC INC.

CN 5266, PRINCETON, NJ 08543-5266
TELEPHONE: (908) 297-0100 TELEX: 211056

May 31, 1994



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Washington, DC 20460



88940000296

RE: TSCA §8(e) Notice

Dear Sir or Madam:

Rhône-Poulenc Inc. is providing this notice to the Agency in accordance with the provisions of Section 8(e) of the Toxic Substances Control Act (TSCA). We are submitting the results of a toxicity study on Clarifloc C9470 (inverse emulsion of high molecular weight cationic polyacrylamide).

A *Ceriodaphnia dubia* acute/chronic toxicity test was performed with Clarifloc C9470. The acute, 48-hr. LC50 determined in the study was 0.8 mg/L. A chronic reproduction NOEC of < 10 µg/L and a LOEC of 10 µg/L was also determined.

These toxicities are in the same range as been reported for other hydrolytically stable, high molecular weight cationic polyacrylamides. Much of this data has been presented to the EPA by the Cationic Polymer Flocculants Association and in other submissions.

Cationic polymers are high affinity adsorbents that attach to any negatively charged surface or soluble polyanionic compound. Due to the high affinity for adsorption, cationic polymers are believed to have little effect on aquatic organisms in natural waters.

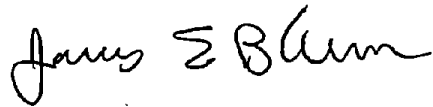
Rhône-Poulenc Inc. hereby asserts that none of the information contained herein is confidential business information (CBI). Should you have any questions, or require any further information, please call (609) 860-3586.



May 31, 1994
TSCA §8(e) Notice
Page 2

Very truly yours,

RHÔNE-POULENC INC.

A handwritten signature in cursive script that reads "James E. Blum".

James E. Blum
Product Safety Compliance Manager

94-049L.EPA

CODING FORMS FOR SRC INDEXING

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BIO-RESEARCH LABS LTD			
Document Title			
SUPPORT: FINAL REPORT FOR A 90-DAY INHALATION NEUROTOXICITY AND TOXICITY STUDY BY EXPOSURE TO A DRY POWDER AEROSOL OF CERIC OXIDE IN THE ALBINO RAT WITH COVER LETTER DATED 013095			
Chemical Category			
CERIC OXIDE			

8EHQ-0295-13054

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RHONE-POULENC INC.
SPECIALTY CHEMICALS DIVISION
CN 7500, CRANBURY, NJ 08512-7500
TELEPHONE (609) 860-4000



8EHQ-94-13054
SP001 02/01/95

January 30, 1995

FEDERAL EXPRESS # 3665214066

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Washington, DC 20460-0001

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RE: 8EHQ-0694-13054

Dear Sir or Madam:

As requested in your followup to a TSCA Section 8(e) notice submitted by Rhone-Poulenc Inc., enclosed is the final report for a 90-day inhalation toxicity study on Ceric Oxide (CAS # 1306-38-3).

The chemical identity/composition of the test material are described in the report and the Certificate of Analysis (Appendix 17).

Should you have any questions, or require any further information, please call (609) 860-3586.

Very truly yours,

RHONE-POULENC, INC.

James E. Blum
Product Safety Compliance Manager

Enc.

JEB: 95-008L.DOC



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TOXICOLOGY REPORT SUMMARY

PRODUCT:	Ceric Oxide
STUDY TITLE:	A 13-Week Inhalation Neurotoxicity and Toxicity Study by Nose-Only Exposure of a Dry Powder Aerosol of Ceric Oxide in the Albino Rat
AUTHOR:	A. Viau
STUDY DATE:	13 April 1994
LABORATORY:	Bio-Research Laboratories, Ltd.
REPORT REF:	Bio No 90831
SUMMARY AUTHOR:	J. Rieth
SIGNED:	<i>J. Rieth</i> 26 September 94

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Ceric oxide was tested via inhalation for 13 weeks (5 days/week, 6 hours/day) in groups of 15 male and female rats at dose levels of 0, 5, 50 and 500 mg/m³. The CeO₂ test material was greater than 99% pure and had a mass median aerodynamic diameter of 2 microns. Animals were examined daily for signs of toxicity, and food consumption and body weights were measured weekly. The animals were examined monthly for potential neurotoxic effects via a functional observational battery and motor activity testing. Laboratory investigations included hematology, clinical biochemistry and urinalysis. Ophthalmoscopy was performed predose and at study termination. A gross pathological exam followed by a detailed histopathologic evaluation were conducted following treatment.

No deaths or clinical signs were recorded that were considered to be effects of treatment. There were no treatment related effects on food consumption, clinical biochemistry or urinalysis.

There were no behavioral effects observed which were associated with exposure to ceric oxide. Ophthalmology was not affected by treatment. The test material was not neurotoxic.

There were no apparent treatment related effects on liver or kidney function, or on reproductive organs.

Although not statistically significant, male body weights were lower in the high dose males than in the controls. This reduction in high dose male body weight gain may have been treatment related.

Statistically significantly higher lung weights were seen in the two highest dose levels in both sexes with apparent trends for higher lung weights encompassing all groups. The lungs in all dose groups were found to have pale areas macroscopically. The histopathological examination of the lung showed pigment accumulation at all dose levels with alveolar hyperplasia at the two highest levels in both sexes.

Treatment related pigment accumulation was observed in the nasal cavity (all treatment groups), bronchi and trachea (high and mid dose animals), and liver and spleen (high dose only).

Bronchial lymph nodes in both sexes were enlarged macroscopically at all dose levels in males and at the two highest dose levels in females. Microscopic findings in the bronchial and other lymph nodes included pigment accumulation and hyperplasia in both sexes at all dose levels. Pigment accumulation and metaplasia were observed in the larynx of animals in all treatment groups.

Higher segmented neutrophil counts were observed in all dose levels for females and the two highest dose levels for males.

The treatment related observations listed above are considered to be indications of varying levels of exposure to ceric oxide via inhalation. The findings are not considered to be evidence of direct toxicity, but rather demonstrate that the normal lung clearance mechanisms were overwhelmed by the high levels of exposure. Following ceric oxide deposition in the deep lung, the normal physiological responses of macrophage infiltration and lymphatic involvement were observed. A No-Observed-Effect-Level was not established in this study. It is probable that the observed findings would be reversible following an appropriate recovery period.

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BIO-RESEARCH LABORATORIES LTD.

STUDY TITLE

A 13-WEEK INHALATION TOXICITY AND NEUROTOXICITY STUDY
BY NOSE-ONLY EXPOSURE OF A DRY POWDER AEROSOL
OF CERIC OXIDE IN THE ALBINO RAT

VOLUME I

SPONSOR

Rhône-Poulenc Canada Inc.
2000 Argentia Road
Plaza 3, Suite 400
Mississauga, Ontario
Canada L5N 1V9

DATA REQUIREMENTS

United States EPA/TSCA (40 CFR Part 792).
Japanese MHW GLP Regulations (Notification No. 313 and revised rule Notification No. 870)
OECD guidelines No. 413

AUTHOR

A. Viau, B.Sc.
Study Director

STUDY COMPLETED ON

September 29, 1994

PERFORMING LABORATORY

Bio-Research Laboratories Ltd.
87 Senneville Road
Senneville, Quebec
Canada H9X 3R3

LABORATORY PROJECT ID

90831

PAGE 1 OF 1352 PAGES

MONTREAL

87 Senneville Rd., Senneville, Quebec H9X 3R3, Canada
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PROJECT NO. 90831

BIO-RESEARCH LABORATORIES LTD.
STATEMENT OF NO DATA CONFIDENTIALITY CLAIM

No claim of confidentiality is made for any information contained in this study on the basis of its falling within the scope of EPA/TSCA §10(d)(1)(A), (B) or (C), Japanese MHW Good Laboratory Practice Regulations (Notification No. 313 and subsequent revised rule Notification No. 870) and OECD guidelines (No. 413).

Company: _____

Company Agent: _____ Date: _____

Title: _____

Signature: _____

MONTREAL

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Tel: (514) 630-8200 - Cable: BIOCAN Fax: (514) 457-3883



PROJECT NO. 90831



BIO-RESEARCH LABORATORIES LTD.
GOOD LABORATORY PRACTICE COMPLIANCE STATEMENT

This study complies with the Good Laboratory Practice Regulations of the United States EPA/TSCA (40 CFR Part 792), Japanese MHW Good Laboratory Practice Regulations (Notification No. 313 and subsequent revised rule Notification No. 870) and OECD guidelines (No. 413) with the following exceptions:

1. The diet used on this study, namely PMI Certified Rodent Chow 5002: PMI Feeds, Inc., is not analyzed in accordance with EPA/TSCA GLP Standards, but rather with FDA GMP Standards.
2. Analysis of the gravimetric samples performed by Rhône-Poulenc at their laboratories (ISO 9002 Certified) is not analyzed in accordance with EPA/TSCA GLP Standards.

Submitter: _____ Date: _____

Sponsor's Monitor: JKR Date: 30 September 94

Joseph P. Rieth, Ph.D., D.A.B.T.
Senior Toxicologist
Rhône-Poulenc
P.O. Box 12014, 2 T.W. Alexander Drive
Research Triangle Park, North Carolina
U.S.A. 27709

Study Director: [Signature] Date: September 29, 1994

A. Viau, B.Sc.
Study Director
Senior Research Scientist,
Inhalation Toxicology
Toxicology Division
Bio-Research Laboratories Ltd.

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Tel: (514) 630-8200 Cable: BIOCAN Fax: (514) 457-3883





BIO-RESEARCH LABORATORIES LTD.
A 13-WEEK INHALATION TOXICITY AND NEUROTOXICITY STUDY
BY NOSE-ONLY EXPOSURE OF A DRY POWDER AEROSOL
OF CERIC OXIDE IN THE ALBINO RAT

This research was conducted at Bio-Research Laboratories Ltd. in compliance with the Good Laboratory Practice Regulations of the United States EPA/TSCA (40 CFR Part 792), Japanese MHW Good Laboratory Practice Regulations (Notification No. 313 and subsequent revised rule Notification No. 870) and OECD guidelines (No. 413). The study was performed under the direction of:

A. Viau, B.Sc.
Study Director
Senior Research Scientist, Inhalation Toxicology
Toxicology Division
Bio-Research Laboratories Ltd.

September 29, 1994

Date

With contributions from:

C.J. Perkin, B.Sc., D.A.B.T.
Director, Scientific Operations
Toxicology Division

W. Evering, D.V.M., Ph. D.,
Diplomate A.C.V.P.
Staff Pathologist

Y. Deschamps, Ph.D.
Director, Clinical Laboratories

C. Beaudry, D.V.M.
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Ophthalmologist

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Tel: (514) 630-8200 Cable: BIOCAN Fax: (514) 457-3883



PROJECT NO. 90831



BIO-RESEARCH LABORATORIES LTD.

**A 13-WEEK INHALATION TOXICITY AND NEUROTOXICITY STUDY
BY NOSE-ONLY EXPOSURE OF A DRY POWDER AEROSOL
OF CERIC OXIDE IN THE ALBINO RAT**

This report has been reviewed by:

A handwritten signature in black ink, appearing to read "C. Banks", written over a horizontal line.

C.M. Banks, B.Sc., D.A.B.T.
Scientific Director, Inhalation Toxicology
Toxicology Division
Bio-Research Laboratories Ltd.

29 September 1994
Date

A handwritten signature in black ink, appearing to read "G. Lulham", written over a horizontal line.

G.W. Lulham, M.Sc.
Director, Toxicology
Toxicology Division
Bio-Research Laboratories Ltd.

29 September 1994
Date

MONTREAL

87 Senneville Rd., Senneville, Quebec H9X 3R3, Canada
Tel: (514) 630-8200 Cable: BIOCAN Fax: (514) 457-3883

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SUMMARY

Four groups of Sprague-Dawley CD rats, each containing 15 males and 15 females, were exposed by nose-only inhalation to air (Group 1) or to a dry powder aerosol of Ceric Oxide (Groups 2, 3 and 4) for 6 hours a day, 5 days a week for 13 weeks.

The mean gravimetric chamber concentration, the mass median aerodynamic diameter and geometric standard deviation (MMAD \pm GSD) and size below which there were 25% of the particles by mass for treated Groups 2, 3 and 4, were as follows:

<u>Group/ Gravimetric conc.</u>	<u>MMAD \pm GSD (μm)</u>	<u>25% Particle Size (μm)</u>
2♂ 0.0050 mg/L	1.9 \pm 1.9	1.3
2♀ 0.0050 mg/L	1.8 \pm 1.9	1.2
3♂ 0.0505 mg/L	2.0 \pm 1.9	1.3
3♀ 0.0505 mg/L	2.0 \pm 1.9	1.3
4♂ 0.5082 mg/L	2.2 \pm 1.8	1.5
4♀ 0.5068 mg/L	2.2 \pm 1.8	1.5

All animals were examined twice daily for mortality and morbidity. Also, each animal was examined before, during and after exposure, for any overt signs of reaction to treatment. Body weight and food consumption were measured for each animal weekly, commencing on the day of randomization, and extending through the treatment period. In addition, each animal was weighed on days of behavioral testing and immediately before sacrifice at study termination. A Functional Observational Battery (FOB) was performed on all animals prior to commencement of treatment, on Day 1 (post-dosing) and once during each of Weeks 4, 8 and 13. Activity levels were tested prior to commencement of treatment, and during Weeks 4, 8 and 13. Laboratory investigations (hematology, clinical biochemistry and urinalysis) were performed in Week 6 and on all surviving animals at study termination. Ophthalmological examination was performed on all animals prior to commencement of treatment and on Groups 1 and 4 at study termination. A gross pathological examination was performed and selected tissues were weighed and retained for histopathological evaluation.

There was one death observed during the study. One high dose male was found dead at the end of treatment on Day 72 and was turned around in its restraining cone. The death was considered not to be treatment related but associated with the exposure procedure.

No clinical signs were recorded that were considered related to treatment with ceric oxide.

The overall body weight gain and food consumption of Group 4 was marginally inferior to that of the controls and was considered related to treatment with ceric oxide.

There were no intergroup differences suggestive of toxicity of ceric oxide on ophthalmology, clinical biochemistry or urinalysis.

Treatment related effects in hematology were observed as higher segmented neutrophil counts in Group 2 females and Groups 3 and 4 of both sexes at 6 and 13 weeks.

No behavioral changes following either acute or subchronic exposure and no significant differences for motor activity counts were observed in the treated groups.

A trend for higher lung weights of males and females from Groups 2, 3 and 4, and higher spleen weights of males from Group 4, were considered to be related to treatment with ceric oxide.

Macroscopically, pertinent changes were recorded in the lungs such as discoloration or pale areas (30 each in Groups 3 and 4), pale foci (4 animals in Group 2) and uncollapsed parenchyma (30 in Group 4 and 2 in Group 3). In addition, enlargement and/or pale discoloration of the bronchial lymph nodes (30 in Groups 3 and 4, and 28 in Group 2) and mediastinal (20 in Group 4, 18 in Group 3, 12 in Group 2 and 1 in Group 1) and pancreatic lymph nodes (3 in Group 1, 1 each in Groups 3 and 4) were primarily evident in animals treated with ceric oxide and considered to be induced by the test material. The above observations were considered to be effects of treatment with ceric oxide.

Histopathologically, pigment accumulation and/or alveolar epithelial/lymphoid hyperplasia in the lungs (30 each in Groups 2, 3 and 4), lymphoid hyperplasia of the bronchial (30 each in Groups 3 and 4, 24 in Group 2), mediastinal (18 each in Groups 3 and 4, 12 in Group 2) and pancreatic (1 in Group 3) lymph nodes, metaplasia and/or pigment accumulation in the larynx (22 in Group 4, 16 in Group 3 and 9 in Group 2), and pigment accumulation in the bronchial lymph node (30 each in Groups 3 and 4, and 27 in Group 2), nasal cavity (30 in Group 4, 26 in Group 3 and 15 in Group 2), bronchi (30 in Group 4, 9 in Group 3 and 1 in Group 2), trachea (28 in Group 4, 2 in Group 3), mediastinal lymph node (18 in Group 4, 17 in Group 3 and 12 in Group 2), liver (11 in Group 4), mandibular lymph node (12 in Group 4), spleen (9 in Group 4) and pancreatic lymph node (1 each in Groups 3 and 4) were considered to be induced by the test material.

In conclusion, nose-only inhalation exposure of Sprague-Dawley CD rats to ceric oxide dry powder aerosol was performed 6 hours daily, 5 days a week over 13 weeks at concentrations 0.0050, 0.0505 and 0.5075 mg/L. An overall no-effect level cannot be established based on marginally reduced body weight gains recorded in Group 4 animals, as well as other changes recorded in treated groups and including increased segmented neutrophil counts, higher lung and spleen weights, discoloration of the lungs and discoloration/enlargement of lymph nodes. Histopathologically, pigmented material accumulation in the lungs, bronchial, mandibular and mediastinal or pancreatic lymph nodes, trachea, bronchi, larynx, nasal cavity, liver and spleen, as well as alveolar epithelial hyperplasia (lungs), metaplasia (larynx) and lymphoid hyperplasia (bronchial and mediastinal or pancreatic lymph nodes, lungs) were seen in all treated groups. Systemic dissemination of the test article was evident in Group 4 animals.

INTRODUCTION

The purpose of this study was to investigate the potential toxicity of a powder aerosol of ceric oxide (CeO_2) during daily inhalation administration to the rat for a minimum of 13 consecutive weeks (5 days a week).

The rat was selected as the test system since it is an accepted rodent species for use in inhalation toxicity and neurotoxicity studies.

Inhalation was selected as the route of administration since it is a possible route of exposure in humans.

The dose levels were selected according to the potential human exposure (TLV of 5 mg/m^3 for respirable nuisance dusts) and existing toxicity data and by taking into consideration the limitations imposed by the exposure apparatus and procedure, as well as the stability of the experimental atmosphere.

This study was conducted at Bio-Research Laboratories Ltd., 87 Senneville Road, Senneville, Quebec, Canada, H9X 3R3, in accordance with the Good Laboratory Practice Regulations of the United States EPA/TSCA (40 CFR Part 792), Japanese MHW Good Laboratory Practice Regulations (Notification No. 313 and subsequent revised rule Notification No. 870) and OECD guidelines (No. 413). The study was initiated on August 6, 1993 (date the protocol was signed by the study director).

Dosing of animals took place on September 13 to December 10, 1993, for males and September 20 to December 17, 1993 for females and terminal necropsies were conducted on December 13 and 20, 1993 for males and females, respectively. The study was completed on the date appearing on the signature page.

A calendar of events documenting the major study events can be found in Table 1.

EXPERIMENTAL PROCEDURES

1. TEST SYSTEM

Eighty-four male and 85 female Sprague-Dawley CD (CrI:CD®(SD)BR) rats were received from Charles River Canada Inc., St. Constant, Quebec, Canada, on August 31, 1993.

Shortly after arrival, each animal was subjected to a general physical examination by a qualified member of the veterinary staff to ensure "normal" health status.

At the start of treatment, animals were approximately seven weeks of age with body weight ranges of 206 to 270 g for males and 135 to 179 g for females. Although the body weight range was slightly lower than specified in the protocol, this deviation was not considered to have influenced the outcome of the study.

All animals were uniquely identified by the AIMS tail tattoo system. Although the protocol states health screen animals will be identified by means of a standard system of ear notching, this deviation was not considered to have influenced the outcome of the study.

1.1 Assignment to Dosage Groups

An acclimation period of approximately 2 weeks (for males) and 3 weeks (for females) was allowed between animal receipt and the start of treatment in order to acclimate the rats to the laboratory environment. Although the females were acclimated for a longer period than specified in the protocol, this deviation was not considered to have influenced the outcome of the study. Treatment of males and females was staggered by one week for logistical reasons.

Before the assignment of animals to treatment groups, 10 male and 10 female rats were selected from the total population using computer generated random numbers for the provision of blood samples, urine samples and gross pathology examination for health-screen purposes. The results of these investigations were available prior to the commencement of treatment.

Approximately one week before treatment of the males commenced, all animals were weighed and assigned to treatment groups using a computer-based randomization procedure which ensured homogeneity of group means and variances for body weight. Males and females were randomized separately. Rats in poor health or at the extremes of the body weight range were not assigned to treatment groups.

The animals were randomized into the following groups:

<u>Group No/ Identification</u>	<u>Target Exposure Level (mg/L)</u>	<u>Animal Numbers</u>	
		<u>Males</u>	<u>Females</u>
1 Air control	0	1001-1015	1501-1515
2 Ceric oxide - Low dose	0.005	2001-2015	2501-2515
3 Ceric oxide - Intermediate dose	0.05	3001-3015	3501-3515
4 Ceric oxide - High dose	0.5	4001-4015	4501-4515

All remaining spare animals not assigned to a dose group were released from the study to Bio-Research's spare colony two weeks after the start of treatment for all animals.

1.2 Housing

Animals were individually housed in stainless-steel wire mesh-bottomed cages equipped with an automatic watering valve. All cages were clearly labeled with a color-coded card indicating project, group and animal numbers, sex and dosage level.

The animal room environment and photoperiod were controlled (targeted conditions: 12 to 15 air changes per hour, temperature $22 \pm 3^{\circ}\text{C}$, humidity $50 \pm 20\%$, 12 hours light, 12 hours dark). Although relative humidity was occasionally lower than the prescribed range, this deviation was of short duration and was considered not to have influenced the outcome of the study.

1.3 Diet and Water

All animals had access to a standard certified commercial laboratory diet (PMI Certified Rodent Chow 5002; PMI Feeds, Inc.) except during exposure, urinalysis, prior to bleeding and prior to necropsy. Animals were also provided with tap water ad libitum (except during exposure) which had been softened, purified by reverse osmosis and sterilized by ultraviolet light.

Maximum allowable concentrations of contaminants in the diet (e.g., heavy metals, aflatoxins, organophosphates, chlorinated hydrocarbons and PCBs) are controlled and routinely analyzed by the manufacturer (see Appendix 15).

Periodic analysis of the water was subcontracted to management authorized analytical laboratories which were audited by the Quality Assurance Department of Bio-Research Laboratories Ltd. The analytical results are retained in the archives of Bio-Research Laboratories Ltd. (see Appendix 16).

It was considered that there were no known contaminants in the dietary materials or water that could influence the toxicity of the test article.

2. TEST ARTICLE

2.1 Test Article Identification

Identity	Ceric oxide (CeO ₂)
CAS Nos.	1306-38-3
Storage	Out of direct light, room temperature
Supplier	Rhône-Poulenc, Inc. 481 Doremus Avenue Newark, NJ 07105 U.S.A.

A shipment of 20 kg of test article was received on August 3, 1993. The test article was a white powder and was supplied in plastic drum. The container was labeled with project number, identity and lot number, expiration date, handling precautions and storage conditions.

A log book was maintained indicating where and when individual test article containers were used. Handling of the test article was performed while wearing a lab coat, gloves, dust mask and goggles or safety glasses with side shields.

A portion of this material was used on this study. With the exception of an archive sample, all test article remaining following completion of studies with CeO₂ has been returned to the Sponsor.

2.2 Test Article Analyses

The test article was characterized by the Sponsor. A test article Certificate of Analysis is presented in Appendix 17. Stability of the test compound over the duration of the study was demonstrated by the chemical analysis of the gravimetric filters performed by the Sponsor and is presented in Appendix 19. Although the samples sent before and after the treatment to the Sponsor were not used to assess the stability of the test article as specified in the protocol, this deviation was not considered to have influenced the outcome of the study.

3. INHALATION EXPOSURE EQUIPMENT

An illustration of the experimental apparatus is found in Figure 2.

Four standard stainless-steel cylindrical "flow-through" nose-only inhalation chambers (chamber volume approximately 80.6 L) were utilized in this experiment (Source: Mobec Inc., Montréal, Canada). The body of each chamber had 40 separate ports in two separate rows into which could be inserted the conical front section of a polycarbonate animal restraint cone (Source: M & M Tool Makers, Montréal, Canada). The top section of the inhalation chamber had an opening for inlet air into which the test article could be introduced. The bottom section of the chamber had a corresponding air extraction port and a drain valve for cleaning. The chamber was mounted on a transport cart such that the chamber could be easily rotated. The chambers were operated under slight negative pressure to prevent outward leakage of the test atmospheres.

The cones which served to restrain individual rats were custom-molded polycarbonate tubes of three different sizes which could accommodate weanling rats, young adults and adult rats. One end of the cone is tapered to approximately fit the shape of the rat's head and the diameter of the cylindrical portion of the cone is such that it is difficult for the rat to turn in the cone. The back portion of the cone is sealed with a plastic cap. The cone containing the rat is fastened to the inhalation chamber by means of a bracket with the nose portion of the cone protruding through a gasket into the chamber. This permits the rat to inhale the test or control atmospheres within the inhalation chamber without otherwise coming in contact with the atmosphere.

During the acclimation period, the rats were conditioned to the laboratory setting and restraint cones. The rats were acclimated to the restraint cones over a period of at least 3 days.

The flow rate through the inhalation chamber was set at a level determined in preliminary work to be adequate to maintain a chamber environment of 20-24°C, 30-70% relative humidity and at least 19% O₂ (prior to test article introduction) and at least 10 air changes/hour with the present animal load. A Sihi low-pressure vacuum pump (Source: Sihi Pumps Ltd., Ontario, Canada) was used to exhaust the inhalation chamber at the required flow rate and draw the contaminated air through a purifying system.

The inhalation chamber and test article generation system for the test groups were contained within separate ventilated walk-in fumehoods to prevent possible contamination of the room air with trace amounts of the test article.

3.1 Generation of Test Atmosphere

The test atmospheres were generated by a Venturi T-section. The Venturi T-sections were operated using predried compressed air obtained from the laboratory compressed air supply. Each Venturi T-section was placed in the inlet of the tangential top of the inhalation chamber such that the output from the T-section was into the chamber. A fixed powder feed nozzle, connected to the feed side of the T-section, was supplied with the test material via a linear powder feed track which contained the test material in a central channel. The powder feeding track was pulled past the aspiration nozzle by means of an electronic peristaltic pump. The rate at which the T-section was supplied with powder (and hence the concentration in the exposure chamber) was controlled by adjusting the rate which the track passed beneath the feed nozzle as well as the size of the central channel of the track. The generation device was custom-built at these laboratories.

3.2 Exposure Procedures

The rats were subjected to "nose-only" exposure for six hours a day, 5 days each week for a minimum of 13 weeks. For each test group, time zero, the time at which animals were placed on the chamber, was defined as that point in time at which approximately 95% of the desired concentration of test article has been established within the chamber. Flow rate through the chamber was calculated to yield a t_{95} (the time required to build up 95% of the target concentration) of no more than approximately 5 minutes. The t_{95} and t_{05} (the time to decay to 5% of the established concentration) were calculated and were equal to 2.4 minutes.

During exposure, aerosol was actively generated for at least 365 minutes (for at least the duration of the t_{95} plus 360 minutes). Following a minimum of 365 minutes of continuous operation, aerosol generation was stopped, and the chamber concentration allowed to decay for the calculated

t₀₅. The rats were removed from the exposure chamber when the generator was stopped and were returned to their home cages.

3.3 Absorption of the Test Article

It was not the intention of this study to investigate the absorption of the test article.

4. MONITORING OF EXPERIMENTAL ATMOSPHERES

4.1 Prestudy Chamber Atmosphere Validation

Prior to the start of treatment, calibration work using the test article was performed in an attempt to attain an exposure atmosphere with total gravimetric aerosol concentrations of 0.005, 0.05 and 0.5 mg/L. The particle size distribution with its mass median aerodynamic diameter and standard deviation (MMAD \pm GSD) of the test article was used as received at the request of the Sponsor.

The homogeneity of chamber atmosphere distribution was evaluated for the low and high dose test article chambers. Three ports were sampled in sequence on the top and bottom animal levels of the chamber in duplicate. The overall mean and standard deviation was 0.0052 mg/L \pm 0.00068 and 0.4982 \pm 0.04330 for Groups 2 and 4, respectively. This represented a coefficient of variance of 13.08% and 8.69% for Groups 2 and 4, respectively, which was considered acceptable.

4.2 Chamber Concentrations

Gravimetric aerosol concentrations were measured hourly using vertically oriented open-faced glass fiber filters (Source: Gelman Sciences, Inc., Montréal, Canada). The sampling apparatus was placed slightly inside the chamber situated at the animal breathing zone, air was drawn across the filter using an airflow ranging from 4 to 38 LPM. Weights of samples that varied by 20% or more from samples previously obtained on this study were repeated immediately. Each test atmosphere was continually monitored throughout the exposure period by a precalibrated real-time aerosol monitor (RAM-S, Source: MIE, Inc., Billerica, MA, U.S.A.) to provide instantaneous qualitative feedback on temporal atmosphere concentration stability. The RAM-S is a compact self-contained aerosol sensor. An air sample from the exposure chamber is continuously drawn through the sensing zone of the RAM-S in which particles are detected. The signal is then processed into a voltage output and recorded continuously on a stripchart. Filters from the second day of treatment, and monthly thereafter were forwarded to the Sponsor for chemical analysis. Raw data relevant to these analyses are retained by the Sponsor. The results of these analyses are provided in Appendix 19.

Nominal chamber concentrations of the test article in the exposure chamber were determined by dividing the amount of CeO₂ powder used by the total volume of air passing through the chamber during the generation period.

4.3 Particle Size Analysis

Particle size distribution analysis was performed weekly during treatment from each test chamber using an Andersen 1 ACFM cascade impactor (Andersen Samplers Incorporated, Atlanta, Georgia, U.S.A.) operated at a flow rate of 28.3 L/min. The method used consisted of a classification into a series of size ranges followed by gravimetric analysis.

The 5, 10, 15, 20, 25, 30, 40, 50, 60, 70, 80 and 90% collections of mass with the estimated particle size were determined by means of a straight line of "best fit" connecting three particle size distribution points (the 16, 50 and 84% collections of mass generated by a computer program based on the Andersen Operating Manual TR# 76-900016 [January 1979 revision]) which had been plotted on log-probability paper with the particle size as the y-axis and the percent size by mass as the x-axis.

4.4 Chamber Conditions

Chamber airflow, temperature and relative humidity were recorded hourly during the exposure period.

5. OBSERVATIONS

Dated and signed records of activities relating to the day-to-day running and maintenance of the study within the animal room as well as the activities relating to the observations and examinations outlined in the protocol were recorded in a Room Maintenance Log and Project Log Book.

5.1 Clinical Examinations

All animals were examined within the cage twice daily for mortality and morbidity. Each animal was also examined outside of its cage before and after exposure for signs of reaction to treatment. Animals were examined hourly during exposure for any overt signs of reaction to treatment. A complete examination for clinical signs was performed weekly. Additional examinations were performed when required. Mortalities and observed clinical signs were individually recorded.

5.2 Body Weight

Body weights were measured for each animal weekly, commencing on the day of randomization and extending through the treatment period. In addition, each animal was weighed on days of behavioral testing and immediately before sacrifice at necropsy.

5.3 Food Consumption

Individual food consumption was measured weekly commencing the day of randomization and extending through the treatment period.

5.4 Functional Observational Battery (FOB)

All animals were tested prior to commencement of treatment, on Day 1 (post-dosing) and once during each of Weeks 4, 8 and 13. Testing of these time points allowed the FOB to be evaluated following acute and subchronic scenarios. Testing was performed by the same trained technicians, wherever possible, who were unaware of the animal's previous treatment and group assignment. This was possible by identifying individual rats by their arrival numbers only tattooed on the tail. In addition, cages were identified by arrival number only during the conduct of the FOB.

The functional observational battery was performed with equipment built for this purpose. The arena was a 2 feet square of plexiglass placed on a raised platform. The tests were conducted in the room housing the animals and temperature, humidity and photoperiod were monitored. Odors in the room were minimized by maintaining adequate air changes and cleaning of equipment, as necessary.

5.4.1 Qualitative

5.4.1.1 Observations in Home Cage

body position
tremors
twitches
convulsions
bizarre/stereotypic behavior

5.4.1.2 Removal from Home Cage

ease of removal
vocalization

5.4.1.3 Observations in Arena

rearing
ataxic
hypotonic and impaired gait
overall gait incapacity
bizarre/stereotypic behavior
palpebral closure
tremors
twitches,
convulsions
piloerection
respiratory rate/pattern
locomotor activity level
arousal
grooming
defecation
urination
olfactory response

5.4.1.4 Handling Observations

lacrimation
pupil size
salivation
urinary staining
diarrhea
body and abdominal tones
extensor thrust
corneal reflex
pinna reflex
toe and tail pinch
visual placing

5.4.1.5 On Surface

auricular startle
air righting reflex

5.4.1.6 On Top of Box

positional passivity

5.4.2 Quantitative

5.4.2.1 Grip Strength

Before the start of testing and following completion of testing on each day, the Chatillon strain gauges were checked using calibration weights and the readings recorded.

5.4.2.1.1 Forelimb

The dial on the gauge was set to "0". The rat was held by the body and/or tail and allowed to grip the mesh, and then was pulled slowly and steadily until it released its grip. Maximum strain was recorded two times, alternating with hindlimb grip testing.

5.4.2.1.2 Hindlimb

The dial on the gauge was set to "0". The rat was allowed to set its hindpaws against the mesh and was pulled backward by the base of the tail until it released its grip. The maximum strain was recorded two times alternating with forelimb grip testing.

5.4.2.2 Hindlimb Splay

Landing foot spread was measured by inking the hind feet of the rat. Hindlimb splay was recorded twice. The ink was wiped off the feet after testing using a paper towel dampened with water.

5.4.2.3 Body Temperature

The rectal probe was inserted and the reading was allowed to stabilize after which the temperature was recorded.

5.5 Motor Activity

Following the FOB assessments the animals were transferred to a testing room where activity levels were measured individually in figure 8 enclosures. Animals were tested prior to commencement of treatment, and during Weeks 4, 8 and 13. Animals from the control and treated groups were balanced across enclosures, where possible, using a preassigned distribution. The sessions were of 1-hour duration and activity counts were recorded by a microcomputer in 6 successive 10-minute intervals.

In the testing room, temperature and humidity were monitored and a background sound level of approximately 70 dBA and an illumination of approximately 1000-1200 Lux maintained throughout testing. Light levels in the testing room were measured before the start of testing and following completion of testing on each day. The sound level was recorded on a continuous basis throughout testing on each day.

In addition to the "diagnostic" function in the system, a check of each beam was made by manually "breaking" each beam a predetermined number of times and verifying that the "breaks" were properly recorded. These checks were made at least prior to the start of testing and at the completion of testing on each day.

5.6 Ophthalmology

Funduscopy (indirect ophthalmoscopy) and biomicroscopic (slit lamp) examinations were performed on all animals prior to commencement of treatment and during the last week of treatment on animals in the high dose and control groups. No changes in the eye were detected following treatment, therefore, animals in the low and intermediate groups were not examined.

5.7 Laboratory Investigations

Prior to commencement of treatment, laboratory investigations (hematology, clinical biochemistry and urinalysis) were performed on the 10 male and 10 female "health screen" animals.

Hematology and biochemistry were performed in Week 6 and on all surviving animals at study termination (at necropsy). Food was removed overnight from animals to be sampled for hematology and biochemistry. Blood samples were collected from the tail vein in Week 6 and from the abdominal aorta at necropsy.

Urine samples were collected in Weeks 6 and 13 (after the final FOB assessment) from individual animals placed in metabolism cages overnight (approximately 16-hour collection period) during which time they were deprived of food.

5.7.1 Hematology (using EDTA or Citrate * as anticoagulant)

Parameters examined:

red blood cell count
hemoglobin
hematocrit
erythrocyte indices (calculated: MCV, MCH, MCHC and RDW)
platelet count
mean platelet volume (MPV)
white blood cell count (total and differential)
prothrombin time (PT) *
blood cell morphology

5.7.2 Clinical Biochemistry (using no anticoagulant)

Parameters examined:

alkaline phosphatase (ALP)
alanine amino-transferase (ALT)
aspartate amino-transferase (AST)
total bilirubin
cholesterol
triglycerides
glucose
blood urea nitrogen (BUN)
creatinine
total protein
albumin
globulin (calculated)
A/G ratio (calculated)
sodium
chloride
potassium
calcium
inorganic phosphorus

5.7.3 Urinalysis

Parameters examined:

color and appearance
pH
glucose
ketones
blood (hemoglobin)
volume
specific gravity
bile pigment (bilirubin)
urobilinogen

protein
nitrite
microscopy of centrifuged deposit

6. TERMINAL PROCEDURES

6.1 Gross Pathology

Prior to commencement of treatment, 10 male and 10 female "health screen" animals were sacrificed by exsanguination from the abdominal aorta following anesthesia by intraperitoneal injection of sodium pentobarbital and blood sample collection. These animals were subjected to external and internal gross examination.

Animal No. 4001, found dead during the study, was subjected to necropsy and tissue samples were preserved.

All terminally sacrificed animals were killed by exsanguination from the abdominal aorta following induction of anesthesia by intraperitoneal injection of sodium pentobarbital. Animals were fasted overnight prior to scheduled kill and weighed before sacrifice. All males and females were killed on their respective necropsy day.

For all animals, necropsy consisted of an external examination, including identification of all clinically recorded lesions, as well as a detailed internal examination under the supervision of a pathologist.

6.2 Organ Weight Assessment

For all animals sacrificed at the scheduled termination of the study, the following organs were dissected free of fat and weighed:

adrenals
brain
heart
kidneys
liver
lungs
ovaries/testes
pituitary
prostate
spleen
thymus
thyroid lobes and parathyroids (lobes weighed together)
uterus

Paired organs were weighed together. Organ weights relative to both body and brain weights were calculated.

6.3 Tissue Preservation

On completion of the gross pathology examination the following tissues were retained and preserved, using neutral buffered 10% formalin unless otherwise indicated:

- abnormalities
- animal identification
- adrenals
- aorta (thoracic)
- ** bone and marrow (sternum)
- brain (3 levels)
- bronchi
- cecum
- colon
- duodenum
- * epididymides
- esophagus
- * eyes
- femur
- heart (including section of aorta)
- ileum
- jejunum
- kidneys
- larynx
- liver (sample of 2 lobes)
- ++ lungs (all lobes)
- lymph nodes (bronchial, mandibular and mesenteric)
- + mammary gland (inguinal)
- ** nasal cavities and sinuses (4 levels)
- *+ optic nerves
- ovaries
- pancreas
- pharynx
- pituitary
- prostate
- rectum
- salivary gland (submandibular)
- sciatic nerve
- seminal vesicles
- skeletal muscle
- skin (inguinal)
- spinal cord (cervical)
- spleen
- stomach
- * testes
- thymus
- + thyroid lobes (and parathyroids)
- tongue

trachea
urinary bladder
uterus (and cervix)
vagina

- * Fixed in Zenker's fluid (sacrificed animals only).
- ** Decalcified prior to sectioning.
- + Examined histopathologically only if present in routine sections of eyes (optic nerves), thyroid lobes (parathyroids), or skin (mammary gland).
- ++ Lungs were infused with neutral buffered 10% formalin (sacrificed animals only).
- * Retained but not processed.

For all sacrificed animals, three femoral bone marrow smears were prepared and stained with May-Grünwald-Giemsa but in the absence of hematological or pathological findings were not evaluated.

Additional tissue samples were taken at the discretion of the supervising pathologist to elucidate abnormal findings.

Femur samples were not retained for males and 9 females due to technical oversight. This is not considered to have interfered with the purpose of this study since femur samples were not intended to be evaluated on this study.

6.4 Histopathology

Tissues listed above from animals in Groups 1 and 4, animals that died prematurely, and respiratory tissues (lungs, larynx, pharynx, bronchi, trachea and nasal cavity and sinuses) and all gross lesions from animals in Groups 2 and 3 were prepared for histopathological examination by embedding in paraffin wax, sectioning and staining with hematoxylin and eosin and examined microscopically.

A peer review of the Study Pathologist's initial histopathology findings was conducted by Experimental Pathology Laboratories, Inc. (EPL). The technical approach which was followed during the review is summarized as follows: Reexamination of all slides from three of the animals of each sex in the control group and nine of the animals of each sex in the high dose group selected randomly. Reexamination of potential target organs tissues from all animals in all groups for specific toxicologic endpoints to verify the probable "no observed effect level". Potential target organs reviewed for males and females are listed below:

Lungs
Bronchus
Lymph nodes (bronchial, mediastinal, pancreatic and mandibular)
Nose
Larynx
Trachea
Spleen
Liver

Following the review of the microscopic changes initially reported by the Study Pathologist, the results were discussed and agreement was achieved on the appropriate terminology and diagnoses

to be used to describe the changes which were present. The diagnoses in the Study Pathologist's final report reflect the consensus diagnoses which were agreed upon by both the Study Pathologist and the Reviewing Pathologist.

7. STATISTICS

Numerical data obtained during the conduct of the study were subjected to calculation of group mean values with standard deviations. The data were analyzed for homogeneity of variance using Bartlett's test (FOB count data was transformed before analysis).

Homogeneous data were analyzed using Analysis of Variance and the significance of differences between the control and treated groups was assessed using Dunnett's 't' test. Heterogeneous data were analyzed using Kruskal-Wallis test and the significance of differences between the control and treated groups was assessed using Dunn's test.

Motor activity counts were analyzed using repeat measures analysis and graphical presentation of the data was made.

Where appropriate, frequency data, gross pathology and histopathology findings were analyzed by comparing the control group to the tested groups using Fisher's exact probability test.

8. QUALITY ASSURANCE

The Quality Assurance Department of Bio-Research Laboratories Ltd. undertook and documented inspections and audits of critical aspects of the study during its conduct at Bio-Research Laboratories Ltd., and audited the study report. Data audits were conducted according to MIL-STANDARD 105D, where appropriate.

The Quality Assurance Statement is presented on Pages 38 and 39.

9. ARCHIVES

All data (except for results of chemical analysis of gravimetric filters sent to the Sponsor), a sample of the test article, copies of the raw data from the chemical analysis of the gravimetric samples performed by the Sponsor, together with the original copy of the protocol, amendments and final report, have been retained in the scientific archives of Bio-Research Laboratories Ltd.

It is the responsibility of the Sponsor to archive all raw data generated during gravimetric sample analysis.

RESULTS AND DISCUSSION

1. Achieved Chamber Conditions (Table Nos. 2 to 5)

The mean achieved test article chamber concentration, mass median aerodynamic diameter and geometric standard deviation (MMAD \pm GSD), the particle size below which there were 25% of the particles by mass and nominal concentration, were as follows:

Group No.	Concentration (mg/L)		MMAD \pm GSD (μ m)	Particle Size for 25% of mass (μ m)	Nominal (mg/L)
	Target	Achieved			
2♂	0.005	0.0050	1.9 \pm 1.9	1.3	0.06
2♀	0.005	0.0050	1.8 \pm 1.9	1.2	0.06
3♂	0.05	0.0505	2.0 \pm 1.9	1.3	0.27
3♀	0.05	0.0505	2.0 \pm 1.9	1.3	0.27
4♂	0.5	0.5082	2.2 \pm 1.8	1.5	2.50
4♀	0.5	0.5068	2.2 \pm 1.8	1.5	2.50

Gravimetric samples taken from the air control group (Group 1) revealed on a few occasions chamber concentrations ranging from 0.0001 mg/L to 0.0006 mg/L and on one sampling occasion 0.0014 mg/L. Based on the small amounts recorded and the low frequency of occurrence, contamination was suspected to have occurred during filter handling and processing and was considered not to have affected the outcome of the study.

During the 6-hour exposure period, chamber environmental conditions were as follows:

Group No.	Temperature ($^{\circ}$ C)	Relative Humidity (%)
1	21 - 25	30 - 70
2	21 - 26	38 - 62
3	21 - 25	40 - 53
4	21 - 27	37 - 57

The temperature occasionally exceeded the target range (20 to 24 $^{\circ}$ C) during exposure of all groups. However, this is considered not to have had an adverse effect on the results of the study.

2. Clinical Signs and Mortality (Table No. 6, Appendix No. 1)

There were no deaths or clinical signs that were associated with the administration of ceric oxide.

There was one death observed during the study. Animal No. 4001 was found dead at the end of treatment on Day 72 after having turned around in its cone. No findings were observed on body weight, food consumption or clinical signs in this animal and the death was considered not to be treatment related but associated with the exposure restraint cone which had been changed to a larger size on that day. Gross pathological findings included thymus with multiple dark areas, lungs with multiple dark areas and discoloration (pale) and lymph nodes (mediastinal and bronchial) enlarged and discolored (pale).

Transient clinical signs observed after dosing in all groups consisted of reddish staining of the muzzle, cranial and periorbital regions. Generally, animals in all groups had one or more of these findings during treatment with muzzle and periorbital staining being the most prominent. The frequency of these observations were often similar to those seen in the controls and were therefore considered to be associated with the exposure procedure rather than treatment with ceric oxide.

Clinical signs observed to varying degrees in several animals of all groups during the treatment period included thin fur cover (except for Group 3), staining and/or scabs and/or lesions on the skin, eye partially closed, malocclusion or broken teeth.

Other incidental clinical signs included periorbital staining (animal no. 2009), fur staining (animal Nos. 3007, 1509, 1510, 3501, 3505, 4503, 4504, 4505, 4515 and 4516), swollen mouth or muzzle (animal Nos. 1009, 3007 and 3511), salivation and/or wet fur (animal Nos. 4012 and 1510), soft feces (animal No. 2009), redness of the skin (animal Nos. 2015, 1510 and 4511), presence of red liquid (animal Nos. 2015 and 1503), alopecia (animal No. 2015) and slight dehydration (animal No. 4504). These findings were not considered to be related to treatment with ceric oxide.

3. Body Weight (Table Nos. 7 and 8; Appendix No. 2)

Statistically significant lower mean body weight gains were recorded in high dose males when compared with the air controls (Group 1) in Weeks 2 and 8. The overall body weight gain of Group 4 was marginally inferior to that of the controls and although not statistically significant, was considered to be due to exposure to ceric oxide.

Statistically significant lower mean body weight gains were recorded in Group 2 females at Week 7 and Group 2, 3 and 4 females at Week 10 when compared with the air control animals. These observations were not considered to be treatment related.

4. Food Consumption (Table No. 9; Appendix No. 3)

Food consumption of high dose males was marginally lower and although not statistically different from controls could be considered to be related to exposure to ceric oxide.

5. Ophthalmology (Appendix No. 4)

The Ophthalmologist's Report is presented on page 33.

Treatment with ceric oxide did not produce any ocular changes. Minor observations recorded in isolated animals in most groups were considered incidental in origin.

6. Functional Observational Battery (FOB) (Table No. 10; Appendix No. 5)

No clear behavioral changes were observed between the control and treated groups for qualitative assessment at any of the time points measured. However, a significantly reduced forelimb grip strength was recorded in Group 4 females at Week 13.

7. Motor Activity (Table No. 11; Appendix No. 6; Figure No. 1)

No toxicologically significant differences for total motor activity counts for any occasion or either sex were recorded between the control and treated groups and the occasional transient changes seen in the patterns of activity were considered unlikely to be associated with treatment.

8. Laboratory Investigations

A legend of methods, symbols and units used in the laboratory investigations is presented in Appendix 7.

8.1 Health Screen Examination (Table Nos. 12 and 13; Appendix Nos. 8 to 10 and 14)

Results of the blood and urine analyses were reviewed and considered to be normal. Only a few rats showed abnormal gross pathological findings at necropsy, they were not considered to be unusual for animals of this strain and age. Consequently, the population of animals received was considered to be suitable for use on this study.

8.2 Hematology (Table No. 12; Appendix No. 8)

Treatment-related effects were observed in segmented neutrophil counts in Group 2 females and Groups 3 and 4 of both sexes.

Statistically significant elevated segmented neutrophil counts (when expressed as a percentage of WBC) in Group 2 and 3 females and Group 4 animals were recorded at Weeks 6 and/or 13 when compared to the air control group. When expressed in absolute terms, segmented neutrophil counts in Group 2 females as well as Group 3 and 4 males and females were elevated at Weeks 6 and 13 when compared to Group 1. These changes were considered related to treatment with ceric oxide.

Incidental increases not considered related to treatment were seen in white blood cell count and associated absolute lymphocyte and eosinophil counts of Group 3 males and hemoglobin in Group 4 females at Week 13.

8.3 Clinical Biochemistry (Table No. 13; Appendix No. 9)

Clinical biochemical parameters were considered unaffected by ceric oxide.

8.4 Urinalysis (Appendix No. 10)

Urinary parameters were considered to be unaffected by treatment with ceric oxide.

9. TERMINAL STUDIES

9.1 Organ Weights (Table Nos. 14 to 16; Appendix Nos. 11 to 13)

Treatment-related effects were seen in lung and spleen weights when expressed as absolute or relative to organ and brain weights.

Higher lung weights (absolute and relative to body weight and brain) were statistically significant in Groups 3 and 4 when compared with those of the air control Group 1. This change in weight, although not always statistically significant, was seen in all treated groups. In addition, higher spleen weights (relative to body weight) were statistically significant in Group 4 males when compared with the air control Group 1. The spleen weight when expressed as absolute weight and relative to brain weight in Group 4 males was also higher than the air control Group 1 but not statistically significant. Spleen and lung weight changes correlated with gross and/or microscopic findings and were considered to be related with treatment with ceric oxide.

Significantly higher thymus weight recorded in Group 3 males (absolute, relative to body weight and brain weight) when compared to the air control Group 1 was not considered to be related with treatment with ceric oxide.

9.2 Gross and Histopathological Examinations (Table Nos. 17 and 18, Appendix No. 14)

The Pathologist's Report is presented on Pages 34 to 37.

Macroscopically, pertinent changes were recorded in the lungs such as discoloration or pale areas (30 each in Groups 3 and 4) and pale foci (4 in Group 2) and uncollapsed parenchyma (30 in Group 4, 2 in Group 3). Statistical analysis performed on the pale areas and pale foci in the lungs were significant in Group 3 males and females (pale area) and in Group 2 females (pale foci) when compared with the air control Group 1.

In addition, enlargement and/or pale discoloration of the bronchial (30 each in Groups 3 and 4, 28 in Group 2), mediastinal (20 in Group 4, 18 in Group 3, 12 in Group 2, 1 in Group 1) and pancreatic lymph nodes (3 in Group 1, 1 each in Groups 3 and 4)) were primarily evident in animals treated with ceric oxide and considered to be induced by the test material.

Histopathologically, the following findings were recorded and statistical evaluation was performed:

Tissue	No. of animals with finding / No. of animals examined							
	Gr1♂	Gr2♂	Gr3♂	Gr4♂	Gr1♀	Gr2♀	Gr3♀	Gr4♀
Bronchus								
- Pigment accumulation	0/15	1/15	5/15*	15/15*	0/15	0/15	4/15*	15/15*
Nasal Cavity								
- Hypertrophy and/or hyperplasia, Goblet cells	0/15	0/15	0/15	1/15	0/15	1/15	0/15	2/15
- Pigment accumulation	0/15	12/15*	15/15*	15/15*	0/15	3/15	11/15*	15/15*
Larynx								
- Metaplasia	0/15	3/15	9/15*	13/15*	0/15	3/15	6/15*	9/15*
- Pigment accumulation	0/15	6/15*	9/15*	12/15*	0/15	0/15	7/15*	9/15*
Liver								
- Pigment accumulation	0/15	0/9	0/7	6/15*	0/15	0/1	0/5	5/15*
Lung								
- Pigment accumulation	0/15	15/15*	15/15*	15/15*	0/15	15/15*	15/15*	15/15*
- Epithelial hyperplasia, Alveolar	0/15	1/15	11/15*	14/15*	0/15	0/15	5/15*	15/15*
- Hyperplasia, Lymphoid	0/15	0/15	0/15	12/15*	0/15	0/15	1/15	7/15*
Mandibular Lymph Node								
- Pigment accumulation	0/15	0/3	0/5	6/15*	0/15	0/5	0/3	6/15*
Spleen								
- Pigment accumulation	0/15	0/1	0/0	6/15*	0/15	0/0	0/0	3/15
Trachea								
- Pigment accumulation	0/15	0/15	1/15	14/15*	0/15	0/15	1/15	14/15*
Bronchial Lymph Node								
- Pigment accumulation	0/15	13/13*	15/15*	15/15*	0/15	14/15*	15/15*	15/15*
- Hyperplasia, Lymphoid	0/15	11/13*	15/15*	15/15*	0/15	13/15*	15/15*	15/15*
Mediastinal Lymph Node								
- Pigment accumulation	0/0	2/2	8/10	9/9	0/1	10/10	9/9	9/10
- Hyperplasia, Lymphoid	0/0	2/2	9/10	9/9	0/1	10/10	9/9	9/10
Pancreatic Lymph Node								
- Pigment accumulation	-	-	-	-	0/2	0/0	1/1	1/1
- Hyperplasia, Lymphoid	-	-	-	-	0/2	0/0	1/1	0/1

SIGNIFICANTLY DIFFERENT FROM CONTROL (GROUP 1) VALUE: * - P < .05 (FISCHER'S)

All positive findings for a given dose level were considered to be induced by the test material, however, not all were statistically significant when compared with the air control Group 1. The

pigmented material present in the various organs was considered to be the test compound or a product thereof.

The presence of lymphoid hyperplasia in the lymph nodes and lungs is consistent with antigenic stimulation by the compound, and there was a correlation between the degree of hyperplasia and the volume of pigment in these tissues.

A no-effect level was not present in Groups 2, 3 and 4, and systemic dissemination of the test article was evident in Group 4 animals. A dose-related effect of the compound was clearly evident.

Remaining unmentioned lesions in various animals were deemed incidental.

CONCLUSION

Nose-only inhalation exposure of Sprague-Dawley CD rats to ceric oxide dry powder aerosol was performed 6 hours daily, 5 days a week over 13 weeks at concentrations of 0.0050, 0.0505 and 0.5075 mg/L. An overall no-effect level cannot be established based on marginally reduced body weight gains recorded in Group 4 animals, as well as other changes recorded in treated groups including increased segmented neutrophil counts, higher lung and spleen weights, discoloration of the lungs and discoloration/enlargement of lymph nodes. Histopathologically, pigmented material accumulation in the lungs, bronchial, mandibular and mediastinal or pancreatic lymph nodes, trachea, bronchi, larynx, nasal cavity, liver and spleen, as well as alveolar epithelial hyperplasia (lungs), metaplasia (larynx) and lymphoid hyperplasia (bronchial and mediastinal or pancreatic lymph nodes, lungs) were seen in all treated groups. Systemic dissemination of the test article was evident in Group 4 animals.

The following endpoints and the no observable effect level (NOEL) were obtained:

<u>Endpoints</u>	<u>NOEL</u>
Clinical signs and Mortality	0.0050 mg/L males and females
Body weight and food consumption	0.0505 mg/L males and females
Ophthalmology	0.0050 mg/L males and females
FOB	0.0050 mg/L males and females
Motor activity	0.0050 mg/L males and females
Laboratory investigations	0.0050 mg/L males and N.D. for females
Organ weights	0.0050 mg/L males and females
Gross and histopathological findings	N.D. for males and females

N.D. - Not Determined

OPHTHALMOLOGIST'S REPORT

A complete funduscopy (indirect ophthalmoscopy) and biomicroscopic (slit lamp) examination was performed on all animals during the pretreatment period and on animals in the high dose and control groups at Week 13.

There were no treatment-related ocular changes during the treatment phase. Minor findings were observed in a few animals. They were considered incidental in origin and unrelated to treatment since they have been routinely found in comparable populations. Since significant changes were not detected, animals in the low and intermediate dose groups were not examined.



P. Blouin, D.V.M., Ph.D., Diplomate A.C.V.O.
Ophthalmologist



Date

PATHOLOGIST'S REPORT**1. INTRODUCTION**

This study was conducted to investigate the potential toxicity of a powder aerosol of ceric oxide (CeO₂) in rats when administered by nose-only inhalation. The animals were grouped as shown in the table below and the control animals and those exposed to the test article received filtered conditioned air and ceric oxide, respectively, for a minimum of 13 consecutive weeks for 5 days per week.

<u>Group/ Identification</u>	<u>Target Exposure Level (mg/L)</u>	<u>No. of Animals</u>	
		<u>Males</u>	<u>Females</u>
1 Air control	0	15	15
2 Ceric oxide Low dose	0.005	15	15
3 Ceric oxide Intermediate dose	0.05	15	15
4 Ceric oxide High dose	0.5	15	15

A complete necropsy was performed on the animal(s) which died during or were sacrificed at termination of the study. Protocol-defined and any abnormal tissues were retained from all groups and microscopically evaluated in Groups 1 and 4. Additionally, selected tissues (nasal cavities and sinuses, larynx, pharynx, trachea, bronchi, lungs) and gross lesions from animals in Groups 2 and 3 were examined by light microscopy. One animal (4001) died on Day 72 of the study. The individual gross and histopathologic findings are presented in Appendix 14 and the incidence of these changes is shown in Tables 17 and 18.

2. RESULTS AND DISCUSSION**Gross Pathology:**

Pertinent gross lesions which were considered to be effects of the test article were evident in the lungs as discoloration or pale areas, (30 each in Groups 3 and 4), pale foci (4 in Group 2) and uncollapsed parenchyma (30 in Group 4, 2 in Group 3). In addition, enlargement and/or pale discoloration of the bronchial (30 each in Groups 3 and 4, 28 in Group 2), mediastinal (20 in Group 4, 18 in Group 3, 12 in Group 2, 1 in Group 1) and pancreatic (3 in Group 1, 1 each in Groups 3 and 4) lymph nodes were primarily evident in the animals exposed to the test compound and were considered to be related to treatment in these rats. However, mandibular lymph node enlargement, which was present in control and test material-exposed animals, and dark discoloration of the lymph node (mediastinal) in one control female were not thought to

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be effects of the test article. These and the remaining unmentioned gross lesions were deemed incidental.

Histopathology:

Salient light microscopic findings which were considered to be test material-induced were pigment accumulation and/or alveolar epithelial/lymphoid hyperplasia in the lungs (30 each in Groups 2, 3 and 4), lymphoid hyperplasia of the bronchial (30 each in Groups 3 and 4, 24 in Group 2), mediastinal (18 each in Groups 3 and 4, 12 in Group 2) and pancreatic (1 in Group 3) lymph nodes, metaplasia and/or pigment accumulation in the larynx (22 in Group 4, 16 in Group 3, 9 in Group 2), and pigment accumulation in the bronchial lymph node (30 each in Groups 3 and 4, 27 in Group 2), nasal cavity (30 in Group 4, 26 in Group 3, 15 in Group 2), bronchi (30 in Group 4, 9 in Group 3, 1 in Group 2), trachea (28 in Group 4, 2 in Group 3), mediastinal lymph node (18 in Group 4, 17 in Group 3, 12 in Group 2), liver (11 in Group 4), mandibular lymph node (12 in Group 4), spleen (9 in Group 4) and pancreatic lymph node (1 each in Groups 3 and 4).

The pigment was present both intra- and extracellularly within the respiratory system and presented histologically as distinctly round, granular, blackish green material. When apparent in such organs as the spleen, lymph nodes and liver, the material was evident with unchanged morphologic characteristics. These findings were consistent with systemic dissemination with minimal to inapparent light microscopic evidence of metabolization of the material.

The initial presence of the pigment almost exclusively within the cytoplasm of alveolar macrophages of the low dose group (2), with subsequent presence both intra- and extracellularly in the higher dose groups (3 and 4), suggested the attainment of a dose concentration which had superseded the rate of clearance of the compound from the alveolar space.

Lymphoid hyperplasia was considered to be reactive to the ceric oxide and was characterized by an increase in the number of lymphocytes, with expansion of the paracortices and cortices of the lymph nodes (1). The presence of lymphoid hyperplasia in the lymph nodes and lungs was consistent with antigenic stimulation by the compound. Antigenic stimulation is the immunologic process by which an immune response is induced (2). A correlation between the degree of lymphoid hyperplasia and the volume of pigment present in these tissues was evident. In addition, the pigment also was present within the pulmonary lymphoid follicles and was almost exclusively observed within the lymphoid follicles of the nasal cavity, larynx and spleen.

The pulmonary change was remarkable for the somewhat contained inflammatory response despite the copious amount of pigmented material present, particularly in the Group 4 animals. This finding, however, is compatible with the minimal clinical signs noted.

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The laryngeal metaplasia was confined to the base of the epiglottis and was characterized by a loss of cilia and the distinct presence of flattened and squamous cells towards the surface of this site. This lesion was interpreted as being adaptive to the insult and can be reversible.

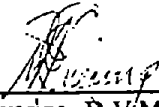
The base of the epiglottis in the larynx of rodents appears to have heightened sensitivity to inhaled materials (3). This is probably due to the airflow characteristics and the regional epithelial sensitivity (4). Although humans possess similar epithelia in their larynx (5), their airflow pattern differs from that of rodents as air makes a 90° turn downwards to reach the larynx in humans (6). In rodents this angle is much less acute. Extrapolation to humans, therefore, should be made with caution due to the differing airflow patterns between the species.

The extensive thymic hemorrhage which was evident in animal No. 4001 which died, may be an indication of hypoxia due to respiratory compromise, an insult which likely contributed to the demise of this animal.

The remaining unmentioned lesions in the various animals were deemed incidental.

3. CONCLUSION

The pigmented material present in the various organs was considered to be the test compound or a product thereof. Pigment accumulation was considered to be due to the test article and was observed in multiple organs (lungs, trachea, bronchi, larynx, nasal cavity, liver, spleen and bronchial, mandibular, mediastinal, pancreatic lymph nodes). Additional test material-induced lesions such as alveolar epithelial hyperplasia (lungs), metaplasia (larynx) and lymphoid hyperplasia (bronchial, mediastinal and pancreatic lymph nodes, lungs) also were observed. A no-effect dose level was not present. Systemic dissemination of the test article was evident in Group 3 and 4 animals. A dose-related effect of the compound was clearly evident.



W. Evering, D.V.M., Ph.D., Diplomate, A.C.V.P.
Study Pathologist

28th September 1974

Date

PROJECT NO. 90831

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QUALITY ASSURANCE
STATEMENT

In compliance with the Good Laboratory Practice Regulations, Study 90831 has been reviewed. The data presented in the final report accurately represent the data collected during the conduct of the study.

DATES OF INSPECTION	DATES OF REPORTS TO MANAGEMENT AND STUDY DIRECTOR
August 19, 1993	August 31, 1993
September 9, 1993	September 12, 1993
September 13,14, 1993	September 23, 1993
September 15, 1993	September 16, 1993
September 24, 1993	September 26, 1993
September 30, 1993	October 5, 1993
October 4, 1993	October 18, 1993
October 9, 1993	October 18, 1993
October 20, 1993	November 9, 1993
October 21, 1993	October 22, 1993
October 25, 1993	November 11, 1993
November 10, 1993	November 11, 1993
December 10, 15, 1993	December 21, 1993
December 17,20, 1993	January 4, 1994
December 30, 1993	January 4, 1994
January 4, 1994	January 5, 1994

(Continued)

QUALITY ASSURANCE STATEMENT

DATES OF INSPECTION	DATES OF REPORTS TO MANAGEMENT AND STUDY DIRECTOR
March 16 - 29, 1994	April 4, 1994
March 21,22, 1994	April 2, 1994
March 21,24,25,28,29, 1994	April 4, 1994
March 21-April 6, 1994	May 17, 1994
March 22- April 4, 1994	May 17, 1994
March 17-April 6, 1994	June 17, 1994
May 26,27,30, 1994	June 12, 1994
August 26 -29, 1994	September 16, 1994
September 8, 1994	September 16, 1994
September 22, 1994	September 27, 1994

QUALITY ASSURANCE:

A. Graham

C.B-Moore

DATE:

27.9.94 29.09.94

A. Gagné

P. Sidney

DATE:

1994-09-29 1994-09-29

GROUP MEAN MOTOR ACTIVITY COUNTS
PRESTUDY, MALES

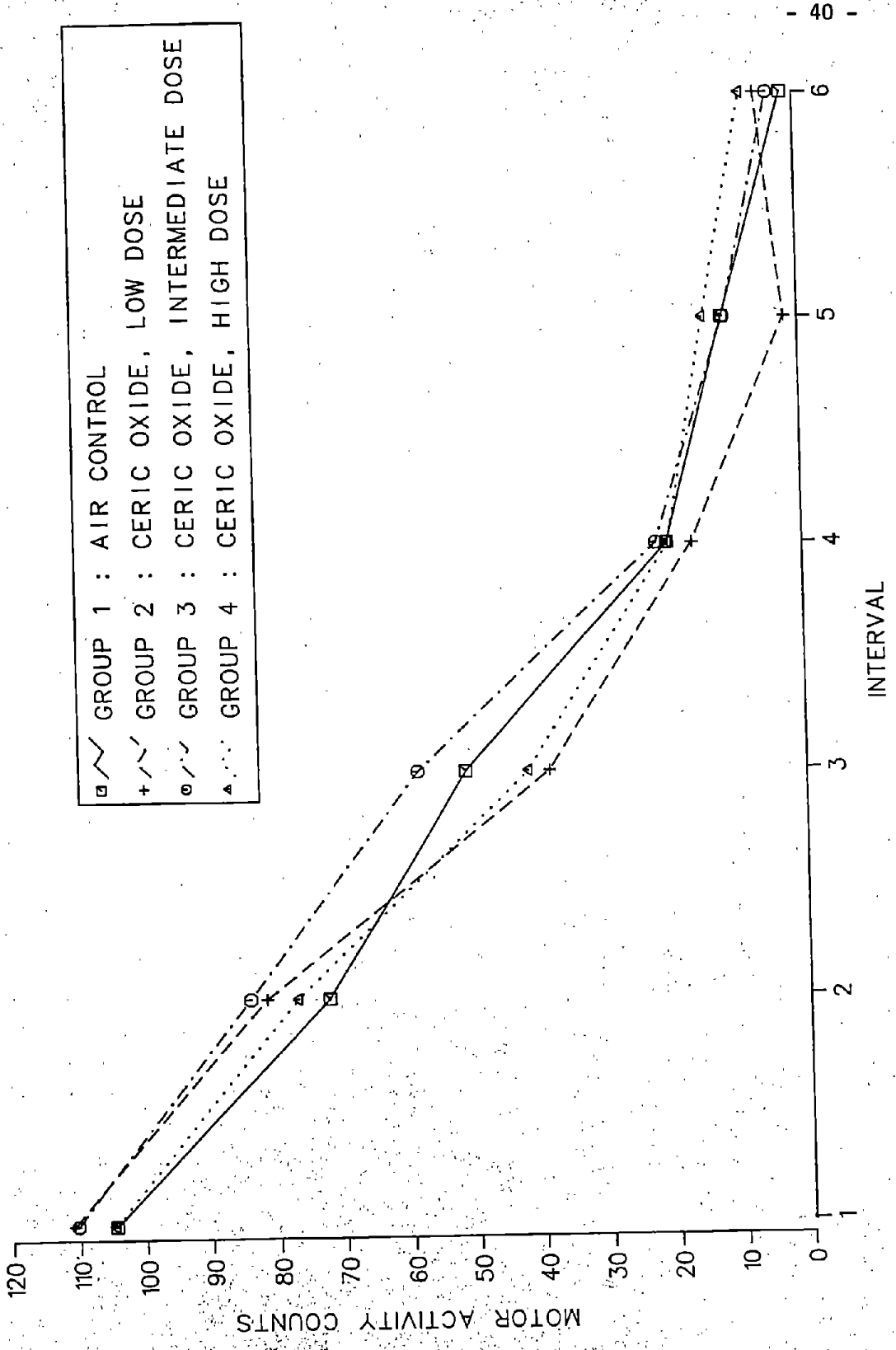


FIGURE NO. 1 GROUP MEAN MOTOR ACTIVITY COUNTS PRESTUDY, FEMALES PROJECT NO. 90831

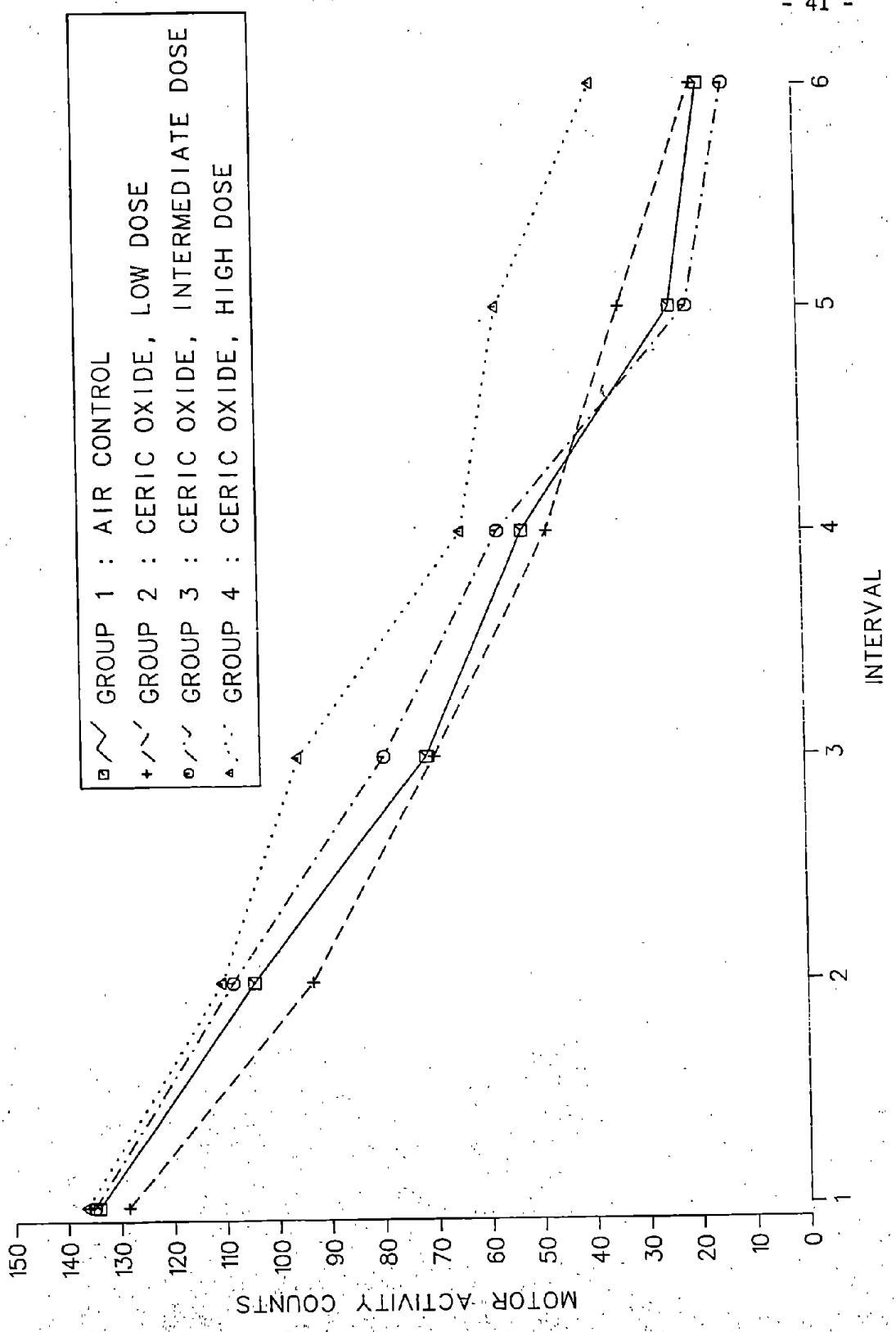


FIGURE NO. 1
GROUP MEAN MOTOR ACTIVITY COUNTS
WEEK 4, MALES
PROJECT NO. 90831

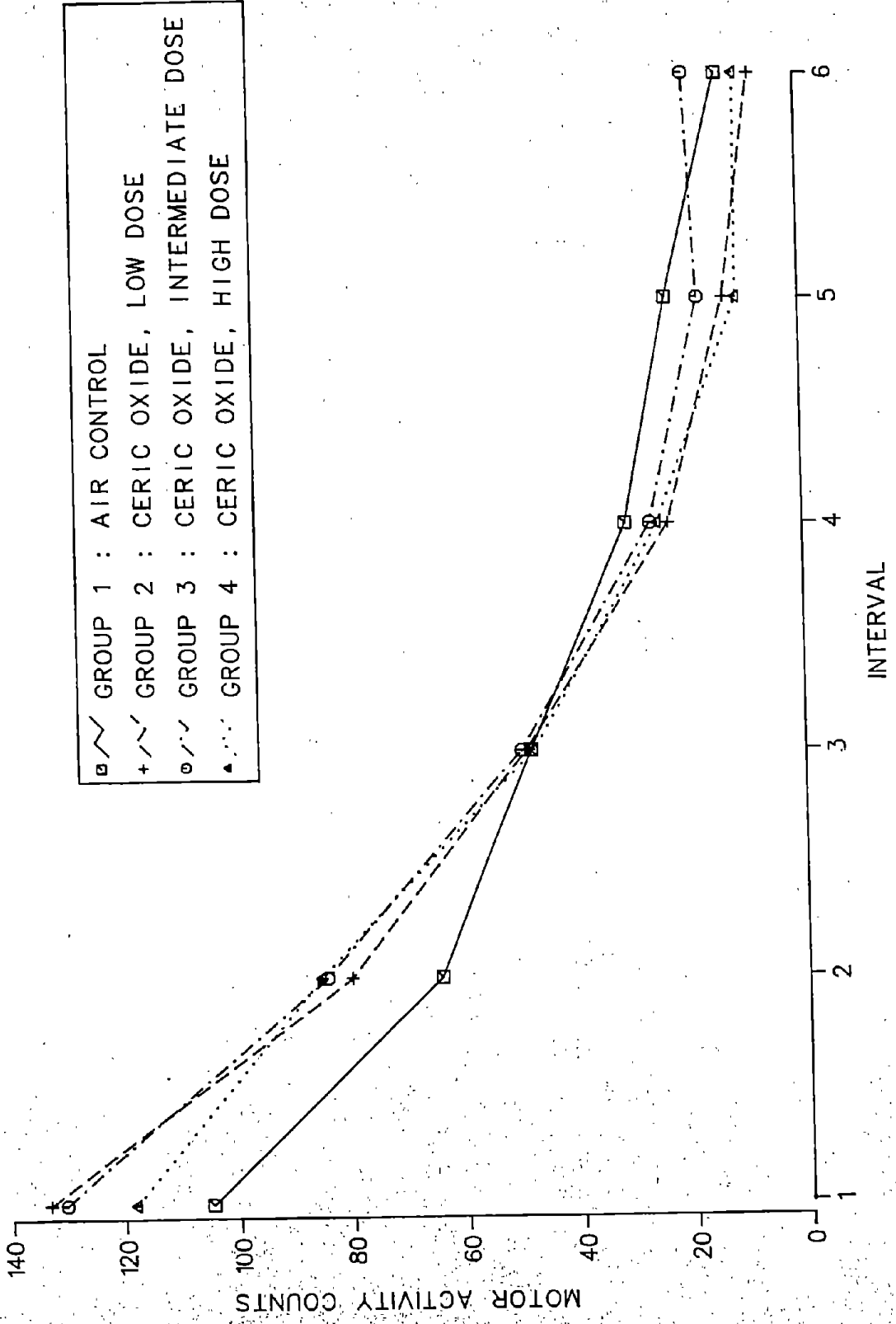
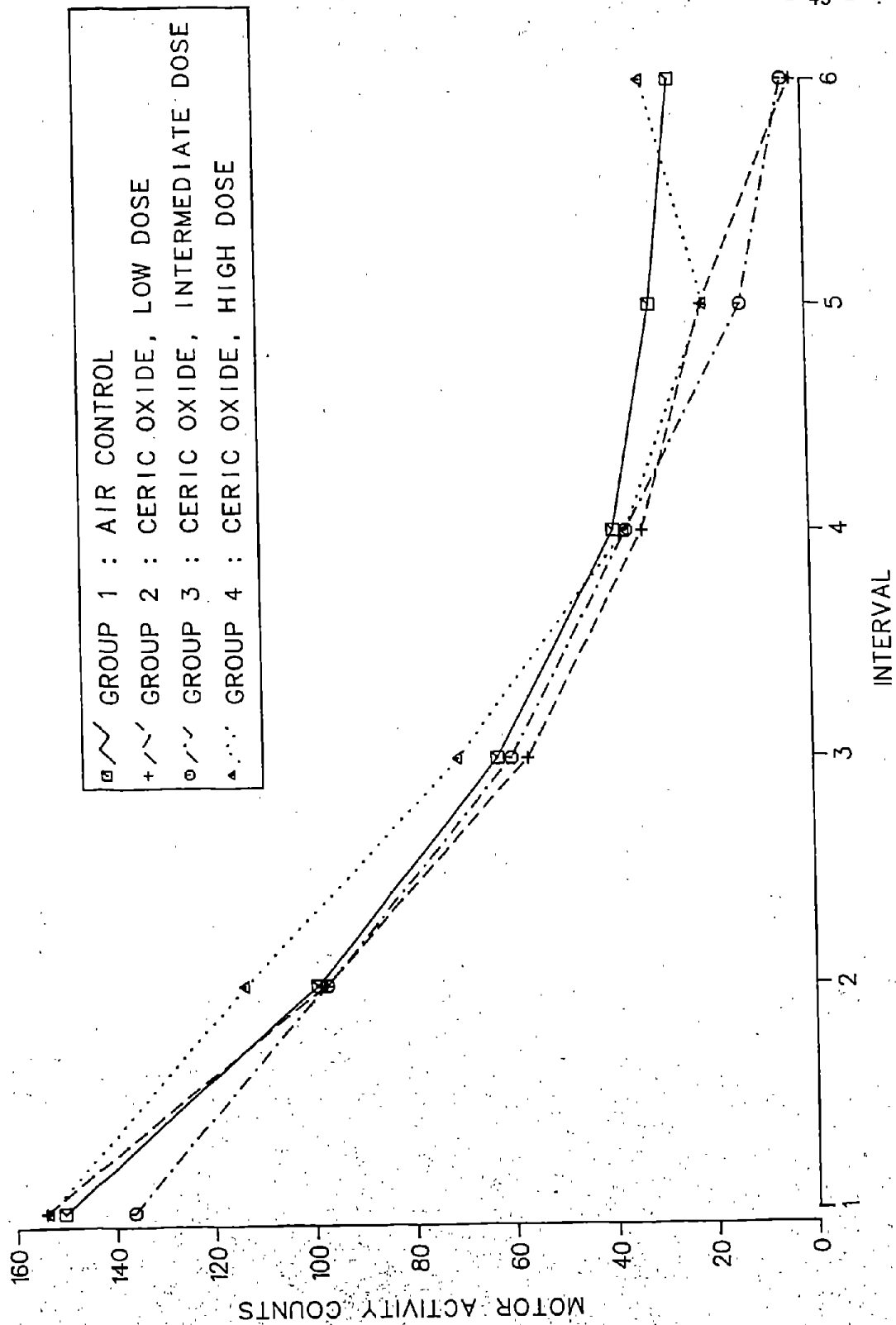


FIGURE NO. 1 GROUP MEAN MOTOR ACTIVITY COUNTS WEEK 4, FEMALES PROJECT NO. 90831

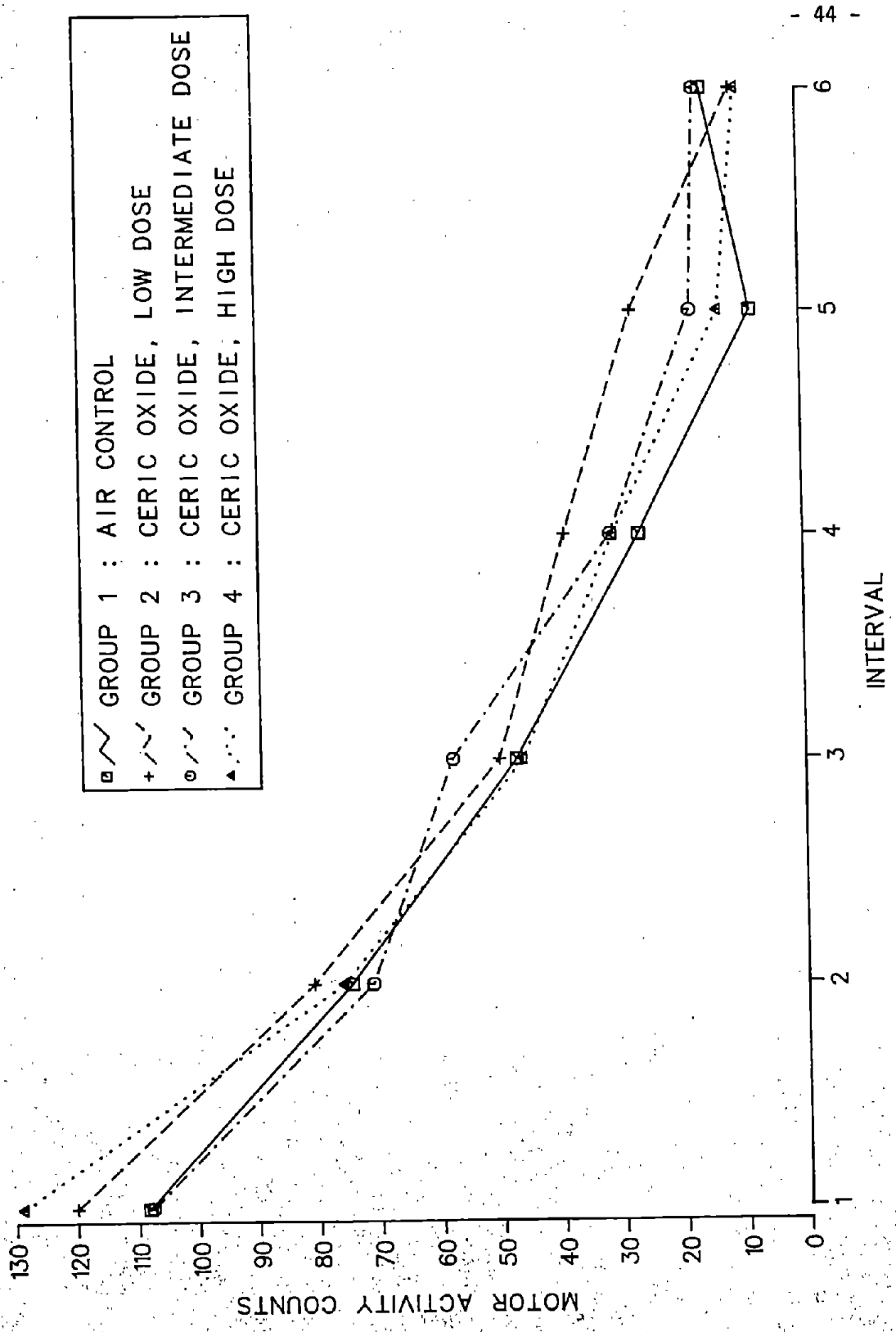


PROJECT NO. 90831

GROUP MEAN MOTOR ACTIVITY COUNTS
WEEK 8, MALES

- GROUP 1 : AIR CONTROL
- GROUP 2 : CERIC OXIDE, LOW DOSE
- GROUP 3 : CERIC OXIDE, INTERMEDIATE DOSE
- GROUP 4 : CERIC OXIDE, HIGH DOSE

FIGURE NO. 1



PROJECT NO. 90831

GROUP MEAN MOTOR ACTIVITY COUNTS
WEEK 8, FEMALES

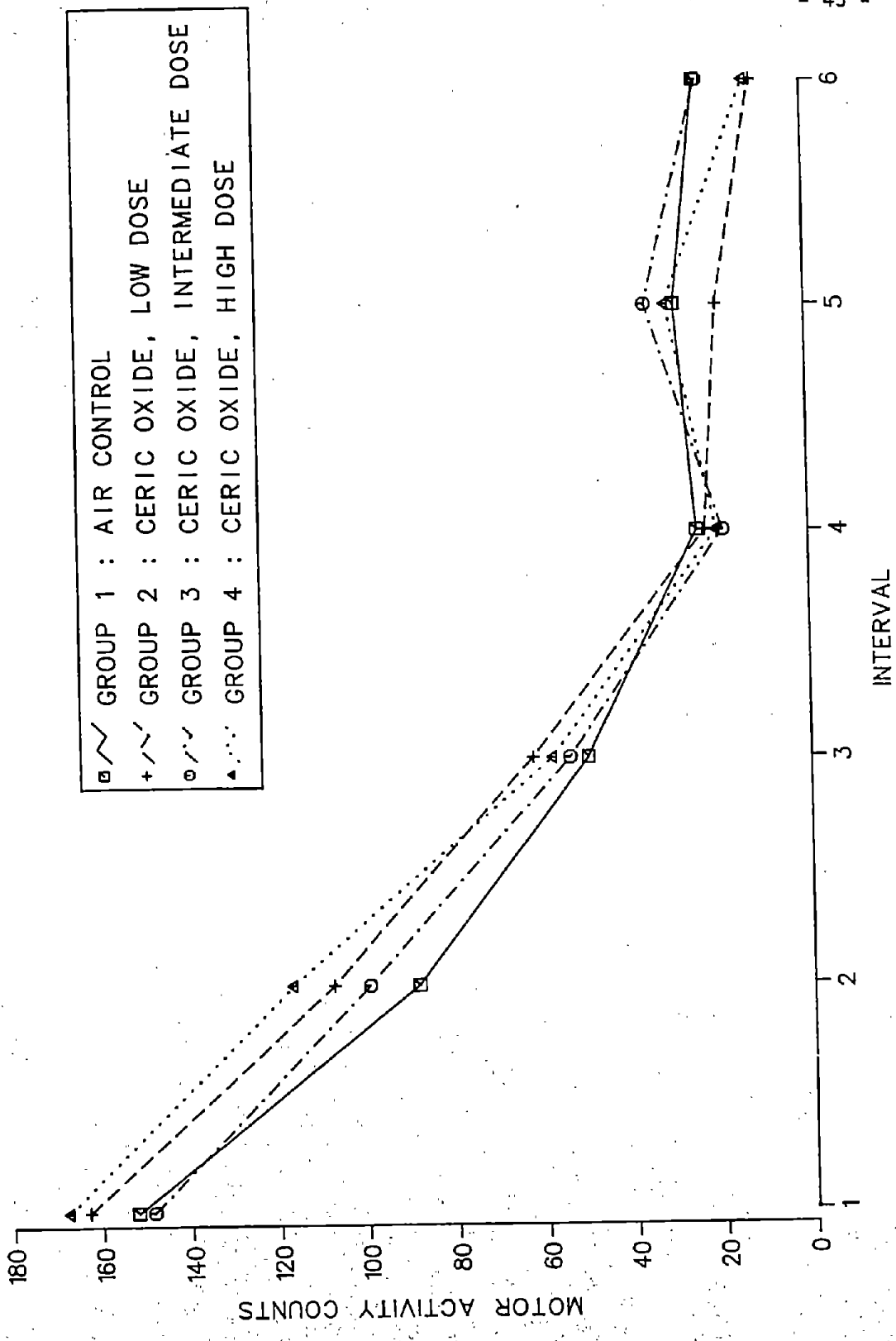


FIGURE NO. 1 GROUP MEAN MOTOR ACTIVITY COUNTS WEEK 13, MALES PROJECT NO. 90831

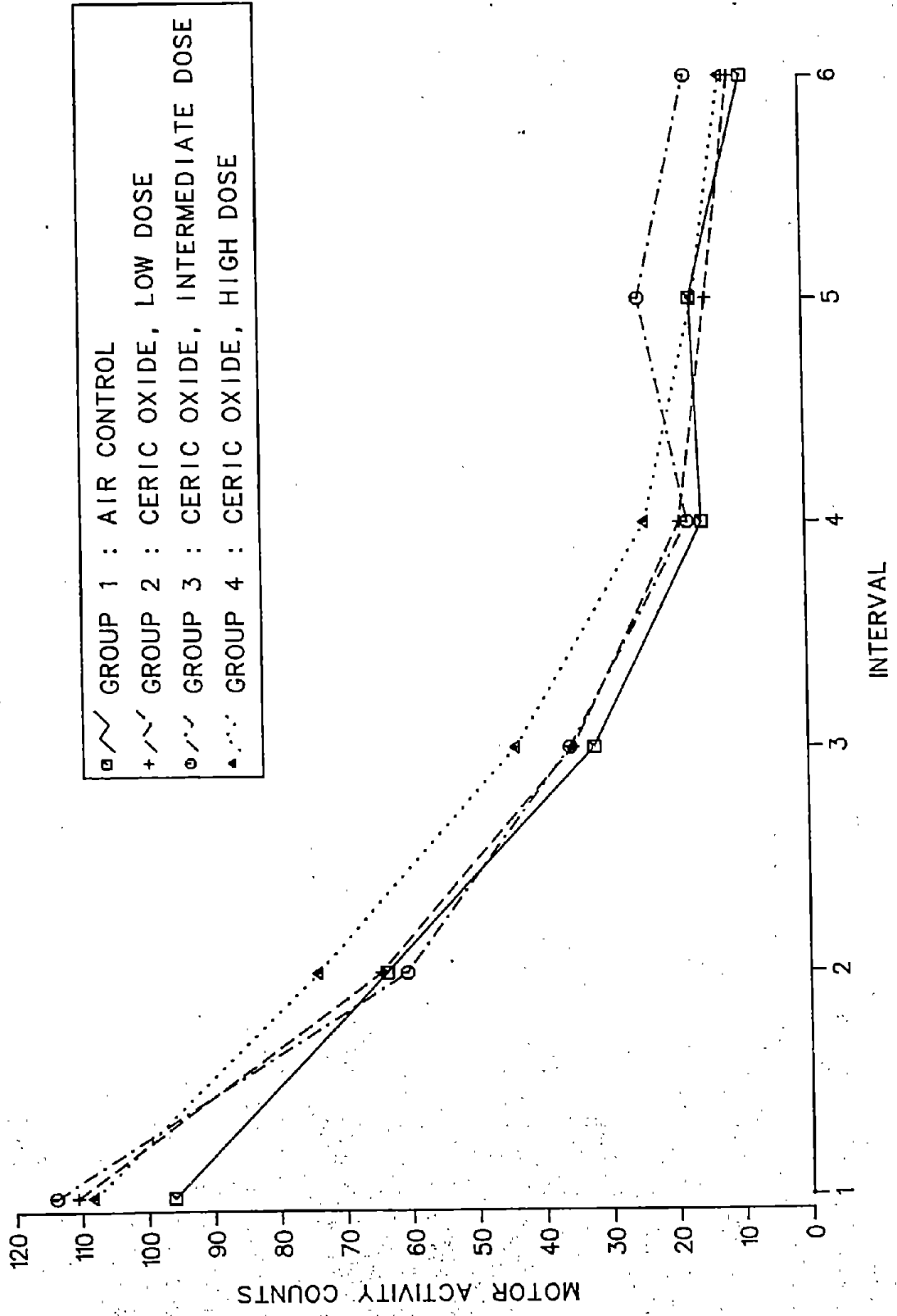
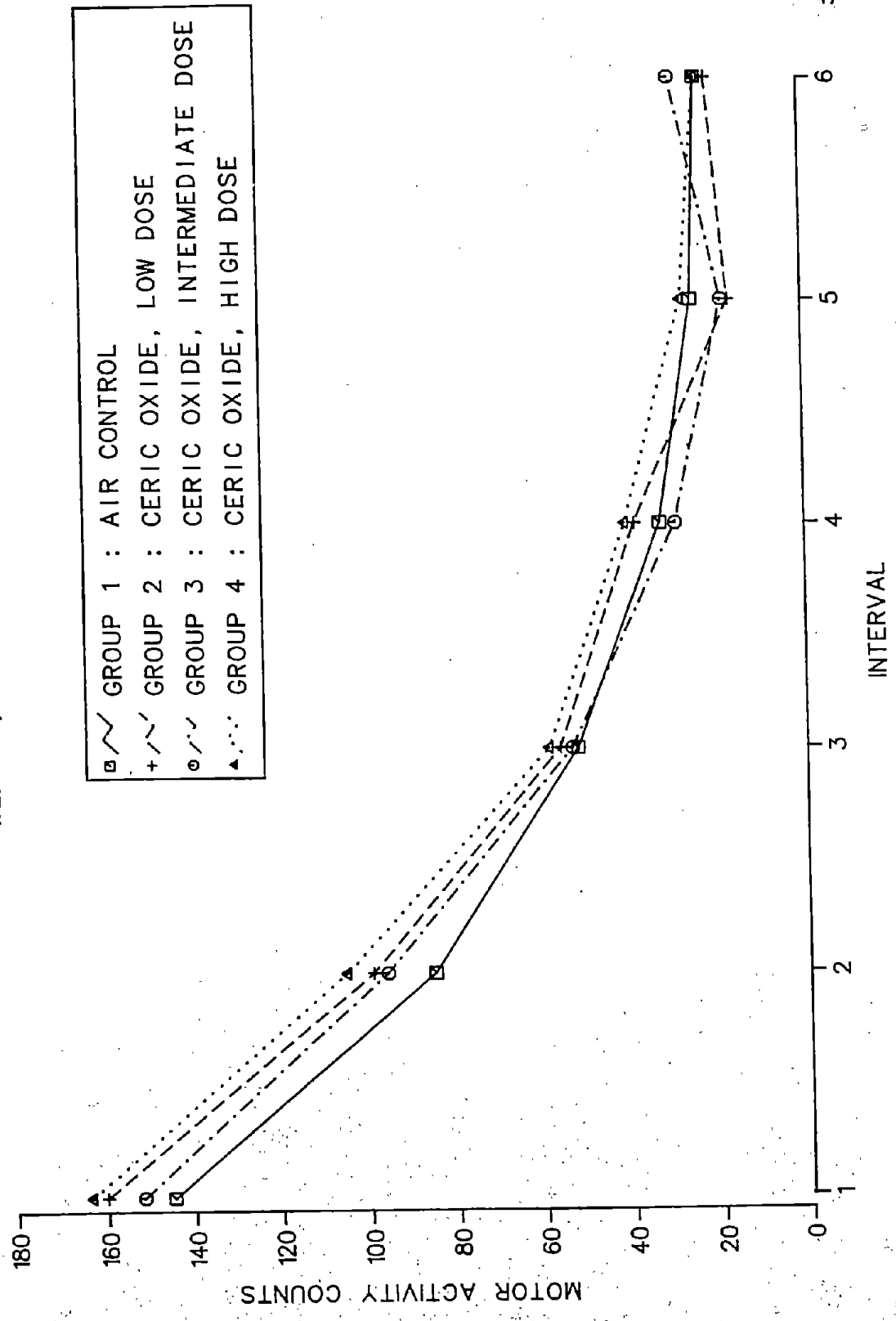
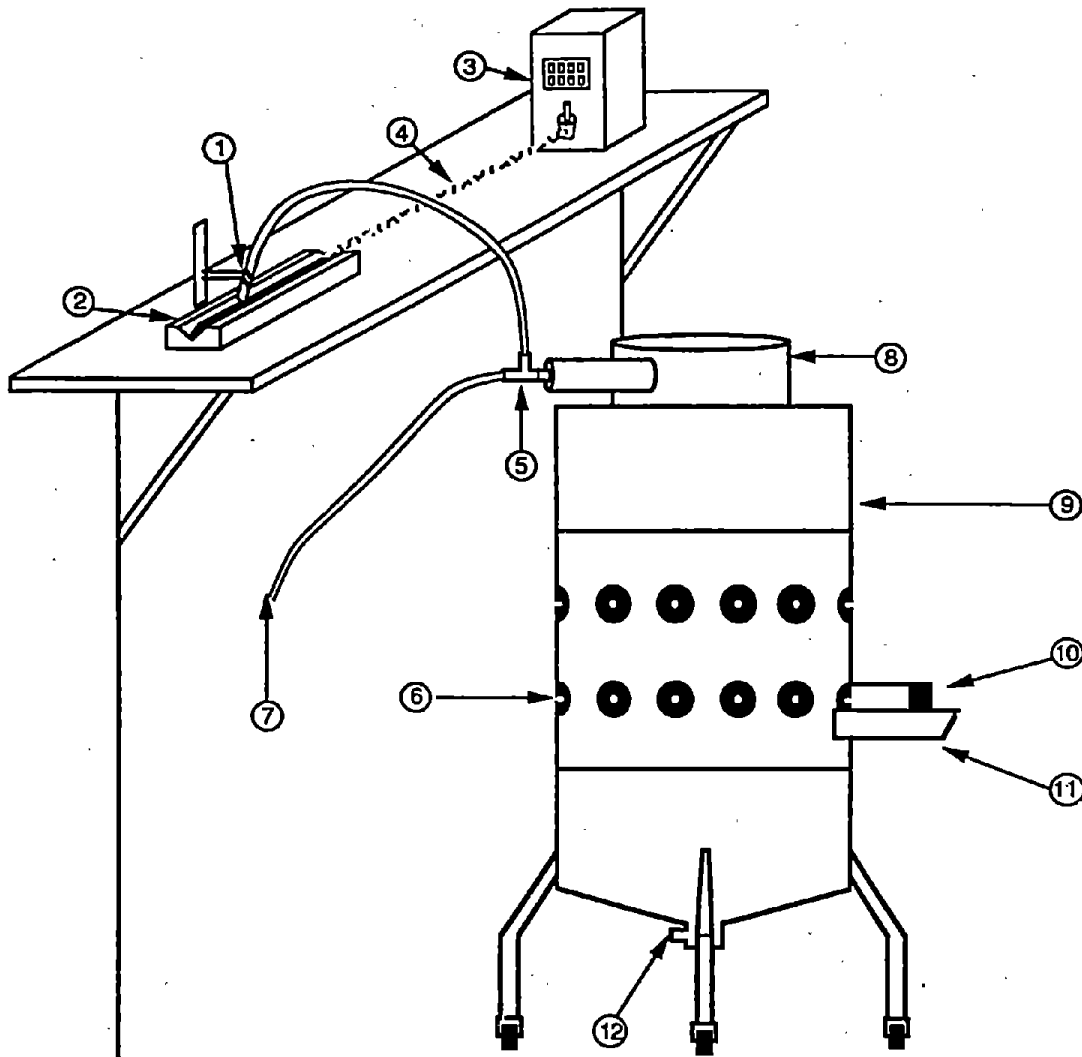


FIGURE NO. 1 GROUP MEAN MOTOR ACTIVITY COUNTS WEEK 13, FEMALES PROJECT NO. 90831



Inhalation Chamber and Generator System



Legend

- | | |
|---|--|
| 1 Powder feed nozzle (secured by clamp) | 8 Tangential chamber top |
| 2 Linear powder feed track | 9 Cylindrical stainless-steel nose-only Inhalation chamber |
| 3 Pump | 10 Restraint tube |
| 4 Pulling chain | 11 Bracket |
| 5 Venturi T-section (containing critical orifice) | 12 Chamber exhaust (to purifying system) |
| 6 Breathing port | |
| 7 Compressed air supply | |

CALENDAR OF EVENTS

MALES

TABLE NO. 1

DATE	STUDY DAYS	STUDY WEEKS	EVENT
August 31, 1993	-13	-2	Animal arrival, mortality check
September 2, 1993	-11	-2	Experimental atmosphere evaluation (begin), particle size analysis (begin)
September 3, 1993	-10	-2	Hematology/biochemistry (health screen), urinalysis (health screen), necropsy (health screen)
September 7, 1993	-6	-1	Randomization, acclimation, body weight (begin), food consumption (begin)
September 8, 9, 1993	-5, -4	-1	Acclimation
September 10, 1993	-3	-1	Ophthalmology
September 11, 1993	-2	-1	Functional observation battery, motor activity
September 13, 1993	1	1	Treatment begin, clinical sign (begin), functional observation battery
October 5, 8, 1993	23, 26	4	Animal spare released
October 9, 1993	27	4	Motor activity, functional observation battery
October 19-21, 1993	37-39	6	Hematology/biochemistry, urinalysis
November 6, 1993	55	8	Motor activity, functional observation battery
December 8, 1993	87	13	Ophthalmology
December 11, 1993	90	13	Motor activity, functional observation battery
December 13, 1993	92	14	Hematology/biochemistry, urinalysis, terminal necropsy

CALENDAR OF EVENTS

FEMALES

DATE	STUDY DAYS	STUDY WEEKS	EVENT
August 31, 1993	-20	-3	Animal arrival, mortality check
September 2, 1993	-18	-3	Experimental atmosphere evaluation (begin), particle size analysis (begin)
September 3, 1993	-17	-3	Hematology/biochemistry (health screen), urinalysis (health screen), necropsy (health screen)
September 7, 1993	-13	-2	Randomization, body weight (begin), food consumption (begin)
September 10, 1993	-10	-2	Ophthalmology
September 14-16, 1993	-6 to -4	-1	Acclimation
September 17, 1993	-3	-1	Motor activity, functional observation battery
September 20, 1993	1	1	Treatment begin, clinical sign (begin), functional observation battery
October 5, 8, 1993	16, 19	3	Animal spare released
October 16, 1993	27	4	Motor activity, functional observation battery
October 26-28, 1993	37-39	6	Hematology/biochemistry, urinalysis
November 13, 1993	55	8	Motor activity, functional observation battery
December 15, 1993	87	13	Ophthalmology
December 18, 1993	90	13	Motor activity, functional observation battery
December 20, 1993	92	14	Hematology/biochemistry, urinalysis, terminal necropsy

TABLE NO. 2

PROJECT NO. 90831

GRAVIMETRIC CHAMBER CONCENTRATIONS
(mg/L)
GROUP 1 - AIR CONTROL

STUDY DAY	SAMPLING TIME						MEAN	S.D.
	0	1	2	3	4	5		
2	0.0006	0.0006	0.0014	0.0004	0.0006	0.0003	0.0007	0.00039
9	0.0000	0.0001	0.0000	0.0000	0.0000	0.0000	0.0000	0.00004
30	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.00000
31	0.0002	0.0003	0.0002	0.0000	0.0000	0.0003	0.0002	0.00014
51	0.0000	0.0001	0.0000	0.0000	0.0002	0.0001	0.0001	0.00008
86	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.00000
							MEAN+	0.0002
							S.D.	0.00027
							MEAN++	0.0001
							S.D.	0.00009

+ Overall mean for males (Day 1 to 89)
++ Overall mean for females (Day 8 to 96)

NOTE : Males were treated from Day 1 to 89 and
females were treated from Day 8 to 96 due to staggered start.

TABLE NO. 2

PROJECT NO. 90831

GRAVIMETRIC CHAMBER CONCENTRATIONS
(mg/L)
GROUP 2 - CERIC OXIDE - LOW DOSE

STUDY DAY	SAMPLING TIME						MEAN	S.D.
	0	1	2	3	4	5		
1	0.0044	0.0052	0.0047	0.0054	0.0045* (0.0037) (0.0053)	0.0048	0.0048	0.00039
2	0.0063* (0.0100) (0.0025)	0.0065* (0.0064) (0.0066)	0.0037* (0.0022) (0.0038) (0.0052)	0.0050	0.0047	0.0062* (0.0104) (0.0046) (0.0037)	0.0054	0.00111
3	0.0048	0.0038	0.0044	0.0040	0.0049	0.0051* (0.0063) (0.0038)	0.0045	0.00052
4	0.0041	0.0040	0.0041* (0.0038) (0.0043)	0.0057* (0.0066) (0.0047)	0.0041	0.0049	0.0045	0.00068
5	0.0055	0.0049	0.0057	0.0053	0.0058	0.0055	0.0055	0.00032
8	0.0055* (0.0067) (0.0043)	0.0048	0.0036* (0.0031) (0.0040)	0.0045	0.0043	0.0034* (0.0037) (0.0031)	0.0044	0.00078
9	0.0043* (0.0051) (0.0035)	0.0045	0.0042	0.0034* (0.0036) (0.0031)	0.0041	0.0041	0.0041	0.00037
10	0.0045	0.0051	0.0040	0.0052* (0.0064) (0.0039)	0.0049	0.0046	0.0047	0.00044
11	0.0056	0.0050	0.0056	0.0047	0.0054	0.0050	0.0052	0.00037
12	0.0058* (0.0061) (0.0054)	0.0045	0.0049	0.0056	0.0045	0.0058	0.0052	0.00062
15	0.0059	0.0053	0.0041	0.0051	0.0055* (0.0067) (0.0042)	0.0044	0.0051	0.00068
16	0.0065* (0.0075) (0.0054)	0.0058	0.0046	0.0056	0.0055	0.0041	0.0054	0.00086
17	0.0059	0.0058	0.0049	0.0050	0.0055	0.0055	0.0054	0.00041
18	0.0060	0.0058	0.0050	0.0052	0.0054	0.0050	0.0054	0.00041
19	0.0057	0.0055	0.0061* (0.0061) (0.0061)	0.0043	0.0052* (0.0063) (0.0040)	0.0051	0.0053	0.00061

* Mean of samples obtained during the hour.

TABLE NO. 2

GRAVIMETRIC CHAMBER CONCENTRATIONS
(mg/L)
GROUP 2 - CERIC OXIDE - LOW DOSE

STUDY DAY	SAMPLING TIME						MEAN	S.D.
	0	1	2	3	4	5		
22	0.0044*	0.0053 (0.0066) (0.0040)	0.0047	0.0052	0.0050	0.0057	0.0051	0.00046
23	0.0061* (0.0077) (0.0060) (0.0046)	0.0036* (0.0029) (0.0042)	0.0066* (0.0066) (0.0065)	0.0046	0.0055	0.0047	0.0052	0.00110
24	0.0054	0.0040	0.0055	0.0058* (0.0065) (0.0050)	0.0052	0.0052	0.0052	0.00062
25	0.0052	0.0047	0.0054* (0.0073) (0.0034)	0.0054* (0.0074) (0.0034)	0.0043	0.0047	0.0050	0.00045
26	0.0056	0.0041	0.0045	0.0049	0.0057	0.0049	0.0050	0.00062
29	0.0050	0.0051	0.0052	0.0054* (0.0061) (0.0046)	0.0052	0.0055* (0.0064) (0.0045)	0.0052	0.00019
30	0.0080* (0.0108) (0.0052)	0.0048	0.0042	0.0056* (0.0064) (0.0048)	0.0040	0.0059	0.0054	0.00147
31	0.0045	0.0042* (0.0028) (0.0043)	0.0047	0.0048	0.0050* (0.0038) (0.0062)	0.0057	0.0048	0.00051
32	0.0057	0.0041	0.0053	0.0049	0.0059* (0.0067) (0.0051)	0.0054	0.0052	0.00065
33	0.0056* (0.0066) (0.0046)	0.0051	0.0057* (0.0077) (0.0036)	0.0057* (0.0063) (0.0050)	0.0055	0.0050	0.0054	0.00031
36	0.0054* (0.0071) (0.0037)	0.0054* (0.0066) (0.0041)	0.0041	0.0049	0.0046	0.0057	0.0050	0.00060
37	0.0062* (0.0068) (0.0056)	0.0051	0.0053* (0.0067) (0.0039)	0.0052	0.0058	0.0059	0.0056	0.00044
38	0.0048* (0.0065) (0.0031)	0.0055	0.0048	0.0047	0.0047	0.0058	0.0051	0.00048
39	0.0050	0.0042	0.0044	0.0060	0.0046	0.0049	0.0049	0.00064
40	0.0041	0.0043	0.0055	0.0044	0.0040	0.0041	0.0044	0.00056

* Mean of samples obtained during the hour.

TABLE NO. 2

PROJECT NO. 90831

GRAVIMETRIC CHAMBER CONCENTRATIONS
(mg/L)
GROUP 2 - CERIC OXIDE - LOW DOSE

STUDY DAY	SAMPLING TIME						MEAN	S.D.
	0	1	2	3	4	5		
43	0.0056* (0.0071) (0.0041)	0.0054* (0.0034) (0.0073)	0.0046* (0.0037) (0.0054)	0.0045	0.0046	0.0049	0.0049	0.00046
44	0.0034* (0.0032) (0.0037) (0.0032)	0.0050	0.0051	0.0053	0.0041	0.0047	0.0046	0.00072
45	0.0056	0.0043* (0.0035) (0.0050)	0.0042	0.0057	0.0042	0.0048	0.0048	0.00070
46	0.0057	0.0049	0.0057* (0.0077) (0.0037)	0.0044	0.0046	0.0040	0.0049	0.00070
47	0.0059	0.0043	0.0057	0.0051	0.0050	0.0044	0.0051	0.00065
50	0.0053* (0.0062) (0.0043)	0.0051	0.0046	0.0047* (0.0039) (0.0054)	0.0047	0.0058* (0.0061) (0.0055)	0.0050	0.00046
51	0.0055	0.0055	0.0046	0.0046	0.0053	0.0057	0.0052	0.00048
52	0.0042* (0.0035) (0.0048)	0.0043* (0.0038) (0.0048)	0.0049	0.0048	0.0051	0.0053	0.0048	0.00044
53	0.0046	0.0043	0.0051	0.0057	0.0050	0.0055	0.0050	0.00053
54	0.0050	0.0048* (0.0037) (0.0058)	0.0047	0.0053	0.0050	0.0042	0.0048	0.00037
57	0.0058	0.0049	0.0053	0.0056	0.0051	0.0054* (0.0078) (0.0029)	0.0054	0.00033
58	0.0050	0.0046	0.0047	0.0045	0.0050	0.0043	0.0047	0.00028
59	0.0056	0.0051	0.0054	0.0049	0.0048	0.0049	0.0051	0.00032
60	0.0048	0.0041	0.0046	0.0048	0.0045	0.0057	0.0048	0.00053
61	0.0059	0.0053* (0.0032) (0.0074)	0.0047	0.0047	0.0046	0.0053	0.0051	0.00051

* Mean of samples obtained during the hour.

BIO

TABLE NO. 2

PROJECT NO. 90831

GRAVIMETRIC CHAMBER CONCENTRATIONS
(mg/L)
GROUP 2 - CERIC OXIDE - LOW DOSE

STUDY DAY	SAMPLING TIME						MEAN	S.D.
	0	1	2	3	4	5		
64	0.0058	0.0040	0.0055	0.0055	0.0052	0.0051	0.0052	0.00063
65	0.0056	0.0045	0.0043	0.0045	0.0052	0.0042	0.0047	0.00056
66	0.0053* (0.0062) (0.0044)	0.0040* (0.0038) (0.0041)	0.0053	0.0064* (0.0065) (0.0077) (0.0050)	0.0058	0.0053* (0.0069) (0.0037)	0.0054	0.00079
67	0.0042	0.0046	0.0047	0.0045	0.0046	0.0057* (0.0064) (0.0050)	0.0047	0.00051
68	0.0060* (0.0062) (0.0058)	0.0045	0.0054	0.0054	0.0058	0.0052* (0.0071) (0.0033)	0.0054	0.00052
71	0.0051	0.0047	0.0043* (0.0034) (0.0052)	0.0045	0.0043	0.0046	0.0046	0.00030
72	0.0053	0.0052	0.0048	0.0046	0.0050	0.0044	0.0049	0.00035
73	0.0060* (0.0084) (0.0054) (0.0041)	0.0046	0.0040	0.0054	0.0055	0.0053	0.0051	0.00071
74	0.0051	0.0052	0.0057 (0.0070) (0.0044)	0.0047 (0.0061) (0.0033)	0.0060	0.0041	0.0051	0.00068
75	0.0050	0.0049	0.0049	0.0050	0.0052	0.0048	0.0050	0.00014
78	0.0043* (0.0039) (0.0046)	0.0041	0.0046	0.0047	0.0051	0.0048	0.0046	0.00036
79	0.0041	0.0056* (0.0062) (0.0049)	0.0057	0.0055* (0.0080) (0.0043) (0.0043)	0.0056	0.0058	0.0054	0.00064
80	0.0046	0.0043	0.0051	0.0051* (0.0062) (0.0039)	0.0058	0.0053* (0.0062) (0.0044)	0.0050	0.00053
81	0.0049	0.0058	0.0053	0.0053	0.0054	0.0063* (0.0064) (0.0062)	0.0055	0.00049
82	0.0043	0.0056* (0.0062) (0.0049)	0.0051	0.0052* (0.0038) (0.0066)	0.0046	0.0053	0.0050	0.00048

* Mean of samples obtained during the hour.

TABLE NO. 2

PROJECT NO. 90831

GRAVIMETRIC CHAMBER CONCENTRATIONS
(mg/L)
GROUP 2 - CERIC OXIDE - LOW DOSE

STUDY DAY	SAMPLING TIME						MEAN	S.D.
	0	1	2	3	4	5		
85	0.0046	0.0042	0.0046	0.0040	0.0042	0.0045	0.0044	0.00025
86	0.0054* (0.0067) (0.0040)	0.0047	0.0050	0.0055	0.0055* (0.0079) (0.0050)	0.0048	0.0052	0.00036
87	0.0048	0.0050	0.0056	0.0052	0.0055	0.0054	0.0053	0.00031
88	0.0045	0.0043	0.0041* (0.0036) (0.0046)	0.0050	0.0042 (0.0037) (0.0046)	0.0056	0.0046	0.00058
89	0.0040	0.0042* (0.0035) (0.0049)	0.0048* (0.0067) (0.0028)	0.0046	0.0049	0.0057	0.0047	0.00060
92	0.0042	0.0041	0.0044* (0.0038) (0.0050)	0.0049	0.0046	0.0038* (0.0037) (0.0039)	0.0043	0.00039
93	0.0052	0.0048	0.0047	0.0049	0.0053	0.0055	0.0051	0.00031
94	0.0052	0.0045	0.0053	0.0048	0.0052	0.0045	0.0049	0.00037
95	0.0044* (0.0038) (0.0050)	0.0044* (0.0039) (0.0048)	0.0052	0.0058	0.0052	0.0050	0.0050	0.00054
96	0.0048	0.0044	0.0048	0.0047	0.0049	0.0045	0.0047	0.00019
							MEAN+	0.0050
							S.D.	0.00033
							MEAN++	0.0050
							S.D.	0.00032

- + Overall mean for males (Day 1 to 89)
- ++ Overall mean for females (Day 8 to 96)
- * Mean of samples obtained during the hour.

NOTE : Males were treated from Day 1 to 89 and females were treated from Day 8 to 96 due to staggered start.



TABLE NO. 2

PROJECT NO. 90831

GRAVIMETRIC CHAMBER CONCENTRATIONS
(mg/L)
GROUP 3 - CERIC OXIDE - INTERMEDIATE DOSE

STUDY DAY	SAMPLING TIME						MEAN	S.D.
	0	1	2	3	4	5		
1	0.0428	0.0460	0.0760* (0.0615) (0.0905)	0.0553	0.0614* (0.0613) (0.0615)	0.0342* (0.0308) (0.0375)	0.0526	0.01490
2	0.0788* (0.0743) (0.0833)	0.0415	0.0488	0.0560	0.0453	0.0367* (0.0363) (0.0370)	0.0512	0.01503
3	0.0543	0.0455	0.0540	0.0420	0.0485	0.0573	0.0503	0.00590
4	0.0583	0.0503	0.0540	0.0575	0.0435	0.0505	0.0524	0.00549
5	0.0580	0.0563	0.0560	0.0520	0.0510	0.0498	0.0539	0.00334
8	0.0508	0.0598* (0.0725) (0.0470)	0.0493	0.0540	0.0495	0.0570	0.0534	0.00431
9	0.0533	0.0539* (0.0620) (0.0458)	0.0495	0.0495	0.0468	0.0463	0.0499	0.00318
10	0.0608* (0.0690) (0.0525)	0.0425* (0.0355) (0.0495)	0.0445	0.0515	0.0520	0.0528	0.0507	0.00655
11	0.0629* (0.0635) (0.0623)	0.0522* (0.0390) (0.0653)	0.0430	0.0478	0.0454	0.0418	0.0489	0.00782
12	0.0440	0.0553	0.0468	0.0525	0.0568	0.0525	0.0513	0.00495
15	0.0579* (0.0698) (0.0460)	0.0495	0.0470	0.0495	0.0573	0.0525	0.0523	0.00448
16	0.0573	0.0565	0.0528	0.0538	0.0440	0.0533	0.0530	0.00474
17	0.0674* (0.0988) (0.0360)	0.0440	0.0528	0.0525	0.0468	0.0523	0.0526	0.00808
18	0.0538	0.0440	0.0453	0.0575	0.0483	0.0498	0.0498	0.00513
19	0.0590	0.0473	0.0515	0.0543	0.0468	0.0538	0.0521	0.00462

* Mean of samples obtained during the hour.

TABLE NO. 2

PROJECT NO. 90831

GRAVIMETRIC CHAMBER CONCENTRATIONS
(mg/L)
GROUP 3 - CERIC OXIDE - INTERMEDIATE DOSE

STUDY DAY	SAMPLING TIME						MEAN	S.D.
	0	1	2	3	4	5		
22	0.0573	0.0488	0.0470	0.0535	0.0535	0.0553	0.0526	0.00392
23	0.0566* (0.0628) (0.0503)	0.0573	0.0453	0.0480	0.0455	0.0538	0.0511	0.00549
24	0.0578* (0.0658) (0.0498)	0.0490	0.0563* (0.0638) (0.0488)	0.0498	0.0518	0.0485	0.0522	0.00395
25	0.0523	0.0554* (0.0648) (0.0460)	0.0510	0.0525	0.0525	0.0505	0.0524	0.00171
26	0.0570	0.0498	0.0490	0.0528	0.0570	0.0560	0.0536	0.00361
29	0.0558	0.0420	0.0538	0.0500	0.0563	0.0458	0.0506	0.00578
30	0.0498	0.0490	0.0465	0.0538	0.0510	0.0508	0.0502	0.00242
31	0.0410	0.0423	0.0493	0.0408	0.0582	0.0518	0.0472	0.00707
32	0.0572* (0.0670) (0.0473)	0.0515	0.0540	0.0485	0.0480	0.0543	0.0523	0.00359
33	0.0448	0.0523	0.0493	0.0458	0.0533	0.0510	0.0494	0.00347
36	0.0555	0.0455	0.0575	0.0493	0.0515	0.0578	0.0529	0.00493
37	0.0550	0.0445	0.0370* (0.0345) (0.0395)	0.0545	0.0508	0.0535	0.0492	0.00712
38	0.0763* (0.0838) (0.0688)	0.0420	0.0580	0.0631* (0.0708) (0.0553)	0.0516* (0.0603) (0.0428)	0.0629* (0.0735) (0.0525)	0.0590	0.01163
39	0.0793* (0.0963) (0.0623)	0.0473	0.0490	0.0433	0.0475	0.0565	0.0538	0.01321
40	0.0533	0.0473	0.0578	0.0438	0.0565	0.0500	0.0515	0.00542

* Mean of samples obtained during the hour.

TABLE NO. 2

PROJECT NO. 90831

GRAVIMETRIC CHAMBER CONCENTRATIONS
(mg/L)
GROUP 3 - CERIC OXIDE - INTERMEDIATE DOSE

STUDY DAY	SAMPLING TIME						MEAN	S. D.
	0	1	2	3	4	5		
43	0.0590* (0.0780) (0.0400)	0.0563	0.0448	0.0438	0.0515	0.0532* (0.0630) (0.0433)	0.0514	0.00610
44	0.0602* (0.0773) (0.0430)	0.0570	0.0485	0.0420	0.0500	0.0547* (0.0640) (0.0453)	0.0521	0.00657
45	0.0510	0.0428	0.0445	0.0423	0.0558	0.0459* (0.0670) (0.0248)	0.0471	0.00530
46	0.0508	0.0428	0.0435	0.0483	0.0458	0.0435	0.0458	0.00319
47	0.0555	0.0490	0.0463	0.0475	0.0483	0.0573	0.0507	0.00458
50	0.0561* (0.0663) (0.0458)	0.0515	0.0453	0.0465	0.0538	0.0601* (0.0668) (0.0673) (0.0463)	0.0522	0.00567
51	0.0553* (0.0733) (0.0373)	0.0403* (0.0353) (0.0453)	0.0508	0.0503	0.0600	0.0463	0.0505	0.00686
52	0.0548	0.0408	0.0535	0.0574* (0.0615) (0.0533)	0.0603	0.0545	0.0536	0.00671
53	0.0553	0.0468	0.0460	0.0483	0.0468	0.0473	0.0484	0.00346
54	0.0518	0.0480	0.0560	0.0603	0.0443	0.0535	0.0523	0.00569
57	0.0460	0.0448	0.0505	0.0513	0.0518	0.0533	0.0496	0.00341
58	0.0418	0.0593	0.0543	0.0575	0.0483	0.0580	0.0532	0.00684
59	0.0415	0.0400	0.0440	0.0485	0.0448	0.0490	0.0446	0.00363
60	0.0525	0.0403	0.0465	0.0495	0.0490	0.0547* (0.0643) (0.0450)	0.0488	0.00503
61	0.0500	0.0540	0.0430	0.0460	0.0498	0.0470	0.0483	0.00381

* Mean of samples obtained during the hour.

TABLE NO. 2

PROJECT NO. 90831

GRAVIMETRIC CHAMBER CONCENTRATIONS
(mg/L)
GROUP 3 - CERIC OXIDE - INTERMEDIATE DOSE

STUDY DAY	SAMPLING TIME						MEAN	S.D.
	0	1	2	3	4	5		
64	0.0483	0.0428* (0.0325) (0.0530)	0.0425	0.0498	0.0545	0.0470	0.0475	0.00452
65	0.0538	0.0505	0.0515	0.0453	0.0513	0.0393* (0.0373) (0.0413)	0.0486	0.00536
66	0.0500	0.0480	0.0450	0.0538	0.0550	0.0465	0.0497	0.00401
67	0.0558	0.0410	0.0480	0.0433	0.0575	0.0580	0.0506	0.00750
68	0.0569* (0.0748) (0.0390)	0.0593	0.0538	0.0503	0.0525	0.0523	0.0542	0.00332
71	0.0525	0.0518	0.0478	0.0565	0.0468	0.0535	0.0515	0.00363
72	0.0510	0.0453	0.0468	0.0445	0.0443	0.0573	0.0482	0.00510
73	0.0510	0.0488	0.0403* (0.0388) (0.0418)	0.0478	0.0445	0.0429* (0.0393) (0.0465)	0.0459	0.00401
74	0.0440	0.0573	0.0403* (0.0393) (0.0413)	0.0533	0.0445	0.0423	0.0470	0.00675
75	0.0513	0.0485	0.0508* (0.0398) (0.0618)	0.0553* (0.0625) (0.0480)	0.0560	0.0433	0.0509	0.00467
78	0.0488	0.0493	0.0455	0.0463* (0.0353) (0.0573)	0.0430	0.0405* (0.0365) (0.0445)	0.0456	0.00338
79	0.0513	0.0410	0.0463	0.0445	0.0530	0.0448	0.0468	0.00451
80	0.0472* (0.0393) (0.0550)	0.0450	0.0493	0.0430	0.0463	0.0518	0.0471	0.00312
81	0.0523	0.0538	0.0410* (0.0348) (0.0415) (0.0468)	0.0470	0.0569* (0.0623) (0.0515)	0.0523	0.0506	0.00567
82	0.0450	0.0578	0.0463	0.0581* (0.0623) (0.0538)	0.0595	0.0458	0.0521	0.00703

* Mean of samples obtained during the hour.

TABLE NO. 2

PROJECT NO. 90831

GRAVIMETRIC CHAMBER CONCENTRATIONS
(mg/L)
GROUP 3 - CERIC OXIDE - INTERMEDIATE DOSE

STUDY DAY	SAMPLING TIME						MEAN	S.D.
	0	1	2	3	4	5		
85	0.0503	0.0483	0.0475	0.0450	0.0505	0.0488	0.0484	0.00203
86	0.0438	0.0428	0.0508	0.0478	0.0495	0.0468	0.0469	0.00314
87	0.0590	0.0570	0.0438	0.0456	0.0443	0.0528	0.0504	0.00674
88	0.0575	0.0401*	0.0439*	0.0513	0.0533	0.0445	0.0484	0.00663
		(0.0388)	(0.0388)					
		(0.0413)	(0.0490)					
89	0.0530	0.0513	0.0433	0.0545	0.0590	0.0560	0.0529	0.00537
92	0.0619*	0.0597*	0.0503	0.0400	0.0528	0.0540	0.0531	0.00776
	(0.0768)	(0.0995)						
	(0.0470)	(0.0198)						
93	0.0480	0.0403	0.0413	0.0453	0.0508	0.0510	0.0461	0.00463
94	0.0445	0.0538	0.0654*	0.0438	0.0525	0.0463	0.0511	0.00817
			(0.0743)					
			(0.0625)					
			(0.0595)					
95	0.0463	0.0554*	0.0543	0.0532*	0.0614*	0.0543	0.0542	0.00483
		(0.0668)		(0.0763)	(0.0673)			
		(0.0440)		(0.0300)	(0.0555)			
96	0.0597*	0.0593	0.0493	0.0643*	0.0544*	0.0553	0.0571	0.00519
	(0.0620)			(0.0718)	(0.0455)			
	(0.0573)			(0.0568)	(0.0633)			
							MEAN +	0.0505
							S.D.	0.00259
							MEAN++	0.0505
							S.D.	0.00278

+ Overall mean for males (Day 1 to 89)

++ Overall mean for females (Day 8 to 96)

* Mean of samples obtained during the hour.

NOTE : Males were treated from Day 1 to 89 and
females were treated from Day 8 to 96 due to staggered start.

TABLE NO. 2

PROJECT NO. 90831

GRAVIMETRIC CHAMBER CONCENTRATIONS
(mg/L)
GROUP 4 - CERIC OXIDE - HIGH DOSE

STUDY DAY	SAMPLING TIME						MEAN	S.D.
	0	1	2	3	4	5		
1	0.4375	0.5650	0.5325	0.5350	0.5675	0.4675	0.5175	0.05327
2	0.5300	0.4800	0.4525	0.5025	0.5625	0.5100	0.5063	0.03830
3	0.6225* (0.6950) (0.5500)	0.4700	0.4825	0.4975	0.6425* (0.6600) (0.6250)	0.4725	0.5313	0.07927
4	0.4100	0.5100	0.5225	0.4650	0.4450	0.5713* (0.6025) (0.5400)	0.4873	0.05843
5	0.4825	0.4850	0.4500	0.5450	0.6275* (0.7225) (0.7650) (0.4375) (0.5850)	0.5575	0.5246	0.06480
8	0.5100	0.5375	0.4900	0.4625	0.4950* (0.3525) (0.6375)	0.5950	0.5150	0.04629
9	0.4163* (0.3550) (0.4775)	0.3813* (0.3150) (0.4475)	0.6200* (0.6750) (0.5650)	0.5075	0.5175	0.4550	0.4829	0.08501
10	0.4600	0.4875	0.4125* (0.3675) (0.4575)	0.4250	0.4150	0.5450	0.4575	0.05187
11	0.5500	0.4200	0.4625	0.4200	0.3988* (0.3425) (0.4550)	0.4875	0.4565	0.05609
12	0.4425	0.4200* (0.3900) (0.4500)	0.4258* (0.3850) (0.2800) (0.6125)	0.4338* (0.3425) (0.5250)	0.4375	0.4575	0.4362	0.01320
15	0.6050* (0.7875) (0.4225)	0.6000	0.3713* (0.3900) (0.3525)	0.4825	0.5750	0.5575	0.5319	0.09025
16	0.4900	0.5350	0.4775	0.5550	0.5325	0.4200	0.5017	0.04959
17	0.5750* (0.6300) (0.5200)	0.4700	0.5450	0.6075* (0.7050) (0.5975) (0.5200)	0.5850* (0.6300) (0.5400)	0.5775	0.5600	0.04845
18	0.4600	0.4500	0.4475	0.4025	0.5700	0.5425	0.4788	0.06381
19	0.5650	0.5675	0.5550	0.4675	0.4675	0.5975	0.5367	0.05542

* Mean of samples obtained during the hour.

BIO

TABLE NO. 2

PROJECT NO. 90831

GRAVIMETRIC CHAMBER CONCENTRATIONS
(mg/L)
GROUP 4 - CERIC OXIDE - HIGH DOSE

STUDY DAY	SAMPLING TIME						MEAN	S.D.
	0	1	2	3	4	5		
22	0.5438* (0.6125) (0.4750)	0.5650	0.5550	0.5200	0.4625	0.5538	0.5334	0.03794
23	0.5450* (0.4800) (0.6100)	0.4625	0.3813* (0.3600) (0.4025)	0.4700* (0.3825) (0.5575)	0.5538* (0.7325) (0.3750)	0.4675	0.4800	0.06321
24	0.5450	0.5500	0.4875	0.6163* (0.6350) (0.5975)	0.5563* (0.6775) (0.4350)	0.4775	0.5388	0.05073
25	0.5025	0.4825	0.4800	0.4300	0.5150	0.4100	0.4700	0.04132
26	0.5550	0.5150	0.4450	0.4750	0.5950	0.4325	0.5029	0.06392
29	0.4800	0.4950* (0.3875) (0.6025)	0.4750	0.5350	0.5275	0.5900	0.5171	0.04331
30	0.5650	0.4100	0.5175	0.5238* (0.6025) (0.4450)	0.5700	0.5700	0.5261	0.06152
31	0.5675	0.4150	0.5350* (0.6075) (0.4625)	0.6775	0.4550	0.6200* (0.8375) (0.6550) (0.3675)	0.5450	0.09878
32	0.5550	0.4775	0.4800	0.5488* (0.6650) (0.4325)	0.5513* (0.6450) (0.4575)	0.5725* (0.6125) (0.5325)	0.5309	0.04121
33	0.5888* (0.6025) (0.5750)	0.5863* (0.6375) (0.5350)	0.5575	0.5575	0.4075* (0.3773) (0.4375)	0.5825	0.5467	0.06962
36	0.5150	0.5950* (0.7400) (0.4500)	0.5375	0.4800	0.4700	0.5675	0.5275	0.04894
37	0.5500	0.5175	0.5250	0.6050	0.5163* (0.6500) (0.3825)	0.4625	0.5294	0.04679

* Mean of samples obtained during the hour.



TABLE NO. 2

PROJECT NO. 90831

GRAVIMETRIC CHAMBER CONCENTRATIONS
(mg/L)
GROUP 4 - CERIC OXIDE - HIGH DOSE

STUDY DAY	SAMPLING TIME						MEAN	S.D.
	0	1	2	3	4	5		
38	0.5713* (0.6225) (0.5200)	0.4975	0.3575* (0.3125) (0.4025)	0.5725	0.5338* (0.6025) (0.4650)	0.4375* (0.3900) (0.4850)	0.4950	0.08432
39	0.6475* (0.7600) (0.8150)	0.5825	0.4200	0.4175* (0.3950) (0.4400)	0.4375	0.4100	0.4858	0.10254
40	0.4088* (0.3950) (0.4225)	0.4675	0.4950	0.4950	0.5700	0.4375	0.4790	0.05581
43	0.4350	0.4450	0.5700	0.5075	0.5038* (0.6200) (0.3875)	0.4625	0.4873	0.05032
44	0.4550	0.5500	0.5875	0.4250	0.4925	0.5475	0.5096	0.06256
45	0.4950	0.4125	0.5875* (0.7350) (0.4400)	0.4400	0.5600	0.5125	0.5013	0.06736
46	0.5700	0.4400	0.5000	0.4825	0.4850	0.4213* (0.3200) (0.5225)	0.4831	0.05200
47	0.4150	0.4625	0.4700	0.3688* (0.3225) (0.4150)	0.7113* (0.7975) (0.6250)	0.4225* (0.3825) (0.4625)	0.4750	0.12137
50	0.5275	0.4000* (0.3800) (0.4200)	0.4800	0.3950* (0.3775) (0.4125)	0.4325	0.4300	0.4442	0.05086
51	0.5375	0.5075* (0.3850) (0.6300)	0.4850	0.6088* (0.6500) (0.5675)	0.4150	0.4775	0.5052	0.06495
52	0.4200	0.5100	0.5925* (0.8700) (0.4525) (0.4550)	0.5575	0.5050	0.5225	0.5179	0.05825
53	0.4975	0.4725	0.4075* (0.3950) (0.4200)	0.5100	0.5475	0.5775	0.5021	0.05942
54	0.5925	0.4600	0.4800	0.4300	0.5625	0.4875	0.5021	0.06244

* Mean of samples obtained during the hour.

TABLE NO. 2

GRAVIMETRIC CHAMBER CONCENTRATIONS
(mg/L)
GROUP 4 - CERIC OXIDE - HIGH DOSE

STUDY DAY	SAMPLING TIME						MEAN	S.D.
	0	1	2	3	4	5		
57	0.5225	0.5925	0.4475	0.4750	0.5500	0.5375	0.5208	0.05243
58	0.4275	0.4650	0.5050	0.5900	0.5150*	0.4313	0.4890	0.06135
					(0.5575)			
					(0.4725)			
59	0.4775	0.4650	0.5900	0.4700	0.5200	0.5050	0.5046	0.04697
60	0.4875	0.5375	0.4750	0.5875	0.5175	0.4900	0.5158	0.04182
61	0.5075	0.4925	0.4800	0.4850	0.5975	0.4900	0.5088	0.04446
64	0.6000	0.6588*	0.4338*	0.4000	0.4475	0.5263*	0.5111	0.10229
		(0.9025)	(0.3925)			(0.6300)		
		(0.4150)	(0.4750)			(0.4225)		
65	0.4875	0.4950	0.5525	0.5750*	0.5500*	0.5050	0.5275	0.03619
				(0.6250)	(0.6850)			
				(0.5250)	(0.4150)			
66	0.5625	0.5000	0.5525	0.4375	0.5675	0.5800	0.5333	0.05451
67	0.5500	0.5975	0.5250	0.5400	0.4950	0.5425	0.5417	0.03360
68	0.5100	0.5413*	0.5338*	0.4400	0.5750	0.6050	0.5342	0.05690
		(0.6600)	(0.6650)					
		(0.4225)	(0.4025)					
71	0.5800	0.4175	0.4250*	0.4975	0.4650	0.4875	0.4788	0.05918
			(0.3875)					
			(0.4625)					
72	0.4825	0.5325	0.4050*	0.5250	0.4400	0.5175	0.4838	0.05164
			(0.3875)					
			(0.4225)					
73	0.4925	0.4875	0.4375	0.5125	0.5400	0.6117*	0.5136	0.05872
						(0.6925)		
						(0.6725)		
						(0.4700)		
74	0.5350	0.5300	0.5250	0.5100	0.4075	0.5300*	0.5063	0.04914
						(0.6225)		
						(0.4375)		
75	0.4750	0.4675	0.4700	0.4800	0.3825*	0.4800	0.4592	0.03790
					(0.3650)			
					(0.4000)			
78	0.5250	0.5538*	0.5400	0.5750*	0.5725*	0.5475	0.5523	0.01921
		(0.4875)		(0.5325)	(0.4500)			
		(0.6200)		(0.6175)	(0.6950)			

* Mean of samples obtained during the hour.

TABLE NO. 2

GRAVIMETRIC CHAMBER CONCENTRATIONS
(mg/L)
GROUP 4 - CERIC OXIDE - HIGH DOSE

STUDY DAY	SAMPLING TIME						MEAN	S.D.
	0	1	2	3	4	5		
79	0.5513* (0.6425) (0.4600)	0.5150	0.5450	0.6000	0.5575	0.4150	0.5306	0.06290
80	0.5363* (0.6125) (0.4600)	0.5775	0.4325* (0.2900) (0.4025) (0.6050)	0.4833* (0.3975) (0.3650) (0.6875)	0.4900	0.5788* (0.6900) (0.4675)	0.5164	0.05806
81	0.6113* (0.7325) (0.4900)	0.5938* (0.6200) (0.5675)	0.5175	0.5513* (0.6300) (0.4725)	0.4700	0.4625	0.5344	0.06218
82	0.5475	0.4200	0.5825* (0.3750) (0.7900)	0.4125	0.5250	0.4750	0.4938	0.06948
85	0.4850	0.5425	0.5950	0.4900	0.4900* (0.6050) (0.3750)	0.5325	0.5225	0.04307
86	0.5400	0.6300* (0.6050) (0.6550)	0.4438* (0.3750) (0.5125)	0.5225	0.5425	0.4975* (0.6050) (0.3900)	0.5294	0.06131
87	0.5525	0.5600	0.5050	0.5425	0.4775	0.5525	0.5317	0.03296
88	0.4350	0.6000	0.5350	0.4700	0.5350	0.5625	0.5229	0.06055
89	0.4575	0.4750	0.4725	0.4975	0.5700	0.6000	0.5121	0.05868
92	0.4000* (0.3375) (0.4625)	0.5025	0.4975	0.4725	0.4925	0.5075	0.4788	0.04043
93	0.4200	0.4575	0.5200* (0.6025) (0.4375)	0.4125	0.5625	0.5125	0.4808	0.06020
94	0.4525	0.5275	0.4725	0.5250	0.4325	0.5825	0.4988	0.05612
95	0.4425	0.5750	0.4875	0.5875	0.4575	0.5975	0.5246	0.06990
96	0.4900	0.4450	0.4575	0.4725	0.5600	0.5300	0.4925	0.04438
MEAN+							0.5082	
S.D.							0.02681	
MEAN++							0.5068	
S.D.							0.02703	

+ Overall mean for males (Day 1 to 89)
 ++ Overall mean for females (Day 8 to 96)
 * Mean of samples obtained during the hour.

NOTE : Males were treated from Day 1 to 89 and
 females were treated from Day 8 to 96 due to staggered start.

TABLE NO. 3

PROJECT NO. 90831

NOMINAL CONCENTRATION
(mg/L)

STUDY DAY	GROUP 2 CERIC OXIDE LOW DOSE	GROUP 3 CERIC OXIDE INTERMEDIATE DOSE	GROUP 4 CERIC OXIDE HIGH DOSE
1	0.04	0.27	2.32
2	0.06	0.19	2.29
3	0.04	0.27	Nc
4	0.04	0.24	2.21
5	0.06	0.24	2.78
8	0.05	0.25	2.26
9	0.06	0.27	2.22
10	0.06	0.30	2.19
11	Nc	0.30	2.10
12	0.06	0.30	1.99
15	0.07	0.27	2.46
16	0.06	0.28	2.51
17	0.06	0.30	2.65
18	0.05	0.31	2.50
19	0.06	0.31	2.60
22	0.09	0.25	2.44
23	0.05	0.30	2.27
24	0.08	0.27	2.58
25	0.08	0.27	2.49
26	0.10	0.31	2.41
29	0.10	0.27	2.71
30	0.08	0.28	2.70
31	0.06	0.27	2.64
32	0.07	0.32	2.79
33	0.13	0.29	2.53
36	0.07	0.32	2.28
37	0.07	0.25	2.88
38	0.07	0.33	2.50
39	0.06	0.27	2.27
40	0.07	0.29	2.60
43	0.07	0.28	2.47
44	0.06	0.25	2.31
45	0.07	0.30	2.41
46	0.08	0.29	2.34
47	0.06	0.29	2.40
50	0.06	0.28	2.28
51	0.07	0.31	2.32
52	0.07	0.29	2.69
53	0.09	0.23	2.83
54	0.07	0.24	2.61

Nc Non calculable

BIO

TABLE NO. 3

PROJECT NO. 90831

NOMINAL CONCENTRATION
(mg/L)

STUDY DAY	GROUP 2 CERIC OXIDE LOW DOSE	GROUP 3 CERIC OXIDE INTERMEDIATE DOSE	GROUP 4 CERIC OXIDE HIGH DOSE
57	0.06	0.22	2.54
58	0.07	0.27	2.79
59	0.07	0.21	2.41
60	0.06	0.26	2.82
61	0.05	0.28	2.47
64	0.07	0.26	2.64
65	0.06	0.21	2.70
66	0.06	0.19	2.44
67	0.06	0.22	2.56
68	0.06	0.31	2.51
71	0.06	0.27	2.63
72	0.07	0.22	2.40
73	0.05	0.20	2.39
74	0.07	0.23	2.75
75	0.05	0.25	2.86
78	0.06	0.21	2.60
79	0.05	0.24	2.21
80	0.04	0.21	3.42
81	0.08	0.21	2.41
82	0.05	0.30	2.48
85	0.07	0.29	2.26
86	0.07	0.24	2.36
87	T	0.30	2.37
88	0.05	0.30	2.32
89	0.05	0.27	2.56
92	0.05	0.30	2.47
93	0.05	0.28	2.36
94	0.05	0.30	2.40
95	0.05	0.31	2.51
96	0.04	0.26	2.40
MEAN: +	0.06	0.27	2.50
S.D.	0.015	0.035	0.230
MEAN: ++	0.06	0.27	2.50
S.D.	0.015	0.034	0.221

+ Overall mean for males (Day 1 to 89)
 ++ Overall mean for females (Day 8 to 96)
 T Technical error

NOTE: Males were treated from Day 1 to 89 and females were treated from Day 8 to 96 due to staggered start.

TABLE NO. 4

PROJECT NO. 90831

PARTICLE SIZE ANALYSIS
(MASS MEDIAN DIAMETER, (μm) AND GEOMETRIC STANDARD DEVIATION)

STUDY WEEK	GROUP 2 CERIC OXIDE LOW DOSE	GROUP 3 CERIC OXIDE INTERMEDIATE DOSE	GROUP 4 CERIC OXIDE HIGH DOSE
1	2.1 \pm 1.7	2.1 \pm 1.9	2.2 \pm 1.8
2	1.7 \pm 2.0* (1.7 \pm 2.1) (1.7 \pm 1.9)	2.1 \pm 2.0* (2.1 \pm 2.1) (2.1 \pm 1.8)	2.0 \pm 2.2* (1.8 \pm 2.4) (2.1 \pm 1.9)
3	1.7 \pm 1.9* (1.6 \pm 2.1) (1.7 \pm 1.6)	2.0 \pm 1.8	2.1 \pm 1.8
4	1.8 \pm 1.7	2.3 \pm 1.8	2.3 \pm 1.8
5	1.8 \pm 1.7	2.0 \pm 1.6	2.4 \pm 1.8
6	1.9 \pm 2.0* (1.8 \pm 2.3) (1.9 \pm 1.6)	2.3 \pm 2.0	2.2 \pm 1.8
7	2.0 \pm 2.0	2.1 \pm 2.1* (2.0 \pm 2.1) (2.2 \pm 2.0)	2.3 \pm 1.8
8	1.9 \pm 1.7	1.8 \pm 1.9	2.3 \pm 1.8
9	1.6 \pm 1.8	1.7 \pm 2.2	2.0 \pm 1.9
10	2.0 \pm 2.0* (1.9 \pm 2.1) (2.1 \pm 1.8)	1.9 \pm 1.7	2.3 \pm 1.8* (2.2 \pm 1.9) (2.3 \pm 1.7)
11	1.9 \pm 1.8* (1.9 \pm 1.9) (1.9 \pm 1.7)	1.9 \pm 1.7	2.0 \pm 1.9
12	1.8 \pm 2.0* (1.7 \pm 2.1) (1.9 \pm 1.9)	2.2 \pm 2.0	2.3 \pm 1.6

TABLE NO. 4

PROJECT NO. 90831

PARTICLE SIZE ANALYSIS
(MASS MEDIAN DIAMETER, (μm) AND GEOMETRIC STANDARD DEVIATION)

STUDY WEEK	GROUP 2 CERIC OXIDE LOW DOSE	GROUP 3 CERIC OXIDE INTERMEDIATE DOSE	GROUP 4 CERIC OXIDE HIGH DOSE
13	2.0 \pm 2.1* (2.0 \pm 2.0) (2.0 \pm 2.1)	2.1 \pm 2.0	2.5 \pm 1.7
14	1.6 \pm 2.1	2.2 \pm 2.1* (2.0 \pm 2.1) (2.3 \pm 2.1)	2.4 \pm 1.9
MEAN+ (MMAD \pm GSD)	1.9 \pm 1.9	2.0 \pm 1.9	2.2 \pm 1.8
MEAN++(MMAD \pm GSD)	1.8 \pm 1.9	2.0 \pm 1.9	2.2 \pm 1.8

+ Overall mean for males (Week 1 to 13)

++ Overall mean for females (Week 2 to 14)

* Mean of samples taken during the same week.

NOTE: Males were treated from Day 1 to 89 and
females were treated from Day 8 to 96 due to staggered start.



TABLE NO. 5

ESTIMATED PARTICLE SIZE (μm)
GROUP 2 - CERIC OXIDE - LOW DOSE

STUDY WEEK	MMAD \pm GSD	% SIZE BY MASS											
		5	10	15	20	25	30	40	50	60	70	80	90
1	2.1 \pm 1.7	0.94	1.1	1.3	1.4	1.5	1.6	1.8	2.1	2.4	2.7	3.2	3.9
2	1.7 \pm 2.0 *	0.54* (0.49)	0.70* (0.64)	0.83* (0.78)	0.95* (0.90)	1.1 * (1.0)	1.2 * (1.1)	1.5 * (1.4)	1.7 * (1.7)	2.1 * (2.1)	2.5 * (2.5)	3.1 * (3.2)	4.3 * (4.5)
	(1.7 \pm 2.1)	(0.59)	(0.76)	(0.88)	(1.0)	(1.1)	(1.2)	(1.5)	(1.7)	(2.0)	(2.4)	(3.0)	(4.0)
	(1.7 \pm 1.9)												
3	1.7 \pm 1.9 *	0.63* (0.52)	0.77* (0.66)	0.88* (0.78)	1.0 * (0.90)	1.1 * (1.0)	1.2 * (1.1)	1.4 * (1.3)	1.7 * (1.6)	1.9 * (1.9)	2.2 * (2.3)	2.7 * (2.9)	3.5 * (3.9)
	(1.6 \pm 2.1)	(0.74)	(0.88)	(0.98)	(1.1)	(1.2)	(1.3)	(1.5)	(1.7)	(1.9)	(2.1)	(2.5)	(3.1)
	(1.7 \pm 1.6)												
4	1.8 \pm 1.7	0.70	0.86	0.98	1.1	1.2	1.3	1.5	1.8	2.1	2.4	2.9	3.7
5	1.8 \pm 1.7	0.70	0.86	0.98	1.1	1.2	1.3	1.5	1.7	2.0	2.3	2.8	3.5
6	1.9 \pm 2.0 *	0.64* (0.48)	0.80* (0.64)	0.94* (0.78)	1.1 * (0.92)	1.2 * (1.1)	1.3 * (1.2)	1.6 * (1.5)	1.8 * (1.8)	2.2 * (2.2)	2.6 * (2.7)	3.2 * (3.6)	4.3 * (5.1)
	(1.8 \pm 2.3)	(0.80)	(0.96)	(1.1)	(1.2)	(1.3)	(1.4)	(1.6)	(1.8)	(2.1)	(2.4)	(2.8)	(3.5)
	(1.9 \pm 1.6)												
7	2.0 \pm 2.0	0.64	0.82	0.98	1.1	1.3	1.4	1.7	2.0	2.4	2.9	3.6	4.9
8	1.9 \pm 1.7	0.86	1.0	1.2	1.3	1.4	1.5	1.7	2.0	2.2	2.5	3.0	3.6
9	1.6 \pm 1.8	0.64	0.78	0.88	1.0	1.1	1.2	1.4	1.6	1.8	2.1	2.6	3.3
10	2.0 \pm 2.0 *	0.71* (0.57)	0.87* (0.74)	1.04* (0.88)	1.2 * (1.0)	1.4 * (1.2)	1.5 * (1.3)	1.7 * (1.6)	2.0 * (1.9)	2.4 * (2.3)	2.9 * (2.8)	3.5 * (3.5)	4.7 (4.9)
	(1.9 \pm 2.1)	(0.84)	(1.0)	(1.2)	(1.3)	(1.5)	(1.6)	(1.8)	(2.1)	(2.4)	(2.9)	(3.4)	(4.4)
	(2.1 \pm 1.8)												

TABLE NO. 5

ESTIMATED PARTICLE SIZE (μm)
GROUP 2 - CERIC OXIDE - LOW DOSE

STUDY WEEK	MMAD \pm GSD	% SIZE BY MASS											
		5	10	15	20	25	30	40	50	60	70	80	90
11	1.9 \pm 1.8 *	0.72*	0.90*	1.04*	1.2 *	1.3 *	1.4 *	1.7 *	1.9 *	2.3 *	2.6 *	3.2 *	4.1 *
	(1.9 \pm 1.9)	(0.66)	(0.84)	(0.98)	(1.1)	(1.3)	(1.4)	(1.6)	(1.9)	(2.3)	(2.7)	(3.3)	(4.4)
	(1.9 \pm 1.7)	(0.78)	(0.96)	(1.1)	(1.2)	(1.3)	(1.4)	(1.7)	(1.9)	(2.2)	(2.5)	(3.0)	(3.8)
12	1.8 \pm 2.0 *	0.59*	0.75*	0.88*	1.0 *	1.2	1.3 *	1.5 *	1.8 *	2.2 *	2.6 *	3.3 *	4.4 *
	(1.7 \pm 2.1)	(0.50)	(0.66)	(0.78)	(0.92)	(1.1)	(1.2)	(1.4)	(1.7)	(2.1)	(2.6)	(3.3)	(4.6)
	(1.9 \pm 1.9)	(0.68)	(0.84)	(0.98)	(1.1)	(1.2)	(1.3)	(1.6)	(1.9)	(2.2)	(2.6)	(3.2)	(4.2)
13	2.0 \pm 2.1 *	0.60*	0.77*	0.93*	1.1 *	1.3	1.4 *	1.7 *	2.0 *	2.4 *	2.9 *	3.6 *	5.0 *
	(2.0 \pm 2.0)	(0.64)	(0.82)	(0.98)	(1.1)	(1.3)	(1.4)	(1.7)	(2.0)	(2.4)	(2.8)	(3.5)	(4.7)
	(2.0 \pm 2.1)	(0.56)	(0.72)	(0.88)	(1.0)	(1.2)	(1.3)	(1.6)	(2.0)	(2.4)	(2.9)	(3.7)	(5.2)
14	1.6 \pm 2.1	0.52	0.66	0.78	0.90	1.0	1.1	1.4	1.6	2.0	2.4	2.9	4.0
	MEAN +	0.69	0.84	0.99	1.12	1.3	1.4	1.6	1.9	2.2	2.6	3.1	4.1
S.D.	0.14 \pm 0.15	0.110	0.109	0.133	0.129	0.13	0.13	0.13	0.16	0.20	0.26	0.33	0.56
	MEAN ++	0.65	0.81	0.95	1.08	1.2	1.3	1.6	1.8	2.2	2.5	3.1	4.1
S.D.	0.14 \pm 0.15	0.088	0.089	0.108	0.111	0.12	0.12	0.13	0.15	0.19	0.26	0.33	0.56

+ Overall mean for males (Week 1 to 13)

++ Overall mean for females (Week 2 to 14)

* Mean of samples taken during the same week.

NOTE: Males were treated from Day 1 to 89 and females were treated from Day 8 to 96 due to staggered start.

TABLE NO. 5

ESTIMATED PARTICLE SIZE (μm)

GROUP 3 - CERIC OXIDE - INTERMEDIATE DOSE

STUDY WEEK	MMAD \pm GSD	% SIZE BY MASS											
		5	10	15	20	25	30	40	50	60	70	80	90
1	2.1 \pm 1.9	0.72	0.90	1.1	1.2	1.4	1.5	1.8	2.1	2.5	3.0	3.7	4.9
2	2.1 \pm 2.0 *	0.73* (0.62) (0.84)	0.91* (0.82) (1.0)	1.09* (0.98) (1.2)	1.2 * (1.1) (1.3)	1.3 * (1.2) (1.4)	1.5 * (1.4) (1.6)	1.8 * (1.7) (1.8)	2.1 * (2.1) (2.1)	2.5 * (2.5) (2.4)	3.0 * (3.1) (2.8)	3.7 * (3.9) (3.4)	4.9 * (5.4) (4.3)
3	2.0 \pm 1.8	0.76	0.92	1.1	1.2	1.3	1.5	1.7	2.0	2.3	2.7	3.3	4.3
4	2.3 \pm 1.8	0.86	1.1	1.2	1.4	1.5	1.7	2.0	2.4	2.7	3.2	3.9	5.0
5	2.0 \pm 1.6	0.86	1.0	1.2	1.3	1.4	1.5	1.7	2.0	2.2	2.6	3.0	3.8
6	2.3 \pm 2.0	0.78	0.98	1.2	1.3	1.5	1.6	2.0	2.3	2.8	3.3	4.0	5.4
7	2.1 \pm 2.1*	0.62* (0.55) (0.68)	0.81* (0.74) (0.88)	0.99* (1.0) (1.2)	1.1 * (1.0) (1.2)	1.3 * (1.2) (1.4)	1.4 * (1.3) (1.5)	1.7 * (1.6) (1.8)	2.1 * (2.0) (2.2)	2.5 * (2.4) (2.6)	3.1 * (2.9) (3.2)	3.9 * (3.8) (4.0)	5.3 * (5.2) (5.4)
8	1.8 \pm 1.9	0.68	0.84	0.98	1.1	1.2	1.3	1.6	1.8	2.1	2.5	3.0	4.0
9	1.7 \pm 2.2	0.48	0.64	0.76	0.9	1.0	1.1	1.4	1.7	2.1	2.6	3.3	4.7
10	1.9 \pm 1.7	0.76	0.94	1.1	1.2	1.3	1.4	1.7	1.9	2.2	2.6	3.1	4.0
11	1.9 \pm 1.7	0.78	0.94	1.1	1.2	1.3	1.4	1.6	1.9	2.2	2.5	3.0	3.8
12	2.2 \pm 2.0	0.72	0.92	1.1	1.2	1.4	1.5	1.8	2.2	2.6	3.1	3.8	5.2

ESTIMATED PARTICLE SIZE (um)
 GROUP 3 - CERIC OXIDE - INTERMEDIATE DOSE

STUDY WEEK	MPAD ± GSD	% SIZE BY MASS											
		5	10	15	20	25	30	40	50	60	70	80	90
13	2.1 ± 2.0	0.64	0.82	0.98	1.1	1.3	1.4	1.7	2.1	2.5	3.0	3.8	5.2
14	2.2 ± 2.1 *	0.66*	0.85*	1.04*	1.2*	1.4 *	1.5 *	1.8 *	2.2 *	2.7 *	3.3 *	4.1 *	5.6 *
	(2.0 ± 2.1)	(0.64)	(0.82)	(0.98)	(1.1)	(1.3)	(1.4)	(1.7)	(2.1)	(2.5)	(3.0)	(3.7)	(5.2)
	(2.3 ± 2.1)	(0.68)	(0.88)	(1.1)	(1.2)	(1.4)	(1.6)	(1.9)	(2.3)	(2.8)	(3.5)	(4.4)	(6.0)
MEAN +	2.0 ± 1.9	0.72	0.90	1.07	1.2	1.3	1.4	1.7	2.0	2.4	2.9	3.5	4.7
S.D.	0.18 ± 0.17	0.102	0.110	0.121	0.12	0.13	0.15	0.16	0.19	0.23	0.28	0.39	0.60
MEAN ++	2.0	0.72	0.90	1.06	1.2	1.3	1.4	1.7	2.1	2.4	2.9	3.5	4.7
S.D.	0.19	0.104	0.111	0.120	0.12	0.13	0.15	0.16	0.20	0.24	0.31	0.42	0.65

+ Overall mean for males (Week 1 to 13)

++ Overall mean for females (Week 2 to 14)

* Mean of samples taken during the same week.

NOTE: Males were treated from Day 1 to 89 and females were treated from Day 8 to 96 due to staggered start.

TABLE NO. 5

ESTIMATED PARTICLE SIZE (um)
GROUP 4 - CERIC OXIDE - HIGH DOSE

% SIZE BY MASS

STUDY WEEK	MMAD ± GSD	% SIZE BY MASS											
		5	10	15	20	25	30	40	50	60	70	80	90
1	2.2 ± 1.8	0.80	1.0	1.2	1.3	1.5	1.6	1.9	2.2	2.6	3.0	3.6	3.7
2	2.0 ± 2.2 * (1.8 ± 2.4) (2.1 ± 1.9)	0.58* (0.46) (0.70)	0.76* (0.62) (0.90)	0.94* (0.78) (1.1)	1.06* (0.92) (1.2)	1.2 * (1.0) (1.3)	1.4 * (1.2) (1.5)	1.7 * (1.5) (1.8)	2.0 * (1.9) (2.1)	2.4 * (2.3) (2.5)	3.0 * (2.9) (3.0)	3.8 * (3.9) (3.7)	5.3 * (5.6) (4.9)
3	2.1 ± 1.8	0.80	1.0	1.2	1.3	1.5	1.6	1.8	2.1	2.5	2.9	3.5	4.5
4	2.3 ± 1.8	0.88	1.1	1.3	1.4	1.6	1.7	2.0	2.3	2.7	3.1	3.8	4.9
5	2.4 ± 1.8	0.88	1.1	1.3	1.4	1.6	1.7	2.0	2.4	2.7	3.2	3.9	5.0
6	2.2 ± 1.8	0.82	1.0	1.2	1.3	1.5	1.6	1.9	2.2	2.5	3.0	3.6	4.7
7	2.3 ± 1.8	0.80	1.0	1.2	1.3	1.5	1.6	1.9	2.2	2.6	3.1	3.8	5.0
8	2.3 ± 1.8	0.88	1.1	1.3	1.4	1.6	1.7	2.0	2.3	2.7	3.2	3.8	4.9
9	2.0 ± 1.9	0.74	0.92	1.1	1.2	1.3	1.5	1.7	2.0	2.4	2.8	3.4	4.5
10	2.3 ± 1.8 * (2.2 ± 1.9) (2.3 ± 1.7)	0.80* (0.68) (0.92)	0.99* (0.88) (1.1)	1.2 * (1.1) (1.3)	1.3 * (1.2) (1.4)	1.5 * (1.4) (1.6)	1.6 * (1.5) (1.7)	2.0 * (1.9) (2.0)	2.3 * (2.2) (2.3)	2.7 * (2.7) (2.6)	3.2 * (3.3) (3.0)	3.9 * (4.2) (3.5)	5.0 * (5.6) (4.4)
11	2.0 ± 1.9	0.74	0.92	1.1	1.2	1.3	1.5	1.7	2.0	2.3	2.8	3.3	4.3
12	2.3 ± 1.6	1.1	1.3	1.5	1.6	1.7	1.9	2.0	2.3	2.6	2.9	3.4	4.3

TABLE NO. 5

ESTIMATED PARTICLE SIZE (µm)
GROUP 4 - CERIC OXIDE - HIGH DOSE

STUDY WEEK	MWAD ± GSD	% SIZE BY MASS											
		5	10	15	20	25	30	40	50	60	70	80	90
13	2.5 ± 1.7	0.96	1.2	1.4	1.5	1.7	1.8	2.2	2.5	2.9	3.4	4.0	5.2
14	2.4 ± 1.9	0.78	1.00	1.2	1.3	1.5	1.7	2.0	2.4	2.8	3.4	4.2	5.5
MEAN +	2.2 ± 1.8	0.83	1.03	1.23	1.33	1.5	1.6	1.9	2.2	2.6	3.0	3.7	4.7
S.D.	0.16 ± 0.14	0.122	0.135	0.141	0.138	0.15	0.13	0.15	0.16	0.16	0.18	0.22	0.44
MEAN ++	2.2 ± 1.8	0.83	1.03	1.23	1.33	1.5	1.6	1.9	2.2	2.6	3.1	3.7	4.9
S.D.	0.17 ± 0.14	0.123	0.135	0.141	0.138	0.15	0.13	0.15	0.17	0.17	0.20	0.27	0.38

+ Overall mean for males (Week 1 to 13)
 ++ Overall mean for females (Week 2 to 14)
 * Mean of samples taken during the same week.

NOTE: Males were treated from Day 1 to 89 and females were treated from Day 8 to 96 due to staggered start.

PROJECT NO. 90831

SUMMARY OF RECURRING CLINICAL SIGNS

MALES

TABLE NO. 6

GROUP 3 - CERIC OXIDE - INTERMEDIATE DOSE
 GROUP 4 - CERIC OXIDE - HIGH DOSE

GROUP 1 - AIR CONTROL
 GROUP 2 - CERIC OXIDE - LOW DOSE

OBSERVATION	GROUP NO.	STUDY DAY																							
		1	2	3	4	5	8	9	10	11	12	PRE/RX	POST/RX	PRE/RX	POST/RX	PRE/RX	POST/RX	PRE/RX	POST/RX	PRE/RX	POST/RX	PRE/RX	POST/RX		
Cranial Staining	1	0/1	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	
	2	0/0	0/1	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	
	3	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	
	4	0/1	0/0	0/0	0/0	0/1	0/1	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	
Muzzle Staining	1	0/3	0/5	0/0	0/1	0/0	0/2	0/5	0/4	0/3	0/3	0/3	0/3	0/3	0/3	0/3	0/3	0/3	0/3	0/3	0/3	0/3	0/3	0/3	
	2	0/7	0/5	0/0	0/5	0/6	0/1	1/0	0/6	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/6	
	3	0/1	0/1	0/0	1/0	0/4	0/0	0/1	0/2	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/5	
	4	0/0	0/1	0/0	0/0	0/3	0/1	0/1	3/0	0/3	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/6	
Periorbital Staining	1	0/7	0/7	0/2	0/4	0/2	0/7	0/2	0/1	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2	
	2	0/4	0/4	0/1	0/3	0/2	0/3	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	
	3	0/4	0/5	0/0	0/1	0/2	0/2	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	
	4	0/4	0/6	0/2	0/3	0/4	0/5	0/3	0/0	0/4	0/5	0/5	0/5	0/5	0/5	0/5	0/5	0/5	0/5	0/5	0/5	0/5	0/5	0/5	

PRE RX : Pretreatment examination
 POST RX : Post treatment examination

TABLE NO. 6

SUMMARY OF RECURRING CLINICAL SIGNS

PROJECT NO. 908J1

MALES

GROUP 1 - AIR CONTROL
 GROUP 2 - CERIC OXIDE - LOW DOSE
 GROUP 3 - CERIC OXIDE - INTERMEDIATE DOSE
 GROUP 4 - CERIC OXIDE - HIGH DOSE

OBSERVATION	GROUP NO.	STUDY DAY																							
		15	16	17	18	19	22	23	24	25	26	15	16	17	18	19	22	23	24	25	26				
		PRE/RX	POST/RX	PRE/RX	POST/RX	PRE/RX	POST/RX	PRE/RX	POST/RX	PRE/RX	POST/RX	PRE/RX	POST/RX	PRE/RX	POST/RX	PRE/RX	POST/RX	PRE/RX	POST/RX	PRE/RX	POST/RX	PRE/RX	POST/RX		
Cranial Staining	1	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0		
	2	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0		
	3	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0		
	4	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0		
Muzzle Staining	1	0/1	0/1	0/9	0/0	0/1	0/2	0/1	0/1	0/1	0/2	0/1	0/6	0/1	0/1	0/1	0/3	0/0	0/1	0/6	0/7	0/1	0/1		
	2	0/2	0/5	0/7	1/5	0/1	0/3	0/1	0/1	0/1	0/3	0/1	0/4	0/1	0/1	0/3	0/0	0/3	0/4	0/4	0/5	0/4	0/4		
	3	0/1	0/7	0/8	0/6	0/2	0/0	0/0	0/2	0/2	0/0	0/3	0/4	0/1	0/1	0/3	0/0	0/3	0/4	0/4	0/4	0/1	0/2		
	4	0/1	0/0	0/7	0/2	0/0	0/1	0/1	0/0	0/0	0/1	0/1	0/4	0/1	0/1	0/3	0/0	0/3	0/4	0/4	0/3	0/2	0/2		
Periorbital Staining	1	0/1	0/2	0/2	1/1	0/0	0/3	0/0	0/0	0/0	0/3	0/2	0/0	0/0	0/2	0/3	0/0	0/2	0/0	0/0	0/0	0/0	0/0		
	2	0/0	0/0	0/2	0/0	0/0	0/3	0/0	0/0	0/0	0/3	0/0	0/2	0/0	0/0	0/3	0/0	0/2	0/2	0/2	0/2	0/0	0/0		
	3	0/0	0/0	0/1	0/0	0/0	0/1	0/0	0/0	0/0	0/1	0/1	0/0	0/0	0/0	0/1	0/1	1/2	0/2	0/2	0/2	0/1	0/1		
	4	0/4	0/0	0/1	0/0	0/1	0/3	0/0	0/0	0/1	0/3	0/1	0/1	0/0	0/1	0/3	0/0	0/1	0/1	0/1	0/0	0/0	0/2		

PRE RX : Pretreatment examination
 POST RX : Post treatment examination

PROJECT NO. 90831

SUMMARY OF RECURRING CLINICAL SIGNS

TABLE NO. 6

MALES

GROUP 3 - CERIC OXIDE - INTERMEDIATE DOSE
 GROUP 4 - CERIC OXIDE - HIGH DOSE

GROUP 1 - AIR CONTROL
 GROUP 2 - CERIC OXIDE - LOW DOSE

OBSERVATION	GROUP NO.	STUDY DAY											
		29	30	31	32	33	36	37	38	39	40		
		PRE/RX	POST/RX	PRE/RX	POST/RX	PRE/RX	POST/RX	PRE/RX	POST/RX	PRE/RX	POST/RX	PRE/RX	POST/RX
Cranial Staining	1	0/0	0/0	0/0	0/1	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0
	2	0/0	0/0	0/0	0/0	0/0	0/0	1/1	0/0	0/0	0/0	0/0	0/2
	3	0/0	0/0	0/0	0/0	0/0	0/0	4/0	0/0	0/1	0/1	0/2	0/2
	4	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/1	0/1	0/3	0/3
Muzzle Staining	1	0/2	0/1	0/6	0/7	0/4	0/3	2/0	0/1	0/1	0/1	0/5	0/5
	2	0/3	0/4	0/7	0/7	0/5	0/4	1/1	0/2	0/3	0/3	0/4	0/4
	3	0/6	0/7	0/1	0/0	0/7	0/1	4/1	0/2	0/3	0/3	0/5	0/5
	4	0/0	0/4	0/3	0/6	0/2	0/2	0/3	0/1	0/3	0/3	0/4	0/4
Periorbital Staining	1	0/1	0/2	0/3	0/2	0/2	0/2	0/0	0/0	0/1	0/1	0/1	0/2
	2	0/1	0/2	0/2	0/3	0/0	0/0	0/1	0/1	0/2	0/2	0/2	0/2
	3	1/1	0/1	0/0	1/1	0/1	0/1	1/0	0/0	0/0	0/0	0/1	0/1
	4	0/1	0/1	0/0	0/2	0/1	0/3	0/2	0/1	0/3	0/3	0/3	0/2

PRE RX : Pretreatment examination
 POST RX : Post treatment examination

PROJECT NO. 90831

SUMMARY OF RECURRING CLINICAL SIGNS

TABLE NO. 6

MALES

GROUP 3 - CERIC OXIDE - INTERMEDIATE DOSE
 GROUP 4 - CERIC OXIDE - HIGH DOSE

GROUP 1 - AIR CONTROL
 GROUP 2 - CERIC OXIDE - LOW DOSE

OBSERVATION	GROUP NO.	STUDY DAY											
		43	44	45	46	47	50	51	52	53	54		
		PRE/RX	POST/RX	PRE/RX	POST/RX	PRE/RX	POST/RX	PRE/RX	POST/RX	PRE/RX	POST/RX	PRE/RX	POST/RX
Cranial Staining	1	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/1	0/0
	2	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0
	3	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0
	4	0/0	0/0	0/1	0/2	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0
Muzzle Staining	1	0/1	0/0	0/5	1/1	0/0	0/1	0/5	0/2	0/5	0/5	0/5	0/1
	2	0/3	0/1	0/3	0/3	0/0	0/0	0/5	0/1	0/0	0/0	0/0	0/4
	3	0/1	0/1	0/4	1/4	0/0	0/0	0/2	0/2	0/5	0/2	0/5	0/2
	4	0/0	0/1	2/6	1/7	0/0	0/2	0/6	0/1	0/4	0/4	0/4	0/1
Periorbital Staining	1	0/1	0/2	0/1	0/0	0/0	0/1	0/2	0/5	0/6	0/6	0/6	0/2
	2	0/0	0/1	0/0	0/0	0/0	0/1	0/1	0/0	0/0	0/0	0/0	0/2
	3	0/1	0/1	0/1	0/1	0/1	0/0	0/1	0/0	0/1	0/0	0/1	0/2
	4	0/4	0/1	0/2	0/3	0/1	0/0	0/3	0/1	0/2	0/1	0/2	0/3

PRE RX : Pretreatment examination
 POST RX : Post treatment examination

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PROJECT NO. 90831

SUMMARY OF RECURRING CLINICAL SIGNS

TABLE NO. 6

MALES

GROUP 3 - CERIC OXIDE - INTERMEDIATE DOSE
 GROUP 4 - CERIC OXIDE - HIGH DOSE

GROUP 1 - AIR CONTROL
 GROUP 2 - CERIC OXIDE - LOW DOSE

OBSERVATION	GROUP NO.	STUDY DAY																				
		57	58	59	60	61	64	65	66	67	68	PRE/POST RX/RX	PRE/POST RX/RX	PRE/POST RX/RX	PRE/POST RX/RX	PRE/POST RX/RX	PRE/POST RX/RX					
Cranial Staining	1	0/0	0/0	0/0	0/0	0/1	0/0	0/0	0/2	0/0	0/0	0/0	0/2	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0
	2	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/4	0/0	0/0	0/0	0/2	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0
	3	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/2	0/0	0/0	0/0	0/2	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0
	4	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/3	0/1	0/2	0/0	0/2	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0
Muzzle Staining	1	0/5	0/5	0/5	0/6	0/7	0/1	0/7	0/2	0/1	0/1	0/2	0/2	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0
	2	0/5	0/5	0/8	0/8	0/1	0/4	0/9	0/2	0/1	0/4	0/2	0/2	0/1	0/1	0/0	0/0	0/0	0/0	0/0	0/0	0/0
	3	0/6	0/5	0/4	0/8	0/2	0/1	0/9	0/2	0/1	0/1	0/2	0/4	0/2	0/2	0/0	0/0	0/0	0/0	0/0	0/0	0/0
	4	0/6	0/3	0/4	0/3	0/1	0/2	0/5	0/3	0/1	0/2	0/5	0/3	0/0	0/0	0/1	0/1	0/1	0/1	0/1	0/1	0/1
Periorbital Staining	1	0/0	0/1	0/1	0/2	0/2	0/1	0/3	0/2	0/1	0/1	0/2	0/2	0/1	0/1	0/1	0/1	0/0	0/0	0/0	0/0	0/1
	2	0/1	0/2	0/0	0/1	0/0	0/0	0/2	0/0	0/0	0/0	0/2	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0
	3	0/1	0/0	0/1	0/1	0/2	0/1	0/2	0/1	0/1	0/1	0/2	0/0	0/2	0/2	0/1	0/1	0/0	0/0	0/0	0/2	0/1
	4	0/2	0/4	0/3	0/1	0/3	0/1	0/1	0/6	0/3	0/1	0/2	0/6	0/2	0/2	0/1	0/2	0/2	0/2	0/2	0/2	0/1

PRE RX : Pretreatment examination
 POST RX : Post treatment examination

PROJECT NO. 90831

SUMMARY OF RECURRING CLINICAL SIGNS

TABLE NO. 6

GROUP 1 - AIR CONTROL
 GROUP 2 - CERIC OXIDE - LOW DOSE
 GROUP 3 - CERIC OXIDE - INTERMEDIATE DOSE
 GROUP 4 - CERIC OXIDE - HIGH DOSE

MALES

OBSERVATION	GROUP NO.	STUDY DAY											
		71	72	73	74	75	78	79	80	81	82		
		PRE/RX	POST/RX	PRE/RX	POST/RX	PRE/RX	POST/RX	PRE/RX	POST/RX	PRE/RX	POST/RX	PRE/RX	POST/RX
Cranial Staining	1	0/0	0/1	0/0	0/0	0/2	0/0	0/1	0/0	0/0	0/0	0/0	0/0
	2	0/0	0/0	0/0	0/0	0/1	0/2	0/1	0/0	0/0	0/0	0/0	0/0
	3	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0
	4	0/0	0/1	0/0	0/0	0/2	0/2	0/2	0/0	0/0	0/0	0/0	0/0
Muzzle Staining	1	0/3	0/2	0/0	0/0	0/6	0/2	0/3	0/1	0/0	0/0	0/0	0/0
	2	0/3	0/3	0/0	0/3	0/8	0/1	0/5	0/0	0/3	0/2	0/0	0/0
	3	0/2	0/1	0/5	0/1	0/6	0/1	0/5	0/0	0/0	0/0	0/0	0/1
	4	0/1	0/3	0/2	0/0	0/8	0/5	0/8	0/0	0/2	0/2	0/1	0/1
Periorbital Staining	1	0/1	0/1	0/0	0/2	0/1	0/1	0/1	0/1	0/2	0/1	0/1	0/1
	2	0/0	0/0	0/1	0/2	0/0	0/3	1/2	1/2	1/1	1/2	1/1	1/2
	3	0/0	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/2
	4	0/2	0/2	0/2	0/2	0/1	0/1	0/3	0/0	0/2	0/1	0/2	0/1

PRE RX : Pretreatment examination
 POST RX : Post treatment examination

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PROJECT NO. 90831

SUMMARY OF RECURRING CLINICAL SIGNS

TABLE NO. 6

GROUP 1 - AIR CONTROL
 GROUP 2 - CERIC OXIDE - LOW DOSE
 GROUP 3 - CERIC OXIDE - INTERMEDIATE DOSE
 GROUP 4 - CERIC OXIDE - HIGH DOSE

MALES

OBSERVATION	GROUP NO.	STUDY DAY							
		85	86	87	88	89	PRE/POST RX/RX	PRE/POST RX/RX	PRE/POST RX/RX
Cranial Staining	1	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0
	2	0/0	0/0	0/1	0/0	0/0	0/0	0/0	0/0
	3	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0
	4	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0
Muzzle Staining	1	0/3	0/3	0/2	0/0	0/0	0/0	0/0	0/0
	2	0/7	0/9	0/10	0/0	0/0	0/0	0/0	0/0
	3	0/4	0/3	0/5	0/0	0/0	0/0	0/0	0/0
	4	0/4	0/0	0/5	0/1	0/1	0/1	0/1	0/1
Periorbital Staining	1	0/1	0/0	0/2	0/1	0/1	0/1	0/1	0/1
	2	0/1	0/5	0/3	1/3	1/2	1/2	1/2	1/2
	3	0/1	0/1	0/1	0/0	0/0	0/0	0/0	0/0
	4	0/1	0/1	0/1	0/2	0/1	0/2	0/1	0/1

PRE RX : Pretreatment examination
 POST RX : Post treatment examination

SUMMARY OF RECURRING CLINICAL SIGNS

TABLE NO. 6

FEMALES

GROUP 1 - AIR CONTROL
 GROUP 2 - CERIC OXIDE - LOW DOSE
 GROUP 3 - CERIC OXIDE - INTERMEDIATE DOSE
 GROUP 4 - CERIC OXIDE - HIGH DOSE

STUDY DAY

OBSERVATION	GROUP NO.	STUDY DAY																							
		1	2	3	4	5	8	9	10	11	12	1	2	3	4	5	8	9	10	11	12				
		PRE/RX	POST/RX	PRE/RX	POST/RX	PRE/RX	POST/RX	PRE/RX	POST/RX	PRE/RX	POST/RX	PRE/RX	POST/RX	PRE/RX	POST/RX	PRE/RX	POST/RX	PRE/RX	POST/RX	PRE/RX	POST/RX	PRE/RX	POST/RX		
Cranial Staining	1	0/0	0/1	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0		
	2	0/3	0/1	0/2	0/2	0/1	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0		
	3	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1		
	4	0/0	0/0	0/1	0/0	0/1	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0		
Muzzle Staining	1	0/5	0/4	0/1	0/1	0/1	0/1	0/0	0/0	0/1	0/0	1/0	1/0	0/1	1/2	0/3	0/3	0/3	0/3	0/3	0/3	0/3	0/3		
	2	0/3	0/0	0/0	0/2	0/3	0/0	0/0	0/0	0/3	0/0	0/0	0/0	0/3	0/1	0/3	0/3	0/3	0/3	0/1	0/1	0/1	0/3		
	3	0/1	0/1	0/0	0/1	1/3	0/0	0/1	0/0	1/3	0/0	0/1	0/1	0/2	0/1	0/2	0/2	0/1	0/2	0/1	0/1	0/1	0/5		
	4	0/2	0/0	0/2	0/2	0/4	0/2	0/2	0/0	0/4	0/0	0/0	0/0	0/6	1/0	0/6	0/6	0/0	0/6	1/0	1/0	1/0	0/3		
Periorbital Staining	1	0/1	0/1	0/0	0/1	0/2	0/1	0/0	0/0	0/2	0/0	0/0	0/0	0/1	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0		
	2	0/1	0/4	0/3	0/2	0/8	0/2	0/1	0/1	0/8	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/5	0/3	0/3		
	3	0/5	0/6	0/4	0/5	0/7	0/5	0/2	0/1	0/7	0/2	0/1	0/1	0/2	0/1	0/2	0/2	0/1	0/2	0/1	0/5	0/2	0/2		
	4	0/3	0/2	0/3	0/5	0/5	0/5	0/5	0/5	0/5	0/5	0/5	0/5	0/5	0/5	0/5	0/5	0/5	0/5	0/5	0/5	0/5	0/5		

PRE RX : Pretreatment examination
 POST RX : Post treatment examination

PROJECT NO. 90831

SUMMARY OF RECURRING CLINICAL SIGNS

FEMALES

GROUP 3 - CERIC OXIDE - INTERMEDIATE DOSE
 GROUP 4 - CERIC OXIDE - HIGH DOSE

GROUP 1 - AIR CONTROL
 GROUP 2 - CERIC OXIDE - LOW DOSE

OBSERVATION	GROUP NO.	STUDY DAY											
		15	16	17	18	19	22	23	24	25	26		
		PRE/RX	POST/RX	PRE/RX	POST/RX	PRE/RX	POST/RX	PRE/RX	POST/RX	PRE/RX	POST/RX	PRE/RX	POST/RX
Cranial Staining	1	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0
	2	0/1	0/0	0/0	0/1	0/0	0/0	0/0	0/1	0/0	0/0	0/0	0/2
	3	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0
	4	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0
Muzzle Staining	1	0/3	0/3	0/2	0/3	0/3	0/4	0/5	0/3	0/4	0/5	0/3	0/1
	2	0/0	0/0	0/1	0/2	0/4	0/8	0/2	0/2	0/2	0/2	0/2	0/2
	3	0/3	0/1	0/4	0/0	0/1	0/5	0/7	0/1	0/5	0/1	0/5	0/0
	4	0/1	0/0	0/2	0/0	0/0	0/1	0/5	0/0	0/1	0/0	0/1	0/2
Periorbital Staining	1	1/1	0/1	0/1	0/1	0/3	0/1	1/1	0/3	0/1	1/1	1/1	0/4
	2	0/3	0/0	0/4	0/4	0/6	0/4	0/2	0/0	0/4	0/2	0/2	0/4
	3	1/3	0/2	0/3	0/3	0/2	1/3	1/4	1/2	0/1	0/1	0/1	0/4
	4	0/2	0/1	0/1	0/2	0/2	0/3	0/3	0/0	0/2	0/2	0/2	0/3

PRE RX : Pretreatment examination
 POST RX : Post treatment examination

PROJECT NO. 90831

SUMMARY OF RECURRING CLINICAL SIGNS

TABLE NO. 6

FEMALES

GROUP 1 - AIR CONTROL
 GROUP 2 - CERIC OXIDE - LOW DOSE
 GROUP 3 - CERIC OXIDE - INTERMEDIATE DOSE
 GROUP 4 - CERIC OXIDE - HIGH DOSE

STUDY DAY

OBSERVATION	GROUP NO.	29		30		31		32		33		36		37		38		39		40	
		PRE/RX	POST/RX	PRE/RX	POST/RX	PRE/RX	POST/RX	PRE/RX	POST/RX	PRE/RX	POST/RX	PRE/RX	POST/RX	PRE/RX	POST/RX	PRE/RX	POST/RX	PRE/RX	POST/RX	PRE/RX	POST/RX
Cranial Staining	1	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/1	0/1	0/0	0/0
	2	0/0	0/1	0/3	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0
	3	0/1	0/0	0/1	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0
	4	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0
Muzzle Staining	1	0/1	0/2	0/1	0/2	0/1	0/1	0/1	0/2	0/1	0/1	0/2	0/1	0/1	0/1	0/4	0/2	2/3	2/3	0/0	0/0
	2	0/1	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/1	0/1	0/1	0/0	0/0	0/0	0/2	0/2	0/2	0/2	0/0	0/0
	3	0/1	0/4	0/1	0/4	0/1	0/1	0/1	0/1	0/7	0/7	0/2	0/1	0/1	0/1	0/2	0/2	0/1	0/1	0/0	0/0
	4	0/3	0/0	0/1	0/0	0/1	0/0	0/0	0/0	0/4	0/4	0/2	0/2	0/0	0/0	0/2	1/2	0/1	0/1	0/0	0/0
Periorbital Staining	1	1/1	1/2	1/0	1/2	1/0	1/2	1/2	1/2	0/1	0/1	1/3	1/1	1/1	1/1	1/1	1/1	0/0	0/0	1/2	0/0
	2	0/2	0/5	0/2	0/1	0/2	0/1	0/1	0/1	0/1	0/1	0/2	0/0	0/0	0/0	0/1	0/1	0/2	0/2	0/0	0/0
	3	0/3	0/3	0/2	0/0	0/2	0/0	0/0	0/0	0/2	0/2	0/3	0/3	0/0	0/0	0/1	0/1	0/3	0/3	0/0	0/0
	4	0/2	0/5	0/4	0/0	0/4	0/0	0/0	0/0	0/1	0/1	0/1	0/1	0/0	0/0	0/3	0/3	0/3	0/3	0/3	0/3

PRE RX : Pretreatment examination
 POST RX : Post treatment examination

PROJECT NO. 90831

SUMMARY OF RECURRING CLINICAL SIGNS

FEMALES

GROUP 3 - CERIC OXIDE - INTERMEDIATE DOSE
 GROUP 4 - CERIC OXIDE - HIGH DOSE

GROUP 1 - AIR CONTROL
 GROUP 2 - CERIC OXIDE - LOW DOSE

OBSERVATION	GROUP NO.	STUDY DAY											
		43	44	45	46	47	50	51	52	53	54		
		PRE/RX	PRE/RX	PRE/RX	PRE/RX	PRE/RX	PRE/RX	PRE/RX	PRE/RX	PRE/RX	PRE/RX	PRE/RX	PRE/RX
Cranial Staining	1	0/0	0/0	0/0	0/0	0/0	0/2	0/2	0/0	0/0	0/0	0/0	0/2
	2	0/3	0/1	0/1	0/1	0/3	0/1	0/2	0/3	0/4	0/4	0/1	0/1
	3	0/0	0/1	0/0	0/0	0/0	0/2	0/2	0/2	0/1	0/1	0/1	0/1
	4	0/0	0/0	0/0	0/0	0/0	0/1	0/0	0/1	0/1	0/1	0/1	0/1
Muzzle Staining	1	1/0	0/4	0/3	0/0	0/7	0/5	0/6	0/7	0/3	0/3	0/3	0/4
	2	0/2	0/9	0/3	0/0	0/2	0/4	0/6	0/2	0/3	0/3	0/3	0/3
	3	0/1	0/4	0/5	0/4	0/5	0/4	0/2	0/2	0/7	0/8	0/7	0/2
	4	0/0	0/5	0/4	0/6	0/3	0/3	0/2	0/3	0/3	0/4	0/4	0/2
Periorbital Staining	1	1/1	0/2	0/2	0/4	0/1	1/4	1/8	1/4	1/2	1/4	1/4	0/3
	2	0/2	0/2	0/2	0/2	0/3	0/5	0/6	0/6	0/7	0/6	0/6	0/5
	3	0/0	0/3	0/2	0/4	0/3	1/4	1/7	1/4	1/5	1/5	1/5	0/5
	4	0/1	0/3	0/2	0/1	0/3	0/3	0/5	0/5	0/4	0/4	0/4	0/3

PRE RX : Pretreatment examination
 POST RX : Post treatment examination

PROJECT NO. 90831

SUMMARY OF RECURRING CLINICAL SIGNS

FEMALES

GROUP 3 - CERIC OXIDE - INTERMEDIATE DOSE
 GROUP 4 - CERIC OXIDE - HIGH DOSE

TABLE NO. 6
 GROUP 1 - AIR CONTROL
 GROUP 2 - CERIC OXIDE - LOW DOSE

OBSERVATION	GROUP NO.	STUDY DAY											
		57	58	59	60	61	64	65	66	67	68		
		PRE/RX	POST/RX	PRE/RX	POST/RX	PRE/RX	POST/RX	PRE/RX	POST/RX	PRE/RX	POST/RX	PRE/RX	POST/RX
Cranial Staining	1	0/1	0/0	0/1	0/3	0/3	0/4	0/0	0/0	0/2	0/2	0/2	0/2
	2	0/2	0/2	0/4	0/4	0/6	0/1	0/0	0/2	0/3	0/3	0/2	0/2
	3	0/2	0/0	0/0	0/2	0/5	0/4	0/0	0/0	0/4	0/4	0/2	0/2
	4	0/1	0/0	0/0	0/0	0/0	0/1	0/2	0/0	0/0	0/0	0/0	0/4
Muzzle Staining	1	0/3	0/0	0/0	0/1	0/2	0/2	0/0	0/0	0/0	0/0	0/3	0/3
	2	0/3	0/0	0/0	0/2	0/3	0/3	0/0	0/1	0/4	0/4	0/6	0/0
	3	0/4	0/0	0/3	0/3	0/4	0/4	0/5	0/0	0/6	0/6	0/0	0/0
	4	0/0	0/0	0/2	0/0	0/1	0/0	0/3	0/0	0/0	0/0	0/7	0/7
Periorbital Staining	1	1/2	0/2	1/3	0/3	0/4	1/2	1/1	1/2	0/3	0/3	1/3	0/3
	2	0/5	0/2	0/6	0/7	0/7	0/3	0/1	0/2	0/4	0/4	0/3	0/3
	3	0/3	0/2	0/2	0/4	0/5	0/4	0/1	0/2	0/0	0/0	0/6	0/6
	4	0/1	0/2	0/2	0/2	0/3	0/3	0/1	0/1	0/3	0/3	0/2	0/2

PRE RX : Pretreatment examination
 POST RX : Post treatment examination

PROJECT NO. 90831

SUMMARY OF RECURRING CLINICAL SIGNS

TABLE NO. 6

FEMALES

GROUP 1 - AIR CONTROL
 GROUP 2 - CERIC OXIDE - LOW DOSE
 GROUP 3 - CERIC OXIDE - INTERMEDIATE DOSE
 GROUP 4 - CERIC OXIDE - HIGH DOSE

OBSERVATION	GROUP NO.	STUDY DAY																			
		71	72	73	74	75	78	79	80	81	82	71	72	73	74	75	78	79	80	81	82
		PRE/RX	POST/RX	PRE/RX	POST/RX	PRE/RX	POST/RX	PRE/RX	POST/RX	PRE/RX	POST/RX	PRE/RX	POST/RX	PRE/RX	POST/RX	PRE/RX	POST/RX	PRE/RX	POST/RX	PRE/RX	POST/RX
Cranial Staining	1	0/0	0/1	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/2	0/0	0/0	0/0
	2	0/0	0/6	0/0	0/8	0/4	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/3	0/0
	3	0/0	0/1	0/0	0/3	0/1	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/2	0/0
	4	0/0	0/1	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/1	0/0
Muzzle Staining	1	0/0	0/10	0/0	0/6	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/2	0/4	0/4	0/4
	2	0/0	0/10	0/0	0/9	0/2	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/3	0/3	0/3	0/4
	3	0/0	0/0	0/0	0/5	0/1	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/3	0/5	0/5	0/4
	4	0/0	0/2	0/0	0/8	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/1	0/0	0/0	0/0
Periorbital Staining	1	0/2	1/3	1/4	1/2	1/3	1/2	1/2	1/2	1/3	0/3	0/4	0/4	0/4	0/4	0/4	0/4	0/4	0/4	1/7	1/3
	2	0/3	0/3	0/0	0/5	0/5	0/5	0/5	0/5	0/5	0/3	0/3	0/3	0/3	0/3	0/3	0/3	0/8	0/9	0/9	0/3
	3	0/2	0/2	0/0	0/1	0/1	0/1	0/1	0/1	0/1	0/2	0/2	0/1	0/1	0/2	0/2	0/1	0/7	0/5	0/5	0/1
	4	0/1	0/2	0/0	0/3	0/3	0/3	0/3	0/3	0/3	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/2	0/3	0/3	0/1

PRE RX : Pretreatment examination
 POST RX : Post treatment examination



PROJECT NO. 90831

SUMMARY OF RECURRING CLINICAL SIGNS

TABLE NO. 6

FEMALES

GROUP 1 - AIR CONTROL
GROUP 2 - CERIC OXIDE - LOW DOSE
GROUP 3 - CERIC OXIDE - INTERMEDIATE DOSE
GROUP 4 - CERIC OXIDE - HIGH DOSE

STUDY DAY

OBSERVATION	GROUP NO.	85		86		87		88		89	
		PRE/RX	POST/RX	PRE/RX	POST/RX	PRE/RX	POST/RX	PRE/RX	POST/RX	PRE/RX	POST/RX
Cranial Staining	1	0/0	0/0	0/0	0/0	0/0	0/0	0/1	0/1	0/0	0/0
	2	3/7	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/2	0/2
	3	0/4	0/1	0/0	0/0	0/0	0/0	0/0	0/0	0/1	0/1
	4	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0
Muzzle Staining	1	0/0	0/4	0/4	0/3	0/3	0/3	0/0	0/0	0/0	0/0
	2	0/5	0/2	0/2	0/1	0/1	0/1	0/1	0/1	0/0	0/0
	3	0/0	0/2	0/2	0/3	0/3	0/6	0/6	0/6	0/4	0/4
	4	0/1	0/0	0/0	0/2	0/2	0/2	0/2	0/2	0/0	0/0
Periorbital Staining	1	1/3	1/3	1/3	1/2	1/2	1/3	1/3	1/3	1/1	1/1
	2	0/6	0/5	0/5	0/2	0/2	0/1	0/1	0/1	0/4	0/4
	3	0/4	0/4	0/4	0/1	0/1	0/3	0/3	0/3	0/2	0/2
	4	0/3	0/0	0/0	0/0	0/0	0/0	0/1	0/1	0/1	0/1

PRE RX : Pretreatment examination
POST RX : Post treatment examination

BODY WEIGHTS (G) - SUMMARY OF MEANS

TABLE NO.: 7
PROJECT NO.: 90831

GROUP	SEX	M A L E S			
		1	2	3	4
GROUP 1	AIR CONTROL				
GROUP 2	CERIC OXIDE				
GROUP 3	CERIC OXIDE			LOW DOSE	
GROUP 4	CERIC OXIDE			INTERMEDIATE DOSE	
				HIGH DOSE	
DAY -6		187.6	187.2	187.1	187.8
DAY -2		225.3	222.7	225.7	223.6
DAY 1		236.3	233.5	237.5	234.0
DAY 8		281.6	278.2	282.4	274.5
DAY 15		328.9	323.2	327.0	313.7
DAY 22		358.8	354.3	357.4	344.7
DAY 27		380.3	374.0	380.2	364.1
DAY 29		391.1	384.9	389.3	372.4
DAY 36		418.9	411.0	417.8	399.6
DAY 43		428.5	423.3	425.9	409.2
DAY 50		450.6	443.2	448.9	429.8
DAY 55		460.7	455.1	458.3	433.3
DAY 57		472.4	466.7	470.1	448.6
DAY 64		494.0	485.4	492.0	466.8
DAY 71		504.6	500.8	503.1	479.7
DAY 78		515.3	503.7	513.9	487.9
DAY 85		523.9	515.8	525.5	497.0
DAY 90		519.0	511.4	524.5	496.2
DAY 91		510.0	503.4	515.1	487.9

TABLE NO.: 7
PROJECT NO.: 90831

BODY WEIGHTS (G) - SUMMARY OF MEANS

GROUP	SEX	F E M A L E S			
		1	2	3	4
GROUP 1	AIR CONTROL				
GROUP 2	CERIC OXIDE				
GROUP 3	CERIC OXIDE				
GROUP 4	CERIC OXIDE				
				LOW DOSE	
				INTERMEDIATE DOSE	
				HIGH DOSE	
DAY-13		110.0	110.4	109.7	110.8
DAY -7		138.5	141.1	137.0	140.3
DAY -3		153.0	157.6	153.1	153.4
DAY 1		160.6	164.2	158.5	158.9
DAY 8		181.1	189.4	182.5	184.4
DAY 15		196.3	202.5	196.3	198.4
DAY 22		211.8	221.4	212.8	215.4
DAY 27		218.4	227.7	216.8	221.1
DAY 29		221.6	232.1	224.7	222.4
DAY 36		232.1	239.7	230.2	234.7
DAY 43		232.6	242.8	237.4	234.7
DAY 50		246.1	249.4	248.5	248.3
DAY 55		250.6	251.6	249.2	247.0
DAY 57		252.8	257.6	255.3	249.5
DAY 64		255.0	263.3	256.6	253.2
DAY 71		264.1	264.2	258.7	254.9
DAY 78		265.1	267.7	260.1	258.5
DAY 85		267.7	268.7	265.5	259.2
DAY 90		267.4	270.6	264.9	260.4
DAY 91		260.1	261.6	256.5	252.3

BODY WEIGHT GAINS (G) - SUMMARY OF MEANS

TABLE NO.: 8
PROJECT NO.: 90831

GROUP	SEX	M A L E S				LOW DOSE INTERMEDIATE DOSE HIGH DOSE
		1	2	3	4	
GROUP 1	AIR CONTROL					
GROUP 2	CERIC OXIDE					
GROUP 3	CERIC OXIDE					
GROUP 4	CERIC OXIDE					
	-6-2	37.6	35.5	38.6	35.8	
	-2-1	11.0	10.8	11.8	10.4	
	1-8	45.4	44.7	44.9	40.5	
	8-15	47.3	45.0	44.6	39.2 B	
	15-22	29.9	31.1	30.4	30.9	
	22-27	21.6	19.8	22.8	19.4	
	27-29	10.8	10.9	9.1	8.3	
	29-36	27.9	26.1	28.5	27.1	
	36-43	9.6	12.3	8.1	9.6	
	43-50	22.1	19.9	23.0	20.7	
	50-55	10.0	11.9	9.3	3.5 B	
	55-57	11.7	11.6	11.8	15.2	
	57-64	21.6	18.7	21.9	18.2	
	64-71	10.7	15.5	11.1	12.9	
	71-78	10.6	2.8	10.8	7.7	
	78-85	8.7	12.1	11.6	9.1	
	85-90	-5.0	-4.4	-1.0	-8	
	90-91	-9.0	-8.0	-9.4	-8.4	

SIGNIFICANTLY DIFFERENT FROM CONTROL (GROUP 1) VALUE: B - P<.01 (DUNNETT'S)

BODY WEIGHT GAINS (G) - SUMMARY OF MEANS

TABLE NO.: 8
PROJECT NO.: 90831

GROUP	SEX	F E M A L E S			
		1	2	3	4
GROUP 1	AIR CONTROL				
GROUP 2	CERIC OXIDE	28.5	30.7	27.4	29.5
GROUP 3	CERIC OXIDE	14.5	16.5	16.1	13.1
GROUP 4	CERIC OXIDE	7.6	6.6	5.4	5.4
		20.5	25.2	24.0	25.5
		15.3	13.1	13.8	14.0
		15.5	18.9	16.6	17.0
		6.6	6.3	4.0	5.7
		3.2	4.4	7.9	1.3
		10.5	7.6	5.4	12.3
		.5	3.0	7.2	.0
		13.4	6.6 A	11.1	13.6
		4.6	2.2	.7	-1.3
		2.2	5.9	6.1	2.6
		2.2	5.8	1.2	3.7
		9.1	.9 B	2.2 A	1.7 B
		1.0	3.6	1.4	3.6
		2.6	.9	5.4	.8
		-2	1.9	-6	1.2
		-7.3	-9.0	-8.5	-8.1

SIGNIFICANTLY DIFFERENT FROM CONTROL (GROUP 1) VALUE: A - P<.05 B - P<.01 (DUNNETT'S)

FOOD CONSUMPTION (GRAMS/ANIMAL), SUMMARY OF MEANS

TABLE NO.: 9
PROJECT NO.: 90831

GROUP	SEX	M A L E S			
		1	2	3	4
GROUP 1		AIR CONTROL			
GROUP 2		CERIC OXIDE			
GROUP 3		CERIC OXIDE			
GROUP 4		CERIC OXIDE			
		LOW DOSE			
		INTERMEDIATE DOSE			
		HIGH DOSE			
1- 8		180.1	177.9	181.5	175.8
8- 15		191.1	189.3	190.3	177.6
15- 22		199.1	196.2	197.4	185.9
22- 29		200.5	194.2	200.8	190.6
29- 36		205.8	200.3	202.6	191.4
36- 43		181.7	178.4	181.5	174.9
43- 50		206.2	203.0	205.1	192.7
50- 57		215.3	212.9	213.2	196.9
57- 64		207.2	219.4	213.1	198.0
64- 71		209.4	210.9	213.7	200.7
71- 78		203.1	197.0	203.0	195.6
78- 85		199.7	203.5	207.7	197.5
85- 91		162.2	165.0	174.3	165.7

FOOD CONSUMPTION (GRAMS/ANIMAL), SUMMARY OF MEANS

TABLE NO.: 9
PROJECT NO.: 90831

GROUP	SEX	F E M A L E S				LOW DOSE	INTERMEDIATE DOSE	HIGH DOSE
		1	2	3	4			
7-1	1	120.4	123.8	117.1	121.3			
1-8	1	123.5	130.8	120.5	123.5			
8-15	1	129.4	135.5	125.6	127.2			
15-22	1	130.8	139.3	129.8	131.7			
22-29	1	131.5	140.1	130.6	125.9			
29-36	1	134.6	139.9	129.7	134.5			
36-43	1	121.9	128.9	119.8	122.1			
43-50	1	148.5	146.7	144.4	149.4			
50-57	1	139.2	142.7	133.2	134.5			
57-64	1	136.4	144.5	133.9	134.8			
64-71	1	133.1	134.7	127.8	128.7			
71-78	1	133.5	135.7	128.9	133.0			
78-85	1	135.0	135.3	130.7	128.7			
85-91	1	112.6	114.5	109.6	110.5			

PROJECT NO. 90831

FUNCTIONAL OBSERVATIONAL BATTERY
 QUALITATIVE ASSESSMENTS
 GROUP SUMMARY - PRESTUDY
 MALES

TABLE NO. 10

NUMBER OF ANIMALS EXAMINED CATEGORY	SCORE	DESCRIPTION	GROUP 1 AIR CONTROL		GROUP 2 CERIC OXIDE LOW DOSE		GROUP 3 CERIC OXIDE INTERMEDIATE DOSE		GROUP 4 CERIC OXIDE HIGH DOSE	
			NO.	%	NO.	%	NO.	%	NO.	%
HOME CAGE BODY POSITION	4	Lying on side or curled up	4	26.7	5	33.3	6	40.0	5	33.3
	5	Sitting/standing	11	73.3	10	66.7	9	60.0	10	66.7
	6	Rearing	0	0.0	3	20.0	0	0.0	0	0.0
TREMORS	0	None	15	100.0	15	100.0	15	100.0	15	100.0
TWITCHES	0	None	15	100.0	15	100.0	15	100.0	15	100.0
CONVULSIONS	0	None	15	100.0	15	100.0	15	100.0	15	100.0
BIZARRE/STEREOTYPIC BEHAVIOR	0	None	15	100.0	15	100.0	15	100.0	15	100.0

SIGNIFICANTLY DIFFERENT FROM CONTROL (GROUP 1) VALUE: NONE

FUNCTIONAL OBSERVATIONAL BATTERY
 QUALITATIVE ASSESSMENTS
 GROUP SUMMARY - PRESTUDY
 MALES

TABLE NO. 10

NUMBER OF ANIMALS EXAMINED CATEGORY	SCORE	DESCRIPTION	GROUP 1 AIR CONTROL		GROUP 2 CERIC OXIDE LOW DOSE		GROUP 3 CERIC OXIDE INTERMEDIATE DOSE		GROUP 4 CERIC OXIDE HIGH DOSE	
			No.	%	No.	%	No.	%	No.	%
REMOVAL FROM HOME CAGE	0	Very easy	15	100.0	14	93.3	15	100.0	15	100.0
EASE OF REMOVAL	2	Easy	0	0.0	1	6.7	0	0.0	0	0.0
VOCALIZATION	MEAN S.D.		0.3 0.6		0.1 0.4		0.2 0.6		0.1 0.3	
ARENA REARING	MEAN S.D.		6.3 1.7		7.8 2.7		7.1 3.0		7.4 2.5	
ATAXIC GAIT	0	None	15	100.0	15	100.0	15	100.0	15	100.0
HYPOTONIC GAIT	0	None	15	100.0	15	100.0	15	100.0	15	100.0
IMPAIRED GAIT	0	None	15	100.0	15	100.0	15	100.0	15	100.0

SIGNIFICANTLY DIFFERENT FROM CONTROL (GROUP 1) VALUE: NONE

FUNCTIONAL OBSERVATIONAL BATTERY
 QUALITATIVE ASSESSMENTS
 GROUP SUMMARY - PRESTUDY
 MALES

TABLE NO. 10

NUMBER OF ANIMALS EXAMINED CATEGORY	SCORE	DESCRIPTION	GROUP 1 AIR CONTROL		GROUP 2 CERIC OXIDE LOW DOSE		GROUP 3 CERIC OXIDE INTERMEDIATE DOSE		GROUP 4 CERIC OXIDE HIGH DOSE	
			NO.	%	NO.	%	NO.	%	NO.	%
ARENA			15	100.0	15	100.0	15	100.0	15	100.0
OVERALL GAIT INCAPACITY	0	None	15	100.0	15	100.0	15	100.0	15	100.0
BIZARRE/STEREOTYPIC BEHAVIOR	0	None	15	100.0	15	100.0	15	100.0	15	100.0
PALPEBRAL CLOSURE	0	Eyes wide open	15	100.0	15	100.0	15	100.0	15	100.0
TREMORS	0	None	15	100.0	15	100.0	15	100.0	15	100.0
TWITCHES	0	None	15	100.0	15	100.0	15	100.0	15	100.0
CONVULSIONS	0	None	15	100.0	15	100.0	15	100.0	15	100.0
PILORECTION	0	None	15	100.0	15	100.0	15	100.0	15	100.0
RESPIRATORY RATE/PATTERN	5	Normal	15	100.0	15	100.0	15	100.0	15	100.0

SIGNIFICANTLY DIFFERENT FROM CONTROL (GROUP 1) VALUE: NONE

PROJECT NO. 90831

FUNCTIONAL OBSERVATIONAL BATTERY
 QUALITATIVE ASSESSMENTS
 GROUP SUMMARY - PRESTUDY
 MALES

TABLE NO. 10

NUMBER OF ANIMALS EXAMINED CATEGORY	SCORE	DESCRIPTION	GROUP 1 AIR CONTROL		GROUP 2 CERIC OXIDE LOW DOSE		GROUP 3 CERIC OXIDE INTERMEDIATE DOSE		GROUP 4 CERIC OXIDE HIGH DOSE	
			NO.	%	NO.	%	NO.	%	NO.	%
ARENA			15	100.0	15	100.0	15	100.0	15	100.0
LOCOMOTOR ACTIVITY LEVEL	4	Moderate movement								
	5	Normal	15	100.0	15	100.0	14	93.3	15	100.0
	6	Moderately increased	0	0.0	0	0.0	1	6.7	0	0.0
GROOMING	0	None	12	80.0	10	66.7	12	80.0	13	86.7
	2	Slight	3	20.0	5	33.3	3	20.0	2	13.3
DEFECATION	MEAN		2.7		1.9		1.8		1.7	
	S.D.		1.6		2.4		1.7		1.7	
URINATION	0	None	2	13.3	7	46.7	9	60.0	7	46.7
	2	Slight	13	86.7	8	53.3	6	40.0	8	53.3
OLFACTORY RESPONSE	0	Orients towards	15	100.0	15	100.0	15	100.0	15	100.0

SIGNIFICANTLY DIFFERENT FROM CONTROL (GROUP 1) VALUE: NONE

PROJECT NO. 90831

FUNCTIONAL OBSERVATIONAL BATTERY
 QUALITATIVE ASSESSMENTS
 GROUP SUMMARY - PRESTUDY
 MALES

TABLE NO. 10

NUMBER OF ANIMALS EXAMINED CATEGORY	SCORE	DESCRIPTION	GROUP 1 AIR CONTROL		GROUP 2 CERIC OXIDE LOW DOSE		GROUP 3 CERIC OXIDE INTERMEDIATE DOSE		GROUP 4 CERIC OXIDE HIGH DOSE	
			NO.	%	NO.	%	NO.	%	NO.	%
HANDLING LACRIMATION	0	None	15	100.0	15	100.0	15	100.0	15	100.0
PUPIL SIZE	0	Pinhead (Normal)	15	100.0	15	100.0	15	100.0	15	100.0
SALIVATION	0	None	15	100.0	15	100.0	15	100.0	15	100.0
URINARY STAINING	0	None	15	100.0	15	100.0	15	100.0	15	100.0
DIARRHEA	0	None	15	100.0	15	100.0	15	100.0	15	100.0
BODY TONE	5	Normal	15	100.0	15	100.0	15	100.0	15	100.0
ABDOMINAL TONE	5	Normal	15	100.0	15	100.0	15	100.0	15	100.0
EXTENSOR THRUST	0	Normal	15	100.0	15	100.0	15	100.0	15	100.0

SIGNIFICANTLY DIFFERENT FROM CONTROL (GROUP 1) VALUE: NONE

TABLE NO. 10
 FUNCTIONAL OBSERVATIONAL BATTERY
 QUALITATIVE ASSESSMENTS
 GROUP SUMMARY - PRESTUDY
 MALES
 PROJECT NO. 90831

NUMBER OF ANIMALS EXAMINED CATEGORY	SCORE	DESCRIPTION	GROUP 1 AIR CONTROL		GROUP 2 CERIC OXIDE LOW DOSE		GROUP 3 CERIC OXIDE INTERMEDIATE DOSE		GROUP 4 CERIC OXIDE HIGH DOSE	
			NO.	%	NO.	%	NO.	%	NO.	%
HANDLING CORNEAL REFLEX	4	Active single or double blink	15	100.0	15	100.0	15	100.0	15	100.0
PINNA REFLEX	4	Moderate brisk flick	15	100.0	15	100.0	15	100.0	15	100.0
TOE PINCH	4	Moderate withdrawal	15	100.0	15	100.0	15	100.0	15	100.0
TAIL PINCH	4	Moderate movement	15	100.0	15	100.0	15	100.0	15	100.0
VISUAL PLACING	5	Normal	15	100.0	15	100.0	15	100.0	15	100.0
ON TOP OF BOX POSITIONAL PASSIVITY	0	Normal	15	100.0	15	100.0	15	100.0	15	100.0
ON SURFACE AURICULAR STARTLE	4	Normal	15	100.0	15	100.0	15	100.0	15	100.0

SIGNIFICANTLY DIFFERENT FROM CONTROL (GROUP 1) VALUE: NONE

PROJECT NO. 90831
 FUNCTIONAL OBSERVATIONAL BATTERY
 QUALITATIVE ASSESSMENTS
 GROUP SUMMARY - PRESTUDY
 MALES

TABLE NO. 10

NUMBER OF ANIMALS EXAMINED CATEGORY	SCORE	DESCRIPTION	GROUP 1 AIR CONTROL		GROUP 2 CERIC OXIDE LOW DOSE		GROUP 3 CERIC OXIDE INTERMEDIATE DOSE		GROUP 4 CERIC OXIDE HIGH DOSE	
			NO.	%	NO.	%	NO.	%	NO.	%
ON SURFACE AIR RIGHTING REFLEX	0	Normal	15	100.0	15	100.0	15	100.0	15	100.0

SIGNIFICANTLY DIFFERENT FROM CONTROL (GROUP 1) VALUE: NONE

PROJECT NO. 90831

FUNCTIONAL OBSERVATIONAL BATTERY
 QUALITATIVE ASSESSMENTS
 GROUP SUMMARY - PRESTUDY
 FEMALES

TABLE NO. 10

NUMBER OF ANIMALS EXAMINED CATEGORY	SCORE	DESCRIPTION	GROUP 1 AIR CONTROL		GROUP 2 CERIC OXIDE LOW DOSE		GROUP 3 CERIC OXIDE INTERMEDIATE DOSE		GROUP 4 CERIC OXIDE HIGH DOSE	
			NO.	%	NO.	%	NO.	%	NO.	%
HOME CAGE			15	100.0	15	100.0	15	100.0	15	100.0
BODY POSITION			3	20.0	1	6.7	4	26.7	3	20.0
	4	Lying on side or curled up								
	5	Sitting/standing	12	80.0	14	93.3	11	73.3	12	80.0
	6	Rearing	2	13.3	3	20.0	4	26.7	4	26.7
TREMORS	0	None	15	100.0	15	100.0	15	100.0	15	100.0
TWITCHES	0	None	15	100.0	15	100.0	15	100.0	15	100.0
CONVULSIONS	0	None	15	100.0	15	100.0	15	100.0	15	100.0
BIZARRE/STEREOTYPIC BEHAVIOR	0	None	15	100.0	15	100.0	15	100.0	15	100.0
REMOVAL FROM HOME CAGE EASE OF REMOVAL	0	Very easy	15	100.0	15	100.0	15	100.0	15	100.0

SIGNIFICANTLY DIFFERENT FROM CONTROL (GROUP 1) VALUE: NONE



TABLE NO. 10
 FUNCTIONAL OBSERVATIONAL BATTERY
 QUALITATIVE ASSESSMENTS
 GROUP SUMMARY - PRESTUDY
 FEMALES
 PROJECT NO. 90831

NUMBER OF ANIMALS EXAMINED CATEGORY	SCORE	DESCRIPTION	GROUP 1 AIR CONTROL		GROUP 2 CERIC OXIDE LOW DOSE		GROUP 3 CERIC OXIDE INTERMEDIATE DOSE		GROUP 4 CERIC OXIDE HIGH DOSE	
			NO.	%	NO.	%	NO.	%	NO.	%
REMOVAL FROM HOME CAGE VOCALIZATION	MEAN S.D.		0.3 1.0		0.2 0.8		0.0 0.0		0.0 0.0	
ARENA REARING	MEAN S.D.		10.9 3.6		11.7 3.5		12.6 2.5		11.3 4.1	
ATAXIC GAIT	0	None	15	100.0	15	100.0	15	100.0	15	100.0
HYPOTONIC GAIT	0	None	15	100.0	15	100.0	15	100.0	15	100.0
IMPAIRED GAIT	0	None	15	100.0	15	100.0	15	100.0	15	100.0
OVERALL GAIT INCAPACITY	0	None	15	100.0	15	100.0	15	100.0	15	100.0

SIGNIFICANTLY DIFFERENT FROM CONTROL (GROUP 1) VALUE: NONE

PROJECT NO. 90831

FUNCTIONAL OBSERVATIONAL BATTERY
 QUALITATIVE ASSESSMENTS
 GROUP SUMMARY - PRESTUDY
 FEMALES

TABLE NO. 10

NUMBER OF ANIMALS EXAMINED CATEGORY	SCORE	DESCRIPTION	GROUP 1 AIR CONTROL		GROUP 2 CERIC OXIDE LOW DOSE		GROUP 3 CERIC OXIDE INTERMEDIATE DOSE		GROUP 4 CERIC OXIDE HIGH DOSE	
			NO.	%	NO.	%	NO.	%	NO.	%
ARENA BIZARRE/STEREOTYPIC BEHAVIOR	0	None	15	100.0	15	100.0	15	100.0	15	100.0
PALPEBRAL CLOSURE	0	Eyes wide open	15	100.0	15	100.0	15	100.0	15	100.0
TREMORS	0	None	15	100.0	15	100.0	15	100.0	15	100.0
TWITCHES	0	None	15	100.0	15	100.0	15	100.0	15	100.0
CONVULSIONS	0	None	15	100.0	15	100.0	15	100.0	15	100.0
PILORECTION	0	None	15	100.0	15	100.0	15	100.0	15	100.0
RESPIRATORY RATE/PATTERN	5	Normal	15	100.0	15	100.0	15	100.0	15	100.0
LOCOMOTOR ACTIVITY LEVEL	4	Moderate movement	15	100.0	15	100.0	15	100.0	15	100.0

SIGNIFICANTLY DIFFERENT FROM CONTROL (GROUP 1) VALUE: NONE



TABLE NO. 10
 FUNCTIONAL OBSERVATIONAL BATTERY
 QUALITATIVE ASSESSMENTS
 GROUP SUMMARY - PRESTUDY
 FEMALES

PROJECT NO. 90831

CATEGORY	NUMBER OF ANIMALS EXAMINED	SCORE	DESCRIPTION	GROUP 1 AIR CONTROL		GROUP 2 CERIC OXIDE LOW DOSE		GROUP 3 CERIC OXIDE INTERMEDIATE DOSE		GROUP 4 CERIC OXIDE HIGH DOSE	
				NO.	%	NO.	%	NO.	%	NO.	%
ARENA AROUSAL	5		Normal	15	100.0	15	100.0	15	100.0	15	100.0
GROOMING	0		None	12	80.0	13	86.7	14	93.3	15	100.0
	2		Slight	3	20.0	2	13.3	1	6.7	0	0.0
DEFECATION	MEAN			0.1		0.2		0.3		0.1	
	S.D.			0.5		0.8		0.7		0.5	
URINATION	0		None	12	80.0	8	53.3	10	66.7	9	60.0
	2		Slight	3	20.0	7	46.7	5	33.3	6	40.0
OLFACTORY RESPONSE	0		Orients towards	15	100.0	15	100.0	15	100.0	15	100.0
HANDLING LACRIMATION	0		None	15	100.0	15	100.0	15	100.0	15	100.0

SIGNIFICANTLY DIFFERENT FROM CONTROL (GROUP 1) VALUE: NONE

TABLE NO. 10
 FUNCTIONAL OBSERVATIONAL BATTERY
 QUALITATIVE ASSESSMENTS
 GROUP SUMMARY - PRESTUDY
 FEMALES
 PROJECT NO. 90831

NUMBER OF ANIMALS EXAMINED CATEGORY	SCORE	DESCRIPTION	GROUP 1 AIR CONTROL		GROUP 2 CERIC OXIDE LOW DOSE		GROUP 3 CERIC OXIDE INTERMEDIATE DOSE		GROUP 4 CERIC OXIDE HIGH DOSE	
			NO.	%	NO.	%	NO.	%	NO.	%
HANDLING	0	Pinhead (Normal)	15	100.0	15	100.0	15	100.0	15	100.0
PUPIL SIZE	0	None	15	100.0	15	100.0	15	100.0	15	100.0
SALIVATION	0	None	15	100.0	15	100.0	15	100.0	15	100.0
URINARY STAINING	0	None	15	100.0	15	100.0	15	100.0	15	100.0
DIARRHEA	0	None	15	100.0	15	100.0	15	100.0	15	100.0
BODY TONE	5	Normal	15	100.0	15	100.0	15	100.0	15	100.0
ABDOMINAL TONE	5	Normal	15	100.0	15	100.0	15	100.0	15	100.0
EXTENSOR THRUST	0	Normal	15	100.0	15	100.0	15	100.0	15	100.0

SIGNIFICANTLY DIFFERENT FROM CONTROL (GROUP 1) VALUE: NONE



PROJECT NO. 90831

FUNCTIONAL OBSERVATIONAL BATTERY
 QUALITATIVE ASSESSMENTS
 GROUP SUMMARY - PRESTUDY
 FEMALES

TABLE NO. 10

NUMBER OF ANIMALS EXAMINED CATEGORY	SCORE	DESCRIPTION	GROUP 1 AIR CONTROL		GROUP 2 CERIC OXIDE LOW DOSE		GROUP 3 CERIC OXIDE INTERMEDIATE DOSE		GROUP 4 CERIC OXIDE HIGH DOSE	
			NO.	%	NO.	%	NO.	%	NO.	%
HANDLING	4	Active single or double blink	15	100.0	15	100.0	15	100.0	15	100.0
CORNEAL REFLEX	4	Moderate brisk flick	15	100.0	15	100.0	15	100.0	15	100.0
PINNA REFLEX	4	Moderate withdrawal	15	100.0	15	100.0	15	100.0	15	100.0
TOE PINCH	4	Moderate movement	15	100.0	15	100.0	15	100.0	15	100.0
TAIL PINCH	5	Normal	15	100.0	15	100.0	15	100.0	15	100.0
VISUAL PLACING	0	Normal	15	100.0	15	100.0	15	100.0	15	100.0
ON TOP OF BOX	0	Normal	15	100.0	15	100.0	15	100.0	15	100.0
POSITIONAL PASSIVITY	4	Normal	15	100.0	15	100.0	15	100.0	15	100.0
ON SURFACE	4	Normal	15	100.0	15	100.0	15	100.0	15	100.0
AURICULAR STARTLE										

SIGNIFICANTLY DIFFERENT FROM CONTROL (GROUP 1) VALUE: NONE



PROJECT NO. 90831

FUNCTIONAL OBSERVATIONAL BATTERY
 QUALITATIVE ASSESSMENTS
 GROUP SUMMARY - PRESTUDY
 FEMALES

TABLE NO. 10

NUMBER OF ANIMALS EXAMINED	GROUP 1 AIR CONTROL	GROUP 2 CERIC OXIDE LOW DOSE		GROUP 3 CERIC OXIDE INTERMEDIATE DOSE		GROUP 4 CERIC OXIDE HIGH DOSE		
		NO.	%	NO.	%	NO.	%	
	15	100.0	15	100.0	15	100.0	15	100.0
ON SURFACE								
AIR RIGHTING REFLEX	15	100.0	15	100.0	15	100.0	15	100.0
			0					
								Normal
CATEGORY			SCORE					DESCRIPTION

SIGNIFICANTLY DIFFERENT FROM CONTROL (GROUP 1) VALUE: NONE

PROJECT NO. 90831

FUNCTIONAL OBSERVATIONAL BATTERY
 QUALITATIVE ASSESSMENTS
 GROUP SUMMARY - DAY 1
 MALES

TABLE NO. 10

NUMBER OF ANIMALS EXAMINED CATEGORY	SCORE	DESCRIPTION	GROUP 1 AIR CONTROL		GROUP 2 CERIC OXIDE LOW DOSE		GROUP 3 CERIC OXIDE INTERMEDIATE DOSE		GROUP 4 CERIC OXIDE HIGH DOSE	
			No.	%	No.	%	No.	%	No.	%
			15	100.0	15	100.0	15	100.0	15	100.0
BONE CAGE			5	33.3	3	20.0	5	33.3	3	20.0
BODY POSITION	4	Lying on side or curled up	10	66.7	12	80.0	10	66.7	12	80.0
	5	Sitting/standing	0	0.0	1	6.7	3	20.0	3	20.0
	6	Rearing	15	100.0	15	100.0	15	100.0	15	100.0
TREMORS	0	None	15	100.0	15	100.0	15	100.0	15	100.0
TWITCHES	0	None	15	100.0	15	100.0	15	100.0	15	100.0
CONVULSIONS	0	None	15	100.0	15	100.0	15	100.0	15	100.0
BIZARRE/STEREOTYPIC BEHAVIOR	0	None	15	100.0	15	100.0	15	100.0	15	100.0

SIGNIFICANTLY DIFFERENT FROM CONTROL (GROUP 1) VALUE: NONE

TABLE NO. 10
 FUNCTIONAL OBSERVATIONAL BATTERY
 QUALITATIVE ASSESSMENTS
 GROUP SUMMARY - DAY 1
 MALES
 PROJECT NO. 90831

NUMBER OF ANIMALS EXAMINED CATEGORY	SCORE	DESCRIPTION	GROUP 1 AIR CONTROL		GROUP 2 CERIC OXIDE LOW DOSE		GROUP 3 CERIC OXIDE INTERMEDIATE DOSE		GROUP 4 CERIC OXIDE HIGH DOSE	
			NO.	%	NO.	%	NO.	%	NO.	%
REMOVAL FROM HOME CAGE	0	Very easy	15	100.0	15	100.0	15	100.0	14	93.3
EASE OF REMOVAL	2	Easy	0	0.0	0	0.0	0	0.0	1	6.7
VOCALIZATION	MEAN S.D.		0.4 1.1		0.3 0.6		0.4 1.1		0.3 1.0	
ARENA REARING	MEAN S.D.		7.1 3.3		9.0 4.0		7.7 3.4		6.7 3.2	
ATAXIC GAIT	0	None	15	100.0	15	100.0	15	100.0	15	100.0
HYPOTONIC GAIT	0	None	15	100.0	15	100.0	15	100.0	15	100.0
IMPAIRED GAIT	0	None	15	100.0	15	100.0	15	100.0	15	100.0

SIGNIFICANTLY DIFFERENT FROM CONTROL (GROUP 1) VALUE: NONE

FUNCTIONAL OBSERVATIONAL BATTERY
 QUALITATIVE ASSESSMENTS
 GROUP SUMMARY - DAY 1
 MALES

TABLE NO. 10

NUMBER OF ANIMALS EXAMINED CATEGORY	SCORE	DESCRIPTION	GROUP 1 AIR CONTROL		GROUP 2 CERIC OXIDE LOW DOSE		GROUP 3 CERIC OXIDE INTERMEDIATE DOSE		GROUP 4 CERIC OXIDE HIGH DOSE	
			NO.	%	NO.	%	NO.	%	NO.	%
HANDLING CORNEAL REFLEX	4	Active single or double blink	15	100.0	15	100.0	15	100.0	15	100.0
PINNA REFLEX	4	Moderate brisk flick	15	100.0	15	100.0	15	100.0	15	100.0
TOE PINCH	4	Moderate withdrawal	15	100.0	15	100.0	15	100.0	15	100.0
TAIL PINCH	4	Moderate movement	15	100.0	15	100.0	15	100.0	15	100.0
VISUAL PLACING	5	Normal	15	100.0	15	100.0	15	100.0	15	100.0
ON TOP OF BOX POSITIONAL PASSIVITY	0	Normal	15	100.0	15	100.0	15	100.0	15	100.0
ON SURFACE AURICULAR STARTLE	4	Normal	15	100.0	15	100.0	15	100.0	15	100.0

SIGNIFICANTLY DIFFERENT FROM CONTROL (GROUP 1) VALUE: NONE

PROJECT NO. 90831

FUNCTIONAL OBSERVATIONAL BATTERY
QUALITATIVE ASSESSMENTS
GROUP SUMMARY - DAY 1
MALES

TABLE NO. 10

NUMBER OF ANIMALS EXAMINED CATEGORY	GROUP 1 AIR CONTROL		GROUP 2 CERIC OXIDE LOW DOSE		GROUP 3 CERIC OXIDE INTERMEDIATE DOSE		GROUP 4 CERIC OXIDE HIGH DOSE		SCORE	DESCRIPTION
	NO.	%	NO.	%	NO.	%	NO.	%		
	15	100.0	15	100.0	15	100.0	15	100.0		
ON SURFACE AIR RIGHTING REFLEX	15	100.0	15	100.0	15	100.0	15	100.0	0	Normal
COMMENT	5	33.3	1	6.7	2	13.3	1	6.7		Post treatment staining

SIGNIFICANTLY DIFFERENT FROM CONTROL (GROUP 1) VALUE: NONE

PROJECT NO. 90831

FUNCTIONAL OBSERVATIONAL BATTERY
 QUALITATIVE ASSESSMENTS
 GROUP SUMMARY - DAY 1
 MALES

TABLE NO. 10

NUMBER OF ANIMALS EXAMINED CATEGORY	SCORE	DESCRIPTION	GROUP 1 AIR CONTROL		GROUP 2 CERIC OXIDE LOW DOSE		GROUP 3 CERIC OXIDE INTERMEDIATE DOSE		GROUP 4 CERIC OXIDE HIGH DOSE	
			NO.	%	NO.	%	NO.	%	NO.	%
ARENA										
OVERALL GAIT INCAPACITY	0	None	15	100.0	15	100.0	15	100.0	15	100.0
BIZARRE/STEREOTYPIC BEHAVIOR	0	None	15	100.0	15	100.0	15	100.0	15	100.0
PALPEBRAL CLOSURE	0	Eyes wide open	15	100.0	15	100.0	15	100.0	15	100.0
TREMORS	0	None	15	100.0	15	100.0	15	100.0	15	100.0
TWITCHES	0	None	15	100.0	15	100.0	15	100.0	15	100.0
CONVULSIONS	0	None	15	100.0	15	100.0	15	100.0	15	100.0
PILORECTION	0	None	15	100.0	15	100.0	15	100.0	15	100.0
RESPIRATORY RATE/PATTERN	5	Normal	15	100.0	15	100.0	15	100.0	15	100.0

SIGNIFICANTLY DIFFERENT FROM CONTROL (GROUP 1) VALUE: NONE

NUMBER OF ANIMALS EXAMINED	CATEGORY	SCORE	DESCRIPTION	GROUP 1 AIR CONTROL		GROUP 2 CERIC OXIDE LOW DOSE		GROUP 3 CERIC OXIDE INTERMEDIATE DOSE		GROUP 4 CERIC OXIDE HIGH DOSE	
				NO.	%	NO.	%	NO.	%	NO.	%
5		2	Slight movement	5	33.3	3	20.0	3	20.0	5	33.3
10		4	Moderate movement	10	66.7	11	73.3	11	73.3	10	66.7
0		6	Vigorous movement	0	0.0	1	6.7	1	6.7	0	0.0
2		4	Moderately decreased	2	13.3	1	6.7	2	13.3	4	26.7
13		5	Normal	13	86.7	14	93.3	13	86.7	11	73.3
10		0	None	10	66.7	9	60.0	12	80.0	11	73.3
5		2	Slight	5	33.3	6	40.0	3	20.0	3	20.0
0		4	Moderate	0	0.0	0	0.0	0	0.0	1	6.7
2.1		MEAN		2.1		0.9		1.5		1.3	
1.8		S.D.		1.8		1.6		2.0		1.6	
8		0	None	8	53.3	12	80.0	12	80.0	14	93.3
7		2	Slight	7	46.7	3	20.0	3	20.0	1	6.7

SIGNIFICANTLY DIFFERENT FROM CONTROL (GROUP 1) VALUE: NONE



PROJECT NO. 90831

FUNCTIONAL OBSERVATIONAL BATTERY
QUALITATIVE ASSESSMENTS
GROUP SUMMARY - DAY 1
MALES

TABLE NO. 10

NUMBER OF ANIMALS EXAMINED CATEGORY	SCORE	DESCRIPTION	GROUP 1 AIR CONTROL		GROUP 2 CERIC OXIDE LOW DOSE		GROUP 3 CERIC OXIDE INTERMEDIATE DOSE		GROUP 4 CERIC OXIDE HIGH DOSE	
			NO.	%	NO.	%	NO.	%	NO.	%
ARENA			15	100.0	15	100.0	15	100.0	15	100.0
OLFACTORY RESPONSE	0	Orients towards								
HANDLING			15	100.0	15	100.0	15	100.0	15	100.0
LACRIMATION	0	None	5	33.3	2	13.3	2	13.3	2	13.3
	C	Chromodacryorrhea	5	33.3	2	13.3	2	13.3	2	13.3
	D	Deposit around eye(s)								
PUPIL SIZE	0	Pinhead (Normal)	13	86.7	15	100.0	15	100.0	13	86.7
	4	Moderately dilated	2	13.3	0	0.0	0	0.0	2	13.3
SALIVATION	0	None	15	100.0	15	100.0	15	100.0	15	100.0
URINARY STAINING	0	None	15	100.0	15	100.0	15	100.0	15	100.0
DIARRHEA	0	None	15	100.0	14	93.3	14	93.3	15	100.0
	4	Present	0	0.0	1	6.7	1	6.7	0	0.0

SIGNIFICANTLY DIFFERENT FROM CONTROL (GROUP 1) VALUE: NONE



PROJECT NO. 90831

FUNCTIONAL OBSERVATIONAL BATTERY
 QUALITATIVE ASSESSMENTS
 GROUP SUMMARY - DAY 1
 MALES

TABLE NO. 10

NUMBER OF ANIMALS EXAMINED CATEGORY	SCORE	DESCRIPTION	GROUP 1 AIR CONTROL		GROUP 2 CERIC OXIDE LOW DOSE		GROUP 3 CERIC OXIDE INTERMEDIATE DOSE		GROUP 4 CERIC OXIDE HIGH DOSE	
			NO.	%	NO.	%	NO.	%	NO.	%
HANDLING BODY TONE	5	Normal	15	100.0	15	100.0	15	100.0	15	100.0
ABDOMINAL TONE	5	Normal	15	100.0	15	100.0	15	100.0	15	100.0
EXTENSOR THRUST	0	Normal	15	100.0	15	100.0	15	100.0	15	100.0

SIGNIFICANTLY DIFFERENT FROM CONTROL (GROUP 1) VALUE: NONE



PROJECT NO. 90831

FUNCTIONAL OBSERVATIONAL BATTERY
QUALITATIVE ASSESSMENTS
GROUP SUMMARY - DAY 1
FEMALES

TABLE NO. 10

NUMBER OF ANIMALS EXAMINED CATEGORY	SCORE	DESCRIPTION	GROUP 1 AIR CONTROL		GROUP 2 CERIC OXIDE LOW DOSE		GROUP 3 CERIC OXIDE INTERMEDIATE DOSE		GROUP 4 CERIC OXIDE HIGH DOSE	
			NO.	%	NO.	%	NO.	%	NO.	%
HOME CAGE										
BODY POSITION										
	4	Lying on side or curled up	5	33.3	5	33.3	3	20.0	2	13.3
	5	Sitting/standing	10	66.7	10	66.7	11	73.3	13	86.7
	6	Rearing	4	26.7	2	13.3	3	20.0	5	33.3
TREHORS	0	None	15	100.0	15	100.0	15	100.0	15	100.0
TWITCHES	0	None	15	100.0	15	100.0	15	100.0	15	100.0
CONVULSIONS	0	None	15	100.0	15	100.0	15	100.0	15	100.0
BIZARRE/STEREOTYPIC BEHAVIOR	0	None	15	100.0	15	100.0	15	100.0	15	100.0

SIGNIFICANTLY DIFFERENT FROM CONTROL (GROUP 1) VALUE: NONE



TABLE NO. 10
 FUNCTIONAL OBSERVATIONAL BATTERY
 QUALITATIVE ASSESSMENTS
 GROUP SUMMARY - DAY 1
 FEMALES
 PROJECT NO. 90831

NUMBER OF ANIMALS EXAMINED CATEGORY	GROUP 1 AIR CONTROL		GROUP 2 CERIC OXIDE LOW DOSE		GROUP 3 CERIC OXIDE INTERMEDIATE DOSE		GROUP 4 CERIC OXIDE HIGH DOSE		DESCRIPTION
	NO.	%	NO.	%	NO.	%	NO.	%	
	15 100.0		15 100.0		15 100.0		15 100.0		
REMOVAL FROM HOME CAGE	14	93.3	13	86.7	15	100.0	14	93.3	
EASE OF REMOVAL	1	6.7	2	13.3	0	0.0	1	6.7	
VOCALIZATION	0.5		0.3		0.6		0.1		
	1.1		0.5		1.4		0.3		
ARENA REARING	11.6		9.9		11.5		12.3		
	4.4		3.7		5.7		3.1		
ATAXIC GAIT	15	100.0	15	100.0	15	100.0	15	100.0	
HYPOTONIC GAIT	15	100.0	15	100.0	15	100.0	15	100.0	
IMPAIRED GAIT	15	100.0	15	100.0	15	100.0	15	100.0	

SIGNIFICANTLY DIFFERENT FROM CONTROL (GROUP 1) VALUE: NONE

TABLE NO. 10
 FUNCTIONAL OBSERVATIONAL BATTERY
 QUALITATIVE ASSESSMENTS
 GROUP SUMMARY - DAY 1
 FEMALES
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NUMBER OF ANIMALS EXAMINED CATEGORY	SCORE	DESCRIPTION	GROUP 1 AIR CONTROL		GROUP 2 CERIC OXIDE LOW DOSE		GROUP 3 CERIC OXIDE INTERMEDIATE DOSE		GROUP 4 CERIC OXIDE HIGH DOSE	
			NO.	%	NO.	%	NO.	%	NO.	%
ARENA										
OVERALL GAIT INCAPACITY	0	None	15	100.0	15	100.0	15	100.0	15	100.0
BIZARRE/STEREOTYPIC BEHAVIOR	0	None	15	100.0	15	100.0	15	100.0	15	100.0
PALPEBRAL CLOSURE	0	Eyes wide open	15	100.0	15	100.0	15	100.0	15	100.0
TREMORS	0	None	15	100.0	15	100.0	15	100.0	15	100.0
TWITCHES	0	None	15	100.0	15	100.0	15	100.0	15	100.0
CONVULSIONS	0	None	15	100.0	15	100.0	15	100.0	15	100.0
PILORECTION	0	None	15	100.0	15	100.0	15	100.0	15	100.0
RESPIRATORY RATE/PATTERN	5	Normal	15	100.0	15	100.0	15	100.0	15	100.0

SIGNIFICANTLY DIFFERENT FROM CONTROL (GROUP 1) VALUE: NONE



PROJECT NO. 90831

FUNCTIONAL OBSERVATIONAL BATTERY
QUALITATIVE ASSESSMENTS
GROUP SUMMARY - DAY 1
FEMALES

TABLE NO. 10

NUMBER OF ANIMALS EXAMINED CATEGORY	SCORE	DESCRIPTION	GROUP 1 AIR CONTROL		GROUP 2 CERIC OXIDE LOW DOSE		GROUP 3 CERIC OXIDE INTERMEDIATE DOSE		GROUP 4 CERIC OXIDE HIGH DOSE	
			NO.	%	NO.	%	NO.	%	NO.	%
ARENA LOCOMOTOR ACTIVITY LEVEL	2	Slight movement	0	0.0	1	6.7	2	13.3	0	0.0
	4	Moderate movement	12	80.0	13	86.7	10	66.7	13	86.7
	6	Vigorous movement	3	20.0	1	6.7	3	20.0	2	13.3
AROUSAL	4	Moderately decreased	0	0.0	1	6.7	1	13.3	0	0.0
	5	Normal	12	80.0	10	66.7	11	73.3	13	86.7
	6	Moderately increased	3	20.0	4	26.7	3	20.0	2	13.3
GROOMING	0	None	13	86.7	14	93.3	15	100.0	15	100.0
	2	Slight	2	13.3	1	6.7	0	0.0	0	0.0
DEFECATION	MEAN		0.5		0.1		0.1		0.0	
	S.D.		1.5		0.5		0.5		0.0	
URINATION	0	None	13	86.7	9	60.0	9	60.0	11	73.3
	2	Slight	2	13.3	6	40.0	6	40.0	4	26.7

SIGNIFICANTLY DIFFERENT FROM CONTROL (GROUP 1) VALUE: NONE

PROJECT NO. 90831

FUNCTIONAL OBSERVATIONAL BATTERY
 QUALITATIVE ASSESSMENTS
 GROUP SUMMARY - DAY 1
 FEMALES

TABLE NO. 10

NUMBER OF ANIMALS EXAMINED CATEGORY	SCORE	DESCRIPTION	GROUP 1 AIR CONTROL		GROUP 2 CERIC OXIDE LOW DOSE		GROUP 3 CERIC OXIDE INTERMEDIATE DOSE		GROUP 4 CERIC OXIDE HIGH DOSE	
			NO.	%	NO.	%	NO.	%	NO.	%
			15	100.0	15	100.0	15	100.0	15	100.0
ARENA OLFACTORY RESPONSE	0	Orients towards	15	100.0	15	100.0	15	100.0	15	100.0
HANDLING LACRIMATION	0	None	15	100.0	15	100.0	15	100.0	15	100.0
PUPIL SIZE	0	Pinhead (Normal)	15	100.0	15	100.0	15	100.0	15	100.0
SALIVATION	0	None	15	100.0	15	100.0	15	100.0	15	100.0
URINARY STAINING	0	None	15	100.0	15	100.0	15	100.0	15	100.0
DIARRHEA	0	None	15	100.0	15	100.0	15	100.0	15	100.0
BODY TONE	5	Normal	15	100.0	15	100.0	15	100.0	15	100.0
ABDOMINAL TONE	5	Normal	15	100.0	15	100.0	15	100.0	15	100.0

SIGNIFICANTLY DIFFERENT FROM CONTROL (GROUP 1) VALUE: NONE

PROJECT NO. 90831

FUNCTIONAL OBSERVATIONAL BATTERY
 QUALITATIVE ASSESSMENTS
 GROUP SUMMARY - DAY 1
 FEMALES

TABLE NO. 10

CATEGORY	NUMBER OF ANIMALS EXAMINED	SCORE	DESCRIPTION	GROUP 1 AIR CONTROL		GROUP 2 CERIC OXIDE LOW DOSE		GROUP 3 CERIC OXIDE INTERMEDIATE DOSE		GROUP 4 CERIC OXIDE HIGH DOSE	
				NO.	%	NO.	%	NO.	%	NO.	%
HANDLING				15	100.0	15	100.0	15	100.0	15	100.0
EXTENSOR THRUST	0		Normal	15	100.0	15	100.0	15	100.0	15	100.0
CORNEAL REFLEX	4		Active single or double blink	15	100.0	15	100.0	15	100.0	15	100.0
PINNA REFLEX	4		Moderate brisk flick	15	100.0	15	100.0	15	100.0	15	100.0
TOE PINCH	4		Moderate withdrawal	15	100.0	15	100.0	15	100.0	15	100.0
TAIL PINCH	4		Moderate movement	15	100.0	15	100.0	15	100.0	15	100.0
VISUAL PLACING	5		Normal	15	100.0	15	100.0	15	100.0	15	100.0

SIGNIFICANTLY DIFFERENT FROM CONTROL (GROUP 1) VALUE: NONE

TABLE NO. 10
 FUNCTIONAL OBSERVATIONAL BATTERY
 QUALITATIVE ASSESSMENTS
 GROUP SUMMARY - DAY 1
 FEMALES
 PROJECT NO. 90831

NUMBER OF ANIMALS EXAMINED CATEGORY	SCORE	DESCRIPTION	GROUP 1 AIR CONTROL		GROUP 2 CERIC OXIDE LOW DOSE		GROUP 3 CERIC OXIDE INTERMEDIATE DOSE		GROUP 4 CERIC OXIDE HIGH DOSE	
			NO.	%	NO.	%	NO.	%	NO.	%
ON TOP OF BOX POSITIONAL PASSIVITY	0	Normal	15	100.0	15	100.0	14	93.3	15	100.0
	2	Slight delay	0	0.0	0	0.0	1	6.7	0	0.0
ON SURFACE AURICULAR STARTLE	4	Normal	15	100.0	15	100.0	15	100.0	15	100.0
	0	Normal	15	100.0	15	100.0	15	100.0	15	100.0
AIR RIGHTING REFLEX	0		0	0.0	1	6.7	0	0.0	0	0.0
COMMENT		Rat dropped her pelvic area 7 to 8 times during arena observations								

SIGNIFICANTLY DIFFERENT FROM CONTROL (GROUP 1) VALUE: NONE



PROJECT NO. 90831
 FUNCTIONAL OBSERVATIONAL BATTERY
 QUALITATIVE ASSESSMENTS
 GROUP SUMMARY - WEEK 4
 MALES

TABLE NO. 10

NUMBER OF ANIMALS EXAMINED CATEGORY	SCORE	DESCRIPTION	GROUP 1 AIR CONTROL		GROUP 2 CERIC OXIDE LOW DOSE		GROUP 3 CERIC OXIDE INTERMEDIATE DOSE		GROUP 4 CERIC OXIDE HIGH DOSE	
			NO.	%	NO.	%	NO.	%	NO.	%
HOME CAGE										
BODY POSITION										
	4	Lying on side or curled up	3	20.0	6	40.0	2	13.3	0	0.0
	5	Sitting/standing	12	80.0	9	60.0	13	86.7	15	100.0
	6	Rearing	1	6.7	1	6.7	1	6.7	1	6.7
TREHORS	0	None	15	100.0	15	100.0	15	100.0	15	100.0
TWITCHES	0	None	15	100.0	15	100.0	15	100.0	15	100.0
CONVULSIONS	0	None	15	100.0	15	100.0	15	100.0	15	100.0
BIZARRE/STEREOTYPIC BEHAVIOR	0	None	15	100.0	15	100.0	15	100.0	15	100.0

SIGNIFICANTLY DIFFERENT FROM CONTROL (GROUP 1) VALUE: NONE



PROJECT NO. 90831

FUNCTIONAL OBSERVATIONAL BATTERY
 QUALITATIVE ASSESSMENTS
 GROUP SUMMARY - WEEK 4
 MALES

TABLE NO. 10

NUMBER OF ANIMALS EXAMINED CATEGORY	SCORE	DESCRIPTION	GROUP 1 AIR CONTROL		GROUP 2 CERIC OXIDE LOW DOSE		GROUP 3 CERIC OXIDE INTERMEDIATE DOSE		GROUP 4 CERIC OXIDE HIGH DOSE	
			NO.	%	NO.	%	NO.	%	NO.	%
REMOVAL FROM HOME CAGE	0	Very easy	15	100.0	15	100.0	12	80.0	15	100.0
EASE OF REMOVAL	2	Easy	0	0.0	0	0.0	3	20.0	0	0.0
VOCALIZATION	MEAN S.D.		0.3 1.0		0.0 0.0		0.3 0.7		0.0 0.0	
ARENA REARING	MEAN S.D.		4.2 3.2		4.6 3.7		5.1 4.4		5.2 2.6	
ATAXIC GAIT	0	None	15	100.0	15	100.0	15	100.0	15	100.0
HYPOTONIC GAIT	0	None	15	100.0	15	100.0	15	100.0	15	100.0
IMPAIRED GAIT	0	None	15	100.0	15	100.0	15	100.0	15	100.0

SIGNIFICANTLY DIFFERENT FROM CONTROL (GROUP 1) VALUE: NONE

PROJECT NO. 90831

FUNCTIONAL OBSERVATIONAL BATTERY
 QUALITATIVE ASSESSMENTS
 GROUP SUMMARY - WEEK 4
 MALES

TABLE NO. 10

NUMBER OF ANIMALS EXAMINED CATEGORY	SCORE	DESCRIPTION	GROUP 1 AIR CONTROL		GROUP 2 CERIC OXIDE LOW DOSE		GROUP 3 CERIC OXIDE INTERMEDIATE DOSE		GROUP 4 CERIC OXIDE HIGH DOSE	
			NO.	%	NO.	%	NO.	%	NO.	%
ARENA			15	100.0	15	100.0	15	100.0	15	100.0
OVERALL GAIT INCAPACITY	0	None	15	100.0	15	100.0	15	100.0	15	100.0
BIZARRE/STEREOTYPIC BEHAVIOR	0	None	15	100.0	15	100.0	15	100.0	15	100.0
PALPEBRAL CLOSURE	0	Eyes wide open	15	100.0	15	100.0	15	100.0	15	100.0
TREMORS	0	None	15	100.0	15	100.0	15	100.0	15	100.0
TWITCHES	0	None	15	100.0	15	100.0	15	100.0	15	100.0
CONVULSIONS	0	None	15	100.0	15	100.0	15	100.0	15	100.0
PILORECTION	0	None	15	100.0	15	100.0	15	100.0	15	100.0
RESPIRATORY RATE/PATTERN	5	Normal	15	100.0	15	100.0	15	100.0	15	100.0

SIGNIFICANTLY DIFFERENT FROM CONTROL (GROUP 1) VALUE: NONE

FUNCTIONAL OBSERVATIONAL BATTERY
 QUALITATIVE ASSESSMENTS
 GROUP SUMMARY - WEEK 4
 MALES

TABLE NO. 10

NUMBER OF ANIMALS EXAMINED CATEGORY	SCORE	DESCRIPTION	GROUP 1 AIR CONTROL		GROUP 2 CERIC OXIDE LOW DOSE		GROUP 3 CERIC OXIDE INTERMEDIATE DOSE		GROUP 4 CERIC OXIDE HIGH DOSE	
			NO.	%	NO.	%	NO.	%	NO.	%
ARENA LOCOMOTOR ACTIVITY LEVEL	2	Slight movement	8	53.3	9	60.0	7	46.7	6	40.0
	4	Moderate movement	7	46.7	6	40.0	8	53.3	9	60.0
AROUSAL	2	Severely decreased	0	0.0	1	6.7	0	0.0	0	0.0
	4	Moderately decreased	2	13.3	2	13.3	3	20.0	0	0.0
	5	Normal	13	86.7	11	73.3	11	73.3	15	100.0
	6	Moderately increased	0	0.0	1	6.7	1	6.7	0	0.0
GROOMING	0	None	12	80.0	14	93.3	15	100.0	13	86.7
	2	Slight	3	20.0	1	6.7	0	0.0	2	13.3
DEFECATION	MEAN		1.6		0.7		0.7		0.7	
	S.D.		1.5		1.2		1.2		1.1	
URINATION	0	None	10	66.7	12	80.0	11	73.3	10	66.7
	2	Slight	5	33.3	3	20.0	4	26.7	5	33.3

SIGNIFICANTLY DIFFERENT FROM CONTROL (GROUP 1) VALUE: NONE

TABLE NO. 10

FUNCTIONAL OBSERVATIONAL BATTERY
 QUALITATIVE ASSESSMENTS
 GROUP SUMMARY - WEEK 4
 MALES

PROJECT NO. 90831

NUMBER OF ANIMALS EXAMINED CATEGORY	SCORE	DESCRIPTION	GROUP 1 AIR CONTROL		GROUP 2 CERIC OXIDE LOW DOSE		GROUP 3 CERIC OXIDE INTERMEDIATE DOSE		GROUP 4 CERIC OXIDE HIGH DOSE	
			NO.	%	NO.	%	NO.	%	NO.	%
ARENA										
OLFACTORY RESPONSE	0	Orients towards	15	100.0	15	100.0	15	100.0	15	100.0
HANDLING										
LACRIMATION	0	None	15	100.0	15	100.0	15	100.0	15	100.0
	C	Chromodacryorrhea	0	0.0	0	0.0	1	6.7	0	0.0
	D	Deposit around eye(s)	0	0.0	0	0.0	1	6.7	0	0.0
PUPIL SIZE	0	Pinhead (Normal)	15	100.0	15	100.0	15	100.0	15	100.0
SALIVATION	0	None	15	100.0	15	100.0	15	100.0	15	100.0
URINARY STAINING	0	None	15	100.0	15	100.0	15	100.0	15	100.0
DIARRHEA	0	None	15	100.0	15	100.0	15	100.0	15	100.0
BODY TONE	5	Normal	15	100.0	15	100.0	15	100.0	15	100.0

SIGNIFICANTLY DIFFERENT FROM CONTROL (GROUP 1) VALUE: NONE

PROJECT NO. 90831

FUNCTIONAL OBSERVATIONAL BATTERY
 QUALITATIVE ASSESSMENTS
 GROUP SUMMARY - WEEK 4
 MALES

TABLE NO. 10

NUMBER OF ANIMALS EXAMINED CATEGORY	SCORE	DESCRIPTION	GROUP 1 AIR CONTROL		GROUP 2 CERIC OXIDE LOW DOSE		GROUP 3 CERIC OXIDE INTERMEDIATE DOSE		GROUP 4 CERIC OXIDE HIGH DOSE	
			NO.	%	NO.	%	NO.	%	NO.	%
HANDLING	5	Normal	15	100.0	15	100.0	15	100.0	15	100.0
ABDOMINAL TONE										
EXTENSOR THRUST	0	Normal	15	100.0	15	100.0	15	100.0	15	100.0
CORNEAL REFLEX	4	Active single or double blink	15	100.0	15	100.0	15	100.0	15	100.0
PINNA REFLEX	4	Moderate brisk Flick	15	100.0	15	100.0	15	100.0	15	100.0
TOE PINCH	4	Moderate withdrawal	15	100.0	15	100.0	15	100.0	15	100.0
TAIL PINCH	4	Moderate movement	15	100.0	15	100.0	15	100.0	15	100.0
VISUAL PLACING	5	Normal	15	100.0	15	100.0	15	100.0	15	100.0

SIGNIFICANTLY DIFFERENT FROM CONTROL (GROUP 1) VALUE: NONE

TABLE NO. 10
 FUNCTIONAL OBSERVATIONAL BATTERY
 QUALITATIVE ASSESSMENTS
 GROUP SUMMARY - WEEK 4
 MALES
 PROJECT NO. 90831

NUMBER OF ANIMALS EXAMINED CATEGORY	GROUP 1 AIR CONTROL		GROUP 2 CERIC OXIDE LOW DOSE		GROUP 3 CERIC OXIDE INTERMEDIATE DOSE		GROUP 4 CERIC OXIDE HIGH DOSE	
	NO.	%	NO.	%	NO.	%	NO.	%
ON TOP OF BOX POSITIONAL PASSIVITY	15	100.0	15	100.0	15	100.0	15	100.0
ON SURFACE AURICULAR STARTLE	15	100.0	15	100.0	15	100.0	15	100.0
AIR RIGHTING REFLEX	15	100.0	15	100.0	15	100.0	15	100.0
SCORE	0		0		0		0	
DESCRIPTION	Normal		Normal		Normal		Normal	

SIGNIFICANTLY DIFFERENT FROM CONTROL (GROUP 1) VALUE: NONE



PROJECT NO. 90831

FUNCTIONAL OBSERVATIONAL BATTERY
QUALITATIVE ASSESSMENTS
GROUP SUMMARY - WEEK 4
FEMALES

TABLE NO. 10

NUMBER OF ANIMALS EXAMINED CATEGORY	SCORE	DESCRIPTION	GROUP 1 AIR CONTROL		GROUP 2 CERIC OXIDE LOW DOSE		GROUP 3 CERIC OXIDE INTERMEDIATE DOSE		GROUP 4 CERIC OXIDE HIGH DOSE	
			NO.	%	NO.	%	NO.	%	NO.	%
HOME CAGE BODY POSITION	4	Lying on side or curled up	0	0.0	2	13.3	2	13.3	1	6.7
	5	Sitting/standing	15	100.0	13	86.7	13	86.7	14	93.3
	6	Rearing	13	86.7	10	66.7	8	53.3	12	80.0
TREMORS	0	None	15	100.0	15	100.0	15	100.0	15	100.0
TWITCHES	0	None	15	100.0	15	100.0	15	100.0	15	100.0
CONVULSIONS	0	None	15	100.0	15	100.0	15	100.0	15	100.0
BIZARRE/STEREOTYPIC BEHAVIOR	0	None	15	100.0	15	100.0	15	100.0	15	100.0

SIGNIFICANTLY DIFFERENT FROM CONTROL (GROUP 1) VALUE: NONE

TABLE NO. 10
 FUNCTIONAL OBSERVATIONAL BATTERY
 QUALITATIVE ASSESSMENTS
 GROUP SUMMARY - WEEK 4
 FEMALES
 PROJECT NO. 90831

NUMBER OF ANIMALS EXAMINED CATEGORY	GROUP 1 AIR CONTROL		GROUP 2 CERIC OXIDE LOW DOSE		GROUP 3 CERIC OXIDE INTERMEDIATE DOSE		GROUP 4 CERIC OXIDE HIGH DOSE		DESCRIPTION
	NO.	%	NO.	%	NO.	%	NO.	%	
REMOVAL FROM HOME CAGE	14	93.3	15	100.0	15	100.0	15	100.0	Very easy
EASE OF REMOVAL	1	6.7	0	0.0	0	0.0	0	0.0	Difficult
VOCALIZATION	0.0		0.1		0.3		0.0		MEAN
	0.0		0.5		0.7		0.0		S.D.
ARENA REARING	11.7		8.8		10.1		11.3		MEAN
	4.9		4.6		5.8		5.5		S.D.
ATAXIC GAIT	15	100.0	15	100.0	15	100.0	15	100.0	0
HYPOTONIC GAIT	15	100.0	15	100.0	15	100.0	15	100.0	0
IMPAIRED GAIT	15	100.0	15	100.0	15	100.0	15	100.0	0

SIGNIFICANTLY DIFFERENT FROM CONTROL (GROUP 1) VALUE: NONE

TABLE NO. 10
 FUNCTIONAL OBSERVATIONAL BATTERY
 QUALITATIVE ASSESSMENTS
 GROUP SUMMARY - WEEK 4
 FEMALES
 PROJECT NO. 90831

NUMBER OF ANIMALS EXAMINED CATEGORY	SCORE	DESCRIPTION	GROUP 1 AIR CONTROL		GROUP 2 CERIC OXIDE LOW DOSE		GROUP 3 CERIC OXIDE INTERMEDIATE DOSE		GROUP 4 CERIC OXIDE HIGH DOSE	
			NO.	%	NO.	%	NO.	%	NO.	%
ARENA			15	100.0	15	100.0	15	100.0	15	100.0
OVERALL GAIT INCAPACITY	0	None	15	100.0	15	100.0	15	100.0	15	100.0
BIZARRE/STEREOTYPIC BEHAVIOR	0	None	15	100.0	15	100.0	15	100.0	15	100.0
PALPEBRAL CLOSURE	0	Eyes wide open	15	100.0	15	100.0	15	100.0	15	100.0
TREMORS	0	None	15	100.0	15	100.0	15	100.0	15	100.0
TWITCHES	0	None	15	100.0	15	100.0	15	100.0	15	100.0
CONVULSIONS	0	None	15	100.0	15	100.0	15	100.0	15	100.0
PILORECTION	0	None	15	100.0	15	100.0	15	100.0	15	100.0
RESPIRATORY RATE/PATTERN	5	Normal	15	100.0	15	100.0	15	100.0	15	100.0

SIGNIFICANTLY DIFFERENT FROM CONTROL (GROUP 1) VALUE: NONE

PROJECT NO. 90831

FUNCTIONAL OBSERVATIONAL BATTERY
QUALITATIVE ASSESSMENTS
GROUP SUMMARY - WEEK 4
FEMALES

TABLE NO. 10

NUMBER OF ANIMALS EXAMINED CATEGORY	SCORE	DESCRIPTION	GROUP 1 AIR CONTROL		GROUP 2 CERIC OXIDE LOW DOSE		GROUP 3 CERIC OXIDE INTERMEDIATE DOSE		GROUP 4 CERIC OXIDE HIGH DOSE	
			NO.	%	NO.	%	NO.	%	NO.	%
ARENA										
LOCOMOTOR ACTIVITY LEVEL	2	Slight movement	0	0.0	2	13.3	1	6.7	1	6.7
	4	Moderate movement	15	100.0	13	86.7	13	86.7	12	80.0
	6	Vigorous movement	0	0.0	0	0.0	1	6.7	2	13.3
AROUSAL										
	4	Moderately decreased	0	0.0	0	0.0	1	6.7	1	6.7
	5	Normal	8	53.3	11	73.3	9	60.0	8	53.3
	6	Moderately increased	7	46.7	4	26.7	5	33.3	6	40.0
GROOMING										
	0	None	14	93.3	14	93.3	11	73.3	14	93.3
	2	Slight	1	6.7	1	6.7	4	26.7	1	6.7
DEFECATION										
	MEAN		0.0		0.6		0.2		0.2	
	S.D.		0.0		1.2		0.8		0.8	
URINATION										
	0	None	14	93.3	8	53.3	12	80.0	13	86.7
	2	Slight	1	6.7	7	46.7	3	20.0	2	13.3

SIGNIFICANTLY DIFFERENT FROM CONTROL (GROUP 1) VALUE: NONE

PROJECT NO. 90831

FUNCTIONAL OBSERVATIONAL BATTERY
 QUALITATIVE ASSESSMENTS
 GROUP SUMMARY - WEEK 4
 FEMALES

TABLE NO. 10

NUMBER OF ANIMALS EXAMINED CATEGORY	SCORE	DESCRIPTION	GROUP 1 AIR CONTROL		GROUP 2 CERIC OXIDE LOW DOSE		GROUP 3 CERIC OXIDE INTERMEDIATE DOSE		GROUP 4 CERIC OXIDE HIGH DOSE	
			NO.	%	NO.	%	NO.	%	NO.	%
ARENA			14	93.3	15	100.0	15	100.0	15	100.0
OLFACTORY RESPONSE	0	Orients towards	1	6.7	0	0.0	0	0.0	0	0.0
	2	Does not orient towards								
HANDLING			15	100.0	15	100.0	15	100.0	15	100.0
LACRIMATION	0	None	1	6.7	1	6.7	0	0.0	0	0.0
	C	Chromodacryorrhea	1	6.7	1	6.7	0	0.0	0	0.0
	D	Deposit around eye(s)								
PUPIL SIZE	0	Pinhead (Normal)	15	100.0	15	100.0	15	100.0	15	100.0
SALIVATION	0	None	15	100.0	15	100.0	15	100.0	15	100.0
URINARY STAINING	0	None	15	100.0	15	100.0	15	100.0	15	100.0
DIARRHEA	0	None	15	100.0	15	100.0	15	100.0	15	100.0
BODY TONE	5	Normal	15	100.0	15	100.0	15	100.0	15	100.0

SIGNIFICANTLY DIFFERENT FROM CONTROL (GROUP 1) VALUE: NONE

PROJECT NO. 90831

FUNCTIONAL OBSERVATIONAL BATTERY
 QUALITATIVE ASSESSMENTS
 GROUP SUMMARY - WEEK 4
 FEMALES

TABLE NO. 10

NUMBER OF ANIMALS EXAMINED CATEGORY	SCORE	DESCRIPTION	GROUP 1 AIR CONTROL		GROUP 2 CERIC OXIDE LOW DOSE		GROUP 3 CERIC OXIDE INTERMEDIATE DOSE		GROUP 4 CERIC OXIDE HIGH DOSE	
			NO.	%	NO.	%	NO.	%	NO.	%
HANDLING	5	Normal	15	100.0	15	100.0	15	100.0	15	100.0
ABDOMINAL TONE	5	Normal	15	100.0	15	100.0	15	100.0	15	100.0
EXTENSOR THRUST	0	Normal	15	100.0	15	100.0	15	100.0	15	100.0
CORNEAL REFLEX	4	Active single or double blink	15	100.0	15	100.0	15	100.0	15	100.0
PINNA REFLEX	4	Moderate brisk flick	15	100.0	15	100.0	15	100.0	15	100.0
TOE PINCH	4	Moderate withdrawal	15	100.0	15	100.0	15	100.0	15	100.0
TAIL PINCH	4	Moderate movement	15	100.0	15	100.0	15	100.0	15	100.0
VISUAL PLACING	5	Normal	15	100.0	15	100.0	15	100.0	15	100.0

SIGNIFICANTLY DIFFERENT FROM CONTROL (GROUP 1) VALUE: NONE

TABLE NO. 10
 FUNCTIONAL OBSERVATIONAL BATTERY
 QUALITATIVE ASSESSMENTS
 GROUP SUMMARY - WEEK 4
 FEMALES
 PROJECT NO. 90831

NUMBER OF ANIMALS EXAMINED CATEGORY	SCORE	DESCRIPTION	GROUP 1 AIR CONTROL		GROUP 2 CERIC OXIDE LOW DOSE		GROUP 3 CERIC OXIDE INTERMEDIATE DOSE		GROUP 4 CERIC OXIDE HIGH DOSE	
			NO.	%	NO.	%	NO.	%	NO.	%
ON TOP OF BOX	0	Normal	15	100.0	15	100.0	15	100.0	15	100.0
ON SURFACE	4	Normal	15	100.0	15	100.0	15	100.0	15	100.0
AURICULAR STARTLE	0	Normal	15	100.0	15	100.0	15	100.0	15	100.0
AIR RIGHTING REFLEX	0	Normal	15	100.0	15	100.0	15	100.0	15	100.0

SIGNIFICANTLY DIFFERENT FROM CONTROL (GROUP 1) VALUE: NONE

PROJECT NO. 90831

FUNCTIONAL OBSERVATIONAL BATTERY
 QUALITATIVE ASSESSMENTS
 GROUP SUMMARY - WEEK 8
 MALES

TABLE NO. 10

NUMBER OF ANIMALS EXAMINED CATEGORY	SCORE	DESCRIPTION	GROUP 1 AIR CONTROL		GROUP 2 CERIC OXIDE LOW DOSE		GROUP 3 CERIC OXIDE INTERMEDIATE DOSE		GROUP 4 CERIC OXIDE HIGH DOSE	
			NO.	%	NO.	%	NO.	%	NO.	%
HOME CAGE										
BODY POSITION										
	4	Lying on side or curled up	0	0.0	2	13.3	2	13.3	2	13.3
	5	Sitting/standing	15	100.0	13	86.7	13	86.7	13	86.7
	6	Rearing	2	13.3	2	13.3	2	13.3	3	20.0
TREMORS	0	None	15	100.0	15	100.0	15	100.0	15	100.0
TWITCHES	0	None	15	100.0	15	100.0	15	100.0	15	100.0
CONVULSIONS	0	None	15	100.0	15	100.0	15	100.0	15	100.0
BIZARRE/STEREOTYPIC BEHAVIOR	0	None	15	100.0	15	100.0	15	100.0	15	100.0

SIGNIFICANTLY DIFFERENT FROM CONTROL (GROUP 1) VALUE: NONE

TABLE NO. 10
 FUNCTIONAL OBSERVATIONAL BATTERY
 QUALITATIVE ASSESSMENTS
 GROUP SUMMARY - WEEK 8
 MALES
 PROJECT NO. 90831

NUMBER OF ANIMALS EXAMINED CATEGORY	SCORE	DESCRIPTION	GROUP 1 AIR CONTROL		GROUP 2 CERIC OXIDE LOW DOSE		GROUP 3 CERIC OXIDE INTERMEDIATE DOSE		GROUP 4 CERIC OXIDE HIGH DOSE	
			NO.	%	NO.	%	NO.	%	NO.	%
REMOVAL FROM HOME CAGE	0	Very easy	10	66.7	14	93.3	14	93.3	13	86.7
EASE OF REMOVAL	2	Easy	4	26.7	1	6.7	1	6.7	2	13.3
	6	Difficult	1	6.7	0	0.0	0	0.0	0	0.0
VOCALIZATION	MEAN		0.6		0.1		0.3		0.0	
	S.D.		1.2		0.4		1.0		0.0	
ARENA REARING	MEAN		3.5		4.5		4.7		4.3	
	S.D.		2.8		3.1		3.6		3.6	
ATAXIC GAIT	0	None	15	100.0	15	100.0	15	100.0	15	100.0
HYPOTONIC GAIT	0	None	15	100.0	15	100.0	15	100.0	15	100.0
IMPAIRED GAIT	0	None	15	100.0	15	100.0	15	100.0	15	100.0

SIGNIFICANTLY DIFFERENT FROM CONTROL (GROUP 1) VALUE: NONE

PROJECT NO. 90831

FUNCTIONAL OBSERVATIONAL BATTERY
QUALITATIVE ASSESSMENTS
GROUP SUMMARY - WEEK 8
MALES

TABLE NO. 10

NUMBER OF ANIMALS EXAMINED CATEGORY	SCORE	DESCRIPTION	GROUP 1 AIR CONTROL		GROUP 2 CERIC OXIDE LOW DOSE		GROUP 3 CERIC OXIDE INTERMEDIATE DOSE		GROUP 4 CERIC OXIDE HIGH DOSE	
			NO.	%	NO.	%	NO.	%	NO.	%
ARENA										
OVERALL GAIT INCAPACITY	0	None	15	100.0	15	100.0	15	100.0	15	100.0
BIZARRE/STEREOTYPIC BEHAVIOR	0	None	15	100.0	15	100.0	15	100.0	15	100.0
PALPEBRAL CLOSURE	0	Eyes wide open	15	100.0	15	100.0	15	100.0	14	93.3
	4	1/2 closed	0	0.0	0	0.0	0	0.0	1	6.7
TREMORS	0	None	15	100.0	15	100.0	15	100.0	15	100.0
TWITCHES	0	None	15	100.0	15	100.0	15	100.0	15	100.0
CONVULSIONS	0	None	15	100.0	15	100.0	15	100.0	15	100.0
PILORECTION	0	None	15	100.0	15	100.0	15	100.0	15	100.0

SIGNIFICANTLY DIFFERENT FROM CONTROL (GROUP 1) VALUE: NONE

TABLE NO. 10

FUNCTIONAL OBSERVATIONAL BATTERY
 QUALITATIVE ASSESSMENTS
 GROUP SUMMARY - WEEK 8
 MALES

PROJECT NO. 90831

NUMBER OF ANIMALS EXAMINED CATEGORY	SCORE	DESCRIPTION	GROUP 1 AIR CONTROL		GROUP 2 CERIC OXIDE LOW DOSE		GROUP 3 CERIC OXIDE INTERMEDIATE DOSE		GROUP 4 CERIC OXIDE HIGH DOSE	
			NO.	%	NO.	%	NO.	%	NO.	%
ARENA			15	100.0	15	100.0	15	100.0	15	100.0
RESPIRATORY RATE/PATTERN	5	Normal								
LOCOMOTOR ACTIVITY LEVEL	2	Slight movement	6	40.0	4	26.7	3	20.0	6	40.0
	4	Moderate movement	9	60.0	11	73.3	11	73.3	9	60.0
	6	Vigorous movement	0	0.0	0	0.0	1	6.7	0	0.0
AROUSAL			2	13.3	1	6.7	1	6.7	1	6.7
	4	Moderately decreased	13	86.7	14	93.3	11	73.3	12	80.0
	5	Normal	0	0.0	0	0.0	3	20.0	2	13.3
	6	Moderately increased	12	80.0	13	86.7	15	100.0	13	86.7
GROOMING	0	None	3	20.0	2	13.3	0	0.0	2	13.3
	2	Slight								
DEFECATION			1.0		0.5		0.9		0.3	
		MEAN	1.6		1.4		1.8		1.0	
		S.D.								

SIGNIFICANTLY DIFFERENT FROM CONTROL (GROUP 1) VALUE: NONE.

PROJECT NO. 90831

FUNCTIONAL OBSERVATIONAL BATTERY
 QUALITATIVE ASSESSMENTS
 GROUP SUMMARY - WEEK 8
 MALES

TABLE NO. 10

NUMBER OF ANIMALS EXAMINED CATEGORY	SCORE	DESCRIPTION	GROUP 1 AIR CONTROL		GROUP 2 CERIC OXIDE LOW DOSE		GROUP 3 CERIC OXIDE INTERMEDIATE DOSE		GROUP 4 CERIC OXIDE HIGH DOSE	
			NO.	%	NO.	%	NO.	%	NO.	%
ARENA	0	None	11	73.3	13	86.7	13	86.7	12	80.0
URINATION	2	Slight	4	26.7	2	13.3	2	13.3	3	20.0
OLFACTORY RESPONSE	0	Orients towards	15	100.0	15	100.0	15	100.0	15	100.0
HANDLING	0	None	15	100.0	15	100.0	15	100.0	15	100.0
LACRIMATION	0	None	15	100.0	15	100.0	15	100.0	15	100.0
PUPIL SIZE	0	Pinhead (Normal)	15	100.0	15	100.0	15	100.0	15	100.0
SALIVATION	0	None	15	100.0	15	100.0	15	100.0	15	100.0
URINARY STAINING	0	None	15	100.0	15	100.0	15	100.0	15	100.0
DIARRHEA	0	None	15	100.0	15	100.0	15	100.0	15	100.0

SIGNIFICANTLY DIFFERENT FROM CONTROL (GROUP 1) VALUE: NONE

FUNCTIONAL OBSERVATIONAL BATTERY
 QUALITATIVE ASSESSMENTS
 GROUP SUMMARY - WEEK 8
 MALES

TABLE NO. 10

NUMBER OF ANIMALS EXAMINED CATEGORY	SCORE	DESCRIPTION	GROUP 1 AIR CONTROL		GROUP 2 CERIC OXIDE LOW DOSE		GROUP 3 CERIC OXIDE INTERMEDIATE DOSE		GROUP 4 CERIC OXIDE HIGH DOSE	
			NO.	%	NO.	%	NO.	%	NO.	%
			15	100.0	15	100.0	15	100.0	15	100.0
HANDLING BODY TONE	5	Normal	15	100.0	15	100.0	14	93.3	15	100.0
	8	Resilient	0	0.0	0	0.0	1	6.7	0	0.0
ABDOMINAL TONE	5	Normal	15	100.0	15	100.0	14	93.3	15	100.0
	8	Resilient	0	0.0	0	0.0	1	6.7	0	0.0
EXTENSOR THRUST	0	Normal	15	100.0	15	100.0	15	100.0	15	100.0
CORNEAL REFLEX	4	Active single or double blink	15	100.0	15	100.0	15	100.0	15	100.0
PINNA REFLEX	4	Moderate brisk flick	15	100.0	15	100.0	15	100.0	15	100.0
TOE PINCH	4	Moderate withdrawal	15	100.0	15	100.0	15	100.0	15	100.0
TAIL PINCH	4	Moderate movement	15	100.0	15	100.0	15	100.0	15	100.0

SIGNIFICANTLY DIFFERENT FROM CONTROL (GROUP 1) VALUE: NONE

10

PROJECT NO. 90831

FUNCTIONAL OBSERVATIONAL BATTERY
 QUALITATIVE ASSESSMENTS
 GROUP SUMMARY - WEEK 8
 MALES

TABLE NO. 10

NUMBER OF ANIMALS EXAMINED CATEGORY	SCORE	DESCRIPTION	GROUP 1 AIR CONTROL		GROUP 2 CERIC OXIDE LOW DOSE		GROUP 3 CERIC OXIDE INTERMEDIATE DOSE		GROUP 4 CERIC OXIDE HIGH DOSE	
			NO.	%	NO.	%	NO.	%	NO.	%
HANDLING VISUAL PLACING	5	Normal	15	100.0	15	100.0	15	100.0	15	100.0
ON TOP OF BOX POSITIONAL PASSIVITY	0	Normal	15	100.0	15	100.0	15	100.0	15	100.0
ON SURFACE AURICULAR STARTLE	4	Normal	15	100.0	15	100.0	15	100.0	15	100.0
AIR RIGHTING REFLEX	0	Normal	15	100.0	15	100.0	15	100.0	15	100.0

SIGNIFICANTLY DIFFERENT FROM CONTROL (GROUP 1) VALUE: NONE

TABLE NO. 10
 FUNCTIONAL OBSERVATIONAL BATTERY
 QUALITATIVE ASSESSMENTS
 GROUP SUMMARY - WEEK 8
 FEMALES
 PROJECT NO. 90831

NUMBER OF ANIMALS EXAMINED CATEGORY	SCORE	DESCRIPTION	GROUP 1 AIR CONTROL		GROUP 2 CERIC OXIDE LOW DOSE		GROUP 3 CERIC OXIDE INTERMEDIATE DOSE		GROUP 4 CERIC OXIDE HIGH DOSE	
			NO.	%	NO.	%	NO.	%	NO.	%
HOME CAGE										
BODY POSITION	4	Lying on side or curled up	3	20.0	2	13.3	0	0.0	1	6.7
	5	Sitting/standing	12	80.0	12	80.0	15	100.0	14	93.3
	6	Rearing	8	53.3	6	40.0	7	46.7	8	53.3
TREMORS	0	None	15	100.0	15	100.0	15	100.0	15	100.0
TWITCHES	0	None	15	100.0	15	100.0	15	100.0	15	100.0
CONVULSIONS	0	None	15	100.0	15	100.0	15	100.0	15	100.0
BIZARRE/STEREOTYPIC BEHAVIOR	0	None	15	100.0	15	100.0	15	100.0	15	100.0

SIGNIFICANTLY DIFFERENT FROM CONTROL (GROUP 1) VALUE: NONE

TABLE NO. 10
 FUNCTIONAL OBSERVATIONAL BATTERY
 QUALITATIVE ASSESSMENTS
 GROUP SUMMARY - WEEK 8
 FEMALES
 PROJECT NO. 90831

NUMBER OF ANIMALS EXAMINED CATEGORY	SCORE	DESCRIPTION	GROUP 1 AIR CONTROL		GROUP 2 CERIC OXIDE LOW DOSE		GROUP 3 CERIC OXIDE INTERMEDIATE DOSE		GROUP 4 CERIC OXIDE HIGH DOSE	
			NO.	%	NO.	%	NO.	%	NO.	%
REMOVAL FROM HOME CAGE	0	Very easy	15	100.0	15	100.0	15	100.0	15	100.0
EASE OF REMOVAL			0.0		0.1		0.0		0.1	
VOCALIZATION	MEAN S.D.		0.0 0.0		0.3 0.3		0.0 0.0		0.4 0.4	
ARENA REARING	MEAN S.D.		10.7 5.9		10.3 5.7		9.4 4.6		13.2 4.3	
ATAxic GAIT	0	None	15	100.0	15	100.0	15	100.0	15	100.0
HYPOTONIC GAIT	0	None	15	100.0	15	100.0	15	100.0	15	100.0
IMPAIRED GAIT	0	None	15	100.0	15	100.0	15	100.0	15	100.0

SIGNIFICANTLY DIFFERENT FROM CONTROL (GROUP 1) VALUE: NONE

PROJECT NO. 90831

FUNCTIONAL OBSERVATIONAL BATTERY
 QUALITATIVE ASSESSMENTS
 GROUP SUMMARY - WEEK 8
 FEMALES

TABLE NO. 10

NUMBER OF ANIMALS EXAMINED CATEGORY	SCORE	DESCRIPTION	GROUP 1 AIR CONTROL		GROUP 2 CERIC OXIDE LOW DOSE		GROUP 3 CERIC OXIDE INTERMEDIATE DOSE		GROUP 4 CERIC OXIDE HIGH DOSE	
			NO.	%	NO.	%	NO.	%	NO.	%
ARENA			15	100.0	15	100.0	15	100.0	15	100.0
OVERALL GAIT INCAPACITY	0	None	15	100.0	15	100.0	15	100.0	15	100.0
BIZARRE/STEREOTYPIC BEHAVIOR	0	None	15	100.0	15	100.0	15	100.0	15	100.0
PALPEBRAL CLOSURE	0	Eyes wide open	15	100.0	15	100.0	15	100.0	15	100.0
TREMORS	0	None	15	100.0	15	100.0	15	100.0	15	100.0
TWITCHES	0	None	15	100.0	15	100.0	15	100.0	15	100.0
CONVULSIONS	0	None	15	100.0	15	100.0	15	100.0	15	100.0
PILOREACTION	0	None	15	100.0	15	100.0	15	100.0	15	100.0
RESPIRATORY RATE/PATTERN	5	Normal	15	100.0	15	100.0	15	100.0	15	100.0

SIGNIFICANTLY DIFFERENT FROM CONTROL (GROUP 1) VALUE: NONE

PROJECT NO. 90831

FUNCTIONAL OBSERVATIONAL BATTERY
 QUALITATIVE ASSESSMENTS
 GROUP SUMMARY - WEEK 8
 FEMALES

TABLE NO. 10

CATEGORY	NUMBER OF ANIMALS EXAMINED	SCORE	DESCRIPTION	GROUP 1 AIR CONTROL		GROUP 2 CERIC OXIDE LOW DOSE		GROUP 3 CERIC OXIDE INTERMEDIATE DOSE		GROUP 4 CERIC OXIDE HIGH DOSE	
				NO.	%	NO.	%	NO.	%	NO.	%
ARENA											
LOCOMOTOR ACTIVITY LEVEL	2		Slight movement	0	0.0	1	6.7	1	6.7	0	0.0
	4		Moderate movement	12	80.0	13	86.7	13	86.7	13	86.7
	6		Vigorous movement	3	20.0	1	6.7	1	6.7	2	13.3
AROUSAL	4		Moderately decreased	0	0.0	1	6.7	1	6.7	0	0.0
	5		Normal	9	60.0	8	53.3	9	60.0	9	60.0
	6		Moderately increased	6	40.0	6	40.0	5	33.3	6	40.0
GROOMING	0		None	12	80.0	13	86.7	11	73.3	14	93.3
	2		Slight	3	20.0	2	13.3	4	26.7	1	6.7
DEFECATION	MEAN			0.0		0.3		0.1		0.1	
	S.D.			0.0		1.0		0.3		0.3	
URINATION	0		None	13	86.7	11	73.3	13	86.7	14	93.3
	2		Slight	2	13.3	4	26.7	2	13.3	1	6.7

SIGNIFICANTLY DIFFERENT FROM CONTROL (GROUP 1) VALUE: NONE

PROJECT NO. 90831

FUNCTIONAL OBSERVATIONAL BATTERY
 QUALITATIVE ASSESSMENTS
 GROUP SUMMARY - WEEK 8
 FEMALES

TABLE NO. 10

NUMBER OF ANIMALS EXAMINED CATEGORY	SCORE	DESCRIPTION	GROUP 1 AIR CONTROL		GROUP 2 CERIC OXIDE LOW DOSE		GROUP 3 CERIC OXIDE INTERMEDIATE DOSE		GROUP 4 CERIC OXIDE HIGH DOSE	
			NO.	%	NO.	%	NO.	%	NO.	%
ARENA	0	Orients towards	15	100.0	15	100.0	15	100.0	15	100.0
OLFACTORY RESPONSE	0		15	100.0	15	100.0	15	100.0	15	100.0
HANDLING LACRIMATION	0	None	15	100.0	15	100.0	15	100.0	15	100.0
PUPIL SIZE	0	Pinhead (Normal)	15	100.0	15	100.0	15	100.0	15	100.0
SALIVATION	0	None	15	100.0	15	100.0	15	100.0	15	100.0
URINARY STAINING	0	None	15	100.0	15	100.0	15	100.0	15	100.0
DIARRHEA	0	None	15	100.0	15	100.0	15	100.0	15	100.0
BODY TONE	5	Normal	15	100.0	15	100.0	15	100.0	15	100.0

SIGNIFICANTLY DIFFERENT FROM CONTROL (GROUP 1) VALUE: NONE

PROJECT NO. 90831

FUNCTIONAL OBSERVATIONAL BATTERY
 QUALITATIVE ASSESSMENTS
 GROUP SUMMARY - WEEK 8
 FEMALES

TABLE NO. 10

NUMBER OF ANIMALS EXAMINED CATEGORY	SCORE	DESCRIPTION	GROUP 1 AIR CONTROL		GROUP 2 CERIC OXIDE LOW DOSE		GROUP 3 CERIC OXIDE INTERMEDIATE DOSE		GROUP 4 CERIC OXIDE HIGH DOSE	
			NO.	%	NO.	%	NO.	%	NO.	%
HANDLING ABDOMINAL TONE	5	Normal	15	100.0	15	100.0	15	100.0	15	100.0
EXTENSOR THRUST	0	Normal	15	100.0	15	100.0	15	100.0	15	100.0
CORNEAL REFLEX	4	Active single or double blink	15	100.0	15	100.0	15	100.0	15	100.0
PINNA REFLEX	4	Moderate brisk flick	15	100.0	15	100.0	15	100.0	15	100.0
TOE PINCH	4	Moderate withdrawal	15	100.0	15	100.0	15	100.0	15	100.0
TAIL PINCH	4	Moderate movement	15	100.0	15	100.0	15	100.0	15	100.0
VISUAL PLACING	5	Normal	15	100.0	15	100.0	15	100.0	15	100.0

SIGNIFICANTLY DIFFERENT FROM CONTROL (GROUP 1) VALUE: NONE

PROJECT NO. 90831

FUNCTIONAL OBSERVATIONAL BATTERY
 QUALITATIVE ASSESSMENTS
 GROUP SUMMARY - WEEK 8
 FEMALES

TABLE NO. 10

NUMBER OF ANIMALS EXAMINED CATEGORY	SCORE	DESCRIPTION	GROUP 1 AIR CONTROL		GROUP 2 CERIC OXIDE LOW DOSE		GROUP 3 CERIC OXIDE INTERMEDIATE DOSE		GROUP 4 CERIC OXIDE HIGH DOSE	
			NO.	%	NO.	%	NO.	%	NO.	%
ON TOP OF BOX	0	Normal	15	100.0	15	100.0	15	100.0	15	100.0
POSITIONAL PASSIVITY	0	Normal	15	100.0	15	100.0	15	100.0	15	100.0
ON SURFACE	4	Normal	15	100.0	15	100.0	15	100.0	15	100.0
AURICULAR STARTLE	0	Normal	15	100.0	15	100.0	15	100.0	15	100.0
AIR RIGHTING REFLEX	0	Normal	15	100.0	15	100.0	15	100.0	15	100.0

SIGNIFICANTLY DIFFERENT FROM CONTROL (GROUP 1) VALUE: NONE

PROJECT NO. 90831

FUNCTIONAL OBSERVATIONAL BATTERY
 QUALITATIVE ASSESSMENTS
 GROUP SUMMARY - WEEK 13
 MALES

TABLE NO. 10

NUMBER OF ANIMALS EXAMINED CATEGORY	SCORE	DESCRIPTION	GROUP 1 AIR CONTROL		GROUP 2 CERIC OXIDE LOW DOSE		GROUP 3 CERIC OXIDE INTERMEDIATE DOSE		GROUP 4 CERIC OXIDE HIGH DOSE	
			NO.	%	NO.	%	NO.	%	NO.	%
HOME CAGE BODY POSITION	4	Lying on side or curled up	3	20.0	2	13.3	3	20.0	2	14.3
	5	Sitting/standing	12	80.0	13	86.7	12	80.0	12	85.7
	6	Rearing	0	0.0	4	26.7	4	26.7	1	7.1
TREMORS	0	None	15	100.0	15	100.0	15	100.0	14	100.0
TWITCHES	0	None	15	100.0	15	100.0	15	100.0	14	100.0
CONVULSIONS	0	None	15	100.0	15	100.0	15	100.0	14	100.0
BIZARRE/STEREOTYPIC BEHAVIOR	0	None	15	100.0	15	100.0	15	100.0	14	100.0

SIGNIFICANTLY DIFFERENT FROM CONTROL (GROUP 1) VALUE: NONE

PROJECT NO. 90831

FUNCTIONAL OBSERVATIONAL BATTERY
 QUALITATIVE ASSESSMENTS
 GROUP SUMMARY - WEEK 13
 MALES

TABLE NO. 10

NUMBER OF ANIMALS EXAMINED CATEGORY	SCORE	DESCRIPTION	GROUP 1 AIR CONTROL		GROUP 2 CERIC OXIDE LOW DOSE		GROUP 3 CERIC OXIDE INTERMEDIATE DOSE		GROUP 4 CERIC OXIDE HIGH DOSE	
			NO.	%	NO.	%	NO.	%	NO.	%
REMOVAL FROM HOME CAGE	0	Very easy	13	86.7	13	86.7	13	86.7	13	92.9
EASE OF REMOVAL	2	Easy	2	13.3	2	13.3	2	13.3	1	7.1
VOCALIZATION	MEAN S.D.		0.6 1.4		0.0 a 0.0		0.3 1.3		0.0 a 0.0	
ARENA REARING	MEAN S.D.		1.7 1.8		2.5 3.8		3.4 4.0		2.7 3.5	
ATAXIC GAIT	0	None	15	100.0	15	100.0	15	100.0	14	100.0
HYPOTONIC GAIT	0	None	15	100.0	15	100.0	15	100.0	14	100.0
IMPAIRED GAIT	0	None	15	100.0	15	100.0	15	100.0	14	100.0

SIGNIFICANTLY DIFFERENT FROM CONTROL (GROUP 1) VALUE: a P < 0.05 (WILCOXON'S)

PROJECT NO. 90831

FUNCTIONAL OBSERVATIONAL BATTERY
 QUALITATIVE ASSESSMENTS
 GROUP SUMMARY - WEEK 13
 MALES

TABLE NO. 10

NUMBER OF ANIMALS EXAMINED CATEGORY	SCORE	DESCRIPTION	GROUP 1 AIR CONTROL		GROUP 2 CERIC OXIDE LOW DOSE		GROUP 3 CERIC OXIDE INTERMEDIATE DOSE		GROUP 4 CERIC OXIDE HIGH DOSE	
			NO.	%	NO.	%	NO.	%	NO.	%
ARENA			15	100.0	15	100.0	15	100.0	15	100.0
OVERALL GAIT INCAPACITY	0	None	15	100.0	15	100.0	15	100.0	15	100.0
BIZARRE/STEREOTYPIC BEHAVIOR	0	None	15	100.0	15	100.0	15	100.0	15	100.0
PALPEBRAL CLOSURE	0	Eyes wide open	15	100.0	15	100.0	15	100.0	15	100.0
TREMORS	0	None	15	100.0	15	100.0	15	100.0	15	100.0
TWITCHES	0	None	15	100.0	15	100.0	15	100.0	15	100.0
CONVULSIONS	0	None	15	100.0	15	100.0	15	100.0	15	100.0
PILORECTION	0	None	15	100.0	15	100.0	15	100.0	15	100.0
RESPIRATORY RATE/PATTERN	5	Normal	15	100.0	15	100.0	15	100.0	15	100.0

SIGNIFICANTLY DIFFERENT FROM CONTROL (GROUP 1) VALUE: NONE

PROJECT NO. 90831

FUNCTIONAL OBSERVATIONAL BATTERY
 QUALITATIVE ASSESSMENTS
 GROUP SUMMARY - WEEK 13
 MALES

TABLE NO. 10

NUMBER OF ANIMALS EXAMINED CATEGORY	SCORE	DESCRIPTION	GROUP 1 ATR CONTROL		GROUP 2 CERIC OXIDE LOW DOSE		GROUP 3 CERIC OXIDE INTERMEDIATE DOSE		GROUP 4 CERIC OXIDE HIGH DOSE	
			NO.	%	NO.	%	NO.	%	NO.	%
ARENA			1	6.7	0	0.0	0	0.0	0	0.0
LOCOMOTOR ACTIVITY LEVEL	0	None, resting	6	40.0	6	40.0	6	40.0	8	57.1
	2	Slight movement	8	53.3	8	53.3	8	53.3	6	42.9
	4	Moderate movement	0	0.0	1	6.7	1	6.7	0	0.0
	6	Vigorous movement	1	6.7	3	20.0	2	13.3	1	7.1
AROUSAL	4	Moderately decreased	14	93.3	11	73.3	11	73.3	12	85.7
	5	Normal	0	0.0	1	6.7	2	13.3	1	7.1
	6	Moderately increased	15	100.0	13	86.7	15	100.0	13	92.9
GROOMING	0	None	0	0.0	2	13.3	0	0.0	1	7.1
	2	Slight								
DEFECATION	MEAN		1.1		0.9		1.3		0.4	
	S.D.		1.5		1.3		1.7		0.9	

SIGNIFICANTLY DIFFERENT FROM CONTROL (GROUP 1) VALUE: NONE

PROJECT NO. 90831

FUNCTIONAL OBSERVATIONAL BATTERY
 QUALITATIVE ASSESSMENTS
 GROUP SUMMARY - WEEK 13
 MALES

TABLE NO. 10

CATEGORY	NUMBER OF ANIMALS EXAMINED	SCORE	DESCRIPTION	GROUP 1 AIR CONTROL		GROUP 2 CERIC OXIDE LOW DOSE		GROUP 3 CERIC OXIDE INTERMEDIATE DOSE		GROUP 4 CERIC OXIDE HIGH DOSE	
				NO.	%	NO.	%	NO.	%	NO.	%
ARENA URINATION	0		None	13	86.7	13	86.7	12	80.0	11	78.6
	2		Slight	2	13.3	2	13.3	3	20.0	3	21.4
OLFACTORY RESPONSE	0		Orients towards	15	100.0	15	100.0	15	100.0	14	100.0
HANDLING LACRIMATION	0		None	15	100.0	15	100.0	15	100.0	14	100.0
	0		Pinhead (Normal)	15	100.0	15	100.0	15	100.0	14	100.0
SALIVATION	0		None	15	100.0	15	100.0	15	100.0	14	100.0
URINARY STAINING	0		None	15	100.0	15	100.0	15	100.0	14	100.0
DIARRHEA	0		None	15	100.0	15	100.0	15	100.0	14	100.0

SIGNIFICANTLY DIFFERENT FROM CONTROL (GROUP 1) VALUE: NONE

PROJECT NO. 90831
 FUNCTIONAL OBSERVATIONAL BATTERY
 QUALITATIVE ASSESSMENTS
 GROUP SUMMARY - WEEK 13
 MALES

TABLE NO. 10

NUMBER OF ANIMALS EXAMINED CATEGORY	SCORE	DESCRIPTION	GROUP 1 AIR CONTROL		GROUP 2 CERIC OXIDE LOW DOSE		GROUP 3 CERIC OXIDE INTERMEDIATE DOSE		GROUP 4 CERIC OXIDE HIGH DOSE	
			NO.	%	NO.	%	NO.	%	NO.	%
HANDLING	5	Normal	15	100.0	15	100.0	15	100.0	14	100.0
BODY TONE	5	Normal	15	100.0	15	100.0	15	100.0	14	100.0
ABDOMINAL TONE	0	Normal	15	100.0	15	100.0	15	100.0	14	100.0
EXTENSOR THRUST	4	Active single or double blink	15	100.0	15	100.0	15	100.0	14	100.0
CORNEAL REFLEX	4	Moderate brisk flick	15	100.0	15	100.0	15	100.0	14	100.0
PINNA REFLEX	4	Moderate withdrawal	15	100.0	15	100.0	15	100.0	14	100.0
TOE PINCH	4	Moderate movement	15	100.0	15	100.0	15	100.0	14	100.0
TAIL PINCH	5	Normal	15	100.0	15	100.0	15	100.0	14	100.0
VISUAL PLACING										

SIGNIFICANTLY DIFFERENT FROM CONTROL (GROUP 1) VALUE: NONE

PROJECT NO. 90831

FUNCTIONAL OBSERVATIONAL BATTERY
 QUALITATIVE ASSESSMENTS
 GROUP SUMMARY - WEEK 13
 MALES

TABLE NO. 10

NUMBER OF ANIMALS EXAMINED CATEGORY	SCORE	DESCRIPTION	GROUP 1 AIR CONTROL		GROUP 2 CERIC OXIDE LOW DOSE		GROUP 3 CERIC OXIDE INTERMEDIATE DOSE		GROUP 4 CERIC OXIDE HIGH DOSE	
			NO.	%	NO.	%	NO.	%	NO.	%
ON TOP OF BOX POSITIONAL PASSIVITY	0	Normal	15	100.0	15	100.0	15	100.0	14	100.0
ON SURFACE AURICULAR STARTLE	4	Normal	15	100.0	15	100.0	15	100.0	14	100.0
AIR RIGHTING REFLEX	0	Normal	15	100.0	15	100.0	15	100.0	14	100.0

SIGNIFICANTLY DIFFERENT FROM CONTROL (GROUP 1) VALUE: NONE



PROJECT NO. 90831

FUNCTIONAL OBSERVATIONAL BATTERY
 QUALITATIVE ASSESSMENTS
 GROUP SUMMARY - WEEK 13
 FEMALES

TABLE NO. 10

NUMBER OF ANIMALS EXAMINED CATEGORY	SCORE	DESCRIPTION	GROUP 1 AIR CONTROL		GROUP 2 CERIC OXIDE LOW DOSE		GROUP 3 CERIC OXIDE INTERMEDIATE DOSE		GROUP 4 CERIC OXIDE HIGH DOSE	
			NO.	%	NO.	%	NO.	%	NO.	%
HOME CAGE										
BODY POSITION	4	Lying on side or curled up	2	13.3	4	26.7	1	6.7	0	0.0
	5	Sitting/standing	13	86.7	11	73.3	14	93.3	15	100.0
	6	Rearing	11	73.3	8	53.3	7	46.7	12	80.0
TREMORS	0	None	15	100.0	15	100.0	15	100.0	15	100.0
TWITCHES	0	None	15	100.0	15	100.0	15	100.0	15	100.0
CONVULSIONS	0	None	15	100.0	15	100.0	15	100.0	15	100.0
BIZARRE/STEREOTYPIC BEHAVIOR	0	None	15	100.0	15	100.0	15	100.0	15	100.0

SIGNIFICANTLY DIFFERENT FROM CONTROL (GROUP 1) VALUE: NONE

PROJECT NO. 90831

FUNCTIONAL OBSERVATIONAL BATTERY
 QUALITATIVE ASSESSMENTS
 GROUP SUMMARY - WEEK 13
 FEMALES

TABLE NO. 10

NUMBER OF ANIMALS EXAMINED CATEGORY	SCORE	DESCRIPTION	GROUP 1 AIR CONTROL		GROUP 2 CERIC OXIDE LOW DOSE		GROUP 3 CERIC OXIDE INTERMEDIATE DOSE		GROUP 4 CERIC OXIDE HIGH DOSE	
			NO.	%	NO.	%	NO.	%	NO.	%
			15	100.0	15	100.0	15	100.0	15	100.0
REMOVAL FROM HOME CAGE	0	Very easy	15	100.0	15	100.0	14	93.3	15	100.0
EASE OF REMOVAL	2		0	0.0	0	0.0	1	6.7	0	0.0
VOCALIZATION	MEAN S.D.		0.0 0.0		0.2 0.4		0.1 0.3		0.0 0.0	
ARENA REARING	MEAN S.D.		9.2 5.9		9.3 5.3		8.2 5.5		10.3 3.9	
ATAXIC GAIT	0	None	15	100.0	15	100.0	15	100.0	15	100.0
HYPOTONIC GAIT	0	None	15	100.0	15	100.0	15	100.0	15	100.0
IMPAIRED GAIT	0	None	15	100.0	15	100.0	15	100.0	15	100.0
OVERALL GAIT INCAPACITY	0	None	15	100.0	15	100.0	15	100.0	15	100.0

SIGNIFICANTLY DIFFERENT FROM CONTROL (GROUP 1) VALUE: NONE

PROJECT NO. 90831

FUNCTIONAL OBSERVATIONAL BATTERY
 QUALITATIVE ASSESSMENTS
 GROUP SUMMARY - WEEK 13
 FEMALES

TABLE NO. 10

NUMBER OF ANIMALS EXAMINED CATEGORY	SCORE	DESCRIPTION	GROUP 1 AIR CONTROL		GROUP 2 CERIC OXIDE LOW DOSE		GROUP 3 CERIC OXIDE INTERMEDIATE DOSE		GROUP 4 CERIC OXIDE HIGH DOSE	
			NO.	%	NO.	%	NO.	%	NO.	%
APRINA	0	None	15	100.0	15	100.0	15	100.0	15	100.0
BIZARRE/STEREOTYPIC BEHAVIOR	0	Eyes wide open	15	100.0	15	100.0	15	100.0	15	100.0
PALPEBRAL CLOSURE	0	None	15	100.0	15	100.0	15	100.0	15	100.0
TREMORS	0	None	15	100.0	15	100.0	15	100.0	15	100.0
TWITCHES	0	None	15	100.0	15	100.0	15	100.0	15	100.0
CONVULSIONS	0	None	15	100.0	15	100.0	15	100.0	15	100.0
PILORECTION	0	None	15	100.0	15	100.0	15	100.0	15	100.0
RESPIRATORY RATE/PATTERN	5	Normal	15	100.0	15	100.0	15	100.0	15	100.0

SIGNIFICANTLY DIFFERENT FROM CONTROL (GROUP 1) VALUE: NONE

FUNCTIONAL OBSERVATIONAL BATTERY
 QUALITATIVE ASSESSMENTS
 GROUP SUMMARY - WEEK 13
 FEMALES

TABLE NO. 10

NUMBER OF ANIMALS EXAMINED	CATEGORY	SCORE	DESCRIPTION	GROUP 1 AIR CONTROL		GROUP 2 CERIC OXIDE LOW DOSE		GROUP 3 CERIC OXIDE INTERMEDIATE DOSE		GROUP 4 CERIC OXIDE HIGH DOSE	
				NO.	%	NO.	%	NO.	%	NO.	%
2	ARENA		Slight movement	2	13.3	0	0.0	2	13.3	0	0.0
4	LOCOMOTOR ACTIVITY LEVEL		Moderate movement	12	80.0	14	93.3	12	80.0	12	80.0
6			Vigorous movement	1	6.7	1	6.7	1	6.7	3	20.0
4	AROUSAL		Moderately decreased	0	0.0	0	0.0	1	6.7	0	0.0
5			Normal	9	60.0	12	80.0	9	60.0	10	66.7
6			Moderately increased	6	40.0	3	20.0	5	33.3	5	33.3
0	GROOMING		None	13	86.7	13	86.7	14	93.3	13	86.7
2			Slight	2	13.3	2	13.3	1	6.7	2	13.3
	DEFECATION	MEAN		0.0		0.1		0.0		0.0	
		S.D.		0.0		0.5		0.0		0.0	
0	URINATION		None	10	66.7	5	33.3	10	66.7	9	60.0
2			Slight	5	33.3	10	66.7	5	33.3	6	40.0

SIGNIFICANTLY DIFFERENT FROM CONTROL (GROUP 1) VALUE: NONE

PROJECT NO. 90831

FUNCTIONAL OBSERVATIONAL BATTERY
 QUALITATIVE ASSESSMENTS
 GROUP SUMMARY - WEEK 13
 FEMALES

TABLE NO. 10

NUMBER OF ANIMALS EXAMINED CATEGORY	SCORE	DESCRIPTION	GROUP 1 AIR CONTROL		GROUP 2 CERIC OXIDE LOW DOSE		GROUP 3 CERIC OXIDE INTERMEDIATE DOSE		GROUP 4 CERIC OXIDE HIGH DOSE	
			NO.	%	NO.	%	NO.	%	NO.	%
ARENA	0	Orients towards	15	100.0	15	100.0	15	100.0	15	100.0
OLFACTORY RESPONSE										
HANDLING	0	None	15	100.0	15	100.0	15	100.0	15	100.0
LACRIMATION										
PUPIL SIZE	0	Pinhead (Normal)	15	100.0	15	100.0	15	100.0	15	100.0
SALIVATION	0	None	15	100.0	15	100.0	15	100.0	15	100.0
URINARY STAINING	0	None	15	100.0	15	100.0	15	100.0	15	100.0
DIARRHEA	0	None	15	100.0	15	100.0	15	100.0	15	100.0
BODY TONE	5	Normal	15	100.0	15	100.0	15	100.0	15	100.0
ABDOMINAL TONE	5	Normal	15	100.0	15	100.0	15	100.0	15	100.0

SIGNIFICANTLY DIFFERENT FROM CONTROL (GROUP 1) VALUE: NONE

PROJECT NO. 90831

FUNCTIONAL OBSERVATIONAL BATTERY
 QUALITATIVE ASSESSMENTS
 GROUP SUMMARY - WEEK 13
 FEMALES

TABLE NO. 10

NUMBER OF ANIMALS EXAMINED CATEGORY	SCORE	DESCRIPTION	GROUP 1 AIR CONTROL		GROUP 2 CERIC OXIDE LOW DOSE		GROUP 3 CERIC OXIDE INTERMEDIATE DOSE		GROUP 4 CERIC OXIDE HIGH DOSE	
			NO.	%	NO.	%	NO.	%	NO.	%
HANDLING EXTENSOR THRUST	0	Normal	15	100.0	15	100.0	15	100.0	15	100.0
CORNEAL REFLEX	4	Active single or double blink	15	100.0	15	100.0	15	100.0	15	100.0
PINNA REFLEX	4	Moderate brisk flick	15	100.0	15	100.0	15	100.0	15	100.0
TOE PINCH	4	Moderate withdrawal	15	100.0	15	100.0	15	100.0	15	100.0
TAIL PINCH	4	Moderate movement	15	100.0	15	100.0	15	100.0	15	100.0
VISUAL PLACING	5	Normal	15	100.0	15	100.0	15	100.0	15	100.0
ON TOP OF BOX POSITIONAL PASSIVITY	0	Normal	15	100.0	15	100.0	15	100.0	15	100.0

SIGNIFICANTLY DIFFERENT FROM CONTROL (GROUP 1) VALUE: NONE

TABLE NO. 10
 FUNCTIONAL OBSERVATIONAL BATTERY
 QUALITATIVE ASSESSMENTS
 GROUP SUMMARY - WEEK 13
 FEMALES
 PROJECT NO. 90831

NUMBER OF ANIMALS EXAMINED CATEGORY	GROUP 1 AIR CONTROL		GROUP 2 CERIC OXIDE LOW DOSE		GROUP 3 CERIC OXIDE INTERMEDIATE DOSE		GROUP 4 CERIC OXIDE HIGH DOSE	
	NO.	%	NO.	%	NO.	%	NO.	%
ON SURFACE	15	100.0	15	100.0	15	100.0	15	100.0
AURICULAR STARTLE	15	100.0	15	100.0	15	100.0	15	100.0
AIR RIGHTING REFLEX	15	100.0	15	100.0	15	100.0	15	100.0
SCORE			4					
DESCRIPTION			Normal					
			0					
			Normal					

SIGNIFICANTLY DIFFERENT FROM CONTROL (GROUP 1) VALUE: NONE

10

PROJECT NO : 90831

GROUP MEAN (S.D.) GRIP STRENGTH (G)
AND HINDLIMB SPLAY (CM)

TABLE NO. 10

PRE-STUDY
MALES

	FORELIMB GRIP STRENGTH	HINDLIMB GRIP STRENGTH	HINDLIMB SPLAY
GROUP 1 - AIR CONTROL	793.0 102.03	433.3 104.00	7.8 1.72
GROUP 2 - CERIC OXIDE LOW DOSE	781.0 153.60	416.7 117.92	8.0 1.73
GROUP 3 - CERIC OXIDE INTERMEDIATE DOSE	796.7 99.21	418.0 106.93	8.4 1.51
GROUP 4 - CERIC OXIDE HIGH DOSE	774.3 147.19	399.3 56.34	7.7 1.33

SIGNIFICANTLY DIFFERENT FROM CONTROL (GROUP 1) VALUE: NONE



PROJECT NO : 90831

GROUP MEAN (S.D.) GRIP STRENGTH (G)
AND HINDLIMB SPLAY (CM)

TABLE NO. 10

PRE-STUDY
FEMALES

	FORELIMB GRIP STRENGTH	HINDLIMB GRIP STRENGTH	HINDLIMB SPLAY
GROUP 1 - AIR CONTROL	670.7 117.61	386.3 92.78	7.8 1.14
GROUP 2 - CERIC OXIDE LOW DOSE	719.7 112.76	403.3 86.82	8.3 1.14
GROUP 3 - CERIC OXIDE INTERMEDIATE DOSE	725.3 117.54	378.7 75.86	7.1 1.37
GROUP 4 - CERIC OXIDE HIGH DOSE	718.0 105.56	379.7 88.61	7.0 1.45

SIGNIFICANTLY DIFFERENT FROM CONTROL (GROUP 1) VALUE: NONE

PROJECT NO : 90831

GROUP MEAN (S.D.) GRIP STRENGTH (G)
AND HINDLIMB SPLAY (CM)

TABLE NO. 10

DAY 1
MALES

	FORELIMB GRIP STRENGTH	HINDLIMB GRIP STRENGTH	HINDLIMB SPLAY
GROUP 1 - AIR CONTROL	781.0 137.22	471.3 119.19	6.8 1.83
GROUP 2 - CERIC OXIDE LOW DOSE	785.3 128.47	491.0 123.10	6.5 1.52
GROUP 3 - CERIC OXIDE INTERMEDIATE DOSE	807.7 129.34	453.7 102.08	7.2 1.31
GROUP 4 - CERIC OXIDE HIGH DOSE	753.0 137.28	461.3 102.44	6.7 1.46

SIGNIFICANTLY DIFFERENT FROM CONTROL (GROUP 1) VALUE: NONE



PROJECT NO : 90831

GROUP MEAN (S.D.) GRIP STRENGTH (G)
AND HINDLIMB SPLAY (CM)

TABLE NO. 10

DAY 1
FEMALES

	FORELIMB GRIP STRENGTH	HINDLIMB GRIP STRENGTH	HINDLIMB SPLAY
GROUP 1 - AIR CONTROL	746.7 150.97	448.3 66.05	7.5 1.36
GROUP 2 - CERIC OXIDE LOW DOSE	774.3 111.61	438.7 81.16	6.9 .86
GROUP 3 - CERIC OXIDE INTERMEDIATE DOSE	676.7 160.82	423.0 64.61	6.1 1.94
GROUP 4 - CERIC OXIDE HIGH DOSE	792.0 154.62	442.0 73.94	6.4 1.80

SIGNIFICANTLY DIFFERENT FROM CONTROL (GROUP 1) VALUE: NONE

10

PROJECT NO : 90831

GROUP MEAN (S.D.) GRIP STRENGTH (G)
AND HINDLIMB SPLAY (CM)

TABLE NO. 10

WEEK 4
MALES

	FORELIMB GRIP STRENGTH	HINDLIMB GRIP STRENGTH	HINDLIMB SPLAY
GROUP 1 - AIR CONTROL	823.7 195.03	563.7 121.29	7.1 1.52
GROUP 2 - CERIC OXIDE LOW DOSE	751.0 115.92	577.3 106.32	7.4 1.96
GROUP 3 - CERIC OXIDE INTERMEDIATE DOSE	809.7 201.55	574.3 145.01	8.0 1.82
GROUP 4 - CERIC OXIDE HIGH DOSE	764.7 147.29	595.7 142.04	7.6 2.27

SIGNIFICANTLY DIFFERENT FROM CONTROL (GROUP 1) VALUE: NONE

BIO

TABLE NO. 10 PROJECT NO : 90831
GROUP MEAN (S.D.) GRIP STRENGTH (G)
AND HINDLIMB SPLAY (CM)

WEEK 4
FEMALES

GROUP	FORELIMB GRIP STRENGTH	HINDLIMB GRIP STRENGTH	HINDLIMB SPLAY
GROUP 1 - AIR CONTROL	730.7 118.83	529.7 89.79	7.5 1.43
GROUP 2 - CERIC OXIDE LOW DOSE	734.7 115.77	477.7 66.25	7.5 1.34
GROUP 3 - CERIC OXIDE INTERMEDIATE DOSE	709.3 135.51	455.0 125.47	7.4 1.80
GROUP 4 - CERIC OXIDE HIGH DOSE	742.3 139.67	448.3 91.92	7.0 1.49

SIGNIFICANTLY DIFFERENT FROM CONTROL (GROUP 1) VALUE: NONE



TABLE NO. 10

GROUP MEAN (S.D.) GRIP STRENGTH (G)
AND HINDLIMB SPLAY (CM)

PROJECT NO : 90831

WEEK 8
MALES

GROUP	FORELIMB GRIP STRENGTH	HINDLIMB GRIP STRENGTH	HINDLIMB SPLAY
GROUP 1 - AIR CONTROL	811.3 210.03	622.7 158.99	7.4 2.40
GROUP 2 - CERIC OXIDE LOW DOSE	717.0 195.73	606.7 105.20	8.1 2.04
GROUP 3 - CERIC OXIDE INTERMEDIATE DOSE	733.3 156.71	645.0 155.37	8.2 1.53
GROUP 4 - CERIC OXIDE HIGH DOSE	696.3 190.44	663.7 124.49	7.6 1.97

SIGNIFICANTLY DIFFERENT FROM CONTROL (GROUP 1) VALUE: NONE



PROJECT NO : 90831

GROUP MEAN (S.D.) GRIP STRENGTH (G)
AND HINDLIMB SPLAY (CM)

TABLE NO. 10

WEEK 8
FEMALES

	FORELIMB GRIP STRENGTH	HINDLIMB GRIP STRENGTH	HINDLIMB SPLAY
GROUP 1 - AIR CONTROL	806.7 150.93	586.7 112.72	7.6 1.42
GROUP 2 - CERIC OXIDE LOW DOSE	822.3 116.34	561.7 105.11	6.9 1.75
GROUP 3 - CERIC OXIDE INTERMEDIATE DOSE	741.0 160.45	558.0 105.73	6.7 1.76
GROUP 4 - CERIC OXIDE HIGH DOSE	745.3 176.99	530.0 100.11	6.9 1.58

SIGNIFICANTLY DIFFERENT FROM CONTROL (GROUP 1) VALUE: NONE



TABLE NO. 10 PROJECT NO : 90831
 GROUP MEAN (S.D.) GRIP STRENGTH (G)
 AND HINDLIMB SPLAY (CM)

WEEK 13
 MALES

GROUP	FORELIMB GRIP STRENGTH	HINDLIMB GRIP STRENGTH	HINDLIMB SPLAY
GROUP 1 - AIR CONTROL	803.7 177.91	702.3 140.38	7.3 2.00
GROUP 2 - CERIC OXIDE LOW DOSE	849.3 138.38	734.7 90.88	7.6 1.65
GROUP 3 - CERIC OXIDE INTERMEDIATE DOSE	809.0 156.07	713.7 165.11	7.7 2.00
GROUP 4 - CERIC OXIDE HIGH DOSE	915.7 179.75	707.9 181.40	7.6 1.87

SIGNIFICANTLY DIFFERENT FROM CONTROL (GROUP 1) VALUE: NONE



PROJECT NO :90831

GROUP MEAN (S.D.) GRIP STRENGTH (G)
AND HINDLIMB SPLAY (CM)

TABLE NO. 10

WEEK 13
FEMALES

	FORELIMB GRIP STRENGTH	HINDLIMB GRIP STRENGTH	HINDLIMB SPLAY
GROUP 1 - AIR CONTROL	797.3 151.87	669.0 122.87	7.5 1.63
GROUP 2 - CERIC OXIDE LOW DOSE	840.0 122.88	659.3 128.45	7.4 1.27
GROUP 3 - CERIC OXIDE INTERMEDIATE DOSE	774.3 122.98	610.3 103.88	7.1 2.28
GROUP 4 - CERIC OXIDE HIGH DOSE	660.7 A 162.58	602.0 124.30	7.1 2.23

SIGNIFICANTLY DIFFERENT FROM CONTROL (GROUP 1) VALUE: A - P <.05 (DUNNETT'S)

NO

PROJECT NO : 90831

GROUP MEAN (S.D.) BODY TEMPERATURE (° C)

TABLE NO. 10

PRE-STUDY
MALES

BODY
TEMPERATURE

37.6
.35

GROUP 1 - AIR CONTROL

37.7
.30

GROUP 2 - CERIC OXIDE
LOW DOSE

37.5
.35

GROUP 3 - CERIC OXIDE
INTERMEDIATE DOSE

37.6
.40

GROUP 4 - CERIC OXIDE
HIGH DOSE

SIGNIFICANTLY DIFFERENT FROM CONTROL (GROUP 1) VALUE: NONE

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PROJECT NO : 90831

GROUP MEAN (S.D.) BODY TEMPERATURE (°C)

TABLE NO. 10

PRE-STUDY
FEMALES

BODY
TEMPERATURE

37.9
.53

GROUP 1 - AIR CONTROL

37.8
.57

GROUP 2 - CERIC OXIDE
LOW DOSE

37.8
.32

GROUP 3 - CERIC OXIDE
INTERMEDIATE DOSE

37.8
.55

GROUP 4 - CERIC OXIDE
HIGH DOSE

SIGNIFICANTLY DIFFERENT FROM CONTROL (GROUP 1) VALUE: NONE

PROJECT NO : 90831

GROUP MEAN (S.D.) BODY TEMPERATURE (°C)

TABLE NO. 10

DAY 1
MALES

BODY
TEMPERATURE

37.9
.32

GROUP 1 - AIR CONTROL

38.0
.44

GROUP 2 - CERIC OXIDE
LOW DOSE

37.8
.37

GROUP 3 - CERIC OXIDE
INTERMEDIATE DOSE

38.1
.33

GROUP 4 - CERIC OXIDE
HIGH DOSE

SIGNIFICANTLY DIFFERENT FROM CONTROL (GROUP 1) VALUE: NONE

PROJECT NO : 90831

GROUP MEAN (S.D.) BODY TEMPERATURE (°C)

TABLE NO. 10

DAY 1
FEMALES

BODY
TEMPERATURE

38.1
.33

GROUP 1 - AIR CONTROL

38.0
.45

GROUP 2 - CERIC OXIDE
LOW DOSE

38.1
.40

GROUP 3 - CERIC OXIDE
INTERMEDIATE DOSE

38.1
.39

GROUP 4 - CERIC OXIDE
HIGH DOSE

SIGNIFICANTLY DIFFERENT FROM CONTROL (GROUP 1) VALUE: NONE



PROJECT NO : 90831

GROUP MEAN (S.D.) BODY TEMPERATURE (°C)

TABLE NO. 10

WEEK 4
MALES

BODY
TEMPERATURE

37.6
.47

GROUP 1 - AIR CONTROL

37.7
.51

GROUP 2 - CERIC OXIDE
LOW DOSE

38.0
.60

GROUP 3 - CERIC OXIDE
INTERMEDIATE DOSE

37.7
.46

GROUP 4 - CERIC OXIDE
HIGH DOSE

SIGNIFICANTLY DIFFERENT FROM CONTROL (GROUP 1) VALUE: NONE



PROJECT NO : 90831

GROUP MEAN (S.D.) BODY TEMPERATURE (°C)

TABLE NO. 10

WEEK 4
FEMALES

BODY
TEMPERATURE

38.4
.53

GROUP 1 - AIR CONTROL

38.2
.60

GROUP 2 - CERIC OXIDE
LOW DOSE

38.2
.39

GROUP 3 - CERIC OXIDE
INTERMEDIATE DOSE

38.4
.60

GROUP 4 - CERIC OXIDE
HIGH DOSE

SIGNIFICANTLY DIFFERENT FROM CONTROL (GROUP 1) VALUE: NONE

TABLE NO. 10 PROJECT NO : 90831

GROUP MEAN (S.D.) BODY TEMPERATURE (°C)

WEEK 8
MALES

BODY
TEMPERATURE

37.4
.58

GROUP 1 - AIR CONTROL

37.7
.59

GROUP 2 - CERIC OXIDE
LOW DOSE

37.7
.82

GROUP 3 - CERIC OXIDE
INTERMEDIATE DOSE

37.4
.45

GROUP 4 - CERIC OXIDE
HIGH DOSE

SIGNIFICANTLY DIFFERENT FROM CONTROL (GROUP 1) VALUE: NONE

PROJECT NO : 90831

GROUP MEAN (S.D.) BODY TEMPERATURE (°C)

TABLE NO. 10

WEEK 8
FEMALES

BODY
TEMPERATURE

GROUP 1 - AIR CONTROL

38.2
.42

GROUP 2 - CERIC OXIDE
LOW DOSE

38.2
.60

GROUP 3 - CERIC OXIDE
INTERMEDIATE DOSE

38.4
.51

GROUP 4 - CERIC OXIDE
HIGH DOSE

38.3
.69

SIGNIFICANTLY DIFFERENT FROM CONTROL (GROUP 1) VALUE: NONE

PROJECT NO :90831

GROUP MEAN (S.D.) BODY TEMPERATURE (°C)

TABLE NO. 10

WEEK 13
MALES

BODY
TEMPERATURE

GROUP 1 - AIR CONTROL

37.5
.59

GROUP 2 - CERIC OXIDE
LOW DOSE

37.9
.58

GROUP 3 - CERIC OXIDE
INTERMEDIATE DOSE

37.6
.64

GROUP 4 - CERIC OXIDE
HIGH DOSE

37.4
.36

SIGNIFICANTLY DIFFERENT FROM CONTROL (GROUP 1) VALUE: NONE



PROJECT NO : 90831

GROUP MEAN (S.D.) BODY TEMPERATURE (°C)

TABLE NO. 10

WEEK 13
FEMALES

BODY
TEMPERATURE

GROUP 1 - AIR CONTROL	38.3 .50
GROUP 2 - CERIC OXIDE LOW DOSE	38.1 .57
GROUP 3 - CERIC OXIDE INTERMEDIATE DOSE	38.3 .71
GROUP 4 - CERIC OXIDE HIGH DOSE	38.4 .54

SIGNIFICANTLY DIFFERENT FROM CONTROL (GROUP 1) VALUE: NONE



GROUP MEAN
MOTOR ACTIVITY COUNTS
MALES
PRE STUDY

TABLE NO. 11

INTERVAL	GROUP 1 AIR CONTROL	GROUP 2 CERIC OXIDE LOW DOSE	GROUP 3 CERIC OXIDE MID DOSE	GROUP 4 CERIC OXIDE HIGH DOSE
1	MEAN 104.5	MEAN 111.0	MEAN 110.4	MEAN 104.7
	S.D. 34.90	S.D. 31.94	S.D. 19.95	S.D. 22.50
	N 15	N 15	N 15	N 15
2	MEAN 72.1	MEAN 81.5	MEAN 83.9	MEAN 76.8
	S.D. 29.57	S.D. 30.43	S.D. 22.16	S.D. 25.38
	N 15	N 15	N 15	N 15
3	MEAN 51.1	MEAN 38.5	MEAN 58.5	MEAN 41.7
	S.D. 36.44	S.D. 38.13	S.D. 35.30	S.D. 36.45
	N 15	N 15	N 15	N 15
4	MEAN 20.3	MEAN 16.7	MEAN 22.0	MEAN 20.1
	S.D. 30.38	S.D. 25.06	S.D. 23.62	S.D. 30.99
	N 15	N 15	N 15	N 15
5	MEAN 11.5	MEAN 2.0	MEAN 11.3	MEAN 14.3
	S.D. 23.21	S.D. 4.16	S.D. 21.19	S.D. 27.85
	N 15	N 15	N 15	N 15
6	MEAN 1.8	MEAN 5.9	MEAN 3.9	MEAN 8.0
	S.D. 3.86	S.D. 16.49	S.D. 8.94	S.D. 21.62
	N 15	N 15	N 15	N 15
TOTAL	MEAN 261.3	MEAN 255.5	MEAN 289.9	MEAN 265.6
	S.D. 128.48	S.D. 117.82	S.D. 88.59	S.D. 135.33
	N 15	N 15	N 15	N 15

SIGNIFICANTLY DIFFERENT FROM CONTROL (GROUP 1) VALUE: NONE



GROUP MEAN
MOTOR ACTIVITY COUNTS
FEMALES
PRE STUDY

TABLE NO. 11

INTERVAL	GROUP 1 AIR CONTROL		GROUP 2 CERIC OXIDE LOW DOSE		GROUP 3 CERIC OXIDE MID DOSE		GROUP 4 CERIC OXIDE HIGH DOSE	
	MEAN	S.D.	MEAN	S.D.	MEAN	S.D.	MEAN	S.D.
1	134.1	27.11	128.5	17.88	134.9	21.48	136.3	34.02
		N		N		N		N
		15		15		14		15
2	104.2	28.21	93.1	28.00	108.3	19.47	110.3	21.20
		N		N		N		N
		15		15		14		15
3	71.3	30.95	69.9	42.88	79.2	22.46	95.3	37.32
		N		N		N		N
		15		15		14		15
4	52.7	29.06	47.9	35.32	57.4	30.61	64.1	38.64
		N		N		N		N
		15		15		14		15
5	23.8	34.21	33.5	42.22	20.6	24.46	56.9	36.59
		N		N		N		N
		15		15		14		15
6	17.9	34.68	19.1	27.21	13.1	24.44	38.1	39.55
		N		N		N		N
		15		15		14		15
TOTAL	404.0	137.79	392.1	153.33	413.6	97.90	501.1	129.29
		N		N		N		N
		15		15		14		15

SIGNIFICANTLY DIFFERENT FROM CONTROL (GROUP 1) VALUE: NONE

GROUP MEAN
MOTOR ACTIVITY COUNTS

TABLE NO. 11

MALES
WEEK 4

INTERVAL	GROUP 1		GROUP 2		GROUP 3		GROUP 4	
	MEAN	S.D.	MEAN	S.D.	MEAN	S.D.	MEAN	S.D.
1	104.8	16.00	133.5	25.45	130.6	22.77	118.1	25.39
	N	15	N	15	N	15	N	15
2	64.2	21.38	79.9	22.99	84.3	22.86	85.3	22.59
	N	15	N	15	N	15	N	15
3	48.2	31.98	49.0	34.43	49.8	22.69	47.7	21.35
	N	15	N	15	N	15	N	15
4	31.1	23.16	23.5	20.98	26.8	26.39	25.4	22.40
	N	15	N	15	N	15	N	15
5	23.4	22.85	13.2	18.54	17.7	24.42	10.9	14.92
	N	15	N	15	N	15	N	15
6	13.8	17.87	8.0	11.27	19.7	28.42	10.6	15.76
	N	15	N	15	N	15	N	15
TOTAL	285.5	104.01	307.1	97.65	328.9	114.14	298.0	83.85
	N	15	N	15	N	15	N	15

SIGNIFICANTLY DIFFERENT FROM CONTROL (GROUP 1) VALUE: a - P < .05 b - P < .01 c - P < .001 (T-TEST), LCV
SIGNIFICANT DOSE LEVEL CONTRASTS: NONE
LCV = Linear Constructed Variable

TABLE NO. 11

GROUP MEAN
MOTOR ACTIVITY COUNTS
FEMALES
WEEK 4

INTERVAL	GROUP 1 AIR CONTROL	GROUP 2 CERIC OXIDE LOW DOSE	GROUP 3 CERIC OXIDE MID DOSE	GROUP 4 CERIC OXIDE HIGH DOSE
1	MEAN S.D. N	150.3 20.71 15	136.3 19.45 15	153.5 22.72 15
2	MEAN S.D. N	99.1 34.78 15	97.5 31.58 15	113.4 16.97 15
3	MEAN S.D. N	62.7 35.68 15	59.9 30.17 15	70.5 34.36 15
4	MEAN S.D. N	39.2 46.35 15	36.7 33.11 15	36.7 35.53 15
5	MEAN S.D. N	31.3 38.79 15	12.9 18.30 15	20.3 30.37 15
6	MEAN S.D. N	26.7 41.00 15	3.9 12.30 15	32.4 34.23 15
TOTAL	MEAN S.D. N	409.3 178.12 15	347.3 92.78 15	426.8 106.35 15

SIGNIFICANTLY DIFFERENT FROM CONTROL (GROUP 1) VALUE: a - P < .05 (T-TEST), LCV
SIGNIFICANT DOSE LEVELS CONTRASTS: NONE
LCV = Linear Constructed Variable



GROUP MEAN
MOTOR ACTIVITY COUNTS
MALES
WEEK 8

TABLE NO. 11

INTERVAL	GROUP 1		GROUP 2		GROUP 3		GROUP 4	
	MEAN	S.D.	MEAN	S.D.	MEAN	S.D.	MEAN	S.D.
1	108.3	25.22	120.1	21.72	107.8	33.21	128.8	27.69
		N		N		N		N
		15		15		15		15
2	74.4	24.45	80.6	18.48	71.0	28.81	75.7	20.05
		N		N		N		N
		15		15		15		15
3	47.2	18.50	50.1	30.78	57.7	28.94	46.1	20.61
		N		N		N		N
		15		15		15		15
4	26.7	20.48	39.0	25.36	31.4	14.73	30.9	19.15
		N		N		N		N
		15		15		15		15
5	8.1	11.58	27.5	25.31	17.9	18.43	13.3	19.22
		N		N		N		N
		15		15		15		15
6	15.7	17.87	10.9	10.94	16.7	22.67	10.1	13.43
		N		N		N		N
		15		15		15		15
TOTAL	280.4	78.17	328.2	85.01	302.5	104.29	304.9	80.26
		N		N		N		N
		15		15		15		15

SIGNIFICANTLY DIFFERENT FROM CONTROL (GROUP 1) VALUE: NONE

TABLE NO. 11

GROUP MEAN
MOTOR ACTIVITY COUNTS
FEMALES
WEEK 8

INTERVAL	GROUP 1 AIR CONTROL	GROUP 2 CERIC OXIDE LOW DOSE	GROUP 3 CERIC OXIDE MID DOSE	GROUP 4 CERIC OXIDE HIGH DOSE
1	MEAN S.D. N 152.1 22.09 15	163.0 23.54 15	148.6 26.92 15	167.6 27.09 15
2	MEAN S.D. N 88.2 35.43 15	107.3 31.34 15	99.3 40.24 15	116.6 29.01 15
3	MEAN S.D. N 50.0 38.16 15	62.5 33.77 15	54.1 39.00 15	58.0 38.00 15
4	MEAN S.D. N 24.7 35.30 15	22.9 26.36 15	19.0 18.41 15	20.4 22.85 15
5	MEAN S.D. N 29.3 38.35 15	19.8 25.86 15	35.9 33.22 15	31.1 31.86 15
6	MEAN S.D. N 23.9 32.90 15	11.3 22.50 15	23.3 35.85 15	12.7 22.68 15
TOTAL	MEAN S.D. N 368.2 160.97 15	386.9 a 96.47 15	380.2 126.94 15	406.4 b 99.63 15

SIGNIFICANTLY DIFFERENT FROM CONTROL (GROUP 1) VALUE: a - P <.05 b - P <.01 (T-TEST), LCV
SIGNIFICANT DOSE LEVEL CONTRASTS: P <.05, Linear, LCV
LCV = Linear Constructed Variable

GROUP MEAN
MOTOR ACTIVITY COUNTS
MALES
WEEK 13

TABLE NO. 11

INTERVAL	GROUP 1			GROUP 2			GROUP 3			GROUP 4		
	MEAN	S.D.	N	CERIC	OXIDE	LOW DOSE	CERIC	OXIDE	MID DOSE	CERIC	OXIDE	HIGH DOSE
1	96.0	28.83	15	110.7	28.80	15	113.9	22.75	15	108.1	25.29	14
2	63.7	33.08	15	64.5	27.10	15	60.6	20.42	15	74.1	19.96	14
3	32.3	21.35	15	35.4	23.31	15	35.9	25.39	15	43.9	19.68	14
4	15.6	11.10	15	19.0	18.60	15	17.8	19.18	15	24.3	17.24	14
5	17.1	18.83	15	14.6	20.81	15	24.9	23.41	15	16.6	16.96	14
6	8.8	15.30	15	10.7	12.19	15	17.3	19.75	15	12.0	14.07	14
TOTAL	233.4	86.23	15	254.9	83.40	15	270.4	95.99	15	279.0	55.27	14

SIGNIFICANTLY DIFFERENT FROM CONTROL (GROUP 1) VALUE: NONE

PROJECT NO.: 90831

GROUP MEAN
MOTOR ACTIVITY COUNTS
FEMALES
WEEK 13

TABLE NO. 11

INTERVAL	GROUP 1 AIR CONTROL	GROUP 2 CERIC OXIDE LOW DOSE	GROUP 3 CERIC OXIDE MID DOSE	GROUP 4 CERIC OXIDE HIGH DOSE
1	MEAN 144.9 S.D. 36.22 N 15	MEAN 160.2 S.D. 23.72 N 15	MEAN 151.8 S.D. 24.76 N 15	MEAN 163.7 S.D. 36.31 N 15
2	MEAN 85.1 S.D. 40.87 N 15	MEAN 99.1 S.D. 36.18 N 15	MEAN 95.9 S.D. 26.56 N 15	MEAN 105.1 S.D. 22.94 N 15
3	MEAN 51.9 S.D. 39.49 N 15	MEAN 55.9 S.D. 36.66 N 15	MEAN 53.2 S.D. 34.05 N 15	MEAN 58.5 S.D. 42.24 N 15
4	MEAN 32.7 S.D. 29.68 N 15	MEAN 38.5 S.D. 36.15 N 15	MEAN 29.3 S.D. 28.38 N 15	MEAN 40.6 S.D. 39.01 N 15
5	MEAN 25.1 S.D. 34.29 N 15	MEAN 16.7 S.D. 24.75 N 15	MEAN 18.3 S.D. 20.20 N 15	MEAN 27.3 S.D. 32.56 N 15
6	MEAN 23.5 S.D. 31.29 N 15	MEAN 21.2 S.D. 32.85 N 15	MEAN 29.3 S.D. 29.66 N 15	MEAN 23.4 S.D. 31.74 N 15
TOTAL	MEAN 363.2 S.D. 152.45 N 15	MEAN 391.7 a S.D. 146.14 N 15	MEAN 377.9 S.D. 119.01 N 15	MEAN 418.5 a S.D. 141.30 N 15

SIGNIFICANTLY DIFFERENT FROM CONTROL (GROUP 1) VALUE: a - P<.05 (T-TEST), LCV
SIGNIFICANT DOSE LEVEL CONTRASTS: NONE
LCV = Linear Constructed Variable

TABLE NO. 12

GROUP MEAN (S.D.) HEMOGRAMS

PROJECT NO : 90831

HEALTH SCREEN - MALES

WBC DIFFERENTIAL COUNT

	WBC X10 ³	NEUT SEG %	NEUT NSEG %	LYMPH %	MONO %	EOSIN %	BASO %
GROUP 5 - HEALTH SCREEN	5.8 1.87	17.2 6.75	0.0 0.00	81.4 6.65	.8 .79	.6 .70	0.0 0.00



PROJECT NO : 90831

GROUP MEAN (S.D.) HEMOGRAMS

TABLE NO. 12

HEALTH SCREEN - MALES

		WBC DIFFERENTIAL COUNT (ABSOLUTE)					
		NEUT SEG	NEUT NSEG	LYMPH	MONO	EOSIN	BASO
GROUP 5 - HEALTH SCREEN		931.9	0.0	4741.3	41.5	35.3	0.0
		341.59	0.00	1814.56	41.33	43.41	0.00

PROJECT NO : 90831

GROUP MEAN (S.D.) HEMOGRAMS

TABLE NO. 12

HEALTH SCREEN - MALES

	RBC X106	Hb G/DL	Ht %	MCV UM3	MCH PG	MCHC G/DL	ROW %
GROUP 5 - HEALTH SCREEN	6.12	12.7	36.9	60.3	20.8	34.5	13.4
	.231	.40	.81	1.47	.50	.74	.67



PROJECT NO : 90831

GROUP MEAN (S.D.) HEMOGRAMS

TABLE NO. 12

HEALTH SCREEN - MALES

PLT X10 ³	MPV UM ³	PT SEC.
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GROUP 5 - HEALTH SCREEN	969.6	8.3	14.1
	88.46	.39	.38



PROJECT NO : 90831

GROUP MEAN (S.D.) HEMOGRAMS

TABLE NO. 12

HEALTH SCREEN - FEMALES

WBC DIFFERENTIAL COUNT

	WBC X10 ³	NEUT SEG %	NEUT NSEG %	LYMPH %	MONO %	EOSIN %	BASO %
GROUP 5 - HEALTH SCREEN	4.8	5.3	0.0	94.2	.3	.2	0.0
	1.97	2.54	0.00	2.30	.95	.42	0.00





PROJECT NO : 90831

GROUP MEAN (S.D.) HEMOGRAMS

TABLE NO. 12

HEALTH SCREEN - FEMALES

WBC DIFFERENTIAL COUNT (ABSOLUTE)

	NEUT SEG	NEUT NSEG	LYMPH	MONO	EOSIN	BASO
GROUP 5 - HEALTH SCREEN	238.5 95.74	0.0 0.00	4554.9 1872.45	29.4 92.97	7.2 15.18	0.0 0.00





PROJECT NO : 90831

GROUP MEAN (S.D.) HEMOGRAMS

TABLE NO. 12

HEALTH SCREEN - FEMALES

	RBC X10 ⁶	Hb G/DL	Ht %	MCV UM ³	MCH PG	MCHC G/DL	RDW %
GROUP 5 - HEALTH SCREEN	5.28	11.5	33.2	63.0	21.8	34.6	15.6
	.291	.44	1.49	2.53	.99	.43	1.30

PROJECT NO : 90831

GROUP MEAN (S.D.) HEMOGRAMS

TABLE NO. 12

HEALTH SCREEN - FEMALES

PLT X10 ³	MPV UM ³	PT SEC.
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GROUP 5 - HEALTH SCREEN	1012.6	8.4	13.8
	98.24	.33	.81

PROJECT NO : 90831

GROUP MEAN (S.D.) HEMOGRAMS
WEEK 6 - MALES

TABLE NO. 12

WBC DIFFERENTIAL COUNT

	WBC X10 ³	NEUT SEG %	NEUT NSEG %	LYMPH %	MONO %	EUSIN %	BASEO %
GROUP 1 - AIR CONTROL	12.0 3.66	11.3 7.50	0.0 0.00	85.4 8.26	2.4 1.18	.9 2.05	0.0 0.00
GROUP 2 - CERIC OXIDE LOW DOSE	11.7 2.82	12.5 5.95	0.0 0.00	84.6 6.49	2.0 1.08	.9 1.19	0.0 0.00
GROUP 3 - CERIC OXIDE INTERMEDIATE DOSE	14.6 2.08	17.7 5.57	0.0 0.00	79.0 5.66	2.8 1.92	.6 .73	0.0 0.00
GROUP 4 - CERIC OXIDE HIGH DOSE	13.9 4.35	22.8 B 6.76	0.0 0.00	73.7 B 6.93	2.8 1.81	.7 .95	0.0 0.00

SIGNIFICANTLY DIFFERENT FROM CONTROL (GROUP 1) VALUE: B - P<.01 (DUNNETT'S)

TABLE NO. 12 GROUP MEAN (S.D.) HEMOGRAMS PROJECT NO : 90831
 WEEK 6 - MALES

	WBC DIFFERENTIAL COUNT (ABSOLUTE)						
	NEUT SEG	NEUT NSEG	LYMPH	MONO	EOSIN	BASO	
GROUP 1 - AIR CONTROL	1509.1 1697.34	0.0 0.00	10057.3 2454.69	298.3 179.70	122.0 299.36	0.0 0.00	
GROUP 2 - CERIC OXIDE LOW DOSE	1440.1 720.16	0.0 0.00	9891.2 2601.67	243.5 149.40	102.2 136.48	0.0 0.00	
GROUP 3 - CERIC OXIDE INTERMEDIATE DOSE	2560.3 881.45	0.0 0.00	11477.5 1944.38	429.4 268.07	82.9 124.52	0.0 0.00	
GROUP 4 - CERIC OXIDE HIGH DOSE	3088.4 B 1162.05	0.0 0.00	10295.6 3669.81	386.5 300.38	109.5 175.05	0.0 0.00	

SIGNIFICANTLY DIFFERENT FROM CONTROL (GROUP 1) VALUE: B - P<.01 (DUNNETT'S)

PROJECT NO : 90831

GROUP MEAN (S.D.) HEMOGRAMS

TABLE NO. 12

WEEK 6 - MALES

	RBC X10 ⁶	Hb G/DL	Ht %	MCV UM ³	MCH PG	MCHC G/DL	RDW %
GROUP 1 - AIR CONTROL	7.76 .726	15.8 .47	42.3 3.92	54.5 1.65	20.5 2.29	37.6 4.24	12.6 .53
GROUP 2 - CERIC OXIDE LOW DOSE	7.87 .265	15.7 .83	43.3 2.14	54.9 1.66	20.0 .69	36.4 .94	12.3 .50
GROUP 3 - CERIC OXIDE INTERMEDIATE DOSE	7.96 .242	15.8 .30	43.6 1.26	54.7 1.47	19.9 .66	36.4 .74	12.3 .42
GROUP 4 - CERIC OXIDE HIGH DOSE	7.88 .275	15.9 .34	43.4 1.10	55.1 1.74	20.2 .67	36.7 .43	12.5 .57

PROJECT NO : 90831

GROUP MEAN (S.D.) HEMOGRAMS

TABLE NO. 12

WEEK 6 - MALES

	PLT X10 ³	MPV UM ³	PT SEC.
GROUP 1 - AIR CONTROL	899.8 69.71	8.9 .47	14.4 .72
GROUP 2 - CERIC OXIDE LOW DOSE	913.3 111.39	9.1 .57	14.2 .79
GROUP 3 - CERIC OXIDE INTERMEDIATE DOSE	870.8 72.13	9.0 .65	14.5 .70
GROUP 4 - CERIC OXIDE HIGH DOSE	834.6 144.93	8.9 .35	14.1 .85

TABLE NO. 12 GROUP MEAN (S.D.) HEMOGRAMS PROJECT NO : 90831
 WEEK 6 - FEMALES

WBC DIFFERENTIAL COUNT

	WBC X10 ³	NEUT SEG %	NEUT NSEG %	LYMPH %	MONO %	EOSIN %	BASO %
GROUP 1 - AIR CONTROL	9.7 2.32	7.8 5.74	0.0 0.00	90.8 5.95	.8 .83	.7 1.00	0.0 0.00
GROUP 2 - CERIC OXIDE LOW DOSE	9.0 2.54	13.0 6.32	0.0 0.00	84.5 6.72	1.7 1.60	.8 .60	0.0 0.00
GROUP 3 - CERIC OXIDE INTERMEDIATE DOSE	10.0 1.72	17.0 B 6.41	0.0 0.00	80.1 B 7.51	2.0 1.41	.9 .83	0.0 0.00
GROUP 4 - CERIC OXIDE HIGH DOSE	10.5 3.82	13.3 4.31	0.0 0.00	84.9 4.46	1.1 1.00	.7 .84	0.0 0.00

SIGNIFICANTLY DIFFERENT FROM CONTROL (GROUP 1) VALUE: B - P<.01 (DUNNETT'S)

PROJECT NO : 90831

GROUP MEAN (S.D.) HEMOGRAMS

TABLE NO. 12

WEEK 6 - FEMALES

	WBC DIFFERENTIAL COUNT (ABSOLUTE)						
	NEUT SEG	NEUT NSEG	LYMPH	MONO	EOSIN	BASO	
GROUP 1 - AIR CONTROL	723.9 493.52	0.0 0.00	8791.4 2355.39	65.6 66.68	74.7 119.35	0.0 0.00	
GROUP 2 - CERIC OXIDE LOW DOSE	1230.3 764.58	0.0 0.00	7537.3 2067.98	174.2 157.33	66.6 56.73	0.0 0.00	
GROUP 3 - CERIC OXIDE INTERMEDIATE DOSE	1679.6 A 650.53	0.0 0.00	8083.3 1737.40	194.6 146.15	92.5 87.74	0.0 0.00	
GROUP 4 - CERIC OXIDE HIGH DOSE	1327.5 562.45	0.0 0.00	8915.7 3677.95	124.8 104.06	86.5 103.72	0.0 0.00	

SIGNIFICANTLY DIFFERENT FROM CONTROL (GROUP 1) VALUE: A - P<.05 (DUNNETT'S)

PROJECT NO : 90831

GROUP MEAN (S.D.) HEMOGRAMS

TABLE NO. 12

WEEK 6 - FEMALES

	RBC X10 ⁶	Hb G/DL	Ht %	MCV UM ³	MCH PG	MCHC G/DL	RDW %
GROUP 1 - AIR CONTROL	7.56 .342	14.7 1.58	41.3 1.75	54.7 2.21	19.5 2.29	35.6 3.27	11.7 .30
GROUP 2 - CERIC OXIDE LOW DOSE	7.58 .293	15.0 2.07	41.9 1.69	55.3 .87	19.8 2.38	35.8 4.30	11.7 .49
GROUP 3 - CERIC OXIDE INTERMEDIATE DOSE	7.52 .270	15.2 .77	41.1 1.90	54.6 .85	20.2 .35	36.9 .39	11.6 .45
GROUP 4 - CERIC OXIDE HIGH DOSE	7.66 .368	15.4 .54	41.6 1.73	54.4 1.45	20.1 .67	37.0 .57	11.8 .45

PROJECT NO : 90931

GROUP MEAN (S.D.) HEMOGRAMS

TABLE NO. 12

WEEK 6 - FEMALES

	PLT X10 ³	MPV UM ³	PT SEC.
GROUP 1 - AIR CONTROL	824.8 230.02	9.0 .63	14.1 .55
GROUP 2 - CERIC OXIDE LOW DOSE	801.6 276.76	8.7 .37	13.9 .90
GROUP 3 - CERIC OXIDE INTERMEDIATE DOSE	850.0 150.47	8.9 .40	14.2 .71
GROUP 4 - CERIC OXIDE HIGH DOSE	937.6 140.25	8.9 .52	14.2 .63



TABLE NO. 12
GROUP MEAN (S.D.) HEMOGRAMS
WEEK 13 - MALES

PROJECT NO : 90831

WBC DIFFERENTIAL COUNT

GROUP	WBC X103	NEUT SEG %	NEUT NSEG %	LYMPH %	MONO %	EOSIN %	BASO %
GROUP 1 - AIR CONTROL	8.1 2.30	18.4 6.38	0.0 0.00	77.5 8.66	3.4 2.87	.7 1.03	0.0 0.00
GROUP 2 - CERIC OXIDE LOW DOSE	8.2 1.66	20.1 6.91	.1 .26	76.1 7.87	2.8 2.11	1.0 .93	0.0 0.00
GROUP 3 - CERIC OXIDE INTERMEDIATE DOSE	11.8 B 3.05	25.4 10.85	0.0 0.00	70.7 11.03	2.5 2.17	1.4 1.18	0.0 0.00
GROUP 4 - CERIC OXIDE HIGH DOSE	8.2 2.21	33.2 B 9.45	0.0 0.00	62.7 B 11.00	3.1 2.96	.9 1.38	0.0 0.00

SIGNIFICANTLY DIFFERENT FROM CONTROL (GROUP 1) VALUE: B - P<.01 (DUNNETT'S)

WEEK 13 - MALES

	WBC DIFFERENTIAL COUNT (ABSOLUTE)						
	NEUT SEG	NEUT NSEG	LYMPH	MONO	EOSIN	PLATE LET	BASO
GROUP 1 - AIR CONTROL	1541.1 908.78	0.0 0.00	6243.2 1574.71	267.5 197.31	61.5 93.81		0.0 0.00
GROUP 2 - CERIC OXIDE LOW DOSE	1637.9 622.48	4.8 18.59	6253.5 1520.90	225.9 178.82	84.6 83.00		0.0 0.00
GROUP 3 - CERIC OXIDE INTERMEDIATE DOSE	2844.1 B 1038.42	0.0 0.00	8480.7 A 3009.45	300.0 283.79	175.2 A 172.88		0.0 0.00
GROUP 4 - CERIC OXIDE HIGH DOSE	2698.0 B 1100.89	0.0 0.00	5238.2 1909.60	233.3 240.39	73.4 97.91		0.0 0.00

SIGNIFICANTLY DIFFERENT FROM CONTROL (GROUP 1) VALUE: A - P<.05 B - P<.01 (DUNNETT'S)

PROJECT NO : 90831

GROUP MEAN (S.D.) HEMOGRAMS

TABLE NO. 12

WEEK 13 - MALES

	RBC X10 ⁶	Hb G/DL	Ht %	MCV UM3	MCH PG	MCHC G/DL	RDW %
GROUP 1 - AIR CONTROL	8.42 .401	15.4 .61	43.4 2.26	51.5 1.50	18.3 .69	35.5 .90	12.6 .58
GROUP 2 - CERIC OXIDE LOW DOSE	8.41 .366	15.4 .53	43.8 1.90	52.1 1.48	18.3 .55	35.2 .76	12.4 .53
GROUP 3 - CERIC OXIDE INTERMEDIATE DOSE	8.42 .360	15.5 .43	43.7 1.39	51.9 1.41	18.4 .73	35.5 .84	12.6 .51
GROUP 4 - CERIC OXIDE HIGH DOSE	8.51 .449	15.8 .53	44.6 2.23	52.5 1.47	18.6 .75	35.5 1.02	12.4 .63

PROJECT NO : 90831

GROUP MEAN (S.D.) HEMOGRAMS

TABLE NO. 12

WEEK 13 - MALES

	PLT 3 X10	MPV UM 3	PT SEC.
GROUP 1 - AIR CONTROL	908.7 103.22	8.7 .54	15.3 1.62
GROUP 2 - CERIC OXIDE LOW DOSE	960.3 117.14	8.8 .63	15.0 .81
GROUP 3 - CERIC OXIDE INTERMEDIATE DOSE	936.9 79.39	8.9 .36	14.8 .84
GROUP 4 - CERIC OXIDE HIGH DOSE	901.6 78.02	8.9 .42	15.2 .98

TABLE NO. 12
 GROUP MEAN (S.D.) HEMOGRAMS
 WEEK 13 - FEMALES
 PROJECT NO : 90831

	WBC DIFFERENTIAL COUNT						
	WBC X10 ³	NEUT SEG %	NEUT NSEG %	LYMPH %	MONO %	EOSIN %	BASEO %
GROUP 1 - AIR CONTROL	4.2 1.50	8.3 4.24	0.0 0.00	85.7 5.48	4.7 2.55	1.3 1.75	0.0 0.00
GROUP 2 - CERIC OXIDE LOW DOSE	5.1 1.67	19.1 B 10.02	0.0 0.00	75.3 B 10.67	4.4 2.64	1.3 1.03	0.0 0.00
GROUP 3 - CERIC OXIDE INTERMEDIATE DOSE	4.9 1.34	19.1 B 7.82	0.0 0.00	76.9 A 8.49	3.2 3.61	.8 .86	0.0 0.00
GROUP 4 - CERIC OXIDE HIGH DOSE	5.0 1.46	21.9 B 6.32	0.0 0.00	73.9 B 7.10	3.5 2.61	.6 .74	.1 .26

SIGNIFICANTLY DIFFERENT FROM CONTROL (GROUP 1) VALUE: A - P<.05 B - P<.01 (DUNNETT'S)



PROJECT NO : 90831

GROUP MEAN (S.D.) HEMOGRAMS

TABLE NO. 12

WEEK 13 - FEMALES

	WBC DIFFERENTIAL COUNT (ABSOLUTE)						
	NEUT SEG	NEUT NSEG	LYMPH	MONO	EOSIN	BASO	
GROUP 1 - AIR CONTROL	324.9 161.95	0.0 0.00	3623.7 1364.64	211.5 144.61	46.5 58.34	0.0 0.00	
GROUP 2 - CERIC OXIDE LOW DOSE	1005.7 C 796.79	0.0 0.00	3793.7 1199.72	233.0 193.96	60.9 55.04	0.0 0.00	
GROUP 3 - CERIC OXIDE INTERMEDIATE DOSE	899.3 C 414.04	0.0 0.00	3802.4 1228.29	169.0 218.51	36.0 44.47	0.0 0.00	
GROUP 4 - CERIC OXIDE HIGH DOSE	1080.7 C 398.80	0.0 0.00	3722.3 1137.35	188.1 175.35	31.5 41.50	4.1 15.75	

SIGNIFICANTLY DIFFERENT FROM CONTROL (GROUP 1) VALUE: C - P<.05 (DUNN'S)

PROJECT NO : 90831

GROUP MEAN (S.D.) HEMOGRAMS

TABLE NO. 12

WEEK 13 - FEMALES

	RBC X10 ⁶	Hb G/DL	Ht %	MCV UM ³	MCH PG	MCHC G/DL	RDW %
GROUP 1 - AIR CONTROL	7.83 .454	14.8 .49	42.0 1.81	53.7 1.55	19.0 .75	35.3 .78	11.5 .44
GROUP 2 - CERIC OXIDE LOW DOSE	7.72 .238	14.8 .55	41.7 1.44	54.0 1.30	19.1 .38	35.4 .66	11.7 .47
GROUP 3 - CERIC OXIDE INTERMEDIATE DOSE	7.95 .425	15.0 .71	42.6 1.91	53.6 1.68	18.9 .44	35.3 .68	11.5 .45
GROUP 4 - CERIC OXIDE HIGH DOSE	8.09 .374	15.4 A .51	43.3 1.89	53.5 1.26	19.1 .56	35.7 .69	11.9 .33

SIGNIFICANTLY DIFFERENT FROM CONTROL (GROUP 1) VALUE: A - P<.05 (DUNNETT'S)

PROJECT NO : 90831

GROUP MEAN (S.D.) HEMOGRAMS

TABLE NO. 12

WEEK 13 - FEMALES

	PLT X10 ³	MPV UM ³	PT SEC.
GROUP 1 - AIR CONTROL	999.5 124.95	8.4 .52	14.0 .50
GROUP 2 - CERIC OXIDE LOW DOSE	957.9 120.77	8.4 .45	14.1 .44
GROUP 3 - CERIC OXIDE INTERMEDIATE DOSE	901.2 70.63	8.4 .44	14.1 .50
GROUP 4 - CERIC OXIDE HIGH DOSE	953.2 79.12	8.5 .37	13.8 .45

PROJECT NO : 90831

GROUP MEAN (S.D.) CLINICAL BIOCHEMICAL ANALYSES

TABLE NO. 13

HEALTH SCREEN - MALES

	B.U.N. MG/DL	CREAT- ININE MG/DL	GLUCOSE MG/DL	TOTAL BILI- RUBIN MG/DL	AST U/L	ALT U/L
GROUP 5 - HEALTH SCREEN	11.4 1.67	.5 .07	117.0 13.81	.09 .022	137.0 32.77	44.2 6.84





PROJECT NO : 90831

GROUP MEAN (S.D.) CLINICAL BIOCHEMICAL ANALYSES

TABLE NO. 13

HEALTH SCREEN - MALES

ALKALINE PHOS- PHATASE U/L	CA MG/DL	PHOS- PHORUS MG/DL	CHOLE- TEROL MG/DL	TRIGLY- CERIDES MG/DL	TOTAL PROTEIN G/DL
239.8	10.0	9.49	78.2	38.8	5.2
67.96	.30	.584	13.71	6.53	.17

GROUP 5 - HEALTH SCREEN

PROJECT NO : 90831

GROUP MEAN (S.D.) CLINICAL BIOCHEMICAL ANALYSES

TABLE NO. 13

HEALTH SCREEN - MALES

ALBUMIN G/DL	A/G RATIO	GLOBULIN G/DL	NA MEQ/L	K MEQ/L	CL MEQ/L
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2.8	1.18	2.4	145.3	4.22	103.0
.11	.057	.10	1.06	.210	.94

GROUP 5 - HEALTH SCREEN

TABLE NO. 13 GROUP MEAN (S.D.) CLINICAL BIOCHEMICAL ANALYSES PROJECT NO :90831
 HEALTH SCREEN - FEMALES

	B.U.N. MG/DL	CREAT- ININE MG/DL	GLUCOSE MG/DL	TOTAL BILI- RUBIN MG/DL	AST U/L	ALT U/L
GROUP 5 - HEALTH SCREEN	15.3 3.74	.6 .09	132.0 20.31	.11 .023	120.2 12.50	30.5 7.29





PROJECT NO : 90871

GROUP MEAN (S.D.) CLINICAL BIOCHEMICAL ANALYSES

TABLE NO. 13

HEALTH SCREEN - FEMALES

ALKALINE PHOS- PHATASE U/L	CA MG/DL	PHOS- PHORUS MG/DL	CHOLE- STEROL MG/DL	TRIGLY- CERIDES MG/DL	TOTAL PROTEIN G/DL
211.9	10.1	10.22	89.5	28.4	5.2
31.43	.17	.589	10.31	7.18	.17

PROJECT NO :90931

GROUP MEAN (S.D.) CLINICAL BIOCHEMICAL ANALYSES

TABLE NO. 13

HEALTH SCREEN - FEMALES

	ALBUMIN G/DL	A/G RATIO	GLOBULIN G/DL	NA MEQ/L	K MEQ/L	CL MEQ/L
GROUP 5 - HEALTH SCREEN	2.9 .11	1.26 .053	2.3 .10	145.6 1.08	4.38 .445	106.4 .52



PROJECT NO : 90831

GROUP MEAN (S.D.) CLINICAL BIOCHEMICAL ANALYSES

TABLE NO. 13

WEEK 6 - MALES

	B.U.N. MG/DL	CREAT- ININE MG/DL	GLUCOSE MG/DL	TOTAL BILI- RUBIN MG/DL	AST U/L	ALT U/L
GROUP 1 - AIR CONTROL	17.3 2.50	.9 .15	103.6 12.49	.13 .027	149.9 23.28	42.7 4.92
GROUP 2 - CERIC OXIDE LOW DOSE	19.3 3.40	.9 .21	95.0 15.48	.14 .018	157.8 18.37	46.8 5.12
GROUP 3 - CERIC OXIDE INTERMEDIATE DOSE	16.9 2.31	.8 .12	112.3 11.76	.15 .031	164.6 25.71	46.0 9.21
GROUP 4 - CERIC OXIDE HIGH DOSE	17.8 2.20	.8 .15	108.6 12.19	.14 .027	148.3 24.70	46.8 9.30

PROJECT NO : 90831

GROUP MEAN (S.D.) CLINICAL BIOCHEMICAL ANALYSES

TABLE NO. 13

WEEK 6 - MALES

	ALKALINE PHOS- PHATASE U/L	CA MG/DL	PHOS- PHORUS MG/DL	CHOLE- TEROL MG/DL	TRIGLY- CERIDES MG/DL	TOTAL PROTEIN G/DL
GROUP 1 - AIR CONTROL	136.8 27.42	8.9 .34	7.42 .628	62.7 14.62	61.1 20.08	6.7 .32
GROUP 2 - CERIC OXIDE LOW DOSE	157.1 36.39	9.0 .24	7.20 .717	61.1 12.56	61.1 29.59	6.8 .26
GROUP 3 - CERIC OXIDE INTERMEDIATE DOSE	156.3 30.15	9.1 .29	7.59 .842	61.2 13.86	68.3 26.87	6.6 .22
GROUP 4 - CERIC OXIDE HIGH DOSE	167.9 32.68	9.1 .25	7.33 .640	62.9 11.07	69.0 20.02	6.7 .28

GROUP MEAN (S.D.) CLINICAL BIOCHEMICAL ANALYSES

TABLE NO. 13

WEEK 6 - MALES

	ALBUMIN G/DL	A/G RATIO	GLOBULIN G/DL	NA MEQ/L	K MEQ/L	CL MEQ/L
GROUP 1 - AIR CONTROL	3.4 .13	1.01 .080	3.4 .27	147.9 1.49	4.95 .630	104.3 1.22
GROUP 2 - CERIC OXIDE LOW DOSE	3.4 .11	1.00 .052	3.4 .20	147.7 2.09	5.05 .548	104.9 2.64
GROUP 3 - CERIC OXIDE INTERMEDIATE DOSE	3.3 .08	1.01 .049	3.3 .18	145.3 B 1.94	5.49 .659	102.6 2.29
GROUP 4 - CERIC OXIDE HIGH DOSE	3.3 .09	.94 .184	3.5 .40	146.5 1.69	5.06 .479	104.1 2.33

SIGNIFICANTLY DIFFERENT FROM CONTROL (GROUP 1) VALUE: B - P<.01 (DUNNETT'S)

PROJECT NO : 90831

GROUP MEAN (S.D.) CLINICAL BIOCHEMICAL ANALYSES

TABLE NO. 13

WEEK 6 - FEMALES

	B. U. N. MG/DL	CREAT- ININE MG/DL	GLUCOSE MG/DL	TOTAL BILI- RUBIN MG/DL	AST U/L	ALT U/L
GROUP 1 - AIR CONTROL	21.3	.9	94.9	.14	162.7	38.7
	3.31	.18	14.25	.021	32.59	7.91
GROUP 2 - CERIC OXIDE LOW DOSE	22.5	.9	96.4	.13	159.4	37.4
	2.56	.13	9.08	.029	26.75	5.47
GROUP 3 - CERIC OXIDE INTERMEDIATE DOSE	22.1	.9	102.2	.13	139.5	42.3
	3.42	.13	12.09	.029	19.63	6.64
GROUP 4 - CERIC OXIDE HIGH DOSE	22.2	1.0	115.0	.15	136.0 A	41.3
	4.14	.12	31.21	.025	25.12	6.66

SIGNIFICANTLY DIFFERENT FROM CONTROL (GROUP 1) VALUE: A - P<.05 (DUNNETT'S)

PROJECT NO : 90831

GROUP MEAN (S.D.) CLINICAL BIOCHEMICAL ANALYSES

TABLE NO. 13

WEEK 6 - FEMALES

	ALKALINE PHOS- PHATASE U/L	CA MG/DL	PHOS- PHORUS MG/DL	CHOLE- TEROL MG/DL	TRIGLY- CERIDES MG/DL	TOTAL PROTEIN G/DL
GROUP 1 - AIR CONTROL	118.0 25.76	9.7 .23	6.71 .945	74.6 15.78	44.8 9.00	6.8 .33
GROUP 2 - CERIC OXIDE LOW DOSE	122.8 40.20	9.7 .32	6.17 .553	78.0 16.22	42.2 6.50	7.0 .32
GROUP 3 - CERIC OXIDE INTERMEDIATE DOSE	112.3 31.37	9.7 .36	6.14 .892	72.8 18.69	44.9 7.40	7.1 .20
GROUP 4 - CERIC OXIDE HIGH DOSE	115.5 22.56	9.9 .33	6.22 1.010	73.3 13.09	42.9 10.86	7.1 A .30

SIGNIFICANTLY DIFFERENT FROM CONTROL (GROUP 1) VALUE: A - P < .05 (DUNNETT'S)

TABLE NO. 13 GROUP MEAN (S.D.) CLINICAL BIOCHEMICAL ANALYSES PROJECT NO : 90831

WEEK 6 - FEMALES

	ALBUMIN G/DL	A/G RATIO	GLOBULIN G/DL	NA MEQ/L	K MEQ/L	CL MEQ/L
GROUP 1 - AIR CONTROL	3.5 .17	1.06 .072	3.3 .22	146.9 2.34	5.42 .601	106.8 2.86
GROUP 2 - CERIC OXIDE LOW DOSE	3.5 .10	1.03 .062	3.4 .25	146.5 2.18	5.37 .495	106.5 2.15
GROUP 3 - CERIC OXIDE INTERMEDIATE DOSE	3.6 .13	1.02 .046	3.5 A .12	145.4 2.41	5.40 .649	106.3 1.95
GROUP 4 - CERIC OXIDE HIGH DOSE	3.6 .15	1.03 .043	3.5 A .18	145.9 1.94	5.27 .759	106.9 1.53

SIGNIFICANTLY DIFFERENT FROM CONTROL (GROUP 1) VALUE: A - P<.05 (DUNNETT'S)

TABLE NO. 13 GROUP MEAN (S.D.) CLINICAL BIOCHEMICAL ANALYSES PROJECT NO : 90831
 WEEK 13 - MALES

	B.U.N. MG/DL	CREAT- ININE MG/DL	GLUCOSE MG/DL	TOTAL BILI- RUBIN MG/DL	AST U/L	ALT U/L
GROUP 1 - AIR CONTROL	12.9 2.50	.6 .11	136.7 12.32	.10 .018	129.0 23.11	35.1 6.33
GROUP 2 - CERIC OXIDE LOW DOSE	13.7 2.06	.6 .13	138.9 15.32	.10 .018	133.2 31.32	39.1 7.42
GROUP 3 - CERIC OXIDE INTERMEDIATE DOSE	13.9 2.06	.6 .11	150.9 15.38	.10 .028	129.7 15.56	34.9 5.57
GROUP 4 - CERIC OXIDE HIGH DOSE	14.5 2.79	.6 .12	137.1 22.45	.09 .019	139.1 27.31	42.1 18.29

PROJECT NO : 90831

GROUP MEAN (S.D.) CLINICAL BIOCHEMICAL ANALYSES

TABLE NO. 13

WEEK 13 - MALES

	ALKALINE PHOS- PHATASE U/L	CA MG/DL	PHOS- PHORUS MG/DL	CHOLE- STEROL MG/DL	TRIGLY- CERIDES MG/DL	TOTAL PROTEIN G/DL
GROUP 1 - AIR CONTROL	69.6 17.93	9.5 .31	7.01 .720	52.3 17.31	68.4 27.58	6.1 .37
GROUP 2 - CERIC OXIDE LOW DOSE	75.8 22.89	9.3 .27	7.33 .496	50.7 11.10	60.2 39.97	6.0 .32
GROUP 3 - CERIC OXIDE INTERMEDIATE DOSE	74.9 11.51	9.6 .38	7.26 .700	55.6 11.74	63.1 34.04	6.2 .41
GROUP 4 - CERIC OXIDE HIGH DOSE	82.3 17.66	9.4 .26	7.16 .583	50.1 11.59	55.4 21.95	6.0 .39

PROJECT NO : 90831

GROUP MEAN (S.D.) CLINICAL BIOCHEMICAL ANALYSES

TABLE NO. 13

WEEK 13 - MALES

	ALBUMIN G/DL	A/G RATIO	GLOBULIN G/DL	NA MEQ/L	K MEQ/L	CL MEQ/L
GROUP 1 - AIR CONTROL	2.9 .12	.92 .067	3.2 .29	145.4 1.50	4.61 .210	101.6 1.72
GROUP 2 - CERIC OXIDE LOW DOSE	2.9 .13	.94 .064	3.1 .25	144.7 1.67	4.69 .299	101.3 1.87
GROUP 3 - CERIC OXIDE INTERMEDIATE DOSE	2.9 .10	.91 .078	3.2 .35	144.5 1.13	4.98 .986	101.5 1.30
GROUP 4 - CERIC OXIDE HIGH DOSE	2.8 .15	.92 .111	3.1 .39	145.4 .74	4.63 .240	102.3 .99

PROJECT NO : 90831

GROUP MEAN (S.D.) CLINICAL BIOCHEMICAL ANALYSES

TABLE NO. 13

WEEK 13 - FEMALES

	B.U.N. MG/DL	CREAT- ININE MG/DL	GLUCOSE MG/DL	TOTAL BILI- RUBIN MG/DL	AST U/L	ALT U/L
GROUP 1 - AIR CONTROL	15.1 2.34	.7 .14	135.3 17.10	.12 .026	119.5 25.60	34.2 6.94
GROUP 2 - CERIC OXIDE LOW DOSE	16.0 2.17	.6 .13	139.7 13.76	.11 .029	119.1 23.99	32.1 4.99
GROUP 3 - CERIC OXIDE INTERMEDIATE DOSE	15.0 1.54	.6 .17	132.3 22.98	.11 .021	120.3 20.87	35.4 6.03
GROUP 4 - CERIC OXIDE HIGH DOSE	15.7 3.31	.6 .14	126.7 24.07	.11 .020	128.9 37.02	42.3 36.05

PROJECT NO : 90831

GROUP MEAN (S.D.) CLINICAL BIOCHEMICAL ANALYSES

TABLE NO. 13

WEEK 13 - FEMALES

	ALKALINE PHOS- PHATASE U/L	CA MG/DL	PHOS- PHORUS MG/DL	CHOLE- TEROL MG/DL	TRIGLY- CERIDES MG/DL	TOTAL PROTEIN G/DL
GROUP 1 - AIR CONTROL	54.4 11.56	9.5 .40	6.78 .991	60.1 20.48	39.8 11.94	6.4 .39
GROUP 2 - CERIC OXIDE LOW DOSE	54.0 15.43	9.7 .44	6.87 .770	67.3 15.49	39.1 8.43	6.3 .32
GROUP 3 - CERIC OXIDE INTERMEDIATE DOSE	53.9 12.04	9.7 .37	6.79 .700	56.9 15.40	31.9 10.15	6.5 .42
GROUP 4 - CERIC OXIDE HIGH DOSE	54.1 12.92	9.7 .43	6.67 .804	59.5 11.17	40.5 12.14	6.4 .32

PROJECT NO : 90831

GROUP MEAN (S.D.) CLINICAL BIOCHEMICAL ANALYSES

TABLE NO. 13

WEEK 13 - FEMALES

	ALBUMIN G/DL	A/G RATIO	GLOBULIN G/DL	NA MEQ/L	K MEQ/L	CL MEQ/L
GROUP 1 - AIR CONTROL	3.1 .16	.97 .075	3.2 .29	144.9 1.58	4.29 .248	103.4 1.55
GROUP 2 - CERIC OXIDE LOW DOSE	3.0 .18	.93 .082	3.3 .25	144.3 1.54	4.29 .348	103.3 1.44
GROUP 3 - CERIC OXIDE INTERMEDIATE DOSE	3.2 .18	.95 .094	3.4 .35	145.5 1.55	4.35 .306	103.9 1.44
GROUP 4 - CERIC OXIDE HIGH DOSE	3.2 .15	.97 .055	3.3 .21	145.1 1.58	4.36 .347	103.8 1.66

PROJECT NO : 90831

GROUP MEAN (S.D.) ABSOLUTE ORGAN WEIGHTS (G)

TABLE NO. 14

MALES

	TERMINAL BODY WEIGHT (G)	LIVER	SPLEEN	HEART	LUNGS
GROUP 1 - AIR CONTROL	485.0 48.04	12.359 1.5845	.783 .1152	1.594 .1500	1.611 .1088
GROUP 2 - CERIC OXIDE LOW DOSE	476.2 43.08	12.239 1.9668	.805 .1457	1.579 .1668	1.760 .1398
GROUP 3 - CERIC OXIDE INTERMEDIATE DOSE	488.4 20.80	12.948 1.0880	.866 .1202	1.569 .1046	2.574 E .3499
GROUP 4 - CERIC OXIDE HIGH DOSE	461.0 58.49	11.981 2.1479	.868 .1741	1.587 .3448	4.662 E .5161

SIGNIFICANTLY DIFFERENT FROM CONTROL (GROUP 1) VALUE: E - P<.001 (DUNN'S)

PROJECT NO : 90831

GROUP MEAN (S.D.) ABSOLUTE ORGAN WEIGHTS (G)

TABLE NO. 14

MALES

	THYROID/	ADRENALS	KIDNEYS	GONADS	PRU-
	PARA-				STATE
	THYROID				
GROUP 1 - AIR CONTROL	.023 .0041	.062 .0079	2.987 .2970	3.543 .3093	1.283 .2452
GROUP 2 - CERIC OXIDE LOW DOSE	.021 .0020	.058 .0054	2.965 .2616	3.510 .2692	1.388 .3016
GROUP 3 - CERIC OXIDE INTERMEDIATE DOSE	.021 .0032	.055 .0080	2.974 .1632	3.621 .2202	1.257 .2451
GROUP 4 - CERIC OXIDE HIGH DOSE	.022 .0044	.058 .0068	2.868 .3922	3.479 .3570	1.360 .3417

PROJECT NO : 90831

GROUP MEAN (S.D.) ABSOLUTE ORGAN WEIGHTS (G)

TABLE NO. 14

MALES

	BRAIN	PIT-UITARY	THYMUS
GROUP 1 - AIR CONTROL	2.160 .0889	.015 .0027	.222 .0551
GROUP 2 - CERIC OXIDE LOW DOSE	2.133 .0537	.015 .0021	.235 .0509
GROUP 3 - CERIC OXIDE INTERMEDIATE DOSE	2.118 .0782	.014 .0017	.287 B .0376
GROUP 4 - CERIC OXIDE HIGH DOSE	2.082 .1896	.015 .0021	.248 .0796

SIGNIFICANTLY DIFFERENT FROM CONTROL (GROUP 1) VALUE: B - P<.01 (DUNNETT'S)

PROJECT NO : 90831

GROUP MEAN (S.D.) ABSOLUTE ORGAN WEIGHTS (G)

TABLE NO. 14

FEMALES

	TERMINAL BODY WEIGHT (G)	LIVER	SPLEEN	HEART	LUNGS
GROUP 1 - AIP CONTROL	240.8 18.96	6.425 .5200	.518 .0657	.950 .0768	1.145 .0871
GROUP 2 - CERIC OXIDE LOW DOSE	241.4 18.75	6.543 .7021	.584 .0795	.958 .1012	1.311 .1490
GROUP 3 - CERIC OXIDE INTERMEDIATE DOSE	237.2 18.14	6.311 .6956	.534 .0966	.975 .1084	1.651 E .2900
GROUP 4 - CERIC OXIDE HIGH DOSE	234.1 15.30	6.343 .6212	.519 .0631	.957 .0634	3.173 E .3235

SIGNIFICANTLY DIFFERENT FROM CONTROL (GROUP 1) VALUE: E - P<.001 (DUNN'S)



PROJECT NO :90831

GROUP MEAN (S.D.) ABSOLUTE ORGAN WEIGHTS (G)

TABLE NO. 14

FEMALES

	THYROIDS/ PARA- THYROIDS	ADRENALS	KIDNEYS	GONADS	UTERUS
GROUP 1 - AIR CONTROL	.015 .0024	.059 .0076	1.693 .1292	.083 .0178	.586 .1030
GROUP 2 - CERIC OXIDE LOW DOSE	.016 .0034	.061 .0125	1.681 .1090	.074 .0138	.546 .0822
GROUP 3 - CERIC OXIDE INTERMEDIATE DOSE	.016 .0029	.062 .0095	1.643 .1487	.095 .0174	.564 .0771
GROUP 4 - CERIC OXIDE HIGH DOSE	.017 .0038	.062 .0102	1.620 .1719	.079 .0113	.554 .1028

PROJECT NO : 90831

TABLE NO. 14 GROUP MEAN (S.D.) ABSOLUTE ORGAN WEIGHTS (G)

FEMALES

BRAIN PITUITARY THYMUS

GROUP	BRAIN	PITUITARY	THYMUS
GROUP 1 - AIR CONTROL	1.924 .0560	.017 .0028	.186 .0335
GROUP 2 - CERIC OXIDE LOW DOSE	1.965 .0803	.015 .0014	.173 .0635
GROUP 3 - CERIC OXIDE INTERMEDIATE DOSE	1.943 .0783	.015 .0025	.204 .0386
GROUP 4 - CERIC OXIDE HIGH DOSE	1.931 .0467	.015 .0021	.165 .0426

TABLE NO. 15 GROUP MEAN (S.D.) RELATIVE ORGAN WEIGHTS (G%)
 (RELATIVE TO BODY WEIGHT) PROJECT NO : 90831

MALES

GROUP	TERMINAL BODY WEIGHT (G)	LIVER	SPLEEN	HEART	LUNGS
GROUP 1 - AIR CONTROL	485.0 48.04	2.545 .1534	.162 .0190	.330 .0318	.334 .0256
GROUP 2 - CERIC OXIDE LOW DOSE	476.2 43.08	2.560 .2395	.169 .0286	.332 .0230	.371 .0270
GROUP 3 - CERIC OXIDE INTERMEDIATE DOSE	488.4 20.80	2.650 .1790	.178 .0266	.322 .0238	.528E .0775
GROUP 4 - CERIC OXIDE HIGH DOSE	461.0 58.49	2.586 .1803	.188A .0298	.344 .0474	1.024E .1621

 SIGNIFICANTLY DIFFERENT FROM CONTROL (GROUP 1) VALUE: A - P<.05(DUNNETT'S)
 E - P<.001 (DUNN'S)



TABLE NO. 15 GROUP MEAN (S.D.) RELATIVE ORGAN WEIGHTS (G%) PROJECT NO : 90831
 (RELATIVE TO BODY WEIGHT)

MALES

	THYROID/	ADRENALS	KIDNEYS	GONADS	PRO-
	PARA-				STATE
	THYROID				
GROUP 1 - AIR CONTROL	.005 .0007	.013 .0022	.619 .0686	.733 .0546	.264 .0476
GROUP 2 - CERIC OXIDE LOW DOSE	.005 .0005	.012 .0015	.624 .0399	.743 .0858	.292 .0673
GROUP 3 - CERIC OXIDE INTERMEDIATE DOSE	.004 .0008	.011 .0017	.609 .0340	.743 .0663	.258 .0558
GROUP 4 - CERIC OXIDE HIGH DOSE	.005 .0010	.013 .0014	.622 .0310	.762 .0984	.294 .0511

PROJECT NO : 90831

GROUP MEAN (S.D.) RELATIVE ORGAN WEIGHTS (G%)
(RELATIVE TO BODY WEIGHT)

TABLE NO. 15

MALES

	BRAIN	PIT-UITARY	THYMUS
GROUP 1 - AIR CONTROL	.449 .0404	.003 .0005	.046 .0109
GROUP 2 - CERIC OXIDE LOW DOSE	.451 .0405	.003 .0005	.050 .0106
GROUP 3 - CERIC OXIDE INTERMEDIATE DOSE	.434 .0237	.003 .0003	.059B .0074
GROUP 4 - CERIC OXIDE HIGH DOSE	.460 .0758	.003 .0003	.053 .0137

SIGNIFICANTLY DIFFERENT FROM CONTROL (GROUP 1) VALUE: B - P<.01 (DUNNETT'S)

PROJECT NO : 90831

GROUP MEAN (S.D.) RELATIVE ORGAN WEIGHTS (G%)
(RELATIVE TO BODY WEIGHT)

TABLE NO. 15

FEMALES

	TERMINAL BODY WEIGHT (G)	LIVER	SPLEEN	HEART	LUNGS
GROUP 1 - AIR CONTROL	240.8 18.96	2.671 .1532	.216 .0281	.396 .0391	.477 .0443
GROUP 2 - CERIC OXIDE LOW DOSE	241.4 18.75	2.707 .1473	.242 .0259	.397 .0312	.544 .0557
GROUP 3 - CERIC OXIDE INTERMEDIATE DOSE	237.2 18.14	2.660 .1992	.226 .0445	.412 .0395	.697E .1124
GROUP 4 - CERIC OXIDE HIGH DOSE	234.1 15.30	2.709 .1830	.222 .0252	.410 .0298	1.358E .1432

SIGNIFICANTLY DIFFERENT FROM CONTROL (GROUP 1) VALUE: E - P<.001 (DUNN'S)

PROJECT NO : 90831

GROUP MEAN (S.D.) RELATIVE ORGAN WEIGHTS (G%)
(RELATIVE TO BODY WEIGHT)

TABLE NO. 15

FEMALES

	THYROIDS/ PARA- THYROIDS	ADRENALS	KIDNEYS	GONADS	UTERUS
GROUP 1 - AIR CONTROL	.006 .0011	.024 .0033	.705 .0560	.035 .0073	.249 .0599
GROUP 2 - CERIC OXIDE LOW DOSE	.007 .0012	.025 .0052	.698 .0417	.031 .0053	.227 .0400
GROUP 3 - CERIC OXIDE INTERMEDIATE DOSE	.007 .0014	.026 .0043	.694 .0532	.036 .0071	.239 .0252
GROUP 4 - CERIC OXIDE HIGH DOSE	.007 .0017	.027 .0044	.692 .0628	.034 .0060	.237 .0497

PROJECT NO : 90831

GROUP MEAN (S.D.) RELATIVE ORGAN WEIGHTS (G%)
(RELATIVE TO BODY WEIGHT)

TABLE NO. 15

FEMALES

	BRAIN	PIT-UITARY	THYMUS
GROUP 1 - AIR CONTROL	.804 .0742	.007 .0012	.078 .0179
GROUP 2 - CERIC OXIDE LOW DOSE	.819 .0766	.006 .0007	.071 .0257
GROUP 3 - CERIC OXIDE INTERMEDIATE DOSE	.823 .0578	.007 .0009	.086 .0168
GROUP 4 - CERIC OXIDE HIGH DOSE	.827 .0463	.007 .0008	.071 .0180

PROJECT NO : 90831

GROUP MEAN (S.D.) RELATIVE ORGAN WEIGHTS (C%)
(RELATIVE TO BRAIN WEIGHT)

TABLE NO. 16

MALES

	BRAIN WEIGHT (G.)	LIVER	SPLEEN	HEART
GROUP 1 - AIR CONTROL	2.160 .0989	572.525 73.5889	36.255 5.0201	73.824 6.5727
GROUP 2 - CERIC OXIDE LOW DOSE	2.133 .0537	573.094 86.5667	37.656 6.3077	74.006 7.3564
GROUP 3 - CERIC OXIDE INTERMEDIATE DOSE	2.118 .0782	611.995 54.9831	40.966 6.0432	74.136 5.0739
GROUP 4 - CERIC OXIDE HIGH DOSE	2.082 .1896	587.554 174.0101	42.378 11.6122	78.667 31.1347

TABLE NO. 16 GROUP MEAN (S.D.) RELATIVE ORGAN WEIGHTS (G%)
 (RELATIVE TO BRAIN WEIGHT) PROJECT NO : 90831

MALES

	LUNGS	THYROIDIS/ PARA- THYROIDIS	ADRENALS	KIDNEYS
GROUP 1 - AIP CONTROL	74.610 4.0913	1.080 .1670	2.894 .3762	138.492 14.5001
GROUP 2 - CERIC OXIDE LOW DOSE	82.566 6.8553	1.004 .0923	2.735 .2878	138.965 11.3344
GROUP 3 - CERIC OXIDE INTERMEDIATE DOSE	121.932 E 18.9617	.975 .1595	2.605 .3386	140.527 8.0447
GROUP 4 - CERIC OXIDE HIGH DOSE	225.991 E 35.2812	1.069 .2848	2.817 .5694	140.154 34.3996

SIGNIFICANTLY DIFFERENT FROM CONTROL (GROUP 1) VALUE: E - P < .001 (DUNN'S)

TABLE NO. 16 GROUP MEAN (S.D.) RELATIVE ORGAN WEIGHTS (G%)
 (RELATIVE TO BRAIN WEIGHT) PROJECT NO : 90831

MALES

	GONADS	PRO- STATE	PIT- UITARY	THYMUS
GROUP 1 - AIR CONTROL	164.009 11.9466	59.259 10.4555	.690 .1149	10.237 2.3387
GROUP 2 - CERIC OXIDE LOW DOSE	164.702 14.0122	65.069 14.1198	.701 .1029	11.038 2.4431
GROUP 3 - CERIC OXIDE INTERMEDIATE DOSE	171.105 11.0295	59.181 10.4695	.672 .0799	13.564A 1.8590
GROUP 4 - CERIC OXIDE HIGH DOSE	169.604 25.5096	67.140 26.1359	.714 .1917	12.182 4.7711

SIGNIFICANTLY DIFFERENT FROM CONTROL (GROUP 1) VALUE: A - P<.05 (DUNNETT'S)

TABLE NO. 16 GROUP MEAN (S.D.) RELATIVE ORGAN WEIGHTS (G%) PROJECT NO : 90831
 (RELATIVE TO BRAIN WEIGHT)

FEMALES

	BRAIN WEIGHT (G)	LIVER	SPLEEN	HEART
GROUP 1 - AIR CONTROL	1.924 .0560	334.191 29.1009	26.950 3.5828	49.419 4.1965
GROUP 2 - CERIC OXIDE LOW DOSE	1.965 .0803	334.096 43.1074	29.779 4.2231	48.943 6.3919
GROUP 3 - CERIC OXIDE INTERMEDIATE DOSE	1.943 .0783	324.656 30.6869	27.502 5.1799	50.242 5.6058
GROUP 4 - CERIC OXIDE HIGH DOSE	1.931 .0467	328.519 31.1325	26.909 3.3719	49.588 3.1272

TABLE NO. 16 GROUP MEAN (S.D.) RELATIVE ORGAN WEIGHTS (G%) PROJECT NO : 90831
 (RELATIVE TO BRAIN WEIGHT)

FEMALES

	LUNGS	THYROIDIS/ PARA- THYROIDIS	ADRENALS	KIDNEYS
GROUP 1 - AIR CONTROL	59.521 4.6352	.781 .1197	3.044 .3765	89.100 7.6830
GROUP 2 - CERIC OXIDE LOW DOSE	66.866 8.3016	.806 .1753	3.112 .6755	85.751 7.5003
GROUP 3 - CERIC OXIDE INTERMEDIATE DOSE	85.047 E 15.0128	.807 .1612	3.173 .5110	84.576 6.6131
GROUP 4 - CERIC OXIDE HIGH DOSE	164.322 E 16.1379	.857 .1911	3.211 .5157	84.867 8.5398

SIGNIFICANTLY DIFFERENT FROM CONTROL (GROUP 1) VALUE: E - P<.001 (DUNN'S)

TABLE NO. 16 GROUP MEAN (S.D.) RELATIVE ORGAN WEIGHTS (G%)
 (RELATIVE TO BRAIN WEIGHT) PROJECT NO : 90931

FEMALES

	GONADS	UTERUS	PIT- UITARY	THYMUS
GROUP 1 - AIR CONTROL	4.310 .9285	30.476 5.2101	.869 .1540	9.661 1.7819
GROUP 2 - CERIC OXIDE LOW DOSE	3.789 .7421	28.193 4.6330	.779 .0944	8.927 3.2883
GROUP 3 - CERIC OXIDE INTERMEDIATE DOSE	4.367 .8957	29.157 3.8670	.794 .1129	10.487 2.0096
GROUP 4 - CERIC OXIDE HIGH DOSE	4.084 .5944	28.761 5.3612	.802 .1028	8.565 2.2580

TABLE NO.: 17
PROJECT NO.: 90G31

INCIDENCE OF GROSS PATHOLOGICAL FINDINGS

GROUP 1 AIR CONTROL	GROUP 2 CERIC OXIDE	LOW DOSE	SEX :				NO. OF ANIMALS IN DOSE GROUP :	NO. OF ANIMALS EXAMINED :
			MALE	FEMALE	INTERMEDIATE DOSE	HIGH DOSE		
			1	2	3	4		
			15	15	15	15		
			15	15	15	15		
KIDNEY								
-DILATATION								
			0	2	1	3		
-AREA DEPRESSED								
			2	0	0	1		
-FOCI DARK								
			0	0	0	1		
-AREA PALE								
			0	1	0	0		
LIVER								
-AREA PALE								
			2	9	7	2		
-AREA RAISED								
			2	0	1	0		
-MASS								
			0	0	0	1		
LUNG								
-DISCOLORATION								
			0	0	0	15		
-AREA DARK								
			0	0	1	1		
-AREA PALE								
			0	0	15	0		
-UNCOLLAPSED								
			0	0	2	15		
LYMPH NODE HINDIBULAR								
-ENLARGEMENT								
			4	2	5	4		
-AREA DARK								
			2	1	2	1		
-FOCI DARK								
			0	1	2	0		
PITUITARY								
-CYST								
			0	1	0	1		

INCIDENCE OF GROSS PATHOLOGICAL FINDINGS

TABLE NO. 17
PROJECT NO. 1 98831

GROUP 1 GROUP 2	AIR CONTROL CERIC OXIDE		LOW DOSE		SEX 1				INTERMEDIATE DOSE HIGH DOSE	
	GROUP 1	GROUP 2	GROUP 3	GROUP 4	GROUP 1	GROUP 2	GROUP 3	GROUP 4	GROUP 1	GROUP 2
DOSE GROUP : 1 2 3 4 NO. OF ANIMALS IN DOSE GROUP : 15 15 15 15 NO. OF ANIMALS EXAMINED : 15 15 15 15										
PROSTATE										
-AREA PALE										
-AREA RAISED										
SPLEEN										
-CYST										
STOMACH										
-AREA DARK										
THYRUS										
-AREA DARK										
-SMALL										
THYROID										
-SMALL										
URINARY BLADDER										
-DILATATION										
-THICKENING										
-AREA DARK										
LYMPH NODE BRONCHIAL										
-ENLARGEMENT										
-DISCOLORATION										

INCIDENCE OF GROSS PATHOLOGICAL FINDINGS

TABLE NO. 1 17
PROJECT NO. 1 90831

GROUP 1 GROUP 2	AIR CONTROL CERIC OXIDE	LOW DOSE	SEX :				INTERMEDIATE DOSE HIGH DOSE
			DOSE GROUP :		M A L E		
			1	2	3	4	
			15	15	15	15	
			15	15	15	15	
NO. OF ANIMALS IN DOSE GROUP :							
NO. OF ANIMALS EXAMINED :							
Lymph Node Mediastinal							
-ENLARGEMENT							
-DISCOLORATION							
-AREA DARK							
Lymph Node Pancreatic							
-ENLARGEMENT							
-AREA DARK							

TABLE NO.: 17
PROJECT NO.: 90831

INCIDENCE OF GROSS PATHOLOGICAL FINDINGS

GROUP	AIR CONTROL	LOW DOSE	GROUP 3	CERIC OXIDE	INTERMEDIATE DOSE
GROUP 2	CERIC OXIDE		GROUP 4	CERIC OXIDE	HIGH DOSE
SEX : FEMALE					
DOSE GROUP : 1 2 3 4					
NO. OF ANIMALS IN DOSE GROUP : 15 15 15 15					
NO. OF ANIMALS EXAMINED : 15 15 15 15					
ADRENAL					
-ENLARGEMENT					
KIDNEY					
-ADHESION					
-CYST					
-AREA DEPRESSED					
-DILATATION					
LIVER					
-AREA PALE					
-AREA RAISED					
LUNG					
-FOCI PALE					
-AREA PALE					
-DISCOLORATION					
-UNCOLLAPSED					
LYMPH NODE MANDIBULAR					
-AREA DARK					
-ENLARGEMENT					
-FOCI DARK					

INCIDENCE OF GROSS PATHOLOGICAL FINDINGS

TABLE NO. 17
PROJECT NO. 90831

GROUP	AIR CONTROL CERIC OXIDE	LOW DOSE	SEX :				INTERMEDIATE DOSE HIGH DOSE
			GROUP 1	GROUP 2	GROUP 3	GROUP 4	
			FEMALE				
			1	2	3	4	
			15	15	15	15	
			15	15	15	15	
NO. OF ANIMALS IN DOSE GROUP :							
NO. OF ANIMALS EXAMINED :							

PITUITARY							
-ENLARGEMENT							

THYROID							
-SMALL							
-AREA DARK							

THYROID							
-ENLARGEMENT							

LYMPH NODE BRONCHIAL							
-DISCOLORATION							
-ENLARGEMENT							

LYMPH NODE MEDIASTINAL							
-DISCOLORATION							
-ENLARGEMENT							

LYMPH NODE PANCREATIC							
-ENLARGEMENT							
-DISCOLORATION							

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INCIDENCE OF HISTOPATHOLOGICAL FINDINGS

TABLE NO.: 18
PROJECT NO.: 90831

GROUP	AIR CONTROL	LOW DOSE	SEX :				GROUP 3	CERIC OXIDE	INTERMEDIATE DOSE
			GROUP 1	GROUP 2	GROUP 3	GROUP 4			
NO. OF ANIMALS IN DOSE GROUP :									
			1	2	3	4			
			15	15	15	15			
--- M A L E ---									
ADRENAL		-TOTAL EXAMINED	15	0	0	15			
-VACUOLATION, CORTICAL									
AORTA		-TOTAL EXAMINED	8	0	0	6			
BONE MARROW		-TOTAL EXAMINED	15	0	0	15			
BONE STERNUM		-TOTAL EXAMINED	15	0	0	15			
BRAIN		-TOTAL EXAMINED	15	0	0	15			
BRONCHUS		-TOTAL EXAMINED	15	15	15	15			
-PIGMENT ACCUMULATION									
CAVITY NASAL		-TOTAL EXAMINED	0	1	5	15			
-HYPERTROPHY AND/OR HYPERPLASIA, GOBLET CELL									
-RHINITIS									
-PIGMENT ACCUMULATION									
		-TOTAL EXAMINED	15	15	15	15			
			0	0	0	1			
			0	1	0	0			
			0	12	15	15			

TABLE NO. 18
PROJECT NO. 90831

INCIDENCE OF HISTOPATHOLOGICAL FINDINGS

GROUP 1 GROUP 2	AIR CONTROL CERIC OXIDE	LOW DOSE	SEX				INTERMEDIATE DOSE		HIGH DOSE	
			GROUP 1	GROUP 2	GROUP 3	GROUP 4	CERIC OXIDE	CERIC OXIDE	CERIC OXIDE	CERIC OXIDE
NO. OF ANIMALS IN DOSE GROUP			15	15	15	15	15	15	15	15
-TOTAL EXAMINED			15	0	0	0	15	0	0	15
CECUM										
-TOTAL EXAMINED			15	0	0	0	15	0	0	15
COLON										
-PARASITE			0	0	0	0	1	0	0	1
DUODENUM										
-TOTAL EXAMINED			15	0	0	0	15	0	0	15
EPIDIDYMIS										
-TOTAL EXAMINED			15	0	0	0	15	0	0	15
ESOPHAGUS										
-TOTAL EXAMINED			15	0	0	0	15	0	0	15
EYE										
-TOTAL EXAMINED			15	0	0	0	15	0	0	15
-FOLD/ROBETTE, RETINAL			1	0	0	0	0	0	0	0
-ATROPHY, RETINAL			1	0	0	0	0	0	0	0
HEART										
-TOTAL EXAMINED			15	0	0	0	15	0	0	15
-INFILTRATION, MONONUCLEAR CELL			8	0	0	0	2	0	0	2

INCIDENCE OF HISTOPATHOLOGICAL FINDINGS

TABLE NO. 1 18
PROJECT NO. 1 90831

	LOW DOSE				INTERMEDIATE DOSE			
	GROUP 1 AIR CONTROL	GROUP 2 CERIC OXIDE	GROUP 3 CERIC OXIDE	GROUP 4 CERIC OXIDE	GROUP 3 CERIC OXIDE	GROUP 4 CERIC OXIDE	GROUP 3 CERIC OXIDE	GROUP 4 CERIC OXIDE
	SEX : M A L E							
	DOSE GROUP :							
	NO. OF ANIMALS IN DOSE GROUP :							
	1	2	3	4	1	2	3	4
	15	15	15	15	15	15	15	15
ILEUM	-TOTAL EXAMINED							
	15	0	0	15	15	0	0	15
JEJUNUM	-TOTAL EXAMINED							
	15	0	0	15	15	0	0	15
KIDNEY	-TOTAL EXAMINED							
	15	3	1	15	15	3	1	15
-FIBROPLASIA	2	0	0	0	2	0	0	0
-CYST	1	0	0	1	1	0	0	1
-DILATATION, PELVIS	0	1	1	3	0	1	1	3
-DILATATION, TUBULAR	0	0	0	1	0	0	0	1
LARYNX	-TOTAL EXAMINED							
	15	15	15	15	15	15	15	15
-METAPLASIA	0	3	9	13	0	3	9	13
-PIGMENT ACCUMULATION	0	6	9	12	0	6	9	12
-LARYNGITIS	0	0	0	1	0	0	0	1
LIVER	-TOTAL EXAMINED							
	15	9	7	15	15	9	7	15
-VACUOLATION, HEPATOCELLULAR	2	7	5	1	2	7	5	1
-NECROSIS	0	0	1	0	0	0	1	0
-PIGMENT ACCUMULATION	0	0	0	6	0	0	0	6

TABLE NO. 18
PROJECT NO. 1 90831

INCIDENCE OF HISTOPATHOLOGICAL FINDINGS

GROUP 1 GROUP 2	AIR CONTROL CERIC OXIDE	LOW DOSE	SEX				INTERMEDIATE DOSE HIGH DOSE
			M A L E				
			DOSE GROUP				
			1	2	3	4	
NO. OF ANIMALS IN DOSE GROUP			15	15	15	15	
LUNG		-TOTAL EXAMINED	15	15	15	15	
		-PIGMENT ACCUMULATION	0	15	15	15	
		-EPITHELIAL HYPERPLASIA, ALVEOLAR	0	1	11	14	
		-MINERALIZATION	0	1	0	0	
		-HYPERPLASIA, LYMPHOID	0	0	0	12	
LYMPH NODE MANDIBULAR		-TOTAL EXAMINED	15	3	5	15	
		-PLASMACYTOSIS AND/OR HISTIOCYTOSIS, MEDULLARY	4	2	5	4	
		-HEMORRHAGE	1	2	2	2	
		-PIGMENT ACCUMULATION	0	0	0	6	
		-HYPERPLASIA, LYMPHOID	0	0	0	2	
LYMPH NODE MESENTERIC		-TOTAL EXAMINED	15	0	0	15	
MAMMARY GLAND		-TOTAL EXAMINED	15	0	0	15	
MUSCLE SKELETAL		-TOTAL EXAMINED	15	0	0	15	
		-INFILTRATION, MONONUCLEAR CELL	0	0	0	1	

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TABLE NO. 18
PROJECT NO. 1 90831

INCIDENCE OF HISTOPATHOLOGICAL FINDINGS

GROUP 1 AIR CONTROL	GROUP 2 CERIC OXIDE	LOW DOSE	SEX				GROUP 3 CERIC OXIDE	GROUP 4 CERIC OXIDE	INTERMEDIATE DOSE	HIGH DOSE
			DOSE GROUP 1	DOSE GROUP 2	DOSE GROUP 3	DOSE GROUP 4				
NO. OF ANIMALS IN DOSE GROUP :										
			15	15	15	15	15	15	15	15
SEX : M A L E										
			1	2	3	4				
-TOTAL EXAMINED										
NERVE OPTIC			15	0	0	15				
-TOTAL EXAMINED										
NERVE SCIATIC			15	0	0	15				
-TOTAL EXAMINED										
PANCREAS			15	0	0	15				
-TOTAL EXAMINED										
PARATHYROID			13	0	0	10				
-TOTAL EXAMINED										
PHARYNX			15	15	15	15				
-TOTAL EXAMINED										
PITUITARY			15	1	0	15				
-TOTAL EXAMINED										
-CYST			1	1	0	1				
-TOTAL EXAMINED										
PROSTATE			15	0	2	15				
-TOTAL EXAMINED										
-PROSTATITIS			4	0	2	1				

INCIDENCE OF HISTOPATHOLOGICAL FINDINGS

TABLE NO. 18
PROJECT NO. 1 90831

GROUP	AIR CONTROL CERIC OXIDE	LOW DOSE	DOSE GROUP				SEX	NO. OF ANIMALS IN DOSE GROUP	CERIC OXIDE		INTERMEDIATE DOSE	
			1	2	3	4			GROUP 3	GROUP 4	HIGH DOSE	INTERMEDIATE DOSE
M A L E												
			15	15	15	15	15	0	0	0	0	15
SALIVARY GLAND												
		-TOTAL EXAMINED	15	0	0	15	15	0	0	15		
SEMINAL VESICLE												
		-TOTAL EXAMINED	15	0	0	15	15	0	0	15		
SKIN												
		-TOTAL EXAMINED	15	0	0	15	15	0	0	15		
SPINAL CORD CERVICAL												
		-TOTAL EXAMINED	14	0	0	15	14	0	0	15		
SPLEEN												
		-TOTAL EXAMINED	15	1	0	15	15	1	0	15		
		-CYST, CAPSULAR -PIGMENT ACCUMULATION	0	1	0	1	0	1	0	1		
			0	0	0	6	0	0	0	6		
STOMACH												
		-TOTAL EXAMINED	15	0	1	15	15	0	1	15		
TESTIS												
		-TOTAL EXAMINED	15	0	0	15	15	0	0	15		

TABLE NO. 18
PROJECT NO. 94831

INCIDENCE OF HISTOPATHOLOGICAL FINDINGS

GROUP 1 GROUP 2	AIR CONTROL CERIC OXIDE	LOW DOSE	SEX				GROUP 3 GROUP 4	CERIC OXIDE CERIC OXIDE	INTERMEDIATE DOSE HIGH DOSE
			M A L E						
			DOSE GROUP						
			1	2	3	4			
NO. OF ANIMALS IN DOSE GROUP			15	15	15	15			
-TOTAL EXAMINED			15	0	0	15			
THYRUS									
-HEMORRHAGE			0	0	0	3			
-TOTAL EXAMINED			15	0	1	15			
-CYST, ULTIMBRANCHIAL/THYROCLOSSAL REMNANTS			5	0	0	9			
-TOTAL EXAMINED			15	0	0	15			
TONGUE									
-TOTAL EXAMINED			15	15	15	15			
TRACHEA									
-PIGMENT ACCUMULATION			0	0	1	14			
-TOTAL EXAMINED			15	0	2	15			
URINARY BLADDER									
-DILATATION			1	0	1	2			
-HEMORRHAGE			0	0	1	0			
-TOTAL EXAMINED			15	13	15	15			
LYMPH NODE BRONCHIAL									
-PIGMENT ACCUMULATION			0	13	15	15			
-HYPERPLASIA, LYMPHOID			0	11	15	15			



INCIDENCE OF HISTOPATHOLOGICAL FINDINGS

TABLE NO.: 18
PROJECT NO.: 9831

GROUP 1 GROUP 2	AIR CONTROL CERIC OXIDE	LOW DOSE	SEX				INTERMEDIATE DOSE HIGH DOSE
			GROUP 3	GROUP 4	CERIC OXIDE	CERIC OXIDE	
			M A L E				
			1	2	3	4	
			15	15	15	15	
			DOSE GROUP				
			0	2	10	9	
			0	2	8	9	
			0	2	9	9	
			0	0	1	0	
			1	0	1	0	
			0	0	1	0	
			NO. OF ANIMALS IN DOSE GROUP				
			-TOTAL EXAMINED				
			LYMPH NODE MEDIASTINAL				
			-PIGMENT ACCUMULATION				
			-HYPERPLASIA, LYMPHOID				
			-HEMORRHAGE				
			LYMPH NODE PANCREATIC				
			-TOTAL EXAMINED				
			-HEMORRHAGE				



INCIDENCE OF HISTOPATHOLOGICAL FINDINGS

TABLE NO. 18
PROJECT NO. 1 90031

GROUP 1 GROUP 2	AIR CONTROL CERIC OXIDE	LOW DOSE	SEX 1				GROUP 3 GROUP 4	CERIC OXIDE CERIC OXIDE	INTERMEDIATE DOSE HIGH DOSE
			DOSE GROUP 1	DOSE GROUP 2	DOSE GROUP 3	DOSE GROUP 4			
NO. OF ANIMALS IN DOSE GROUP 1									
			15	1	0	15	0	15	
-TOTAL EXAMINED									
ADRENAL									
			1	0	0	0	0	0	
-FOCAL CORTICAL HYPERTROPHY									
-TOTAL EXAMINED									
AORTA									
			15	0	0	15	0	15	
-TOTAL EXAMINED									
BONE MARROW									
			15	0	0	15	0	15	
-TOTAL EXAMINED									
BONE STERNUM									
			15	0	0	15	0	15	
-TOTAL EXAMINED									
BRAIN									
			15	0	0	15	0	15	
-TOTAL EXAMINED									
BRONCHUS									
			15	15	15	15	15	15	
-TOTAL EXAMINED									
-PIGMENT ACCUMULATION									
			0	0	4	15			
-TOTAL EXAMINED									
CAVITY NASAL									
			15	15	15	15			
-TOTAL EXAMINED									
			1	0	1	0			
-ATROPHY, OLFACTORY EPITHELIUM									
			0	1	0	2			
-HYPERTROPHY AND/OR HYPERPLASIA, GOBLET CELL									
			0	3	11	15			
-PIGMENT ACCUMULATION									

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INCIDENCE OF HISTOPATHOLOGICAL FINDINGS

TABLE NO. 1 18
PROJECT NO. 1 90031

GROUP 1 GROUP 2	AIR CONTROL CERIC OXIDE	LOW DOSE	SEX 1				INTERMEDIATE DOSE HIGH DOSE
			GROUP 3	GROUP 4	CERIC OXIDE	CERIC OXIDE	
			FEMALE				
			DOSE GROUP 1	DOSE GROUP 2	DOSE GROUP 3	DOSE GROUP 4	
NO. OF ANIMALS IN DOSE GROUP 1			15	15	15	15	15
CECUM		-TOTAL EXAMINED	15	0	0	0	15
COLON		-TOTAL EXAMINED	15	0	0	0	15
DUODENUM		-TOTAL EXAMINED	15	0	0	0	15
ESOPHAGUS		-TOTAL EXAMINED	15	0	0	0	15
EYE		-TOTAL EXAMINED	15	0	0	0	15
-FOLD/ROSETTE, RETINAL		-TOTAL EXAMINED	0	0	0	0	2
HEART		-TOTAL EXAMINED	15	0	0	0	15
ILEUM		-TOTAL EXAMINED	15	0	0	0	15
JEJUNUM		-TOTAL EXAMINED	15	0	0	0	15

INCIDENCE OF HISTOPATHOLOGICAL FINDINGS

TABLE NO. 1 18
PROJECT NO. 1 90831

GROUP 1 GROUP 2	AIR CONTROL CERIC OXIDE	LOW DOSE	SEX 1				GROUP 3 GROUP 4	CERIC OXIDE CERIC OXIDE	INTERMEDIATE DOSE HIGH DOSE
			DOSE GROUP 1	DOSE GROUP 2	DOSE GROUP 3	DOSE GROUP 4			
NO. OF ANIMALS IN DOSE GROUP 1									
			15	15	15	15			
FEMALE									
			15	2	2	15			
-TOTAL EXAMINED									
KIDNEY									
-DILATATION, PELVIS									
-ADHESION, CAPSULAR									
-CYST									
-INFILTRATION, MONONUCLEAR CELL									
-TOTAL EXAMINED									
LARYNX									
-METAPLASIA									
-PIGMENT ACCUMULATION									
-LARYNGITIS									
-TOTAL EXAMINED									
LIVER									
-VACUOLATION, HEPATOCELLULAR									
-ACCESSORY HEPATIC TISSUE									
-PIGMENT ACCUMULATION									
-TOTAL EXAMINED									
LUNG									
-PIGMENT ACCUMULATION									
-EPITHELIAL HYPERPLASIA, ALVEOLAR									
-HYPERPLASIA, LYMPHOID									

INCIDENCE OF HISTOPATHOLOGICAL FINDINGS

TABLE NO. 1 18
PROJECT NO. 1 90831

GROUP 1 GROUP 2	AIR CONTROL CERIC OXIDE	LOW DOSE	SEX 1 FEMALE				INTERMEDIATE DOSE HIGH DOSE
			GROUP 3 GROUP 4	CERIC OXIDE CERIC OXIDE	CERIC OXIDE CERIC OXIDE	CERIC OXIDE CERIC OXIDE	
NO. OF ANIMALS IN DOSE GROUP :			15	15	15	15	
-TOTAL EXAMINED			15	5	3	15	
LYMPH NODE MANDIBULAR			2	4	3	1	
-PLASMACYTOSIS AND/OR HISTIOCYTOSIS, MEDULLARY			3	1	0	0	
-HEMORRHAGE			0	0	0	6	
-PIGMENT ACCUMULATION			15	0	0	15	
LYMPH NODE MESENTERIC			15	0	0	15	
-TOTAL EXAMINED			15	0	0	15	
MAMMARY GLAND			15	0	0	15	
-TOTAL EXAMINED			15	0	0	15	
MUSCLE SKELETAL			15	0	0	15	
-TOTAL EXAMINED			15	0	0	15	
NERVE OPTIC			15	0	0	15	
-TOTAL EXAMINED			15	0	0	15	
NERVE SCIATIC			15	0	0	15	
-TOTAL EXAMINED			15	0	0	15	
OVARY			15	0	0	15	
-TOTAL EXAMINED			15	0	0	15	

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INCIDENCE OF HISTOPATHOLOGICAL FINDINGS

TABLE NO. 1 18
PROJECT NO. 1 90831

GROUP	AIR CONTROL CERIC OXIDE	LOW DOSE	SEX :				INTERMEDIATE DOSE HIGH DOSE
			GROUP 1	GROUP 2	GROUP 3	GROUP 4	
NO. OF ANIMALS IN DOSE GROUP :			15	15	15	15	
DOSE GROUP :			1	2	3	4	
SEX :			FEMALE				
-TOTAL EXAMINED			15	0	0	15	
PANCREAS							
-TOTAL EXAMINED			11	0	0	9	
PARATHYROID							
-TOTAL EXAMINED			15	15	15	15	
PHARYNX							
-TOTAL EXAMINED			15	0	0	15	
PITUITARY							
-TOTAL EXAMINED			15	0	0	15	
SALIVARY GLAND							
-TOTAL EXAMINED			15	0	0	15	
SKIN							
-TOTAL EXAMINED			15	0	0	15	
SPINAL CORD CERVICAL							
-TOTAL EXAMINED			15	0	0	15	
SPLEEN							
-TOTAL EXAMINED			15	0	0	15	
-PIGMENT ACCUMULATION							
-TOTAL EXAMINED			0	0	0	3	

INCIDENCE OF HISTOPATHOLOGICAL FINDINGS

TABLE NO. 1 18
PROJECT NO. 1 90831

GROUP 1 GROUP 2	AIR CONTROL CERIC OXIDE	LOW DOSE	SEX :				INTERMEDIATE DOSE HIGH DOSE
			GROUP 1	GROUP 2	GROUP 3	GROUP 4	
NO. OF ANIMALS IN DOSE GROUP :			15	15	15	15	
-TOTAL EXAMINED			15	0	0	15	
STOMACH							
-TOTAL EXAMINED			15	1	0	15	
THYMUS							
-HEMORRHAGE			0	0	0	1	
-TOTAL EXAMINED			15	0	0	15	
THYROID							
-CYST, ULTIMBRANCHIAL/THYROGLOSSAL REMNANTS			5	0	0	3	
-TOTAL EXAMINED			15	0	0	15	
TONGUE							
-TOTAL EXAMINED			15	15	15	15	
TRACHEA							
-PIGMENT ACCUMULATION			0	0	1	14	
-TOTAL EXAMINED			15	0	0	15	
URINARY BLADDER							
-TOTAL EXAMINED			15	0	0	15	
UTERUS							
-TOTAL EXAMINED			15	0	0	15	

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INCIDENCE OF HISTOPATHOLOGICAL FINDINGS

TABLE NO. 18
PROJECT NO. 9831

GROUP 1 GROUP 2	AIR CONTROL CERIC OXIDE	LOW DOSE	SEX :				INTERMEDIATE DOSE HIGH DOSE
			DOSE GROUP 1	DOSE GROUP 2	DOSE GROUP 3	DOSE GROUP 4	
NO. OF ANIMALS IN DOSE GROUP 1			15	15	15	15	
-TOTAL EXAMINED			15	0	0	15	
VAGINA							
-TOTAL EXAMINED			15	15	15	15	
LYMPH NODE BRONCHIAL							
-PIGMENT ACCUMULATION			0	14	15	15	
-HYPERPLASIA, LYMPHOID			0	13	15	15	
-HEMORRHAGE			0	1	0	0	
-TOTAL EXAMINED			1	10	9	10	
LYMPH NODE MEDIASTINAL							
-HEMORRHAGE			1	0	0	0	
-HYPERPLASIA, LYMPHOID			0	10	9	9	
-PIGMENT ACCUMULATION			0	10	9	9	
-TOTAL EXAMINED			2	0	1	1	
LYMPH NODE PANCREATIC							
-HYPERPLASIA, LYMPHOID			0	0	1	0	
-PIGMENT ACCUMULATION			0	0	1	1	

**BIO-RESEARCH LABORATORIES LTD.****STUDY TITLE**

**A 13-WEEK INHALATION TOXICITY AND NEUROTOXICITY STUDY
BY NOSE-ONLY EXPOSURE OF A DRY POWDER AEROSOL
OF CERIC OXIDE IN THE ALBINO RAT**

VOLUME II**SPONSOR**

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DATA REQUIREMENTS

**United States EPA/TSCA (40 CFR Part 792).
Japanese MHW GLP Regulations (Notification No. 313 and revised rule Notification No. 870)
OECD guidelines No. 413**

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STUDY COMPLETED ON

September 29, 1994

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90831

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PROJECT NO. 90831

INDIVIDUAL CLINICAL OBSERVATIONS

APPENDIX NO. 1

MALES

GROUP 1 - VEHICLE CONTROL
 GROUP 2 - CERIC OXIDE LOW DOSE
 GROUP 3 - CERIC OXIDE INTERMEDIATE DOSE

ANIMAL NO.	OBSERVATION	DAY(S) OF OBSERVATION
1001	Mouth, incisor, broken	71-91
1009	Skin, lesion muzzle, general body condition, swollen muzzle	54-60
1013	Scab, right forelimb, left forelimb Lesion purulent, right forelimb Fur, thin cover, moderate, right forelimb Fur, thin cover, moderate, left forelimb	32-47 33-40 33-92 33-92
1017	Right eye partly closed	39-47
2009	Malocclusion of upper teeth Periorbital, staining, red, left eye Soft feces, liquid during dosing Staining in cage	78-92 78-92 78-89 78-89
2015	Alopecia, right scapular (region of lesion) Skin lesion, right scapular Redness, right scapular Scab, skin, right scapular, fur staining, red, right scapular Liquid, red, right scapular	29-60 29-81 29-89 47-89 47-60
3004	Left eye partly closed	18-24

PROJECT NO. 90831

INDIVIDUAL CLINICAL OBSERVATIONS

APPENDIX NO. 1

MALES

GROUP 4 - CERIC OXIDE HIGH DOSE

GROUP 3 - CERIC OXIDE INTER-MEDIATE DOSE

ANIMAL NO.	OBSERVATION	DAY(S) OF OBSERVATION
3007	Right incisor, broken Fur, staining, red, muzzle Mouth swollen, moderate	16-92 15-24 15-24
4004	Scabs, multiple, left hindpaw	90-92
4006	Incisor, missing, top Incisors, broken, left, incisors, broken, right	10-16 16-24
4012	Salivation excessive, wet fur, muzzle, wet, lower jaw	58-60
4014	Scab, muzzle, left	10-16
4015	Left eye partly closed	18-24

PROJECT NO. 90831

INDIVIDUAL CLINICAL OBSERVATIONS

APPENDIX NO. 1

FEMALES

GROUP 2 - CERIC OXIDE LOW DOSE

GROUP 1 - VEHICLE CONTROL

ANIMAL NO.	OBSERVATION	DAY(S) OF OBSERVATION
1503	Skin, lesion, muzzle Liquid, red, muzzle Staining, red, muzzle Scab, skin, muzzle Scab, skin, muzzle	8-11 8-12 8-12 11-18 40-46
1509	Fur, staining brown, left hindpaw Fur, thin cover, moderate, periorbital right Skin, redness, right periorbital Fur, staining, brown, dorsal thoracic Fur, staining, brown, ventral thoracic	11-18 25-92 33-92 91-92 91-92
1510	Skin, redness, right periorbital Fur, staining, red, right periorbital Fur, wet, right periorbital	25-33 25-33 25-33
1514	Scab, skin, muzzle	40-67
2506	Scab, skin, dry, red, mouth upper jaw, left	75-91
2507	Eyes partly closed, left Mouth, incisors, broken, teeth	17-18 73
2512	Fur, thin cover, slight lower jaw	18-25

PROJECT NO. 90831

INDIVIDUAL CLINICAL OBSERVATIONS

APPENDIX NO. 1

FEMALES

GROUP 4 - CERIC OXIDE HIGH DOSE

GROUP 3 - CERIC OXIDE INTERMEDIATE DOSE

ANIMAL NO.	OBSERVATION	DAY(S) OF OBSERVATION
3501	Fur, staining, brown, right pinna Fur, staining, brown, left hindlimb	11-18 11-18
3502	Incisor, not solid	27-40
3503	Incisors, broken	40-67
3505	Skin lesion, tip of tail Fur, staining, red, left periorbital	6-11 18-33
3511	General body condition, swollen muzzle, skin redness, muzzle	17-25
3516	Skin lesion, red, liquid, tip of tail General body condition: abnormality, tail, blood near tip Scab, skin, tip of tail	Pre Rx to 4 4-33 11-25
3517	Incisor, broken, left Scab, muzzle	40-67 67-89
4503	Fur, staining, reddish, dorsal cervical	11-18
4504	General body condition, dehydrated, slight Fur, staining, red, muzzle	11-12 18-25
4505	Fur, staining, red, muzzle	18-25

PROJECT NO. 90831

INDIVIDUAL CLINICAL OBSERVATIONS

APPENDIX NO. 1

FEMALES

GROUP 4 - CERIC OXIDE HIGH DOSE

ANIMAL NO.	OBSERVATION	DAY(S) OF OBSERVATION
4509	Fur, thin cover, slight, muzzle	33-46
4511	Skin, redness, muzzle Fur, alopecia, moderate, muzzle	19-25 19-33
4515	Fur, staining, red, left forepaw, fur, staining, red, right forepaw	11-18
4516	Fur, staining, red, lower jaw, fur, thin cover, slight, lower jaw	18-25



INDIVIDUAL BODY WEIGHTS (G)

APPENDIX NO.: 2
PROJECT NO.: 90831

ANIMAL \ DAY NO.	MALES GROUP 1 AIR CONTROL			
	78	85	90	91
1001	538	548	542	536
1002	542	554	553	538
1005	547	554	542	535
1006	469	480	464	462
1007	527	534	536	525
1008	447	451	449	441
1009	440	452	454	439
1010	524	536	538	531
1011	391	404	402	400
1012	558	558	554	549
1013	502	506	500	485
1014	570	576	566	551
1015	557	568	561	551
1016	570	580	581	567
1017	545	558	542	538

MEAN 515.3 523.9 519.0 510.0
S.D. 54.0 53.6 52.6 51.0
N 15 15 15 15



INDIVIDUAL BODY WEIGHTS (G)

APPENDIX NO.: 2
PROJECT NO.: 90831

ANIMAL \ DAY NO.	HALES			CERIC OXIDE			LOW DOSE
	78	85	90	91	90	91	91
2001	498	510	513	504			
2002	528	544	546	529			
2003	579	592	578	570			
2004	524	539	527	516			
2005	503	509	498	496			
2006	511	523	504	504			
2007	485	495	492	482			
2008	490	501	500	489			
2009	397	422	422	421			
2010	562	578	576	568			
2011	459	459	460	453			
2012	496	507	504	494			
2013	454	464	470	460			
2015	502	519	506	496			
2016	568	577	575	569			

MEAN 503.7 515.8 511.4 503.4
 S.D. 46.9 46.4 44.1 42.8
 N 15 15 15 15

INDIVIDUAL BODY WEIGHTS (G)

APPENDIX NO.: 2
PROJECT NO.: 90831

ANIMAL \ DAY NO.	MALES				GROUP	HIGH DOSE			
	78	85	90	91		CERIC OXIDE	CERIC OXIDE	CERIC OXIDE	CERIC OXIDE
4002	409	414	407	401					
4003	563	574	572	561					
4004	440	425	421	424					
4005	498	508	510	502					
4006	514	531	533	517					
4007	420	427	419	418					
4008	484	498	494	488					
4009	437	445	445	433					
4010	537	549	553	541					
4011	525	534	529	525					
4012	469	479	468	467					
4014	442	454	459	451					
4015	493	500	506	487					
4016	601	623	631	615					
MEAN	487.9	497.0	496.2	487.9					
S.D.	56.3	61.4	64.7	60.8					
N	14	14	14	14					



INDIVIDUAL BODY WEIGHTS (G)

APPENDIX NO.: 2
PROJECT NO.: 90831

ANIMAL \ DAY	-13	-7	-3	1	8	15	22	27	29	36	43	50	55	57	64
	FEMALES GROUP 1 AIR CONTROL														
1501	115	143	159	158	173	187	198	207	204	226	231	237	245	249	250
1502	110	138	150	164	191	202	223	226	244	253	257	267	264	273	275
1503	112	134	152	156	188	194	215	225	219	237	237	251	257	257	268
1504	110	134	152	165	189	205	216	227	240	240	240	254	260	263	265
1505	104	133	146	147	168	188	204	214	206	227	230	242	246	249	252
1506	109	147	160	168	192	202	223	234	222	240	230	247	255	260	247
1507	113	139	156	171	196	223	239	245	253	260	257	271	279	281	280
1508	118	153	172	177	193	210	235	239	236	256	243	265	269	267	274
1509	107	139	149	157	180	192	207	212	220	230	227	237	239	235	242
1510	106	132	144	155	168	184	199	202	215	231	226	238	243	244	248
1511	113	143	153	156	177	189	205	211	209	224	228	239	251	250	254
1512	111	134	151	157	172	184	190	189	201	208	213	229	228	231	225
1513	107	137	148	157	168	189	198	204	197	205	200	219	214	221	213
1514	106	134	152	160	178	194	209	215	224	224	220	235	238	243	245
1515	107	138	151	159	184	201	218	227	234	220	250	259	270	270	287

MEAN 110.0 138.5 153.0 160.6 181.1 196.3 211.8 218.4 221.6 232.1 232.6 246.1 250.6 252.8 255.0
S.D. 3.7 6.0 6.7 7.3 9.9 10.8 14.1 15.1 16.9 16.0 15.7 14.9 17.1 16.7 20.4
N 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15

INDIVIDUAL BODY WEIGHTS (G)

APPENDIX NO.: 2
PROJECT NO.: 90831

ANIMAL \ DAY	71	78	85	90	91
	FEMALES GROUP 1 AIR CONTROL				
1501	265	261	272	277	272
1502	280	281	277	281	274
1503	265	270	274	276	273
1504	273	274	267	276	261
1505	257	260	260	260	248
1506	267	269	270	266	267
1507	298	290	296	293	285
1508	296	293	292	290	278
1509	2	255	251	248	242
1510	257	264	261	266	260
1511	260	266	271	269	271
1512	229	236	234	233	226
1513	233	232	251	232	226
1514	251	239	246	250	240
1515	285	288	292	294	280
MEAN	264.1	265.1	267.7	267.4	260.1
S.D.	20.3	18.9	17.7	19.8	19.3
N	15	15	15	15	15



INDIVIDUAL BODY WEIGHTS (G)

APPENDIX NO.: 2
PROJECT NO.: 90831

ANIMAL \ DAY NO.	FEMALES GROUP 2					CERIC OXIDE					LOW DOSE				
	71	78	85	90	91	71	78	85	90	91	71	78	85	90	91
2501	265	262	271	276	263	265	262	271	276	263	265	262	271	276	263
2502	234	244	252	248	240	234	244	252	248	240	234	244	252	248	240
2503	249	256	243	248	248	249	256	243	248	248	249	256	243	248	248
2504	282	279	282	269	261	282	279	282	269	261	282	279	282	269	261
2505	243	237	244	247	235	243	237	244	247	235	243	237	244	247	235
2506	267	278	277	281	271	267	278	277	281	271	267	278	277	281	271
2507	291	270	282	282	275	291	270	282	282	275	291	270	282	282	275
2508	312	312	318	321	314	312	312	318	321	314	312	312	318	321	314
2509	266	278	277	273	266	266	278	277	273	266	266	278	277	273	266
2510	294	301	301	292	285	294	301	301	292	285	294	301	301	292	285
2511	243	249	250	261	253	243	249	250	261	253	243	249	250	261	253
2512	260	265	261	273	252	260	265	261	273	252	260	265	261	273	252
2513	261	272	269	274	257	261	272	269	274	257	261	272	269	274	257
2514	233	248	245	245	240	233	248	245	245	240	233	248	245	245	240
2515	263	267	258	267	262	263	267	258	267	262	263	267	258	267	262
MEAN	264.2	267.7	268.7	270.6	261.6	264.2	267.7	268.7	270.6	261.6	264.2	267.7	268.7	270.6	261.6
S.D.	22.8	20.5	21.6	20.1	20.1	22.8	20.5	21.6	20.1	20.1	22.8	20.5	21.6	20.1	20.1
N	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15



INDIVIDUAL BODY WEIGHTS (G)

APPENDIX NO.: 2
PROJECT NO.: 90831

ANIMAL \ DAY NO.	FEMALES GROUP 3					INTERMEDIATE DOSE				
	71	78	85	90	91					
3501	279	280	279	276	267					
3502	243	247	253	249	245					
3503	290	288	293	290	288					
3504	242	248	258	253	244					
3505	248	247	262	267	251					
3506	273	274	283	277	272					
3507	232	238	220	242	237					
3508	265	268	277	276	267					
3509	275	279	284	269	265					
3510	277	275	278	281	266					
3511	217	228	242	246	226					
3513	260	260	267	266	259					
3514	301	285	300	299	289					
3516	249	255	257	257	251					
3517	231	232	230	227	218					

MEAN 258.7 260.1 265.5 264.9 256.5
S.D. 23.9 19.8 22.8 19.4 20.5
N 15 15 15 15 15

INDIVIDUAL BODY WEIGHTS (G)

APPENDIX NO.: 2
PROJECT NO.: 90831

ANIMAL NO.	DAY	FEMALES GROUP 4				HIGH DOSE
		71	78	85	90	
4501		273	275	283	293	289
4502		248	247	263	259	252
4503		221	232	237	241	227
4504		232	236	241	240	232
4505		255	258	255	260	250
4506		265	266	269	260	258
4507		256	261	255	251	247
4508		267	275	268	268	257
4509		251	248	246	238	241
4510		249	244	250	254	243
4511		242	248	241	256	246
4513		273	278	278	280	270
4514		260	269	267	280	262
4515		283	295	289	284	271
4516		245	245	245	242	239
MEAN		254.9	258.5	259.2	260.4	252.3
S.D.		16.4	17.7	16.1	17.3	16.2
N		15	15	15	15	15

0

APPENDIX NO. 3

PROJECT NO. 90831

INDIVIDUAL FOOD CONSUMPTION (G)
MALES AND FEMALES

The following footnotes have been used throughout the appendix:

Pf Powdered food
T Technical error

INDIVIDUAL FOOD CONSUMPTION (GRAMS/ANIMAL)

APPENDIX NO.: 3
PROJECT NO.: 90831

ANIMAL \ DAY	LOW DOSE															
	8	15	22	29	36	43	50	57	64	71	78	85	91			
NO.	MALES GROUP 2 CERIC OXIDE															
2001	180	183	188	182	192	165	194	206	204	216	187	191	171			
2002	185	207	211	203	206	181	208	223	224	226	215	213	172			
2003	197	228	237	240	232	207	253	272	264	226	231	226	182			
2004	191	206	208	205	202	176	215	226	226	218	211	216	171			
2005	178	186	197	192	201	160	211	223	225	218	212	204	165			
2006	183	187	188	195	196	180	203	207	193	199	198	195	154			
2007	176	193	198	186	203	181	191	199	206	209	188	199	156			
2008	178	185	197	190	197	179	201	209	189	207	198	207	171			
2009	168	174	184	182	189	169	193	203	200	203	111	Pf	127			
2010	199	210	224	227	249	226	244	252	265	264	245	250	200			
2011	153	161	175	169	169	143	166	173	171	173	174	165	150			
2012	161	166	172	171	178	166	184	196	192	190	193	192	162			
2013	156	166	173	176	175	158	164	187	312	185	172	175	157			
2015	175	191	188	187	T	18A	204	192	200	207	207	216	168			
2016	188	196	204	208	215	200	214	224	219	223	211	201	166			
MEAN	177.9	189.3	196.2	194.2	200.3	178.4	203.0	212.9	219.4	210.9	197.0	203.5	165.0			
S.D.	13.6	18.5	18.4	19.8	21.5	20.7	24.1	25.1	36.6	21.2	30.9	21.2	16.0			
N	15	15	15	15	14	15	15	15	15	15	15	14	15			

INDIVIDUAL FOOD CONSUMPTION (GRAMS/ANIMAL)

APPENDIX NO.: 3
PROJECT NO.: 90831

ANIMAL \ DAY NO.	HIGH DOSE												
	8	15	22	29	36	43	50	57	64	71	78	85	91
	MALES GROUP 4 CERIC OXIDE												
4001	164	177	184	176	188	159	186	188	187	180	DEAD	157	135
4002	136	158	166	167	167	156	162	168	161	159	154	222	175
4003	188	197	187	217	220	204	217	223	223	227	216	158	136
4004	161	172	174	171	174	162	165	167	167	174	175	210	179
4005	195	190	196	196	195	181	203	205	213	218	215	210	173
4006	170	Pf	188	198	210	192	199	202	206	210	211	210	139
4007	147	156	170	174	162	145	171	184	178	166	163	164	174
4008	196	176	185	188	186	174	198	201	197	197	198	202	151
4009	166	168	170	171	170	165	165	175	179	187	171	175	185
4010	187	188	202	211	219	197	216	226	232	238	223	225	180
4011	184	197	207	213	201	181	203	213	223	221	213	217	160
4012	175	168	183	180	178	158	185	186	176	202	191	196	167
4014	166	174	175	183	180	161	185	171	187	186	173	190	170
4015	192	183	186	188	188	173	194	197	199	208	206	203	196
4016	211	184	216	225	235	215	242	247	243	237	229	237	196
MEAN	175.8	177.6	185.9	190.6	191.4	174.9	192.7	196.9	198.0	200.7	195.6	197.5	165.7
S.D.	20.2	12.8	14.4	18.7	21.5	19.9	22.2	23.4	24.7	24.9	24.4	25.7	18.9
N	15	14	15	15	15	15	15	15	15	15	14	14	14

INDIVIDUAL FOOD CONSUMPTION (GRAMS/ANIMAL)

APPENDIX NO.: 3
PROJECT NO.: 90831

ANIMAL \ DAY NO.	1	8	15	22	29	36	43	50	57	64	71	78	85	91
	FEMALES GROUP 1 AIR CONTROL													
1501	126	124	128	123	124	141	123	141	139	134	132	132	130	113
1502	120	127	137	147	144	150	139	158	143	148	140	140	140	117
1503	114	131	121	135	132	149	135	156	149	149	T	133	144	117
1504	120	126	128	132	137	136	121	144	140	135	138	131	131	106
1505	117	128	135	132	127	144	130	163	152	152	134	142	146	122
1506	120	127	127	138	131	133	127	140	143	127	136	144	141	118
1507	131	139	142	144	144	137	124	153	144	139	150	139	138	114
1508	130	126	136	138	136	145	114	158	141	134	144	149	130	119
1509	117	120	123	131	134	136	127	142	124	130	125	131	123	103
1510	117	113	127	126	139	144	114	148	141	143	134	138	131	122
1511	113	121	120	121	123	127	111	140	140	131	124	132	137	112
1512	120	120	130	125	121	122	115	156	129	126	116	112	123	88
1513	116	115	125	119	112	110	103	128	114	116	120	113	134	99
1514	121	115	126	124	126	116	109	132	126	120	119	T	117	103
1515	122	120	136	128	140	128	138	167	165	163	151	T	160	135
MEAN	120.4	123.5	129.4	130.8	131.5	134.6	121.9	148.5	139.2	136.4	133.1	133.5	135.0	112.6
S.D.	5.4	6.8	6.4	8.2	9.1	11.9	10.9	11.6	12.3	12.8	11.2	10.8	10.6	11.3
N	15	15	15	15	15	15	15	15	15	15	14	13	15	15

INDIVIDUAL FOOD CONSUMPTION (GRAMS/ANIMAL)

APPENDIX NO.: 3
PROJECT NO.: 90831

ANIMAL NO.	FEMALES		LOW DOSE														
	DAY	GROUP	1	8	15	22	29	36	43	50	57	64	71	78	85	91	
2501			124	131	135	134	139	140	118	145	147	144	138	136	139	121	
2502			117	121	130	124	140	133	118	127	140	131	118	124	125	100	
2503			119	125	133	135	132	145	135	146	140	142	136	139	129	117	
2504			118	129	135	138	144	152	134	161	153	157	155	148	154	121	
2505			113	115	125	127	132	120	113	132	121	120	113	113	116	100	
2506			119	145	146	144	155	141	143	156	162	169	151	147	151	134	
2507			123	129	131	141	140	138	123	143	135	147	133	T	123	96	
2508			124	134	140	155	138	159	141	162	153	153	149	147	139	120	
2509			134	139	148	156	146	149	130	145	155	147	109	142	133	105	
2510			143	157	166	164	167	165	155	185	156	168	167	T	165	132	
2511			116	119	120	131	124	133	118	143	135	141	127	T	137	118	
2512			134	136	132	142	139	134	128	151	133	138	132	129	129	110	
2513			124	124	129	132	140	130	131	152	144	143	138	136	133	119	
2514			120	121	125	124	128	126	117	136	130	133	122	131	126	104	
2515			129	136	137	142	137	135	129	118	137	136	134	136	130	120	
MEAN			123.8	130.8	135.5	139.3	140.1	139.9	128.9	146.7	142.7	144.5	134.7	135.7	135.3	114.5	
S.D.			8.2	11.0	11.3	11.9	10.4	12.0	11.6	16.0	11.4	13.3	16.0	10.3	13.0	11.4	
N			15	15	15	15	15	15	15	15	15	15	15	12	15	15	

INDIVIDUAL FOOD CONSUMPTION (GRAMS/ANIMAL)

APPENDIX NO.: 3
PROJECT NO.: 90831

ANIMAL \ DAY	1	8	15	22	29	36	43	50	57	64	71	78	85	91	INTERMEDIATE DOSE		
															CERIC OXIDE	CERIC OXIDE	
NO.																	
	FEMALES														GROUP	3	
3501	118	123	133	132	136	141	134	155	144	161	135	149	138	116			
3502	119	108	114	113	Pf	110	97	T	108	114	111	109	113	95			
3503	134	137	146	144	146	134	120	161	153	144	147	144	137	120			
3504	108	106	115	114	108	117	115	126	117	124	113	124	122	99			
3505	114	114	126	120	130	119	118	127	128	122	113	127	132	106			
3506	112	122	122	124	122	128	127	132	133	146	118	129	130	106			
3507	112	120	113	135	120	125	122	138	130	121	123	122	122	112			
3508	118	126	125	132	130	135	113	143	132	129	129	130	131	106			
3509	111	122	123	143	134	135	135	157	143	152	138	143	147	109			
3510	130	138	148	146	149	151	129	155	146	142	152	135	142	124			
3511	114	103	114	122	118	115	115	144	123	115	109	119	133	104			
3513	126	129	132	130	140	136	113	141	142	133	133	133	132	111			
3514	129	134	134	150	154	153	145	192	163	150	161	134	150	134			
3516	109	115	122	120	119	124	107	137	116	124	109	113	114	98			
3517	103	110	117	122	122	122	109	113	120	133	125	122	118	104			
MEAN	117.1	120.5	125.6	129.8	130.6	129.7	119.8	144.4	133.2	133.9	127.8	128.9	130.7	109.6			
S.D.	9.1	11.0	11.1	11.8	13.3	12.7	12.3	19.4	15.2	14.4	16.5	11.2	11.3	10.4			
N	15	15	15	15	14	15	15	14	15	15	15	15	15	15			





PROJECT NO. 90831

INDIVIDUAL OPHTHALMOSCOPY
EXAMINATION
MALES

APPENDIX NO. 4

GROUP 1 - AIR CONTROL
GROUP 2 - CERIC OXIDE LOW DOSE
GROUP 3 - CERIC OXIDE INTERMEDIATE DOSE
GROUP 4 - CERIC OXIDE HIGH DOSE

WEEK 13

GROUP NO.	ANIMAL NO.	PRETREATMENT
1	1007	Focal nuclear opacity, left eye
		All other animals appear normal
2	1010	-
	1017	-
	2015	Focal nuclear opacity, both eyes
3		All other animals appear normal
	3013	Vitreous hemorrhage, right eye
4		All other animals appear normal
	4006	Vitreous hemorrhage, left eye
	4007	Focal nuclear opacity, left eye
		All other animals appear normal

Reddish discharge, left eye
Focal chorioretinal atrophy, right eye
All other animals appear normal

All animals appear normal

PROJECT NO. 90831

INDIVIDUAL OPHTHALMOSCOPY
EXAMINATION
FEMALES

APPENDIX NO. 4

GROUP 3 - CERIC OXIDE INTERMEDIATE DOSE

GROUP 1 - AIR CONTROL
GROUP 2 - CERIC OXIDE LOW DOSE

GROUP NO.	ANIMAL NO.	PRETREATMENT	WEEK 13
1	1510	Vitreous hemorrhage, right eye	
		All other animals appear normal	
2	1512	-	Focal nuclear opacity, left eye
			All other animals appear normal
			All other animals appear normal
3	2511	Vitreous hemorrhage, left eye	
	2514	Focal nuclear opacity, right eye	
		All other animals appear normal	
	3502	Focal nuclear opacity, right eye	
	3506	Vitreous hemorrhage, left eye	
	3507	Vitreous hemorrhage, left eye	
		All other animals appear normal	

PROJECT NO. 90831

INDIVIDUAL OPHTHALMOSCOPY
EXAMINATION
FEMALES

APPENDIX NO. 4

GROUP 4 - CERIC OXIDE HIGH DOSE

GROUP NO.	ANIMAL NO.	PRETREATMENT	WEEK 13
4	4505	Focal nuclear opacity, right eye	
	4506	Focal nuclear opacity, right eye	Focal nuclear opacity, right eye
	4507	All other animals appear normal	Focal chorioretinal atrophy, right eye All other animals appear normal



PROJECT NO. 90831

FUNCTIONAL OBSERVATIONAL BATTERY
QUALITATIVE ASSESSMENTS
PRESTUDY
MALES

APPENDIX NO. 5

GROUP 3 - CERIC OXIDE INTERMEDIATE DOSE

CATEGORY	ANIMAL NO.															
	3001	3002	3003	3004	3005	3006	3007	3008	3009	3011	3012	3013	3014	3015	3016	
HANDLING																
PINNA REFLEX	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	
TOE PINCH	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	
TAIL PINCH	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	
VISUAL PLACING	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	
ON TOP OF BOX																
POSITIONAL PASSIVITY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
ON SURFACE																
AURICULAR STARTLE	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	
AIR RIGHTING REFLEX	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	



PROJECTS NO. 90831

FUNCTIONAL OBSERVATIONAL BATTERY
QUALITATIVE ASSESSMENTS

DAY 1
MALES

APPENDIX NO. 5

GROUP 1 - AIR CONTROL

CATEGORY	ANIMAL NO.																
	1001	1002	1005	1006	1007	1008	1009	1010	1011	1012	1013	1014	1015	1016	1017		
HANDLING																	
PIANA REFLEX	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4		
TOE PINCH	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4		
TAIL PINCH	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4		
VISUAL PLACING	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5		
ON TOP OF BOX																	
POSITIONAL PASSIVITY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
ON SURFACE																	
AURICULAR STARTLE	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4		
AIR RIGHTING REFLEX	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
COMMENTS	b	b	-	-	-	-	-	-	-	-	-	-	-	-	b		

b Post treatment staining

APPENDIX NO. 5
 FUNCTIONAL OBSERVATIONAL BATTERY
 QUALITATIVE ASSESSMENTS
 DAY 1
 MALES
 PROJECT NO. 90831

GROUP 2 - CERIC OXIDE LOW DOSE

ANIMAL NO.

CATEGORY	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2015	2016
HANDLING															
PINNA REFLEX	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
TOE PINCH	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
TAIL PINCH	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
VISUAL PLACING	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
ON TOP OF BOX															
POSITIONAL PASSIVITY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ON SURFACE															
AURICULAR STARTLE	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
AIR RIGHTING REFLEX	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
COMMENTS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

b Post treatment staining

APPENDIX NO. 5
 FUNCTIONAL OBSERVATIONAL BATTERY
 QUALITATIVE ASSESSMENTS
 DAY 1
 MALES

PROJECT NO. 90831

GROUP 3 - CERIC OXIDE INTERMEDIATE DOSE

CATEGORY	ANIMAL NO.															
	3001	3002	3003	3004	3005	3006	3007	3008	3009	3011	3012	3013	3014	3015	3016	
HANDLING																
PINNA REFLEX	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	
TOE PINCH	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	
TAIL PINCH	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	
VISUAL PLACING	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	
ON TOP OF BOX																
POSITIONAL PASSIVITY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
ON SURFACE																
AURICULAR STARTLE	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	
AIR RIGHTING REFLEX	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
COMMENTS	-	-	-	b	-	-	-	-	-	-	b	-	-	-	-	

b Post treatment staining

APPENDIX NO. 5
 FUNCTIONAL OBSERVATIONAL BATTERY
 QUALITATIVE ASSESSMENTS
 DAY 1
 MALES

PROJECT NO. 90831

GROUP 4 - CERIC OXIDE HIGH DOSE

CATEGORY	ANIMAL NO.															
	4001	4002	4003	4004	4005	4006	4007	4008	4009	4010	4011	4012	4014	4015	4016	
HANDLING																
PINNA REFLEX	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	
TOE PINCH	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	
TAIL PINCH	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	
VISUAL PLACING	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	
ON TOP OF BOX																
POSITIONAL PASSIVITY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
ON SURFACE																
AURICULAR STARTLE	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	
AIR RIGHTING REFLEX	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
COMMENTS	-	-	-	-	-	-	-	-	-	-	b	-	-	-	-	

b Post treatment staining

APPENDIX NO. 5
 FUNCTIONAL OBSERVATIONAL BATTERY
 QUALITATIVE ASSESSMENTS
 DAY 1
 FEMALES

PROJECT NO. 90831

GROUP 2 - CERIC OXIDE LOW DOSE

CATEGORY	ANIMAL NO.														
	2501	2502	2503	2504	2505	2506	2507	2508	2509	2510	2511	2512	2513	2514	2515
HANDLING	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
PINNA REFLEX	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
TOE PINCH	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
TAIL PINCH	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
VISUAL PLACING	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
ON TOP OF BOX	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
POSITIONAL PASSIVITY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ON SURFACE	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
AURICULAR SPARKLE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AIR RIGHTING REFLEX	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
COMMENTS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

a Rat dropped her pelvic area 7 to 8 times during arena observations

APPENDIX NO. 5
 FUNCTIONAL OBSERVATIONAL BATTERY
 QUALITATIVE ASSESSMENTS
 WEEK 8
 MALES

PROJECT NO. 90831

GROUP 1 - AIR CONTROL

ANIMAL NO.

CATEGORY	1001	1002	1005	1006	1007	1008	1009	1010	1011	1012	1013	1014	1015	1016	1017
HOME CAGE															
BODY POSITION	5,6	5	5	5,6	5	5	5	5	5	5	5	5	5	5	5
TREMORS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TWITCHES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CONVULSIONS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BIZARRE/STEREOTYPIC BEHAVIOR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
REMOVAL FROM HOME CAGE															
EASE OF REMOVAL	2	0	6	0	2	0	0	0	0	0	0	2	2	0	0
VOCALIZATION	0	0	4	0	0	0	0	0	0	0	0	1	2	0	2
ARENA															
REARING	7	6	1	5	4	5	2	3	7	0	7	0	0	0	5
ATAXIC GAIT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HYPOTONIC GAIT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
IMPAIRED GAIT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
OVERALL GAIT INCAPACITY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BIZARRE/STEREOTYPIC BEHAVIOR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PALPEBRAL CLOSURE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TREMORS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0





APPENDIX NO. 5

FUNCTIONAL OBSERVATIONAL BATTERY
QUALITATIVE ASSESSMENTS
WEEK 13
FEMALES

PROJECT NO. 90831

GROUP 1 - AIR CONTROL

ANIMAL NO.

CATEGORY	1501	1502	1503	1504	1505	1506	1507	1508	1509	1510	1511	1512	1513	1514	1515
HANDLING															
ABDOMINAL TONE	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
EXTENSOR THRUST	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CORNEAL REFLEX	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
PINNA REFLEX	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
TOE PINCH	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
TAIL PINCH	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
VISUAL PLACING	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
ON TOP OF BOX															
POSITIONAL PASSIVITY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ON SURFACE															
AURICULAR STARTLE	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
AIR RIGHTING REFLEX	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0





PROJECT NO : 90831

APPENDIX NO. 5 INDIVIDUAL GRIP STRENGTH (G) AND HINDLIMB SPLAY (CM)

MEAN OF TRIALS 1 AND 2 - MALES

ANIMAL NO.	FORELIMB GRIP STRENGTH	HINDLIMB GRIP STRENGTH	HINDLIMB SPLAY
1001	795.0	340.0	6.4
1002	650.0	380.0	9.0
1005	685.0	610.0	9.0
1006	900.0	550.0	6.9
1007	770.0	340.0	6.3
1008	790.0	340.0	3.9
1009	805.0	335.0	9.4
1010	655.0	570.0	7.7
1011	915.0	460.0	9.3
1012	780.0	390.0	6.6
1013	970.0	510.0	8.7
1014	690.0	395.0	9.5
1015	915.0	430.0	6.4
1016	715.0	285.0	7.1
1017	860.0	565.0	10.2

PROJECT NO : 90831

APPENDIX NO. 5 INDIVIDUAL GRIP STRENGTH (G) AND HINDLIMB SPLAY (CM)

MEAN OF TRIALS 1 AND 2 - MALES

ANIMAL NO.	FORELIMB GRIP STRENGTH	HINDLIMB GRIP STRENGTH	HINDLIMB SPLAY
GROUP 2 - CERIC OXIDE			
LOW DOSE			
2001	700.0	355.0	7.9
2002	875.0	445.0	9.7
2003	805.0	450.0	9.6
2004	640.0	425.0	9.5
2005	960.0	380.0	9.9
2006	815.0	555.0	8.9
2007	640.0	465.0	8.6
2008	870.0	280.0	3.7
2009	650.0	415.0	8.5
2010	620.0	215.0	7.9
2011	895.0	385.0	9.5
2012	565.0	475.0	6.9
2013	670.0	230.0	5.5
2015	910.0	520.0	7.6
2016	1100.0	655.0	7.2

APPENDIX NO. 5

INDIVIDUAL GRIP STRENGTH (G) AND HINDLIMB SPLAY (CM)

PROJECT NO :90831

MEAN OF TRIALS 1 AND 2 - MALES

ANIMAL NO.	FORELIMB GRIP STRENGTH	HINDLIMB GRIP STRENGTH	HINDLIMB SPLAY
3001	655.0	320.0	6.6
3002	835.0	530.0	9.9
3003	835.0	410.0	7.9
3004	880.0	455.0	10.0
3005	790.0	485.0	8.8
3006	900.0	410.0	10.3
3007	685.0	350.0	9.3
3008	665.0	360.0	7.4
3009	885.0	660.0	9.1
3011	855.0	445.0	9.5
3012	865.0	245.0	8.9
3013	805.0	400.0	6.5
3014	595.0	260.0	4.9
3015	800.0	425.0	8.3
3016	900.0	515.0	8.4

GROUP 3 - CERIC OXIDE INTERMEDIATE DOSE

APPENDIX NO. 5 INDIVIDUAL GRIP STRENGTH (G) AND HINDLIMB SPLAY (CM) PROJECT NO :90831

MEAN OF TRIALS 1 AND 2 - MALES

ANIMAL NO.	FORELIMB GRIP STRENGTH	HINDLIMB GRIP STRENGTH	HINDLIMB SPLAY
4001	825.0	455.0	6.4
4002	855.0	445.0	9.6
4003	630.0	335.0	6.6
4004	625.0	395.0	6.1
4005	710.0	380.0	7.5
4006	1025.0	460.0	9.3
4007	985.0	485.0	9.8
4008	695.0	410.0	6.4
4009	855.0	445.0	8.5
4010	805.0	300.0	6.8
4011	735.0	345.0	8.5
4012	450.0	335.0	6.6
4014	875.0	430.0	6.6
4015	705.0	425.0	7.1
4016	840.0	345.0	9.1

GROUP 4 - CERIC OXIDE HIGH DOSE

PROJECT NO : 90831

APPENDIX NO. 5 INDIVIDUAL GRIP STRENGTH (G) AND HINDLIMB SPLAY (CM)

MEAN OF TRIALS 1 AND 2 - PRE-STUDY FEMALES

ANIMAL NO.	FORELIMB GRIP STRENGTH	HINDLIMB GRIP STRENGTH	HINDLIMB SPLAY
GROUP 1 - AIR CONTROL			
1501	490.0	300.0	9.0
1502	775.0	335.0	6.3
1503	660.0	260.0	8.1
1504	550.0	295.0	6.8
1505	630.0	245.0	9.0
1506	695.0	475.0	8.4
1507	755.0	385.0	8.9
1508	720.0	505.0	8.4
1509	695.0	420.0	9.1
1510	505.0	305.0	8.4
1511	815.0	380.0	8.0
1512	715.0	450.0	7.5
1513	495.0	480.0	5.1
1514	875.0	425.0	7.4
1515	685.0	535.0	7.4

PROJECT NO : 90831

APPENDIX NO. 5 INDIVIDUAL GRIP STRENGTH (G) AND HINDLIMB SPLAY (CM)

MEAN OF TRIALS 1 AND 2 - PRE-STUDY FEMALES

ANIMAL NO.	FORELIMB GRIP STRENGTH	HINDLIMB GRIP STRENGTH	HINDLIMB SPLAY
2501	630.0	245.0	5.0
2502	590.0	300.0	7.7
2503	765.0	515.0	8.6
2504	455.0	420.0	7.9
2505	560.0	300.0	8.6
2506	785.0	380.0	9.3
2507	775.0	555.0	9.5
2508	695.0	410.0	8.3
2509	830.0	415.0	9.1
2510	765.0	450.0	7.6
2511	815.0	340.0	8.7
2512	820.0	450.0	7.6
2513	815.0	510.0	9.5
2514	790.0	350.0	9.2
2515	705.0	410.0	8.2

GROUP 2 - CERIC OXIDE LOW DOSE

PROJECT NO : 90831

APPENDIX NO. 5 INDIVIDUAL GRIP STRENGTH (G) AND HINDLIMB SPLAY (CM)

MEAN OF TRIALS 1 AND 2 - PRE-STUDY FEMALES

ANIMAL NO.	FORELIMB GRIP STRENGTH	HINDLIMB GRIP STRENGTH	HINDLIMB SPLAY
GROUP 3 - CERIC OXIDE			
INTERMEDIATE DOSE			
3501	805.0	475.0	6.3
3502	845.0	370.0	9.0
3503	815.0	490.0	8.2
3504	645.0	290.0	7.3
3505	775.0	295.0	7.9
3506	765.0	330.0	6.2
3507	650.0	520.0	7.8
3508	645.0	350.0	8.7
3509	760.0	390.0	8.0
3510	815.0	465.0	7.8
3511	710.0	390.0	7.4
3513	550.0	360.0	6.0
3514	935.0	290.0	6.8
3516	675.0	350.0	6.0
3517	490.0	315.0	3.5

PROJECT NO : 90831

APPENDIX NO. 5 INDIVIDUAL GRIP STRENGTH (G) AND HINDLIMB SPLAY (CM)

MEAN OF TRIALS 1 AND 2 - WEEK 8
FEMALES

GROUP 4 - CERIC OXIDE HIGH DOSE	ANIMAL NO.	FORELIMB GRIP STRENGTH	HINDLIMB GRIP STRENGTH	HINDLIMB SPLAY
	4501	540.0	390.0	7.2
	4502	685.0	560.0	9.3
	4503	640.0	560.0	7.1
	4504	855.0	655.0	8.2
	4505	815.0	545.0	6.7
	4506	1095.0	615.0	9.1
	4507	800.0	435.0	9.1
	4508	1075.0	680.0	7.1
	4509	545.0	460.0	5.3
	4510	615.0	460.0	6.8
	4511	880.0	470.0	7.8
	4513	780.0	685.0	5.2
	4514	575.0	585.0	5.5
	4515	680.0	455.0	4.4
	4516	600.0	395.0	5.2

PROJECT NO : 90831

APPENDIX NO. 5 INDIVIDUAL GRIP STRENGTH (G) AND HINDLIMB SPLAY (CM)

MEAN OF TRIALS 1 AND 2 -- PRE-STUDY
FEMALES

ANIMAL NO.	FORELIMB GRIP STRENGTH	HINDLIMB GRIP STRENGTH	HINDLIMB SPLAY
GROUP 4 - CERIC OXIDE			
HIGH DOSE			
4501	755.0	460.0	4.9
4502	840.0	450.0	8.7
4503	680.0	335.0	9.4
4504	715.0	290.0	7.2
4505	715.0	345.0	5.4
4506	575.0	245.0	8.4
4507	755.0	330.0	7.1
4508	875.0	510.0	6.8
4509	625.0	260.0	5.0
4510	575.0	360.0	7.2
4511	705.0	445.0	8.8
4513	750.0	370.0	5.6
4514	930.0	550.0	7.9
4515	595.0	345.0	7.0
4516	680.0	400.0	5.7

NO

PROJECT NO : 90831

APPENDIX NO. 5 INDIVIDUAL GRIP STRENGTH (G) AND HINDLIMB SPLAY (CM)

MEAN OF TRIALS 1 AND 2 - DAY 1
MALES

ANIMAL NO.	FORELIMB GRIP STRENGTH	HINDLIMB GRIP STRENGTH	HINDLIMB SPLAY
GROUP 1 - AIR CONTROL			
1001	1030.0	460.0	5.3
1002	575.0	280.0	5.2
1005	905.0	480.0	8.2
1006	810.0	505.0	6.8
1007	535.0	300.0	5.0
1008	820.0	445.0	4.3
1009	955.0	555.0	5.8
1010	805.0	545.0	7.7
1011	740.0	590.0	9.4
1012	655.0	575.0	7.4
1013	845.0	515.0	8.1
1014	740.0	630.0	9.1
1015	840.0	475.0	8.4
1016	635.0	215.0	3.5
1017	825.0	500.0	7.6

PROJECT NO :90831

INDIVIDUAL GRIP STRENGTH (G) AND HINDLIMB SPLAY (CM)

APPENDIX NO. 5

MEAN OF TRIALS 1 AND 2 - DAY 1
MALES

ANIMAL NO.	FORELIMB GRIP STRENGTH	HINDLIMB GRIP STRENGTH	HINDLIMB SPLAY
2001	845.0	325.0	7.1
2002	770.0	585.0	6.6
2003	820.0	420.0	7.6
2004	695.0	505.0	6.2
2005	825.0	565.0	7.6
2006	1025.0	555.0	6.9
2007	825.0	635.0	7.0
2008	830.0	565.0	4.4
2009	690.0	570.0	4.4
2010	530.0	265.0	7.3
2011	930.0	525.0	9.2
2012	575.0	350.0	5.7
2013	755.0	330.0	4.0
2015	905.0	505.0	8.5
2016	760.0	665.0	5.4

GROUP 2 - CERIC OXIDE
LOW DOSE



APPENDIX NO. 5 INDIVIDUAL GRIP STRENGTH (G) AND HINDLIMB SPLAY (CM) PROJECT NO : 90831

MEAN OF TRIALS 1 AND 2 - DAY 1
MALES

ANIMAL NO.	FORELIMB GRIP STRENGTH	HINDLIMB GRIP STRENGTH	HINDLIMB SPLAY
GROUP 3 - CERIC OXIDE			
INTERMEDIATE DOSE			
3001	685.0	330.0	4.4
3002	1090.0	565.0	6.9
3003	825.0	580.0	7.2
3004	875.0	540.0	8.9
3005	755.0	300.0	6.7
3006	645.0	465.0	8.1
3007	860.0	540.0	8.4
3008	685.0	455.0	4.9
3009	960.0	550.0	7.8
3011	795.0	370.0	7.7
3012	815.0	460.0	8.4
3013	845.0	310.0	7.4
3014	570.0	330.0	5.9
3015	825.0	560.0	8.7
3016	885.0	450.0	6.8



PROJECT NO : 90831

APPENDIX NO. 5 INDIVIDUAL GRIP STRENGTH (G) AND HINDLIMB SPLAY (CM)

MEAN OF TRIALS 1 AND 2 - DAY 1
MALES

ANIMAL NO.	FORELIMB GRIP STRENGTH	HINDLIMB GRIP STRENGTH	HINDLIMB SPLAY
GROUP 4 - CERIC OXIDE			
HIGH DOSE			
4001	700.0	510.0	6.2
4002	930.0	585.0	8.1
4003	650.0	545.0	7.5
4004	430.0	245.0	8.1
4005	635.0	275.0	6.7
4006	890.0	425.0	6.8
4007	905.0	520.0	9.4
4008	740.0	360.0	4.9
4009	715.0	535.0	5.2
4010	655.0	505.0	5.2
4011	740.0	490.0	8.6
4012	780.0	395.0	5.4
4014	965.0	510.0	5.6
4015	795.0	455.0	5.1
4016	765.0	565.0	7.3



PROJECT NO : 90831

APPENDIX NO. 5 INDIVIDUAL GRIP STRENGTH (G) AND HINDLIMB SPLAY (CM)

MEAN OF TRIALS 1 AND 2 - DAY 1
FEMALES

ANIMAL NO.	FORELIMB GRIP STRENGTH	HINDLIMB GRIP STRENGTH	HINDLIMB SPLAY
1501	760.0	430.0	8.3
1502	580.0	380.0	8.2
1503	580.0	450.0	9.1
1504	835.0	375.0	5.9
1505	515.0	395.0	9.2
1506	900.0	560.0	8.5
1507	860.0	520.0	8.1
1508	915.0	435.0	7.6
1509	570.0	570.0	8.0
1510	655.0	380.0	8.1
1511	835.0	430.0	6.4
1512	840.0	480.0	6.5
1513	565.0	365.0	4.6
1514	850.0	495.0	5.6
1515	940.0	460.0	8.1

PROJECT NO :90831

INDIVIDUAL GRIP STRENGTH (G) AND HINDLIMB SPLAY (CM)

APPENDIX NO. 5

MEAN OF TRIALS 1 AND 2 - DAY 1
FEMALES

ANIMAL NO.	FORELIMB GRIP STRENGTH	HINDLIMB GRIP STRENGTH	HINDLIMB SPLAY
2501	585.0	315.0	7.1
2502	790.0	365.0	6.7
2503	685.0	400.0	7.1
2504	805.0	500.0	5.5
2505	770.0	450.0	6.6
2506	815.0	480.0	7.2
2507	905.0	580.0	8.0
2508	515.0	370.0	6.4
2509	720.0	545.0	7.4
2510	780.0	395.0	6.0
2511	860.0	345.0	5.4
2512	840.0	450.0	7.0
2513	760.0	565.0	6.6
2514	875.0	410.0	8.3
2515	910.0	410.0	8.1

GROUP 2 - CERIC OXIDE
LOW DOSE

APPENDIX NO. 5 INDIVIDUAL GRIP STRENGTH (G) AND HINDLIMB SPLAY (CM) PROJECT NO :90831

MEAN OF TRIALS 1 AND 2 - DAY 1 FEMALES

ANIMAL NO.	FORELIMB GRIP STRENGTH	HINDLIMB GRIP STRENGTH	HINDLIMB SPLAY
GROUP 3 - CERIC OXIDE INTERMEDIATE DOSE			
3501	650.0	545.0	4.6
3502	565.0	370.0	9.1
3503	925.0	390.0	7.5
3504	780.0	360.0	5.8
3505	655.0	495.0	8.2
3506	685.0	475.0	7.2
3507	535.0	500.0	6.7
3508	740.0	375.0	8.2
3509	975.0	445.0	8.1
3510	720.0	375.0	6.3
3511	730.0	500.0	4.2
3513	510.0	335.0	4.4
3514	800.0	410.0	4.2
3516	400.0	380.0	4.4
3517	480.0	390.0	2.7





APPENDIX NO. 5

INDIVIDUAL GRIP STRENGTH (G) AND HINDLIMB SPLAY (CM)

PROJECT NO : 90831

MEAN OF TRIALS 1 AND 2 - DAY 1
FEMALES

ANIMAL NO.	FORELIMB GRIP STRENGTH	HINDLIMB GRIP STRENGTH	HINDLIMB SPLAY
GROUP 4 - CERIC OXIDE			
HIGH DOSE			
4501	575.0	515.0	4.9
4502	955.0	375.0	7.7
4503	550.0	450.0	9.1
4504	895.0	470.0	9.6
4505	880.0	265.0	6.6
4506	725.0	500.0	7.1
4507	770.0	435.0	8.6
4508	1015.0	465.0	4.7
4509	515.0	480.0	4.4
4510	690.0	410.0	5.9
4511	725.0	365.0	6.8
4513	725.0	510.0	4.7
4514	915.0	460.0	7.3
4515	590.0	375.0	4.4
4516	755.0	555.0	4.4





APPENDIX NO. 5 INDIVIDUAL GRIP STRENGTH (G) AND HINDLIMB SPLAY (CM) PROJECT NO : 90831

MEAN OF TRIALS 1 AND 2 - WEEK 4

MALES

ANIMAL NO.	FORELIMB GRIP STRENGTH	HINDLIMB GRIP STRENGTH	HINDLIMB SPLAY
GROUP 1 - AIR CONTROL			
1001	790.0	380.0	5.1
1002	735.0	465.0	6.4
1005	865.0	470.0	8.2
1006	615.0	555.0	8.0
1007	840.0	545.0	9.0
1008	800.0	440.0	6.6
1009	1165.0	540.0	7.1
1010	855.0	705.0	5.7
1011	620.0	550.0	7.5
1012	995.0	760.0	5.2
1013	890.0	695.0	9.3
1014	955.0	580.0	8.6
1015	1150.0	735.0	7.1
1016	545.0	400.0	4.3
1017	535.0	635.0	8.1



PROJECT NO : 90831

APPENDIX NO. 5 INDIVIDUAL GRIP STRENGTH (G) AND HINDLIMB SPLAY (CM)

MEAN OF TRIALS 1 AND 2 - WEEK 4
MALES

ANIMAL NO.	FORELIMB GRIP STRENGTH	HINDLIMB GRIP STRENGTH	HINDLIMB SPLAY
2001	735.0	750.0	6.7
2002	775.0	690.0	7.1
2003	965.0	435.0	10.1
2004	720.0	615.0	8.9
2005	600.0	525.0	9.4
2006	660.0	620.0	9.7
2007	790.0	655.0	9.7
2008	520.0	685.0	4.8
2009	900.0	465.0	6.2
2010	650.0	565.0	9.0
2011	760.0	600.0	4.6
2012	750.0	410.0	6.6
2013	855.0	485.0	4.4
2015	730.0	685.0	6.9
2016	855.0	475.0	7.1

GROUP 2 - CERIC OXIDE
LOW DOSE

PROJECT NO : 90831

APPENDIX NO. 5 INDIVIDUAL GRIP STRENGTH (G) AND HINDLIMB SPLAY (CM)

MEAN OF TRIALS 1 AND 2 - WEEK 4
MALES

GROUP 3 - CERIC OXIDE INTERMEDIATE DOSE	ANIMAL NO.	FORELIMB GRIP STRENGTH	HINDLIMB GRIP STRENGTH	HINDLIMB SPLAY
	3001	975.0	515.0	5.4
	3002	725.0	910.0	9.8
	3003	675.0	685.0	9.0
	3004	600.0	515.0	9.0
	3005	1075.0	525.0	9.5
	3006	855.0	465.0	10.1
	3007	655.0	625.0	9.6
	3008	550.0	545.0	6.3
	3009	860.0	575.0	10.0
	3011	575.0	560.0	5.7
	3012	765.0	345.0	7.6
	3013	870.0	555.0	6.4
	3014	790.0	360.0	4.9
	3015	1300.0	670.0	8.9
	3016	875.0	765.0	8.4

PROJECT NO : 90831

INDIVIDUAL GRIP STRENGTH (G) AND HINDLIMB SPLAY (CM)

APPENDIX NO. 5

MEAN OF TRIALS 1 AND 2 - WEEK 4
MALES

ANIMAL NO.	FORELIMB GRIP STRENGTH	HINDLIMB GRIP STRENGTH	HINDLIMB SPLAY
4001	955.0	675.0	6.4
4002	805.0	820.0	10.2
4003	800.0	860.0	9.7
4004	720.0	690.0	11.7
4005	725.0	550.0	6.7
4006	710.0	575.0	8.3
4007	610.0	510.0	11.6
4008	675.0	505.0	6.8
4009	900.0	595.0	7.7
4010	355.0	395.0	5.4
4011	820.0	635.0	5.5
4012	890.0	445.0	5.2
4014	800.0	390.0	8.1
4015	805.0	555.0	5.3
4016	900.0	745.0	5.7

GROUP 4 - CERIC OXIDE
HIGH DOSE

APPENDIX NO. 5

INDIVIDUAL GRIP STRENGTH (G) AND HINDLIMB SPLAY (CM)

PROJECT NO : 90831

MEAN OF TRIALS 1 AND 2 - WEEK 4
FEMALES

ANIMAL NO.	FORELIMB GRIP STRENGTH	HINDLIMB GRIP STRENGTH	HINDLIMB SPLAY
1501	800.0	500.0	7.8
1502	830.0	690.0	6.8
1503	625.0	605.0	9.1
1504	840.0	515.0	6.1
1505	725.0	510.0	6.7
1506	855.0	595.0	9.3
1507	615.0	520.0	8.1
1508	890.0	555.0	8.6
1509	705.0	550.0	5.8
1510	760.0	490.0	10.1
1511	520.0	465.0	6.5
1512	845.0	635.0	6.0
1513	555.0	305.0	6.7
1514	780.0	560.0	5.8
1515	615.0	450.0	8.9

GROUP 1 - AIR CONTROL

APPENDIX NO. 5 INDIVIDUAL GRIP STRENGTH (G) AND HINDLIMB SPLAY (CM) PROJECT NO :90831

MEAN OF TRIALS 1 AND 2 - WEEK 4
FEMALES

ANIMAL NO.	FORELIMB GRIP STRENGTH	HINDLIMB GRIP STRENGTH	HINDLIMB SPLAY
GROUP 2 - CERIC OXIDE			
LOW DOSE			
2501	700.0	395.0	7.0
2502	690.0	475.0	8.2
2503	705.0	530.0	7.1
2504	840.0	500.0	4.4
2505	650.0	475.0	7.6
2506	575.0	590.0	6.9
2507	950.0	440.0	8.0
2508	575.0	475.0	6.6
2509	645.0	435.0	8.0
2510	845.0	470.0	5.9
2511	805.0	545.0	8.1
2512	850.0	495.0	7.0
2513	840.0	560.0	9.6
2514	750.0	325.0	9.5
2515	600.0	455.0	8.9

PROJECT NO : 90831

APPENDIX NO. 5 INDIVIDUAL GRIP STRENGTH (G) AND HINDLIMB SPLAY (CM)

MEAN OF TRIALS 1 AND 2 - WEEK 4
FEMALES

ANIMAL NO.	FORELIMB GRIP STRENGTH	HINDLIMB GRIP STRENGTH	HINDLIMB SPLAY
GROUP 3 - CERIC OXIDE INTERMEDIATE DOSE			
3501	730.0	535.0	6.1
3502	570.0	345.0	7.6
3503	780.0	560.0	8.6
3504	640.0	395.0	4.8
3505	805.0	370.0	8.6
3506	760.0	445.0	8.4
3507	715.0	640.0	9.9
3508	735.0	440.0	9.3
3509	970.0	375.0	9.4
3510	800.0	780.0	9.1
3511	775.0	370.0	7.1
3513	530.0	415.0	5.9
3514	790.0	310.0	6.9
3516	410.0	395.0	5.8
3517	630.0	450.0	4.1

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PROJECT NO : 90831

INDIVIDUAL GRIP STRENGTH (G) AND HINDLIMB SPLAY (CM)

APPENDIX NO. 5

MEAN OF TRIALS 1 AND 2 - WEEK 4
FEMALES

GROUP 4 - CERIC OXIDE HIGH DOSE	ANIMAL NO.	FORELIMB GRIP STRENGTH	HINDLIMB GRIP STRENGTH	HINDLIMB SPLAY
	4501	735.0	535.0	4.8
	4502	840.0	520.0	8.8
	4503	500.0	515.0	9.1
	4504	850.0	435.0	8.0
	4505	845.0	460.0	6.6
	4506	885.0	535.0	9.2
	4507	860.0	340.0	9.4
	4508	910.0	435.0	6.6
	4509	490.0	285.0	5.7
	4510	665.0	475.0	6.8
	4511	695.0	290.0	6.8
	4513	880.0	585.0	5.8
	4514	590.0	395.0	6.1
	4515	725.0	400.0	6.3
	4516	665.0	520.0	5.4

APPENDIX NO. 5 INDIVIDUAL GRIP STRENGTH (G) AND HINDLIMB SPLAY (CM) PROJECT NO :90831

MEAN OF TRIALS 1 AND 2 - WEEK 8
MALES

ANIMAL NO.	FORELIMB GRIP STRENGTH	HINDLIMB GRIP STRENGTH	HINDLIMB SPLAY
GROUP 1 - AIR CONTROL			
1001	880.0	520.0	6.2
1002	535.0	575.0	5.9
1005	925.0	510.0	3.6
1006	995.0	670.0	7.9
1007	1150.0	555.0	9.9
1008	775.0	430.0	8.2
1009	840.0	630.0	8.9
1010	820.0	870.0	5.8
1011	525.0	635.0	10.1
1012	815.0	830.0	3.9
1013	855.0	670.0	8.4
1014	1190.0	930.0	10.4
1015	780.0	670.0	8.1
1016	535.0	445.0	3.6
1017	550.0	400.0	9.7



APPENDIX NO. 5

INDIVIDUAL GRIP STRENGTH (G) AND HINDLIMB SPLAY (CM)

PROJECT NO : 90831

MEAN OF TRIALS 1 AND 2 - WEEK 8
MALES

ANIMAL NO.	FORELIMB GRIP STRENGTH	HINDLIMB GRIP STRENGTH	HINDLIMB SPLAY
2001	425.0	625.0	9.0
2002	775.0	710.0	6.4
2003	710.0	640.0	10.2
2004	300.0	635.0	10.3
2005	555.0	535.0	7.5
2006	700.0	670.0	5.9
2007	1050.0	770.0	8.5
2008	650.0	675.0	5.8
2009	910.0	515.0	7.1
2010	820.0	750.0	11.3
2011	870.0	435.0	9.8
2012	825.0	450.0	6.1
2013	555.0	530.0	4.7
2015	745.0	505.0	10.3
2016	865.0	655.0	8.5

GROUP 2 - CERIC OXIDE
LOW DOSE

PROJECT NO : 90831

APPENDIX NO. 5 INDIVIDUAL GRIP STRENGTH (G) AND HINDLIMB SPLAY (CM)

MEAN OF TRIALS 1 AND 2 - WEEK 8
MALES

ANIMAL NO.	FORELIMB GRIP STRENGTH	HINDLIMB GRIP STRENGTH	HINDLIMB SPLAY
GROUP 3 - CERIC OXIDE INTERMEDIATE DOSE			
3001	670.0	350.0	4.6
3002	770.0	935.0	10.1
3003	880.0	655.0	8.5
3004	850.0	685.0	8.3
3005	775.0	745.0	7.9
3006	630.0	745.0	8.6
3007	815.0	760.0	8.7
3008	700.0	640.0	10.6
3009	1140.0	800.0	7.8
3011	500.0	475.0	6.5
3012	730.0	685.0	9.2
3013	595.0	530.0	6.9
3014	530.0	410.0	7.0
3015	680.0	695.0	9.1
3016	735.0	565.0	9.4

PROJECT NO : 90831

APPENDIX NO. 5 INDIVIDUAL GRIP STRENGTH (G) AND HINDLIMB SPLAY (CM)

MEAN OF TRIALS 1 AND 2 - WEEK 8
MALES

ANIMAL NO.	FORELIMB GRIP STRENGTH	HINDLIMB GRIP STRENGTH	HINDLIMB SPLAY
GROUP 4 - CERIC OXIDE			
HIGH DOSE			
4001	825.0	760.0	5.1
4002	810.0	950.0	10.0
4003	605.0	805.0	9.5
4004	735.0	580.0	10.0
4005	585.0	560.0	4.4
4006	765.0	635.0	8.4
4007	875.0	595.0	10.3
4008	545.0	735.0	8.8
4009	215.0	590.0	4.9
4010	460.0	480.0	5.5
4011	900.0	740.0	7.8
4012	930.0	565.0	6.2
4014	800.0	640.0	7.6
4015	730.0	555.0	7.6
4016	665.0	765.0	8.1

PROJECT NO : 90831

APPENDIX NO. 5 INDIVIDUAL GRIP STRENGTH (G) AND HINDLIMB SPLAY (CM)

MEAN OF TRIALS 1 AND 2 - WEEK 8
FEMALES

ANIMAL NO.	FORELIMB GRIP STRENGTH	HINDLIMB GRIP STRENGTH	HINDLIMB SPLAY
GROUP 1 - AIR CONTROL			
1501	625.0	650.0	7.8
1502	705.0	545.0	8.9
1503	685.0	590.0	8.9
1504	735.0	630.0	6.6
1505	890.0	560.0	7.4
1506	1180.0	610.0	7.5
1507	745.0	625.0	7.7
1508	870.0	575.0	6.9
1509	770.0	565.0	6.0
1510	680.0	580.0	10.3
1511	825.0	390.0	8.1
1512	740.0	590.0	6.5
1513	845.0	385.0	5.6
1514	1075.0	880.0	5.9
1515	730.0	625.0	9.9

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PROJECT NO : 90831

APPENDIX NO. 5 INDIVIDUAL GRIP STRENGTH (G) AND HINDLIMB SPLAY (CM)

MEAN OF TRIALS 1 AND 2 - WEEK 8
FEMALES

GROUP 2 - CERIC OXIDE LOW DOSE	ANIMAL NO.	FORELIMB GRIP STRENGTH	HINDLIMB GRIP STRENGTH	HINDLIMB SPLAY
	2501	700.0	440.0	6.9
	2502	800.0	620.0	9.5
	2503	845.0	510.0	8.5
	2504	745.0	575.0	5.9
	2505	715.0	405.0	5.6
	2506	850.0	745.0	6.4
	2507	1030.0	510.0	5.9
	2508	735.0	535.0	5.4
	2509	835.0	495.0	8.3
	2510	915.0	545.0	4.5
	2511	765.0	460.0	6.2
	2512	1100.0	530.0	4.1
	2513	710.0	625.0	8.1
	2514	770.0	665.0	9.8
	2515	820.0	765.0	8.3

PROJECT NO : 90831

APPENDIX NO. 5 INDIVIDUAL GRIP STRENGTH (G) AND HINDLIMB SPLAY (CM)

MEAN OF TRIALS 1 AND 2 - WEEK 8
FEMALES

ANIMAL NO.	FORELIMB GRIP STRENGTH	HINDLIMB GRIP STRENGTH	HINDLIMB SPLAY
GROUP 3 - CERIC OXIDE INTERMEDIATE DOSE			
3501	600.0	555.0	6.9
3502	835.0	605.0	8.5
3503	725.0	525.0	8.4
3504	650.0	525.0	5.9
3505	1115.0	465.0	6.9
3506	545.0	640.0	6.8
3507	920.0	735.0	9.8
3508	615.0	415.0	6.2
3509	950.0	785.0	9.0
3510	725.0	555.0	7.1
3511	715.0	570.0	3.7
3513	580.0	475.0	5.5
3514	645.0	420.0	4.6
3516	655.0	490.0	7.2
3517	840.0	610.0	4.1



PROJECT NO : 90831

APPENDIX NO. 5 INDIVIDUAL GRIP STRENGTH (G) AND HINDLIMB SPLAY (CM)

MEAN OF TRIALS 1 AND 2 - WEEK 13
MALES

ANIMAL NO.	FORELIMB GRIP STRENGTH	HINDLIMB GRIP STRENGTH	HINDLIMB SPLAY
GROUP 1 - AIR CONTROL			
1001	790.0	795.0	5.4
1002	455.0	490.0	5.6
1005	875.0	545.0	7.4
1006	795.0	715.0	7.7
1007	835.0	930.0	7.4
1008	800.0	640.0	5.4
1009	1220.0	870.0	7.6
1010	940.0	850.0	6.1
1011	595.0	555.0	9.3
1012	895.0	720.0	5.1
1013	775.0	660.0	8.9
1014	845.0	705.0	10.2
1015	870.0	860.0	7.9
1016	550.0	495.0	4.4
1017	815.0	705.0	11.3



APPENDIX NO. 5

INDIVIDUAL GRIP STRENGTH (G) AND HINDLIMB SPLAY (CM)

PROJECT NO :90831

MEAN OF TRIALS 1 AND 2 - WEEK 13
MALES

ANIMAL NO.	FORELIMB GRIP STRENGTH	HINDLIMB GRIP STRENGTH	HINDLIMB SPLAY
2001	970.0	775.0	9.1
2002	845.0	745.0	4.8
2003	1090.0	770.0	8.2
2004	815.0	725.0	8.4
2005	645.0	585.0	8.1
2006	885.0	800.0	6.8
2007	820.0	825.0	10.5
2008	840.0	620.0	7.8
2009	990.0	900.0	4.7
2010	710.0	790.0	8.3
2011	730.0	625.0	8.2
2012	680.0	795.0	7.1
2013	710.0	625.0	5.9
2015	1020.0	775.0	9.5
2016	990.0	665.0	6.3

GROUP 2 - CERIC OXIDE
LOW DOSE

APPENDIX NO. 5

INDIVIDUAL GRIP STRENGTH (G) AND HINDLIMB SPLAY (CM)

PROJECT NO :90831

MEAN OF TRIALS 1 AND 2 - WEEK 13
MALES

ANIMAL NO.	FORELIMB GRIP STRENGTH	HINDLIMB GRIP STRENGTH	HINDLIMB SPLAY
GROUP 3 - CERIC OXIDE			
INTERMEDIATE DOSE			
3001	800.0	665.0	5.9
3002	930.0	1000.0	11.4
3003	965.0	675.0	9.0
3004	950.0	780.0	4.4
3005	1065.0	550.0	6.3
3006	930.0	850.0	8.8
3007	780.0	940.0	9.4
3008	775.0	830.0	9.7
3009	660.0	805.0	8.5
3011	475.0	535.0	6.1
3012	735.0	710.0	8.3
3013	765.0	745.0	5.7
3014	680.0	410.0	5.1
3015	950.0	495.0	9.3
3016	660.0	715.0	7.6

PROJECT NO : 90831

APPENDIX NO. 5 INDIVIDUAL GRIP STRENGTH (G) AND HINDLIMB SPLAY (CM)

MEAN OF TRIALS 1 AND 2 - WEEK 13
MALES

ANIMAL NO.	FORELIMB GRIP STRENGTH	HINDLIMB GRIP STRENGTH	HINDLIMB SPLAY
GROUP 4 - CERIC OXIDE			
HIGH DOSE			
4002	970.0	1000.0	11.5
4003	945.0	1105.0	9.0
4004	630.0	635.0	9.6
4005	700.0	660.0	5.4
4006	1095.0	595.0	8.0
4007	690.0	540.0	9.3
4008	640.0	740.0	8.0
4009	670.0	600.0	5.3
4010	600.0	775.0	7.8
4011	930.0	665.0	6.8
4012	880.0	690.0	5.7
4014	1030.0	570.0	5.9
4015	625.0	450.0	5.9
4016	1015.0	885.0	8.3

PROJECT NO :90831

APPENDIX NO. 5 INDIVIDUAL GRIP STRENGTH (G) AND HINDLIMB SPLAY (CM)

MEAN OF TRIALS 1 AND 2 - WEEK 13
FEMALES

ANIMAL NO.	FORELIMB GRIP STRENGTH	HINDLIMB GRIP STRENGTH	HINDLIMB SPLAY
GROUP 1 - AIR CONTROL			
1501	645.0	560.0	7.6
1502	680.0	805.0	7.1
1503	930.0	710.0	9.1
1504	690.0	640.0	7.1
1505	850.0	530.0	6.0
1506	1050.0	885.0	7.4
1507	890.0	735.0	9.0
1508	890.0	820.0	9.1
1509	1050.0	820.0	7.7
1510	605.0	715.0	9.4
1511	740.0	555.0	7.5
1512	550.0	585.0	8.3
1513	830.0	560.0	3.3
1514	835.0	600.0	5.4
1515	725.0	515.0	8.4

MEAN OF TRIALS 1 AND 2 - WEEK 13
FEMALES

ANIMAL NO.	FORELIMB GRIP STRENGTH	HINDLIMB GRIP STRENGTH	HINDLIMB SPLAY
GROUP 2 - CERIC OXIDE			
LOW DOSE			
2501	885.0	875.0	6.9
2502	1015.0	730.0	10.0
2503	855.0	530.0	7.0
2504	685.0	700.0	5.7
2505	790.0	675.0	8.0
2506	680.0	720.0	8.7
2507	875.0	575.0	7.9
2508	735.0	520.0	7.5
2509	945.0	915.0	9.4
2510	870.0	640.0	5.8
2511	660.0	425.0	6.9
2512	1030.0	725.0	6.0
2513	870.0	615.0	6.9
2514	980.0	645.0	7.5
2515	725.0	600.0	6.4

APPENDIX NO. 5

INDIVIDUAL GRIP STRENGTH (G) AND HINDLIMB SPLAY (CM)

PROJECT NO :90831

MEAN OF TRIALS 1 AND 2 - WEEK 13
FEMALES

ANIMAL NO.	FORELIMB GRIP STRENGTH	HINDLIMB GRIP STRENGTH	HINDLIMB SPLAY
GROUP 3 - CERIC OXIDE INTERMEDIATE DOSE			
3501	725.0	780.0	6.4
3502	625.0	540.0	8.2
3503	855.0	560.0	9.3
3504	650.0	605.0	6.2
3505	975.0	640.0	9.0
3506	1025.0	605.0	7.6
3507	825.0	845.0	10.3
3508	790.0	620.0	8.3
3509	875.0	560.0	9.0
3510	800.0	700.0	8.6
3511	620.0	600.0	7.0
3513	705.0	510.0	4.5
3514	720.0	490.0	4.2
3516	645.0	640.0	6.6
3517	780.0	460.0	1.8



APPENDIX NO. 5

INDIVIDUAL GRIP STRENGTH (G) AND HINDLIMB SPLAY (CM)

PROJECT NO :90831

MEAN OF TRIALS 1 AND 2 - WEEK 13
FEMALES

ANIMAL NO.	FORELIMB GRIP STRENGTH	HINDLIMB GRIP STRENGTH	HINDLIMB SPLAY
GROUP 4 - CERIC OXIDE HIGH DOSE			
4501	535.0	475.0	6.1
4502	685.0	765.0	7.5
4503	480.0	655.0	7.6
4504	915.0	705.0	9.2
4505	905.0	600.0	8.3
4506	775.0	710.0	9.9
4507	775.0	740.0	9.5
4508	530.0	590.0	7.9
4509	535.0	725.0	5.3
4510	895.0	605.0	8.5
4511	685.0	530.0	9.7
4513	960.0	420.0	3.8
4514	605.0	470.0	3.1
4515	630.0	370.0	4.2
4516	400.0	670.0	6.3

APPENDIX NO: 5

INDIVIDUAL GRIP STRENGTH (G)

PROJECT NO : 90831

TRIALS 1 AND 2 - PRE-STUDY
MALES

GROUP	ANIMAL NO.	TRIAL	FORELIMB	HINDLIMB
GROUP 1 - AIR CONTROL	1001	01	700.0	320.0
	1001	02	890.0	360.0
	1002	01	580.0	390.0
	1002	02	720.0	370.0
	1005	01	730.0	600.0
	1005	02	640.0	620.0
	1006	01	920.0	550.0
	1006	02	880.0	550.0
	1007	01	790.0	240.0
	1007	02	750.0	440.0
1008	01	700.0	260.0	
1008	02	880.0	420.0	
1009	01	790.0	310.0	
1009	02	820.0	360.0	
1010	01	610.0	530.0	
1010	02	700.0	610.0	

APPENDIX NO: 5

INDIVIDUAL GRIP STRENGTH (G)

PROJECT NO : 90831

TRIALS 1 AND 2 - PRE-STUDY
MALES $\frac{1}{2}$

GROUP	ANIMAL NO.	TRIAL	FORELIMB	HINDLIMB
GROUP 1 - AIR CONTROL	1011	01	920.0	440.0
	1011	02	910.0	480.0
	1012	01	680.0	310.0
	1012	02	880.0	470.0
	1013	01	950.0	480.0
	1013	02	990.0	540.0
	1014	01	650.0	470.0
	1014	02	730.0	320.0
	1015	01	860.0	380.0
	1015	02	970.0	480.0
	1016	01	700.0	280.0
	1016	02	730.0	290.0
	1017	01	900.0	610.0
	1017	02	820.0	520.0

PROJECT NO : 90831

INDIVIDUAL GRIP STRENGTH (G)

TRIALS 1 AND 2 - PRE-STUDY
MALES

APPENDIX NO: 5

ANIMAL NO.	TRIAL	FORELIMB	HINDLIMB
GROUP 2 - CERIC OXIDE LOW DOSE			
2001	01	690.0	310.0
2001	02	710.0	400.0
2002	01	900.0	420.0
2002	02	850.0	470.0
2003	01	790.0	440.0
2003	02	820.0	460.0
2004	01	680.0	410.0
2004	02	600.0	440.0
2005	01	990.0	400.0
2005	02	930.0	360.0
2006	01	730.0	470.0
2006	02	900.0	640.0
2007	01	680.0	400.0
2007	02	600.0	530.0
2008	01	930.0	300.0
2008	02	810.0	260.0

PROJECT NO : 90831

INDIVIDUAL GRIP STRENGTH (G)

TRIALS 1 AND 2 - PRE-STUDY
MALES

APPENDIX NO: 5

ANIMAL NO.	TRIAL	FORELIMB	HINDLIMB
GROUP 2 - CERIC OXIDE LOW DOSE			
2009	01	660.0	410.0
2009	02	640.0	420.0
2010	01	570.0	210.0
2010	02	670.0	220.0
2011	01	930.0	320.0
2011	02	860.0	450.0
2012	01	500.0	540.0
2012	02	630.0	410.0
2013	01	710.0	280.0
2013	02	630.0	180.0
2015	01	940.0	580.0
2015	02	880.0	460.0
2016	01	1200.0	670.0
2016	02	1000.0	640.0

NO

PROJECT NO : 90831

INDIVIDUAL GRIP STRENGTH (G)

TRIALS 1 AND 2 - PRE-STUDY
MALES

APPENDIX NO: 5

ANIMAL NO.	TRIAL	FORELIMB	HINDLIMB
GROUP 3 - CERIC OXIDE INTERMEDIATE DOSE			
3001	01	650.0	330.0
3001	02	660.0	310.0
3002	01	720.0	580.0
3002	02	950.0	480.0
3003	01	880.0	400.0
3003	02	790.0	420.0
3004	01	830.0	410.0
3004	02	930.0	500.0
3005	01	850.0	440.0
3005	02	730.0	530.0
3006	01	860.0	480.0
3006	02	940.0	340.0
3007	01	660.0	370.0
3007	02	710.0	330.0
3008	01	660.0	310.0
3008	02	670.0	410.0



APPENDIX NO: 5

INDIVIDUAL GRIP STRENGTH (G)

PROJECT NO : 90831

TRIALS 1 AND 2 - PRE-STUDY
MALES

GROUP	ANIMAL NO.	TRIAL	FORELIMB	HINDLIMB
GROUP 3 - CERIC OXIDE INTERMEDIATE DOSE	3009	01	860.0	750.0
	3009	02	910.0	570.0
	3011	01	890.0	530.0
	3011	02	820.0	360.0
	3012	01	830.0	290.0
	3012	02	900.0	200.0
	3013	01	790.0	450.0
	3013	02	870.0	350.0
	3014	01	640.0	290.0
	3014	02	550.0	230.0
	3015	01	720.0	520.0
	3015	02	880.0	330.0
	3016	01	860.0	480.0
	3016	02	940.0	550.0

PROJECT NO : 90831

INDIVIDUAL GRIP STRENGTH (G)

TRIALS 1 AND 2 - PRE-STUDY
MALES

APPENDIX NO: 5

GROUP 4 - CERIC OXIDE HIGH DOSE	ANIMAL NO.	TRIAL	FORELIMB	HINDLIMB
	4001	01	750.0	480.0
	4001	02	900.0	430.0
	4002	01	800.0	430.0
	4002	02	910.0	460.0
	4003	01	500.0	350.0
	4003	02	760.0	320.0
	4004	01	690.0	410.0
	4004	02	560.0	380.0
	4005	01	620.0	410.0
	4005	02	800.0	350.0
	4006	01	980.0	450.0
	4006	02	1070.0	470.0
	4007	01	990.0	460.0
	4007	02	980.0	510.0
	4008	01	730.0	410.0
	4008	02	660.0	410.0





PROJECT NO : 90831

INDIVIDUAL GRIP STRENGTH (G)

TRIALS 1 AND 2 - PRE-STUDY
MALES

APPENDIX NO: 5

ANIMAL NO.	TRIAL	FORELIMB	HINDLIMB
GROUP 4 - CERIC OXIDE HIGH DOSE			
4009	01	940.0	480.0
4009	02	770.0	410.0
4010	01	800.0	400.0
4010	02	810.0	200.0
4011	01	600.0	430.0
4011	02	870.0	260.0
4012	01	510.0	310.0
4012	02	390.0	360.0
4014	01	880.0	490.0
4014	02	870.0	370.0
4015	01	720.0	420.0
4015	02	690.0	430.0
4016	01	840.0	240.0
4016	02	840.0	450.0



PROJECT NO : 90831

INDIVIDUAL GRIP STRENGTH (G)

TRIALS 1 AND 2 - PRE-STUDY
FEMALES

APPENDIX NO: 5

GROUP	ANIMAL NO.	TRIAL	FORELIMB	HINDLIMB
GROUP 1 - AIR CONTROL	1501	01	500.0	330.0
	1501	02	480.0	270.0
	1502	01	710.0	370.0
	1502	02	840.0	300.0
	1503	01	670.0	280.0
	1503	02	650.0	240.0
	1504	01	520.0	210.0
	1504	02	580.0	380.0
	1505	01	660.0	240.0
	1505	02	600.0	250.0
	1506	01	630.0	420.0
	1506	02	760.0	530.0
	1507	01	600.0	390.0
	1507	02	910.0	380.0
	1508	01	610.0	500.0
	1508	02	830.0	510.0

APPENDIX NO: 5

INDIVIDUAL GRIP STRENGTH (G)

PROJECT NO : 90R31

TRIALS 1 AND 2 - PRE-STUDY
FEMALES

GROUP	ANIMAL NO.	TRIAL	FORELIMB	HINDLIMB
GROUP 1 - AIR CONTROL	1509	01	600.0	430.0
	1509	02	790.0	410.0
	1510	01	500.0	300.0
	1510	02	510.0	310.0
	1511	01	730.0	340.0
	1511	02	900.0	420.0
	1512	01	660.0	500.0
	1512	02	770.0	400.0
	1513	01	540.0	510.0
	1513	02	450.0	450.0
	1514	01	890.0	420.0
	1514	02	860.0	430.0
	1515	01	700.0	560.0
	1515	02	670.0	510.0

PROJECT NO : 90831

INDIVIDUAL GRIP STRENGTH (G)

APPENDIX NO: 5

TRIALS 1 AND 2 - PRE-STUDY
FEMALES

ANIMAL NO.	TRIAL	FORELIMB	HINDLIMB
GROUP 2 - CERIC OXIDE LOW DOSE			
2501	01	700.0	230.0
2501	02	560.0	260.0
2502	01	590.0	330.0
2502	02	590.0	270.0
2503	01	770.0	490.0
2503	02	760.0	540.0
2504	01	500.0	420.0
2504	02	410.0	420.0
2505	01	570.0	280.0
2505	02	550.0	320.0
2506	01	760.0	350.0
2506	02	810.0	410.0
2507	01	720.0	550.0
2507	02	830.0	560.0
2508	01	600.0	360.0
2508	02	790.0	460.0

PROJECT NO : 90931

INDIVIDUAL GRIP STRENGTH (G)

TRIALS 1 AND 2 - PRE-STUDY
FEMALES

ANIMAL NO.	TRIAL	FORELIMB	HINDLIMB
GROUP 2 - CERIC OXIDE			
LOW DOSE			
2509	01	930.0	380.0
2509	02	830.0	450.0
2510	01	680.0	460.0
2510	02	850.0	440.0
2511	01	770.0	320.0
2511	02	860.0	360.0
2512	01	900.0	420.0
2512	02	740.0	480.0
2513	01	840.0	510.0
2513	02	790.0	510.0
2514	01	720.0	360.0
2514	02	860.0	340.0
2515	01	790.0	400.0
2515	02	620.0	420.0

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PROJECT NO : 90831

INDIVIDUAL GRIP STRENGTH (G)

TRIALS 1 AND 2 - PRE-STUDY
FEMALES

APPENDIX NO: 5

ANIMAL NO.	TRIAL	FORELIMB	HINDLIMB
GROUP 3 - CERIC OXIDE INTERMEDIATE DOSE			
3501	01	930.0	440.0
3501	02	680.0	510.0
3502	01	760.0	290.0
3502	02	930.0	450.0
3503	01	800.0	560.0
3503	02	830.0	420.0
3504	01	690.0	310.0
3504	02	600.0	270.0
3505	01	700.0	300.0
3505	02	850.0	290.0
3506	01	780.0	340.0
3506	02	750.0	320.0
3507	01	600.0	530.0
3507	02	700.0	510.0
3508	01	630.0	340.0
3508	02	660.0	360.0



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INDIVIDUAL GRIP STRENGTH (G)

APPENDIX NO: 5

TRIALS 1 AND 2 - PRE-STUDY
FEMALES

ANIMAL NO.	TRIAL	FORELIMB	HINDLIMB
GROUP 3 - CERIC OXIDE INTERMEDIATE DOSE			
3509	01	710.0	450.0
3509	02	810.0	330.0
3510	01	720.0	490.0
3510	02	910.0	440.0
3511	01	730.0	400.0
3511	02	690.0	380.0
3513	01	500.0	400.0
3513	02	600.0	320.0
3514	01	900.0	200.0
3514	02	970.0	380.0
3516	01	650.0	340.0
3516	02	700.0	360.0
3517	01	480.0	280.0
3517	02	500.0	350.0



PROJECT NO : 90831

INDIVIDUAL GRIP STRENGTH (G)

APPENDIX NO: 5

TRIALS 1 AND 2 - PRE-STUDY
FEMALES

ANIMAL NO.	TRIAL	FORELIMB	HINDLIMB
4501	01	780.0	470.0
4501	02	730.0	450.0
4502	01	950.0	450.0
4502	02	730.0	450.0
4503	01	790.0	270.0
4503	02	570.0	400.0
4504	01	680.0	250.0
4504	02	750.0	330.0
4505	01	710.0	310.0
4505	02	720.0	380.0
4506	01	620.0	280.0
4506	02	530.0	210.0
4507	01	740.0	280.0
4507	02	770.0	380.0
4508	01	850.0	420.0
4508	02	900.0	600.0

GROUP 4 - CERIC OXIDE
HIGH DOSE

PROJECT NO : 90831

INDIVIDUAL GRIP STRENGTH (G)

TRIALS 1 AND 2 - PRE-STUDY
FEMALES

APPENDIX NO: 5

ANIMAL NO.	TRIAL	FORELIMB	HINDLIMB
GROUP 4 - CERIC OXIDE HIGH DOSE			
4509	01	570.0	240.0
4509	02	680.0	280.0
4510	01	640.0	340.0
4510	02	510.0	380.0
4511	01	730.0	490.0
4511	02	680.0	400.0
4513	01	750.0	350.0
4513	02	750.0	390.0
4514	01	980.0	540.0
4514	02	880.0	560.0
4515	01	690.0	370.0
4515	02	500.0	320.0
4516	01	770.0	450.0
4516	02	590.0	350.0



APPENDIX NO: 5
INDIVIDUAL GRIP STRENGTH (G)
PROJECT NO : 90831

TRIALS 1 AND 2 - DAY 1
MALES

ANIMAL NO.	TRIAL	FORELIMB	HINDLIMB
1001	01	1100.0	410.0
1001	02	960.0	510.0
1002	01	520.0	240.0
1002	02	630.0	320.0
1005	01	910.0	520.0
1005	02	900.0	440.0
1006	01	890.0	520.0
1006	02	730.0	490.0
1007	01	620.0	360.0
1007	02	450.0	240.0
1008	01	790.0	410.0
1008	02	850.0	480.0
1009	01	950.0	580.0
1009	02	960.0	530.0
1010	01	720.0	520.0
1010	02	890.0	570.0

GROUP 1 - AIR CONTROL



PROJECT NO : 90931

INDIVIDUAL GRIP STRENGTH (G)

TRIALS 1 AND 2 - DAY 1
MALES

APPENDIX NO: 5

ANIMAL NO.	TRIAL	FORELIMB	HINDLIMB
GROUP 1 - AIR CONTROL			
1011	01	780.0	500.0
1011	02	700.0	680.0
1012	01	640.0	630.0
1012	02	670.0	520.0
1013	01	770.0	530.0
1013	02	920.0	500.0
1014	01	710.0	700.0
1014	02	770.0	560.0
1015	01	900.0	450.0
1015	02	780.0	500.0
1016	01	650.0	220.0
1016	02	620.0	210.0
1017	01	770.0	440.0
1017	02	880.0	560.0



PROJECT NO : 90831

INDIVIDUAL GRIP STRENGTH (G)

APPENDIX NO: 5

TRIALS 1 AND 2 - DAY 1
MALES

	ANIMAL NO.	TRIAL	FORELIMB	HINDLIMB
GROUP 2 - CERIC OXIDE LOW DOSE	2001	01	850.0	340.0
	2001	02	840.0	310.0
	2002	01	670.0	570.0
	2002	02	870.0	600.0
	2003	01	880.0	410.0
	2003	02	760.0	430.0
	2004	01	790.0	500.0
	2004	02	600.0	510.0
	2005	01	720.0	630.0
	2005	02	930.0	500.0
	2006	01	990.0	520.0
	2006	02	1060.0	590.0
	2007	01	870.0	660.0
	2007	02	780.0	610.0
	2008	01	730.0	550.0
	2008	02	930.0	580.0



APPENDIX NO: 5

INDIVIDUAL GRIP STRENGTH (G)

PROJECT NO : 90831

TRIALS 1 AND 2 - DAY 1
MALES

ANIMAL NO.	TRIAL	FORELIMB	HINDLIMB
GROUP 2 - CERIC OXIDE LOW DOSE			
2009	01	770.0	580.0
2009	02	610.0	560.0
2010	01	550.0	260.0
2010	02	510.0	270.0
2011	01	880.0	530.0
2011	02	980.0	520.0
2012	01	530.0	390.0
2012	02	620.0	310.0
2013	01	780.0	360.0
2013	02	730.0	300.0
2015	01	850.0	550.0
2015	02	960.0	460.0
2016	01	770.0	630.0
2016	02	750.0	700.0





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INDIVIDUAL GRIP STRENGTH (G)

APPENDIX NO: 5

TRIALS 1 AND 2 - DAY 1
MALES

ANIMAL NO.	TRIAL	FORELIMB	HINDLIMB
GROUP 3 - CERIC OXIDE INTERMEDIATE DOSE			
3001	01	750.0	380.0
3001	02	620.0	280.0
3002	01	1070.0	570.0
3002	02	1110.0	560.0
3003	01	900.0	590.0
3003	02	750.0	570.0
3004	01	900.0	520.0
3004	02	850.0	560.0
3005	01	700.0	240.0
3005	02	810.0	360.0
3006	01	670.0	520.0
3006	02	620.0	410.0
3007	01	850.0	610.0
3007	02	870.0	470.0
3008	01	670.0	530.0
3008	02	700.0	380.0

PROJECT NO : 90831

INDIVIDUAL GRIP STRENGTH (G)

APPENDIX NO: 5

TRIALS 1 AND 2 - DAY 1
MALES

	ANIMAL NO.	TRIAL	FORELIMB	HINDLIMB
GROUP 3 - CERIC OXIDE INTERMEDIATE DOSE	3009	01	930.0	550.0
	3009	02	990.0	550.0
	3011	01	840.0	350.0
	3011	02	750.0	390.0
	3012	01	920.0	460.0
	3012	02	710.0	460.0
	3013	01	900.0	310.0
	3013	02	790.0	310.0
	3014	01	580.0	360.0
	3014	02	560.0	300.0
	3015	01	890.0	560.0
	3015	02	760.0	560.0
	3016	01	860.0	460.0
	3016	02	910.0	440.0

PROJECT NO : 90831

INDIVIDUAL GRIP STRENGTH (G)

APPENDIX NO: 5

TRIALS 1 AND 2 - DAY 1
MALES

ANIMAL NO.	TRIAL	FORELIMB	HINDLIMB
GROUP 4 - CERIC OXIDE HIGH DOSE			
4001	01	770.0	550.0
4001	02	630.0	470.0
4002	01	1040.0	590.0
4002	02	820.0	580.0
4003	01	640.0	530.0
4003	02	660.0	560.0
4004	01	500.0	270.0
4004	02	360.0	220.0
4005	01	750.0	270.0
4005	02	520.0	280.0
4006	01	870.0	430.0
4006	02	910.0	420.0
4007	01	910.0	600.0
4007	02	900.0	440.0
4008	01	750.0	420.0
4008	02	730.0	300.0



PROJECT NO : 90831

INDIVIDUAL GRIP STRENGTH (G)

TRIALS 1 AND 2 - DAY 1
MALES

APPENDIX NO: 5

ANIMAL NO.	TRIAL	FORELIMB	HINDLIMB
GROUP 4 - CERIC OXIDE HIGH DOSE			
4009	01	670.0	510.0
4009	02	760.0	560.0
4010	01	680.0	410.0
4010	02	630.0	600.0
4011	01	630.0	520.0
4011	02	850.0	460.0
4012	01	720.0	470.0
4012	02	840.0	320.0
4014	01	900.0	510.0
4014	02	1030.0	510.0
4015	01	750.0	390.0
4015	02	840.0	520.0
4016	01	800.0	600.0
4016	02	730.0	530.0



PROJECT NO : 90831

INDIVIDUAL GRIP STRENGTH (G)

TRIALS 1 AND 2 - DAY 1
FEMALES

APPENDIX NO: 5

ANIMAL NO.	TRIAL	FORELIMB	HINDLIMB
1501	01	680.0	380.0
1501	02	840.0	480.0
1502	01	630.0	380.0
1502	02	530.0	380.0
1503	01	710.0	530.0
1503	02	450.0	370.0
1504	01	800.0	420.0
1504	02	870.0	330.0
1505	01	580.0	380.0
1505	02	450.0	410.0
1506	01	940.0	500.0
1506	02	860.0	620.0
1507	01	870.0	520.0
1507	02	850.0	520.0
1508	01	980.0	400.0
1508	02	850.0	470.0

GROUP 1 - AIR CONTROL

PROJECT NO : 90831

INDIVIDUAL GRIP STRENGTH (G)

APPENDIX NO: 5

TRIALS 1 AND 2 - DAY 1
FEMALES

ANIMAL NO.	TRIAL	FORELIMB	HINDLIMB
GROUP 1 - AIR CONTROL			
1509	01	690.0	590.0
1509	02	450.0	550.0
1510	01	650.0	420.0
1510	02	660.0	340.0
1511	01	840.0	410.0
1511	02	830.0	450.0
1512	01	930.0	460.0
1512	02	750.0	500.0
1513	01	600.0	350.0
1513	02	530.0	380.0
1514	01	820.0	520.0
1514	02	880.0	470.0
1515	01	910.0	460.0
1515	02	970.0	460.0



PROJECT NO : 90831

INDIVIDUAL GRIP STRENGTH (G)

TRIALS 1 AND 2 - DAY 1
FEMALES

APPENDIX NO: 5

ANIMAL NO.	TRIAL	FORELIMB	HINDLIMB
GROUP 2 - CERIC OXIDE LOW DOSE			
2501	01	560.0	320.0
2501	02	610.0	310.0
2502	01	710.0	360.0
2502	02	870.0	370.0
2503	01	750.0	330.0
2503	02	620.0	470.0
2504	01	850.0	500.0
2504	02	760.0	500.0
2505	01	720.0	440.0
2505	02	820.0	460.0
2506	01	810.0	470.0
2506	02	820.0	490.0
2507	01	940.0	600.0
2507	02	870.0	560.0
2508	01	540.0	380.0
2508	02	490.0	360.0

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PROJECT NO : 90831

INDIVIDUAL GRIP STRENGTH (G)

TRIALS 1 AND 2 - DAY 1
FEMALES

APPENDIX NO: 5

ANIMAL NO.	TRIAL	FORELIMB	HINDLIMB
GROUP 2 - CERIC OXIDE LOW DOSE			
2509	01	790.0	580.0
2509	02	650.0	510.0
2510	01	680.0	310.0
2510	02	880.0	480.0
2511	01	900.0	310.0
2511	02	820.0	380.0
2512	01	740.0	460.0
2512	02	940.0	440.0
2513	01	880.0	550.0
2513	02	640.0	580.0
2514	01	980.0	440.0
2514	02	770.0	380.0
2515	01	880.0	420.0
2515	02	940.0	400.0

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PROJECT NO : 90831

INDIVIDUAL GRIP STRENGTH (G)

TRIALS 1 AND 2 - DAY 1
FEMALES

APPENDIX NO: 5

ANIMAL NO.	TRIAL	FORELIMB	HINDLIMB
GROUP 3 - CERIC OXIDE INTERMEDIATE DOSE			
3501	01	590.0	600.0
3501	02	710.0	490.0
3502	01	630.0	380.0
3502	02	500.0	360.0
3503	01	900.0	370.0
3503	02	950.0	410.0
3504	01	760.0	280.0
3504	02	800.0	440.0
3505	01	620.0	460.0
3505	02	690.0	530.0
3506	01	580.0	450.0
3506	02	790.0	500.0
3507	01	550.0	480.0
3507	02	520.0	520.0
3508	01	840.0	360.0
3508	02	640.0	390.0



PROJECT NO : 90831

INDIVIDUAL GRIP STRENGTH (G)

TRIALS 1 AND 2 - DAY 1
FEMALES

APPENDIX NO: 5

ANIMAL NO.	TRIAL	FORELIMB	HINDLIMB
3509	01	960.0	390.0
3509	02	990.0	500.0
3510	01	830.0	440.0
3510	02	610.0	310.0
3511	01	780.0	480.0
3511	02	680.0	520.0
3513	01	490.0	390.0
3513	02	530.0	280.0
3514	01	720.0	390.0
3514	02	880.0	430.0
3516	01	450.0	380.0
3516	02	350.0	380.0
3517	01	530.0	400.0
3517	02	430.0	380.0

GROUP 3 - CERIC OXIDE
INTERMEDIATE DOSE



APPENDIX NO: 5

INDIVIDUAL GRIP STRENGTH (G)

PROJECT NO : 90831

TRIALS 1 AND 2 - DAY 1
FEMALES

ANIMAL NO.	TRIAL	FORELIMB	HINDLIMB
GROUP 4 - CERIC OXIDE HIGH DOSE			
4501	01	610.0	490.0
4501	02	540.0	540.0
4502	01	910.0	300.0
4502	02	1000.0	450.0
4503	01	650.0	440.0
4503	02	450.0	460.0
4504	01	820.0	400.0
4504	02	970.0	540.0
4505	01	820.0	280.0
4505	02	940.0	250.0
4506	01	800.0	580.0
4506	02	650.0	420.0
4507	01	710.0	450.0
4507	02	830.0	420.0
4508	01	1000.0	490.0
4508	02	1030.0	440.0

PROJECT NO : 90831

INDIVIDUAL GRIP STRENGTH (G)

APPENDIX NO: 5

TRIALS 1 AND 2 - DAY 1
FEMALES

ANIMAL NO.	TRIAL	FORELIMB	HINDLIMB
GROUP 4 - CERIC OXIDE HIGH DOSE			
4509	01	530.0	490.0
4509	02	500.0	470.0
4510	01	740.0	410.0
4510	02	640.0	410.0
4511	01	760.0	360.0
4511	02	690.0	370.0
4513	01	750.0	480.0
4513	02	700.0	540.0
4514	01	830.0	480.0
4514	02	1000.0	440.0
4515	01	590.0	360.0
4515	02	590.0	390.0
4516	01	800.0	520.0
4516	02	710.0	590.0

PROJECT NO : 90831

INDIVIDUAL GRIP STRENGTH (G)

APPENDIX NO: 5

TRIALS 1 AND 2 - WEEK 4
MALES

ANIMAL NO.	TRIAL	FORELIMB	HINDLIMB
GROUP 1 - AIR CONTROL			
1001	01	870.0	270.0
1001	02	710.0	490.0
1002	01	810.0	440.0
1002	02	660.0	490.0
1005	01	930.0	440.0
1005	02	800.0	500.0
1006	01	620.0	580.0
1006	02	610.0	530.0
1007	01	930.0	540.0
1007	02	750.0	550.0
1008	01	730.0	480.0
1008	02	870.0	400.0
1009	01	1300.0	600.0
1009	02	1030.0	480.0
1010	01	780.0	870.0
1010	02	930.0	540.0

PROJECT NO : 90831

INDIVIDUAL GRIP STRENGTH (G)

TRIALS 1 AND 2 - WEEK 4
MALES

APPENDIX NO: 5

ANIMAL NO.	TRIAL	FORELIMB	HINDLIMB
1011	01	680.0	620.0
1011	02	560.0	480.0
1012	01	960.0	750.0
1012	02	1030.0	770.0
1013	01	980.0	710.0
1013	02	800.0	680.0
1014	01	1020.0	510.0
1014	02	890.0	650.0
1015	01	1100.0	600.0
1015	02	1200.0	870.0
1016	01	530.0	380.0
1016	02	560.0	420.0
1017	01	540.0	610.0
1017	02	530.0	660.0

GROUP 1 - AIR CONTROL

PROJECT NO : 90831

INDIVIDUAL GRIP STRENGTH (G)

APPENDIX NO: 5

TRIALS 1 AND 2 - WEEK 4
MALES

ANIMAL NO.	TRIAL	FORELIMB	HINDLIMB
2001	01	740.0	740.0
2001	02	730.0	760.0
2002	01	850.0	670.0
2002	02	700.0	710.0
2003	01	1000.0	350.0
2003	02	930.0	520.0
2004	01	740.0	680.0
2004	02	700.0	550.0
2005	01	740.0	670.0
2005	02	460.0	380.0
2006	01	710.0	440.0
2006	02	610.0	800.0
2007	01	730.0	580.0
2007	02	850.0	730.0
2008	01	500.0	630.0
2008	02	540.0	740.0

GROUP 2 - CERIC OXIDE
LOW DOSE

PROJECT NO : 90831

INDIVIDUAL GRIP STRENGTH (G)

TRIALS 1 AND 2 - WEEK 4
MALES

APPENDIX NO: 5

ANIMAL NO.	TRIAL	FORELIMB	HINDLIMB
GROUP 2 - CERIC OXIDE			
LOW DOSE			
2009	01	930.0	370.0
2009	02	870.0	560.0
2010	01	690.0	580.0
2010	02	610.0	550.0
2011	01	860.0	620.0
2011	02	660.0	580.0
2012	01	850.0	440.0
2012	02	650.0	380.0
2013	01	970.0	480.0
2013	02	740.0	490.0
2015	01	710.0	760.0
2015	02	750.0	610.0
2016	01	890.0	520.0
2016	02	820.0	430.0

PROJECT NO : 90831

INDIVIDUAL GRIP STRENGTH (G)

TRIALS 1 AND 2 - WEEK 4
MALES

APPENDIX NO: 5

ANIMAL NO.	TRIAL	FORELIMB	HINDLIMB
GROUP 3 - CERIC OXIDE INTERMEDIATE DOSE			
3001	01	1000.0	610.0
3001	02	950.0	420.0
3002	01	680.0	930.0
3002	02	770.0	890.0
3003	01	600.0	730.0
3003	02	750.0	640.0
3004	01	650.0	440.0
3004	02	550.0	590.0
3005	01	1060.0	530.0
3005	02	1090.0	520.0
3006	01	980.0	570.0
3006	02	730.0	360.0
3007	01	700.0	670.0
3007	02	610.0	580.0
3008	01	520.0	690.0
3008	02	580.0	400.0

APPENDIX NO: 5

INDIVIDUAL GRIP STRENGTH (G)

PROJECT NO : 90831

TRIALS 1 AND 2 - WEEK 4
MALES

ANIMAL NO.	TRIAL	FORELIMB	HINDLIMB
GROUP 3 - CERIC OXIDE INTERMEDIATE DOSE			
3009	01	740.0	460.0
3009	02	980.0	690.0
3011	01	580.0	520.0
3011	02	570.0	600.0
3012	01	730.0	360.0
3012	02	800.0	330.0
3013	01	970.0	640.0
3013	02	770.0	470.0
3014	01	700.0	350.0
3014	02	880.0	370.0
3015	01	1300.0	530.0
3015	02	1300.0	810.0
3016	01	810.0	740.0
3016	02	940.0	790.0

PROJECT NO : 90831

INDIVIDUAL GRIP STRENGTH (G)

TRIALS 1 AND 2 - WEEK 4
MALES

APPENDIX NO: 5

ANIMAL NO.	TRIAL	FORELIMB	HINDLIMB
GROUP 4 - CERIC OXIDE HIGH DOSE			
4001	01	1050.0	590.0
4001	02	860.0	760.0
4002	01	830.0	820.0
4002	02	780.0	820.0
4003	01	800.0	890.0
4003	02	800.0	840.0
4004	01	750.0	830.0
4004	02	690.0	530.0
4005	01	880.0	510.0
4005	02	570.0	590.0
4006	01	740.0	520.0
4006	02	680.0	630.0
4007	01	630.0	520.0
4007	02	590.0	500.0
4008	01	770.0	540.0
4008	02	580.0	470.0

APPENDIX NO: 5

INDIVIDUAL GRIP STRENGTH (G)

PROJECT NO : 90831

TRIALS 1 AND 2 - WEEK 4
MALES

ANIMAL NO.	TRIAL	FORELIMB	HINDLIMB
GROUP 4 - CLERIC OXIDE HIGH DOSE			
4009	01	930.0	650.0
4009	02	870.0	540.0
4010	01	300.0	400.0
4010	02	410.0	390.0
4011	01	770.0	620.0
4011	02	870.0	650.0
4012	01	810.0	460.0
4012	02	970.0	430.0
4014	01	790.0	300.0
4014	02	810.0	480.0
4015	01	870.0	500.0
4015	02	740.0	610.0
4016	01	880.0	790.0
4016	02	920.0	700.0



APPENDIX NO: 5

INDIVIDUAL GRIP STRENGTH (G)

PROJECT NO : 90831

TRIALS 1 AND 2 - WEEK 4
FEMALES

GROUP	ANIMAL NO.	TRIAL	FORELIMB	HINDLIMB
GROUP 1 - AIR CONTROL	1501	01	840.0	560.0
	1501	02	760.0	440.0
	1502	01	710.0	700.0
	1502	02	950.0	680.0
	1503	01	630.0	590.0
	1503	02	620.0	620.0
	1504	01	850.0	510.0
	1504	02	830.0	520.0
	1505	01	850.0	440.0
	1505	02	600.0	580.0
	1506	01	960.0	540.0
	1506	02	750.0	650.0
	1507	01	690.0	570.0
	1507	02	540.0	470.0
	1508	01	990.0	650.0
	1508	02	790.0	460.0

APPENDIX NO: 5

INDIVIDUAL GRIP STRENGTH (G)

PROJECT NO : 90831

TRIALS 1 AND 2 - WEEK 4
FEMALES

GROUP 1 - AIR CONTROL	ANIMAL NO.	TRIAL	FORELIMB	HINDLIMB
	1509	01	660.0	570.0
	1509	02	750.0	530.0
	1510	01	810.0	430.0
	1510	02	710.0	550.0
	1511	01	600.0	490.0
	1511	02	440.0	440.0
	1512	01	870.0	610.0
	1512	02	820.0	660.0
	1513	01	600.0	210.0
	1513	02	510.0	400.0
	1514	01	810.0	520.0
	1514	02	750.0	600.0
	1515	01	630.0	570.0
	1515	02	600.0	330.0

PROJECT NO : 90831

INDIVIDUAL GRIP STRENGTH (G)

APPENDIX NO: 5

TRIALS 1 AND 2 - WEEK 4
FEMALES

		ANIMAL NO.	TRIAL	FORELIMB	HINDLIMB
GROUP 2 - CERIC OXIDE					
LOW DOSE					
		2501	01	730.0	300.0
		2501	02	670.0	490.0
		2502	01	600.0	440.0
		2502	02	780.0	510.0
		2503	01	750.0	600.0
		2503	02	660.0	460.0
		2504	01	980.0	420.0
		2504	02	700.0	580.0
		2505	01	720.0	420.0
		2505	02	580.0	530.0
		2506	01	590.0	630.0
		2506	02	560.0	550.0
		2507	01	930.0	370.0
		2507	02	970.0	510.0
		2508	01	600.0	470.0
		2508	02	550.0	480.0

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PROJECT NO : 90831

INDIVIDUAL GRIP STRENGTH (G)

TRIALS 1 AND 2 - WEEK 4
FEMALES

APPENDIX NO: 5

ANIMAL NO.	TRIAL	FORELIMB	HINDLIMB
GROUP 2 - CERIC OXIDE LOW DOSE			
2509	01	650.0	450.0
2509	02	640.0	420.0
2510	01	710.0	420.0
2510	02	980.0	520.0
2511	01	750.0	560.0
2511	02	860.0	530.0
2512	01	800.0	510.0
2512	02	900.0	480.0
2513	01	980.0	500.0
2513	02	700.0	620.0
2514	01	800.0	400.0
2514	02	700.0	250.0
2515	01	550.0	440.0
2515	02	650.0	470.0

APPENDIX NO: 5

INDIVIDUAL GRIP STRENGTH (G)

PROJECT NO : 90831

TRIALS 1 AND 2 - WEEK 4
FEMALES

ANIMAL NO.	TRIAL	FORELIMB	HINDLIMB
GROUP 3 - CERIC OXIDE INTERMEDIATE DOSE			
3501	01	730.0	530.0
3501	02	730.0	540.0
3502	01	530.0	280.0
3502	02	610.0	410.0
3503	01	760.0	600.0
3503	02	800.0	520.0
3504	01	600.0	400.0
3504	02	680.0	390.0
3505	01	890.0	350.0
3505	02	720.0	390.0
3506	01	810.0	410.0
3506	02	710.0	480.0
3507	01	730.0	620.0
3507	02	700.0	660.0
3508	01	730.0	490.0
3508	02	740.0	390.0

PROJECT NO : 90831

INDIVIDUAL GRIP STRENGTH (G)

TRIALS 1 AND 2 - WEEK 4
FEMALES

APPENDIX NO: 5

ANIMAL NO.	TRIAL	FORELIMB	HINDLIMB
GROUP 3 - CERIC OXIDE INTERMEDIATE DOSE			
3509	01	950.0	390.0
3509	02	990.0	360.0
3510	01	1000.0	730.0
3510	02	600.0	830.0
3511	01	800.0	380.0
3511	02	750.0	360.0
3513	01	600.0	410.0
3513	02	460.0	420.0
3514	01	730.0	280.0
3514	02	850.0	340.0
3516	01	500.0	500.0
3516	02	320.0	290.0
3517	01	560.0	420.0
3517	02	700.0	480.0



APPENDIX NO: 5
INDIVIDUAL GRIP STRENGTH (G)
PROJECT NO : 90831

TRIALS 1 AND 2 - WEEK 4
FEMALES

ANIMAL NO.	TRIAL	FORELIMB	HINDLIMB
4501	01	860.0	540.0
4501	02	610.0	530.0
4502	01	800.0	540.0
4502	02	880.0	500.0
4503	01	520.0	540.0
4503	02	480.0	490.0
4504	01	970.0	420.0
4504	02	730.0	450.0
4505	01	870.0	510.0
4505	02	820.0	410.0
4506	01	790.0	490.0
4506	02	980.0	580.0
4507	01	910.0	300.0
4507	02	810.0	380.0
4508	01	940.0	380.0
4508	02	880.0	490.0

GROUP 4 - CERIC OXIDE
HIGH DOSE



PROJECT NO : 90831

INDIVIDUAL GRIP STRENGTH (G)

TRIALS 1 AND 2 - WEEK 4
FEMALES

APPENDIX NO: 5

ANIMAL NO.	TRIAL	FORELIMB	HINDLIMB
GROUP 4 - CERIC OXIDE HIGH DOSE			
4509	01	520.0	310.0
4509	02	460.0	260.0
4510	01	750.0	350.0
4510	02	580.0	600.0
4511	01	680.0	340.0
4511	02	710.0	240.0
4513	01	960.0	510.0
4513	02	800.0	660.0
4514	01	630.0	430.0
4514	02	550.0	360.0
4515	01	810.0	460.0
4515	02	640.0	340.0
4516	01	640.0	430.0
4516	02	690.0	610.0



PROJECT NO : 90831

INDIVIDUAL GRIP STRENGTH (G)

TRIALS 1 AND 2 - WEEK 8
MALES

APPENDIX NO: 5

ANIMAL NO.	TRIAL	FORELIMB	HINDLIMB
GROUP 1 - AIR CONTROL			
1001	01	950.0	530.0
1001	02	810.0	510.0
1002	01	570.0	700.0
1002	02	500.0	450.0
1005	01	1000.0	520.0
1005	02	850.0	500.0
1006	01	1000.0	640.0
1006	02	990.0	700.0
1007	01	1150.0	610.0
1007	02	1150.0	500.0
1008	01	800.0	510.0
1008	02	750.0	350.0
1009	01	820.0	690.0
1009	02	860.0	570.0
1010	01	800.0	890.0
1010	02	840.0	850.0



APPENDIX NO: 5

INDIVIDUAL GRIP STRENGTH (G)

PROJECT NO : 90831

TRIALS 1 AND 2 - WEEK 8
MALES

ANIMAL NO.	TRIAL	FORELIMB	HINDLIMB
GROUP 1 - AIR CONTROL			
1011	01	460.0	520.0
1011	02	590.0	750.0
1012	01	880.0	820.0
1012	02	750.0	840.0
1013	01	860.0	700.0
1013	02	850.0	640.0
1014	01	1200.0	860.0
1014	02	1180.0	1000.0
1015	01	730.0	570.0
1015	02	830.0	770.0
1016	01	570.0	510.0
1016	02	500.0	380.0
1017	01	550.0	420.0
1017	02	550.0	380.0



APPENDIX NO: 5

INDIVIDUAL GRIP STRENGTH (G)

PROJECT NO : 90831

TRIALS 1 AND 2 - WEEK 8
MALES

ANIMAL NO.	TRIAL	FORELIMB	HINDLIMB
GROUP 2 - CERIC OXIDE			
LOW DOSE			
2001	01	450.0	650.0
2001	02	400.0	600.0
2002	01	800.0	810.0
2002	02	750.0	610.0
2003	01	700.0	760.0
2003	02	720.0	520.0
2004	01	280.0	610.0
2004	02	320.0	660.0
2005	01	510.0	550.0
2005	02	600.0	520.0
2006	01	730.0	730.0
2006	02	670.0	610.0
2007	01	1050.0	760.0
2007	02	1050.0	780.0
2008	01	600.0	700.0
2008	02	700.0	650.0

PROJECT NO : 90831

INDIVIDUAL GRIP STRENGTH (G)

APPENDIX NO: 5

TRIALS 1 AND 2 - WEEK 8
MALES

ANIMAL NO.	TRIAL	FORELIMB	HINDLIMB
GROUP 2. - CERIC OXIDE			
LOW DOSE			
2009	01	950.0	500.0
2009	02	870.0	530.0
2010	01	790.0	850.0
2010	02	850.0	650.0
2011	01	800.0	360.0
2011	02	940.0	510.0
2012	01	740.0	360.0
2012	02	910.0	540.0
2013	01	490.0	470.0
2013	02	620.0	590.0
2015	01	690.0	540.0
2015	02	800.0	470.0
2016	01	800.0	670.0
2016	02	930.0	640.0

APPENDIX NO: 5

INDIVIDUAL GRIP STRENGTH (G)

PROJECT NO : 90831

TRIALS 1 AND 2 - WEEK 8
MALES

ANIMAL NO.	TRIAL	FORELIMB	HINDLIMB
GROUP 3 - CERIC OXIDE INTERMEDIATE DOSE			
3001	01	730.0	250.0
3001	02	610.0	450.0
3002	01	620.0	870.0
3002	02	920.0	1000.0
3003	01	960.0	600.0
3003	02	800.0	710.0
3004	01	780.0	690.0
3004	02	920.0	680.0
3005	01	830.0	790.0
3005	02	720.0	700.0
3006	01	560.0	690.0
3006	02	700.0	800.0
3007	01	780.0	740.0
3007	02	850.0	780.0
3008	01	590.0	630.0
3008	02	810.0	650.0

PROJECT NO : 90831

INDIVIDUAL GRIP STRENGTH (G)

TRIALS 1 AND 2 - WEEK 8
MALES

APPENDIX NO: 5

ANIMAL NO.	TRIAL	FORELIMB	HINDLIMB
GROUP 3 - CERIC OXIDE INTERMEDIATE DOSE			
3009	01	1150.0	740.0
3009	02	1130.0	860.0
3011	01	410.0	390.0
3011	02	590.0	560.0
3012	01	690.0	750.0
3012	02	770.0	620.0
3013	01	690.0	520.0
3013	02	500.0	540.0
3014	01	610.0	380.0
3014	02	450.0	440.0
3015	01	810.0	810.0
3015	02	550.0	580.0
3016	01	870.0	650.0
3016	02	600.0	480.0

PROJECT NO : 90831

INDIVIDUAL GRIP STRENGTH (G)

TRIALS 1 AND 2 - WEEK 8
MALES

ANIMAL NO.	TRIAL	FORELIMB	HINDLIMB
4001	01	830.0	820.0
4001	02	820.0	700.0
4002	01	770.0	900.0
4002	02	850.0	1000.0
4003	01	610.0	820.0
4003	02	600.0	790.0
4004	01	780.0	550.0
4004	02	690.0	610.0
4005	01	600.0	440.0
4005	02	570.0	680.0
4006	01	760.0	560.0
4006	02	770.0	710.0
4007	01	950.0	610.0
4007	02	800.0	580.0
4008	01	590.0	710.0
4008	02	500.0	760.0

GROUP 4 - CERIC OXIDE
HIGH DOSE

BIO

PROJECT NO : 90831

INDIVIDUAL GRIP STRENGTH (G)

TRIALS 1 AND 2 - WEEK 8
MALES

APPENDIX NO: 5

ANIMAL NO.	TRIAL	FORELIMB	HINDLIMB
4009	01	200.0	670.0
4009	02	230.0	510.0
4010	01	450.0	500.0
4010	02	470.0	460.0
4011	01	1000.0	720.0
4011	02	800.0	760.0
4012	01	920.0	580.0
4012	02	940.0	550.0
4014	01	710.0	620.0
4014	02	890.0	660.0
4015	01	850.0	440.0
4015	02	610.0	670.0
4016	01	650.0	730.0
4016	02	680.0	800.0

GROUP 4 - CERIC OXIDE
HIGH DOSE

PROJECT NO : 90831

INDIVIDUAL GRIP STRENGTH (G)

APPENDIX NO: 5

TRIALS 1 AND 2 - WEEK 8
FEMALES

ANIMAL NO.	TRIAL	FORELIMB	HINDLIMB
1501	01	660.0	610.0
1501	02	590.0	690.0
1502	01	720.0	690.0
1502	02	690.0	400.0
1503	01	680.0	530.0
1503	02	690.0	650.0
1504	01	680.0	620.0
1504	02	790.0	640.0
1505	01	780.0	650.0
1505	02	1000.0	470.0
1506	01	1180.0	580.0
1506	02	1180.0	640.0
1507	01	770.0	640.0
1507	02	720.0	610.0
1508	01	930.0	680.0
1508	02	810.0	470.0

GROUP 1 - AIR CONTROL

PROJECT NO : 90831

INDIVIDUAL GRIP STRENGTH (G)

APPENDIX NO: 5

TRIALS 1 AND 2 - WEEK 8
FEMALES

ANIMAL NO.	TRIAL	FORELIMB	HINDLIMB
GROUP 1 - AIR CONTROL			
1509	01	760.0	580.0
1509	02	780.0	550.0
1510	01	610.0	540.0
1510	02	750.0	620.0
1511	01	860.0	410.0
1511	02	790.0	370.0
1512	01	710.0	510.0
1512	02	770.0	670.0
1513	01	880.0	470.0
1513	02	810.0	300.0
1514	01	1150.0	840.0
1514	02	1000.0	920.0
1515	01	760.0	640.0
1515	02	700.0	610.0

PROJECT NO : 90831

INDIVIDUAL GRIP STRENGTH (G)

APPENDIX NO: 5

TRIALS 1 AND 2 - WEEK 8
FEMALES

ANIMAL NO.	TRIAL	FORELIMB	HINDLIMB
2501	01	710.0	470.0
2501	02	690.0	410.0
2502	01	810.0	630.0
2502	02	790.0	610.0
2503	01	950.0	540.0
2503	02	740.0	480.0
2504	01	810.0	650.0
2504	02	680.0	500.0
2505	01	700.0	380.0
2505	02	730.0	430.0
2506	01	870.0	750.0
2506	02	830.0	740.0
2507	01	960.0	460.0
2507	02	1100.0	560.0
2508	01	650.0	520.0
2508	02	820.0	550.0

GROUP 2 - CERIC OXIDE
LOW DOSE



PROJECT NO : 90831

INDIVIDUAL GRIP STRENGTH (G)

APPENDIX NO: 5

TRIALS 1 AND 2 - WEEK 8
FEMALES

ANIMAL NO.	TRIAL	FORELIMB	HINDLIMB
2509	01	930.0	400.0
2509	02	740.0	590.0
2510	01	1030.0	610.0
2510	02	800.0	480.0
2511	01	700.0	400.0
2511	02	830.0	520.0
2512	01	1000.0	500.0
2512	02	1200.0	560.0
2513	01	740.0	720.0
2513	02	680.0	530.0
2514	01	840.0	650.0
2514	02	700.0	680.0
2515	01	790.0	730.0
2515	02	850.0	800.0

GROUP 2 - CERIC OXIDE
LOW DOSE

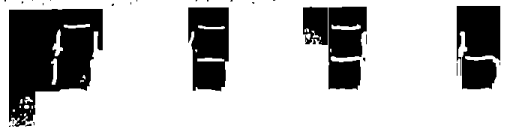




APPENDIX NO: 5
INDIVIDUAL GRIP STRENGTH (G)
PROJECT NO : 90831

TRIALS 1 AND 2 - WEEK 8
FEMALES

ANIMAL NO.	TRIAL	FORELIMB	HINDLIMB
GROUP 3 - CERIC OXIDE INTERMEDIATE DOSE			
3501	01	660.0	560.0
3501	02	540.0	550.0
3502	01	800.0	540.0
3502	02	870.0	670.0
3503	01	730.0	520.0
3503	02	720.0	530.0
3504	01	690.0	530.0
3504	02	610.0	520.0
3505	01	1060.0	410.0
3505	02	1170.0	520.0
3506	01	520.0	520.0
3506	02	570.0	760.0
3507	01	1030.0	820.0
3507	02	810.0	650.0
3508	01	720.0	370.0
3508	02	510.0	460.0



PROJECT NO : 90831

INDIVIDUAL GRIP STRENGTH (G)

TRIALS 1 AND 2 - WEEK 8
FEMALES

APPENDIX NO: 5

ANIMAL NO.	TRIAL	FORELIMB	HINDLIMB
GROUP 3 - CERIC OXIDE INTERMEDIATE DOSE			
3509	01	940.0	850.0
3509	02	960.0	720.0
3510	01	740.0	400.0
3510	02	710.0	710.0
3511	01	830.0	550.0
3511	02	600.0	590.0
3513	01	600.0	470.0
3513	02	560.0	480.0
3514	01	740.0	430.0
3514	02	550.0	410.0
3516	01	710.0	510.0
3516	02	600.0	470.0
3517	01	850.0	600.0
3517	02	830.0	620.0

PROJECT NO : 90831

INDIVIDUAL GRIP STRENGTH (G)

TRIALS 1 AND 2 - WEEK 8
FEMALES

APPENDIX NO: 5

ANIMAL NO.	TRIAL	FORELIMB	HINDLIMB
GROUP 4 - CERIC OXIDE HIGH DOSE			
4501	01	560.0	300.0
4501	02	520.0	480.0
4502	01	730.0	630.0
4502	02	640.0	490.0
4503	01	740.0	460.0
4503	02	540.0	660.0
4504	01	790.0	600.0
4504	02	920.0	710.0
4505	01	700.0	570.0
4505	02	930.0	520.0
4506	01	1220.0	710.0
4506	02	970.0	520.0
4507	01	850.0	330.0
4507	02	750.0	540.0
4508	01	1090.0	570.0
4508	02	1060.0	790.0

APPENDIX NO: 5

INDIVIDUAL GRIP STRENGTH (G)

PROJECT NO : 90831

TRIALS 1 AND 2 - WEEK 8
FEMALES

ANIMAL NO.	TRIAL	FORELIMB	HINDLIMB
GROUP 4 - CERIC OXIDE HIGH DOSE			
4509	01	590.0	510.0
4509	02	500.0	410.0
4510	01	530.0	450.0
4510	02	700.0	470.0
4511	01	800.0	460.0
4511	02	960.0	480.0
4513	01	840.0	620.0
4513	02	720.0	750.0
4514	01	580.0	530.0
4514	02	570.0	640.0
4515	01	680.0	450.0
4515	02	680.0	460.0
4516	01	570.0	320.0
4516	02	630.0	470.0

PROJECT NO : 90831

INDIVIDUAL GRIP STRENGTH (G)

APPENDIX NO: 5

TRIALS 1 AND 2 - WEEK 13
MALES

ANIMAL NO.	TRIAL	FORELIMB	HINDLIMB
GROUP 1 - AIR CONTROL			
1001	01	780.0	850.0
1001	02	800.0	740.0
1002	01	450.0	490.0
1002	02	460.0	490.0
1005	01	890.0	620.0
1005	02	860.0	470.0
1006	01	700.0	700.0
1006	02	890.0	730.0
1007	01	900.0	1100.0
1007	02	770.0	760.0
1008	01	870.0	520.0
1008	02	730.0	760.0
1009	01	1310.0	920.0
1009	02	1130.0	820.0
1010	01	890.0	850.0
1010	02	990.0	850.0

PROJECT NO : 90831

INDIVIDUAL GRIP STRENGTH (G)

APPENDIX NO: 5

TRIALS 1 AND 2 - WEEK 13
MALES

ANIMAL NO.	TRIAL	FORELIMB	HINDLIMB
1011	01	570.0	690.0
1011	02	620.0	420.0
1012	01	850.0	720.0
1012	02	940.0	720.0
1013	01	850.0	730.0
1013	02	700.0	590.0
1014	01	760.0	650.0
1014	02	930.0	760.0
1015	01	800.0	950.0
1015	02	940.0	770.0
1016	01	560.0	480.0
1016	02	540.0	510.0
1017	01	810.0	760.0
1017	02	820.0	650.0

GROUP 1 - AIR CONTROL

810

APPENDIX NO: 5 INDIVIDUAL GRIP STRENGTH (G) PROJECT NO : 90831

TRIALS 1 AND 2 - WEEK 13

MALES

ANIMAL NO.	TRIAL	FORELIMB	HINDLIMB
2001	01	980.0	680.0
2001	02	960.0	870.0
2002	01	870.0	740.0
2002	02	820.0	750.0
2003	01	1190.0	650.0
2003	02	990.0	890.0
2004	01	850.0	740.0
2004	02	780.0	710.0
2005	01	730.0	560.0
2005	02	560.0	610.0
2006	01	920.0	860.0
2006	02	850.0	740.0
2007	01	790.0	910.0
2007	02	850.0	740.0
2008	01	970.0	720.0
2008	02	710.0	520.0

GROUP 2 - CERIC OXIDE
LOW DOSE



APPENDIX NO: 5

INDIVIDUAL GRIP STRENGTH (G)

PROJECT NO : 90831

TRIALS 1 AND 2 - WEEK 13
MALES

ANIMAL NO.	TRIAL	FORELIMB	HINDLIMB
GROUP 2 - CERIC OXIDE			
LOW DOSE			
2009	01	1030.0	930.0
2009	02	950.0	870.0
2010	01	750.0	700.0
2010	02	670.0	880.0
2011	01	670.0	730.0
2011	02	790.0	520.0
2012	01	700.0	890.0
2012	02	660.0	700.0
2013	01	820.0	600.0
2013	02	600.0	650.0
2015	01	1110.0	900.0
2015	02	930.0	650.0
2016	01	1000.0	660.0
2016	02	980.0	670.0

PROJECT NO : 90831

INDIVIDUAL GRIP STRENGTH (G)

TRIALS 1 AND 2 - WEEK 13
MALES

APPENDIX NO: 5

ANIMAL NO.	TRIAL	FORELIMB	HINDLIMB
GROUP 3 - CERIC OXIDE INTERMEDIATE DOSE			
3001	01	1050.0	810.0
3001	02	550.0	520.0
3002	01	930.0	1080.0
3002	02	930.0	920.0
3003	01	1100.0	670.0
3003	02	830.0	680.0
3004	01	910.0	790.0
3004	02	990.0	770.0
3005	01	1300.0	700.0
3005	02	830.0	400.0
3006	01	1030.0	850.0
3006	02	830.0	850.0
3007	01	870.0	930.0
3007	02	690.0	950.0
3008	01	800.0	900.0
3008	02	750.0	760.0

APPENDIX NO: 5

INDIVIDUAL GRIP STRENGTH (G)

PROJECT NO : 90831

TRIALS 1 AND 2 - WEEK 13
 MALES

ANIMAL NO.	TRIAL	FORELIMB	HINDLIMB
GROUP 3 - CERIC OXIDE INTERMEDIATE DOSE			
3009	01	660.0	810.0
3009	02	660.0	800.0
3011	01	450.0	430.0
3011	02	500.0	640.0
3012	01	740.0	630.0
3012	02	730.0	790.0
3013	01	780.0	660.0
3013	02	750.0	830.0
3014	01	650.0	460.0
3014	02	710.0	360.0
3015	01	900.0	480.0
3015	02	1000.0	510.0
3016	01	690.0	630.0
3016	02	630.0	800.0



APPENDIX NO: 5

INDIVIDUAL GRIP STRENGTH (G)

PROJECT NO : 90831

TRIALS 1 AND 2 - WEEK 13
MALES

ANIMAL NO.	TRIAL	FORELIMB	HINDLIMB
4002	01	1080.0	1000.0
4002	02	860.0	1000.0
4003	01	1090.0	1100.0
4003	02	800.0	1110.0
4004	01	740.0	770.0
4004	02	520.0	500.0
4005	01	600.0	630.0
4005	02	800.0	690.0
4006	01	1080.0	630.0
4006	02	1110.0	560.0
4007	01	780.0	550.0
4007	02	600.0	530.0
4008	01	720.0	830.0
4008	02	560.0	650.0
4009	01	640.0	690.0
4009	02	700.0	510.0

GROUP 4 - CERIC OXIDE
HIGH DOSE



PROJECT NO : 90831

INDIVIDUAL GRIP STRENGTH (G)

TRIALS 1 AND 2 - WEEK 13
MALES

APPENDIX NO: 5

ANIMAL NO.	TRIAL	FORELIMB	HINDLIMB
GROUP 4 - CERIC OXIDE HIGH DOSE			
4010	01	530.0	870.0
4010	02	670.0	680.0
4011	01	860.0	640.0
4011	02	1000.0	690.0
4012	01	890.0	760.0
4012	02	870.0	620.0
4014	01	910.0	600.0
4014	02	1150.0	540.0
4015	01	650.0	430.0
4015	02	600.0	470.0
4016	01	730.0	850.0
4016	02	1300.0	920.0



APPENDIX NO: 5

INDIVIDUAL GRIP STRENGTH (G)

PROJECT NO : 90831

TRIALS 1 AND 2 - WEEK 13
FEMALES

GROUP 1 - AIR CONTROL	ANIMAL NO.	TRIAL	FORELIMB	HINDLIMB
	1501	01	740.0	660.0
	1501	02	550.0	460.0
	1502	01	760.0	710.0
	1502	02	600.0	900.0
	1503	01	1060.0	600.0
	1503	02	800.0	820.0
	1504	01	630.0	750.0
	1504	02	750.0	530.0
	1505	01	850.0	510.0
	1505	02	850.0	550.0
	1506	01	1000.0	840.0
	1506	02	1100.0	930.0
	1507	01	840.0	780.0
	1507	02	940.0	690.0
	1508	01	980.0	760.0
	1508	02	800.0	880.0



PROJECT NO : 90831

INDIVIDUAL GRIP STRENGTH (G)

TRIALS 1 AND 2 - WEEK 13
FEMALES

APPENDIX NO: 5

ANIMAL NO.	TRIAL	FORELIMB	HINDLIMB
GROUP 1 - AIR CONTROL			
1509	01	1000.0	900.0
1509	02	1100.0	740.0
1510	01	620.0	820.0
1510	02	590.0	610.0
1511	01	680.0	540.0
1511	02	800.0	570.0
1512	01	540.0	550.0
1512	02	560.0	620.0
1513	01	890.0	620.0
1513	02	780.0	500.0
1514	01	1000.0	640.0
1514	02	670.0	560.0
1515	01	670.0	540.0
1515	02	780.0	490.0

PROJECT NO : 90831

INDIVIDUAL GRIP STRENGTH (G)

APPENDIX NO: 5

TRIALS 1 AND 2 - WEEK 13
FEMALES

ANIMAL NO.	TRIAL	FORELIMB	HINDLIMB
GROUP 2 - CERIC OXIDE			
LOW DOSE			
2501	01	770.0	750.0
2501	02	1000.0	1000.0
2502	01	830.0	680.0
2502	02	1200.0	780.0
2503	01	730.0	400.0
2503	02	980.0	660.0
2504	01	650.0	690.0
2504	02	720.0	710.0
2505	01	840.0	600.0
2505	02	740.0	750.0
2506	01	760.0	800.0
2506	02	600.0	640.0
2507	01	970.0	460.0
2507	02	780.0	690.0
2508	01	680.0	510.0
2508	02	790.0	530.0



PROJECT NO : 90831

INDIVIDUAL GRIP STRENGTH (G)

TRIALS 1 AND 2 - WEEK 13
FEMALES

APPENDIX NO: 5

ANIMAL NO.	TRIAL	FORELIMB	HINDLIMB
GROUP 2 - CERIC OXIDE			
LOW DOSE			
2509	01	1010.0	930.0
2509	02	880.0	900.0
2510	01	850.0	680.0
2510	02	890.0	600.0
2511	01	620.0	450.0
2511	02	700.0	400.0
2512	01	810.0	700.0
2512	02	1250.0	750.0
2513	01	840.0	620.0
2513	02	900.0	610.0
2514	01	980.0	590.0
2514	02	980.0	700.0
2515	01	770.0	600.0
2515	02	680.0	600.0

PROJECT NO : 90831

INDIVIDUAL GRIP STRENGTH (G)

TRIALS 1 AND 2 - WEEK 13
FEMALES

APPENDIX NO: 5

ANIMAL NO.	TRIAL	FORELIMB	HINDLIMB
GROUP 3 - CERIC OXIDE INTERMEDIATE DOSE			
3501	01	610.0	830.0
3501	02	840.0	730.0
3502	01	700.0	540.0
3502	02	550.0	540.0
3503	01	770.0	590.0
3503	02	940.0	530.0
3504	01	800.0	580.0
3504	02	500.0	630.0
3505	01	1000.0	760.0
3505	02	950.0	520.0
3506	01	970.0	630.0
3506	02	1080.0	580.0
3507	01	860.0	850.0
3507	02	790.0	840.0
3508	01	940.0	700.0
3508	02	640.0	540.0

PROJECT NO : 90831

INDIVIDUAL GRIP STRENGTH (G)

APPENDIX NO: 5

TRIALS 1 AND 2 - WEEK 13
FEMALES

ANIMAL NO.	TRIAL	FORELIMB	HINDLIMB
GROUP 3 - CERIC OXIDE INTERMEDIATE DOSE			
3509	01	880.0	500.0
3509	02	870.0	620.0
3510	01	950.0	750.0
3510	02	650.0	650.0
3511	01	580.0	660.0
3511	02	660.0	540.0
3513	01	770.0	450.0
3513	02	640.0	570.0
3514	01	690.0	440.0
3514	02	750.0	540.0
3516	01	750.0	700.0
3516	02	540.0	580.0
3517	01	890.0	460.0
3517	02	680.0	460.0





PROJECT NO : 90831

INDIVIDUAL GRIP STRENGTH (G)

TRIALS 1 AND 2 - WEEK 13
FEMALES

APPENDIX NO: 5

ANIMAL NO.	TRIAL	FORELIMB	HINDLIMB
GROUP 4 - CERIC OXIDE HIGH DOSE			
4501	01	670.0	380.0
4501	02	400.0	570.0
4502	01	690.0	680.0
4502	02	680.0	850.0
4503	01	400.0	630.0
4503	02	560.0	680.0
4504	01	950.0	700.0
4504	02	880.0	710.0
4505	01	1020.0	690.0
4505	02	790.0	510.0
4506	01	700.0	770.0
4506	02	850.0	650.0
4507	01	730.0	820.0
4507	02	820.0	660.0
4508	01	500.0	640.0
4508	02	560.0	540.0

PROJECT NO : 90831

INDIVIDUAL GRIP STRENGTH (G)

TRIALS 1 AND 2 - WEEK 13
FEMALES

APPENDIX NO: 5

ANIMAL NO.	TRIAL	FORELIMB	HINDLIMB
GROUP 4 - CERIC OXIDE HIGH DOSE			
4509	01	600.0	830.0
4509	02	470.0	620.0
4510	01	900.0	690.0
4510	02	890.0	520.0
4511	01	730.0	660.0
4511	02	640.0	400.0
4513	01	600.0	460.0
4513	02	520.0	380.0
4514	01	560.0	500.0
4514	02	650.0	440.0
4515	01	700.0	420.0
4515	02	560.0	320.0
4516	01	450.0	790.0
4516	02	350.0	550.0

PROJECT NO : 90931

INDIVIDUAL HINDLIMB SPLAY (CM)

TRIALS 1 AND 2 - PRE-STUDY
MALES

APPENDIX NO: 5

ANIMAL NO.	TRIAL	HINDLIMB SPLAY
1001	01	6.6
1001	02	6.2
1002	01	9.3
1002	02	8.7
1005	01	9.5
1005	02	8.4
1006	01	7.2
1006	02	6.6
1007	01	8.1
1007	02	4.5
1008	01	3.9
1008	02	3.8
1009	01	9.5
1009	02	9.3
1010	01	8.1
1010	02	7.3

GROUP 1 - AIR CONTROL



PROJECT NO : 90931

INDIVIDUAL HINDLIMB SPLAY (CM)

TRIALS 1 AND 2 - PRE-STUDY
MALES

APPENDIX NO: 5

HINDLIMB
SPLAY

ANIMAL
NO. TRIAL

GROUP 1 - AIR CONTROL

1011	01	9.5
1011	02	9.1
1012	01	6.1
1012	02	7.0
1013	01	8.5
1013	02	8.9
1014	01	9.8
1014	02	9.2
1015	01	7.2
1015	02	5.7
1016	01	7.5
1016	02	6.7
1017	01	10.7
1017	02	9.7

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PROJECT NO : 90831

INDIVIDUAL HINDLIMB SPLAY (CM)

TRIALS 1 AND 2 - PRE-STUDY
MALES

HINDLIMB
SPLAY

ANIMAL
NO. TRIAL

GROUP 2 - CERIC OXIDE
LOW DOSE

ANIMAL NO.	TRIAL	HINDLIMB SPLAY
2001	01	8.1
2001	02	7.7
2002	01	9.6
2002	02	9.7
2003	01	10.0
2003	02	9.2
2004	01	9.6
2004	02	9.4
2005	01	9.6
2005	02	10.2
2006	01	9.6
2006	02	8.2
2007	01	8.9
2007	02	8.3
2008	01	3.9
2008	02	3.4

APPENDIX NO: 5

INDIVIDUAL HINDLIMB SPLAY (CM)

PROJECT NO : 90831

TRIALS 1 AND 2 - PRE-STUDY
MALES

ANIMAL NO.	TRIAL	HINDLIMB SPLAY
GROUP 2 - CERIC OXIDE LOW DOSE		
2009	01	8.5
2009	02	8.4
2010	01	7.4
2010	02	8.5
2011	01	9.4
2011	02	9.6
2012	01	7.7
2012	02	6.1
2013	01	6.1
2013	02	4.9
2015	01	8.1
2015	02	7.1
2016	01	6.5
2016	02	7.8

APPENDIX NO: 5

INDIVIDUAL HINDLIMB SPLAY (CM)

PROJECT NO: 90831

TRIALS 1 AND 2 - PRE-STUDY
MALES

ANIMAL NO.	TRIAL	HINDLIMB SPLAY
GROUP 3 - CERIC OXIDE INTERMEDIATE DOSE		
3001	01	7.5
3001	02	5.7
3002	01	10.5
3002	02	9.3
3003	01	9.0
3003	02	6.7
3004	01	10.3
3004	02	9.6
3005	01	9.6
3005	02	8.0
3006	01	10.8
3006	02	9.8
3007	01	9.2
3007	02	9.4
3008	01	8.6
3008	02	6.1

APPENDIX NO: 5

INDIVIDUAL HINDLIMB SPLAY (CM)

PROJECT NO : 90831

TRIALS 1 AND 2 - PRE-STUDY
MALES

ANIMAL NO.	TRIAL	HINDLIMB SPLAY
3009	01	8.3
3009	02	10.0
3011	01	9.7
3011	02	9.3
3012	01	8.4
3012	02	9.3
3013	01	7.6
3013	02	5.4
3014	01	4.4
3014	02	5.3
3015	01	8.2
3015	02	8.4
3016	01	8.2
3016	02	8.5

GROUP 3 - CERIC OXIDE
INTERMEDIATE DOSE



APPENDIX NO: 5

INDIVIDUAL HINDLIMB SPLAY (CM)

PROJECT NO : 90831

TRIALS 1 AND 2 - PRE-STUDY
MALES

ANIMAL NO.	TRIAL	HINDLIMB SPLAY
GROUP 4 - CERIC OXIDE HIGH DOSE		
4001	01	7.2
4001	02	5.7
4002	01	9.9
4002	02	9.3
4003	01	7.3
4003	02	5.9
4004	01	5.4
4004	02	6.8
4005	01	8.2
4005	02	6.8
4006	01	9.4
4006	02	9.1
4007	01	9.1
4007	02	10.5
4008	01	6.8
4008	02	6.0



APPENDIX NO: 5

INDIVIDUAL HINDLIMB SPLAY (CM)

PROJECT NO : 90831

TRIALS 1 AND 2 - PRE-STUDY
MALES

GROUP	ANIMAL NO.	TRIAL	HINDLIMB SPLAY
GROUP 4 - CERIC OXIDE HIGH DOSE	4009	01	9.1
	4009	02	7.8
	4010	01	7.0
	4010	02	6.5
	4011	01	8.3
	4011	02	8.8
	4012	01	7.1
	4012	02	6.0
	4014	01	6.9
	4014	02	6.3
	4015	01	7.7
	4015	02	6.5
	4016	01	9.4
	4016	02	8.9

PROJECT NO : 90831

INDIVIDUAL HINDLIMB SPLAY (CM)

TRIALS 1 AND 2 - PRE-STUDY
FEMALES

APPENDIX NO: 5

HINDLIMB
SPLAY

ANIMAL
NO. TRIAL

8.8
9.3
6.2
6.3
7.5
8.8
6.8
6.7
9.3
8.7
8.7
8.1
8.8
8.9
7.8
9.0

01
02
01
02
01
02
01
02
01
02
01
02
01
02
01
02

1501
1501
1502
1502
1503
1503
1504
1504
1505
1505
1506
1506
1507
1507
1508
1508

GROUP 1 - AIR CONTROL

PROJECT NO : 90831

INDIVIDUAL HINDLIMB SPLAY (CM)

APPENDIX NO: 5

TRIALS 1 AND 2 - PRE-STUDY
FEMALES

ANIMAL NO.	TRIAL	HINDLIMB SPLAY
1509	01	9.6
1509	02	8.5
1510	01	8.8
1510	02	7.9
1511	01	9.2
1511	02	6.8
1512	01	7.8
1512	02	7.2
1513	01	5.1
1513	02	5.1
1514	01	7.4
1514	02	7.4
1515	01	7.2
1515	02	7.5

GROUP 1 - AIR CONTROL

11
5
57

APPENDIX NO: 5

INDIVIDUAL HINDLIMB SPLAY (CM)

PROJECT NO : 90831

TRIALS 1 AND 2 - PRE-STUDY
FEMALES

ANIMAL NO.	TRIAL	HINDLIMB SPLAY
GROUP 2 - CERIC OXIDE LOW DOSE		
2501	01	4.4
2501	02	5.6
2502	01	7.2
2502	02	8.1
2503	01	8.5
2503	02	8.7
2504	01	9.0
2504	02	6.8
2505	01	8.4
2505	02	8.7
2506	01	9.1
2506	02	9.5
2507	01	9.5
2507	02	9.5
2508	01	8.6
2508	02	8.0



APPENDIX NO: 5

INDIVIDUAL HINDLIMB SPLAY (CM)

PROJECT NO : 90831

TRIALS 1 AND 2 - PRE-STUDY
FEMALES

ANIMAL NO.	TRIAL	HINDLIMB SPLAY
GROUP 2 - CERIC OXIDE LOW DOSE		
2509	01	9.2
2509	02	9.0
2510	01	8.2
2510	02	7.0
2511	01	8.6
2511	02	8.8
2512	01	7.5
2512	02	7.6
2513	01	9.2
2513	02	9.7
2514	01	9.0
2514	02	9.4
2515	01	8.8
2515	02	7.6

APPENDIX NO: 5

INDIVIDUAL HINDLIMB SPLAY (CM)

PROJECT NO : 90831

TRIALS 1 AND 2 - PRE-STUDY
FEMALES

	ANIMAL NO.	TRIAL	HINDLIMB SPLAY
GROUP 3 - CERIC OXIDE INTERMEDIATE DOSE	3501	01	4.1
	3501	02	8.5
	3502	01	9.3
	3502	02	8.8
	3503	01	8.1
	3503	02	8.2
	3504	01	7.9
	3504	02	6.6
	3505	01	8.3
	3505	02	7.5
	3506	01	5.5
	3506	02	7.9
	3507	01	8.3
	3507	02	7.4
	3508	01	8.8
	3508	02	8.6



APPENDIX NO: 5

INDIVIDUAL HINDLIMB SPLAY (CM)

PROJECT NO : 90831

TRIALS 1 AND 2 - PRE-STUDY
FEMALES

HINDLIMB
SPLAY

ANIMAL
NO.

TRIAL

GROUP 3 - CERIC OXIDE
INTERMEDIATE DOSE

3509	01	8.2
3509	02	7.7
3510	01	7.9
3510	02	7.7
3511	01	8.0
3511	02	6.8
3513	01	6.8
3513	02	5.2
3514	01	6.9
3514	02	6.6
3516	01	5.1
3516	02	6.8
3517	01	3.8
3517	02	3.2

APPENDIX NO: 5

INDIVIDUAL HINDLIMB SPLAY (CM)

PROJECT NO : 90831

TRIALS 1 AND 2 - PRE-STUDY
FEMALES

GROUP 4 - CERIC OXIDE HIGH DOSE	ANIMAL NO.	TRIAL	HINDLIMB SPLAY
	4501	01	4.6
	4501	02	5.2
	4502	01	10.2
	4502	02	7.1
	4503	01	9.3
	4503	02	9.5
	4504	01	5.9
	4504	02	8.5
	4505	01	5.0
	4505	02	5.9
	4506	01	8.3
	4506	02	8.5
	4507	01	8.8
	4507	02	5.4
	4508	01	7.3
	4508	02	6.3

APPENDIX NO: 5

INDIVIDUAL HINDLIMB SPLAY (CM)

PROJECT NO : 90931

TRIALS 1 AND 2 - PRE-STUDY
FEMALES

GROUP	ANIMAL NO.	TRIAL	HINDLIMB SPLAY
GROUP 4 - CERIC OXIDE HIGH DOSE	4509	01	5.0
	4509	02	9.0
	4510	01	7.5
	4510	02	6.9
	4511	01	9.0
	4511	02	8.6
	4513	01	5.2
	4513	02	6.0
	4514	01	7.4
	4514	02	8.5
	4515	01	7.3
	4515	02	6.6
	4516	01	6.5
	4516	02	4.8

APPENDIX NO: 5

INDIVIDUAL HINDLIMB SPLAY (CM)

PROJECT NO : 90831

TRIALS 1 AND 2 - DAY 1
MALES

ANIMAL NO.	TRIAL	HINDLIMB SPLAY
1001	01	6.3
1001	02	4.2
1002	01	6.4
1002	02	4.0
1005	01	9.2
1005	02	7.1
1006	01	6.0
1006	02	7.5
1007	01	6.2
1007	02	3.8
1008	01	4.8
1008	02	3.7
1009	01	5.3
1009	02	6.2
1010	01	7.3
1010	02	8.1

GROUP 1 - AIR CONTROL

PROJECT NO : 90831

INDIVIDUAL HINDLIMB SPLAY (CM)

APPENDIX NO: 5

TRIALS 1 AND 2 - DAY 1
MALES

	ANIMAL NO.	TRIAL	HINDLIMB SPLAY
GROUP 1 - AIR CONTROL	1011	01	9.7
	1011	02	9.1
	1012	01	7.6
	1012	02	7.2
	1013	01	7.6
	1013	02	8.6
	1014	01	8.6
	1014	02	9.6
	1015	01	8.7
	1015	02	8.1
	1016	01	4.1
	1016	02	2.9
	1017	01	8.3
	1017	02	7.0



APPENDIX NO: 5

INDIVIDUAL HINDLIMB SPLAY (CM)

PROJECT NO : 90831

TRIALS 1 AND 2 - DAY 1
MALES

ANIMAL NO.	TRIAL	HINDLIMB SPLAY
GROUP 2 - CERIC OXIDE LOW DOSE		
2001	01	8.1
2001	02	6.0
2002	01	6.0
2002	02	7.1
2003	01	7.1
2003	02	8.0
2004	01	6.7
2004	02	5.6
2005	01	8.8
2005	02	6.3
2006	01	7.6
2006	02	6.2
2007	01	7.2
2007	02	6.8
2008	01	4.3
2008	02	4.4

PROJECT NO : 90831

INDIVIDUAL HINDLIMB SPLAY (CM)

TRIALS 1 AND 2 - DAY 1
MALES

APPENDIX NO: 5

ANIMAL NO.	TRIAL	HINDLIMB SPLAY
GROUP 2 - CERIC OXIDE LOW DOSE		
2009	01	5.1
2009	02	3.6
2010	01	7.3
2010	02	7.3
2011	01	9.4
2011	02	9.0
2012	01	5.4
2012	02	6.0
2013	01	4.0
2013	02	3.9
2015	01	8.5
2015	02	8.4
2016	01	5.2
2016	02	5.7

PROJECT NO : 90831

INDIVIDUAL HINDLIMB SPLAY (CM)

APPENDIX NO: 5

TRIALS 1 AND 2 - DAY 1
MALES

ANIMAL NO.	ANIMAL TRIAL	HINDLIMB SPLAY
GROUP 3 - CERIC OXIDE INTERMEDIATE DOSE		
3001	01	4.7
3001	02	4.2
3002	01	7.6
3002	02	6.2
3003	01	8.0
3003	02	6.4
3004	01	9.1
3004	02	8.6
3005	01	7.1
3005	02	6.3
3006	01	8.8
3006	02	7.5
3007	01	9.4
3007	02	7.3
3008	01	4.2
3008	02	5.6

APPENDIX NO: 5

INDIVIDUAL HINDLIMB SPLAY (CM)

PROJECT NO : 90831

TRIALS 1 AND 2 - DAY 1
MALES

ANIMAL NO.	TRIAL	HINDLIMB SPLAY
GROUP 3 - CERIC OXIDE INTERMEDIATE DOSE		
3009	01	9.1
3009	02	6.4
3011	01	6.6
3011	02	8.8
3012	01	8.8
3012	02	7.9
3013	01	7.6
3013	02	7.2
3014	01	6.6
3014	02	5.2
3015	01	7.6
3015	02	9.8
3016	01	6.5
3016	02	7.0

PROJECT NO : 90831

INDIVIDUAL HINDLIMB SPLAY (CM)

TRIALS 1 AND 2 - DAY 1
MALES

APPENDIX NO: 5

GROUP 4 - CERIC OXIDE HIGH DOSE	ANIMAL NO.	TRIAL	HINDLIMB SPLAY
	4001	01	7.3
	4001	02	5.1
	4002	01	9.1
	4002	02	7.2
	4003	01	8.8
	4003	02	6.2
	4004	01	8.3
	4004	02	7.9
	4005	01	7.4
	4005	02	6.0
	4006	01	7.2
	4006	02	6.3
	4007	01	9.9
	4007	02	8.9
	4008	01	4.5
	4008	02	5.2



PROJECT NO : 90831

INDIVIDUAL HINDLIMB SPLAY (CM)

TRIALS 1 AND 2 - DAY 1
MALES

APPENDIX NO: 5

ANIMAL NO.	TRIAL	HINDLIMB SPLAY
GROUP 4 - CERIC OXIDE HIGH DOSE		
4009	01	6.1
4009	02	4.3
4010	01	5.3
4010	02	5.1
4011	01	9.6
4011	02	7.5
4012	01	4.9
4012	02	5.9
4014	01	6.5
4014	02	4.6
4015	01	5.6
4015	02	4.5
4016	01	7.1
4016	02	7.5



APPENDIX NO: 5

INDIVIDUAL HINDLIMB SPLAY (CM)

PROJECT NO : 90831

TRIALS 1 AND 2 - DAY 1
FEMALES

ANIMAL NO.	TRIAL	HINDLIMB SPLAY
1501	01	8.2
1501	02	8.4
1502	01	7.9
1502	02	8.5
1503	01	9.6
1503	02	8.5
1504	01	6.9
1504	02	4.9
1505	01	9.6
1505	02	8.7
1506	01	8.5
1506	02	8.4
1507	01	8.0
1507	02	8.1
1508	01	8.4
1508	02	6.9

GROUP 1 - AIR CONTROL

APPENDIX NO: 5

INDIVIDUAL HINDLIMB SPLAY (CM)

PROJECT NO : 90831

TRIALS 1 AND 2 - DAY 1
FEMALES

ANIMAL NO.	TRIAL	HINDLIMB SPLAY
GROUP 1 - AIR CONTROL		
1509	01	9.2
1509	02	6.7
1510	01	8.6
1510	02	7.6
1511	01	7.3
1511	02	5.5
1512	01	7.5
1512	02	5.5
1513	01	4.9
1513	02	4.2
1514	01	6.5
1514	02	4.6
1515	01	8.0
1515	02	8.3



APPENDIX NO: 5

INDIVIDUAL HINDLIMB SPLAY (CM)

PROJECT NO : 90831

TRIALS 1 AND 2 - DAY 1
FEMALES

GROUP 2 - CERIC OXIDE LOW DOSE	ANIMAL NO.	TRIAL	HINDLIMB SPLAY
	2501	01	7.1
	2501	02	7.0
	2502	01	7.2
	2502	02	6.2
	2503	01	7.6
	2503	02	6.5
	2504	01	6.0
	2504	02	5.0
	2505	01	7.8
	2505	02	5.4
	2506	01	7.0
	2506	02	7.3
	2507	01	8.1
	2507	02	7.8
	2508	01	6.9
	2508	02	6.0





PROJECT NO : 90931

INDIVIDUAL HINDLIMB SPLAY (CM)

TRIALS 1 AND 2 - DAY 1
FEMALES

APPENDIX NO: 5

	ANIMAL NO.	TRIAL	HINDLIMB SPLAY
GROUP 2 - CERIC OXIDE LOW DOSE	2509	01	7.4
	2509	02	7.4
	2510	01	6.8
	2510	02	5.1
	2511	01	5.9
	2511	02	4.8
	2512	01	7.4
	2512	02	6.6
	2513	01	8.3
	2513	02	5.0
	2514	01	8.9
	2514	02	7.7
	2515	01	8.2
	2515	02	7.9

PROJECT NO : 90831

INDIVIDUAL HINDLIMB SPLAY (CM)

TRIALS 1 AND 2 - DAY 1
FEMALES

APPENDIX NO: 5

	ANIMAL NO.	TRIAL	HINDLIMB SPLAY
GROUP 3 - CERIC OXIDE INTERMEDIATE DOSE	3501	01	3.7
	3501	02	5.5
	3502	01	9.1
	3502	02	9.1
	3503	01	7.3
	3503	02	7.7
	3504	01	6.4
	3504	02	5.2
	3505	01	8.0
	3505	02	8.4
	3506	01	7.8
	3506	02	6.6
	3507	01	7.6
	3507	02	5.8
	3508	01	8.9
	3508	02	7.5

PROJECT NO : 90831

INDIVIDUAL HINDLIMB SPLAY (CM)

TRIALS 1 AND 2 - DAY 1
FEMALES

APPENDIX NO: 5

GROUP 3 - CERIC OXIDE INTERMEDIATE DOSE	ANIMAL NO.	TRIAL	HINDLIMB SPLAY
	3509	01	8.7
	3509	02	7.5
	3510	01	6.7
	3510	02	5.8
	3511	01	4.1
	3511	02	4.3
	3513	01	4.5
	3513	02	4.3
	3514	01	4.0
	3514	02	4.3
	3516	01	3.8
	3516	02	5.0
	3517	01	2.9
	3517	02	2.5



PROJECT NO : 90831

INDIVIDUAL HINDLIMB SPLAY (CM)

TRIALS 1 AND 2 - DAY 1
FEMALES

APPENDIX NO: 5

HINDLIMB
SPLAY

ANIMAL
NO. TRIAL

ANIMAL NO.	TRIAL	HINDLIMB SPLAY
GROUP 4 - CERIC OXIDE HIGH DOSE		
4501	01	4.9
4501	02	4.9
4502	01	7.9
4502	02	7.5
4503	01	9.7
4503	02	8.4
4504	01	9.4
4504	02	9.8
4505	01	6.9
4505	02	6.2
4506	01	6.8
4506	02	7.3
4507	01	9.0
4507	02	8.3
4508	01	5.0
4508	02	4.4



PROJECT NO : 90831

INDIVIDUAL HINDLIMB SPLAY (CM)

TRIALS 1 AND 2 - DAY 1
FEMALES

APPENDIX NO: 5

GROUP	ANIMAL NO.	TRIAL	HINDLIMB SPLAY
GROUP 4 - CERIC OXIDE HIGH DOSE	4509	01	4.5
	4509	02	4.4
	4510	01	6.3
	4510	02	5.5
	4511	01	7.4
	4511	02	6.1
	4513	01	4.3
	4513	02	5.0
	4514	01	6.9
	4514	02	7.6
	4515	01	5.4
	4515	02	3.3
	4516	01	4.2
	4516	02	4.7



PROJECT NO : 90831

INDIVIDUAL HINDLIMB SPLAY (CM)

TRIALS 1 AND 2 - WEEK 4
MALES

APPENDIX NO: 5

HINDLIMB
SPLAY

ANIMAL
NO.

TRIAL

GROUP 1 - AIR CONTROL

1001	01	5.8
1001	02	4.4
1002	01	6.4
1002	02	6.5
1005	01	9.2
1005	02	7.1
1006	01	8.3
1006	02	7.7
1007	01	10.0
1007	02	8.0
1008	01	5.3
1008	02	7.8
1009	01	7.3
1009	02	6.8
1010	01	5.6
1010	02	5.8



PROJECT NO : 90831

INDIVIDUAL HINDLIMB SPLAY (CM)

TRIALS 1 AND 2 - WEEK 4
MALES

APPENDIX NO: 5

GROUP	ANIMAL NO.	TRIAL	HINDLIMB SPLAY
GROUP 1 - AIR CONTROL	1011	01	7.9
	1011	02	7.1
	1012	01	4.2
	1012	02	6.1
	1013	01	9.8
	1013	02	8.8
	1014	01	9.3
	1014	02	8.0
	1015	01	8.4
	1015	02	5.7
	1016	01	4.1
	1016	02	4.4
	1017	01	8.9
	1017	02	7.3



PROJECT NO : 90831

INDIVIDUAL HINDLIMB SPLAY (CM)

TRIALS 1 AND 2 - WEEK 4
MALES

HINDLIMB
SPLAY

ANIMAL
NO. TRIAL

ANIMAL NO.	TRIAL	HINDLIMB SPLAY
2001	01	7.8
2001	02	5.5
2002	01	7.9
2002	02	6.4
2003	01	10.4
2003	02	9.9
2004	01	10.0
2004	02	7.8
2005	01	10.0
2005	02	8.8
2006	01	10.3
2006	02	9.1
2007	01	9.6
2007	02	9.8
2008	01	5.0
2008	02	4.5

GROUP 2 - CERIC OXIDE
LOW DOSE



PROJECT NO : 90831

INDIVIDUAL HINDLIMB SPLAY (CM)

TRIALS 1 AND 2 - WEEK 4
MALES

APPENDIX NO: 5

ANIMAL NO.	TRIAL	HINDLIMB SPLAY
GROUP 2 - CERIC OXIDE LOW DOSE		
2009	01	7.1
2009	02	5.2
2010	01	9.1
2010	02	8.8
2011	01	4.3
2011	02	4.8
2012	01	6.8
2012	02	6.4
2013	01	4.4
2013	02	4.5
2015	01	6.4
2015	02	7.3
2016	01	7.9
2016	02	6.3

APPENDIX NO: 5

INDIVIDUAL HINDLIMB SPLAY (CM)

PROJECT NO : 90831

TRIALS 1 AND 2 - WEEK 4
MALES

ANIMAL NO.	TRIAL	HINDLIMB SPLAY
3001	01	5.6
3001	02	5.2
3002	01	10.3
3002	02	9.3
3003	01	10.5
3003	02	7.5
3004	01	11.1
3004	02	6.8
3005	01	9.0
3005	02	9.9
3006	01	10.6
3006	02	9.5
3007	01	10.7
3007	02	8.5
3008	01	5.8
3008	02	6.7

GROUP 3 - CERIC OXIDE
INTERMEDIATE DOSE



PROJECT NO : 90831

INDIVIDUAL HINDLIMB SPLAY (CM)

TRIALS 1 AND 2 - WEEK 4
MALES

APPENDIX NO: 5

HINDLIMB
SPLAY

ANIMAL
NO. TRIAL

ANIMAL NO.	TRIAL	HINDLIMB SPLAY
GROUP 3 - CERIC OXIDE INTERMEDIATE DOSE		
3009	01	9.9
3009	02	10.0
3011	01	5.0
3011	02	6.3
3012	01	7.1
3012	02	8.1
3013	01	6.0
3013	02	6.8
3014	01	4.0
3014	02	5.8
3015	01	9.5
3015	02	8.2
3016	01	9.4
3016	02	7.3



PROJECT NO : 90831

INDIVIDUAL HINDLIMB SPLAY (CM)

TRIALS 1 AND 2 - WEEK 4
MALES

HINDLIMB
SPLAY

ANIMAL
NO.

TRIAL

ANIMAL NO.	TRIAL	HINDLIMB SPLAY
4001	01	7.2
4001	02	5.6
4002	01	11.1
4002	02	9.3
4003	01	10.3
4003	02	9.1
4004	01	11.5
4004	02	11.9
4005	01	6.7
4005	02	6.7
4006	01	8.7
4006	02	7.8
4007	01	11.9
4007	02	11.4
4008	01	6.2
4008	02	7.3

GROUP 4 - CERIC OXIDE
HIGH DOSE

PROJECT NO : 90831

INDIVIDUAL HINDLIMB SPLAY (CM)

TRIALS 1 AND 2 - WEEK 4
MALES

APPENDIX NO: 5

GROUP 4 - CERIC OXIDE HIGH DOSE	ANIMAL NO.	TRIAL	HINDLIMB SPLAY
	4009	01	9.0
	4009	02	6.4
	4010	01	6.1
	4010	02	4.6
	4011	01	7.2
	4011	02	3.8
	4012	01	5.3
	4012	02	5.0
	4014	01	8.0
	4014	02	8.1
	4015	01	4.6
	4015	02	6.0
	4016	01	6.5
	4016	02	4.9

PROJECT NO : 90831

INDIVIDUAL HINDLIMB SPLAY (CM)

APPENDIX NO: 5

TRIALS 1 AND 2 - WEEK 4
FEMALES

ANIMAL NO.	TRIAL	HINDLIMB SPLAY
GROUP 1 - AIR CONTROL		
1501	01	7.1
1501	02	8.4
1502	01	7.5
1502	02	6.0
1503	01	9.3
1503	02	8.9
1504	01	6.8
1504	02	5.4
1505	01	7.0
1505	02	6.4
1506	01	9.0
1506	02	9.6
1507	01	7.6
1507	02	8.5
1508	01	8.2
1508	02	8.9



PROJECT NO : 90831

INDIVIDUAL HINDLIMB SPLAY (CM)

TRIALS 1 AND 2 - WEEK 4
FEMALES

APPENDIX NO: 5

GROUP 1 - AIR CONTROL	ANIMAL NO.	TRIAL	HINDLIMB SPLAY
	1509	01	6.2
	1509	02	5.4
	1510	01	10.1
	1510	02	10.0
	1511	01	5.5
	1511	02	7.5
	1512	01	6.4
	1512	02	5.6
	1513	01	6.8
	1513	02	6.6
	1514	01	6.6
	1514	02	4.9
	1515	01	8.7
	1515	02	9.0

PROJECT NO : 90831

INDIVIDUAL HINDLIMB SPLAY (CM)

TRIALS 1 AND 2 - WEEK 4
FEMALES

GROUP 2 - CERIC OXIDE LOW DOSE	ANIMAL NO.	TRIAL	HINDLIMB SPLAY
	2501	01	6.6
	2501	02	7.3
	2502	01	8.7
	2502	02	7.7
	2503	01	7.7
	2503	02	6.5
	2504	01	3.7
	2504	02	5.2
	2505	01	8.1
	2505	02	7.1
	2506	01	5.9
	2506	02	8.0
	2507	01	7.6
	2507	02	8.4
	2508	01	7.3
	2508	02	5.8



PROJECT NO : 90831

INDIVIDUAL HINDLIMB SPLAY (CM)

TRIALS 1 AND 2 - WEEK 4
FEMALES

APPENDIX NO: 5

GROUP	ANIMAL NO.	TRIAL	HINDLIMB SPLAY
GROUP 2 - CERIC OXIDE LOW DOSE	2509	01	9.0
	2509	02	7.0
	2510	01	5.9
	2510	02	6.0
	2511	01	8.6
	2511	02	7.6
	2512	01	7.4
	2512	02	6.6
	2513	01	8.9
	2513	02	10.2
	2514	01	9.4
	2514	02	9.6
	2515	01	8.9
	2515	02	8.9

PROJECT NO : 90831

INDIVIDUAL HINDLIMB SPLAY (CM)

TRIALS 1 AND 2 - WEEK 4
FEMALES

APPENDIX NO: 5

HINDLIMB
SPLAY

ANIMAL
NO. TRIAL

ANIMAL NO.	TRIAL	HINDLIMB SPLAY
GROUP 3 - CERIC OXIDE INTERMEDIATE DOSE		
3501	01	7.7
3501	02	4.5
3502	01	7.9
3502	02	7.3
3503	01	9.1
3503	02	8.1
3504	01	4.4
3504	02	5.1
3505	01	8.6
3505	02	8.5
3506	01	8.6
3506	02	8.2
3507	01	9.9
3507	02	9.8
3508	01	9.4
3508	02	9.1



PROJECT NO : 90831

INDIVIDUAL HINDLIMB SPLAY (CM)

APPENDIX NO: 5

TRIALS 1 AND 2 - WEEK 4
FEMALES

	ANIMAL NO.	TRIAL	HINDLIMB SPLAY
GROUP 3 - CERIC OXIDE INTERMEDIATE DOSE	3509	01	9.5
	3509	02	9.3
	3510	01	8.1
	3510	02	10.1
	3511	01	6.0
	3511	02	8.3
	3513	01	6.2
	3513	02	5.5
	3514	01	6.9
	3514	02	6.8
	3516	01	4.7
	3516	02	6.8
	3517	01	4.0
	3517	02	4.2



APPENDIX NO: 5

INDIVIDUAL HINDLIMB SPLAY (CM)

PROJECT NO : 90831

TRIALS 1 AND 2 - WEEK 4
FEMALES

ANIMAL NO.	TRIAL	HINDLIMB SPLAY
GROUP 4 - CERIC OXIDE HIGH DOSE		
4501	01	4.3
4501	02	5.3
4502	01	8.5
4502	02	9.1
4503	01	9.5
4503	02	8.6
4504	01	8.5
4504	02	7.5
4505	01	7.5
4505	02	5.6
4506	01	9.5
4506	02	8.9
4507	01	9.5
4507	02	9.2
4508	01	7.2
4508	02	6.0

PROJECT NO : 90831

INDIVIDUAL HINDLIMB SPLAY (CM)

TRIALS 1 AND 2 - WEEK 4
FEMALES

APPENDIX NO: 5

ANIMAL NO.	TRIAL	HINDLIMB SPLAY
GROUP 4 - CERIC OXIDE HIGH DOSE		
4509	01	6.6
4509	02	4.8
4510	01	8.0
4510	02	5.5
4511	01	8.9
4511	02	4.6
4513	01	5.2
4513	02	6.4
4514	01	7.5
4514	02	4.7
4515	01	6.8
4515	02	5.8
4516	01	5.6
4516	02	5.1



PROJECT NO : 90831

INDIVIDUAL HINDLIMB SPLAY (CM)

APPENDIX NO: 5

TRIALS 1 AND 2 - WEEK 8
MALES

ANIMAL NO.	TRIAL	HINDLIMB SPLAY
1001	01	6.3
1001	02	6.1
1002	01	7.0
1002	02	4.8
1005	01	4.1
1005	02	3.0
1006	01	8.4
1006	02	7.5
1007	01	9.6
1007	02	10.2
1008	01	8.6
1008	02	7.8
1009	01	8.6
1009	02	9.1
1010	01	5.6
1010	02	5.9

GROUP 1 - AIR CONTROL



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INDIVIDUAL HINDLIMB SPLAY (CM)

APPENDIX NO: 5

TRIALS 1 AND 2 - WEEK 8
MALES

	ANIMAL NO.	TRIAL	HINDLIMB SPLAY
GROUP 1 - AIR CONTROL	1011	01	10.3
	1011	02	10.0
	1012	01	3.3
	1012	02	4.5
	1013	01	9.0
	1013	02	7.8
	1014	01	9.9
	1014	02	10.9
	1015	01	8.7
	1015	02	7.4
	1016	01	3.0
	1016	02	4.1
	1017	01	9.6
	1017	02	9.8

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PROJECT NO : 90831

INDIVIDUAL HINDLIMB SPLAY (CM)

TRIALS 1 AND 2 - WEEK 8
MALES

APPENDIX NO: 5

	ANIMAL NO.	TRIAL	HINDLIMB SPLAY
GROUP 2 - CERIC OXIDE LOW DOSE	2001	01	9.7
	2001	02	8.3
	2002	01	6.2
	2002	02	6.6
	2003	01	10.0
	2003	02	10.4
	2004	01	10.9
	2004	02	9.7
	2005	01	7.3
	2005	02	7.7
	2006	01	6.2
	2006	02	5.6
	2007	01	8.5
	2007	02	8.5
	2008	01	5.4
	2008	02	6.1



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INDIVIDUAL HINDLIMB SPLAY (CM)

APPENDIX NO: 5

TRIALS 1 AND 2 - WEEK 8
MALES

HINDLIMB
SPLAY

ANIMAL
NO. TRIAL

ANIMAL NO.	TRIAL	HINDLIMB SPLAY
GROUP 2 - CERIC OXIDE LOW DOSE		
2009	01	8.7
2009	02	5.5
2010	01	12.3
2010	02	10.2
2011	01	9.3
2011	02	10.3
2012	01	5.1
2012	02	7.0
2013	01	4.4
2013	02	5.0
2015	01	10.1
2015	02	10.5
2016	01	9.4
2016	02	7.7

PROJECT NO: 90831

INDIVIDUAL HINDLIMB SPLAY (CM)

APPENDIX NO: 5

TRIALS 1 AND 2 - WEEK 8
MALES

ANIMAL NO.	TRIAL	HINDLIMB SPLAY
GROUP 3 - CERIC OXIDE INTERMEDIATE DOSE		
3001	01	4.4
3001	02	4.7
3002	01	10.4
3002	02	9.7
3003	01	9.5
3003	02	7.4
3004	01	9.8
3004	02	6.7
3005	01	9.1
3005	02	6.7
3006	01	9.4
3006	02	7.9
3007	01	8.6
3007	02	8.7
3008	01	12.5
3008	02	8.7

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PROJECT NO : 90831

INDIVIDUAL HINDLIMB SPLAY (CM)

TRIALS 1 AND 2 - WEEK 8
MALES

APPENDIX NO: 5

ANIMAL NO.	TRIAL	HINDLIMB SPLAY
GROUP 3 - CERIC OXIDE INTERMEDIATE DOSE		
3009	01	8.3
3009	02	7.4
3011	01	6.1
3011	02	6.8
3012	01	11.2
3012	02	7.2
3013	01	6.5
3013	02	7.2
3014	01	8.8
3014	02	5.2
3015	01	9.9
3015	02	8.2
3016	01	9.4
3016	02	9.4



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INDIVIDUAL HINDLIMB SPLAY (CM)

TRIALS 1 AND 2 - WEEK 8
MALES

APPENDIX NO: 5

ANIMAL NO.	TRIAL	HINDLIMB SPLAY
GROUP 4 - CERIC OXIDE HIGH DOSE		
4001	01	5.4
4001	02	4.9
4002	01	9.9
4002	02	10.1
4003	01	10.1
4003	02	8.8
4004	01	10.1
4004	02	9.8
4005	01	4.6
4005	02	4.2
4006	01	7.8
4006	02	9.0
4007	01	10.7
4007	02	9.9
4008	01	8.8
4008	02	8.7

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INDIVIDUAL HINDLIMB SPLAY (CM)

APPENDIX NO: 5

TRIALS 1 AND 2 - WEEK 8
MALES

ANIMAL NO.	TRIAL	HINDLIMB SPLAY
GROUP 4 - CERIC OXIDE HIGH DOSE		
4009	01	4.9
4009	02	4.8
4010	01	7.1
4010	02	3.8
4011	01	7.2
4011	02	8.4
4012	01	6.3
4012	02	6.1
4014	01	8.0
4014	02	7.2
4015	01	8.3
4015	02	6.8
4016	01	8.7
4016	02	7.4

PROJECT NO : 90831

INDIVIDUAL HINDLIMB SPLAY (CM)

TRIALS 1 AND 2 - WEEK 8
FEMALES

APPENDIX NO: 5

ANIMAL NO.	TRIAL	HINDLIMB SPLAY
1501	01	8.8
1501	02	6.8
1502	01	8.8
1502	02	9.0
1503	01	9.9
1503	02	7.9
1504	01	7.5
1504	02	5.7
1505	01	6.9
1505	02	7.8
1506	01	7.1
1506	02	7.9
1507	01	7.3
1507	02	8.0
1508	01	6.7
1508	02	7.2

GROUP 1 - AIR CONTROL

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INDIVIDUAL HINDLIMB SPLAY (CM)

APPENDIX NO: 5

TRIALS 1 AND 2 - WEEK 8
FEMALES

ANIMAL NO.	TRIAL	HINDLIMB SPLAY
GROUP 1 - AIR CONTROL		
1509	01	6.0
1509	02	6.0
1510	01	10.2
1510	02	10.3
1511	01	8.5
1511	02	7.8
1512	01	6.6
1512	02	6.4
1513	01	4.9
1513	02	6.3
1514	01	5.5
1514	02	6.3
1515	01	9.9
1515	02	9.9



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INDIVIDUAL HINDLIMB SPLAY (CM)

TRIALS 1 AND 2 - WEEK 8
FEMALES

APPENDIX NO: 5

HINDLIMB
SPLAY

ANIMAL
NO. TRIAL

GROUP 2 - CERIC OXIDE
LOW DOSE

2501	01	6.7
2501	02	7.1
2502	01	9.4
2502	02	9.6
2503	01	8.5
2503	02	8.5
2504	01	6.0
2504	02	5.8
2505	01	6.9
2505	02	4.4
2506	01	6.0
2506	02	6.9
2507	01	6.4
2507	02	5.5
2508	01	5.7
2508	02	5.1

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INDIVIDUAL HINDLIMB SPLAY (CM)

TRIALS 1 AND 2 - WEEK 8
FEMALES

APPENDIX NO: 5

HINDLIMB
SPLAY

ANIMAL
NO.

TRIAL

8.5
8.0
4.1
4.8
6.3
6.1
3.4
4.8
8.4
7.9
9.9
9.6
8.6
7.9

GROUP 2 - CERIC OXIDE
LOW DOSE

2509 01
2509 02
2510 01
2510 02
2511 01
2511 02
2512 01
2512 02
2513 01
2513 02
2514 01
2514 02
2515 01
2515 02

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INDIVIDUAL HINDLIMB SPLAY (CM)

APPENDIX NO: 5

TRIALS 1 AND 2 - WEEK 8
FEMALES

ANIMAL NO.	TRIAL	HINDLIMB SPLAY
3501	01	6.7
3501	02	7.2
3502	01	8.8
3502	02	8.1
3503	01	8.4
3503	02	8.3
3504	01	5.7
3504	02	6.2
3505	01	8.1
3505	02	5.6
3506	01	6.9
3506	02	6.6
3507	01	10.1
3507	02	9.4
3508	01	6.5
3508	02	5.9

GROUP 3 - CERIC OXIDE
INTERMEDIATE DOSE



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INDIVIDUAL HINDLIMB SPLAY (CM)

TRIALS 1 AND 2 - WEEK 8
FEMALES

APPENDIX NO: 5

	ANIMAL NO.	TRIAL	HINDLIMB SPLAY
GROUP 3 - CERIC OXIDE INTERMEDIATE DOSE	3509	01	9.4
	3509	02	8.6
	3510	01	7.0
	3510	02	7.1
	3511	01	3.3
	3511	02	4.1
	3513	01	5.2
	3513	02	5.8
	3514	01	4.2
	3514	02	5.0
	3516	01	7.6
	3516	02	6.7
	3517	01	3.7
	3517	02	4.5

NO

PROJECT NO : 90831

INDIVIDUAL HINDLIMB SPLAY (CM)

TRIALS 1 AND 2 - WEEK 8
FEMALES

HINDLIMB
SPLAY

ANIMAL
NO.

TRIAL

GROUP 4 - CERIC OXIDE
HIGH DOSE

4501	01	6.7
4501	02	7.6
4502	01	9.5
4502	02	9.0
4503	01	7.3
4503	02	6.8
4504	01	8.5
4504	02	7.9
4505	01	7.5
4505	02	5.9
4506	01	9.4
4506	02	8.8
4507	01	8.9
4507	02	9.3
4508	01	7.4
4508	02	6.9



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INDIVIDUAL HINDLIMB SPLAY (CM)

APPENDIX NO: 5

TRIALS 1 AND 2 - WEEK 8
FEMALES

HINDLIMB
SPLAY

ANIMAL
NO. TRIAL

ANIMAL NO.	TRIAL	HINDLIMB SPLAY
GROUP 4 - CERIC OXIDE HIGH DOSE		
4509	01	5.1
4509	02	5.5
4510	01	6.4
4510	02	7.1
4511	01	6.8
4511	02	8.7
4513	01	5.3
4513	02	5.0
4514	01	5.6
4514	02	5.3
4515	01	4.6
4515	02	4.1
4516	01	5.6
4516	02	4.8

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INDIVIDUAL HINDLIMB SPLAY (CM)

TRIALS 1 AND 2 - WEEK 13
MALES

APPENDIX NO: 5

HINDLIMB
SPLAY

ANIMAL
NO.

TRIAL

GROUP 1 - AIR CONTROL

1001	01	6.0
1001	02	4.7
1002	01	6.3
1002	02	4.8
1005	01	8.0
1005	02	6.8
1006	01	9.0
1006	02	6.4
1007	01	7.5
1007	02	7.4
1008	01	4.4
1008	02	6.3
1009	01	8.5
1009	02	6.6
1010	01	5.9
1010	02	6.3

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PROJECT NO : 90631

INDIVIDUAL HINDLIMB SPLAY (CM)

TRIALS 1 AND 2 - WEEK 13
MALES

APPENDIX NO: 5

HINDLIMB
SPLAY

ANIMAL
NO.

TRIAL

ANIMAL NO.	TRIAL	HINDLIMB SPLAY
GROUP 1 - AIR CONTROL		
1011	01	9.5
1011	02	9.1
1012	01	4.1
1012	02	6.1
1013	01	8.4
1013	02	9.3
1014	01	10.1
1014	02	10.3
1015	01	8.6
1015	02	7.2
1016	01	4.2
1016	02	4.7
1017	01	11.9
1017	02	10.6



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INDIVIDUAL HINDLIMB SPLAY (CM)

TRIALS 1 AND 2 - WEEK 13
MALES

APPENDIX NO: 5

GROUP 2 - CERIC OXIDE LOW DOSE		ANIMAL NO.	TRIAL	HINDLIMB SPLAY
		2001	01	10.8
		2001	02	7.4
		2002	01	5.0
		2002	02	4.6
		2003	01	8.1
		2003	02	8.3
		2004	01	9.1
		2004	02	7.7
		2005	01	9.1
		2005	02	7.2
		2006	01	6.3
		2006	02	7.2
		2007	01	11.0
		2007	02	10.0
		2008	01	10.1
		2008	02	5.5

INDIVIDUAL HINDLIMB SPLAY (CM)

TRIALS 1 AND 2 - WEEK 13
MALES

APPENDIX NO: 5

HINDLIMB
SPLAY

ANIMAL
NO.

TRIAL

2009	01	5.6
2009	02	3.7
2010	01	10.0
2010	02	6.5
2011	01	6.7
2011	02	9.7
2012	01	6.7
2012	02	7.5
2013	01	7.2
2013	02	4.6
2015	01	9.3
2015	02	9.6
2016	01	7.2
2016	02	5.4

GROUP 2 - CERIC OXIDE
LOW DOSE

PROJECT NO : 90831

INDIVIDUAL HINDLIMB SPLAY (CM)

TRIALS 1 AND 2 - WEEK 13
MALES

APPENDIX NO: 5

HINDLIMB
SPLAY

ANIMAL
NO. TRIAL

ANIMAL NO.	TRIAL	HINDLIMB SPLAY
3001	01	5.3
3001	02	6.5
3002	01	11.5
3002	02	11.2
3003	01	10.2
3003	02	7.8
3004	01	4.9
3004	02	4.0
3005	01	6.0
3005	02	6.5
3006	01	9.2
3006	02	8.3
3007	01	9.8
3007	02	9.0
3008	01	10.7
3008	02	8.7

GROUP 3 - CERIC OXIDE
INTERMEDIATE DOSE



PROJECT NO : 90831

INDIVIDUAL HINDLIMB SPLAY (CM)

TRIALS 1 AND 2 - WEEK 13
MALES

APPENDIX NO: 5

ANIMAL NO.	TRIAL	HINDLIMB SPLAY
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GROUP 3 - CERIC OXIDE INTERMEDIATE DOSE

3009	01	6.1
3009	02	8.8
3011	01	4.9
3011	02	7.2
3012	01	7.8
3012	02	8.7
3013	01	5.2
3013	02	6.2
3014	01	4.4
3014	02	5.7
3015	01	9.1
3015	02	9.4
3016	01	8.7
3016	02	6.5

NO

PROJECT NO : 90831

INDIVIDUAL HINDLIMB SPLAY (CM)

TRIALS 1 AND 2 - WEEK 13
MALES

APPENDIX NO: 5

HINDLIMB
SPLAY

ANIMAL
NO.

TRIAL

GROUP 4 - CERIC OXIDE
HIGH DOSE

4002	01	12.8
4002	02	10.2
4003	01	8.9
4003	02	9.0
4004	01	10.2
4004	02	9.0
4005	01	5.3
4005	02	5.5
4006	01	9.4
4006	02	6.6
4007	01	7.3
4007	02	11.2
4008	01	7.3
4008	02	8.7
4009	01	5.3
4009	02	5.2

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INDIVIDUAL HINDLIMB SPLAY (CM)

APPENDIX NO: 5

TRIALS 1 AND 2 - WEEK 13
MALES

HINDLIMB
SPLAY

ANIMAL
NO.

TRIAL

7.0
8.5
6.7
6.9
5.7
5.6
5.7
6.0
5.7
6.0
8.7
7.8

GROUP 4 - CERIC OXIDE
HIGH DOSE

4010 01
4010 02
4011 01
4011 02
4012 01
4012 02
4014 01
4014 02
4015 01
4015 02
4016 01
4016 02

PROJECT NO : 90831

INDIVIDUAL HINDLIMB SPLAY (CM)

TRIALS 1 AND 2 - WEEK 13
FEMALES

APPENDIX NO: 5

HINDLIMB
SPLAY

ANIMAL
NO.

TRIAL

GROUP 1 - AIR CONTROL

1501	01	7.8
1501	02	7.3
1502	01	6.2
1502	02	7.9
1503	01	9.4
1503	02	8.8
1504	01	7.0
1504	02	7.2
1505	01	5.4
1505	02	6.6
1506	01	7.7
1506	02	7.2
1507	01	8.9
1507	02	9.1
1508	01	9.2
1508	02	8.9

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INDIVIDUAL HINDLIMB SPLAY (CM)

TRIALS 1 AND 2 - WEEK 13
FEMALES

APPENDIX NO: 5

HINDLIMB
SPLAY

ANIMAL
NO.

TRIAL

GROUP 1 - AIR CONTROL

1509	01	7.3
1509	02	8.1
1510	01	8.9
1510	02	9.9
1511	01	9.0
1511	02	6.0
1512	01	8.3
1512	02	8.3
1513	01	2.9
1513	02	3.6
1514	01	5.1
1514	02	5.7
1515	01	9.5
1515	02	7.2

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INDIVIDUAL HINDLIMB SPLAY (CM)

TRIALS 1 AND 2 - WEEK 13
FEMALES

APPENDIX NO: 5

HINDLIMB
SPLAY

ANIMAL
NO. TRIAL

2501	01	6.5
2501	02	7.4
2502	01	10.1
2502	02	9.9
2503	01	7.4
2503	02	6.6
2504	01	6.6
2504	02	4.7
2505	01	7.6
2505	02	8.4
2506	01	9.2
2506	02	8.1
2507	01	8.2
2507	02	7.6
2508	01	7.0
2508	02	8.0

GROUP 2 - CERIC OXIDE
LOW DOSE

NO

PROJECT NO : 90831

INDIVIDUAL HINDLIMB SPLAY (CM)

TRIALS 1 AND 2 - WEEK 13
FEMALES

APPENDIX NO: 5

HINDLIMB
SPLAY

ANIMAL
NO. TRIAL

2509	01	9.6
2509	02	9.2
2510	01	5.7
2510	02	5.8
2511	01	6.7
2511	02	7.0
2512	01	5.1
2512	02	6.9
2513	01	6.9
2513	02	7.0
2514	01	7.8
2514	02	7.1
2515	01	6.7
2515	02	6.2

GROUP 2 - CERIC OXIDE
LOW DOSE

PROJECT NO : 90931

INDIVIDUAL HINDLIMB SPLAY (CM)

TRIALS 1 AND 2 - WEEK 13
FEMALES

APPENDIX NO: 5

HINDLIMB
SPLAY

ANIMAL
NO. TRIAL

GROUP 3 - CERIC OXIDE
INTERMEDIATE DOSE

3501	01	6.7
3501	02	6.1
3502	01	9.2
3502	02	7.2
3503	01	10.0
3503	02	8.6
3504	01	6.9
3504	02	5.5
3505	01	9.2
3505	02	8.8
3506	01	7.9
3506	02	7.2
3507	01	10.0
3507	02	10.5
3508	01	7.9
3508	02	8.6

PROJECT NO : 90831

INDIVIDUAL HINDLIMB SPLAY (CM)

APPENDIX NO: 5

TRIALS 1 AND 2 - WEEK 13
FEMALES

HINDLIMB
SPLAY

ANIMAL
NO. TRIAL

ANIMAL NO.	TRIAL	HINDLIMB SPLAY
3509	01	8.9
3509	02	9.0
3510	01	9.0
3510	02	8.2
3511	01	7.4
3511	02	6.6
3513	01	4.1
3513	02	4.8
3514	01	4.1
3514	02	4.2
3516	01	6.9
3516	02	6.3
3517	01	1.8
3517	02	1.7

GROUP 3 - CERIC OXIDE
INTERMEDIATE DOSE



PROJECT NO : 90831

INDIVIDUAL HINDLIMB SPLAY (CM)

TRIALS 1 AND 2 - WEEK 13
FEMALES

APPENDIX NO: 5

HINDLIMB
SPLAY

ANIMAL
NO. TRIAL

4501	01	6.1
4501	02	6.0
4502	01	8.2
4502	02	6.7
4503	01	7.9
4503	02	7.3
4504	01	8.7
4504	02	9.6
4505	01	7.8
4505	02	8.8
4506	01	10.5
4506	02	9.3
4507	01	10.1
4507	02	8.9
4508	01	8.3
4508	02	7.5

GROUP 4 - CERIC OXIDE
HIGH DOSE

PROJECT NO : 90831

INDIVIDUAL HINDLIMB SPLAY (CM)

APPENDIX NO: 5

TRIALS 1 AND 2 - WEEK 13
FEMALES

HINDLIMB
SPLAY

ANIMAL
NO.

TRIAL

GROUP 4 - CERIC OXIDE
HIGH DOSE

4509	01	6.0
4509	02	4.5
4510	01	9.0
4510	02	8.0
4511	01	9.4
4511	02	10.0
4513	01	4.6
4513	02	3.0
4514	01	3.6
4514	02	2.6
4515	01	4.6
4515	02	3.8
4516	01	6.1
4516	02	6.5

PROJECT NO : 90831

INDIVIDUAL BODY TEMPERATURE (°C)

APPENDIX NO. 5

PRE-STUDY
MALES

ANIMAL
NO. BODY
 TEMPERATURE

GROUP 1 - AIR CONTROL

1001	38.6
1002	37.8
1005	37.7
1006	38.0
1007	37.5
1008	37.4
1009	37.4
1010	37.5
1011	37.6
1012	37.2
1013	37.5
1014	37.3
1015	37.6
1016	38.0
1017	37.6

INDIVIDUAL BODY TEMPERATURE (°C)

APPENDIX NO. 5

PRE-STUDY
MALES

ANIMAL NO.	BODY TEMPERATURE
GROUP 2 - CERIC OXIDE LOW DOSE	
2001	38.3
2002	38.2
2003	37.7
2004	37.7
2005	38.1
2006	37.5
2007	37.7
2008	37.7
2009	38.1
2010	37.5
2011	37.6
2012	37.6
2013	37.4
2015	37.7
2016	37.3

PROJECT NO : 90831

INDIVIDUAL BODY TEMPERATURE (°C)

APPENDIX NO. 5

PRE-STUDY
MALES

ANIMAL NO.	BODY TEMPERATURE
GROUP 3 - CERIC OXIDE INTERMEDIATE DOSE	
3001	37.5
3002	38.1
3003	37.7
3004	37.7
3005	37.6
3006	37.6
3007	37.8
3008	37.6
3009	36.9
3011	38.1
3012	37.5
3013	37.2
3014	37.6
3015	37.3
3016	36.9

PROJECT NO : 90831

INDIVIDUAL BODY TEMPERATURE (°C)

APPENDIX NO. 5

PRE-STUDY
MALES

ANIMAL
NO.

GROUP 4 - CERIC OXIDE
HIGH DOSE

ANIMAL NO.	BODY TEMPERATURE
4001	37.2
4002	38.3
4003	38.0
4004	37.2
4005	38.0
4006	38.1
4007	37.5
4008	37.7
4009	38.3
4010	37.4
4011	37.5
4012	37.2
4014	37.5
4015	37.6
4016	37.2

PROJECT NO : 90831

INDIVIDUAL BODY TEMPERATURE (°C)

APPENDIX NO. 5

PRE-STUDY
FEMALES

	ANIMAL NO.	BODY TEMPERATURE
GROUP 1 - AIR CONTROL	1501	37.6
	1502	39.1
	1503	38.6
	1504	37.9
	1505	38.4
	1506	37.8
	1507	38.1
	1508	37.5
	1509	37.7
	1510	37.6
	1511	37.6
	1512	38.1
	1513	37.0
	1514	37.3
	1515	37.6

PROJECT NO : 90831

INDIVIDUAL BODY TEMPERATURE (°C)

APPENDIX NO. 5

PRE-STUDY
FEMALES

ANIMAL
NO. BODY
 TEMPERATURE

ANIMAL NO.	BODY TEMPERATURE
2501	38.5
2502	38.4
2503	37.8
2504	38.5
2505	37.7
2506	38.6
2507	37.9
2508	36.6
2509	37.0
2510	37.5
2511	37.5
2512	37.4
2513	37.9
2514	38.0
2515	37.9

PROJECT NO : 90831

INDIVIDUAL BODY TEMPERATURE (°C)

APPENDIX NO. 5

PRE-STUDY
FEMALES

ANIMAL
NO. BODY
 TEMPERATURE

ANIMAL NO.	BODY TEMPERATURE
3501	37.9
3502	37.7
3503	37.4
3504	37.7
3505	37.5
3506	38.4
3507	38.0
3508	37.8
3509	37.8
3510	38.2
3511	37.5
3513	37.9
3514	37.7
3516	37.1
3517	38.0

PROJECT NO : 90831

INDIVIDUAL BODY TEMPERATURE (°C)

APPENDIX NO. 5

PRE-STUDY
FEMALES

ANIMAL NO.	BODY TEMPERATURE
GROUP 4 - CERIC OXIDE HIGH DOSE	
4501	38.5
4502	37.3
4503	38.0
4504	38.8
4505	37.9
4506	38.2
4507	38.4
4508	37.8
4509	37.3
4510	37.7
4511	36.8
4513	37.6
4514	37.9
4515	37.6
4516	37.0

BIO

PROJECT NO : 90831

INDIVIDUAL BODY TEMPERATURE (° C)

APPENDIX NO. 5

DAY 1
MALES

ANIMAL NO.	BODY TEMPERATURE
GROUP 1 - AIR CONTROL	
1001	38.9
1002	38.2
1005	37.9
1006	38.0
1007	37.7
1008	37.8
1009	37.7
1010	38.1
1011	37.6
1012	37.8
1013	37.9
1014	37.7
1015	37.6
1016	37.9
1017	37.8



PROJECT NO : 90831

INDIVIDUAL BODY TEMPERATURE (°C)

APPENDIX NO. 5

DAY 1
MALES

ANIMAL NO. BODY TEMPERATURE

GROUP 2 - CERIC OXIDE
LOW DOSE

2001	38.7
2002	38.9
2003	38.2
2004	38.3
2005	38.0
2006	37.3
2007	37.7
2008	38.0
2009	38.0
2010	38.0
2011	37.7
2012	37.9
2013	37.6
2015	37.9
2016	37.3

PROJECT NO : 90831

INDIVIDUAL BODY TEMPERATURE (°C)

APPENDIX NO. 5

DAY 1
MALES

ANIMAL NO.	BODY TEMPERATURE
GROUP 3 -- CERIC OXIDE INTERMEDIATE DOSE	
3001	38.0
3002	38.3
3003	37.7
3004	37.9
3005	37.5
3006	38.2
3007	37.8
3008	38.2
3009	37.0
3011	38.3
3012	37.4
3013	38.0
3014	37.8
3015	37.7
3016	37.5

PROJECT NO : 90831

INDIVIDUAL BODY TEMPERATURE (°C)

APPENDIX NO. 5

DAY 1
MALES

ANIMAL NO.	BODY TEMPERATURE
4001	38.2
4002	38.9
4003	37.7
4004	37.9
4005	38.0
4006	37.7
4007	37.9
4008	38.0
4009	38.2
4010	37.7
4011	38.6
4012	37.9
4014	38.2
4015	38.0
4016	38.1

GROUP 4 - CERIC OXIDE
HIGH DOSE

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PROJECT NO : 90831

INDIVIDUAL BODY TEMPERATURE (° C)

APPENDIX NO. 5

DAY 1
FEMALES

ANIMAL NO.	BODY TEMPERATURE
GROUP 1 - AIR CONTROL	
1501	38.4
1502	37.7
1503	37.6
1504	38.0
1505	38.7
1506	38.0
1507	38.0
1508	37.6
1509	37.8
1510	38.4
1511	38.5
1512	38.2
1513	38.0
1514	38.3
1515	37.9

PROJECT NO : 90831

INDIVIDUAL BODY TEMPERATURE (°C)

APPENDIX NO. 5

DAY 1
FEMALES

ANIMAL NO.	BODY TEMPERATURE
2501	37.8
2502	37.9
2503	38.8
2504	38.5
2505	38.2
2506	38.1
2507	37.5
2508	37.6
2509	37.4
2510	37.3
2511	37.6
2512	38.1
2513	37.8
2514	38.3
2515	38.6

GROUP 2 -- CERIC OXIDE
LOW DOSE

PROJECT NO : 90831

INDIVIDUAL BODY TEMPERATURE (°C)

APPENDIX NO. 5

DAY 1
FEMALES

ANIMAL NO.	BODY TEMPERATURE
3501	38.2
3502	37.8
3503	38.3
3504	38.4
3505	37.7
3506	37.5
3507	38.5
3508	37.5
3509	37.9
3510	38.8
3511	37.9
3513	37.6
3514	38.3
3516	38.3
3517	38.4

GROUP 3 - CERIC OXIDE
INTERMEDIATE DOSE

PROJECT NO : 90831

INDIVIDUAL BODY TEMPERATURE (°C)

APPENDIX NO. 5

DAY 1
FEMALES

ANIMAL NO.	BODY TEMPERATURE
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GROUP 4 - CERIC OXIDE HIGH DOSE	
4501	38.7
4502	37.9
4503	37.9
4504	38.6
4505	37.8
4506	38.5
4507	38.2
4508	37.9
4509	37.9
4510	38.1
4511	37.8
4513	37.8
4514	38.7
4515	37.4
4516	38.4

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PROJECT NO : 90831

INDIVIDUAL BODY TEMPERATURE (°C)

APPENDIX NO. 5

WEEK 4
MALES

ANIMAL NO.	BODY TEMPERATURE
GROUP 1 - AIR CONTROL	
1001	38.5
1002	38.1
1005	37.3
1006	37.6
1007	38.0
1008	37.3
1009	37.1
1010	37.2
1011	38.1
1012	37.2
1013	37.0
1014	37.2
1015	38.2
1016	37.5
1017	37.5



PROJECT NO : 90831

INDIVIDUAL BODY TEMPERATURE (°C)

APPENDIX NO. 5

WEEK 4
MALES

ANIMAL
NO.

BODY
TEMPERATURE

2001	39.0
2002	38.6
2003	37.3
2004	37.4
2005	38.6
2006	38.2
2007	37.1
2008	37.6
2009	37.9
2010	37.6
2011	37.4
2012	37.3
2013	37.4
2015	37.5
2016	36.9

GROUP 2 - CERIC OXIDE
LOW DOSE



PROJECT NO : 90831

INDIVIDUAL BODY TEMPERATURE (° C)

APPENDIX NO. 5

WEEK 4
MALES

ANIMAL
NO. BODY
 TEMPERATURE

ANIMAL NO.	BODY TEMPERATURE
3001	38.0
3002	38.9
3003	38.2
3004	38.2
3005	38.7
3006	38.0
3007	37.9
3008	37.6
3009	37.5
3011	39.2
3012	38.3
3013	37.2
3014	37.6
3015	37.6
3016	37.1

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PROJECT NO : 90831

INDIVIDUAL BODY TEMPERATURE (°C)

APPENDIX NO. 5

WEEK 4
MALES

ANIMAL
NO.

GROUP 4 - CERIC OXIDE
HIGH DOSE

ANIMAL NO.	BODY TEMPERATURE
4001	38.1
4002	38.3
4003	37.9
4004	37.1
4005	37.4
4006	37.3
4007	38.3
4008	37.4
4009	37.9
4010	37.1
4011	37.0
4012	38.3
4014	37.4
4015	37.9
4016	37.5

PROJECT NO : 90831

INDIVIDUAL BODY TEMPERATURE (°C)

APPENDIX NO. 5

WEEK 4
FEMALES

ANIMAL NO.	BODY TEMPERATURE
GROUP 1 - AIR CONTROL	
1501	38.5
1502	38.7
1503	38.4
1504	38.6
1505	39.4
1506	38.9
1507	37.7
1508	37.9
1509	38.9
1510	37.3
1511	38.7
1512	38.7
1513	38.1
1514	38.2
1515	38.2



PROJECT NO : 90831

INDIVIDUAL BODY TEMPERATURE (° C)

APPENDIX NO. 5

WEEK 4
FEMALES

ANIMAL NO.	BODY TEMPERATURE
GROUP 2 - CERIC OXIDE LOW DOSE	
2501	38.9
2502	39.0
2503	39.0
2504	39.1
2505	38.0
2506	38.4
2507	37.6
2508	38.1
2509	37.6
2510	37.7
2511	38.2
2512	37.4
2513	38.2
2514	37.5
2515	38.7

PROJECT NO : 90831

INDIVIDUAL BODY TEMPERATURE (°C)

APPENDIX NO. 5

WEEK 4
FEMALES

ANIMAL NO.	BODY TEMPERATURE
GROUP 3 - CERIC OXIDE INTERMEDIATE DOSE	
3501	38.6
3502	38.1
3503	38.0
3504	38.6
3505	38.2
3506	38.6
3507	37.9
3508	38.1
3509	37.6
3510	37.5
3511	37.8
3513	37.8
3514	39.6
3516	38.6
3517	38.4

BIO

PROJECT NO : 90831

INDIVIDUAL BODY TEMPERATURE (°C)

APPENDIX NO. 5

WEEK 4
FEMALES

ANIMAL
NO. BODY
 TEMPERATURE

GROUP 4 - CERIC OXIDE
HIGH DOSE

4501	39.1
4502	38.7
4503	38.6
4504	38.6
4505	38.8
4506	39.2
4507	37.9
4508	37.4
4509	38.6
4510	37.8
4511	37.2
4513	38.5
4514	38.8
4515	38.1
4516	38.9

PROJECT NO : 90831

INDIVIDUAL BODY TEMPERATURE (°C)

APPENDIX NO. 5

WEEK 8
MALES

ANIMAL
NO. BODY
 TEMPERATURE

GROUP 1 - AIR CONTROL

1001	38.4
1002	37.3
1005	37.8
1006	38.1
1007	38.4
1008	37.2
1009	36.7
1010	36.8
1011	37.1
1012	36.9
1013	37.8
1014	37.7
1015	36.8
1016	37.0
1017	37.5

PROJECT NO : 90831

INDIVIDUAL BODY TEMPERATURE (°C)

APPENDIX NO. 5

WEEK 8
MALES

ANIMAL NO. BODY TEMPERATURE

GROUP 2 - CERIC OXIDE
LOW DOSE

2001	37.9
2002	38.4
2003	36.5
2004	37.1
2005	38.2
2006	37.8
2007	38.2
2008	37.4
2009	37.0
2010	37.2
2011	37.0
2012	37.7
2013	38.1
2015	38.5
2016	37.8

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PROJECT NO : 90831

INDIVIDUAL BODY TEMPERATURE (° C)

APPENDIX NO. 5

WEEK 8
MALES

ANIMAL NO.	BODY TEMPERATURE
GROUP 3 - CERIC OXIDE INTERMEDIATE DOSE	
3001	37.6
3002	38.6
3003	37.8
3004	36.6
3005	38.1
3006	37.0
3007	36.7
3008	38.0
3009	36.9
3011	39.7
3012	37.2
3013	38.1
3014	38.4
3015	37.6
3016	37.3

PROJECT NO : 90831

INDIVIDUAL BODY TEMPERATURE (°C)

APPENDIX NO. 5

WEEK 8
MALES

ANIMAL NO.	BODY TEMPERATURE
GROUP 4 - CERIC OXIDE HIGH DOSE	
4001	37.4
4002	38.3
4003	38.1
4004	37.6
4005	37.2
4006	36.7
4007	37.2
4008	37.0
4009	36.9
4010	37.2
4011	37.1
4012	38.0
4014	37.4
4015	37.6
4016	37.5

PROJECT NO : 90831

INDIVIDUAL BODY TEMPERATURE (°C)

APPENDIX NO. 5

WEEK 8
FEMALES

ANIMAL
NO. BODY
 TEMPERATURE

GROUP 1 - AIR CONTROL

1501	38.9
1502	38.7
1503	38.5
1504	38.1
1505	38.2
1506	38.3
1507	37.9
1508	37.4
1509	38.2
1510	37.6
1511	38.6
1512	38.3
1513	38.5
1514	38.3
1515	37.7

PROJECT NO : 90831

INDIVIDUAL BODY TEMPERATURE (°C)

APPENDIX NO. 5

WEEK 8
FEMALES

ANIMAL NO.	BODY TEMPERATURE
GROUP 2 - CERIC OXIDE	
LOW DOSE	
2501	39.0
2502	38.8
2503	39.1
2504	37.9
2505	38.5
2506	37.1
2507	37.9
2508	37.5
2509	38.1
2510	37.3
2511	38.1
2512	37.7
2513	38.6
2514	38.3
2515	38.4

APPENDIX NO. 5

INDIVIDUAL BODY TEMPERATURE (°C)

PROJECT NO : 90831

WEEK 8
FEMALES

ANIMAL NO.	BODY TEMPERATURE
------------	------------------

GROUP 3 - CERIC OXIDE
INTERMEDIATE DOSE

3501	38.9
3502	38.7
3503	38.6
3504	38.8
3505	38.3
3506	38.4
3507	38.8
3508	38.3
3509	37.5
3510	38.0
3511	38.7
3513	37.1
3514	38.4
3516	38.8
3517	38.4

APPENDIX NO. 5

INDIVIDUAL BODY TEMPERATURE (°C)

PROJECT NO : 90831

WEEK 8
FEMALES

ANIMAL NO.	BODY TEMPERATURE
4501	39.4
4502	38.7
4503	38.8
4504	38.0
4505	38.6
4506	38.7
4507	37.5
4508	37.8
4509	38.0
4510	37.1
4511	37.0
4513	38.6
4514	38.9
4515	38.4
4516	38.7

GROUP 4 - CERIC OXIDE
HIGH DOSE

APPENDIX NO. 5

INDIVIDUAL BODY TEMPERATURE (° C)

PROJECT NO : 90831

WEEK 13
MALES

GROUP 1 - AIR CONTROL

ANIMAL NO.	BODY TEMPERATURE
1001	38.8
1002	38.9
1005	37.5
1006	37.7
1007	37.3
1008	37.5
1009	37.2
1010	37.1
1011	37.2
1012	37.6
1013	37.2
1014	37.4
1015	37.0
1016	36.9
1017	37.9

PROJECT NO : 90831

INDIVIDUAL BODY TEMPERATURE (°C)

APPENDIX NO. 5

WEEK 13
MALES

ANIMAL NO.	BODY TEMPERATURE
GROUP 2 - CERIC OXIDE LOW DOSE	
2001	38.1
2002	38.8
2003	37.4
2004	37.0
2005	38.4
2006	38.0
2007	38.6
2008	37.7
2009	37.9
2010	37.2
2011	37.4
2012	37.9
2013	38.7
2015	37.2
2016	38.3

APPENDIX NO. 5

INDIVIDUAL BODY TEMPERATURE (°C)

PROJECT NO : 90831

WEEK 13
MALES

ANIMAL NO.	BODY TEMPERATURE
GROUP 3 - CERIC OXIDE INTERMEDIATE DOSE	
3001	38.3
3002	38.5
3003	38.5
3004	37.4
3005	38.3
3006	37.5
3007	37.3
3008	37.1
3009	36.6
3011	38.3
3012	37.1
3013	37.6
3014	38.1
3015	36.9
3016	37.0

PROJECT NO : 90831

INDIVIDUAL BODY TEMPERATURE (°C)

APPENDIX NO. 5

WEEK 13
MALES

ANIMAL NO.	BODY TEMPERATURE
4002	38.0
4003	37.9
4004	36.9
4005	37.2
4006	37.0
4007	37.4
4008	37.1
4009	37.4
4010	37.3
4011	36.8
4012	37.8
4014	37.4
4015	37.3
4016	37.5

GROUP 4 - CERIC OXIDE
HIGH DOSE

APPENDIX NO. 5

INDIVIDUAL BODY TEMPERATURE (°C)

PROJECT NO : 90831

WEEK 13
FEMALES

ANIMAL NO.	BODY TEMPERATURE
1501	38.9
1502	38.7
1503	38.9
1504	38.4
1505	38.8
1506	37.9
1507	38.4
1508	37.6
1509	38.5
1510	37.7
1511	37.4
1512	38.1
1513	38.7
1514	38.2
1515	37.7

GROUP 1 - AIR CONTROL

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INDIVIDUAL BODY TEMPERATURE (° C)

APPENDIX NO. 5

WEEK 13
FEMALES

ANIMAL NO.	BODY TEMPERATURE
2501	38.8
2502	38.9
2503	39.0
2504	37.7
2505	38.3
2506	37.9
2507	38.2
2508	37.5
2509	37.8
2510	37.0
2511	37.9
2512	38.1
2513	38.2
2514	37.7
2515	38.8

GROUP 2 - CERIC OXIDE
LOW DOSE

PROJECT NO : 90831

INDIVIDUAL BODY TEMPERATURE (°C)

APPENDIX NO. 5

WEEK 13
FEMALES

ANIMAL NO.	BODY TEMPERATURE
3501	39.0
3502	38.9
3503	38.5
3504	38.9
3505	38.0
3506	37.4
3507	38.3
3508	37.9
3509	37.5
3510	38.5
3511	39.0
3513	36.8
3514	38.3
3516	37.6
3517	39.2

GROUP 3 - CERIC OXIDE
INTERMEDIATE DOSE



APPENDIX NO. 5

INDIVIDUAL BODY TEMPERATURE (°C)

PROJECT NO : 90831

WEEK 13
FEMALES

ANIMAL NO.	BODY TEMPERATURE
4501	39.1
4502	38.8
4503	38.9
4504	38.7
4505	38.8
4506	37.7
4507	38.6
4508	39.0
4509	38.4
4510	38.1
4511	37.1
4513	38.0
4514	38.5
4515	38.3
4516	38.6

GROUP 4 - CERIC OXIDE
HIGH DOSE



BIO-RESEARCH LABORATORIES LTD.

STUDY TITLE

A 13-WEEK INHALATION TOXICITY AND NEUROTOXICITY STUDY
BY NOSE-ONLY EXPOSURE OF A DRY POWDER AEROSOL
OF CERIC OXIDE IN THE ALBINO RAT

VOLUME III

SPONSOR

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DATA REQUIREMENTS

United States EPA/TSCA (40 CFR Part 792).
Japanese MHW GLP Regulations (Notification No. 313 and revised rule Notification No. 870)
OECD guidelines No. 413

AUTHOR

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Study Director

STUDY COMPLETED ON

September 29, 1994

PERFORMING LABORATORY

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LABORATORY PROJECT ID

90831

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APPENDIX NO. 6

PROJECT NO. 90831

INDIVIDUAL MOTOR ACTIVITY COUNTS
MALES AND FEMALES

The following footnotes have been used throughout the appendix:

Dead	Animal dead
T	Technical error

APPENDIX NO. 6
 INDIVIDUAL
 MOTOR ACTIVITY COUNTS
 MALES
 PRE STUDY
 GROUP 1 AIR CONTROL

PROJECT NO.: 90831

ANIMAL NO.	INTERVAL	NO. OF BREAKS PER BEAM								INTERVAL TOTAL	SESSION TOTAL
		1	2	3	4	5	6	7	8		
1007	1	4	7	18	20	7	15	18	10	99	
	2	16	1	14	16	6	12	9	5	79	
	3	4	1	6	12	3	4	5	2	37	
	4	0	0	3	8	0	4	8	0	23	
	5	0	0	1	0	0	0	0	0	1	
	6	0	0	0	0	0	0	0	0	0	
	TOTAL		9	23	20	12	16	18	23	18	139
1008	1	4	11	12	17	7	14	25	6	96	
	2	6	1	2	4	14	14	7	2	50	
	3	0	0	0	0	0	0	0	0	0	
	4	3	6	5	7	10	8	7	6	52	
	5	0	0	0	0	0	0	0	0	0	
	6	0	0	0	0	0	0	0	0	0	
	TOTAL		9	13	19	18	10	12	11	13	105
1009	1	7	11	17	4	6	18	19	12	94	
	2	2	6	6	7	5	1	1	1	29	
	3	1	2	6	1	0	4	4	8	26	
	4	0	0	0	0	0	0	0	0	0	
	5	0	0	0	0	0	0	0	0	0	
	6	0	0	1	0	0	0	0	0	1	
	TOTAL		7	16	17	13	6	8	11	14	92
1010	1	7	12	10	13	10	15	14	15	96	
	2	6	1	4	16	2	6	1	2	38	
	3	0	0	0	2	0	0	0	0	2	
	4	0	0	0	0	0	0	0	0	0	
	5	0	0	0	0	0	0	0	0	0	
	6	0	0	0	0	0	0	0	0	0	
	TOTAL		7	12	10	13	10	15	14	15	96

INDIVIDUAL
MOTOR ACTIVITY COUNTS
MALES
PRE STUDY

PROJECT NO.: 90831
GROUP 1 AIR CONTROL

APPENDIX NO. 6

NO. OF BREAKS PER BEAM

ANIMAL NO.	INTERVAL	BEAM NO.								INTERVAL TOTAL	SESSION TOTAL
		1	2	3	4	5	6	7	8		
1011	1	10	12	16	16	7	15	19	7	102	
	2	3	8	12	7	4	13	7	0	54	
	3	1	3	2	0	1	0	6	2	15	
	4	0	0	0	0	0	0	0	0	0	
	5	0	0	0	0	0	0	0	0	0	
	6	0	0	0	0	0	0	0	0	0	
	TOTAL		9	12	12	11	8	16	13	11	92
1012	1	6	11	10	8	7	8	9	8	67	
	2	3	2	0	1	8	1	7	1	23	
	3	0	0	0	0	0	0	1	0	1	
	4	0	0	0	0	0	0	0	0	0	
	5	0	0	0	0	0	0	0	0	0	
	6	0	0	0	0	0	0	0	0	0	
	TOTAL		9	12	12	11	8	16	13	11	92
1013	1	0	0	2	4	0	0	0	0	6	
	2	0	0	2	0	0	0	0	0	2	
	3	0	0	0	0	0	0	0	0	0	
	4	0	0	0	0	0	0	0	0	0	
	5	0	0	0	0	0	0	0	0	0	
	6	0	0	0	0	0	0	0	0	0	
	TOTAL		0	0	2	4	0	0	0	0	6
1014	1	3	10	56	10	3	11	7	7	107	
	2	1	0	6	16	1	3	15	6	48	
	3	0	0	0	0	0	0	0	0	0	
	4	0	0	0	0	0	0	0	0	0	
	5	0	0	0	0	0	0	0	0	0	
	6	0	0	0	0	0	0	0	0	0	
	TOTAL		3	10	56	10	3	11	7	7	107



PROJECT NO.: 90831

INDIVIDUAL
MOTOR ACTIVITY COUNTS
MALES
PRE STUDY

APPENDIX NO. 6

GROUP 1 AIR CONTROL

NO. OF BREAKS PER BEAM

ANIMAL NO.	INTERVAL	BEAM NO.								INTERVAL TOTAL	SESSION TOTAL
		1	2	3	4	5	6	7	8		
1015	1	12	14	13	7	14	19	5	85		
	2	3	4	1	6	11	9	8	44		
	3	4	10	8	4	9	10	3	51		
	4	0	0	0	0	0	0	0	0		
	5	0	0	0	0	0	0	0	0		
	6	0	0	0	0	0	0	0	0		
	TOTAL		22	19	14	6	14	15	13	107	180
1016	1	14	17	8	4	8	8	12	80		
	2	8	10	17	11	16	15	15	97		
	3	1	0	0	0	0	0	3	4		
	4	0	0	0	0	0	0	0	0		
	5	0	0	0	0	0	0	0	0		
	6	0	0	0	0	0	0	0	0		
	TOTAL		22	17	17	4	8	8	12	80	288
1017	1	11	20	13	6	15	19	11	103		
	2	13	13	12	6	9	15	10	85		
	3	8	13	9	6	9	11	9	68		
	4	3	2	4	3	11	2	1	27		
	5	0	0	0	0	0	0	0	0		
	6	0	0	0	0	0	0	0	0		
	TOTAL		35	58	48	24	54	57	41	323	284

PROJECT NO.: 90831

INDIVIDUAL
MOTOR ACTIVITY COUNTS
MALES
PRE STUDY

APPENDIX NO. 6

GROUP 2 CERIC OXIDE LOW DOSE

NO. OF BREAKS PER BEAM

ANIMAL NO.	INTERVAL	BEAM NO.								INTERVAL TOTAL	SESSION TOTAL
		1	2	3	4	5	6	7	8		
2013	1	6	12	17	11	21	12	10	9	98	
	2	3	2	10	8	6	10	7	5	51	
	3	0	0	0	0	0	0	0	0	0	
	4	0	0	0	0	0	0	0	0	0	
	5	0	0	0	0	0	0	0	0	0	
	6	0	0	0	0	0	0	0	0	0	
	TOTAL		10	13	19	16	12	18	25	15	128
2015	1	10	13	19	16	12	18	25	15	128	
	2	11	23	11	9	13	18	17	11	113	
	3	0	0	2	2	0	5	4	0	13	
	4	0	0	0	0	0	0	0	0	0	
	5	0	0	0	0	0	0	0	0	0	
	6	0	0	0	0	0	0	0	0	0	
	TOTAL		21	36	22	25	23	33	46	26	254
2016	1	6	3	5	5	5	5	9	7	45	
	2	2	4	9	6	2	3	16	6	48	
	3	0	0	0	1	0	3	0	0	4	
	4	0	0	0	0	0	0	0	0	0	
	5	0	0	0	0	0	0	0	0	0	
	6	0	0	0	0	0	0	0	0	0	
	TOTAL		8	7	14	12	7	21	25	13	97



INDIVIDUAL
MOTOR ACTIVITY COUNTS
MALES
PRE STUDY

PROJECT NO.: 90831

APPENDIX NO. 6

GROUP 3 CERIC OXIDE INTERMEDIATE DOSE

NO. OF BREAKS PER BEAM

ANIMAL NO.	INTERVAL	BEAM NO.								INTERVAL TOTAL	SESSION TOTAL
		1	2	3	4	5	6	7	8		
3001	1	2	6	16	11	2	11	17	10	75	
	2	10	14	18	21	14	14	18	12	121	
	3	5	12	16	12	8	21	21	19	114	
	4	0	4	8	3	0	2	4	3	24	
	5	0	0	2	2	0	1	1	0	6	
	6	0	0	0	0	0	0	0	0	0	0
	TOTAL	7	19	27	16	12	12	24	24	141	340
3002	1	5	13	17	7	5	5	21	6	79	
	2	6	12	8	16	10	7	14	19	92	
	3	4	16	5	8	3	15	10	15	76	
	4	2	11	8	5	5	16	15	7	69	
	5	1	3	2	0	0	2	1	1	10	
	6	1	3	2	0	0	2	1	1	10	467
	TOTAL	3	11	17	22	5	12	17	19	106	
3003	1	10	10	7	11	9	9	11	10	77	
	2	5	15	9	9	12	4	9	11	74	
	3	3	6	5	6	10	8	9	9	56	
	4	0	0	0	0	0	0	0	0	0	
	5	0	0	0	0	0	0	0	0	0	
	6	0	0	0	0	0	0	0	0	0	313
	TOTAL	9	12	21	25	8	16	14	18	123	
3004	1	3	11	13	13	2	18	17	7	84	
	2	2	6	30	9	3	11	4	1	66	
	3	0	0	7	0	0	0	0	0	7	
	4	0	0	0	0	0	0	0	0	0	
	5	0	0	0	0	0	0	0	0	0	
	6	0	0	0	0	0	0	0	0	0	280
	TOTAL										

INDIVIDUAL
MOTOR ACTIVITY COUNTS
MALES
PRE STUDY

GROUP 3 CERIC OXIDE INTERMEDIATE DOSE

NO. OF BREAKS PER BEAM

ANIMAL NO.	INTERVAL	BEAM NO.								INTERVAL TOTAL	SESSION TOTAL
		1	2	3	4	5	6	7	8		
3005	1	6	14	18	16	8	24	18	13	117	
	2	6	22	40	16	4	11	11	13	123	
	3	9	10	18	14	4	18	20	8	101	
	4	1	4	11	15	3	3	13	6	56	
	5	1	6	1	1	2	3	3	4	21	
	6	2	1	3	5	0	4	0	0	15	433
TOTAL		8	13	30	18	8	23	22	11	133	
3006	1	3	17	13	7	6	15	16	12	89	
	2	6	5	3	2	2	4	1	1	24	
	3	0	0	2	0	0	0	0	0	2	
	4	0	0	0	0	0	0	0	0	0	
	5	0	0	0	0	0	0	0	0	0	
	6	0	0	0	0	0	0	0	0	0	248
TOTAL		6	11	20	22	6	18	13	11	107	
3007	1	6	10	10	19	13	15	12	10	95	
	2	7	11	11	13	5	10	6	10	73	
	3	6	7	7	8	1	4	1	2	36	
	4	0	0	0	4	2	2	0	1	9	
	5	0	0	0	1	0	0	0	0	1	321
	6	0	0	0	1	0	0	0	0	0	
TOTAL		10	29	22	19	11	16	19	13	139	
3008	1	9	8	13	17	3	17	17	12	96	
	2	5	11	19	16	4	17	5	3	80	
	3	0	0	0	0	0	0	1	0	1	
	4	0	0	0	0	0	0	0	0	0	
	5	0	0	0	0	0	0	0	0	0	
	6	6	3	4	3	3	1	7	5	32	348
TOTAL											



PROJECT NO.: 90831

INDIVIDUAL
MOTOR ACTIVITY COUNTS
MALES
PRE STUDY

APPENDIX NO. 6

GROUP 3 CERIC OXIDE INTERMEDIATE DOSE

NO. OF BREAKS PER BEAM

ANIMAL NO.	INTERVAL	BEAM NO.								INTERVAL TOTAL	SESSION TOTAL
		1	2	3	4	5	6	7	8		
3014	1	9	18	13	20	7	25	16	16	124	
	2	6	15	14	10	3	16	6	7	77	
	3	2	13	4	11	2	16	13	7	68	
	4	0	0	0	0	0	0	9	0	9	
	5	0	0	0	0	0	0	0	0	0	
	6	0	0	0	0	0	0	0	0	0	
	TOTAL	4	10	15	12	5	7	20	14	87	278
3015	1	1	1	9	2	0	7	22	4	46	
	2	1	5	11	2	4	1	13	7	44	
	3	0	0	0	0	0	0	7	2	9	
	4	0	0	0	0	0	0	0	0	0	
	5	0	0	0	0	0	0	0	0	0	
	6	0	0	0	0	0	0	0	0	0	
	TOTAL	7	9	12	6	9	15	15	9	82	186
3016	1	4	7	7	8	5	9	13	10	63	
	2	0	0	0	0	0	1	0	0	1	
	3	0	1	3	4	0	5	4	0	17	
	4	0	0	0	0	0	0	0	0	0	
	5	0	0	0	0	0	0	0	0	0	
	6	0	0	0	0	0	0	0	0	0	
	TOTAL	4	7	7	8	5	9	13	10	63	163



PROJECT NO.: 90831

INDIVIDUAL
MOTOR ACTIVITY COUNTS
MALES
PRE STUDY

GROUP 4 CERIC OXIDE HIGH DOSE

APPENDIX NO. 6

NO. OF BREAKS PER BEAM

ANIMAL NO.	INTERVAL	BEAM NO.								INTERVAL TOTAL	SESSION TOTAL
		1	2	3	4	5	6	7	8		
4001	1	4	26	16	16	13	25	21	18	139	
	2	11	19	9	9	6	12	17	25	117	
	3	3	6	4	9	5	13	16	21	77	
	4	3	8	4	3	3	1	1	13	36	
	5	0	0	0	0	0	0	1	1	2	
	6	0	0	0	0	0	0	0	0	0	
	TOTAL		5	15	19	16	7	23	30	21	136
4002	1	5	6	7	9	35	4	25	13	104	
	2	5	0	3	3	12	3	7	3	31	
	3	0	0	0	0	0	0	0	0	0	
	4	0	0	0	0	0	0	0	0	0	
	5	0	0	0	0	0	0	0	0	0	
	6	0	0	0	0	0	0	0	0	0	
	TOTAL		10	6	7	9	35	4	25	13	104
4003	1	1	5	13	10	3	19	17	7	75	
	2	4	11	13	12	10	4	3	7	64	
	3	0	0	12	2	1	1	0	0	16	
	4	0	3	0	0	2	5	7	2	19	
	5	0	0	0	0	0	0	0	0	0	
	6	0	0	0	0	0	0	0	0	0	
	TOTAL		5	19	25	22	5	29	24	16	174
4004	1	8	13	24	19	4	14	10	17	109	
	2	15	11	15	17	8	16	7	12	101	
	3	21	13	13	13	13	15	11	11	110	
	4	11	6	5	15	14	19	15	7	92	
	5	8	5	5	8	6	10	6	5	53	
	6	10	14	9	13	8	8	8	11	81	
	TOTAL		73	58	66	79	68	86	63	63	546

INDIVIDUAL
MOTOR ACTIVITY COUNTS
MALES
PRE STUDY

APPENDIX NO. 6

GROUP 4 CERIC OXIDE HIGH DOSE

NO. OF BREAKS PER BEAM

ANIMAL NO.	INTERVAL	BEAM NO.								INTERVAL TOTAL	SESSION TOTAL
		1	2	3	4	5	6	7	8		
4009	1	12	17	14	5	9	22	18	102		
	2	11	12	13	6	6	11	13	74		
	3	5	6	10	9	11	12	8	64		
	4	1	1	1	1	2	2	0	8		
	5	1	1	2	4	1	3	0	18		
	6	0	0	0	0	0	0	0	0	266	
TOTAL		16	18	18	11	17	13	10	115		
4010	1	7	13	14	6	16	9	10	79		
	2	3	8	7	1	4	6	2	34		
	3	0	0	0	0	0	0	0	0		
	4	0	0	0	0	0	0	0	0		
	5	0	0	0	0	0	0	0	0		
	6	0	0	0	0	0	0	0	0	228	
TOTAL		10	21	20	16	8	12	21	113		
4011	1	15	13	11	2	22	13	15	103		
	2	14	10	15	8	10	9	10	88		
	3	6	8	11	0	13	4	8	56		
	4	4	16	10	5	3	5	6	52		
	5	2	2	0	0	0	0	0	3		
	6	0	0	0	0	0	0	0	0	415	
TOTAL		4	8	13	8	8	13	8	69		
4012	1	7	4	0	3	8	9	9	51		
	2	0	0	0	0	0	0	0	0		
	3	0	0	0	0	0	0	0	0		
	4	0	0	0	0	0	0	0	0		
	5	0	0	0	0	0	0	0	0		
	6	0	0	0	0	0	0	0	0	120	
TOTAL											



PROJECT NO.: 90831

INDIVIDUAL
MOTOR ACTIVITY COUNTS
MALES
PRE STUDY

APPENDIX NO. 6

GROUP 4 CERIC OXIDE HIGH DOSE

NO. OF BREAKS PER BEAM

ANIMAL NO.	INTERVAL	BEAM NO.								INTERVAL TOTAL	SESSION TOTAL
		1	2	3	4	5	6	7	8		
4014	1	4	3	24	13	10	10	15	10	89	
	2	0	4	3	1	21	2	5	2	38	
	3	0	0	0	0	4	0	0	0	4	
	4	0	0	0	0	0	0	0	0	0	
	5	0	0	0	0	0	0	0	0	0	
	6	0	0	0	0	6	0	0	0	0	6
	TOTAL	4	17	10	14	10	17	19	12	103	
4015	1	2	7	13	9	1	6	11	8	57	
	2	0	0	0	0	0	0	0	0	0	
	3	0	0	0	0	0	0	0	0	0	
	4	0	0	0	0	0	0	0	0	0	
	5	0	0	0	0	0	0	0	0	0	
	6	0	0	0	0	0	0	0	0	0	0
	TOTAL	4	14	13	9	1	6	11	8	57	
4016	1	4	9	5	9	9	10	24	9	79	
	2	1	4	3	4	0	9	6	5	32	
	3	1	2	0	0	2	5	2	1	13	
	4	0	0	0	0	0	1	0	0	1	
	5	0	0	0	0	0	0	0	0	0	
	6	0	0	0	0	0	0	0	0	0	0
	TOTAL	4	16	8	13	11	24	32	16	125	



PROJECT NO.: 90831

INDIVIDUAL
MOTOR ACTIVITY COUNTS
MALES
WEEK 4
GROUP 1 AIR CONTROL

APPENDIX NO. 6

ANIMAL NO.	INTERVAL	NO. OF BREAKS PER BEAM								INTERVAL TOTAL	SESSION TOTAL
		1	2	3	4	5	6	7	8		
1001	1	9	15	13	16	15	11	10	15	104	
	2	8	11	8	7	13	15	13	10	85	
	3	16	5	15	13	4	17	9	6	85	
	4	4	3	4	6	11	11	11	5	55	
	5	2	6	6	12	1	3	12	7	49	
	6	4	6	1	2	5	13	5	2	38	416
TOTAL		8	17	21	16	11	17	17	18	125	
1002	1	4	2	8	7	4	9	21	9	64	
	2	10	14	9	9	3	9	22	12	88	
	3	2	4	5	6	0	1	6	9	33	
	4	0	0	3	3	3	7	5	2	23	
	5	0	0	0	0	0	0	0	0	0	
	6	0	0	0	0	0	0	0	0	0	333
TOTAL		10	13	13	18	14	18	11	14	111	
1005	1	7	8	6	10	3	10	10	7	61	
	2	7	12	7	7	7	12	8	4	64	
	3	4	8	11	12	2	4	15	6	62	
	4	8	7	6	9	7	10	16	11	74	
	5	5	8	6	6	2	12	9	4	52	
	6	5	18	14	11	4	24	15	10	101	424
TOTAL		3	9	8	11	3	23	16	15	88	
1006	1	2	3	4	11	2	18	13	8	61	
	2	1	1	3	11	4	4	2	6	32	
	3	1	1	6	7	2	7	3	3	31	
	4	2	2	0	6	0	2	7	3	31	
	5	1	2	0	6	0	2	7	3	31	
	6	1	2	0	6	0	2	7	3	31	12
TOTAL		6	1	0	6	0	2	7	3	12	325



PROJECT NO.: 90831

INDIVIDUAL
MOTOR ACTIVITY COUNTS

APPENDIX NO. 6

MALES

WEEK 4

GROUP 3 CERIC OXIDE INTERMEDIATE DOSE

NO. OF BREAKS PER BEAM

BEAM NO.

INTERVAL

SESSION

TOTAL

TOTAL

TOTAL

TOTAL

TOTAL

TOTAL

TOTAL

TOTAL

TOTAL

TOTAL

TOTAL

TOTAL

ANIMAL NO.	INTERVAL	NO. OF BREAKS PER BEAM								INTERVAL TOTAL	SESSION TOTAL
		1	2	3	4	5	6	7	8		
3005	1	13	13	18	21	6	15	18	23	127	
	2	3	3	7	6	5	5	6	11	46	
	3	18	5	5	6	2	7	9	9	61	
	4	0	0	0	0	0	0	0	0	0	
	5	0	0	0	0	0	0	0	0	0	
	6	0	0	0	0	0	0	0	0	0	
TOTAL		16	28	26	21	10	25	17	26	169	234
3006	1	4	21	11	13	3	24	18	21	115	
	2	1	9	4	6	1	18	7	11	57	
	3	0	15	1	0	1	8	1	0	26	
	4	0	8	2	2	0	10	3	1	26	
	5	0	2	0	0	0	0	0	0	2	
	6	0	2	0	0	0	0	0	0	0	
TOTAL		5	22	20	44	8	17	8	15	139	395
3007	1	3	7	8	12	10	7	4	3	54	
	2	0	0	1	4	0	0	0	0	5	
	3	0	0	0	0	0	0	0	0	0	
	4	0	0	0	0	0	0	0	0	0	
	5	0	0	0	0	0	0	0	0	0	
	6	0	0	0	0	0	0	0	0	0	
TOTAL		21	15	21	21	14	12	17	21	142	198
3008	1	17	13	22	14	14	13	9	7	109	
	2	20	5	8	10	10	1	8	4	66	
	3	3	4	5	3	0	3	1	14	33	
	4	0	0	0	0	0	0	0	0	0	
	5	0	0	0	0	0	0	0	0	0	
	6	0	0	0	0	0	0	0	0	0	
TOTAL		0	0	0	0	0	0	0	0	0	350



PROJECT NO.: 90831

INDIVIDUAL
MOTOR ACTIVITY COUNTS
MALES
WEEK 4

APPENDIX NO. 6

GROUP 4 CERIC OXIDE HIGH DOSE

NO. OF BREAKS PER BEAM

ANIMAL NO.	INTERVAL	BEAM NO.								INTERVAL TOTAL	SESSION TOTAL
		1	2	3	4	5	6	7	8		
4001	1	3	26	19	16	9	18	10	17	118	
	2	3	26	5	5	3	4	11	62		
	3	0	9	8	13	0	0	0	30		
	4	1	8	10	1	0	3	2	1	26	
	5	0	0	0	0	0	0	0	0	0	
	6	0	4	4	0	0	0	0	0	8	
	TOTAL	6	16	12	11	21	13	8	11	98	244
4002	1	4	6	6	4	1	1	8	6	80	
	2	0	7	1	1	18	0	0	0	27	
	3	0	0	0	0	14	0	0	0	14	
	4	0	0	0	0	0	0	0	0	0	
	5	0	0	0	0	0	0	0	0	0	
	6	0	0	0	0	0	0	0	0	0	
	TOTAL	13	14	23	14	14	13	15	9	115	219
4003	1	4	7	13	10	14	9	15	9	81	
	2	2	12	9	3	3	6	9	4	48	
	3	0	1	0	0	0	0	0	0	1	
	4	1	4	3	2	0	2	7	0	19	
	5	0	0	0	0	0	0	0	0	0	
	6	0	0	0	0	0	0	0	0	0	
	TOTAL	13	28	14	26	16	17	19	17	150	264
4004	1	11	12	14	31	8	10	20	14	120	
	2	6	4	6	18	7	9	6	10	66	
	3	3	9	5	32	4	10	5	15	83	
	4	1	2	1	16	1	3	2	1	27	
	5	0	1	1	7	0	0	0	0	9	
	6	0	1	1	1	0	0	0	0	0	
	TOTAL	33	41	41	105	22	38	42	44	455	455

APPENDIX NO. 6
 INDIVIDUAL
 MOTOR ACTIVITY COUNTS
 MALES
 WEEK 8
 GROUP 2 CERIC OXIDE LOW DOSE
 PROJECT NO.: 90831

ANIMAL NO.	INTERVAL	NO. OF BREAKS PER BEAM								INTERVAL TOTAL	SESSION TOTAL
		BEAM NO.									
		1	2	3	4	5	6	7	8		
2001	1	4	7	12	35	7	10	6	7	88	
	2	0	3	10	15	1	5	10	13	57	
	3	2	3	0	6	2	1	0	0	14	
	4	0	0	4	0	0	0	0	0	4	
	5	0	0	0	0	0	0	0	0	0	
	6	0	0	0	0	0	0	0	0	0	
	TOTAL		13	32	20	21	11	14	9	12	132
2002	1	5	16	9	2	2	22	14	24	94	
	2	4	8	3	3	2	17	16	30	83	
	3	4	1	2	4	1	4	6	19	40	
	4	0	2	5	0	0	0	1	4	12	
	5	0	1	0	0	0	0	0	11	14	
	6	0	1	0	0	0	2	2	0	14	
TOTAL		13	32	20	21	11	14	9	12	132	375
2003	1	4	12	16	15	3	16	16	13	95	
	2	5	11	7	11	2	9	11	11	67	
	3	4	20	13	16	0	20	9	14	96	
	4	0	7	9	7	0	3	3	6	35	
	5	0	4	7	20	1	9	5	14	60	
	6	4	1	1	4	2	5	6	9	32	
TOTAL		13	32	20	21	11	14	9	12	132	385
2004	1	4	34	27	27	8	15	17	13	145	
	2	1	16	10	11	5	23	13	12	91	
	3	0	7	4	4	12	10	12	11	60	
	4	2	3	3	8	6	21	24	11	78	
	5	0	0	0	0	0	2	3	1	6	
	6	0	0	0	0	0	8	0	0	8	
TOTAL		13	32	20	21	11	14	9	12	132	388

APPENDIX NO. 6
 INDIVIDUAL MOTOR ACTIVITY COUNTS
 MALES
 WEEK 8
 GROUP 2 CERIC OXIDE LOW DOSE

PROJECT NO.: 90831

ANIMAL NO.	INTERVAL	NO. OF BREAKS PER BEAM								INTERVAL TOTAL	SESSION TOTAL
		1	2	3	4	5	6	7	8		
2009	1	4	24	25	26	5	17	17	16	134	
	2	0	16	27	11	0	4	3	0	61	
	3	0	0	1	4	0	0	0	0	5	
	4	0	0	2	3	0	0	0	0	5	
	5	0	0	0	0	0	0	0	0	0	
	6	0	0	0	5	0	0	0	0	0	5
	TOTAL	8	13	16	18	12	15	17	15	114	210
2010	1	4	6	11	5	12	12	8	12	70	
	2	0	5	5	11	2	8	12	9	52	
	3	0	8	5	5	2	15	8	4	47	
	4	2	9	10	8	2	2	5	4	42	
	5	0	0	0	0	0	2	0	0	2	
	6	0	0	0	0	0	0	0	0	0	
	TOTAL	9	21	20	20	6	18	14	17	125	327
2011	1	3	17	22	16	2	19	6	5	90	
	2	3	15	14	19	4	17	15	14	101	
	3	1	4	5	6	0	1	3	2	22	
	4	0	0	0	0	0	0	0	0	0	
	5	0	0	0	0	0	0	0	0	0	
	6	0	0	0	0	0	0	0	0	0	
	TOTAL	9	15	17	31	5	11	19	14	121	338
2012	1	5	6	6	11	2	11	18	12	71	
	2	1	0	2	7	0	2	2	2	16	
	3	0	2	1	14	0	9	2	3	31	
	4	2	0	4	15	0	9	7	10	47	
	5	0	0	0	5	0	2	3	3	12	
	6	0	0	0	0	0	0	0	0	0	
	TOTAL	9	15	17	31	5	11	19	14	121	298

APPENDIX NO. 6
 INDIVIDUAL
 MOTOR ACTIVITY COUNTS
 MALES
 WEEK 8
 GROUP 3 CERIC OXIDE INTERMEDIATE DOSE
 PROJECT NO.: 90831

ANIMAL NO.	INTERVAL	NO. OF BREAKS PER BEAM								INTERVAL TOTAL	SESSION TOTAL
		1	2	3	4	5	6	7	8		
3001	1	7	10	13	10	11	14	14	10	89	
	2	6	8	14	13	19	15	10	16	101	
	3	2	7	8	14	10	28	18	23	110	
	4	0	2	4	3	1	5	10	9	34	
	5	0	1	2	1	0	4	6	1	15	
	6	0	5	7	2	0	6	0	0	20	
	TOTAL		7	11	15	18	11	16	23	17	118
3002	1	5	14	7	18	5	16	17	6	88	
	2	2	6	9	22	4	11	4	6	64	
	3	1	6	7	7	1	4	2	7	35	
	4	0	0	0	0	0	0	0	0	0	
	5	1	0	0	0	0	0	0	0	0	
	6	1	0	5	5	1	4	3	3	22	
TOTAL		5	20	17	19	4	16	18	18	117	327
3003	1	0	6	9	17	1	1	2	3	39	
	2	2	6	6	13	2	5	3	7	44	
	3	0	3	2	11	0	3	2	5	26	
	4	0	0	0	0	0	0	0	0	0	
	5	0	0	0	0	0	0	0	0	0	
	6	0	0	0	0	0	0	0	0	0	
TOTAL		7	18	12	8	7	33	13	21	119	226
3004	1	4	15	4	11	2	30	10	6	82	
	2	0	4	0	2	0	38	5	7	56	
	3	0	5	2	4	0	30	3	6	50	
	4	0	1	0	1	0	19	0	0	21	
	5	0	0	0	0	0	5	0	0	5	
	6	0	0	0	0	0	0	0	0	0	
TOTAL		4	15	4	11	2	30	10	6	82	333



APPENDIX NO. 6
 INDIVIDUAL
 MOTOR ACTIVITY COUNTS
 MALES
 WEEK 8
 GROUP 3 CERIC OXIDE INTERMEDIATE DOSE

PROJECT NO.: 90831

ANIMAL NO.	INTERVAL	NO. OF BREAKS PER BEAM								INTERVAL TOTAL	SESSION TOTAL
		1	2	3	4	5	6	7	8		
3005	1	10	20	21	11	8	19	15	18	122	
	2	10	9	7	12	6	21	15	11	91	
	3	7	7	6	10	5	6	10	22	73	
	4	1	4	1	6	1	3	4	3	23	
	5	0	2	2	2	0	2	1	3	12	
	6	0	0	0	0	0	0	1	0	1	
	TOTAL		5	13	14	15	5	32	15	17	116
3006	1	0	2	1	2	2	28	2	1	38	
	2	0	0	0	0	0	11	8	4	23	
	3	0	0	0	0	0	4	12	8	24	
	4	0	0	0	0	0	17	11	2	39	
	5	0	3	3	3	0	4	5	3	15	
	6	0	0	0	3	0	4	4	7	81	
	TOTAL		3	5	15	26	7	14	4	7	67
3007	1	2	6	10	22	6	9	5	7	53	
	2	0	6	13	28	1	1	2	2	44	
	3	0	5	25	10	0	1	1	0	7	
	4	0	0	6	1	0	0	0	0	0	
	5	0	0	0	0	0	0	0	0	0	
	6	0	0	0	0	0	0	0	0	0	
	TOTAL		11	18	19	34	4	15	18	34	153
3008	1	18	9	7	7	10	16	16	13	96	
	2	26	5	6	3	1	15	9	11	76	
	3	1	1	0	0	0	25	2	2	31	
	4	2	0	0	0	3	30	5	3	43	
	5	0	0	0	0	0	5	0	0	5	
	6	0	0	0	0	0	0	0	0	0	
TOTAL		84	25	26	23	29	81	71	64	404	404

PROJECT NO.: 90831

INDIVIDUAL
MOTOR ACTIVITY COUNTS

MALES
WEEK 8

GROUP 4 CERIC OXIDE HIGH DOSE

APPENDIX NO. 6

NO. OF BREAKS PER BEAM

INTERVAL SESSION
TOTAL TOTAL

BEAM NO.

INTERVAL

ANIMAL
NO.

1 2 3 4 5 6 7 8

4001

3 23 20 17 8 12 9 6

8 9 3 0 1 1 0 0

0 1 1 0 0 0 0 0

0 5 2 0 0 0 0 0

2 17 16 11 9 3 0 0

98 46 14 12 5 0 0 0

4002

20 12 6 6 6 6 6 6

8 21 11 2 9 7 0 0

19 4 0 0 0 0 0 0

14 12 8 0 0 0 0 0

114 84 62 40 1 0 0 0

4003

7 19 23 19 8 20 13 16

9 1 7 7 1 10 12 7

3 15 3 10 0 4 4 7

0 2 0 0 0 0 0 0

301 127 62 74 17 0 0 0

4004

11 17 19 30 11 19 22 21

5 18 13 13 9 16 16 19

7 6 12 18 6 8 7 17

0 7 6 23 0 12 5 11

280 150 109 81 64 31 6 441

TOTAL

441



PROJECT NO.: 90831

INDIVIDUAL
MOTOR ACTIVITY COUNTS
MALES

APPENDIX NO. 6

WEEK 13

GROUP 1 AIR CONTROL

NO. OF BREAKS PER BEAM

ANIMAL NO.	INTERVAL	BEAM NO.								INTERVAL TOTAL	SESSION TOTAL
		1	2	3	4	5	6	7	8		
1007	1	4	9	21	13	1	7	6	5	66	
	2	5	1	10	6	0	7	1	1	31	
	3	0	3	3	3	0	1	1	2	13	
	4	0	4	6	7	0	0	0	0	17	
	5	0	0	5	0	0	0	0	0	5	
	6	0	1	1	2	2	0	0	0	6	
	TOTAL		9	11	14	16	14	19	12	6	100
1008	1	8	5	3	3	12	16	11	5	56	
	2	1	0	0	0	4	11	14	2	31	
	3	0	0	0	1	2	14	2	1	20	
	4	0	3	6	4	3	8	3	4	32	
	5	1	0	0	0	2	9	2	2	15	
	6	0	0	0	0	7	7	7	12	84	
	TOTAL		10	22	12	14	22	27	20	12	254
1009	1	3	20	9	10	0	4	2	7	55	
	2	3	16	3	1	3	6	7	10	46	
	3	0	12	2	5	0	4	0	2	25	
	4	0	14	4	3	4	8	13	16	64	
	5	2	3	4	6	0	14	12	16	55	
	6	0	0	0	0	6	8	8	14	329	
	TOTAL		8	10	15	14	6	6	8	14	80
1010	1	7	0	4	1	0	0	0	0	5	
	2	0	0	7	1	0	0	0	0	8	
	3	0	0	1	0	0	0	0	0	1	
	4	0	0	1	0	0	0	0	0	0	
	5	0	0	0	0	0	0	0	0	0	
	6	0	0	1	0	0	0	0	0	1	
	TOTAL		7	0	15	14	6	6	8	14	80



APPENDIX NO. 6
 INDIVIDUAL
 MOTOR ACTIVITY COUNTS
 MALES
 WEEK 13
 GROUP 1 AIR CONTROL
 PROJECT NO.: 90831

ANIMAL NO.	INTERVAL	NO. OF BREAKS PER BEAM								INTERVAL SESSION TOTAL
		BEAM NO.								
		1	2	3	4	5	6	7	8	
1015	1	5	20	28	26	4	21	11	20	135
	2	0	22	15	8	1	3	3	6	58
	3	0	7	8	1	0	0	0	0	16
	4	0	2	8	2	0	0	0	0	12
	5	0	9	1	1	0	3	1	2	17
	6	0	1	0	0	0	0	0	0	1
	TOTAL		5	22	8	10	4	9	14	20
1016	1	5	22	8	10	4	9	14	20	92
	2	2	23	5	4	0	14	10	18	76
	3	0	10	7	3	0	2	1	1	24
	4	0	11	0	0	0	3	1	1	16
	5	0	2	0	0	0	0	0	0	2
	6	0	1	0	0	0	0	0	0	1
	TOTAL		7	13	14	21	12	14	19	21
1017	1	4	8	7	8	9	7	14	21	123
	2	0	2	3	5	1	3	5	11	78
	3	0	0	0	0	0	0	1	0	30
	4	1	1	2	2	3	4	6	2	21
	5	0	0	0	0	0	0	0	1	1
	6	0	0	0	0	0	0	0	0	1
	TOTAL		4	8	7	8	9	7	14	21

PROJECT NO.: 90831

INDIVIDUAL
MOTOR ACTIVITY COUNTS
MALES
WEEK 13
GROUP 2 CERIC OXIDE LOW DOSE

APPENDIX NO. 6

ANIMAL NO.	INTERVAL	NO. OF BREAKS PER BEAM								INTERVAL TOTAL	SESSION TOTAL
		BEAM NO.									
		1	2	3	4	5	6	7	8		
2001	1	6	13	16	25	6	9	14	14	100	
	2	3	9	25	11	2	5	8	5	68	
	3	0	1	42	6	0	1	0	0	50	
	4	0	0	8	0	0	0	0	0	8	
	5	0	0	3	0	0	0	0	0	3	
	6	0	0	0	0	0	0	0	0	0	
	TOTAL		10	16	16	17	4	18	9	24	114
2002	1	4	14	12	22	4	15	3	11	85	
	2	6	13	8	14	2	8	5	13	69	
	3	0	3	2	0	0	0	0	0	16	
	4	1	11	11	6	1	5	3	5	43	
	5	0	0	0	1	0	4	0	7	12	
	6	0	0	0	1	0	0	0	0	0	
	TOTAL		8	21	15	9	3	20	8	12	96
2003	1	0	11	8	14	1	15	16	17	82	
	2	3	5	10	5	0	3	3	2	31	
	3	2	1	2	7	2	2	2	3	21	
	4	0	0	0	0	0	0	0	0	0	
	5	0	0	0	0	0	0	0	0	0	
	6	0	0	0	0	0	0	0	0	0	
	TOTAL		6	17	21	22	10	15	12	19	122
2004	1	3	21	22	16	2	19	13	17	113	
	2	3	22	16	9	2	9	7	10	78	
	3	2	9	18	2	1	6	5	0	43	
	4	0	0	1	0	0	0	0	0	1	
	5	0	0	0	2	0	0	0	0	0	
	6	0	0	0	2	0	0	0	0	2	
	TOTAL		6	21	22	16	2	19	13	17	113



PROJECT NO.: 90831

INDIVIDUAL
MOTOR ACTIVITY COUNTS

APPENDIX NO. 6

MALES

WEEK 13

GROUP 2 CERIC OXIDE LOW DOSE

NO. OF BREAKS PER BEAM

ANIMAL NO.	INTERVAL	BEAM NO.								INTERVAL TOTAL	SESSION TOTAL
		1	2	3	4	5	6	7	8		
2005	1	8	23	10	14	19	15	16	17	17	122
	2	5	9	13	7	20	9	6	5	5	74
	3	0	4	0	4	3	3	2	5	5	21
	4	0	0	2	2	1	7	1	0	0	13
	5	0	7	1	0	0	1	5	3	3	17
	6	0	0	0	0	0	0	0	0	0	0
TOTAL		5	22	29	14	8	17	22	17	134	247
2006	1	1	7	19	7	0	15	13	11	11	73
	2	0	0	14	1	0	5	0	0	0	20
	3	0	0	0	0	0	0	0	0	0	0
	4	0	0	0	0	0	0	0	0	0	0
	5	0	0	0	0	0	0	0	0	0	0
	6	0	0	0	0	0	0	0	0	0	0
TOTAL		8	17	17	26	13	22	21	16	140	227
2007	1	8	8	5	18	1	10	6	11	67	140
	2	0	0	0	6	0	4	0	0	10	67
	3	0	0	0	2	0	0	0	0	2	10
	4	0	0	0	1	0	1	0	0	2	2
	5	0	0	0	7	0	5	2	6	20	20
	6	0	0	0	0	0	0	0	0	0	0
TOTAL		10	18	13	20	6	12	13	15	107	241
2008	1	4	9	1	2	3	4	2	9	34	107
	2	0	7	3	6	0	7	0	0	23	34
	3	0	4	3	4	0	30	4	3	48	23
	4	0	5	0	3	2	11	4	2	27	48
	5	0	2	1	1	0	13	2	2	21	27
	6	0	0	0	0	0	0	0	0	0	21
TOTAL											260



PROJECT NO.: 90831

INDIVIDUAL
MOTOR ACTIVITY COUNTS

APPENDIX NO. 6

MALES

WEEK 13

GROUP 2 CERIC OXIDE LOW DOSE

NO. OF BREAKS PER BEAM

ANIMAL NO.	INTERVAL	BEAM NO.								INTERVAL TOTAL	SESSION TOTAL
		1	2	3	4	5	6	7	8		
2009	1	4	27	14	5	1	2	2	3	58	
	2	0	0	2	0	0	0	0	0	2	
	3	0	0	0	0	0	0	0	0	0	
	4	0	0	1	0	0	0	0	0	1	
	5	0	0	0	0	0	0	0	0	0	
	6	0	0	0	0	0	0	0	0	0	
	TOTAL		8	24	22	17	18	11	8	22	130
2010	1	4	8	12	7	9	6	6	19	71	
	2	5	9	9	6	2	4	6	11	52	
	3	2	2	3	2	2	1	2	9	23	
	4	6	7	6	5	3	10	10	15	62	
	5	1	1	3	1	0	6	4	13	29	
	6	5	33	24	27	6	15	18	24	152	367
	TOTAL		24	64	67	48	39	59	66	102	427
2011	1	7	10	9	15	2	10	9	7	69	
	2	0	6	2	16	1	5	3	3	36	
	3	1	2	3	11	7	4	0	0	28	
	4	0	1	0	17	0	3	2	2	25	
	5	0	0	0	4	0	0	0	0	4	
	6	0	0	0	12	0	0	0	0	12	
	TOTAL		8	29	24	65	9	22	14	26	174
2012	1	7	10	9	15	2	10	9	7	69	
	2	0	6	2	16	1	5	3	3	36	
	3	1	2	3	11	7	4	0	0	28	
	4	0	1	0	17	0	3	2	2	25	
	5	0	0	0	4	0	0	0	0	4	
	6	0	0	0	12	0	0	0	0	12	
	TOTAL		8	29	24	65	9	22	14	26	174



APPENDIX NO. 6
 INDIVIDUAL
 MOTOR ACTIVITY COUNTS
 MALES
 WEEK 13
 GROUP 2 CERIC OXIDE LOW DOSE
 PROJECT NO.: 90831

ANIMAL NO.	INTERVAL	NO. OF BREAKS PER BEAM								INTERVAL TOTAL	SESSION TOTAL
		BEAM NO.									
		1	2	3	4	5	6	7	8		
2013	1	5	28	21	40	5	23	12	15	149	
	2	0	12	11	46	0	11	1	5	86	
	3	0	2	8	25	0	1	0	0	36	
	4	0	13	16	29	0	1	0	0	59	
	5	0	0	6	5	0	0	0	0	11	
	6	0	2	7	19	0	0	0	0	28	369
TOTAL		9	14	11	14	4	10	7	9	78	
2015	1	3	5	10	8	0	5	6	6	43	
	2	1	12	9	11	3	4	4	3	47	
	3	0	18	2	0	0	1	1	1	23	
	4	4	15	5	5	5	9	3	3	49	
	5	0	4	0	0	0	0	0	0	5	
	6	0	4	0	0	0	0	0	0	1	245
TOTAL		10	12	6	6	6	14	17	18	89	
2016	1	7	8	5	10	1	6	7	9	53	
	2	0	0	0	0	0	0	6	0	6	
	3	0	0	0	0	0	0	0	0	0	
	4	0	0	0	0	0	0	0	0	0	
	5	0	0	0	0	0	0	0	0	0	
	6	3	3	2	2	2	0	0	13	7	32
TOTAL		3	3	2	2	2	2	13	7	32	180

APPENDIX NO. 6 INDIVIDUAL MOTOR ACTIVITY COUNTS PROJECT NO.: 90831
 MALES WEEK 13
 GROUP 3 CERIC OXIDE INTERMEDIATE DOSE

ANIMAL NO.	INTERVAL	NO. OF BREAKS PER BEAM								INTERVAL TOTAL	SESSION TOTAL
		BEAM NO.									
		1	2	3	4	5	6	7	8		
3009	1	3	16	14	12	5	14	18	14	96	
	2	1	10	5	11	2	3	7	6	45	
	3	0	4	4	1	0	5	3	1	18	
	4	0	0	0	0	0	0	0	0	0	
	5	0	5	5	1	3	2	1	0	17	
	6	0	0	0	0	0	0	0	0	0	
	TOTAL		2	10	7	11	18	26	20	19	113
3011	1	0	3	1	1	1	36	11	4	57	
	2	0	5	1	2	2	37	12	1	60	
	3	1	0	0	0	0	15	5	0	21	
	4	1	4	6	8	3	23	15	23	83	
	5	0	0	0	0	1	21	2	0	24	
	TOTAL		1	19	6	13	1	42	38	18	138
3012	1	0	3	2	9	0	36	19	13	82	
	2	4	2	1	3	1	41	4	4	60	
	3	0	0	0	1	0	27	5	3	36	
	4	0	0	0	0	0	23	15	0	38	
	5	0	0	0	0	0	14	7	6	43	
	TOTAL		4	23	26	12	2	9	13	14	103
3013	1	2	10	16	29	2	8	5	5	77	
	2	0	0	15	8	0	0	0	0	23	
	3	0	1	14	4	0	0	0	0	19	
	4	0	3	6	4	0	0	0	0	13	
	5	1	4	9	29	3	15	5	6	72	
	TOTAL		2	17	51	74	2	8	5	5	207

APPENDIX NO. 6
 INDIVIDUAL
 MOTOR ACTIVITY COUNTS
 MALES
 WEEK 13
 GROUP 3 CERIC OXIDE INTERMEDIATE DOSE
 PROJECT NO.: 90831

ANIMAL NO.	INTERVAL	NO. OF BREAKS PER BEAM								INTERVAL TOTAL	SESSION TOTAL
		1	2	3	4	5	6	7	8		
3014	1	20	17	16	4	23	20	17	120		
	2	26	11	8	3	17	12	7	86		
	3	18	5	5	2	8	10	8	58		
	4	10	7	7	3	6	4	15	53		
	5	4	8	4	2	10	7	9	46		
	6	0	0	0	0	0	0	0	0		
	TOTAL		8	8	9	2	15	7	11	65	363
3015	1	13	11	15	3	6	5	7	63		
	2	2	0	1	1	2	0	0	6		
	3	0	0	0	0	0	0	0	0		
	4	0	0	0	0	0	0	0	0		
	5	3	1	2	2	0	0	1	9		
	6	0	0	0	1	0	0	0	2		
TOTAL		18	12	18	7	8	7	18	98	145	
3016	1	20	54	30	1	11	17	11	146		
	2	5	9	6	1	7	34	12	74		
	3	11	21	21	5	12	6	16	96		
	4	2	6	3	0	1	3	4	19		
	5	3	5	14	1	2	2	12	39		
	6	0	5	2	0	0	0	0	7		
TOTAL		41	125	74	9	43	72	52	381		



APPENDIX NO. 6
 INDIVIDUAL MOTOR ACTIVITY COUNTS
 PROJECT NO.: 90831
 MALES
 WEEK 13
 GROUP 4 CERIC OXIDE HIGH DOSE

ANIMAL NO.	INTERVAL	NO. OF BREAKS PER BEAM								INTERVAL TOTAL	SESSION TOTAL
		1	2	3	4	5	6	7	8		
4009	1	7	8	11	12	3	5	8	9	63	
	2	7	7	4	17	1	5	5	7	53	
	3	5	4	6	16	0	2	1	5	39	
	4	0	1	1	10	1	4	2	4	23	
	5	7	3	4	7	0	2	0	0	23	
	6	0	5	7	16	0	4	3	5	40	
	TOTAL		33	37	44	72	4	25	14	6	241
4010	1	3	2	2	9	3	25	14	6	64	
	2	7	8	3	3	3	20	9	13	66	
	3	1	0	0	0	1	22	8	1	33	
	4	0	0	0	0	0	17	5	0	22	
	5	0	1	0	0	0	12	1	2	16	
	6	0	0	0	0	0	4	0	0	4	
	TOTAL		11	11	5	12	4	85	19	19	205
4011	1	4	11	5	8	2	22	14	19	85	
	2	2	6	3	8	3	15	3	7	47	
	3	3	10	11	19	5	11	14	10	83	
	4	3	12	4	9	1	19	10	8	66	
	5	2	5	3	4	3	21	5	4	47	
	6	0	0	0	1	2	0	0	1	4	
	TOTAL		17	41	26	48	16	132	47	47	332
4012	1	8	41	17	16	3	17	11	19	132	
	2	0	40	14	17	0	7	5	7	90	
	3	0	16	7	8	0	1	3	3	38	
	4	0	7	2	1	0	4	1	1	16	
	5	0	9	0	0	0	0	0	0	9	
	6	0	12	1	0	0	2	0	1	16	
	TOTAL		8	117	51	64	3	30	21	21	301



APPENDIX NO. 6
 INDIVIDUAL
 MOTOR ACTIVITY COUNTS
 MALES
 WEEK 13
 GROUP 4 CERIC OXIDE HIGH DOSE
 PROJECT NO. 90831

ANIMAL NO.	INTERVAL	NO. OF BREAKS PER BEAM								INTERVAL TOTAL	SESSION TOTAL
		BEAM NO.									
		1	2	3	4	5	6	7	8		
4014	1	7	18	13	13	17	22	14	19	123	
	2	1	14	1	7	18	13	7	2	63	
	3	5	4	6	9	6	12	7	7	56	
	4	0	0	0	2	1	2	0	0	5	
	5	0	3	4	2	7	5	9	2	32	
	6	0	0	0	0	0	0	0	0	0	0
TOTAL		3	17	8	22	2	36	15	11	114	279
4015	1	3	17	8	22	2	36	15	11	114	
	2	2	16	8	8	0	50	5	6	95	
	3	0	0	0	0	1	20	1	1	23	
	4	0	0	0	0	0	16	0	0	16	
	5	0	0	0	0	0	8	2	0	10	
	6	0	0	0	0	0	1	0	0	1	
TOTAL		5	33	16	30	2	130	17	12	279	259
4016	1	8	14	26	18	6	8	9	11	100	
	2	1	7	20	8	3	2	2	3	46	
	3	0	3	5	6	1	1	2	4	22	
	4	1	2	6	4	0	1	2	2	18	
	5	0	0	0	0	0	0	0	0	0	
	6	0	0	0	1	0	0	0	0	1	1
TOTAL		10	26	57	37	10	13	20	21	187	187



INDIVIDUAL
MOTOR ACTIVITY COUNTS
FEMALES
PRE STUDY

GROUP 1 AIR CONTROL

NO. OF BREAKS PER BEAM

ANIMAL NO.	INTERVAL	BEAM NO.								INTERVAL TOTAL	SESSION TOTAL
		1	2	3	4	5	6	7	8		
1509	1	8	24	27	28	14	20	23	31	175	
	2	8	18	15	25	13	14	13	10	116	
	3	9	18	14	14	9	16	23	11	114	
	4	10	13	19	10	2	14	7	6	81	
	5	0	2	0	0	0	0	0	0	2	
	6	0	0	0	0	0	0	0	0	0	
	TOTAL		12	17	16	16	14	11	8	12	106
1510	1	16	6	10	8	13	5	5	6	69	
	2	8	4	4	5	14	4	0	6	45	
	3	1	2	1	3	33	1	2	1	44	
	4	0	0	0	0	23	0	0	0	23	
	5	0	0	0	0	0	0	0	0	0	
	6	0	0	0	0	0	0	0	0	0	
	TOTAL		11	22	20	20	20	24	19	15	159
1511	1	7	17	20	17	27	16	18	17	139	
	2	5	17	20	14	4	15	15	12	102	
	3	3	6	7	7	3	8	9	6	49	
	4	0	0	0	0	0	0	0	0	0	
	5	0	0	0	0	0	0	0	0	0	
	6	0	0	0	0	0	0	0	0	0	
	TOTAL		8	11	13	13	8	16	10	14	93
1512	1	9	12	8	4	4	17	14	11	79	
	2	9	5	9	8	6	11	9	3	60	
	3	10	8	2	2	7	8	6	12	55	
	4	2	5	1	7	1	2	1	1	20	
	5	0	0	0	0	0	0	0	0	0	
	6	0	0	0	0	0	0	0	0	0	
	TOTAL		0	0	0	0	0	0	0	0	0

APPENDIX NO. 6
 INDIVIDUAL
 MOTOR ACTIVITY COUNTS
 FEMALES
 PRE STUDY
 GROUP 1 AIR CONTROL
 PROJECT NO.: 90831

ANIMAL NO.	INTERVAL	NO. OF BREAKS PER BEAM								INTERVAL TOTAL	SESSION TOTAL
		1	2	3	4	5	6	7	8		
1513	1	9	19	13	12	11	22	16	18	120	
	2	11	11	11	13	17	17	15	11	106	
	3	5	9	3	7	11	14	6	5	60	
	4	4	13	7	7	7	14	10	22	84	
	5	0	0	0	0	0	0	0	0	0	
	6	0	0	0	0	0	0	0	0	0	
	TOTAL		9	13	12	11	14	12	14	15	100
1514	1	9	13	12	11	14	12	14	15	100	
	2	22	13	13	12	18	11	7	7	103	
	3	6	5	10	10	8	7	7	11	64	
	4	5	4	5	10	15	9	6	9	63	
	5	9	3	6	4	17	5	7	6	57	
	6	1	1	0	3	13	8	3	1	30	
	TOTAL		8	15	31	25	8	17	21	28	153
1515	1	8	15	31	25	8	17	21	28	153	
	2	4	8	16	10	8	14	25	12	97	
	3	8	4	11	4	1	3	9	6	46	
	4	17	0	0	0	0	0	0	0	17	
	5	4	0	0	0	0	0	0	0	4	
	6	6	0	0	0	0	0	0	0	6	
TOTAL		6	0	0	0	0	0	0	0	6	323

INDIVIDUAL
MOTOR ACTIVITY COUNTS
FEMALES
PRE STUDY

GROUP 2 CERIC OXIDE LOW DOSE

NO. OF BREAKS PER BEAM

ANIMAL NO.	INTERVAL	BEAM NO.								INTERVAL TOTAL	SESSION TOTAL
		1	2	3	4	5	6	7	8		
2501	1	4	17	25	26	14	14	11	13	124	
	2	7	10	9	21	14	10	7	8	86	
	3	4	7	11	14	5	9	7	9	66	
	4	16	3	3	16	6	7	5	12	68	
	5	2	7	3	6	3	4	2	8	35	
	6	18	2	3	3	3	2	4	5	38	417
TOTAL		25	19	23	27	19	22	17	16	168	
2502	1	46	16	18	14	21	10	11	8	144	
	2	21	10	14	18	15	10	7	7	106	
	3	59	8	7	7	10	5	5	5	106	
	4	59	7	4	8	2	12	15	27	134	
	5	45	0	1	1	2	9	7	20	85	743
	TOTAL		8	21	17	14	9	23	16	11	119
2503	1	9	13	9	15	12	8	10	10	86	
	2	13	3	7	3	15	11	5	9	66	
	3	6	7	10	6	26	8	2	4	69	
	4	5	7	4	6	12	29	6	2	71	
	5	0	1	2	3	28	5	0	1	40	451
	TOTAL		6	8	17	24	11	12	17	24	119
2504	1	6	10	11	10	12	8	17	13	87	
	2	9	3	10	11	16	6	7	12	74	
	3	6	11	7	14	6	19	17	10	90	
	4	6	7	4	11	15	12	19	10	84	
	5	6	7	4	11	15	12	19	10	84	
	6	9	13	5	4	6	7	7	6	57	511
TOTAL											

76

PROJECT NO.: 90831

INDIVIDUAL
MOTOR ACTIVITY COUNTS
FEMALES
PRE STUDY

APPENDIX NO. 6

GROUP 2 CERIC OXIDE LOW DOSE

NO. OF BREAKS PER BEAM

ANIMAL NO.	INTERVAL	BEAM NO.								INTERVAL TOTAL	SESSION TOTAL
		1	2	3	4	5	6	7	8		
2509	1	8	12	21	18	12	20	23	19	133	
	2	7	11	19	11	9	22	17	15	111	
	3	4	8	7	11	7	23	9	12	81	
	4	10	5	2	4	2	7	1	14	45	
	5	6	3	3	5	4	2	11	12	46	
	6	0	0	0	0	0	0	0	0	0	0
	TOTAL		12	18	19	23	6	26	18	18	140
2510	1	1	7	7	10	1	16	7	8	57	
	2	0	0	0	0	0	2	0	0	2	
	3	0	0	0	0	0	0	0	0	0	
	4	0	0	0	0	0	0	0	0	0	
	5	0	0	0	0	0	0	0	0	0	
	6	0	0	0	0	0	0	0	0	0	
	TOTAL		1	7	7	10	1	16	7	8	57
2511	1	7	19	9	9	10	18	22	17	111	
	2	5	5	10	6	2	10	8	8	54	
	3	7	3	4	1	3	9	4	5	36	
	4	1	2	4	2	0	2	2	0	13	
	5	0	0	0	0	0	0	0	0	0	
	6	3	2	1	1	0	1	1	2	11	
	TOTAL		22	38	26	25	22	40	32	32	199
2512	1	8	15	14	9	15	12	18	16	107	
	2	6	7	7	10	9	6	5	6	56	
	3	0	0	0	0	0	0	0	0	0	
	4	0	0	0	0	0	0	0	0	0	
	5	0	0	0	0	0	0	0	0	0	
	6	0	0	0	0	0	0	0	0	0	
	TOTAL		14	22	21	19	24	18	23	22	163

APPENDIX NO. 6
 INDIVIDUAL
 MOTOR ACTIVITY COUNTS
 FEMALES
 PRE STUDY
 PROJECT NO.: 90831

GROUP 3 CERIC OXIDE INTERMEDIATE DOSE

NO. OF BREAKS PER BEAM

ANIMAL NO.	INTERVAL	BEAM NO.								INTERVAL TOTAL	SESSION TOTAL
		1	2	3	4	5	6	7	8		
3501	1	15	13	20	30	5	15	16	18	132	
	2	15	10	21	17	5	10	19	10	107	
	3	8	10	16	16	7	16	14	9	96	
	4	1	3	7	11	6	6	16	2	52	
	5	3	0	0	2	0	3	3	0	11	
	6	0	0	0	0	0	0	0	0	0	
	TOTAL		7	25	24	20	5	24	28	23	156
3502	1	7	12	18	13	6	28	24	6	114	
	2	7	10	4	5	3	15	15	7	69	
	3	10	14	12	15	6	13	6	15	85	
	4	4	14	2	1	0	1	2	3	13	
	5	1	3	2	1	0	1	1	2	3	
	6	4	7	1	3	1	8	20	6	50	
	TOTAL		7	21	24	20	5	24	25	20	131
3503	1	7	20	16	14	8	25	18	16	132	
	2	15	13	14	15	10	19	19	15	112	
	3	7	9	10	17	5	15	21	10	93	
	4	6	9	11	20	8	13	12	8	83	
	5	2	9	2	7	3	9	3	6	35	
	6	2	3	2	7	3	9	3	6	35	
	TOTAL		7	20	24	20	13	20	16	18	141
3504	1	10	16	8	14	10	18	12	8	95	
	2	9	18	11	11	3	11	7	7	77	
	3	9	4	5	10	3	4	5	5	40	
	4	4	4	4	7	1	7	2	4	29	
	5	0	4	4	12	3	13	8	6	79	
	6	12	11	14	12	3	13	8	6	81	
	TOTAL		12	11	14	12	3	13	8	6	81

APPENDIX NO. 6
 INDIVIDUAL
 MOTOR ACTIVITY COUNTS
 FEMALES
 PRE STUDY
 PROJECT NO.: 90831

GROUP 3 CERIC OXIDE INTERMEDIATE DOSE

ANIMAL NO.	INTERVAL	NO. OF BREAKS PER BEAM								INTERVAL TOTAL	SESSION TOTAL
		BEAM NO.									
		1	2	3	4	5	6	7	8		
3505	1	8	14	27	21	13	11	18	6	118	
	2	5	11	20	16	12	22	16	12	114	
	3	6	8	9	6	8	7	6	13	63	
	4	1	8	10	7	3	5	6	3	43	
	5	0	0	0	0	0	0	0	0	0	
	6	0	0	0	0	0	0	0	0	0	
	TOTAL		0	4	28	30	6	22	21	15	126
3506	1	4	13	12	14	7	9	17	7	83	
	2	7	4	6	6	4	3	6	5	41	
	3	0	0	0	0	0	0	0	0	0	
	4	0	0	0	0	0	0	0	0	0	
	5	0	0	0	0	0	0	0	0	0	
	6	0	0	0	0	0	0	0	0	0	
	TOTAL		0	17	18	14	7	9	17	7	126
3507	1	6	11	14	21	15	12	13	13	105	
	2	8	9	9	9	20	13	13	11	92	
	3	8	12	10	10	27	16	10	10	103	
	4	6	5	3	6	49	3	4	3	79	
	5	0	1	2	2	20	0	0	1	27	
	6	0	0	0	0	13	0	0	0	13	
	TOTAL		0	17	19	23	14	23	35	17	157
3508	1	13	11	11	10	7	20	8	15	95	
	2	5	16	11	4	9	14	3	10	72	
	3	9	6	6	6	7	13	9	6	62	
	4	1	1	2	1	0	1	1	1	8	
	5	0	0	0	0	0	0	0	0	0	
	6	0	0	0	0	0	0	0	0	0	
	TOTAL		0	0	0	0	0	0	0	0	0

APPENDIX NO. 6
 INDIVIDUAL
 MOTOR ACTIVITY COUNTS
 FEMALES
 WEEK 4
 GROUP 2 CERIC OXIDE LOW DOSE
 PROJECT NO. 190831

ANIMAL NO.	INTERVAL	NO. OF BREAKS PER BEAM								INTERVAL TOTAL	SESSION TOTAL
		1	2	3	4	5	6	7	8		
2501	1	14	16	16	17	13	20	16	25	137	
	2	9	20	9	9	9	12	15	9	92	
	3	8	17	6	5	7	7	6	12	68	
	4	7	12	9	5	4	5	7	10	59	
	5	3	5	11	7	0	4	5	10	45	
	6	1	2	2	0	0	0	0	2	7	
	TOTAL		30	21	20	19	11	34	21	17	173
2502	1	51	14	6	15	15	24	15	12	152	
	2	34	17	10	15	16	13	8	10	123	
	3	24	8	6	5	7	6	7	13	76	
	4	10	2	1	2	2	1	2	8	28	
	5	0	0	0	0	0	0	0	0	0	
	6	0	0	0	0	0	0	0	0	0	
	TOTAL		11	18	14	20	13	21	14	23	134
2503	1	9	10	16	8	8	11	10	10	82	
	2	3	9	4	16	22	17	9	8	88	
	3	3	2	0	4	22	3	0	0	34	
	4	0	0	0	0	0	0	0	0	0	
	5	0	0	0	0	0	0	0	0	0	
	6	0	0	0	0	0	0	0	0	0	
	TOTAL		12	31	28	15	14	26	22	17	165
2504	1	4	7	11	15	5	9	8	6	65	
	2	0	4	2	2	4	0	0	1	13	
	3	0	0	0	0	0	0	0	0	0	
	4	1	3	2	7	1	2	2	2	20	
	5	0	2	2	3	3	2	2	1	15	
	6	0	2	2	3	3	2	2	2	15	
	TOTAL		0	2	2	3	3	2	2	1	15



PROJECT NO.: 90831

INDIVIDUAL
MOTOR ACTIVITY COUNTS
FEMALES
WEEK 4
GROUP 2 CERIC OXIDE LOW DOSE

APPENDIX NO. 6

NO. OF BREAKS PER BEAM

ANIMAL NO.	INTERVAL	BEAM NO.								INTERVAL TOTAL	SESSION TOTAL
		1	2	3	4	5	6	7	8		
2509	1	15	18	13	26	21	21	24	26	164	
	2	18	18	9	8	20	12	15	19	119	
	3	7	5	0	0	5	1	1	3	22	
	4	0	0	0	0	0	0	0	0	0	
	5	7	6	5	3	7	7	4	1	40	
	6	0	0	1	0	0	0	0	0	1	
	TOTAL		14	31	23	20	12	29	30	29	188
2510	1	11	13	24	12	8	15	19	11	113	
	2	4	5	8	2	16	2	9	12	58	
	3	0	0	41	2	0	0	0	0	43	
	4	0	0	0	0	0	0	0	0	0	
	5	0	0	0	0	0	0	0	0	0	
	6	0	0	0	0	0	0	0	0	0	
TOTAL		13	33	23	20	8	25	21	12	155	402
2511	1	5	12	18	12	5	10	13	25	100	
	2	8	14	7	6	3	4	3	6	51	
	3	3	5	3	2	2	5	5	4	29	
	4	0	0	0	0	0	0	0	0	0	
	5	0	0	0	0	0	0	0	0	0	
	6	0	0	0	0	0	0	0	0	0	
TOTAL		6	16	27	18	5	28	17	22	139	335
2512	1	0	2	9	2	0	1	1	2	17	
	2	0	0	0	0	0	0	0	0	0	
	3	0	0	0	0	0	0	0	0	0	
	4	0	0	0	0	0	0	0	0	0	
	5	0	0	0	0	0	0	0	0	0	
	6	0	0	0	0	0	0	0	0	0	
TOTAL		0	2	9	2	0	1	1	2	17	156



PROJECT NO.: 90831

INDIVIDUAL
MOTOR ACTIVITY COUNTS
FEMALES
WEEK 4

APPENDIX NO. 6

GROUP 3 CERIC OXIDE INTERMEDIATE DOSE

NO. OF BREAKS PER BEAM

ANIMAL NO.	INTERVAL	BEAM NO.								INTERVAL TOTAL	SESSION TOTAL
		1	2	3	4	5	6	7	8		
3501	1	8	17	27	15	9	22	21	22	141	
	2	7	15	24	8	9	14	13	12	102	
	3	2	11	20	15	10	12	12	6	88	
	4	1	7	21	6	3	7	4	4	53	
	5	0	0	15	2	0	2	1	2	22	
	6	0	0	2	0	0	0	0	0	2	
	TOTAL		7	16	11	12	8	18	16	12	100
3502	1	0	0	0	0	0	0	0	0	0	
	2	3	0	0	0	1	6	0	0	10	
	3	0	0	0	0	0	0	0	0	0	
	4	0	0	0	0	0	0	0	0	0	
	5	0	0	0	0	0	0	0	0	0	
	6	0	0	0	0	0	0	0	0	0	
	TOTAL		3	0	0	0	1	6	0	0	10
3503	1	10	15	16	20	17	14	16	14	122	
	2	9	6	10	13	7	17	10	20	92	
	3	3	8	6	11	5	4	9	9	55	
	4	5	7	9	27	5	14	6	9	82	
	5	4	4	6	30	0	3	3	10	60	
	6	2	5	4	7	1	6	7	16	48	
	TOTAL		33	52	61	102	44	78	61	88	459
3504	1	12	21	18	26	18	20	26	16	157	
	2	0	16	15	17	24	15	14	9	118	
	3	24	7	4	10	18	18	8	10	99	
	4	1	7	6	10	12	6	5	5	52	
	5	0	0	0	0	27	0	0	0	27	
	6	0	0	0	0	0	0	0	0	0	
	TOTAL		47	61	43	83	93	75	68	50	453

PROJECT NO.: 90831

INDIVIDUAL
MOTOR ACTIVITY COUNTS
FEMALES
WEEK 4

APPENDIX NO. 6

GROUP 3 CERIC OXIDE INTERMEDIATE DOSE

NO. OF BREAKS PER BEAM

ANIMAL NO.	INTERVAL	BEAM NO.								INTERVAL TOTAL	SESSION TOTAL
		1	2	3	4	5	6	7	8		
3505	1	13	13	21	25	12	15	29	23	151	
	2	11	11	16	14	4	17	20	15	108	
	3	2	5	6	4	4	11	11	8	51	
	4	0	0	0	0	0	0	0	0	0	
	5	0	0	0	0	0	0	0	0	0	
	6	0	0	0	0	0	0	0	0	0	
	TOTAL		10	14	18	21	10	26	27	20	146
3506	1	8	10	16	15	11	13	32	18	123	
	2	3	0	0	0	2	0	4	3	12	
	3	0	0	0	0	0	0	0	0	0	
	4	0	0	0	0	0	0	0	0	0	
	5	0	0	0	0	0	0	0	0	0	
	6	0	0	0	0	0	0	0	0	0	
	TOTAL		13	12	13	14	8	21	14	14	109
3507	1	4	8	11	13	8	23	7	9	83	
	2	2	3	3	3	62	5	1	7	86	
	3	4	1	4	3	14	4	4	1	34	
	4	0	0	0	0	8	0	0	0	8	
	5	0	0	0	0	2	0	0	0	2	
	6	0	0	0	0	0	0	0	0	0	
	TOTAL		11	20	21	20	14	24	22	12	144
3508	1	5	11	19	10	9	12	11	14	91	
	2	1	0	0	0	29	2	0	0	32	
	3	3	2	4	3	5	4	9	1	31	
	4	0	2	5	3	11	3	0	0	24	
	5	0	2	5	3	11	3	0	0	24	
	6	0	0	0	0	1	0	0	0	1	
	TOTAL		0	0	0	0	1	0	0	0	1



PROJECT NO.: 90831

INDIVIDUAL
MOTOR ACTIVITY COUNTS

APPENDIX NO. 6

FEMALES

WEEK 4

GROUP 4 CERIC OXIDE HIGH DOSE

NO. OF BREAKS PER BEAM

ANIMAL NO.	INTERVAL	BEAM NO.								INTERVAL TOTAL	SESSION TOTAL
		1	2	3	4	5	6	7	8		
4501	1	10	27	20	22	15	19	13	15	141	
	2	8	13	15	15	14	14	15	12	106	
	3	4	7	10	10	17	8	5	10	71	
	4	3	6	5	7	13	6	5	9	54	
	5	2	7	4	24	18	5	4	8	72	
	6	7	10	6	11	11	11	9	12	77	521
TOTAL		15	20	15	24	16	13	11	12	126	
4502	1	6	22	5	7	27	12	5	19	103	
	2	11	18	18	7	25	5	3	5	92	
	3	13	8	12	18	38	12	9	10	120	
	4	7	12	5	7	15	9	7	3	65	
	5	1	0	3	3	14	3	2	4	30	536
	TOTAL		9	33	22	27	6	28	15	27	169
4503	1	11	30	9	4	7	19	9	28	117	
	2	5	23	4	21	6	6	6	37	108	
	3	4	19	3	3	0	8	7	35	79	
	4	8	10	12	19	7	8	3	13	80	
	5	2	11	12	10	3	11	14	16	79	632
	TOTAL		17	27	21	24	15	20	22	30	176
4504	1	17	17	7	9	11	21	14	17	113	
	2	18	16	12	13	39	6	5	15	124	
	3	1	5	1	3	40	0	0	0	50	
	4	0	0	0	0	0	0	0	0	0	
	5	0	0	0	0	0	0	0	0	0	
	6	0	0	0	0	7	0	0	0	7	470
TOTAL											



PROJECT NO.: 190831

INDIVIDUAL
MOTOR ACTIVITY COUNTS
FEMALES
WEEK 4
GROUP 4 CERIC OXIDE HIGH DOSE

APPENDIX NO. 6

ANIMAL NO.	INTERVAL	NO. OF BREAKS PER BEAM								INTERVAL TOTAL	SESSION TOTAL
		1	2	3	4	5	6	7	8		
4505	1	18	27	25	25	10	28	24	25	182	
	2	12	20	18	13	23	10	15	16	127	
	3	13	10	11	11	16	6	13	18	98	
	4	7	6	9	8	6	5	9	4	54	
	5	1	1	1	0	0	2	5	1	11	
	6	5	9	4	9	4	2	9	7	49	
TOTAL		16	21	19	19	12	17	24	26	154	521
4506	1	16	21	19	19	12	17	24	26	154	
	2	14	20	6	24	9	27	13	10	123	
	3	3	0	0	0	0	3	1	0	7	
	4	7	2	3	8	4	7	5	3	39	
	5	0	0	0	0	0	0	0	0	0	
	6	0	0	0	0	0	0	0	0	0	
TOTAL		12	14	17	17	13	21	17	13	126	323
4507	1	12	14	17	19	13	21	17	13	126	
	2	6	14	12	8	21	9	12	10	92	
	3	4	5	6	2	16	6	8	5	52	
	4	0	0	0	0	0	0	0	0	0	
	5	2	6	4	3	20	4	4	8	51	
	6	0	0	0	0	6	0	0	0	6	
TOTAL		13	28	30	22	10	34	18	20	175	327
4508	1	13	28	30	22	10	34	18	20	175	
	2	6	26	23	17	7	23	16	12	130	
	3	6	13	13	14	6	22	14	16	104	
	4	0	0	0	0	0	0	0	0	0	
	5	0	0	0	0	0	0	0	0	0	
	6	8	7	7	6	2	11	5	3	49	
TOTAL		8	7	7	6	2	11	5	3	49	458

APPENDIX NO. 6
 INDIVIDUAL
 MOTOR ACTIVITY COUNTS
 FEMALES
 WEEK 4
 GROUP 4 CERIC OXIDE HIGH DOSE
 PROJECT NO.: 90831

ANIMAL NO.	INTERVAL	NO. OF BREAKS PER BEAM								INTERVAL TOTAL	SESSION TOTAL
		BEAM NO.									
		1	2	3	4	5	6	7	8		
4509	1	12	36	26	24	11	31	25	22	187	
	2	6	20	17	14	8	21	21	15	122	
	3	3	21	13	11	2	15	9	10	84	
	4	3	8	6	5	1	7	4	2	36	
	5	0	0	0	0	0	0	0	0	0	
	6	0	0	0	0	0	0	0	0	0	
	TOTAL		9	23	26	24	14	26	17	20	159
4510	1	5	20	17	15	20	19	24	23	143	
	2	0	8	2	9	12	9	8	8	56	
	3	0	0	0	0	0	0	0	0	0	
	4	0	0	0	0	0	0	0	0	0	
	5	1	4	3	3	3	3	3	3	24	
	6	7	15	8	9	14	12	12	22	102	
	TOTAL		9	16	25	15	8	21	32	17	143
4511	1	2	15	25	11	2	25	23	19	122	
	2	1	8	12	3	0	7	26	5	62	
	3	0	0	4	2	0	3	32	1	42	
	4	0	0	0	0	0	0	0	0	0	
	5	0	0	0	0	0	0	0	0	0	
	6	1	8	5	9	1	6	11	4	45	
	TOTAL		9	13	11	24	16	16	17	13	119
4513	1	4	10	11	3	3	12	17	11	71	
	2	4	9	8	13	9	7	10	5	65	
	3	0	0	5	0	0	0	0	0	5	
	4	0	0	0	0	0	0	0	0	0	
	5	0	0	0	0	0	0	0	0	0	
	6	0	0	0	0	0	0	0	0	0	
	TOTAL		9	13	11	24	16	16	17	13	119

PROJECT NO.: 90831

INDIVIDUAL
MOTOR ACTIVITY COUNTS
FEMALES
WEEK 4

APPENDIX NO. 6

GROUP 4 CERIC OXIDE HIGH DOSE

NO. OF BREAKS PER BEAM

ANIMAL NO.	INTERVAL	BEAM NO.								INTERVAL TOTAL	SESSION TOTAL
		1	2	3	4	5	6	7	8		
4514	1	9	14	12	16	28	18	17	24	138	
	2	15	15	10	7	15	10	23	16	111	
	3	11	10	3	2	8	11	6	11	62	
	4	6	0	0	0	0	0	0	0	6	
	5	2	0	0	0	0	0	0	0	2	
	6	0	0	0	0	0	0	0	0	0	0
TOTAL		43	49	35	41	74	49	67	84	319	
4515	1	10	22	14	12	5	18	19	33	133	
	2	3	16	12	4	2	14	18	41	110	
	3	4	4	3	7	5	11	18	21	73	
	4	2	6	5	4	1	5	21	21	65	
	5	0	0	0	0	0	0	0	0	0	
	6	1	3	4	1	5	10	6	12	42	423
TOTAL		20	51	48	40	25	60	82	133	423	
4516	1	16	22	21	24	9	22	21	39	174	
	2	6	11	14	18	21	13	15	13	111	
	3	0	0	0	0	0	0	0	0	0	
	4	0	0	0	0	0	0	0	0	0	
	5	0	0	0	0	0	0	0	0	0	
	6	0	0	0	0	0	0	0	0	0	0
TOTAL		22	44	59	70	30	57	66	65	285	



PROJECT NO.: 90831

INDIVIDUAL
MOTOR ACTIVITY COUNTS
FEMALES
WEEK 8
GROUP 1 AIR CONTROL

APPENDIX NO. 6

NO. OF BREAKS PER BEAM

ANIMAL NO.	INTERVAL	BEAM NO.								INTERVAL TOTAL	SESSION TOTAL
		1	2	3	4	5	6	7	8		
1501	1	18	24	24	20	22	34	23	17	182	
	2	18	14	16	18	26	13	14	10	129	
	3	19	22	10	9	19	15	22	10	126	
	4	7	14	9	12	16	17	17	18	110	
	5	5	20	11	14	16	9	17	14	106	
	6	9	9	12	19	14	14	9	15	101	754
	TOTAL		20	15	11	14	19	16	21	24	140
1502	1	24	17	7	10	11	6	3	13	91	
	2	30	9	5	8	7	6	4	6	75	
	3	15	16	4	14	3	6	5	8	71	
	4	29	19	10	10	12	6	4	13	103	
	5	29	3	4	7	6	3	0	11	63	543
	6										
	TOTAL		6	27	29	23	5	21	23	25	159
1503	1	3	13	8	10	5	19	11	5	74	
	2	4	13	8	20	1	13	9	14	82	
	3	0	4	3	4	6	8	5	0	30	
	4	2	14	11	7	1	5	11	8	59	
	5	2	10	6	6	1	3	10	5	43	447
	6										
	TOTAL		10	20	21	20	10	18	13	30	142
1504	1	11	10	9	11	11	10	10	12	84	
	2	7	9	8	8	8	3	1	1	45	
	3	0	0	0	0	0	0	0	0	0	
	4	0	0	0	0	0	0	0	0	0	
	5	0	0	0	0	2	0	0	0	2	
	6	17	1	4	2	1	6	9	1	41	314
	TOTAL		17	1	4	2	1	6	9	1	41

PROJECT NO.: 90831

INDIVIDUAL
MOTOR ACTIVITY COUNTS
FEMALES
WEEK 8
GROUP 1 AIR CONTROL

APPENDIX NO. 6

NO. OF BREAKS PER BEAM

ANIMAL NO.	INTERVAL	BEAM NO.								INTERVAL TOTAL	SESSION TOTAL
		1	2	3	4	5	6	7	8		
1509	1	9	31	24	27	15	41	31	29	207	
	2	7	38	17	27	32	21	19	18	179	
	3	4	18	8	13	12	7	14	7	83	
	4	2	4	10	9	8	5	6	7	51	
	5	0	0	0	0	0	0	0	0	0	
	6	0	0	0	0	0	0	0	0	0	
	TOTAL		14	23	23	17	18	22	23	16	156
1510	1	3	9	8	9	32	11	11	10	93	
	2	0	0	0	0	6	0	0	0	6	
	3	0	0	0	0	0	0	0	0	0	
	4	0	0	0	0	0	0	0	0	0	
	5	0	0	0	0	0	0	0	0	0	
	6	0	0	0	0	0	0	0	0	0	
	TOTAL		3	9	8	9	32	11	11	10	93
1511	1	8	22	19	18	7	13	28	15	130	
	2	9	8	11	6	11	12	10	10	77	
	3	2	11	5	2	1	5	13	8	47	
	4	0	0	0	0	0	0	0	0	0	
	5	0	0	0	0	0	0	0	0	0	
	6	0	0	0	0	0	0	0	0	0	
	TOTAL		19	22	19	18	7	13	28	15	130
1512	1	7	21	26	26	16	18	23	13	150	
	2	1	14	20	15	5	13	11	11	90	
	3	1	4	8	8	1	0	6	5	33	
	4	0	2	2	0	0	0	0	0	4	
	5	0	0	0	0	0	0	0	0	0	
	6	0	0	0	0	0	0	0	0	0	
	TOTAL		9	21	26	26	16	18	23	13	150



PROJECT NO.: 90831

INDIVIDUAL
MOTOR ACTIVITY COUNTS

FEMALES
WEEK 8

APPENDIX NO. 6

GROUP 2 CERIC OXIDE LOW DOSE

NO. OF BREAKS PER BEAM

ANIMAL NO.	INTERVAL	BEAM NO.								INTERVAL TOTAL	SESSION TOTAL
		1	2	3	4	5	6	7	8		
2509	1	18	30	17	21	18	26	21	15	166	
	2	16	8	8	12	50	11	11	15	131	
	3	31	0	0	0	0	0	0	0	31	
	4	0	0	0	0	0	0	0	0	0	
	5	1	0	0	0	0	0	0	0	1	
	6	9	5	4	4	4	1	1	0	2	26
TOTAL		13	22	18	24	27	24	25	26	179	
2510	1	18	9	7	2	21	5	9	15	86	
	2	7	3	2	8	19	6	7	9	61	
	3	1	3	3	1	0	2	2	3	15	
	4	0	0	0	0	0	0	0	0	0	
	5	0	0	0	0	0	0	0	0	0	
	6	0	0	0	0	0	0	0	0	0	0
TOTAL		13	37	33	26	6	26	34	21	196	
2511	1	11	16	17	19	4	16	11	17	111	
	2	0	5	4	2	0	2	1	3	17	
	3	0	0	0	0	0	0	0	0	0	
	4	3	11	4	9	1	8	9	11	56	
	5	0	0	0	0	0	0	0	0	0	
	6	7	16	26	23	7	17	22	26	144	380
TOTAL		7	3	13	15	10	4	0	0	45	
2512	1	0	0	3	1	0	0	0	0	4	
	2	0	0	3	1	0	0	0	0	6	
	3	0	0	6	0	0	0	0	0	0	
	4	0	0	0	0	0	0	0	0	0	
	5	0	0	0	0	0	0	0	0	0	
	6	0	2	2	1	0	0	0	0	3	8
TOTAL		0	2	2	1	0	0	0	3	8	

APPENDIX NO. 6
 INDIVIDUAL
 MOTOR ACTIVITY COUNTS
 FEMALES
 WEEK 8
 GROUP 2 CERIC OXIDE LOW DOSE
 PROJECT NO.: 90831

ANIMAL NO.	INTERVAL	NO. OF BREAKS PER BEAM								INTERVAL TOTAL	SESSION TOTAL
		1	2	3	4	5	6	7	8		
2513	1	26	22	22	30	13	19	17	23	172	
	2	12	16	20	23	20	12	14	15	132	
	3	1	10	8	6	48	6	9	10	98	
	4	3	6	9	2	51	1	3	3	78	
	5	0	1	1	2	21	6	4	4	39	
	6	0	0	0	0	0	0	0	0	0	0
TOTAL		18	16	23	35	12	26	26	36	192	519
2514	1	18	16	23	35	12	26	26	36	192	
	2	28	29	20	12	7	23	16	30	165	
	3	6	11	12	10	5	11	18	5	78	
	4	0	0	0	0	0	0	4	0	4	
	5	8	15	4	6	1	7	14	9	64	
	6	2	1	0	0	0	0	1	2	6	
TOTAL		12	25	27	24	11	13	19	21	152	509
2515	1	12	25	27	24	11	13	19	21	152	
	2	5	26	23	20	11	11	12	5	113	
	3	4	5	3	17	1	4	1	5	40	
	4	3	10	7	13	2	6	10	6	57	
	5	2	2	2	5	0	1	1	1	14	
	6	1	1	4	6	1	1	2	1	17	
TOTAL		1	1	4	6	1	1	2	1	17	393



PROJECT NO.: 90831

INDIVIDUAL
MOTOR ACTIVITY COUNTS
FEMALES

APPENDIX NO. 6

GROUP 3 CERIC OXIDE INTERMEDIATE DOSE

WEEK 8

NO. OF BREAKS PER BEAM

ANIMAL NO.	INTERVAL	BEAM NO.								INTERVAL TOTAL	SESSION TOTAL
		1	2	3	4	5	6	7	8		
3501	1	7	18	19	8	2	16	16	12	98	
	2	2	3	4	1	0	1	4	8	23	
	3	7	1	1	5	7	5	5	3	34	
	4	1	4	5	3	1	2	2	5	23	
	5	0	0	0	0	0	0	0	0	0	
	6	0	0	0	0	0	0	1	0	1	
	TOTAL		13	25	20	16	12	42	33	27	188
3502	1	7	15	13	19	10	13	11	14	102	
	2	10	4	5	16	4	18	15	10	82	
	3	8	10	7	5	2	4	3	3	42	
	4	7	9	11	10	4	24	7	22	94	
	5	0	0	0	0	0	0	0	0	0	
	6	0	0	0	0	0	0	0	0	0	
	TOTAL		13	25	20	16	12	42	33	27	188
3503	1	13	21	19	11	9	20	22	10	125	
	2	6	9	10	31	4	18	25	15	118	
	3	3	12	7	11	3	7	15	12	70	
	4	1	5	5	15	0	11	12	6	55	
	5	1	6	7	5	2	14	6	9	50	
	6	5	22	8	6	6	10	11	16	84	
	TOTAL		14	20	20	18	9	16	16	22	135
3504	1	5	20	12	12	15	19	18	11	112	
	2	5	3	1	0	4	0	2	1	16	
	3	0	0	0	0	0	4	0	0	4	
	4	0	8	5	4	32	2	10	19	80	
	5	0	0	0	0	1	0	0	0	1	
	6	0	0	0	0	0	0	0	0	0	
	TOTAL		0	0	0	0	1	0	0	0	1

PROJECT NO.: 90831

INDIVIDUAL
MOTOR ACTIVITY COUNTS
FEMALES
WEEK 13
GROUP 1 AIR CONTROL

APPENDIX NO. 6

NO. OF BREAKS PER BEAM

ANIMAL NO.	INTERVAL	BEAM NO.								INTERVAL TOTAL	SESSION TOTAL
		1	2	3	4	5	6	7	8		
1505	1	14	28	25	18	10	29	21	27	172	
	2	7	14	17	22	3	17	26	20	126	
	3	10	19	15	11	9	18	11	15	108	
	4	0	1	3	3	2	5	2	1	17	
	5	0	0	0	0	0	0	0	0	0	
	6	0	9	3	3	2	5	5	4	31	
	TOTAL		6	28	26	17	11	38	36	19	181
1506	1	0	0	4	0	0	0	0	0	4	
	2	0	0	0	0	0	0	0	0	0	
	3	0	0	0	0	0	0	0	0	0	
	4	0	2	3	0	0	1	1	1	0	
	5	0	0	0	0	0	0	0	0	0	
	6	0	0	0	0	0	0	0	0	0	
	TOTAL		0	0	0	0	0	0	0	0	0
1507	1	4	24	17	13	7	20	16	12	113	
	2	2	2	2	3	3	6	9	6	33	
	3	0	0	0	0	0	0	0	0	0	
	4	0	11	3	2	3	3	2	7	31	
	5	0	0	0	0	0	0	0	0	0	
	6	0	0	0	0	0	0	0	0	0	
	TOTAL		4	24	17	13	7	20	16	12	113
1508	1	11	19	26	21	30	24	12	14	157	
	2	7	12	16	12	20	17	19	14	117	
	3	1	10	4	4	14	2	2	1	38	
	4	0	0	1	2	6	0	0	0	9	
	5	7	15	8	8	11	13	18	19	99	
	6	0	1	0	0	1	1	2	0	5	
	TOTAL		11	19	26	21	30	24	12	14	157



APPENDIX NO. 6
 INDIVIDUAL
 MOTOR ACTIVITY COUNTS
 FEMALES
 WEEK 13
 GROUP 1 AIR CONTROL

PROJECT NO.: 90831

NO. OF BREAKS PER BEAM

ANIMAL NO.	INTERVAL	BEAM NO.								INTERVAL TOTAL	SESSION TOTAL
		1	2	3	4	5	6	7	8		
1513	1	6	6	7	6	2	10	16	10	63	
	2	2	5	2	1	8	8	20	2	48	
	3	2	11	6	7	8	19	14	8	75	
	4	4	2	4	3	8	9	32	1	63	
	5	0	0	0	0	0	0	2	0	2	
	6	0	0	0	0	0	0	0	0	0	
	TOTAL		17	13	16	15	14	10	21	24	130
1514	1	11	7	9	8	9	16	24	20	104	
	2	5	8	6	9	17	8	10	14	77	
	3	5	12	11	2	7	4	4	3	48	
	4	7	3	4	6	24	1	1	4	50	
	5	16	5	0	0	1	2	5	5	34	
	TOTAL		44	35	40	35	68	41	48	66	443
1515	1	4	13	17	11	10	13	16	24	108	
	2	4	4	4	2	0	7	8	10	39	
	3	0	2	3	3	0	2	2	2	14	
	4	0	2	10	0	1	0	0	8	21	
	5	0	0	0	0	5	2	3	0	10	
	6	0	0	0	0	0	0	0	1	1	
TOTAL		8	22	34	16	16	22	27	44	193	193



PROJECT NO.: 90831

INDIVIDUAL
MOTOR ACTIVITY COUNTS
FEMALES
WEEK 13

APPENDIX NO. 6

GROUP 3 CERIC OXIDE INTERMEDIATE DOSE

NO. OF BREAKS PER BEAM

ANIMAL NO.	INTERVAL	BEAM NO.								INTERVAL TOTAL	SESSION TOTAL
		1	2	3	4	5	6	7	8		
3501	1	8	18	18	18	10	14	24	15	125	
	2	9	4	4	6	4	7	11	6	51	
	3	2	9	3	5	10	14	8	9	60	
	4	0	5	5	2	3	5	7	5	32	
	5	5	5	2	2	3	2	8	4	31	
	6	0	1	2	1	0	3	2	4	13	
	TOTAL		14	31	23	34	11	15	22	25	175
3502	1	24	22	17	8	8	13	14	11	117	
	2	2	13	4	15	13	5	2	0	54	
	3	1	1	3	2	4	5	2	7	25	
	4	0	0	0	0	0	0	0	0	0	
	5	0	0	0	0	0	0	0	0	0	
	6	0	0	0	0	0	0	0	0	0	
	TOTAL		26	36	24	25	25	23	26	28	206
3503	1	8	22	18	16	10	28	16	22	140	
	2	6	15	12	14	1	14	9	11	82	
	3	2	10	7	7	1	7	5	11	50	
	4	5	15	4	5	2	8	7	8	54	
	5	3	5	1	4	1	8	7	4	33	
	6	0	0	0	0	0	2	0	0	2	
	TOTAL		24	67	42	50	14	61	56	66	361
3504	1	12	20	18	16	13	31	31	19	160	
	2	13	16	14	16	19	17	17	15	127	
	3	7	8	7	11	28	13	20	12	106	
	4	2	2	9	3	14	4	5	2	41	
	5	19	1	4	7	1	2	19	1	54	
	6	23	9	2	3	0	4	3	8	52	
	TOTAL		76	76	65	63	85	83	88	64	540

APPENDIX NO. 6
 INDIVIDUAL
 MOTOR ACTIVITY COUNTS
 FEMALES
 WEEK 13
 GROUP 3 CERIC OXIDE INTERMEDIATE DOSE
 PROJECT NO.: 90831

ANIMAL NO.	INTERVAL	NO. OF BREAKS PER BEAM								INTERVAL TOTAL	SESSION TOTAL
		1	2	3	4	5	6	7	8		
3505	1	19	20	12	10	16	15	18	118		
	2	18	4	6	8	9	6	5	63		
	3	7	0	0	0	0	0	0	7		
	4	0	1	0	1	1	3	1	7		
	5	0	0	5	0	0	0	0	7		
	6	0	0	0	0	0	0	0	0		
	TOTAL		21	21	26	18	27	28	33	189	202
3506	1	5	10	13	1	9	12	17	69		
	2	3	10	8	3	8	20	5	57		
	3	0	0	2	0	0	0	1	10		
	4	5	0	0	0	0	0	0	0		
	5	0	0	0	0	0	0	0	0		
	6	0	0	0	0	0	0	0	0		
	TOTAL		15	21	26	18	27	28	33	189	325
3507	1	21	20	16	14	15	27	17	143		
	2	18	11	4	17	6	9	11	77		
	3	7	0	0	41	2	3	5	59		
	4	0	5	4	14	8	3	3	40		
	5	0	0	0	0	0	0	0	0		
	6	0	0	0	2	0	0	0	2		
	TOTAL		13	21	20	14	15	27	17	143	321
3508	1	13	15	12	24	9	7	10	100		
	2	7	2	5	15	4	6	25	69		
	3	4	1	1	14	1	2	1	26		
	4	0	0	0	0	0	0	0	0		
	5	0	0	0	0	0	0	0	0		
	6	9	9	4	14	6	5	5	55		
	TOTAL		10	13	15	24	9	7	10	100	250



APPENDIX NO. 6
 INDIVIDUAL
 MOTOR ACTIVITY COUNTS
 FEMALE
 WEEK 13
 GROUP 3 CERIC OXIDE INTERMEDIATE DOSE
 PROJECT NO.: 90831

ANIMAL NO.	INTERVAL	NO. OF BREAKS PER BEAM								INTERVAL TOTAL	SESSION TOTAL
		1	2	3	4	5	6	7	8		
3509	1	11	26	20	21	7	26	28	23	162	
	2	6	13	8	9	4	19	28	11	98	
	3	1	4	3	4	0	4	2	7	25	
	4	0	0	0	0	0	0	0	0	0	
	5	0	0	0	0	0	1	3	4	8	
	6	0	0	0	0	0	0	0	0	0	
	TOTAL		9	35	20	25	15	17	24	24	169
3510	1	10	19	8	14	11	13	19	14	108	
	2	9	10	8	7	27	19	17	14	111	
	3	3	24	7	12	6	8	8	11	79	
	4	1	1	0	2	1	1	1	7	14	
	5	3	9	9	6	10	6	5	25	73	
	6	15	27	11	16	23	26	19	18	155	
	TOTAL		13	12	12	18	28	13	11	13	120
3511	1	8	13	7	10	34	7	12	2	93	
	2	7	6	4	14	20	11	9	13	84	
	3	4	7	1	2	9	4	3	4	34	
	4	3	5	8	6	31	7	12	3	75	
	5	14	13	23	23	19	12	14	15	133	
	6	7	7	5	9	20	9	12	18	87	
	TOTAL		5	3	6	2	19	4	2	3	44
3513	1	0	1	2	2	12	0	0	0	17	
	2	0	0	0	0	5	0	0	0	5	
	3	0	0	0	0	5	0	0	0	5	
	4	2	1	2	2	4	2	0	1	15	
	5	2	0	0	0	5	0	0	0	15	
	6	2	1	2	3	4	2	2	1	15	
	TOTAL		2	1	2	2	4	2	2	1	15



PROJECT NO.: 90831

INDIVIDUAL
MOTOR ACTIVITY COUNTS
FEMALES

APPENDIX NO. 6

WEEK 13

GROUP 4 CERIC OXIDE HIGH DOSE

NO. OF BREAKS PER BEAM

ANIMAL NO.	INTERVAL	BEAM NO.								INTERVAL TOTAL	SESSION TOTAL
		1	2	3	4	5	6	7	8		
4514	1	9	24	16	23	16	17	19	32	156	
	2	18	19	11	15	16	5	8	26	118	
	3	7	8	10	11	15	6	14	16	87	
	4	5	11	8	10	26	3	8	6	77	
	5	6	8	13	10	15	3	0	9	64	
	6	11	3	2	2	10	4	9	30	71	573
TOTAL		6	20	22	16	9	12	18	30	133	
4515	1	2	22	11	7	7	16	13	20	98	
	2	4	14	10	11	3	22	7	4	75	
	3	0	13	7	2	9	11	9	3	54	
	4	0	0	0	0	5	0	0	0	5	
	5	0	0	0	0	1	0	0	0	1	
	6	0	0	0	0	0	0	0	0	0	366
TOTAL		10	16	14	16	17	16	21	22	132	
4516	1	22	10	14	7	9	12	12	18	104	
	2	8	0	0	0	0	1	5	4	18	
	3	1	0	0	0	1	1	15	1	19	
	4	0	0	0	0	0	0	0	0	0	
	5	2	1	2	2	4	3	5	4	23	
	6	2	1	2	2	4	3	5	4	23	296
TOTAL		22	10	14	7	9	12	12	18	104	

1. HEMATOLOGY LABORATORY

Red Blood Cell Count RBC

Coulter S-Plus-IV. Electrical resistance.
Unit: $\times 10^6/\text{mm}^3$.
Reference: Coulter operating manual, Oct. 1983.

Hemoglobin Hb

Coulter S-Plus-IV. Photometric method.
Unit: g/dL.
Reference: Coulter Operating Manual, Nov. 1983.

Hematocrit Ht

Coulter S-Plus-IV. Calculated.
Unit: %.
Reference: Coulter operating manual, Nov. 1983.

Erythrocyte Indices

Coulter S-Plus-IV. Calculated.
Reference: Coulter operating manual, Oct. 1983 and Nov. 1983.

Mean Corpuscular Volume MCV Unit: um^3 .

Mean Corpuscular Hemoglobin MCH Unit: pg.

Mean Corpuscular Hemoglobin Concentration MCHC Unit: g/dL.

Red Cell Size Distribution Width RDW Unit: %.

Platelet Count PLT

Coulter S-Plus-IV. Electrical resistance.
Unit: $\times 10^3/\text{mm}^3$.
Reference: Coulter operating manual, Oct. 1983.

Mean Platelet Volume MPV

Unit: um^3 .

White Blood Cell Count WBC

Coulter S-Plus-IV. Electrical resistance.
Unit: $\times 10^3/\text{mm}^3$.
Reference: Coulter operating manual, Oct. 1983.

1. HEMATOLOGY LABORATORY (CONT'D)

WBC Differential Stain

Hematek II automatic slide stainer. Modified Wright's stain.
Reference: Ames Hematek II stainer operating manual, 1978.

WBC Differential Count

Microscopic enumeration (100 white cells).
Unit: % OR Number (n/mm³) (absolute value)
References: Blood morphology of lab. animal, S. Schermer, 1967.
Veterinary Hematology, 4th edition. Schalm 1986.

WBC Differential Reported as Number or %

Segmented Neutrophils NEUT SEG
Band NEUT NSEG
Lymphocytes LYMPH
Monocytes MONO
Eosinophils EOSIN
Basophils BASO

Immature cells IMMC

Atypical Lymphocyte ALYMP
Metamyelocyte MMYEL
Myelocyte MYEL
Promyelocyte PMYEL
Blast BLAST
Promonocyte PMONO
Plasma Cell PCELL
Band Eosinophils BEOS

OTHERS - Reported as Number But Not Included in WBC Differential

Nucleated Red Blood Cells NRBC
Proerythroblast PROER
Basophilic Erythroblast BASER
Polychromatic Erythroblast POLER
Orthochromatic Erythroblast ORTER

1. HEMATOLOGY LABORATORY (CONT'D)

Cell Morphology

Microscopic examination. Evaluated simultaneously with the WBC differential count.

The following observations are reported as:

1+ (slight), 2+ (moderate), 3+ (moderate to marked) or
4+ (marked).

Polychromasia POLY	Drepanocyte (sickle cell)
Crenation CREN	DREP
Anisocytosis ANIS	Elliptocyte (ovalocyte) ELLP
Hypochromia HYPO	Keratocyte (horn cell) KERA
Hyperchromia HYPR	Leptocyte (thin cell) LEPT
Microcytosis MICR	Schizocyte (helmet cell) SCHZ
Macrocytosis MACR	Spherostomatocyte (spherocyte)
Poikilocytosis POIK	SPHR
Rouleau Formation ROUL	Stomatocyte (mouth cell) STOM
Agglutination AGGL	Cabot Rings CABT
Acanthocyte (spur cell) ACAN	Howell Jolly Bodies HJB
Codocyte (target cell) CODO	Basophilic Stippling BSTIP
Dacryocyte (tear cell) DACR	

Hypersegmentation HYSG
 Toxic Granulations TOXG
 Vacuoles VAC
 Döhle Bodies DOHL

Azurophilic Granulations AZUR
 Giant Neutrophils GNEU
 Pelger Huet Anomaly PHA

References:

- Morphology of canine and feline blood cells, Rich, 1976.
- Atlas of cell morphology, Barbara, 1984.
- Blood morphology, S. Schermer, 1967.
- Vet. Hematology, Schalm's, 1986.

Reported as Presence of

Heinz Bodies HEINZB
 Plasmodium (Trophozoite Stage) PLST
 Plasmodium (Schizont Stage) PLSS
 Megakaryocytes MEGA
 Giant Platelet GPLT
 Degenerated Cell DGENC

1. HEMATOLOGY LABORATORY (CONT'D)

Megakaryocyte MEGAK
Kurloff Cell KURL
Monocyte with Erythrophagocytosis EPHAG
Cellular Anaplasia CANAP

Prothrombin Time PT

MLA Electra 750. Photometric method of endpoint detection.

Unit: seconds.

Reference: MLA operator's manual, 1977.

Bone Marrow Stain

Manual. May-Grünwald-Giemsa stain.

or Hematek II stainer. Modified Wright's stain.

References: Medical lab. Tech-Lynch, 1967, page 644. Ames

Hematek II stainer operating manual, 1978.

2. CLINICAL CHEMISTRY LABORATORY

Alanine Aminotransferase/ALT: Adapted for H-717.

Units: U/L. IFCC/SFBC method.

Reference: BMC, package insert, Hico ALT, Dec. 1987.

Aspartate Aminotransferase/AST/GOT: Adapted for H-717.

Units: U/L. IFCC/SFBC method.

Reference: BMC, package insert, Hico AST, Dec. 1987.

Albumin/ALB: Adapted for H-717.

Units: g/dL. Bromcresol-green method.

Reference; BMC, package insert, Albumin, Nov. 1987.

Albumin/globulin or A/G Ratio: Calculated.

Alkaline Phosphatase/ALP: Adapted for H-717.

Units: U/L. PNPP - AMP buffer method.

Reference: BMC, package insert, Alkaline Phosphatase, AMP Buffer, Oct. 1988.

Alkaline Phosphatase isoenzymes: Electrophoresis.

Units: % and U/L

Reference: Beckman Isopal, package insert, February 1991.

Calcium/CA: Adapted for H-717.

Units: mg/dL.

Ca-cresolphthalein complexone.

Reference: BMC, package insert, Calcium Gaba, 1989.

Cholesterol/CHOL: Adapted for H-717.

Units: mg/dL. CHOD-PAP enzymatic colorimetric method.

Reference: BMC, package insert, Cholesterol Chod - PAP method, June 1987.

Creatinine/CREAT (Serum): Adapted for H-717.

Units: mg/dL. Jaffe kinetic method.

Reference: BMC, package insert, Hico creatinine, Dec. 1987.

Globulin/C1/GLOB: Calculated. Total serum protein - serum albumin = serum globulin.

Units: g/dL.

Glucose/GLU: Adapted for H-717.

Units: mg/dL. Hexokinase method.

Reference: BMC, package insert, Gluco - Quant Glucose, March 1988.

Phosphorus/PHOS (serum or urine): Adapted for H-717.

Units: mg/dL. Phosphomolybdate complex measured at 340 nm.

Reference: BMC, package insert, Inorganic Phosphorous, Oct. 1987.

2. CLINICAL CHEMISTRY LABORATORY (CONT'D)

Sodium/Na, Potassium/K, Chloride/Cl: (Serum) Ion selective electrode module of H-717. Indirect measurement.

Units: mEq/L.

Reference: Operator's manual, March 1988.

Total Bilirubin/T. BIL: Adapted for H-717.

Units: mg/dL. DPD method.

Reference: BMC, package insert, Hico Bilirubin, Aug. 1988.

Total Protein/TP: Adapted for H-717.

Units: g/dL. Biuret method.

Reference: BMC package insert, Hico Total protein, Dec. 1987.

Triglycerides/TRIG: Adapted for H-717.

Units: mg/dL. GPO-PAP enzymatic colorimetric method.

Reference: BMC, package insert, Triglycerides GPO-PAP, Dec. 1987.

Urea Nitrogen/BUN: Adapted for H-717. Urease method. Results reported as mg/dL of blood urea nitrogen.

Reference: BMC, package insert, Urea, Dec. 1987.

3. URINALYSIS3.1 Test for pH, Protein, Glucose, Bilirubin, Ketone, Blood, Nitrite, Urobilinogen and Specific Gravity in Urine

N-Multistix S.G. reagent strip system using CLINITEK 200 Urine Chemistry Analyzer. Reflectance spectrophotometer. References: Clinitek operating manual, 1985. Ames, package insert, Ames reagent strips, AD0021.

Test values measured and reported (S.I. Units)

Protein PROT

Reported as: negative (-)
trace (±) (0.15 g/L approximate)
0.3 g/L
1.0 g/L
≥ 3.0 g/L

Glucose GLU

Reported as: negative (-)
5.5 mmol/L
14.0 mmol/L
28.0 mmol/L
≥ 55.0 mmol/L

Ketone KET

Reported as: negative (-)
trace (±) (0.5 mmol/L approximate)
1.5 mmol/L
3.9 mmol/L
7.8 mmol/L

Bilirubin BIL

Reported as: negative (-)
trace (±)
small (+)
moderate (++)
large (+++)

Blood

Reported as: negative (-)
trace (±)
small (+)
moderate (++)
large (+++)

3. URINALYSIS (CONT'D)pH

Reported as: 5.0
5.5
6.0
6.5
7.0
7.5
8.0
8.5
≥ 9.0

Nitrite NIT

Reported as: negative (-)
positive (+)

Urobilinogen UBG

Reported as: 3.2 umol/L
16.0 umol/L
33.0 umol/L
66.0 umol/L
131.0 umol/L

Specific Gravity

Reported as: ≤ 1.005*
1.010
1.015
1.020
1.025
≥ 1.030*

3.2 Urinalysis - Gross Analysis (Manual, Visual Method)Color

Y = Yellow
Br = Brown
Gr = Green
R = Red
A = Amber

Lt = Light
D = Dark
Co = Colorless

Volume

Manual. Unit: mL.

* ≤ 1.005 or ≥ 1.030 will be determined by using the Refractometer.

3. URINALYSIS (CONT'D)

Appearance APPEAR

C = Clear
Cl = Cloudy
T = Turbid

3.3 Urinalysis - Sediment Microscopy (Microscopic Examination)

3.3.1 Organized Sediments - Cells

White Blood Cell WBC

Reported in number/HPF (high power field).

Red Blood Cell RBC

Reported in number/HPF (high power field).

Epithelial Cell EPC

Reported in number/HPF (high power field)

3.3.2 Organized Sediments - Mucous

Reported as: negative (-)/High power field (HPF)
slight or few (+)
moderate (++)
large (+++)
very large (++++)

3.3.3 Organized Sediments - Bacteria

Reported as: negative (-)/High power field (HPF)
slight or few (+)
moderate (++)
large (+++)
very large (++++)

3.3.4 Organized Sediments - Misc.

Reported as: negative (-)/High power field (HPF)
slight or few (+) (1-10/HPF)
moderate (++) (11-30/HPF)
large (+++) (31-50/HPF)
very large (++++) (+51/HPF)

S = Spermatozoa
Y = Yeast
Pr = Protozoa
PO = Parasite Ova

3. URINALYSIS (CONT'D)

The following are reported as presence:

P = Pus

The following are reported in number (high power field):

Tr = Trichomonas
FB = Fat Bodies

Casts - The following are reported in number/LPF (low power field)

H: Hyaline	Er: Erythrocyte
G: Granular	Wa: Waxy
Ep: Epithelial	Fa: Fatty
L: Leukocyte	Ce: Cellular

3.3.5 Unorganized Sediments - Crystals

Reported as: negative	(-)/High power field (HPF)
slight or few	(+) (1-10/HPF)
moderate	(++) (11-30/HPF)
large	(+++) (31-50/HPF)
very large	(++++) (+51/HPF)

Phosphate PHOS

TP = Triple phosphate
AP = Amorphous phosphate

Urate

AU = Amorphous urate
AmU = Ammonium urate

Oxalate

CO = Calcium oxalate

Other Crystals

CC = Calcium carbonate	LC = Leucine crystal
CS = Calcium sulphate	BC = Bilirubin crystal
TC = Tyrosine crystal	CyC = Cystine crystal
HA = Hippuric acid	

Uric Acid

UA = Uric acid

3. URINALYSIS (CONT'D)

Unidentified Crystals

- 1C = Irregular crystals
- 2C = Rectangular crystals
- 3C = Irregular crystals covered with
spicules
- 4C = Rosette and needle-like crystals
- 5C = Sharp needles polarizing crystals

APPENDIX NO. 8

PROJECT NO. 90831

INDIVIDUAL HEMOGRAMS
MALES AND FEMALES

The following footnotes have been used throughout the appendix:

Ct	Clotted
Ns	No sample
NSQ	Not sufficient quantity



APPENDIX NO. 8

INDIVIDUAL HEMOGRAMS

PROJECT NO : 90831

HEALTH SCREEN - MALES

WBC DIFFERENTIAL COUNT

ANIMAL NO.	WBC X10 ³	NEUT SEG %	NEUT NSEG %	LYMPH %	MONO %	EOSIN %	BASO %
5001	5.5	18.0	0.0	80.0	1.0	1.0	0.0
5002	7.4	20.0	0.0	80.0	0.0	0.0	0.0
5003	3.2	18.0	0.0	80.0	2.0	0.0	0.0
5004	5.2	18.0	0.0	81.0	0.0	1.0	0.0
5005	8.9	7.0	0.0	92.0	0.0	1.0	0.0
5006	6.0	14.0	0.0	82.0	2.0	2.0	0.0
5007	3.7	18.0	0.0	81.0	0.0	1.0	0.0
5008	4.6	33.0	0.0	66.0	1.0	0.0	0.0
5009	4.9	13.0	0.0	86.0	1.0	0.0	0.0
5010	8.1	13.0	0.0	86.0	1.0	0.0	0.0



PROJECT NO : 90831

INDIVIDUAL HEMOGRAMS

APPENDIX NO. 8

HEALTH SCREEN - MALES

WBC DIFFERENTIAL COUNT (ABSOLUTE)

ANIMAL NO.	NEUT SEG	NEUT NSEG	LYMPH	MONO	EOSIN	BASO
5001	990.0	0.0	4400.0	55.0	55.0	0.0
5002	1480.0	0.0	5920.0	0.0	0.0	0.0
5003	576.0	0.0	2560.0	64.0	0.0	0.0
5004	936.0	0.0	4212.0	0.0	52.0	0.0
5005	623.0	0.0	8188.0	0.0	89.0	0.0
5006	840.0	0.0	4920.0	120.0	120.0	0.0
5007	666.0	0.0	2997.0	0.0	37.0	0.0
5008	1518.0	0.0	3036.0	46.0	0.0	0.0
5009	637.0	0.0	4214.0	49.0	0.0	0.0
5010	1053.0	0.0	6966.0	81.0	0.0	0.0



PROJECT NO : 90831

INDIVIDUAL HEMOGRAMS

APPENDIX NO. 8

HEALTH SCREEN - MALES

ANIMAL NO.	RBC ₆ X10 ⁶	Hb G/DL	Ht %	MCV UM ³	MCH PG	MCHC G/DL	RDW %
5001	6.31	12.5	37.0	59.7	19.8	33.7	12.8
5002	5.86	12.2	35.8	61.1	20.8	34.1	13.5
5003	6.03	12.5	36.8	61.0	20.7	34.0	12.9
5004	6.28	12.9	37.7	60.1	20.5	34.2	13.2
5005	6.12	12.8	37.7	61.6	20.9	34.0	14.2
5006	5.72	12.1	35.5	62.0	21.2	34.1	13.2
5007	6.53	13.3	37.4	57.3	20.4	35.5	12.5
5008	6.22	13.1	37.3	60.0	21.1	35.1	14.2
5009	6.06	13.0	36.2	59.8	21.5	35.9	14.5
5010	6.10	13.0	37.6	61.6	21.3	34.6	13.1

GROUP 5 - HEALTH SCREEN

NO

PROJECT NO : 90831

INDIVIDUAL HEMOGRAMS

APPENDIX NO. 8

HEALTH SCREEN - MALES

ANIMAL NO.	PLT ₃ X10 ³	MPV ₃ UM ³	PT SEC.
5001	1037.0	8.5	13.9
5002	1059.0	8.5	14.0
5003	1031.0	7.9	13.5
5004	1130.0	8.5	14.3
5005	885.0	8.2	14.6
5006	942.0	8.8	14.2
5007	925.0	8.0	14.1
5008	891.0	8.2	14.2
5009	930.0	8.9	13.6
5010	866.0	7.7	14.7

GROUP 5 - HEALTH SCREEN



PROJECT NO. 90831

INDIVIDUAL HEMOGRAMS
BLOOD CELL MORPHOLOGY
HEALTH SCREEN
MALES

APPENDIX NO. 8

ANIMAL NO.	CREN	POLY	HYP0	ANIS	POIK	CODO	HJB	BSTIP	COMMENTS
5001	-	1+	-	-	-	-	-	-	-
5002	-	1+	-	1+	-	-	-	-	-
5003	-	1+	-	1+	-	-	-	-	-
5004	-	1+	-	1+	-	-	-	-	-
5005	-	1+	-	-	-	-	-	-	-
5006	-	1+	-	1+	-	-	-	-	-
5007	1+	1+	-	-	-	-	-	-	-
5008	1+	1+	-	-	-	-	-	-	-
5009	-	2+	-	1+	-	-	-	-	-
5010	1+	1+	-	-	-	-	-	-	-





PROJECT NO : 90831

INDIVIDUAL HEMOGRAMS

APPENDIX NO. 8

HEALTH SCREEN - FEMALES

WBC DIFFERENTIAL COUNT

ANIMAL NO.	WBC X10 ³	NEUT SEG %	NEUT NSEG %	LYMPH %	MONO %	EOSIN %	BASO %
5501	4.0	11.0	0.0	89.0	0.0	0.0	0.0
5502	4.2	5.0	0.0	95.0	0.0	0.0	0.0
5503	4.5	6.0	0.0	94.0	0.0	0.0	0.0
5504	3.6	5.0	0.0	94.0	0.0	1.0	0.0
5505	4.4	3.0	0.0	97.0	0.0	0.0	0.0
5506	6.7	4.0	0.0	96.0	0.0	0.0	0.0
5507	3.9	5.0	0.0	95.0	0.0	0.0	0.0
5508	9.8	3.0	0.0	94.0	3.0	0.0	0.0
5509	3.6	3.0	0.0	96.0	0.0	1.0	0.0
5510	3.6	8.0	0.0	92.0	0.0	0.0	0.0



PROJECT NO : 90831

INDIVIDUAL HEMOGRAMS

APPENDIX NO. 8

HEALTH SCREEN - FEMALES

ANIMAL NO.	NEUT SEG	NEUT NSEG	WBC DIFFERENTIAL COUNT (ABSOLUTE)				BASO
			LYMPH	MONO	EOSIN		
GROUP 5 - HEALTH SCREEN							
5501	440.0	0.0	3560.0	0.0	0.0	0.0	0.0
5502	210.0	0.0	3990.0	0.0	0.0	0.0	0.0
5503	270.0	0.0	4230.0	0.0	0.0	0.0	0.0
5504	180.0	0.0	3384.0	0.0	36.0	0.0	0.0
5505	132.0	0.0	4268.0	0.0	0.0	0.0	0.0
5506	268.0	0.0	6432.0	0.0	0.0	0.0	0.0
5507	195.0	0.0	3705.0	0.0	0.0	0.0	0.0
5508	294.0	0.0	9212.0	294.0	0.0	0.0	0.0
5509	108.0	0.0	3456.0	0.0	36.0	0.0	0.0
5510	288.0	0.0	3312.0	0.0	0.0	0.0	0.0

APPENDIX NO. 8

INDIVIDUAL HEMOGRAMS

PROJECT NO : 90831

HEALTH SCREEN - FEMALES

ANIMAL NO.	RBC ⁶ X10 ⁶	Hb G/DL	Ht %	MCV UM	MCH PG	MCHC G/DL	RDW %
5501	4.77	10.7	30.1	63.2	22.4	35.5	15.0
5502	5.63	11.3	33.0	58.6	20.1	34.3	16.1
5503	5.28	11.0	31.8	60.3	20.8	34.5	17.1
5504	5.55	11.5	33.4	60.2	20.7	34.4	16.2
5505	5.22	11.7	34.0	65.2	22.4	34.4	17.3
5506	5.19	11.8	33.8	65.2	22.7	34.9	13.7
5507	4.88	11.3	32.2	65.9	23.2	35.1	13.3
5508	5.28	11.7	34.3	65.0	22.2	34.1	16.1
5509	5.63	12.2	35.1	62.4	21.7	34.7	15.7
5510	5.39	11.8	34.4	63.9	21.9	34.3	15.6

GROUP 5 - HEALTH SCREEN



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INDIVIDUAL HEMOGRAMS

HEALTH SCREEN - FEMALES

APPENDIX NO. 8

ANIMAL NO.	PLT ₃ X10 ³	MPV ₃ UM ³	PT SEC.
5501	1186.0	7.8	13.7
5502	865.0	8.3	14.1
5503	976.0	8.3	12.9
5504	1134.0	8.4	14.3
5505	925.0	8.7	13.4
5506	1038.0	8.6	15.3
5507	1011.0	8.1	14.4
5508	1042.0	8.6	12.4
5509	1033.0	8.9	13.9
5510	916.0	8.7	13.8

GROUP 5 - HEALTH SCREEN



PROJECT NO. 90831

INDIVIDUAL HEMOGRAMS
BLOOD CELL MORPHOLOGY
HEALTH SCREEN
FEMALES

APPENDIX NO. 8

ANIMAL NO.	CREN	POLY	HYPO	ANTS	POIK	CODO	HJIB	BSTIP	COMMENTS
5501	1+	1+	-	1+	-	-	-	-	-
5502	-	2+	-	1+	-	-	-	-	-
5503	1+	2+	-	-	-	-	-	-	-
5504	-	2+	-	1+	-	-	-	-	-
5505	1+	2+	-	-	-	-	-	-	-
5506	1+	2+	-	-	-	-	-	-	-
5507	1+	2+	-	-	-	-	-	-	-
5508	1+	2+	-	-	-	-	-	-	-
5509	-	2+	-	-	-	-	-	-	NRBC 2
5510	-	2+	-	1+	-	-	-	-	-





PROJECT NO : 90831

INDIVIDUAL HEMOGRAMS

WEEK 6 - MALES

WBC DIFFERENTIAL COUNT

ANIMAL NO.	WBC X10 ³	NEUT SEG %	NEUT NSEG %	LYMPH %	MONO %	EOSIN %	BASO %
GROUP 1 - AIR CONTROL							
1001	8.1	10.0	0.0	90.0	0.0	0.0	0.0
1002	11.2	10.0	0.0	88.0	2.0	0.0	0.0
1005	13.7	11.0	0.0	85.0	3.0	1.0	0.0
1006	10.1	7.0	0.0	92.0	1.0	0.0	0.0
1007	17.4	4.0	0.0	93.0	3.0	0.0	0.0
1008	10.8	7.0	0.0	92.0	1.0	0.0	0.0
1009	12.3	8.0	0.0	89.0	2.0	1.0	0.0
1010	21.3	34.0	0.0	63.0	3.0	0.0	0.0
1011	9.2	8.0	0.0	87.0	4.0	1.0	0.0
1012	9.2	9.0	0.0	87.0	3.0	1.0	0.0
1013	12.2	9.0	0.0	87.0	4.0	0.0	0.0
1014	7.2	10.0	0.0	87.0	3.0	0.0	0.0
1015	10.5	5.0	0.0	90.0	3.0	2.0	0.0
1016	11.9	19.0	0.0	80.0	1.0	0.0	0.0
1017	14.7	18.0	0.0	71.0	3.0	8.0	0.0

PROJECT NO : 90831

INDIVIDUAL HEMOGRAMS

APPENDIX NO. 8

WEEK 6 - MALES

ANIMAL NO.	NEUT SEG	NEUT NSEG	WBC DIFFERENTIAL COUNT (ABSOLUTE)			
			LYMPH	MONO	EOSIN	BASO
GROUP 1 - AIR CONTROL						
1001	810.0	0.0	7290.0	0.0	0.0	0.0
1002	1120.0	0.0	9856.0	224.0	0.0	0.0
1005	1507.0	0.0	11645.0	411.0	137.0	0.0
1006	707.0	0.0	9292.0	101.0	0.0	0.0
1007	696.0	0.0	16182.0	522.0	0.0	0.0
1008	756.0	0.0	9936.0	108.0	0.0	0.0
1009	984.0	0.0	10947.0	246.0	123.0	0.0
1010	7242.0	0.0	13419.0	639.0	0.0	0.0
1011	736.0	0.0	8004.0	368.0	92.0	0.0
1012	828.0	0.0	8004.0	276.0	92.0	0.0
1013	1098.0	0.0	10614.0	488.0	0.0	0.0
1014	720.0	0.0	6264.0	216.0	0.0	0.0
1015	525.0	0.0	9450.0	315.0	210.0	0.0
1016	2261.0	0.0	9520.0	119.0	0.0	0.0
1017	2646.0	0.0	10437.0	441.0	1176.0	0.0



APPENDIX NO. 8

INDIVIDUAL HEMOGRAMS

PROJECT NO : 90831

WEEK 6 - MALES

GROUP 1 - AIR CONTROL

ANIMAL NO.	RBC X10 ⁶	Hb G/DL	Ht %	MCV ₃ UM	MCH PG	MCHC G/DL	RDW %
1001	8.55	16.1	47.0	55.0	18.8	34.2	12.1
1002	7.90	15.4	42.5	53.8	19.5	36.2	11.9
1005	7.62	16.0	43.0	56.4	21.0	37.2	12.2
1006	7.91	15.7	42.0	53.1	19.8	37.4	13.1
1007	7.92	15.8	43.8	55.3	19.9	36.1	12.2
1008	5.48	15.4	29.3	53.4	28.1	52.6	11.8
1009	7.81	15.2	41.7	53.4	19.5	36.4	13.0
1010	7.28	14.9	40.1	55.1	20.5	37.1	13.1
1011	8.23	15.1	42.2	51.3	18.3	35.8	12.0
1012	7.77	15.6	43.2	55.6	20.1	36.1	13.2
1013	7.72	16.3	43.8	56.7	21.1	37.2	12.6
1014	8.64	16.2	45.2	52.3	18.8	35.9	13.0
1015	7.48	16.1	42.8	57.2	21.5	37.6	13.2
1016	7.94	16.2	43.4	54.6	20.4	37.4	12.8
1017	8.11	16.4	44.1	54.4	20.2	37.2	13.1



PROJECT NO : 90831

INDIVIDUAL HEMOGRAMS

APPENDIX NO. 8

WEEK 6 - MALES

ANIMAL NO.	PLT ³ X10 ³	MPV UM ³	PT SEC.
1001	892.0	8.4	14.0
1002	710.0	8.4	14.4
1005	914.0	8.6	13.5
1006	916.0	9.1	15.5
1007	811.0	9.0	13.8
1008	1001.0	8.9	14.2
1009	988.0	10.0	16.1
1010	941.0	9.6	Ct
1011	903.0	8.8	14.0
1012	913.0	9.2	14.7
1013	866.0	8.2	13.9
1014	893.0	8.8	14.9
1015	936.0	9.1	13.8
1016	930.0	8.6	14.7
1017	893.0	8.6	14.0

GROUP 1 - AIR CONTROL



PROJECT NO. 90831

INDIVIDUAL HEMOGRAMS
BLOOD CELL MORPHOLOGY
WEEK 6
MALES

APPENDIX NO. 8

GROUP 1 - AIR CONTROL

ANIMAL NO.	CREN	POLY	HYPO	ANIS	POIK	CODO	HJIB	BSTIP	COMMENTS
1001	2+	1+	-	-	-	-	-	-	NRBC 4
1002	4+	1+	-	-	-	-	-	-	-
1005	4+	1+	-	1+	-	-	-	-	NRBC 2
1006	4+	1+	-	1+	-	-	-	-	NRBC 1
1007	3+	1+	-	-	-	-	-	-	-
1008	4+	1+	-	1+	-	-	-	-	NRBC 2
1009	4+	1+	-	1+	-	-	-	-	NRBC 1
1010	4+	1+	-	1+	-	-	-	-	-
1011	3+	1+	-	-	-	-	-	-	NRBC 1
1012	3+	1+	-	1+	-	-	-	-	-
1013	4+	1+	-	1+	-	-	-	-	-
1014	3+	1+	-	1+	-	-	-	-	-
1015	3+	1+	-	1+	-	-	-	-	-
1016	4+	2+	-	1+	-	-	-	-	NRBC 1
1017	4+	1+	-	1+	-	-	-	-	-



PROJECT NO : 90831

INDIVIDUAL HEMOGRAMS

APPENDIX NO. 8

WEEK 6 - MALES

WBC DIFFERENTIAL COUNT

ANIMAL NO.	WBC X10 ³	NEUT		LYMPH		MONO		EOSIN		BASO	
		SEG %	NSEG %	%	%	%	%	%	%	%	%
2001	16.0	14.0	0.0	83.0	2.0	1.0	0.0	0.0	0.0	0.0	0.0
2002	16.9	6.0	0.0	92.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0
2003 Ct											
2004 NS											
2005	9.3	8.0	0.0	88.0	1.0	3.0	0.0	0.0	0.0	0.0	0.0
2006	10.7	11.0	0.0	87.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0
2007	14.6	12.0	0.0	86.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0
2008	9.4	11.0	0.0	89.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2009	11.7	8.0	0.0	88.0	2.0	2.0	0.0	0.0	0.0	0.0	0.0
2010	8.8	11.0	0.0	87.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0
2011	7.8	14.0	0.0	82.0	2.0	2.0	0.0	0.0	0.0	0.0	0.0
2012	11.0	5.0	0.0	93.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0
2013	10.7	21.0	0.0	77.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0
2015	11.2	26.0	0.0	70.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0
2016	13.7	15.0	0.0	78.0	4.0	3.0	0.0	0.0	0.0	0.0	0.0



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INDIVIDUAL HEMOGRAMS

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WEEK 6 - MALES

WBC DIFFERENTIAL COUNT (ABSOLUTE)

ANIMAL NO.	NEUT SEG	NEUT NSEG	LYMPH	MONO	EOSIN	BASO
2001	2240.0	0.0	13280.0	320.0	160.0	0.0
2002	1014.0	0.0	15548.0	338.0	0.0	0.0
2003	Ct					
2004	Ns					
2005	744.0	0.0	8184.0	93.0	279.0	0.0
2006	1177.0	0.0	9309.0	214.0	0.0	0.0
2007	1752.0	0.0	12556.0	292.0	0.0	0.0
2008	1034.0	0.0	8366.0	0.0	0.0	0.0
2009	936.0	0.0	10296.0	234.0	234.0	0.0
2010	968.0	0.0	7656.0	88.0	88.0	0.0
2011	1092.0	0.0	6396.0	156.0	156.0	0.0
2012	550.0	0.0	10230.0	220.0	0.0	0.0
2013	2247.0	0.0	8239.0	214.0	0.0	0.0
2015	2912.0	0.0	7840.0	448.0	0.0	0.0
2016	2055.0	0.0	10686.0	548.0	411.0	0.0

GROUP 2 - CERIC OXIDE
LOW DOSE



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INDIVIDUAL HEMOGRAMS

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WEEK 6 - MALES

GROUP 2 - CERIC OXIDE
LOW DOSE

ANIMAL NO.	RBC 6 X10	Hb G/DL	Ht %	MCU UM 3	MCH PG	MCHC G/DL	RDW %
2001	8.05	16.4	44.9	55.8	20.4	36.5	12.1
2002	8.14	16.3	43.8	53.8	20.0	37.2	13.3
2003ct							
2004Ns							
2005	8.39	16.9	48.0	57.2	20.1	35.2	11.9
2006	7.60	14.2	42.0	55.2	18.7	33.8	11.6
2007	7.54	16.0	43.6	57.8	21.2	36.7	11.8
2008	8.02	16.5	44.8	55.9	20.6	36.8	12.0
2009	7.74	15.4	41.5	53.6	19.9	37.1	12.9
2010	7.51	14.6	40.1	53.4	19.4	36.4	12.6
2011	8.01	16.3	44.5	55.6	20.3	36.6	11.9
2012	7.63	15.5	42.1	55.2	20.3	36.8	12.8
2013	8.02	15.9	42.6	53.1	19.8	37.3	12.3
2015	7.75	14.6	40.4	52.1	18.8	36.2	12.5
2016	7.94	16.1	44.1	55.6	20.3	36.5	12.5



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WEEK 6 - MALES

ANIMAL NO.	PLT X10 ³	MPV ₃ UM ³	PT SEC.
GROUP 2 - CERIC OXIDE			
LOW DOSE			
2001	949.0	9.2	13.9
2002	988.0	9.2	13.5
2003Ct			12.9
2004NS			15.3
2005	816.0	9.3	14.4
2006	858.0	10.3	14.2
2007	973.0	8.1	14.0
2008	898.0	8.9	15.1
2009	985.0	9.7	Ct
2010	875.0	9.6	13.3
2011	775.0	8.9	15.6
2012	1187.0	8.4	14.3
2013	896.0	8.6	14.5
2015	917.0	9.1	13.7
2016	756.0	9.0	Ct

WEEK 6 - MALES

WBC DIFFERENTIAL COUNT

ANIMAL NO.	WBC X10 ³	NEUT SEG %	NEUT NSEG %	LYMPH %	MONO %	EOSIN %	BASO %
GROUP 3 - CERIC OXIDE							
INTERMEDIATE DOSE							
3001	15.4	18.0	0.0	77.0	4.0	1.0	0.0
3002 Ct							
3003	12.2	8.0	0.0	87.0	5.0	0.0	0.0
3004	18.3	11.0	0.0	86.0	2.0	1.0	0.0
3005 Ct							
3006 Ct							
3007 Ct							
3008	13.0	26.0	0.0	72.0	2.0	0.0	0.0
3009 Ct							
3011 NSQ		18.0	0.0	80.0	1.0	1.0	0.0
3012	14.7	21.0	0.0	73.0	6.0	0.0	0.0
3013 Ct							
3014	16.3	23.0	0.0	73.0	2.0	2.0	0.0
3015	14.0	17.0	0.0	83.0	0.0	0.0	0.0
3016	12.5	17.0	0.0	80.0	3.0	0.0	0.0



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INDIVIDUAL HEMOGRAMS

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WEEK 6 - MALES

WBC DIFFERENTIAL COUNT (ABSOLUTE)

ANIMAL NO.	NEUT SEG	NEUT NSEG	LYMPH	MONO	EOSIN	BASO
3001	2772.0	0.0	11858.0	616.0	154.0	0.0
3002Ct						
3003	976.0	0.0	10614.0	610.0	0.0	0.0
3004	2013.0	0.0	15738.0	366.0	183.0	0.0
3005Ct						
3006Ct						
3007Ct						
3008	3380.0	0.0	9360.0	260.0	0.0	0.0
3009Ct						
3011NSQ						
3012	3087.0	0.0	10731.0	882.0	0.0	0.0
3013Ct						
3014	3749.0	0.0	11899.0	326.0	326.0	0.0
3015	2380.0	0.0	11620.0	0.0	0.0	0.0
3016	2125.0	0.0	10000.0	375.0	0.0	0.0

GROUP 3 - CERIC OXIDE INTERMEDIATE DOSE

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INDIVIDUAL HEMOGRAMS

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WEEK 6 - MALES

ANIMAL NO.	RBC X10 ⁶	Hb G/DL	Ht %	MCV UM ³	MCH PG	MCHC G/DL	RDW %
GROUP 3 - CERIC OXIDE INTERMEDIATE DOSE							
3001	7.97	15.7	43.0	53.9	19.7	36.5	12.0
3002Ct							
3003	7.54	15.8	42.8	56.7	21.0	37.0	11.7
3004	8.21	16.3	46.2	56.3	19.9	35.3	12.4
3005Ct							
3006Ct							
3007Ct							
3008	8.12	15.6	42.3	52.1	19.2	36.9	12.4
3009Ct							
3011NSQ							
3012	8.09	15.8	44.0	54.4	19.5	35.9	12.2
3013Ct							
3014	8.19	15.9	44.3	54.1	19.4	35.9	12.9
3015	7.79	15.3	42.8	54.9	19.6	35.8	11.9
3016	7.74	16.1	43.0	55.5	20.8	37.5	12.8

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INDIVIDUAL HEMOGRAMS

WEEK 6 - MALES

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ANIMAL NO.	PLT X10 ³	MPV UM ³	PT SEC.
3001	876.0	8.8	14.7
3002 Ct			14.2
3003	791.0	9.0	13.9
3004	761.0	8.5	NSQ
3005 Ct			16.1
3006 Ct			14.0
3007 Ct			
3008	871.0	9.1	14.0
3009 Ct			13.9
3011 NSQ			
3012	964.0	8.5	14.0
3013 Ct			
3014	870.0	8.8	Ct
3015	967.0	8.7	14.9
3016	866.0	10.5	14.8

GROUP 3 - CERIC OXIDE INTERMEDIATE DOSE

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INDIVIDUAL HEMOGRAMS
BLOOD CELL MORPHOLOGY
WEEK 6
MALES

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GROUP 3 - CERIC OXIDE INTERMEDIATE DOSE

ANIMAL NO.	CREN	POLY	HYPO	ANIS	POIK	ODO	HJB	BSTIP	COMMENTS
3001	3+	1+	-	-	-	-	-	-	NRBC 1
3002 Ct									
3003	4+	1+	-	1+	-	-	-	-	-
3004	2+	1+	-	-	1+	1+	-	-	NRBC 1
3005 Ct									
3006 Ct									
3007 Ct									
3008	3+	1+	-	1+	-	-	-	-	NRBC 1
3009 Ct									
3011	4+	1+	-	1+	-	-	-	-	NRBC 2
3012	3+	1+	-	-	-	-	-	-	-
3013 Ct									
3014	3+	1+	-	-	-	-	-	-	-
3015	3+	1+	-	-	-	-	-	-	-
3016	4+	1+	-	1+	-	-	-	-	-

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INDIVIDUAL HEMOGRAMS

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WEEK 6 - MALES

WBC DIFFERENTIAL COUNT

ANIMAL NO.	WBC X10 ³	NEUT SEG %	NEUT NSEG %	LYMPH %	MONO %	EOSIN %	BASO %
GROUP 4 - CERIC OXIDE							
4001 Ct	9.3	20.0	0.0	77.0	2.0	1.0	0.0
4002	12.2	26.0	0.0	70.0	4.0	0.0	0.0
4003							
4004 Ct							
4005 Ct	6.7	22.0	0.0	73.0	5.0	0.0	0.0
4006	14.7	17.0	0.0	80.0	3.0	0.0	0.0
4007	17.8	31.0	0.0	63.0	5.0	1.0	0.0
4008	13.1	19.0	0.0	79.0	2.0	0.0	0.0
4009	10.8	35.0	0.0	64.0	0.0	1.0	0.0
4010	20.4	14.0	0.0	82.0	4.0	0.0	0.0
4011 Ct							
4012 Ct							
4014 Ns	14.9	27.0	0.0	69.0	3.0	1.0	0.0
4015	18.9	17.0	0.0	80.0	0.0	3.0	0.0
4016							



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INDIVIDUAL HEMOGRAMS

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WEEK 6 - MALES

ANIMAL NO.	GROUP 4 - CERIC OXIDE HIGH DOSE	WBC DIFFERENTIAL COUNT (ABSOLUTE)						
		NEUT SEG	NEUT NSEG	LYMPH	MONO	EOSIN	BASO	
4001 Ct								
4002		1860.0	0.0	7161.0	186.0	93.0	0.0	
4003		3172.0	0.0	8540.0	488.0	0.0	0.0	
4004 Ct								
4005 Ct								
4006		1474.0	0.0	4891.0	335.0	0.0	0.0	
4007		2499.0	0.0	11760.0	441.0	0.0	0.0	
4008		5518.0	0.0	11214.0	890.0	178.0	0.0	
4009		2489.0	0.0	10349.0	262.0	0.0	0.0	
4010		3780.0	0.0	6912.0	0.0	108.0	0.0	
4011		2856.0	0.0	16728.0	816.0	0.0	0.0	
4012 Ct								
4014 Ns								
4015		4023.0	0.0	10281.0	447.0	149.0	0.0	
4016		3213.0	0.0	15120.0	0.0	567.0	0.0	



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WEEK 6 - MALES

ANIMAL NO.	RBC 6 X10	Hb G/DL	Ht %	MCV UM 3	MCH PG	MCHC G/DL	RDW %
4001 Ct							
4002	7.72	16.3	44.0	57.0	21.1	37.0	11.9
4003	7.45	15.6	42.2	56.7	20.9	36.9	11.5
4004 Ct							
4005 Ct							
4006	7.79	15.5	42.2	54.2	19.9	36.7	13.1
4007	7.92	16.2	43.7	55.2	20.5	37.1	12.8
4008	7.69	15.5	42.5	55.3	20.2	36.4	12.6
4009	8.44	16.0	43.9	52.0	19.0	36.5	12.1
4010	8.10	15.6	42.4	52.4	19.3	36.8	13.0
4011	8.06	16.3	45.7	56.7	20.2	35.7	12.4
4012 Ct							
4014 Ns							
4015	7.95	16.2	43.9	55.2	20.4	36.9	12.0
4016	7.72	16.0	43.2	55.9	20.7	37.1	13.2

GROUP 4 - CERIC OXIDE HIGH DOSE

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INDIVIDUAL HEMOGRAMS

WEEK 6 - MALES

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GROUP 4 - CERIC OXIDE
HIGH DOSE

ANIMAL NO.	PLT X10 ³	MPU UM ³	PT SEC.
4001 Ct			14.3
4002	549.0	9.0	NSQ
4003	897.0	8.7	Ct
4004 Ct			14.1
4005 Ct			14.0
4006	713.0	9.5	Ct
4007	888.0	9.0	16.2
4008	745.0	9.2	13.7
4009	850.0	8.3	Ct
4010	1099.0	9.1	14.1
4011	824.0	9.1	14.2
4012 Ct			14.2
4014 NS			
4015	864.0	8.5	12.8
4016	917.0	8.9	13.7



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BLOOD CELL MORPHOLOGY
WEEK 6
MALES

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GROUP 4 - CERIC OXIDE HIGH DOSE

ANIMAL NO.	CREN	POLY	HYPH	ANIS	POIK	CODO	HJB	ESTIP	COMMENTS
4001 Ct									
4002	4+	1+	-	1+	-	-	-	-	NRBC 2
4003	4+	2+	-	1+	-	-	-	-	NRBC 2
4004 Ct									
4005 Ct									
4006	3+	1+	-	-	-	-	-	-	-
4007	3+	1+	-	-	-	-	-	-	NRBC 3
4008	4+	1+	-	1+	-	-	-	-	-
4009	4+	1+	-	-	-	-	-	-	NRBC 1
4010	4+	1+	-	1+	-	-	-	-	-
4011	3+	1+	-	-	-	-	-	-	-
4012 Ct									
4014 Ns									
4015	2+	1+	-	1+	-	-	-	-	-
4016	3+	1+	-	-	-	-	-	-	NRBC 1



WEEK 6 - FEMALES

WBC DIFFERENTIAL COUNT

ANIMAL NO.	WBC 3 X10	NEUT SEG %	NEUT NSEG %	LYMPH %	MONO %	EOSIN %	BASO %
GROUP 1 - AIR CONTROL							
1501	8.9	8.0	0.0	91.0	0.0	1.0	0.0
1502	8.5	14.0	0.0	86.0	0.0	0.0	0.0
1503 Ct							
1504 Ct							
1505	8.2	9.0	0.0	88.0	2.0	1.0	0.0
1506	14.1	4.0	0.0	95.0	0.0	1.0	0.0
1507 Ct							
1508 Ct							
1509	8.3	18.0	0.0	81.0	1.0	0.0	0.0
1510 Ct							
1511	11.4	1.0	0.0	99.0	0.0	0.0	0.0
1512 Ns							
1513	12.0	10.0	0.0	86.0	1.0	3.0	0.0
1514	8.7	5.0	0.0	94.0	1.0	0.0	0.0
1515	6.8	1.0	0.0	97.0	2.0	0.0	0.0

WEEK 6 - FEMALES

WBC DIFFERENTIAL COUNT (ABSOLUTE)

ANIMAL NO.	NEUT SEG	NEUT NSEG	LYMPH	MONO	EOSIN	BASO
GROUP 1 - AIR CONTROL						
1501	712.0	0.0	8099.0	0.0	89.0	0.0
1502	1190.0	0.0	7310.0	0.0	0.0	0.0
1503ct						
1504ct						
1505	738.0	0.0	7216.0	164.0	82.0	0.0
1506	564.0	0.0	13395.0	0.0	141.0	0.0
1507ct						
1508ct						
1509	1494.0	0.0	6723.0	83.0	0.0	0.0
1510ct						
1511	114.0	0.0	11286.0	0.0	0.0	0.0
1512NS						
1513	1200.0	0.0	10320.0	120.0	360.0	0.0
1514	435.0	0.0	8178.0	87.0	0.0	0.0
1515	68.0	0.0	6596.0	136.0	0.0	0.0



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INDIVIDUAL HEMOGRAMS

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WEEK 6 - FEMALES

ANIMAL NO.	RBC $\times 10^6$	Hb G/DL	Ht %	MCV ₃ UM	MCH PG	MCHC G/DL	RDW %
GROUP 1 - AIR CONTROL							
1501	7.65	14.6	43.0	56.2	19.1	34.0	11.6
1502	6.88	15.0	39.3	57.1	21.8	38.2	11.4
1503Ct							
1504Ct							
1505	7.22	15.4	41.7	57.7	21.3	37.0	12.0
1506	7.83	15.5	42.4	54.1	19.8	36.6	11.8
1507Ct							
1508Ct							
1509	7.72	15.6	42.5	55.0	20.2	36.7	11.4
1510Ct							
1511	7.72	10.7	38.9	50.4	13.9	27.5	12.0
1512Ns							
1513	7.57	14.5	40.3	53.2	19.2	36.0	12.1
1514	8.01	16.0	43.7	54.5	20.0	36.7	11.3
1515	7.40	15.1	39.8	53.8	20.4	37.9	11.7



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INDIVIDUAL HEMOGRAMS

WEEK 6 - FEMALES

GROUP 1 - AIR CONTROL

ANIMAL NO.	PLT X10 ³	MPU UM ³	PT SEC.
1501	507.0	9.0	Ct
1502	1000.0	9.5	14.4
1503Ct			
1504Ct			
1505	808.0	8.1	12.9
1506	1025.0	8.4	14.4
1507Ct			
1508Ct			
1509	1041.0	8.7	Ct
1510Ct			
1511	881.0	9.7	14.5
1512	NS	NS	14.3
1513	461.0	10.0	14.0
1514	1034.0	8.9	14.5
1515	666.0	8.6	13.8





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INDIVIDUAL HEMOGRAMS
BLOOD CELL MORPHOLOGY
WEEK 6
FEMALES

PROJECT NO. 90831

GROUP 1 - AIR CONTROL

ANIMAL NO.	CREN	POLY	HYPO	ANTS	FOJK	CODO	HJB	BSTIP	COMMENTS
1501	4+	1+	-	1+	-	-	-	-	-
1502	4+	2+	-	1+	-	-	-	-	-
1503 Ct									
1504 Ct									
1505	2+	2+	-	1+	-	-	-	-	-
1506	3+	1+	-	-	-	-	-	-	-
1507 Ct									
1508 Ct									
1509	4+	1+	-	-	-	-	-	-	-
1510 Ct									
1511	4+	1+	-	1+	-	-	-	-	-
1512 Ns									
1513	4+	1+	-	-	-	-	-	-	-
1514	4+	1+	-	-	-	-	-	-	-
1515	4+	1+	-	1+	-	-	-	-	-



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INDIVIDUAL HEMOGRAMS

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WEEK 6 - FEMALES

ANIMAL NO.	NEUT SEG	NEUT NSEG	WBC DIFFERENTIAL COUNT (ABSOLUTE)				
			LYMPH	MONO	EOSIN	BASO	
GROUP 2 - CERIC OXIDE							
LOW DOSE							
2501 NSQ	630.0	0.0	6230.0	70.0	70.0	0.0	
2502 Ct							
2503 Ct							
2504	2400.0	0.0	6912.0	288.0	0.0	0.0	
2505	840.0	0.0	7308.0	168.0	84.0	0.0	
2506	1111.0	0.0	8585.0	303.0	101.0	0.0	
2507	2400.0	0.0	7200.0	300.0	100.0	0.0	
2508	2288.0	0.0	8112.0	0.0	0.0	0.0	
2509	740.0	0.0	6142.0	370.0	148.0	0.0	
2510	1296.0	0.0	9396.0	0.0	108.0	0.0	
2511	387.0	0.0	3870.0	0.0	43.0	0.0	
2512	1595.0	0.0	12325.0	435.0	145.0	0.0	
2513	560.0	0.0	6370.0	70.0	0.0	0.0	
2514	516.0	0.0	7998.0	86.0	0.0	0.0	
2515 NS							

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INDIVIDUAL HEMOGRAMS

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WEEK 6 - FEMALES

ANIMAL NO.	RBC 6 X10 ⁶	Hb G/DL	Ht %	MCV ₃ UM	MCH PG	MCHC G/DL	RDW %
GROUP 2 - CERIC OXIDE							
LOW DOSE							
2501 NSQ	7.91	15.7	42.9	54.2	19.8	36.6	11.5
2502							
2503 Ct							
2504	7.41	15.6	41.6	56.1	21.1	37.5	12.6
2505	7.65	15.8	42.8	56.0	20.7	36.9	11.7
2506	7.47	15.2	41.1	55.0	20.3	37.0	12.4
2507	7.59	15.6	42.4	55.9	20.6	36.8	11.4
2508	7.39	14.5	39.5	53.5	19.6	36.7	11.0
2509	7.61	15.9	42.8	56.3	20.9	37.1	11.2
2510	8.00	15.9	43.8	54.8	19.9	36.3	11.5
2511	6.91	8.6	38.5	55.7	12.4	22.3	11.3
2512	7.47	15.7	40.9	54.7	21.0	38.4	11.6
2513	7.59	15.8	41.7	55.0	20.8	37.8	11.9
2514	7.92	16.1	44.3	55.9	20.3	36.4	12.2
2515 NS							

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INDIVIDUAL HEMOGRAMS

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WEEK 6 - FEMALES

ANIMAL NO.	PLT ₃ X10 ³	MPV ₃ UM ³	PT SEC.
2501NSQ			
2502	724.0	8.3	14.6
2503Ct			16.0
2504	666.0	8.8	Ct
2505	854.0	8.5	13.9
2506	928.0	9.1	14.1
2507	545.0	8.4	Ct
2508	961.0	8.3	14.0
2509	1196.0	8.5	14.1
2510	971.0	8.7	12.9
2511	114.0	8.8	12.7
2512	771.0	8.7	13.5
2513	1013.0	8.5	13.3
2514	876.0	9.6	13.4
2515Ns			

GROUP 2 - CERIC OXIDE
LOW DOSE

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INDIVIDUAL HEMOGRAMS
BLOOD CELL MORPHOLOGY
WEEK 6
FEMALES

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GROUP 2 - CERIC OXIDE LOW DOSE

ANIMAL NO.	CREN	POLY	HYP	ANIS	POIK	COD	HJB	BSTIP	COMMENTS
2501	3+	1+	-	1+	-	-	-	-	NRBC 1
2502	4+	1+	-	1+	-	-	-	-	-
2503 Ct									
2504	3+	1+	-	-	-	-	-	-	NRBC 1
2505	4+	1+	-	1+	-	-	-	-	-
2506	2+	1+	-	-	-	-	-	-	-
2507	3+	1+	-	1+	-	-	-	-	NRBC 1
2508	3+	1+	-	1+	-	-	-	-	-
2509	3+	1+	-	-	-	-	-	-	-
2510	3+	1+	-	-	-	-	-	-	-
2511	4+	1+	-	1+	-	-	-	-	-
2512	4+	1+	-	-	-	-	-	-	-
2513	4+	1+	-	1+	-	-	-	-	-
2514	4+	1+	-	-	-	-	-	-	-
2515 Ns									



APPENDIX NO. 8

INDIVIDUAL HEMOGRAMS

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WEEK 6 - FEMALES

WBC DIFFERENTIAL COUNT

ANIMAL NO.	WBC X10 ³	NEUT SEG %	NEUT NSEG %	LYMPH %	MONO %	EOSIN %	BASO %
GROUP 3 - CERIC OXIDE							
INTERMEDIATE DOSE							
3501 Ns							
3502 Ct	8.2	19.0	0.0	78.0	3.0	0.0	0.0
3503							
3504 Ct	8.1	16.0	0.0	81.0	3.0	0.0	0.0
3505							
3506 Ct							
3507 Ct	12.3	22.0	0.0	74.0	3.0	1.0	0.0
3508	8.8	22.0	0.0	74.0	3.0	1.0	0.0
3509	11.5	13.0	0.0	82.0	3.0	2.0	0.0
3510							
3511 Ns							
3513 Ct	9.0	25.0	0.0	72.0	1.0	2.0	0.0
3514	10.6	5.0	0.0	95.0	0.0	0.0	0.0
3516	11.9	14.0	0.0	85.0	0.0	1.0	0.0
3517							

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INDIVIDUAL HEMOGRAMS

APPENDIX NO. 8

WEEK 6 - FEMALES

ANIMAL NO.	WBC DIFFERENTIAL COUNT (ABSOLUTE)	WBC DIFFERENTIAL COUNT (ABSOLUTE)					
		NEUT SEC	NEUT NSEG	LYMPH	MONO	EOSIN	BASO
GROUP 3 - CERIC OXIDE							
INTERMEDIATE DOSE							
3501 Ns							
3502 Ct							
3503	1558.0	0.0	6396.0	246.0	0.0	0.0	
3504 Ct							
3505	1296.0	0.0	6561.0	243.0	0.0	0.0	
3506 Ct							
3507 Ct							
3508	2706.0	0.0	9102.0	369.0	123.0	0.0	
3509	1936.0	0.0	6512.0	264.0	88.0	0.0	
3510	1495.0	0.0	9430.0	345.0	230.0	0.0	
3511 Ns							
3513 Ct							
3514	2250.0	0.0	6480.0	90.0	180.0	0.0	
3516	530.0	0.0	10070.0	0.0	0.0	0.0	
3517	1666.0	0.0	10115.0	0.0	119.0	0.0	

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INDIVIDUAL HEMOGRAMS

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WEEK 6 - FEMALES

ANIMAL NO.	RBC X10 ⁶	Hb G/DL	Ht %	MCV UM ³	MCH PG	MCHC G/DL	RDW %
3501	Ns						
3502	Ct						
3503	7.83	16.1	44.0	56.2	20.6	36.6	11.4
3504	Ct						
3505	7.16	14.4	39.3	54.9	20.1	36.6	10.7
3506	Ct						
3507	Ct						
3508	7.67	15.4	41.5	54.1	20.1	37.1	11.9
3509	7.27	14.6	39.3	54.1	20.1	37.1	12.1
3510	7.72	15.9	42.7	55.3	20.6	37.2	11.4
3511	Ns						
3513	Ct						
3514	7.83	16.0	42.7	54.5	20.4	37.5	11.9
3516	7.37	14.5	39.9	54.2	19.7	36.3	11.9
3517	7.32	14.4	39.2	53.5	19.7	36.8	11.7

GROUP 3 - CERIC OXIDE INTERMEDIATE DOSE

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INDIVIDUAL HEMOGRAMS

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WEEK 6 - FEMALES

ANIMAL NO.	PLT X10 ³	MPV UM ³	PT SEC.
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GROUP 3 - CERIC OXIDE INTERMEDIATE DOSE

3501 NS			14.9
3502 Ct			
3503	940.0	9.0	13.8
3504 Ct			15.5
3505	1021.0	8.6	Ct
3506 Ct			
3507 Ct			14.1
3508	831.0	8.8	14.1
3509	843.0	8.9	14.3
3510	671.0	8.5	14.4
3511 NS			
3513 Ct			
3514	929.0	8.8	13.7
3516	974.0	8.7	14.6
3517	591.0	9.8	12.9

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BLOOD CELL MORPHOLOGY
WEEK 6
FEMALES

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GROUP 3 - CERIC OXIDE INTERMEDIATE DOSE

ANIMAL NO.	CREN	POLY	HYP	ANIS	POIK	CODO	HUB	ESTIP	COMMENTS
3501 Ns									
3502 Ct									
3503	4+	1+	-	1+	-	-	-	-	NRBC 2
3504 Ct									
3505	4+	1+	-	1+	-	-	-	-	-
3506Ct									
3507 Ct									
3508	2+	1+	-	-	-	-	-	-	-
3509	2+	1+	-	-	-	-	-	-	-
3510	3+	1+	-	-	-	-	-	-	-
3511 Ns									
3513 Ct									
3514	4+	1+	-	-	-	-	-	-	-
3516	4+	1+	-	-	-	-	-	-	-
3517	4+	1+	-	-	-	-	-	-	-

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INDIVIDUAL HEMOGRAMS

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WEEK 6 - FEMALES

WBC DIFFERENTIAL COUNT

ANIMAL NO.	WBC X10 ³	NEUT SEG %	NEUT NSEG %	LYMPH %	MONO %	EOSIN %	BASO %
GROUP 4 - CERIC OXIDE HIGH DOSE							
4501	9.2	16.0	0.0	83.0	1.0	0.0	0.0
4502	NSQ	13.0	0.0	87.0	0.0	0.0	0.0
4503	5.5	17.0	0.0	83.0	0.0	0.0	0.0
4504	20.2	4.0	0.0	94.0	1.0	1.0	0.0
4505 Ct							
4506	11.4	18.0	0.0	80.0	2.0	0.0	0.0
4507	8.2	12.0	0.0	86.0	2.0	0.0	0.0
4508	12.1	17.0	0.0	82.0	0.0	1.0	0.0
4509	12.3	19.0	0.0	77.0	2.0	2.0	0.0
4510	7.7	10.0	0.0	89.0	1.0	0.0	0.0
4511	8.5	13.0	0.0	84.0	1.0	2.0	0.0
4513	9.3	11.0	0.0	86.0	3.0	0.0	0.0
4514 Ct							
4515	10.6	10.0	0.0	88.0	0.0	2.0	0.0
4516 NS							



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INDIVIDUAL HEMOGRAMS

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WEEK 6 - FEMALES

WBC DIFFERENTIAL COUNT (ABSOLUTE)

ANIMAL NO.	NEUT SEC	NEUT NSEG	LYMPH	MONO	EUSIN	BAZO
GROUP 4 - CERIC OXIDE						
HIGH DOSE						
4501	1472.0	0.0	7636.0	92.0	0.0	0.0
4502 NSQ						
4503	935.0	0.0	4565.0	0.0	0.0	0.0
4504	808.0	0.0	18988.0	202.0	202.0	0.0
4505 Ct						
4506	2052.0	0.0	9120.0	228.0	0.0	0.0
4507	984.0	0.0	7052.0	164.0	0.0	0.0
4508	2057.0	0.0	9922.0	0.0	121.0	0.0
4509	2337.0	0.0	9471.0	246.0	246.0	0.0
4510	770.0	0.0	6853.0	77.0	0.0	0.0
4511	1105.0	0.0	7140.0	85.0	170.0	0.0
4513	1023.0	0.0	7998.0	279.0	0.0	0.0
4514 Ct						
4515	1060.0	0.0	9328.0	0.0	212.0	0.0
4516Ns						

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WEEK 6 - FEMALES

ANIMAL NO.	RBC6 X10	Hb G/DL	Ht %	MCV UM	MCH PG	MCHC G/DL	RDW %
4501	7.80	15.9	42.7	54.8	20.4	37.2	11.9
4502NSQ							
4503	7.18	14.5	38.9	54.2	20.2	37.3	12.1
4504	7.94	15.7	42.2	53.2	19.8	37.2	12.2
4505Ct							
4506	7.75	15.5	41.7	53.8	20.0	37.2	11.9
4507	7.89	16.0	42.8	54.2	20.3	37.4	12.4
4508	7.32	15.1	40.3	55.0	20.6	37.5	11.6
4509	7.29	15.6	41.7	57.2	21.4	37.4	11.3
4510	7.50	15.2	40.9	54.5	20.3	37.2	12.2
4511	7.38	14.4	38.8	52.6	19.5	37.1	10.9
4513	7.72	15.6	43.4	56.2	20.2	36.0	11.5
4514Ct							
4515	8.44	15.8	44.1	52.3	18.7	35.8	11.7
4516Ns							

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WEEK 6 - FEMALES

ANIMAL NO.	PLT ₃ X10 ³	MPU ₃ UM ₃	PT SEC.
4501	961.0	8.8	14.8
4502 NSQ			15.0
4503	942.0	9.1	14.8
4504	865.0	9.2	14.1
4505 Ct			
4506	1109.0	8.4	13.9
4507	918.0	8.8	13.4
4508	984.0	9.0	14.4
4509	913.0	8.5	13.8
4510	1167.0	7.7	14.4
4511	891.0	9.0	14.3
4513	948.0	9.2	14.4
4514 Ct			14.8
4515	616.0	9.7	13.3
4516 NS			12.9

GROUP 4 - CERIC OXIDE
HIGH DOSE



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INDIVIDUAL HEMOGRAMS
BLOOD CELL MORPHOLOGY
WEEK 6
FEMALES

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GROUP 4 - CERIC OXIDE HIGH DOSE

ANIMAL NO.	CREN	POLY	HYPO	ANIS	POIK	CODO	HJB	BSTIP	COMMENTS
4501	2+	1+	-	1+	-	-	-	-	-
4502	2+	1+	-	1+	-	-	-	-	-
4503	3+	1+	-	1+	-	-	-	-	-
4504	3+	1+	-	1+	-	-	-	-	-
4505 Ct									
4506	2+	1+	-	1+	1+	-	-	-	NRBC 1
4507	2+	1+	-	-	-	-	-	-	-
4508	2+	1+	-	1+	-	-	-	-	NRBC 1
4509	2+	1+	-	1+	-	-	-	-	-
4510	2+	1+	-	-	-	-	-	-	-
4511	4+	1+	-	-	-	-	-	-	-
4513	2+	1+	-	-	-	-	-	-	-
4514 Ct									
4515	3+	1+	-	-	-	-	-	-	NRBC 2
4516Ns									



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INDIVIDUAL HEMOGRAMS

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WEEK 13 - MALES

WBC DIFFERENTIAL COUNT

ANIMAL NO.	WBC X10 ³	NEUT		LYMPH		MONO		EOSIN		BASO		
		SEG %	NSEG %	%	%	%	%	%	%	%	%	
GROUP 1 - AIR CONTROL												
1001	8.3	28.0	0.0	71.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	
1002	8.2	18.0	0.0	79.0	2.0	1.0	0.0	0.0	0.0	0.0	0.0	
1005	15.3	29.0	0.0	66.0	3.0	2.0	0.0	0.0	0.0	0.0	0.0	
1006	6.9	16.0	0.0	82.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	
1007	9.3	17.0	0.0	80.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	
1008	7.7	17.0	0.0	80.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	
1009	9.5	15.0	0.0	83.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	
1010	9.7	14.0	0.0	81.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0	
1011	6.6	11.0	0.0	86.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	
1012	6.9	13.0	0.0	84.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	
1013	7.3	18.0	0.0	75.0	5.0	2.0	0.0	0.0	0.0	0.0	0.0	
1014	6.4	32.0	0.0	55.0	12.0	1.0	0.0	0.0	0.0	0.0	0.0	
1015	6.3	21.0	0.0	70.0	6.0	3.0	0.0	0.0	0.0	0.0	0.0	
1016	6.5	14.0	0.0	86.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1017	6.8	13.0	0.0	84.0	1.0	2.0	0.0	0.0	0.0	0.0	0.0	

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INDIVIDUAL HEMOGRAMS

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WEEK 13 - MALES

WBC DIFFERENTIAL COUNT (ABSOLUTE)

ANIMAL NO.	NEUT SEC	NEUT NISEG	LYMPH	MONO	EOSIN	BASO
GROUP 1 - AIR CONTROL						
1001	2324.0	0.0	5893.0	83.0	0.0	0.0
1002	1476.0	0.0	6478.0	164.0	82.0	0.0
1005	4437.0	0.0	10098.0	459.0	306.0	0.0
1006	1104.0	0.0	5658.0	138.0	0.0	0.0
1007	1581.0	0.0	7440.0	279.0	0.0	0.0
1008	1309.0	0.0	6160.0	231.0	0.0	0.0
1009	1425.0	0.0	7885.0	190.0	0.0	0.0
1010	1358.0	0.0	7857.0	485.0	0.0	0.0
1011	726.0	0.0	5676.0	198.0	0.0	0.0
1012	897.0	0.0	5796.0	207.0	0.0	0.0
1013	1314.0	0.0	5475.0	365.0	146.0	0.0
1014	2048.0	0.0	3520.0	768.0	64.0	0.0
1015	1323.0	0.0	4410.0	378.0	189.0	0.0
1016	910.0	0.0	5590.0	0.0	0.0	0.0
1017	884.0	0.0	5712.0	68.0	136.0	0.0



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INDIVIDUAL HEMOGRAMS

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WEEK 13 - MALES

GROUP 1 - AIR CONTROL

ANIMAL NO.	RBC $\times 10^6$	Hb G/DL	Ht %	MCV μm^3	MCH PG	MCHC G/DL	RDW %
1001	8.20	14.9	41.9	51.1	18.2	35.6	13.4
1002	8.77	16.1	45.2	51.5	18.4	35.6	12.6
1005	7.85	15.2	41.4	52.7	19.4	36.7	12.1
1006	8.14	15.1	40.7	50.0	18.6	37.1	13.0
1007	8.34	15.0	43.5	52.1	18.0	34.5	12.0
1008	8.40	15.4	42.7	50.8	18.3	36.1	13.2
1009	7.90	14.4	40.5	51.3	18.2	35.5	12.9
1010	8.70	15.9	45.4	52.2	18.3	35.0	12.4
1011	8.72	15.1	44.2	50.7	17.3	34.2	12.3
1012	8.89	15.8	45.6	51.3	17.8	34.6	13.7
1013	8.90	16.7	47.9	53.8	18.8	34.9	12.0
1014	9.13	15.3	44.4	48.6	16.8	34.5	12.9
1015	8.25	16.1	45.2	54.8	19.5	35.6	12.2
1016	8.05	15.0	40.9	50.8	18.6	36.7	11.7
1017	8.08	14.9	41.1	50.9	18.4	36.2	12.4



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WEEK 13 - MALES

ANIMAL NO.	PLT 3 X10	MPX UM ³	PT SEC.
GROUP 1 - AIR CONTROL			
1001	1055.0	8.2	14.9
1002	878.0	8.1	14.6
1005	866.0	8.6	14.8
1006	876.0	8.6	15.1
1007	757.0	8.7	14.6
1008	1061.0	7.7	15.2
1009	905.0	9.3	19.4
1010	1069.0	9.9	14.8
1011	1042.0	9.1	14.5
1012	916.0	9.2	14.4
1013	856.0	8.8	14.8
1014	846.0	9.0	14.7
1015	753.0	8.9	14.1
1016	853.0	8.4	19.1
1017	898.0	8.5	14.6

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INDIVIDUAL HEMOGRAMS
 BLOOD CELL MORPHOLOGY
 WEEK 13
 MALES
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GROUP 1 - AIR CONTROL

ANIMAL NO.	CREN	POLY	HYPO	ANIS	ROIK	CODO	HJB	BSTIP	COMMENTS
1001	1+	1+	-	1+	-	-	-	-	-
1002	1+	1+	-	1+	-	-	-	-	-
1005	1+	1+	-	1+	-	-	-	-	-
1006	2+	1+	-	1+	-	-	-	-	-
1007	1+	-	-	1+	-	-	-	-	-
1008	1+	1+	-	1+	-	-	-	-	-
1009	1+	1+	-	1+	-	-	-	-	-
1010	1+	-	-	1+	-	-	-	-	-
1011	1+	-	-	1+	-	-	-	-	-
1012	1+	1+	-	1+	-	-	-	-	-
1013	2+	1+	-	1+	-	-	-	-	-
1014	2+	1+	-	1+	-	-	-	-	-
1015	3+	1+	-	1+	-	-	-	-	-
1016	2+	-	-	1+	-	-	-	-	-
1017	1+	1+	-	-	-	-	-	-	-

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WEEK 13 - MALES

WBC DIFFERENTIAL COUNT

ANIMAL NO.	WBC 3 X10 ³	NEUT SEG %	NEUT NSEG %	LYMPH %	MONO %	EOSIN %	BASO %
2001	10.5	28.0	0.0	70.0	1.0	1.0	0.0
2002	11.8	13.0	0.0	85.0	0.0	2.0	0.0
2003	7.0	19.0	0.0	79.0	1.0	1.0	0.0
2004	7.2	20.0	1.0	72.0	5.0	2.0	0.0
2005	7.4	31.0	0.0	65.0	4.0	0.0	0.0
2006	8.4	12.0	0.0	81.0	7.0	0.0	0.0
2007	8.7	30.0	0.0	61.0	6.0	3.0	0.0
2008	10.6	15.0	0.0	81.0	3.0	1.0	0.0
2009	7.7	19.0	0.0	79.0	1.0	1.0	0.0
2010	8.1	21.0	0.0	73.0	5.0	1.0	0.0
2011	6.2	25.0	0.0	71.0	2.0	2.0	0.0
2012	9.0	17.0	0.0	81.0	2.0	0.0	0.0
2013	6.6	11.0	0.0	88.0	1.0	0.0	0.0
2015	6.5	12.0	0.0	85.0	2.0	1.0	0.0
2016	7.4	28.0	0.0	70.0	2.0	0.0	0.0

GROUP 2 - CERIC OXIDE
LOW DOSE



APPENDIX NO. 8

INDIVIDUAL HEMOGRAMS

PROJECT NO : 90831

WEEK 13 - MALES

WBC DIFFERENTIAL COUNT (ABSOLUTE)

ANIMAL NO.	NEUT SEG	NEUT NSEG	LYMPH	MONO	EOSIN	BASO
GROUP 2 - CERIC OXIDE						
LOW DOSE						
2001	2940.0	0.0	7350.0	105.0	105.0	0.0
2002	1534.0	0.0	10030.0	0.0	236.0	0.0
2003	1330.0	0.0	5530.0	70.0	70.0	0.0
2004	1440.0	72.0	5184.0	360.0	144.0	0.0
2005	2294.0	0.0	4810.0	296.0	0.0	0.0
2006	1008.0	0.0	6804.0	588.0	0.0	0.0
2007	2610.0	0.0	5307.0	522.0	261.0	0.0
2008	1590.0	0.0	8586.0	318.0	106.0	0.0
2009	1463.0	0.0	6083.0	77.0	77.0	0.0
2010	1701.0	0.0	5913.0	405.0	81.0	0.0
2011	1550.0	0.0	4402.0	124.0	124.0	0.0
2012	1530.0	0.0	7290.0	180.0	0.0	0.0
2013	726.0	0.0	5808.0	66.0	0.0	0.0
2015	780.0	0.0	5525.0	130.0	65.0	0.0
2016	2072.0	0.0	5180.0	148.0	0.0	0.0

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INDIVIDUAL HEMOGRAMS

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WEEK 13 - MALES

ANIMAL NO.	RBC X10 ⁶	Hb G/DL	Ht %	MCV UM ³	MCH PG	MCHC G/DL	RDW %
GROUP 2 - CERIC OXIDE							
LOW DOSE							
2001	8.31	15.6	43.4	52.2	18.8	36.0	12.4
2002	8.21	15.1	41.3	50.3	18.4	36.6	13.4
2003	8.40	15.4	42.8	50.9	18.3	36.0	12.8
2004	8.60	15.6	43.2	50.2	18.1	36.1	12.7
2005	8.28	15.6	44.3	53.5	18.8	35.2	11.8
2006	8.18	15.4	43.1	52.7	18.8	35.7	11.9
2007	7.85	14.9	42.7	54.4	19.0	34.9	12.1
2008	8.78	16.5	46.7	53.2	18.8	35.3	11.6
2009	7.69	14.1	39.4	51.3	18.3	35.7	13.2
2010	9.08	15.5	45.5	50.1	17.1	34.1	12.8
2011	8.51	15.7	45.7	53.7	18.4	34.4	12.1
2012	8.24	15.3	44.0	53.4	18.6	34.8	12.2
2013	8.46	15.4	44.3	52.4	18.2	34.7	12.3
2015	8.82	15.2	44.3	50.2	17.2	34.3	13.0
2016	8.71	16.0	46.3	53.1	18.4	34.6	12.1



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INDIVIDUAL HEMOGRAMS

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WEEK 13 - MALES

ANIMAL NO.	PLT X10 ³	MPV UM3	PT SEC.
2001	955.0	9.1	14.8
2002	930.0	9.2	16.8
2003	1029.0	8.2	14.8
2004	1012.0	8.7	15.7
2005	786.0	8.8	15.4
2006	827.0	9.4	14.3
2007	902.0	7.6	NSQ
2008	1179.0	8.2	15.6
2009	899.0	8.4	14.4
2010	1022.0	10.2	14.4
2011	967.0	8.7	16.2
2012	1115.0	8.8	14.5
2013	1095.0	8.4	14.3
2015	783.0	9.4	15.0
2016	903.0	9.2	14.1

GROUP 2 - CERIC OXIDE
LOW DOSE



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INDIVIDUAL HEMOGRAMS

APPENDIX NO. 8

WEEK 13 - MALES

WBC DIFFERENTIAL COUNT

ANIMAL NO.	WBC X10 ³	NEUT SEG %	NEUT NSEG %	LYMPH %	MONO %	EOSIN %	BASO %
3001	9.0	21.0	0.0	77.0	0.0	2.0	0.0
3002	9.5	49.0	0.0	50.0	1.0	0.0	0.0
3003	16.1	23.0	0.0	71.0	2.0	4.0	0.0
3004	12.1	21.0	0.0	78.0	0.0	1.0	0.0
3005	13.7	14.0	0.0	84.0	1.0	1.0	0.0
3006	17.6	15.0	0.0	78.0	5.0	2.0	0.0
3007	14.4	20.0	0.0	80.0	0.0	0.0	0.0
3008	11.7	31.0	0.0	66.0	0.0	3.0	0.0
3009	14.9	10.0	0.0	84.0	5.0	1.0	0.0
3011	8.4	42.0	0.0	52.0	6.0	0.0	0.0
3012	8.6	29.0	0.0	67.0	2.0	2.0	0.0
3013	9.0	21.0	0.0	75.0	4.0	0.0	0.0
3014	12.3	39.0	0.0	54.0	5.0	2.0	0.0
3015	11.8	25.0	0.0	71.0	3.0	1.0	0.0
3016	7.9	21.0	0.0	73.0	4.0	2.0	0.0

GROUP 3 - CERIC OXIDE INTERMEDIATE DOSE

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INDIVIDUAL HEMOGRAMS

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WEEK 13 - MALES

ANIMAL NO.	WBC DIFFERENTIAL COUNT (ABSOLUTE)						
	NEUT SEG	NEUT NSEG	LYMPH	MONO	EOSIN	BASO	
GROUP 3 - CERIC OXIDE INTERMEDIATE DOSE							
3001	1890.0	0.0	6930.0	0.0	180.0	0.0	0.0
3002	4655.0	0.0	4750.0	95.0	0.0	0.0	0.0
3003	3703.0	0.0	11431.0	322.0	644.0	0.0	0.0
3004	2541.0	0.0	9438.0	0.0	121.0	0.0	0.0
3005	1918.0	0.0	11508.0	137.0	137.0	0.0	0.0
3006	2640.0	0.0	13728.0	880.0	352.0	0.0	0.0
3007	2880.0	0.0	11520.0	0.0	0.0	0.0	0.0
3008	3627.0	0.0	7722.0	0.0	351.0	0.0	0.0
3009	1490.0	0.0	12516.0	745.0	149.0	0.0	0.0
3011	3528.0	0.0	4368.0	504.0	0.0	0.0	0.0
3012	2494.0	0.0	5762.0	172.0	172.0	0.0	0.0
3013	1890.0	0.0	6750.0	360.0	0.0	0.0	0.0
3014	4797.0	0.0	6642.0	615.0	246.0	0.0	0.0
3015	2950.0	0.0	8378.0	354.0	118.0	0.0	0.0
3016	1659.0	0.0	5767.0	316.0	158.0	0.0	0.0



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INDIVIDUAL HEMOGRAMS

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WEEK 13 - MALES

ANIMAL NO.	RBC X10 ⁶	Hb G/DL	Ht %	MCV UM ³	MCH PG	MCHC G/DL	RDW %
3001	8.52	15.4	42.6	50.0	18.1	36.2	12.1
3002	8.00	15.2	42.5	53.1	19.0	35.8	12.0
3003	7.96	15.4	42.1	52.9	19.3	36.6	12.1
3004	8.61	16.2	44.7	51.9	18.8	36.3	12.5
3005	8.03	15.4	42.2	52.5	19.2	36.5	13.3
3006	8.28	15.6	42.5	51.3	18.8	36.7	13.1
3007	8.56	16.4	46.5	54.3	19.2	35.3	12.2
3008	9.17	15.9	45.6	49.7	17.3	34.9	13.0
3009	8.24	15.8	44.4	53.9	19.2	35.6	11.9
3011	8.32	14.8	42.7	51.3	17.8	34.7	12.6
3012	8.64	15.4	44.0	50.9	17.8	35.0	13.4
3013	8.57	15.3	44.7	52.2	17.9	34.2	12.8
3014	9.05	15.6	45.2	49.9	17.2	34.5	13.1
3015	8.32	15.0	43.4	52.2	18.0	34.5	12.1
3016	8.10	15.2	42.8	52.8	18.8	35.5	12.5

GROUP 3 - CERIC OXIDE INTERMEDIATE DOSE



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INDIVIDUAL HEMOGRAMS

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WEEK 13 - MALES

ANIMAL NO.	PLT X10 ³	MPU UM 3	PT SEC.
3001	916.0	8.8	16.4
3002	833.0	8.5	16.6
3003	788.0	8.9	14.3
3004	1065.0	8.3	14.5
3005	1079.0	8.4	NSQ
3006	857.0	8.6	15.3
3007	969.0	9.3	14.8
3008	987.0	8.9	13.8
3009	913.0	8.8	13.8
3011	945.0	9.1	14.1
3012	916.0	8.6	14.6
3013	942.0	9.5	14.9
3014	1013.0	9.1	14.5
3015	930.0	9.1	15.0
3016	900.0	9.4	14.5

GROUP 3 - CERIC OXIDE INTERMEDIATE DOSE



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INDIVIDUAL HEMOGRAMS
BLOOD CELL MORPHOLOGY
WEEK 13
MALES 1

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GROUP 3 - CERIC OXIDE INTERMEDIATE DOSE

ANIMAL NO.	CREN	POLY	HYPO	ANIS	POIK	CODO	HUB	BSTIP	COMMENTS
3001	1+	1+	-	-	-	-	-	-	-
3002	1+	-	-	1+	-	-	-	-	NRBC 1
3003	2+	1+	-	1+	-	-	-	-	-
3004	2+	1+	-	-	-	-	-	-	-
3005	1+	1+	-	1+	-	-	-	-	-
3006	2+	1+	-	1+	-	-	-	-	-
3007	2+	1+	-	-	-	-	-	-	-
3008	1+	1+	-	1+	-	-	-	-	-
3009	2+	1+	-	1+	-	-	-	-	-
3011	2+	1+	-	-	-	-	-	-	-
3012	2+	1+	-	1+	-	-	-	-	-
3013	1+	1+	-	1+	-	-	-	-	-
3014	2+	1+	-	1+	-	-	-	-	-
3015	1+	1+	-	-	-	-	-	-	-
3016	2+	1+	-	1+	-	-	-	-	-



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INDIVIDUAL HEMOGRAMS

WEEK 13 - MALES

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ANIMAL NO.	WBC X10 ³	NEUT SEG %	NEUT NSEG %	LYMPH %	MONO %	EOSIN %	BASO %
GROUP 4 CERIC OXIDE HIGH DOSE							
4002	6.9	33.0	0.0	67.0	0.0	0.0	0.0
4003	9.1	28.0	0.0	68.0	2.0	2.0	0.0
4004	8.9	45.0	0.0	52.0	3.0	0.0	0.0
4005	6.1	34.0	0.0	59.0	7.0	0.0	0.0
4006	5.4	44.0	0.0	46.0	8.0	2.0	0.0
4007	7.3	27.0	0.0	71.0	2.0	0.0	0.0
4008	11.9	44.0	0.0	55.0	0.0	1.0	0.0
4009	9.6	15.0	0.0	83.0	2.0	0.0	0.0
4010	8.9	37.0	0.0	63.0	0.0	0.0	0.0
4011	11.5	16.0	0.0	83.0	0.0	1.0	0.0
4012	5.7	37.0	0.0	56.0	6.0	1.0	0.0
4014	6.3	37.0	0.0	60.0	3.0	0.0	0.0
4015	6.7	29.0	0.0	63.0	3.0	5.0	0.0
4016	11.1	39.0	0.0	52.0	8.0	1.0	0.0





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INDIVIDUAL HEMOGRAMS

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WEEK 13 - MALES

WBC DIFFERENTIAL COUNT (ABSOLUTE)

ANIMAL NO.	NEUT SEIG	NEUT NSEG	LYMPH	MONO	EOSIN	BASO
GROUP 4 - CERIC OXIDE HIGH DOSE						
4002	2277.0	0.0	4623.0	0.0	0.0	0.0
4003	2548.0	0.0	6188.0	182.0	182.0	0.0
4004	4005.0	0.0	4628.0	267.0	0.0	0.0
4005	2074.0	0.0	3599.0	427.0	0.0	0.0
4006	2376.0	0.0	2484.0	432.0	108.0	0.0
4007	1971.0	0.0	5183.0	146.0	0.0	0.0
4008	5236.0	0.0	6545.0	0.0	119.0	0.0
4009	1440.0	0.0	7968.0	192.0	0.0	0.0
4010	3293.0	0.0	5607.0	0.0	0.0	0.0
4011	1840.0	0.0	9545.0	0.0	115.0	0.0
4012	2109.0	0.0	3192.0	342.0	57.0	0.0
4014	2331.0	0.0	3780.0	189.0	0.0	0.0
4015	1943.0	0.0	4221.0	201.0	335.0	0.0
4016	4329.0	0.0	5772.0	888.0	111.0	0.0



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INDIVIDUAL HEMOGRAMS

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WEEK 13 - MALES

ANIMAL NO.	RBC X10 ⁶	Hb G/DL	Ht %	MCV UM ³	MCH PG	MCHC G/DL	RDW %
4002	7.96	15.7	43.1	54.8	20.0	36.4	11.8
4003	7.94	15.8	42.2	53.1	19.9	37.5	12.1
4004	8.26	15.7	42.7	51.7	19.0	36.8	12.6
4005	8.39	15.5	42.6	50.8	18.5	36.4	12.8
4006	8.87	16.6	45.9	51.8	18.7	36.1	13.4
4007	7.99	15.0	42.3	53.0	18.8	35.4	12.6
4008	8.71	16.2	46.4	53.3	18.6	34.9	11.2
4009	9.00	16.4	47.3	52.6	18.2	34.6	13.1
4010	9.05	15.4	44.4	49.1	17.0	34.7	12.8
4011	8.65	16.1	47.1	54.5	18.6	34.2	12.6
4012	9.09	16.2	47.1	51.8	17.8	34.4	11.6
4014	8.86	16.3	47.1	53.2	18.4	34.6	12.1
4015	8.59	16.1	45.7	53.2	18.7	35.2	11.6
4016	7.93	14.8	41.2	51.9	18.7	36.0	12.6

GROUP 4 - CERIC OXIDE HIGH DOSE.



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INDIVIDUAL HEMOGRAMS

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WEEK 13 - MALES

ANIMAL NO.	PLT ₃ X10 ³	MPU ₃ UM ³	PT SEC.
4002	848.0	8.9	14.8
4003	852.0	8.8	15.3
4004	920.0	8.7	15.5
4005	971.0	8.7	14.6
4006	879.0	9.1	16.9
4007	969.0	8.5	15.3
4008	791.0	9.0	15.6
4009	870.0	8.2	17.3
4010	1040.0	9.6	14.2
4011	852.0	9.6	15.1
4012	838.0	9.2	15.5
4014	879.0	8.7	14.6
4015	1052.0	8.5	14.4
4016	862.0	9.4	13.7

GROUP 4 - CERIC OXIDE
HIGH DOSE



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INDIVIDUAL HEMOGRAMS
BLOOD CELL MORPHOLOGY
WEEK 13
MALES

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GROUP 4 - CERIC OXIDE HIGH DOSE

ANIMAL NO.	CREN	POLY	HYPO	ANIS	POIK	CODO	HJUB	BSTIP	COMMENTS
4002	1+	1+	-	1+	-	-	-	-	-
4003	1+	1+	-	1+	-	-	-	-	-
4004	2+	1+	-	1+	-	-	-	-	-
4005	2+	1+	-	1+	-	-	-	-	NRBC 1
4006	2+	1+	-	1+	-	-	-	-	NRBC 1
4007	1+	1+	-	1+	-	-	-	-	-
4008	1+	1+	-	1+	-	-	-	-	-
4009	1+	-	-	-	-	-	-	-	-
4010	2+	1+	-	1+	-	-	-	-	-
4011	1+	1+	-	1+	-	-	-	-	-
4012	1+	1+	-	1+	-	-	-	-	-
4014	1+	1+	-	-	-	-	-	-	NRBC 1
4015	2+	1+	-	1+	-	-	-	-	-
4016	2+	1+	-	1+	-	-	-	-	-





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INDIVIDUAL HEMOGRAMS

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WEEK 13 - FEMALES

WBC DIFFERENTIAL COUNT

ANIMAL NO.	WBC 3 X10 ³	NEUT SEG %	NEUT NSEG %	LYMPH %	MONO %	EOSIN %	BASO %
GROUP 1 - AIR CONTROL							
1501	5.6	10.0	0.0	86.0	4.0	0.0	0.0
1502	3.4	10.0	0.0	84.0	5.0	1.0	0.0
1503	4.4	10.0	0.0	84.0	5.0	1.0	0.0
1504	4.5	12.0	0.0	80.0	6.0	2.0	0.0
1505	3.2	13.0	0.0	78.0	3.0	6.0	0.0
1506	3.8	10.0	0.0	87.0	1.0	2.0	0.0
1507	2.6	4.0	0.0	92.0	4.0	0.0	0.0
1508	2.9	15.0	0.0	76.0	5.0	4.0	0.0
1509	3.9	8.0	0.0	81.0	11.0	0.0	0.0
1510	5.3	5.0	0.0	90.0	5.0	0.0	0.0
1511	4.7	0.0	0.0	97.0	3.0	0.0	0.0
1512	7.9	6.0	0.0	87.0	7.0	0.0	0.0
1513	5.3	3.0	0.0	89.0	6.0	2.0	0.0
1514	1.6	13.0	0.0	87.0	0.0	0.0	0.0
1515	4.0	6.0	0.0	88.0	5.0	1.0	0.0



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INDIVIDUAL HEMOGRAMS

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WEEK 13 - FEMALES

WBC DIFFERENTIAL COUNT (ABSOLUTE)

ANIMAL NO.	NEUT SEC	NEUT NSEC	LYMPH	MONO	EOSIN	BASO
GROUP 1 - AIR CONTROL						
1501	560.0	0.0	4816.0	224.0	0.0	0.0
1502	340.0	0.0	2856.0	170.0	34.0	0.0
1503	440.0	0.0	3696.0	220.0	44.0	0.0
1504	540.0	0.0	3600.0	270.0	90.0	0.0
1505	416.0	0.0	2496.0	96.0	192.0	0.0
1506	380.0	0.0	3306.0	38.0	76.0	0.0
1507	104.0	0.0	2392.0	104.0	0.0	0.0
1508	435.0	0.0	2204.0	145.0	116.0	0.0
1509	312.0	0.0	3159.0	429.0	0.0	0.0
1510	265.0	0.0	4770.0	265.0	0.0	0.0
1511	0.0	0.0	4559.0	141.0	0.0	0.0
1512	474.0	0.0	6873.0	553.0	0.0	0.0
1513	159.0	0.0	4717.0	318.0	106.0	0.0
1514	209.0	0.0	1392.0	0.0	0.0	0.0
1515	240.0	0.0	3520.0	200.0	40.0	0.0

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INDIVIDUAL HEMOGRAMS

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WEEK 13 - FEMALES

GROUP 1 - AIR CONTROL

ANIMAL NO.	RBC X10 ⁶	Hb G/DL	Ht %	MCV ₃ UM ³	MCH PG	MCHC G/DL	RDW %
1501	7.56	15.1	41.8	55.3	20.0	36.1	10.8
1502	7.47	14.4	41.0	54.9	19.3	35.1	11.0
1503	7.59	14.8	41.0	54.0	19.5	36.1	10.9
1504	7.58	14.6	40.2	53.1	19.3	36.3	11.8
1505	6.99	14.0	39.9	57.1	20.0	35.1	11.1
1506	8.32	15.2	44.2	53.1	18.3	34.4	11.8
1507	7.49	14.5	40.4	53.9	19.4	35.9	11.7
1508	7.41	14.8	40.8	55.1	20.0	36.2	12.0
1509	7.97	14.9	41.4	52.0	18.7	36.0	11.9
1510	8.11	15.2	42.8	52.8	18.7	35.5	11.8
1511	8.46	14.8	42.9	50.7	17.5	34.5	12.2
1512	8.27	15.2	43.2	52.2	18.4	35.2	11.6
1513	8.23	15.1	44.4	53.9	18.3	34.0	11.1
1514	7.55	13.9	40.3	53.4	18.4	34.5	11.6
1515	8.46	15.8	45.9	54.2	18.7	34.5	11.3



PROJECT NO : 90B31

INDIVIDUAL HEMOGRAMS

APPENDIX NO. 8

WEEK 13 - FEMALES

ANIMAL NO.	PLT X10 ³	MPV ₃ UM ³	PT SEC.
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GROUP 1 - AIR CONTROL

1501	952.0	8.8	13.2
1502	989.0	9.0	13.8
1503	998.0	7.7	14.2
1504	1154.0	8.1	13.3
1505	670.0	8.0	13.7
1506	1078.0	7.8	14.0
1507	951.0	8.2	13.8
1508	995.0	8.1	13.5
1509	1205.0	8.0	14.5
1510	853.0	9.1	14.1
1511	1006.0	8.8	14.1
1512	1000.0	8.4	14.9
1513	1029.0	9.5	14.7
1514	1011.0	8.6	14.6
1515	1102.0	8.5	13.8

PROJECT NO. 90831

INDIVIDUAL HEMOGRAMS
BLOOD CELL MORPHOLOGY
WEEK 13
FEMALES

APPENDIX NO. 8

GROUP 1 - AIR CONTROL

ANIMAL NO.	CREN	POLY	HYPO	ANTS	POIK	CODO	ILUB	BSTIP	COMMENTS
1501	1+	1+	-	1+	-	-	-	-	-
1502	1+	1+	-	1+	-	-	-	-	NRBC 1
1503	1+	1+	-	1+	-	-	-	-	-
1504	1+	-	-	1+	-	-	-	-	-
1505	-	-	-	1+	-	-	-	-	-
1506	-	-	-	1+	1+	-	-	-	-
1507	1+	-	-	1+	-	-	-	-	NRBC 1
1508	1+	-	-	1+	-	-	-	-	-
1509	2+	-	-	1+	-	-	-	-	-
1510	-	1+	-	1+	1+	-	-	-	-
1511	-	1+	-	1+	1+	-	-	-	-
1512	-	-	-	1+	-	-	-	-	-
1513	-	-	-	1+	-	-	-	-	-
1514	1+	-	-	1+	-	-	-	-	-
1515	1+	-	-	1+	-	-	-	-	-

APPENDIX NO. 8

INDIVIDUAL HEMOGRAMS

PROJECT NO : 90831

WEEK 13 - FEMALES

WBC DIFFERENTIAL COUNT

ANIMAL NO.	WBC ₃ X10 ³	NEUT SEG %	NEUT NSEG %	LYMPH %	MONO %	EDSIN %	BASO %
2501	2.7	30.0	0.0	67.0	1.0	2.0	0.0
2502	4.2	40.0	0.0	54.0	4.0	2.0	0.0
2503	4.1	13.0	0.0	82.0	5.0	0.0	0.0
2504	4.8	15.0	0.0	76.0	8.0	1.0	0.0
2505	5.0	12.0	0.0	80.0	7.0	1.0	0.0
2506	5.7	14.0	0.0	81.0	5.0	0.0	0.0
2507	4.3	14.0	0.0	80.0	3.0	3.0	0.0
2508	8.6	41.0	0.0	48.0	9.0	2.0	0.0
2509	5.3	9.0	0.0	83.0	8.0	0.0	0.0
2510	7.5	22.0	0.0	78.0	0.0	0.0	0.0
2511	4.1	12.0	0.0	84.0	3.0	1.0	0.0
2512	7.6	14.0	0.0	81.0	3.0	2.0	0.0
2513	2.9	14.0	0.0	79.0	4.0	3.0	0.0
2514	4.5	18.0	0.0	77.0	4.0	1.0	0.0
2515	5.1	18.0	0.0	79.0	2.0	1.0	0.0

GROUP 2 - CERIC OXIDE
LOW DOSE



PROJECT NO : 90831

INDIVIDUAL HEMOGRAMS

APPENDIX NO. 8

WEEK 13 - FEMALES

ANIMAL NO.	NEUT SECS	NEUT NSEG	WBC DIFFERENTIAL COUNT (ABSOLUTE)							
			LYMPH	MONO	EOSIN	PLAS	BASO			
GROUP 2 - CERIC OXIDE										
LOW DOSE										
2501	810.0	0.0	1809.0	27.0	54.0	0.0				
2502	1680.0	0.0	2268.0	168.0	84.0	0.0				
2503	533.0	0.0	3362.0	205.0	0.0	0.0				
2504	720.0	0.0	3648.0	384.0	48.0	0.0				
2505	600.0	0.0	4000.0	350.0	50.0	0.0				
2506	798.0	0.0	4617.0	285.0	0.0	0.0				
2507	602.0	0.0	3440.0	129.0	129.0	0.0				
2508	3526.0	0.0	4128.0	774.0	172.0	0.0				
2509	477.0	0.0	4399.0	424.0	0.0	0.0				
2510	1650.0	0.0	5850.0	0.0	0.0	0.0				
2511	492.0	0.0	3444.0	123.0	41.0	0.0				
2512	1064.0	0.0	6156.0	228.0	152.0	0.0				
2513	406.0	0.0	2291.0	116.0	82.0	0.0				
2514	810.0	0.0	3465.0	180.0	45.0	0.0				
2515	918.0	0.0	4029.0	102.0	51.0	0.0				



PROJECT NO : 90831

INDIVIDUAL HEMOGRAMS

APPENDIX NO. 8

WEEK 13 - FEMALES

ANIMAL NO.	RBC ₆ X10 ⁶	Hb G/DL	Ht %	MCV ₃ UM ³	MCH PG	MCHC G/DL	RDW %
GROUP 2 - CERIC OXIDE							
LOW DOSE							
2501	7.01	13.7	39.0	55.7	19.5	35.1	11.5
2502	7.84	14.5	41.1	52.4	18.5	35.3	11.9
2503	7.54	14.1	41.4	54.9	18.7	34.1	11.5
2504	7.83	15.2	42.1	53.8	19.4	36.1	12.6
2505	7.92	15.4	42.1	53.2	19.4	36.5	12.4
2506	7.95	15.3	43.5	54.7	19.2	35.2	11.9
2507	7.54	14.4	40.1	53.2	19.1	35.9	11.9
2508	7.65	14.1	39.2	51.2	18.4	36.0	12.0
2509	7.98	15.5	43.3	54.3	19.4	35.8	11.1
2510	7.77	14.5	40.8	52.5	18.7	35.5	12.1
2511	7.79	15.1	42.6	54.7	19.4	35.4	10.9
2512	7.78	15.2	42.2	54.2	19.5	36.0	11.7
2513	7.86	15.2	43.6	55.5	19.3	34.8	11.6
2514	7.66	14.7	42.6	55.6	19.2	34.5	11.4
2515	7.75	14.6	41.8	54.0	18.8	34.9	11.2



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INDIVIDUAL HEMOGRAMS

APPENDIX NO. 8

WEEK 13 - FEMALES

ANIMAL NO.	PLT X10 ³	MPV UM ³	PT SEC.
2501	983.0	8.7	13.6
2502	795.0	8.0	14.6
2503	915.0	8.8	14.4
2504	1046.0	8.4	14.4
2505	898.0	8.5	13.5
2506	883.0	8.7	13.3
2507	1009.0	8.3	14.2
2508	921.0	7.7	14.1
2509	1260.0	8.1	13.7
2510	1014.0	8.6	13.5
2511	861.0	7.8	14.7
2512	1089.0	7.9	14.4
2513	1014.0	8.3	14.3
2514	806.0	9.4	14.3
2515	874.0	8.2	14.1

GROUP 2 - CERIC OXIDE
LOW DOSE



PROJECT NO. 90831

INDIVIDUAL HEMOGRAMS
BLOOD CELL MORPHOLOGY
WEEK 13
FEMALES

APPENDIX NO. 8

GROUP 2 - CERIC OXIDE LOW DOSE

ANIMAL NO.	CREN	POLY	HYPO	ANIS	POIK	CODO	HLB	BTIP	COMMENTS
2501	1+	1+	-	1+	-	-	-	-	-
2502	-	-	-	1+	1+	-	-	-	-
2503	-	-	-	1+	-	-	-	-	-
2504	1+	-	-	1+	-	-	-	-	-
2505	2+	-	-	1+	-	-	-	-	-
2506	-	-	-	1+	-	-	-	-	-
2507	1+	-	-	1+	-	-	-	-	NRBC 1
2508	2+	1+	-	1+	-	-	-	-	NRBC 1
2509	-	-	-	1+	-	-	-	-	-
2510	1+	-	-	-	-	-	-	-	-
2511	1+	1+	-	-	-	-	-	-	-
2512	1+	1+	-	-	-	-	-	-	-
2513	-	-	-	1+	1+	-	-	-	-
2514	-	-	-	1+	-	-	-	-	-
2515	-	-	-	2+	-	-	-	-	-





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INDIVIDUAL HEMOGRAMS

APPENDIX NO. 8

WEEK 13 - FEMALES

WBC DIFFERENTIAL COUNT

ANIMAL NO.	WBC X10 ³	NEUT SEG %	NEUT NSEG %	LYMPH %	MONO %	EOSIN %	BASO %
3501	3.4	31.0	0.0	66.0	2.0	1.0	0.0
3502	2.7	22.0	0.0	74.0	3.0	1.0	0.0
3503	5.1	13.0	0.0	84.0	2.0	1.0	0.0
3504	6.3	21.0	0.0	68.0	10.0	1.0	0.0
3505	6.5	31.0	0.0	63.0	6.0	0.0	0.0
3506	5.6	6.0	0.0	79.0	12.0	3.0	0.0
3507	3.6	27.0	0.0	72.0	0.0	1.0	0.0
3508	3.6	18.0	0.0	79.0	1.0	2.0	0.0
3509	7.1	14.0	0.0	85.0	1.0	0.0	0.0
3510	5.0	17.0	0.0	83.0	0.0	0.0	0.0
3511	5.8	18.0	0.0	80.0	2.0	0.0	0.0
3513	3.7	24.0	0.0	72.0	4.0	0.0	0.0
3514	4.5	14.0	0.0	84.0	1.0	1.0	0.0
3516	6.3	6.0	0.0	94.0	0.0	0.0	0.0
3517	4.4	25.0	0.0	70.0	4.0	1.0	0.0

GROUP 3 - CERIC OXIDE INTERMEDIATE DOSE



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INDIVIDUAL HEMOGRAMS

APPENDIX NO. 8

WEEK 13 - FEMALES

WBC DIFFERENTIAL COUNT (ABSOLUTE)

ANIMAL NO.	NEUT SEG	NEUT NSEG	LYMPH	MONO	EOSIN	BASED
GROUP 3 - CERIC OXIDE INTERMEDIATE DOSE						
3501	1054.0	0.0	2244.0	68.0	34.0	0.0
3502	594.0	0.0	1998.0	81.0	27.0	0.0
3503	663.0	0.0	4284.0	102.0	51.0	0.0
3504	1323.0	0.0	4284.0	630.0	63.0	0.0
3505	2015.0	0.0	4095.0	390.0	0.0	0.0
3506	336.0	0.0	4424.0	672.0	168.0	0.0
3507	972.0	0.0	2592.0	0.0	36.0	0.0
3508	648.0	0.0	2844.0	36.0	72.0	0.0
3509	994.0	0.0	6035.0	71.0	0.0	0.0
3510	850.0	0.0	4150.0	0.0	0.0	0.0
3511	1044.0	0.0	4640.0	116.0	0.0	0.0
3513	898.0	0.0	2664.0	148.0	0.0	0.0
3514	630.0	0.0	3780.0	45.0	45.0	0.0
3516	378.0	0.0	5922.0	0.0	0.0	0.0
3517	1100.0	0.0	3080.0	176.0	44.0	0.0

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INDIVIDUAL HEMOGRAMS

APPENDIX NO. 8

WEEK 13 - FEMALES

ANIMAL NO.	RBC X10 ⁶	Hb G/DL	Ht %	MCV ₃ UM ₃	MCH PG	MCHC G/DL	RDW %
3501	7.61	14.7	41.9	55.1	19.3	35.1	11.2
3502	7.83	14.4	40.9	52.2	18.4	35.2	10.8
3503	7.95	15.2	42.7	53.7	19.1	35.6	11.4
3504	7.26	13.8	37.6	51.8	19.0	36.7	11.8
3505	8.13	15.1	42.4	52.1	18.6	35.6	12.4
3506	8.78	16.5	45.2	51.5	18.8	36.5	12.2
3507	7.75	14.4	41.3	53.3	18.6	34.9	11.5
3508	8.27	15.5	44.0	53.2	18.7	35.2	11.3
3509	8.34	16.2	45.0	53.9	19.4	36.0	11.2
3510	7.92	14.9	42.6	53.8	18.8	35.0	10.7
3511	7.20	14.5	42.0	58.4	20.1	34.5	11.2
3513	8.45	15.7	44.8	53.0	18.6	35.1	11.6
3514	7.75	14.7	42.3	54.6	19.0	34.7	11.7
3516	7.86	15.0	42.8	54.4	19.1	35.1	11.5
3517	8.15	15.0	43.7	53.6	18.4	34.3	11.5

GROUP 3 - CERIC OXIDE INTERMEDIATE DOSE



PROJECT NO : 90831

INDIVIDUAL HEMOGRAMS

APPENDIX NO. 8

WEEK 13 - FEMALES

ANIMAL NO.	PLT ₃ X10 ³	MPU UM ₃	PT SEC.
3501	947.0	8.2	14.0
3502	838.0	8.4	14.7
3503	898.0	8.7	13.1
3504	949.0	7.8	13.5
3505	951.0	8.4	13.9
3506	1059.0	7.9	13.4
3507	957.0	8.0	14.2
3508	870.0	8.6	13.8
3509	842.0	8.0	14.6
3510	795.0	8.4	14.1
3511	837.0	8.6	14.9
3513	939.0	9.2	13.8
3514	932.0	8.7	14.3
3516	896.0	8.2	14.0
3517	808.0	9.3	14.5

GROUP 3 - CERIC OXIDE INTERMEDIATE DOSE

APPENDIX NO. 8
 INDIVIDUAL HEMOGRAMS
 BLOOD CELL MORPHOLOGY
 WEEK 13
 FEMALES
 PROJECT NO. 90831

GROUP 3 - CERIC OXIDE INTERMEDIATE DOSE

ANIMAL NO.	CREN	POLY	HYP0	ANIS	POIK	CODO	HJB	ESTIP	COMMENTS
3501	-	-	-	-	1+	-	-	-	-
3502	-	-	-	1+	-	-	-	-	-
3503	-	-	-	1+	-	-	-	-	-
3504	1+	-	-	1+	-	-	-	-	-
3505	1+	-	-	1+	-	-	-	-	-
3506	1+	1+	-	1+	-	-	-	-	-
3507	1+	1+	-	1+	-	-	-	-	-
3508	1+	1+	-	-	-	-	-	-	-
3509	2+	-	-	-	-	-	-	-	-
3510	-	1+	-	1+	-	-	-	-	-
3511	-	-	-	-	-	-	-	-	-
3513	-	-	-	-	-	-	-	-	-
3514	-	-	-	1+	1+	-	-	-	-
3516	1+	-	-	1+	-	-	-	-	-
3517	-	-	-	1+	-	-	-	-	-

APPENDIX NO. 8

INDIVIDUAL HEMOGRAMS

PROJECT NO : 90831

WEEK 13 - FEMALES

WBC DIFFERENTIAL COUNT

ANIMAL NO.	WBC X10 ³	NEUT SEG %	NEUT NSEG %	LYMPH %	MONO %	EOSIN %	BASO %
4501	3.0	28.0	0.0	68.0	3.0	1.0	0.0
4502	4.6	27.0	0.0	71.0	2.0	0.0	0.0
4503	4.0	25.0	0.0	69.0	6.0	0.0	0.0
4504	6.1	25.0	0.0	66.0	6.0	2.0	1.0
4505	3.6	34.0	0.0	64.0	2.0	0.0	0.0
4506	6.2	11.0	0.0	84.0	5.0	0.0	0.0
4507	3.4	20.0	0.0	77.0	2.0	1.0	0.0
4508	4.7	25.0	0.0	69.0	4.0	2.0	0.0
4509	6.9	24.0	0.0	65.0	10.0	1.0	0.0
4510	4.2	18.0	0.0	81.0	0.0	1.0	0.0
4511	5.1	17.0	0.0	80.0	3.0	0.0	0.0
4513	6.2	24.0	0.0	74.0	2.0	0.0	0.0
4514	3.9	19.0	0.0	81.0	0.0	0.0	0.0
4515	5.3	10.0	0.0	85.0	5.0	0.0	0.0
4516	8.2	22.0	0.0	75.0	2.0	1.0	0.0

GROUP 4 - CERIC OXIDE
HIGH DOSE

APPENDIX NO. 8

INDIVIDUAL HEMOGRAMS

PROJECT NO : 90831

WEEK 13 - FEMALES

WBC DIFFERENTIAL COUNT (ABSOLUTE)

ANIMAL NO.	NEUT SEC	NEUT NSEG	LYMPH	MONO	EUSIN	BASO
4501	840.0	0.0	2040.0	90.0	30.0	0.0
4502	1242.0	0.0	3266.0	92.0	0.0	0.0
4503	1000.0	0.0	2760.0	240.0	0.0	0.0
4504	1525.0	0.0	4026.0	366.0	122.0	61.0
4505	1224.0	0.0	2304.0	72.0	0.0	0.0
4506	682.0	0.0	5208.0	310.0	0.0	0.0
4507	680.0	0.0	2618.0	68.0	34.0	0.0
4508	1175.0	0.0	3243.0	188.0	94.0	0.0
4509	1656.0	0.0	4485.0	690.0	69.0	0.0
4510	756.0	0.0	3402.0	0.0	42.0	0.0
4511	867.0	0.0	4080.0	153.0	0.0	0.0
4513	1488.0	0.0	4598.0	124.0	0.0	0.0
4514	741.0	0.0	3159.0	0.0	0.0	0.0
4515	530.0	0.0	4905.0	265.0	0.0	0.0
4516	1804.0	0.0	6150.0	164.0	82.0	0.0

GROUP 4 - CERIC OXIDE
HIGH DOSE



PROJECT NO : 90831

INDIVIDUAL HEMOGRAMS

APPENDIX NO. 8

WEEK 13 - FEMALES

ANIMAL NO.	RBC X10 ⁶	Hb G/DL	Ht %	MCV UM ³	MCH PG	MCHC G/DL	RDW %
4501	8.01	15.7	43.8	54.7	19.6	35.8	11.9
4502	8.30	16.2	44.5	53.6	19.5	36.4	12.0
4503	7.62	14.6	39.9	52.3	19.2	36.6	12.1
4504	8.37	15.5	43.7	52.2	18.5	35.5	12.5
4505	8.09	14.9	43.0	53.2	18.4	34.6	11.1
4506	8.53	15.9	44.4	52.1	18.6	35.8	12.1
4507	7.89	15.1	41.7	52.8	19.1	36.2	12.0
4508	7.63	15.1	41.6	54.5	19.8	36.3	11.7
4509	7.77	15.4	43.0	55.4	19.8	35.8	11.5
4510	7.56	14.6	40.0	52.9	19.3	36.5	12.0
4511	8.84	16.2	46.7	52.8	18.3	34.7	12.0
4513	7.96	15.6	44.0	55.3	19.6	35.4	11.5
4514	8.32	15.9	45.9	55.2	19.1	34.6	11.9
4515	8.46	15.4	43.7	51.7	18.2	35.2	11.7
4516	7.98	15.6	43.0	53.9	19.5	36.3	11.8

GROUP 4 - CERIC OXIDE
HIGH DOSE



PROJECT NO : 90831

INDIVIDUAL HEMOGRAMS

APPENDIX NO. 8

WEEK 13 - FEMALES

ANIMAL NO.	PLT ₃ X10 ³	MPV ₃ UM ³	PT SEC.
4501	918.0	8.4	13.3
4502	788.0	8.3	13.8
4503	891.0	8.6	13.8
4504	911.0	9.0	13.2
4505	958.0	9.0	13.7
4506	1018.0	8.4	13.8
4507	964.0	8.4	13.8
4508	939.0	8.6	13.6
4509	1020.0	8.3	13.6
4510	1083.0	7.7	13.8
4511	998.0	8.5	14.2
4513	1007.0	8.5	14.1
4514	830.0	8.8	14.8
4515	935.0	9.2	13.3
4516	1038.0	8.2	14.6

GROUP 4 - CERIC OXIDE
HIGH DOSE



PROJECT NO. 90831

INDIVIDUAL HEMOGRAMS
BLOOD CELL MORPHOLOGY
WEEK 13
FEMALES

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GROUP 4 - CERIC OXIDE HIGH DOSE

ANTHAL NO.	CREN	POLY	HYPO	ANTS	POIK	CODO	HJB	BSITP	COMMENTS
4501	1+	1+	-	1+	-	-	-	-	-
4502	1+	-	-	1+	-	-	-	-	-
4503	1+	-	-	-	-	-	-	-	-
4504	1+	1+	-	1+	-	-	-	-	-
4505	-	-	-	1+	-	-	-	-	ROUL 1+
4506	1+	-	-	1+	-	-	-	-	-
4507	2+	1+	-	1+	-	-	-	-	-
4508	2+	1+	-	-	-	-	-	-	-
4509	1+	1+	-	1+	-	-	-	-	-
4510	1+	-	-	1+	-	-	-	-	-
4511	1+	1+	-	1+	-	-	-	-	-
4513	-	-	-	1+	-	-	-	-	NRBC 1
4514	1+	1+	-	1+	-	-	-	-	-
4515	-	-	-	1+	-	-	-	-	-
4516	-	1+	-	1+	-	-	-	-	-





APPENDIX NO. 9

PROJECT NO. 90831

INDIVIDUAL CLINICAL BIOCHEMICAL ANALYSES
MALES AND FEMALES

The following footnotes have been used throughout the appendix:

Ns No sample

NSQ Not sufficient quantity



APPENDIX NO. 9

INDIVIDUAL CLINICAL BIOCHEMICAL ANALYSES

PROJECT NO :90831

HEALTH SCREEN - MALES

ANIMAL NO.	B.U.N. MG/DL	CREAT- ININE MG/DL	GLUCOSE MG/DL	TOTAL BILI- RUBIN MG/DL	AST U/L	ALT U/L
5001	13.9	.5	132.0	.09	210.0	57.0
5002	11.5	.4	119.0	.07	173.0	49.0
5003	11.1	.5	132.0	.05	121.0	45.0
5004	11.5	.5	133.0	.08	114.0	34.0
5005	12.5	.6	123.0	.13	135.0	44.0
5006	13.0	.5	123.0	.07	126.0	38.0
5007	8.4	.4	100.0	.08	106.0	39.0
5008	10.1	.5	100.0	.11	105.0	40.0
5009	12.6	.6	107.0	.08	132.0	45.0
5010	9.7	.5	101.0	.09	148.0	51.0

GROUP 5 - HEALTH SCREEN



PROJECT NO : 90831

INDIVIDUAL CLINICAL BIOCHEMICAL ANALYSES

HEALTH SCREEN - MALES

ANIMAL NO.	ALKALINE PHOS- PHATASE U/L	CA MG/DL	PHOS- PHORUS MG/DL	CHOLE- TEROL MG/DL	TRIGLY- CERIDES MG/DL	TOTAL PROTEIN G/DL
5001	157.0	10.2	9.00	77.0	29.0	5.4
5002	287.0	9.6	9.31	100.0	49.0	5.1
5003	206.0	9.9	8.69	68.0	40.0	5.4
5004	188.0	9.8	9.61	68.0	33.0	5.2
5005	207.0	9.9	8.82	70.0	47.0	4.9
5006	292.0	9.7	9.78	83.0	32.0	5.4
5007	198.0	9.8	9.12	83.0	32.0	5.0
5008	184.0	10.4	10.23	64.0	40.0	5.2
5009	332.0	10.4	10.12	102.0	37.0	5.3
5010	347.0	10.3	10.22	67.0	44.0	5.2

GROUP 5 - HEALTH SCREEN



PROJECT NO : 90831

INDIVIDUAL CLINICAL BIOCHEMICAL ANALYSES

APPENDIX NO. 9

HEALTH SCREEN - MALES

ANIMAL NO.	ALBUMIN G/DL	A/G RATIO	GLOBULIN G/DL	NA MEQ/L	K MEQ/L	CL MEQ/L
5001	3.0	1.25	2.4	147.0	4.40	103.0
5002	2.7	1.12	2.4	145.0	4.24	103.0
5003	2.9	1.16	2.5	146.0	3.80	103.0
5004	2.9	1.26	2.3	144.0	4.25	104.0
5005	2.7	1.23	2.2	144.0	4.17	103.0
5006	2.9	1.16	2.5	146.0	4.25	104.0
5007	2.7	1.17	2.3	145.0	4.08	102.0
5008	2.8	1.17	2.4	146.0	4.09	103.0
5009	2.9	1.21	2.4	146.0	4.40	104.0
5010	2.7	1.08	2.5	144.0	4.56	101.0



APPENDIX NO. 9 INDIVIDUAL CLINICAL BIOCHEMICAL ANALYSES PROJECT NO : 90831
 HEALTH SCREEN - FEMALES

ANIMAL NO.	B.U.N. MG/DL	CREAT- ININE MG/DL	GLUCOSE MG/DL	TOTAL BILI- RUBIN MG/DL	AST U/L	ALT U/L
GROUP 5 - HEALTH SCREEN						
5501	15.7	.4	149.0	.10	117.0	28.0
5502	18.9	.6	165.0	.11	131.0	27.0
5503	11.2	.6	122.0	.08	104.0	18.0
5504	17.5	.6	127.0	.13	149.0	30.0
5505	16.4	.5	117.0	.15	115.0	31.0
5506	14.6	.6	128.0	.10	113.0	45.0
5507	12.6	.6	109.0	.09	121.0	35.0
5508	11.2	.7	106.0	.08	122.0	36.0
5509	22.7	.7	159.0	.13	120.0	31.0
5510	12.0	.5	138.0	.11	110.0	24.0

APPENDIX NO. 9

INDIVIDUAL CLINICAL BIOCHEMICAL ANALYSES

PROJECT NO : 90831

HEALTH SCREEN - FEMALES

ANIMAL NO.	ALKALINE PHOS- PHATASE U/L	CA MG/DL	PHOS- PHORUS MG/DL	CHOLE- TEROL MG/DL	TRIGLY- CERIDES MG/DL	TOTAL PROTEIN G/DL
5501	197.0	10.3	10.46	89.0	44.0	5.0
5502	277.0	10.1	9.56	73.0	22.0	5.4
5503	196.0	10.1	10.53	101.0	29.0	5.2
5504	218.0	9.9	10.17	100.0	35.0	5.2
5505	188.0	10.0	9.83	94.0	22.0	5.4
5506	229.0	9.9	9.70	89.0	27.0	5.4
5507	227.0	10.1	9.73	75.0	30.0	4.9
5508	159.0	10.4	10.34	101.0	29.0	5.3
5509	225.0	10.3	11.58	92.0	19.0	5.1
5510	203.0	10.0	10.27	81.0	27.0	5.2

GROUP 5 - HEALTH SCREEN



APPENDIX NO. 9

INDIVIDUAL CLINICAL BIOCHEMICAL ANALYSES

PROJECT NO :90831

HEALTH SCREEN - FEMALES

ANIMAL NO.	ALBUMIN G/DL	A/G RATIO	GLOBULIN G/DL	NA MEQ/L	K MEQ/L	CL MEQ/L
5501	2.8	1.27	2.2	146.0	4.18	106.0
5502	3.0	1.25	2.4	147.0	4.04	107.0
5503	2.8	1.17	2.4	146.0	4.05	106.0
5504	3.0	1.36	2.2	144.0	4.72	106.0
5505	3.0	1.25	2.4	145.0	4.13	106.0
5506	3.0	1.25	2.4	145.0	4.11	106.0
5507	2.7	1.23	2.2	146.0	4.04	106.0
5508	2.9	1.21	2.4	144.0	5.38	107.0
5509	2.9	1.32	2.2	147.0	4.77	107.0
5510	2.9	1.26	2.3	146.0	4.37	107.0

GROUP 5 - HEALTH SCREEN



PROJECT NO : 90831

INDIVIDUAL CLINICAL BIOCHEMICAL ANALYSES

APPENDIX NO. 9

WEEK 6 - MALES

ANIMAL NO.	B. U. N. MG/DL	CREAT- ININE MG/DL	GLUCOSE MG/DL	TOTAL BILI- RUBIN MG/DL	AST U/L	ALT U/L
GROUP 1 - AIR CONTROL						
1001	21.1	1.1	91.0	.13	142.0	52.0
1002	17.4	.9	103.0	.12	178.0	47.0
1005	21.1	1.0	121.0	.15	135.0	46.0
1006	15.0	.6	93.0	.11	165.0	38.0
1007	13.6	.8	120.0	.10	133.0	39.0
1008	15.2	.9	89.0	.13	200.0	40.0
1009	17.5	1.0	81.0	.14	146.0	46.0
1010	16.0	1.0	99.0	.12	162.0	52.0
1011	22.4	1.2	113.0	.17	156.0	39.0
1012	15.4	1.0	106.0	.13	161.0	40.0
1013	16.7	.9	90.0	.15	163.0	43.0
1014	16.4	.7	117.0	.12	117.0	42.0
1015	18.6	.9	110.0	.17	108.0	36.0
1016	16.4	.9	111.0	.07	142.0	41.0
1017	17.2	.9	110.0	.10	140.0	39.0

APPENDIX NO. 9

INDIVIDUAL CLINICAL BIOCHEMICAL ANALYSES

PROJECT NO : 90831

WEEK 6 - MALES

ANIMAL NO.	ALKALINE PHOS- PHATASE U/L	CA MG/DL	PHOS- PHORUS MG/DL	CHOLE- TEROL MG/DL	TRIGLY- CERIDES MG/DL	TOTAL PROTEIN G/DL
GROUP 1 - AIR CONTROL						
1001	176.0	8.9	6.05	59.0	32.0	6.6
1002	193.0	8.9	7.74	84.0	58.0	6.2
1005	128.0	9.3	8.60	79.0	48.0	6.9
1006	142.0	9.4	7.76	53.0	87.0	7.1
1007	116.0	8.0	7.56	65.0	108.0	6.7
1008	142.0	8.8	7.46	45.0	72.0	6.8
1009	119.0	8.9	6.89	62.0	64.0	6.6
1010	159.0	9.1	8.16	64.0	74.0	7.4
1011	110.0	9.0	6.74	54.0	66.0	6.6
1012	95.0	8.7	7.33	65.0	54.0	6.5
1013	145.0	8.8	7.76	48.0	39.0	6.4
1014	159.0	9.0	6.98	42.0	38.0	7.1
1015	105.0	9.2	6.95	96.0	44.0	6.9
1016	145.0	8.8	7.53	62.0	65.0	6.4
1017	118.0	9.3	7.83	63.0	68.0	6.7

PROJECT NO : 90831

INDIVIDUAL CLINICAL BIOCHEMICAL ANALYSES

APPENDIX NO. 9

WEEK 6 - MALES

ANIMAL NO.	ALBUMIN G/DL	A/G RATIO	GLOBULIN G/DL	NA MEQ/L	K MEQ/L	CL MEQ/L
GROUP 1 - AIR CONTROL						
1001	3.4	1.06	3.2	149.0	4.33	106.0
1002	3.1	1.00	3.1	146.0	4.62	105.0
1005	3.4	.97	3.5	147.0	4.85	105.0
1006	3.5	.97	3.6	146.0	5.20	103.0
1007	3.3	.97	3.4	147.0	6.80	102.0
1008	3.5	1.06	3.3	149.0	5.22	104.0
1009	3.4	1.06	3.2	151.0	4.56	105.0
1010	3.3	.80	4.1	148.0	5.44	104.0
1011	3.5	1.13	3.1	147.0	5.31	104.0
1012	3.4	1.10	3.1	149.0	4.81	104.0
1013	3.3	1.06	3.1	149.0	4.52	105.0
1014	3.5	.97	3.6	149.0	4.40	105.0
1015	3.5	1.03	3.4	149.0	4.41	106.0
1016	3.1	.94	3.3	147.0	4.61	102.0
1017	3.3	.97	3.4	146.0	5.20	104.0

PROJECT NO : 90831

INDIVIDUAL CLINICAL BIOCHEMICAL ANALYSES

APPENDIX NO. 9

WEEK 6 - MALES

ANIMAL NO.	B.U.N. MG/DL	CREAT- ININE MG/DL	GLUCOSE MG/DL	TOTAL BILI- RUBIN MG/DL	AST U/L	ALT U/L
2001	18.5	1.0	107.0	.15	162.0	45.0
2002	19.3	1.0	124.0	.15	141.0	40.0
2003	21.9	1.1	87.0	.11	143.0	51.0
2004	27.6	1.2	89.0	.12	125.0	39.0
2005	24.8	1.5	60.0	.11	160.0	49.0
2006	18.4	.9	94.0	.12	156.0	39.0
2007	17.8	.8	98.0	.16	191.0	48.0
2008	16.4	.8	74.0	.12	148.0	52.0
2009	16.3	.8	110.0	.12	157.0	42.0
2010	13.7	.7	98.0	.14	143.0	48.0
2011	19.2	.8	90.0	.14	148.0	53.0
2012	18.2	.8	87.0	.15	172.0	54.0
2013	18.2	.8	105.0	.13	191.0	50.0
2015	18.7	.8	94.0	.16	175.0	43.0
2016	19.8	.8	108.0	.16	155.0	49.0

GROUP 2 - CERIC OXIDE
LOW DOSE



PROJECT NO : 90831

INDIVIDUAL CLINICAL BIOCHEMICAL ANALYSES

APPENDIX NO. 9

WEEK 6 - MALES

ANIMAL NO.	ALKALINE PHOS- PHATASE U/L	CA MG/DL	PHOS- PHORUS MG/DL	CHOLE- TEROL MG/DL	TRIGLY- CERIDES MG/DL	TOTAL PROTEIN G/DL
2001	150.0	8.8	7.90	62.0	39.0	6.9
2002	121.0	8.9	8.40	77.0	105.0	6.8
2003	194.0	9.4	6.86	84.0	33.0	6.9
2004	96.0	9.4	6.53	52.0	40.0	7.4
2005	132.0	8.8	5.20	44.0	33.0	6.5
2006	245.0	9.1	7.44	56.0	79.0	6.9
2007	144.0	8.9	7.01	51.0	49.0	6.8
2008	146.0	9.0	7.12	79.0	73.0	6.9
2009	170.0	9.2	7.74	71.0	102.0	6.6
2010	166.0	9.5	7.72	70.0	125.0	6.8
2011	145.0	8.9	7.32	46.0	37.0	7.0
2012	152.0	9.0	7.28	51.0	41.0	6.5
2013	149.0	9.0	7.17	64.0	42.0	7.0
2015	208.0	8.7	7.29	56.0	52.0	6.4
2016	138.0	9.0	7.07	53.0	66.0	6.5

GROUP 2 - CERIC OXIDE
LOW DOSE

APPENDIX NO. 9

INDIVIDUAL CLINICAL BIOCHEMICAL ANALYSES

PROJECT NO : 90831

WEEK 6 - MALES

ANIMAL NO.	ALBUMIN G/DL	A/G RATIO	GLOBULIN G/DL	NA MEQ/L	K MEQ/L	CL MEQ/L
2001	3.4	.97	3.5	148.0	4.22	105.0
2002	3.3	.94	3.5	148.0	4.76	104.0
2003	3.5	1.03	3.4	149.0	4.67	107.0
2004	3.5	.90	3.9	150.0	4.12	107.0
2005	3.3	1.03	3.2	149.0	5.87	110.0
2006	3.5	1.03	3.4	149.0	4.97	102.0
2007	3.5	1.06	3.3	149.0	4.86	106.0
2008	3.4	.97	3.5	149.0	5.74	106.0
2009	3.4	1.06	3.2	144.0	5.60	102.0
2010	3.3	.94	3.5	147.0	5.23	101.0
2011	3.6	1.06	3.4	149.0	5.77	108.0
2012	3.3	1.03	3.2	148.0	4.62	105.0
2013	3.4	.94	3.6	149.0	4.96	106.0
2015	3.2	1.00	3.2	145.0	4.94	102.0
2016	3.3	1.03	3.2	143.0	5.47	102.0

GROUP 2 - CERIC OXIDE
LOW DOSE

APPENDIX NO. 9

INDIVIDUAL CLINICAL BIOCHEMICAL ANALYSES

PROJECT NO : 90831

WEEK 6 - MALES

ANIMAL NO.	B.U.N. MG/DL	CREAT- ININE MG/DL	GLUCOSE MG/DL	TOTAL BILI- RUBIN MG/DL	AST U/L	ALT U/L
GROUP 3 - CERIC OXIDE INTERMEDIATE DOSE						
3001	18.9	.5	112.0	.13	124.0	31.0
3002	22.3	.9	108.0	.16	212.0	48.0
3003	14.2	.8	133.0	.16	207.0	56.0
3004	17.8	1.0	122.0	.17	177.0	49.0
3005	17.7	.8	107.0	.16	145.0	46.0
3006	17.6	.9	131.0	.22	163.0	49.0
3007	13.8	.7	95.0	.10	184.0	41.0
3008	16.0	.9	104.0	.11	197.0	69.0
3009	18.2	1.0	102.0	.16	160.0	50.0
3011	18.4	.8	109.0	.17	154.0	38.0
3012	15.8	.8	101.0	.10	147.0	50.0
3013	13.4	.9	124.0	.14	137.0	33.0
3014	17.4	.9	114.0	.15	152.0	44.0
3015	14.9	.8	123.0	.16	160.0	43.0
3016	17.4	.9	100.0	.16	150.0	43.0

APPENDIX NO. 9

INDIVIDUAL CLINICAL BIOCHEMICAL ANALYSES

PROJECT NO : 90831

WEEK 6 - MALES

ANIMAL NO.	ALKALINE PHOSPHATASE U/L	CA MG/DL	PHOSPHORUS MG/DL	CHOLESTEROL MG/DL	TRIGLYCERIDES MG/DL	TOTAL PROTEIN G/DL
3001	127.0	9.1	8.32	57.0	55.0	6.3
3002	175.0	9.0	7.95	65.0	55.0	6.7
3003	123.0	9.2	6.91	82.0	70.0	6.8
3004	128.0	NSQ	6.60	NSQ	NSQ	NSQ
3005	231.0	9.3	8.21	80.0	81.0	6.7
3006	145.0	9.5	9.46	72.0	89.0	6.5
3007	172.0	8.7	7.42	53.0	55.0	6.5
3008	140.0	9.3	7.11	70.0	152.0	7.0
3009	188.0	9.5	7.13	82.0	64.0	6.6
3011	150.0	9.0	6.94	47.0	51.0	6.8
3012	129.0	9.0	6.60	41.0	65.0	6.5
3013	187.0	8.6	8.33	56.0	48.0	6.9
3014	146.0	9.2	8.59	49.0	50.0	6.6
3015	168.0	8.7	6.89	54.0	66.0	6.5
3016	136.0	8.8	7.43	49.0	55.0	6.2

GROUP 3 - CERIC OXIDE INTERMEDIATE DOSE



APPENDIX NO. 9

INDIVIDUAL CLINICAL BIOCHEMICAL ANALYSES

PROJECT NO :90831

WEEK 6 - MALES

ANIMAL NO.	ALBUMIN G/DL	A/G RATIO	GLOBULIN G/DL	NA MEQ/L	K MEQ/L	CL MEQ/L
3001	3.2	1.03	3.1	142.0	4.93	98.0
3002	3.3	.97	3.4	144.0	6.14	106.0
3003	3.3	.94	3.5	143.0	5.13	104.0
3004	NSQ	NSQ	NSQ	147.0	7.04	106.0
3005	3.4	1.03	3.3	146.0	5.01	102.0
3006	3.2	.97	3.3	145.0	6.13	100.0
3007	3.3	1.03	3.2	147.0	5.06	102.0
3008	3.4	.94	3.6	149.0	5.14	106.0
3009	3.4	1.06	3.2	147.0	4.71	102.0
3011	3.4	1.00	3.4	144.0	5.60	103.0
3012	3.3	1.03	3.2	143.0	5.36	100.0
3013	3.3	.92	3.6	145.0	6.31	102.0
3014	3.4	1.06	3.2	146.0	5.79	103.0
3015	3.3	1.03	3.2	144.0	4.89	103.0
3016	3.2	1.07	3.0	147.0	5.17	102.0

APPENDIX NO. 9

INDIVIDUAL CLINICAL BIOCHEMICAL ANALYSES

PROJECT NO : 90831

WEEK 6 - MALES

ANIMAL NO.	B.U.N. MG/DL	CREAT- ININE MG/DL	GLUCOSE MG/DL	TOTAL BILI- RUBIN MG/DL	AST U/L	ALT U/L
GROUP 4 - CERIC OXIDE HIGH DOSE						
4001	14.9	.6	113.0	.16	142.0	45.0
4002	17.1	.9	125.0	.10	121.0	42.0
4003	18.0	.8	120.0	.20	150.0	54.0
4004	13.0	.5	103.0	.15	125.0	49.0
4005	21.1	.9	119.0	.12	117.0	35.0
4006	18.0	.9	97.0	.17	152.0	44.0
4007	18.7	.9	96.0	.13	180.0	53.0
4008	17.9	.8	95.0	.12	188.0	50.0
4009	16.7	.9	112.0	.12	137.0	50.0
4010	18.1	.7	101.0	.14	173.0	41.0
4011	19.1	.9	95.0	.14	154.0	35.0
4012	16.5	.9	91.0	.19	182.0	71.0
4014	20.6	1.0	119.0	.13	152.0	54.0
4015	16.5	.7	117.0	.15	107.0	41.0
4016	20.9	1.1	126.0	.15	145.0	38.0



APPENDIX NO. 9

INDIVIDUAL CLINICAL BIOCHEMICAL ANALYSES

PROJECT NO : 90831

WEEK 6 - MALES

ANIMAL NO.	ALKALINE PHOS- PHATASE U/L	CA MG/DL	PHOS- PHORUS MG/DL	CHOLE- TEROL MG/DL	TRIGLY- CERIDES MG/DL	TOTAL PROTEIN G/DL
4001	176.0	9.1	7.26	72.0	112.0	6.4
4002	135.0	9.4	6.41	65.0	74.0	6.7
4003	135.0	9.1	7.99	85.0	77.0	6.4
4004	168.0	9.6	7.04	66.0	48.0	6.7
4005	187.0	9.1	8.78	48.0	57.0	6.7
4006	150.0	9.4	7.02	60.0	94.0	6.9
4007	201.0	9.3	6.36	NSQ	NSQ	6.2
4008	158.0	8.9	7.40	67.0	43.0	6.9
4009	149.0	9.4	6.56	54.0	89.0	6.4
4010	167.0	9.0	7.68	53.0	67.0	6.7
4011	138.0	8.6	7.42	52.0	69.0	6.7
4012	217.0	9.1	7.67	50.0	40.0	6.5
4014	244.0	9.0	7.51	59.0	58.0	6.9
4015	163.0	9.2	7.02	72.0	66.0	7.0
4016	131.0	9.0	7.83	77.0	72.0	7.3

PROJECT NO : 90831

INDIVIDUAL CLINICAL BIOCHEMICAL ANALYSES

APPENDIX NO. 9

WEEK 6 - MALES

GROUP 4 - CERIC OXIDE HIGH DOSE	ANIMAL NO.	ALBUMIN G/DL	A/G RATIO	GLOBULIN G/DL	NA MEQ/L	K MEQ/L	CL MEQ/L
	4001	3.3	1.06	3.1	145.0	4.65	103.0
	4002	3.4	1.03	3.3	148.0	4.35	107.0
	4003	3.3	1.06	3.1	144.0	5.16	103.0
	4004	3.4	1.03	3.3	145.0	5.36	104.0
	4005	3.3	.97	3.4	147.0	6.26	108.0
	4006	3.5	1.03	3.4	149.0	4.95	105.0
	4007	NSQ	.32	4.7	150.0	5.48	109.0
	4008	3.2	.86	3.7	146.0	5.20	105.0
	4009	3.3	1.06	3.1	148.0	4.75	104.0
	4010	3.3	.97	3.4	145.0	5.35	101.0
	4011	3.3	.97	3.4	145.0	5.23	102.0
	4012	3.3	1.03	3.2	147.0	5.06	104.0
	4014	3.4	.97	3.5	146.0	5.08	103.0
	4015	3.3	.89	3.7	146.0	4.68	102.0
	4016	3.5	.92	3.8	146.0	4.40	102.0



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INDIVIDUAL CLINICAL BIOCHEMICAL ANALYSES

WEEK 6 - FEMALES

APPENDIX NO. 9

ANIMAL NO.	B. U. N. MG/DL	CREAT- ININE MG./DL	GLUCOSE MG./DL	TOTAL BILI- RUBIN MG./DL	AST U/L	ALT U/L
GROUP 1 - AIR CONTROL						
1501	15.9	.8	76.0	.12	141.0	41.0
1502	22.4	.7	88.0	.14	176.0	36.0
1503	19.8	.9	99.0	.14	206.0	42.0
1504	26.9	1.5	81.0	.16	172.0	46.0
1505	24.0	.9	82.0	.11	171.0	42.0
1506	20.8	.8	112.0	.14	141.0	50.0
1507	20.8	1.0	107.0	.13	138.0	31.0
1508	18.2	.9	97.0	.15	171.0	42.0
1509	28.4	1.0	81.0	.15	215.0	54.0
1510	19.7	1.1	105.0	.10	210.0	40.0
1511	18.1	.9	96.0	.13	154.0	34.0
1512	21.4	.9	97.0	.17	181.0	26.0
1513	22.5	.8	80.0	.13	136.0	27.0
1514	18.8	.9	95.0	.12	124.0	37.0
1515	22.5	1.0	128.0	.17	104.0	33.0



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INDIVIDUAL CLINICAL BIOCHEMICAL ANALYSES

PROJECT NO : 90931

WEEK 6 - FEMALES

ANIMAL NO.	ALKALINE PHOSPHATASE		CA MG/DL	PHOSPHORUS MG/DL	CHOLESTEROL MG/DL	TRIGLYCERIDES MG/DL	TOTAL PROTEIN G/DL
	U/L	MG/DL					
GROUP 1 - AIR CONTROL							
1501	157.0	9.8	5.05	91.0	55.0	7.0	
1502	90.0	9.3	7.00	89.0	33.0	6.6	
1503	123.0	9.3	6.63	74.0	35.0	6.7	
1504	159.0	9.6	7.15	89.0	42.0	6.9	
1505	116.0	9.6	5.31	60.0	58.0	6.7	
1506	131.0	9.9	6.01	56.0	44.0	6.6	
1507	123.0	9.5	6.82	60.0	45.0	6.2	
1508	97.0	9.9	6.06	91.0	52.0	7.4	
1509	131.0	9.5	7.65	71.0	37.0	6.5	
1510	128.0	9.7	7.40	90.0	47.0	7.3	
1511	113.0	9.9	7.38	64.0	54.0	6.6	
1512	94.0	10.0	8.73	72.0	44.0	6.5	
1513	58.0	9.7	6.19	82.0	49.0	7.2	
1514	131.0	10.0	6.20	41.0	26.0	7.0	
1515	119.0	9.8	7.10	89.0	51.0	6.8	

PROJECT NO : 90831

INDIVIDUAL CLINICAL BIOCHEMICAL ANALYSES

APPENDIX NO. 9

WEEK 6 - FEMALES

ANIMAL NO.	ALBUMIN G/DL	A/G RATIO	GLOBULIN G/DL	NA MEQ/L	K MEQ/L	CL MEQ/L
GROUP 1 - AIR CONTROL						
1501	3.7	1.12	3.3	150.0	4.08	108.0
1502	3.5	1.13	3.1	145.0	5.17	105.0
1503	3.4	1.03	3.3	144.0	5.68	104.0
1504	3.5	1.03	3.4	148.0	6.21	110.0
1505	3.4	1.03	3.3	151.0	5.38	113.0
1506	3.7	1.28	2.9	143.0	5.43	103.0
1507	3.2	1.07	3.0	145.0	5.50	108.0
1508	3.7	1.00	3.7	147.0	5.55	107.0
1509	3.3	1.03	3.2	147.0	5.92	109.0
1510	3.8	1.09	3.5	145.0	6.37	105.0
1511	3.4	1.06	3.2	146.0	5.73	103.0
1512	3.3	1.03	3.2	147.0	5.59	106.0
1513	3.6	1.00	3.6	147.0	4.89	106.0
1514	3.5	1.00	3.5	149.0	4.47	105.0
1515	3.5	1.06	3.3	150.0	5.27	110.0

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INDIVIDUAL CLINICAL BIOCHEMICAL ANALYSES

PROJECT NO : 90831

WEEK 6 - FEMALES

ANIMAL NO.	B. U. N. MG/DL	CREAT- ININE MG/DL	GLUCOSE MG/DL	TOTAL BILI- RUBIN MG/DL	AST U/L	ALT U/L
GROUP 2 - CERIC OXIDE						
LOW DOSE						
2501	23.2	1.0	83.0	.12	146.0	37.0
2502	20.6	1.0	99.0	.09	198.0	34.0
2503	21.4	.9	97.0	.10	167.0	37.0
2504	24.7	.9	105.0	.12	211.0	43.0
2505	19.8	.9	85.0	.11	144.0	29.0
2506	19.6	.7	91.0	.19	176.0	34.0
2507	27.8	1.0	99.0	.17	127.0	41.0
2508	19.3	1.1	98.0	.14	162.0	31.0
2509	21.8	.7	93.0	.16	150.0	44.0
2510	22.5	.8	95.0	.11	185.0	44.0
2511	22.1	.7	116.0	.12	143.0	45.0
2512	NS					
2513	23.1	.9	105.0	.12	137.0	32.0
2514	26.2	1.0	87.0	.12	126.0	35.0
2515	NS					

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INDIVIDUAL CLINICAL BIOCHEMICAL ANALYSES

APPENDIX NO. 9

WEEK 6 - FEMALES

ANIMAL NO.	ALKALINE PHOS- PHATASE U/L	CA MG/DL	PHOS- PHORUS MG/DL	CHOLE- TEROL MG/DL	TRIGLY- CERIDES MG/DL	TOTAL PROTEIN G/DL
2501	104.0	10.1	6.05	85.0	43.0	7.6
2502	112.0	9.4	6.56	85.0	45.0	7.2
2503	168.0	9.1	5.36	71.0	37.0	6.4
2504	109.0	9.4	6.07	82.0	38.0	7.1
2505	92.0	9.7	5.44	78.0	38.0	7.0
2506	98.0	10.0	7.12	88.0	50.0	7.1
2507	121.0	9.6	5.83	110.0	55.0	7.0
2508	134.0	9.9	6.29	79.0	45.0	7.1
2509	111.0	10.1	5.50	87.0	48.0	7.3
2510	66.0	9.9	6.55	81.0	41.0	6.8
2511	163.0	9.6	5.97	67.0	30.0	6.8
2512Ns						
2513	99.0	9.3	6.55	59.0	38.0	6.5
2514	220.0	9.8	6.87	42.0	41.0	6.9
2515Ns						

GROUP 2 - CERIC OXIDE
LOW DOSE

PROJECT NO : 90831

INDIVIDUAL CLINICAL BIOCHEMICAL ANALYSES

APPENDIX NO. 9

WEEK 6 - FEMALES

ANIMAL NO.	ALBUMIN G/DL	A/G RATIO	GLOBULIN G/DL	NA MEQ/L	K MEQ/L	CL MEQ/L
2501	3.6	.90	4.0	146.0	5.23	107.0
2502	3.6	1.00	3.6	144.0	5.49	103.0
2503	3.4	1.13	3.0	144.0	5.19	106.0
2504	3.6	1.03	3.5	146.0	5.40	108.0
2505	3.6	1.06	3.4	145.0	5.43	105.0
2506	3.7	1.09	3.4	145.0	5.57	103.0
2507	3.5	1.00	3.5	145.0	6.83	106.0
2508	3.5	.97	3.6	147.0	4.81	107.0
2509	3.6	.97	3.7	148.0	5.01	106.0
2510	3.5	1.06	3.3	145.0	5.30	106.0
2511	3.5	1.06	3.3	149.0	5.14	108.0
2512 NS						
2513	3.3	1.03	3.2	149.0	4.94	108.0
2514	3.6	1.09	3.3	151.0	5.49	111.0
2515 NS						

GROUP 2 - CERIC OXIDE
LOW DOSE

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INDIVIDUAL CLINICAL BIOCHEMICAL ANALYSES

PROJECT NO : 90831

WEEK 6 - FEMALES

ANIMAL NO.	B. U. N. MG/DL	CREAT- ININE MG/DL	GLUCOSE MG/DL	TOTAL BILI- RUBIN MG/DL	AST U/L	ALT U/L
GROUP 3 - CERIC OXIDE INTERMEDIATE DOSE						
3501	27.3	1.1	108.0	.17	178.0	49.0
3502	21.6	1.0	82.0	.11	157.0	41.0
3503	20.1	.8	109.0	.09	152.0	41.0
3504	29.7	1.0	83.0	.18	132.0	33.0
3505	19.8	.8	89.0	.08	176.0	38.0
3506	24.6	1.0	119.0	.14	114.0	40.0
3507	22.9	1.0	118.0	.11	133.0	38.0
3508	19.6	.7	98.0	.11	126.0	44.0
3509	21.0	.7	104.0	.14	133.0	34.0
3510	23.0	.9	94.0	.14	120.0	44.0
3511	19.3	.8	113.0	.12	127.0	43.0
3513	18.3	1.1	118.0	.11	152.0	34.0
3514	20.1	.8	98.0	.13	139.0	55.0
3516	18.4	.9	101.0	.17	119.0	51.0
3517	25.9	.9	99.0	.14	134.0	50.0



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INDIVIDUAL CLINICAL BIOCHEMICAL ANALYSES

PROJECT NO : 90831

WEEK 6 - FEMALES

ANIMAL NO.	ALKALINE PHOS- PHATASE U/L	CA MG/DL	PHOS- PHORUS MG/DL	CHOLE- TEROL MG/DL	TRIGLY- CERIDES MG/DL	TOTAL PROTEIN G/DL
3501	136.0	9.8	5.77	57.0	42.0	7.1
3502	155.0	9.7	8.29	NSQ	NSQ	NSQ
3503	124.0	9.4	5.32	103.0	45.0	7.0
3504	157.0	10.1	5.63	83.0	51.0	7.1
3505	99.0	9.4	6.53	104.0	44.0	7.0
3506	127.0	9.4	5.80	71.0	40.0	7.0
3507	73.0	9.5	5.14	52.0	41.0	6.8
3508	88.0	10.0	5.53	84.0	43.0	7.5
3509	77.0	9.7	6.78	52.0	37.0	6.7
3510	115.0	9.6	7.55	60.0	38.0	6.9
3511	119.0	9.6	5.56	55.0	38.0	7.0
3513	102.0	10.0	5.51	NSQ	NSQ	7.3
3514	81.0	10.1	6.69	86.0	63.0	7.2
3516	69.0	8.7	5.62	58.0	49.0	7.0
3517	162.0	9.9	6.45	82.0	53.0	7.1

GROUP 3 - CERIC OXIDE INTERMEDIATE DOSE

APPENDIX NO. 9

INDIVIDUAL CLINICAL BIOCHEMICAL ANALYSES

PROJECT NO : 90831

WEEK 6 - FEMALES

ANIMAL NO.	ALBUMIN G/DL	A/G RATIO	GLOBULIN G/DL	NA MEQ/L	K MEQ/L	CL MEQ/L
3501	3.6	1.03	3.5	147.0	5.18	107.0
3502	NSQ	NSQ	NSQ	148.0	5.33	108.0
3503	3.5	1.00	3.5	144.0	4.57	105.0
3504	3.7	1.09	3.4	146.0	5.94	107.0
3505	3.5	1.00	3.5	146.0	5.75	109.0
3506	3.6	1.06	3.4	142.0	5.83	103.0
3507	3.4	1.00	3.4	141.0	4.84	105.0
3508	3.7	.97	3.8	146.0	4.49	106.0
3509	3.4	1.03	3.3	144.0	5.03	104.0
3510	3.3	.92	3.6	142.0	6.72	108.0
3511	3.6	1.06	3.4	146.0	4.88	108.0
3513	3.8	1.09	3.5	150.0	5.94	110.0
3514	3.6	1.00	3.6	147.0	4.73	106.0
3516	3.5	1.00	3.5	146.0	5.94	107.0
3517	3.6	1.03	3.5	146.0	5.88	106.0

GROUP 3 - CERIC OXIDE INTERMEDIATE DOSE

WEEK 6 - FEMALES

ANIMAL NO.	B. U. N. MG/DL	CREAT- ININE MG/DL	GLUCOSE MG/DL	TOTAL BILI- RUBIN MG/DL	AST U/L	ALT U/L
4501	27.2	1.1	162.0	.15	124.0	45.0
4502	21.2	1.1	189.0	.14	170.0	41.0
4503	29.3	1.1	105.0	.16	167.0	37.0
4504	17.7	.8	159.0	.12	128.0	40.0
4505	19.3	.9	95.0	.17	119.0	33.0
4506	19.0	.8	92.0	.15	144.0	36.0
4507	28.1	1.2	73.0	.16	124.0	52.0
4508	21.4	1.0	97.0	.19	194.0	52.0
4509	24.0	1.0	103.0	.14	122.0	40.0
4510	26.4	.9	111.0	.13	117.0	50.0
4511	18.7	.9	101.0	.17	124.0	43.0
4513	21.1	.9	114.0	.18	111.0	45.0
4514	24.6	.9	106.0	.12	139.0	41.0
4515	16.8	.8	123.0	.14	104.0	35.0
4516	17.7	1.0	95.0	.10	153.0	30.0

GROUP 4 - CERIC OXIDE
HIGH DOSE

APPENDIX NO. 9

INDIVIDUAL CLINICAL BIOCHEMICAL ANALYSES

PROJECT NO :90831

WEEK 6 - FEMALES

ANIMAL NO.	ALKALINE PHOS- PHATASE U/L	CA MG/DL	PHOS- PHORUS MG/DL	CHOLE- TEROL MG/DL	TRIGLY- CERIDES MG/DL	TOTAL PROTEIN G/DL
GROUP 4 - CERIC OXIDE HIGH DOSE						
4501	115.0	10.2	6.13	78.0	33.0	7.0
4502	147.0	9.6	5.96	52.0	40.0	7.0
4503	102.0	9.6	8.22	89.0	38.0	6.9
4504	153.0	9.7	5.41	68.0	48.0	7.2
4505	112.0	9.5	7.05	98.0	53.0	6.8
4506	106.0	9.9	7.16	70.0	30.0	7.4
4507	100.0	9.8	6.29	82.0	53.0	7.4
4508	91.0	9.6	7.44	60.0	49.0	7.0
4509	75.0	10.5	5.10	86.0	39.0	7.4
4510	94.0	10.4	4.55	63.0	34.0	7.4
4511	141.0	9.9	6.31	76.0	66.0	6.8
4513	126.0	10.1	5.51	66.0	38.0	7.4
4514	142.0	9.8	5.04	56.0	41.0	7.0
4515	110.0	10.4	6.14	85.0	26.0	7.3
4516	118.0	9.7	6.94	70.0	55.0	6.4

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INDIVIDUAL CLINICAL BIOCHEMICAL ANALYSES

PROJECT NO : 90831

WEEK 6 - FEMALES

ANIMAL NO.	ALBUMIN G/DL	A/G RATIO	GLOBULIN G/DL	NA MEQ/L	K MEQ/L	CL MEQ/L
4501	3.5	1.00	3.5	146.0	7.02	108.0
4502	3.6	1.06	3.4	142.0	5.97	107.0
4503	3.5	1.03	3.4	146.0	6.07	110.0
4504	3.7	1.06	3.5	145.0	5.28	105.0
4505	3.4	1.00	3.4	147.0	4.76	107.0
4506	3.8	1.06	3.6	143.0	5.10	105.0
4507	3.6	.95	3.8	149.0	4.91	108.0
4508	3.5	1.00	3.5	145.0	6.03	106.0
4509	3.9	1.11	3.5	145.0	4.37	106.0
4510	3.7	1.00	3.7	146.0	4.36	108.0
4511	3.5	1.06	3.3	145.0	5.08	105.0
4513	3.7	1.00	3.7	148.0	5.19	108.0
4514	3.6	1.06	3.4	149.0	4.43	109.0
4515	3.6	.97	3.7	147.0	4.74	106.0
4516	3.3	1.06	3.1	146.0	5.73	106.0

GROUP 4 - CERIC OXIDE
HIGH DOSE

APPENDIX NO. 9

INDIVIDUAL CLINICAL BIOCHEMICAL ANALYSES

PROJECT NO : 90831

WEEK 13 - MALES

ANIMAL NO.	B.U.N. MG/DL	CREAT- ININE MG/DL	GLUCOSE MG/DL	TOTAL BILI- RUBIN MG/DL	AST U/L	ALT U/L
GROUP 1 - AIR CONTROL						
1001	13.3	.7	114.0	.13	152.0	41.0
1002	15.2	.7	132.0	.11	182.0	40.0
1005	11.6	.6	117.0	.11	115.0	33.0
1006	18.4	.7	128.0	.10	149.0	35.0
1007	11.7	.8	147.0	.10	128.0	36.0
1008	11.0	.4	148.0	.12	96.0	33.0
1009	14.3	.5	129.0	.10	118.0	44.0
1010	12.4	.7	132.0	.07	151.0	49.0
1011	11.9	.6	150.0	.10	126.0	31.0
1012	8.7	.5	148.0	.09	130.0	36.0
1013	13.3	.6	142.0	.11	125.0	31.0
1014	11.4	.6	152.0	.08	92.0	32.0
1015	10.7	.5	150.0	.09	119.0	23.0
1016	17.0	.6	131.0	.06	139.0	30.0
1017	12.6	.7	131.0	.11	113.0	33.0



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INDIVIDUAL CLINICAL BIOCHEMICAL ANALYSES

PROJECT NO : 90831

WEEK 13 - MALES

GROUP	ANIMAL NO.	ALKALINE PHOS- PHATASE U/L	CA MG/DL	PHOS- PHORUS MG/DL	CHOLE- TEROL MG/DL	TRIGLY- CERIDES MG/DL	TOTAL PROTEIN G/DL
GROUP 1 - AIR CONTROL	1001	84.0	9.2	6.06	54.0	57.0	6.3
	1002	106.0	9.1	5.95	64.0	47.0	6.0
	1005	58.0	9.9	7.08	69.0	102.0	6.8
	1006	97.0	9.5	5.78	41.0	54.0	6.8
	1007	51.0	9.5	6.85	50.0	79.0	6.0
	1008	67.0	9.2	7.90	30.0	36.0	5.8
	1009	71.0	9.9	7.34	50.0	37.0	5.9
	1010	80.0	9.3	7.45	54.0	74.0	6.2
	1011	66.0	9.5	8.21	43.0	42.0	5.6
	1012	49.0	9.7	6.47	62.0	55.0	6.3
	1013	63.0	9.0	7.77	33.0	54.0	5.8
	1014	70.0	9.5	7.42	31.0	68.0	6.0
	1015	46.0	10.0	7.06	98.0	83.0	6.6
	1016	85.0	9.1	6.68	57.0	111.0	5.8
	1017	51.0	9.4	7.06	48.0	127.0	5.9

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INDIVIDUAL CLINICAL BIOCHEMICAL ANALYSES

PROJECT NO :90831

WEEK 13 - MALES

GROUP 1 - AIR CONTROL	ANIMAL NO.	ALBUMIN G/DL	A/G RATIO	GLOBULIN G/DL	NA MEQ/L	K MEQ/L	CL MEQ/L
	1001	2.9	.85	3.4	143.0	4.54	98.0
	1002	2.9	.94	3.1	144.0	4.52	100.0
	1005	3.0	.79	3.8	145.0	4.79	102.0
	1006	3.2	.89	3.6	147.0	4.29	102.0
	1007	2.9	.94	3.1	145.0	4.56	101.0
	1008	2.9	1.00	2.9	145.0	4.62	102.0
	1009	2.9	.97	3.0	148.0	4.58	103.0
	1010	2.8	.82	3.4	144.0	4.99	101.0
	1011	2.8	1.00	2.8	145.0	4.75	101.0
	1012	3.1	.97	3.2	147.0	4.91	103.0
	1013	2.9	1.00	2.9	147.0	4.76	103.0
	1014	2.8	.87	3.2	146.0	4.30	103.0
	1015	3.1	.89	3.5	147.0	4.66	105.0
	1016	2.8	.93	3.0	144.0	4.51	100.0
	1017	2.9	.97	3.0	144.0	4.32	100.0



APPENDIX NO. 9

INDIVIDUAL CLINICAL BIOCHEMICAL ANALYSES

PROJECT NO :90831

WEEK 13 - MALES

ANIMAL NO.	B.U.N. MG/DL	CREAT- ININE MG/DL	GLUCOSE MG/DL	TOTAL BILI- RUBIN MG/DL	AST U/L	ALT U/L
2001	18.6	.9	135.0	.10	155.0	38.0
2002	16.1	.5	132.0	.08	160.0	33.0
2003	11.4	.5	118.0	.08	132.0	35.0
2004	14.3	.6	145.0	.10	120.0	30.0
2005	12.0	.7	132.0	.11	96.0	38.0
2006	13.8	.6	129.0	.07	107.0	43.0
2007	14.6	.8	144.0	.08	112.0	40.0
2008	12.5	.8	110.0	.11	208.0	58.0
2009	14.0	.6	162.0	.09	108.0	41.0
2010	12.0	.6	151.0	.12	139.0	37.0
2011	11.1	.6	143.0	.13	108.0	48.0
2012	13.5	.5	138.0	.11	117.0	43.0
2013	16.0	.5	171.0	.08	184.0	41.0
2015	11.8	.5	137.0	.08	125.0	32.0
2016	13.6	.6	136.0	.11	127.0	29.0

GROUP 2 - CERIC OXIDE
LOW DOSE



APPENDIX NO. 9

INDIVIDUAL CLINICAL BIOCHEMICAL ANALYSES

PROJECT NO : 90831

WEEK 13 - MALES

ANIMAL NO.	ALKALINE PHOS- PHATASE U/L	CA MG/DL	PHOS- PHORUS MG/DL	CHOLE- TEROL MG/DL	TRIGLY- CERIDES MG/DL	TOTAL PROTEIN G/DL
2001	78.0	8.9	6.76	53.0	67.0	6.3
2002	74.0	8.9	6.61	59.0	127.0	6.0
2003	99.0	9.5	6.62	74.0	143.0	6.1
2004	41.0	9.7	7.73	51.0	104.0	6.2
2005	63.0	9.3	7.31	33.0	33.0	5.6
2006	136.0	9.6	6.72	40.0	59.0	6.4
2007	62.0	8.9	7.14	42.0	30.0	6.3
2008	67.0	9.7	8.04	68.0	40.0	6.5
2009	89.0	9.5	7.52	54.0	48.0	5.6
2010	72.0	9.4	7.69	57.0	104.0	6.2
2011	67.0	9.4	7.75	39.0	23.0	5.7
2012	64.0	9.3	7.39	43.0	27.0	5.4
2013	69.0	9.3	7.47	54.0	26.0	6.0
2015	101.0	9.2	8.10	49.0	28.0	5.9
2016	55.0	9.5	7.07	44.0	44.0	6.1

GROUP 2 - CERIC OXIDE LOW DOSE

APPENDIX NO. 9

INDIVIDUAL CLINICAL BIOCHEMICAL ANALYSES

PROJECT NO : 90831

WEEK 13 - MALES

ANIMAL NO.	ALBUMIN G/DL	A/G RATIO	GLOBULIN G/DL	NF. MEQ/L	K MEQ/L	CL MEQ/L
2001	3.0	.91	3.3	141.0	5.09	99.0
2002	2.9	.94	3.1	144.0	4.48	98.0
2003	3.0	.97	3.1	144.0	4.71	100.0
2004	2.9	.88	3.3	145.0	4.82	102.0
2005	2.7	.93	2.9	144.0	4.24	101.0
2006	3.2	1.00	3.2	147.0	4.56	103.0
2007	2.8	.80	3.5	145.0	4.20	103.0
2008	3.0	.86	3.5	146.0	5.23	99.0
2009	2.8	1.00	2.8	146.0	4.77	102.0
2010	2.9	.88	3.3	142.0	5.03	100.0
2011	2.9	1.04	2.8	146.0	4.71	102.0
2012	2.7	1.00	2.7	145.0	4.50	104.0
2013	2.9	.94	3.1	144.0	4.54	100.0
2015	2.9	.97	3.0	147.0	4.62	104.0
2016	2.9	.91	3.2	145.0	4.79	102.0

GROUP 2 - CERIC OXIDE
LOW DOSE



PROJECT NO : 90831

INDIVIDUAL CLINICAL BIOCHEMICAL ANALYSES

APPENDIX NO. 9

WEEK 13 - MALES

ANIMAL NO.	B.U.N. MG/DL	CREAT- ININE MG/DL	GLUCOSE MG/DL	TOTAL BILI- RUBIN MG/DL	AST U/L	ALT U/L
GROUP 3 - CERIC OXIDE INTERMEDIATE DOSE						
3001	14.4	.6	121.0	.09	125.0	33.0
3002	19.0	.7	126.0	.06	136.0	36.0
3003	16.4	.6	131.0	.10	142.0	41.0
3004	14.1	.7	152.0	.13	118.0	45.0
3005	13.2	.6	175.0	.11	118.0	32.0
3006	12.8	.6	173.0	.15	104.0	35.0
3007	13.6	.7	152.0	.10	150.0	30.0
3008	12.1	.5	147.0	.08	140.0	47.0
3009	16.0	.6	162.0	.14	124.0	35.0
3011	11.5	.4	156.0	.07	125.0	30.0
3012	14.4	.4	152.0	.09	130.0	34.0
3013	11.2	.7	163.0	.12	112.0	27.0
3014	14.4	.7	154.0	.09	124.0	34.0
3015	12.7	.7	152.0	.08	132.0	35.0
3016	12.3	.5	148.0	.06	166.0	30.0



APPENDIX NO. 9

INDIVIDUAL CLINICAL BIOCHEMICAL ANALYSES

PROJECT NO : 90831

WEEK 13 - MALES

ANIMAL NO.	ALKALINE PHOSPHATASE U/L	CA MG/DL	PHOSPHORUS MG/DL	CHOLESTEROL MG/DL	TRIGLYCERIDES MG/DL	TOTAL PROTEIN G/DL
3001	60.0	9.2	6.41	55.0	81.0	6.0
3002	80.0	9.1	7.09	57.0	88.0	6.0
3003	83.0	10.0	6.63	77.0	111.0	7.3
3004	66.0	9.7	7.60	63.0	85.0	6.2
3005	89.0	10.3	9.13	65.0	58.0	5.6
3006	56.0	10.0	7.53	66.0	61.0	6.2
3007	84.0	9.5	6.55	47.0	41.0	6.3
3008	70.0	9.4	7.21	62.0	150.0	6.0
3009	98.0	9.9	7.43	72.0	28.0	6.3
3011	72.0	9.1	6.66	40.0	35.0	6.5
3012	79.0	9.7	6.97	41.0	47.0	6.1
3013	79.0	9.7	8.22	54.0	46.0	6.1
3014	68.0	9.3	6.90	42.0	37.0	6.0
3015	78.0	9.6	7.32	50.0	36.0	6.3
3016	62.0	9.0	7.23	43.0	42.0	5.5

APPENDIX NO. 9

INDIVIDUAL CLINICAL BIOCHEMICAL ANALYSES

PROJECT NO : 90831

WEEK 13 - MALES

ANIMAL NO.	ALBUMIN G/DL	A/G RATIO	GLOBULIN G/DL	NA MEQ/L	K MEQ/L	CL MEQ/L
3001	2.9	.94	3.1	143.0	4.65	100.0
3002	2.8	.87	3.2	144.0	4.48	101.0
3003	3.1	.74	4.2	145.0	4.44	102.0
3004	2.9	.88	3.3	144.0	4.70	100.0
3005	2.8	1.00	2.8	143.0	8.47	101.0
3006	2.9	.88	3.3	145.0	4.54	103.0
3007	3.0	.91	3.3	143.0	5.06	99.0
3008	2.9	.94	3.1	145.0	4.68	101.0
3009	3.1	.97	3.2	146.0	4.73	102.0
3011	2.8	.76	3.7	143.0	5.14	103.0
3012	2.9	.91	3.2	144.0	4.93	102.0
3013	2.9	.91	3.2	146.0	4.73	102.0
3014	2.9	.94	3.1	145.0	4.58	103.0
3015	3.0	.91	3.3	146.0	4.70	103.0
3016	2.8	1.04	2.7	145.0	4.74	100.0

GROUP 3 - CERIC OXIDE INTERMEDIATE DOSE

APPENDIX NO. 9

INDIVIDUAL CLINICAL BIOCHEMICAL ANALYSES

PROJECT NO :90831

WEEK 13 - MALES

ANIMAL NO.	B.U.N. MG/DL	CREAT- ININE MG/DL	GLUCOSE MG/DL	TOTAL BILI- RUBIN MG/DL	AST U/L	ALT U/L
4002	14.8	.5	107.0	.09	151.0	36.0
4003	13.9	.6	123.0	.14	169.0	48.0
4004	12.3	.7	115.0	.10	205.0	98.0
4005	17.2	.6	117.0	.09	141.0	48.0
4006	13.2	.5	104.0	.10	130.0	34.0
4007	16.2	.9	157.0	.08	116.0	39.0
4008	17.3	.6	158.0	.08	109.0	43.0
4009	16.4	.5	161.0	.09	107.0	35.0
4010	11.1	.6	134.0	.10	157.0	32.0
4011	11.5	.5	118.0	.07	147.0	26.0
4012	14.3	.8	163.0	.09	142.0	47.0
4014	12.0	.7	156.0	.07	140.0	51.0
4015	12.1	.7	161.0	.11	103.0	28.0
4016	20.8	.6	146.0	.07	131.0	24.0

GROUP 4 - CERIC OXIDE
HIGH DOSE



PROJECT NO : 90831

INDIVIDUAL CLINICAL BIOCHEMICAL ANALYSES

APPENDIX NO. 9

WEEK 13 - MALES

ANIMAL NO.	ALKALINE PHOS- PHATASE U/L	CA MG/DL	PHOS- PHORUS MG/DL	CHOLE- TEROL MG/DL	TRIGLY- CERIDES MG/DL	TOTAL PROTEIN G/DL
GROUP 4 - CERIC OXIDE						
HIGH DOSE						
4002	82.0	9.1	7.08	50.0	49.0	5.7
4003	56.0	9.2	6.24	69.0	81.0	6.0
4004	80.0	9.4	6.19	54.0	43.0	6.2
4005	90.0	9.3	7.86	39.0	79.0	5.9
4006	75.0	9.7	6.49	57.0	91.0	6.3
4007	93.0	9.4	7.20	45.0	23.0	5.4
4008	90.0	9.6	7.53	49.0	29.0	5.8
4009	83.0	9.5	7.84	36.0	36.0	5.8
4010	78.0	9.3	7.03	41.0	81.0	6.2
4011	72.0	8.9	6.70	40.0	46.0	5.7
4012	103.0	9.2	7.13	42.0	46.0	5.6
4014	124.0	9.2	7.89	44.0	38.0	6.0
4015	67.0	9.9	7.62	63.0	60.0	6.4
4016	59.0	9.2	7.50	73.0	73.0	6.9



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INDIVIDUAL CLINICAL BIOCHEMICAL ANALYSES

PROJECT NO : 90831

WEEK 13 - MALES

ANIMAL NO.	ALBUMIN G/DL	A/G RATIO	GLOBULIN G/DL	NA MEQ/L	K MEQ/L	CL MEQ/L
GROUP 4 - CERIC OXIDE						
HIGH DOSE						
4002	2.9	1.04	2.8	145.0	4.11	100.0
4003	2.9	.94	3.1	146.0	4.34	102.0
4004	3.0	.94	3.2	145.0	4.40	103.0
4005	2.8	.90	3.1	146.0	4.80	101.0
4006	3.1	.97	3.2	145.0	4.60	103.0
4007	2.7	1.00	2.7	144.0	4.70	104.0
4008	2.6	.81	3.2	145.0	4.39	102.0
4009	2.9	1.00	2.9	146.0	4.63	103.0
4010	3.0	.94	3.2	146.0	4.86	102.0
4011	2.8	.97	2.9	145.0	4.95	102.0
4012	2.8	1.00	2.8	146.0	4.78	103.0
4014	2.8	.87	3.2	146.0	4.70	102.0
4015	3.0	.88	3.4	146.0	4.83	102.0
4016	2.6	.60	4.3	144.0	4.79	103.0



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INDIVIDUAL CLINICAL BIOCHEMICAL ANALYSES

PROJECT NO : 90831

WEEK 13 - FEMALES

ANIMAL NO.	B.U.N. MG/DL	CREAT- ININE MG/DL	GLUCOSE MG/DL	TOTAL BILI- RUBIN MG/DL	AST U/L	ALT U/L
GROUP 1 - AIR CONTROL						
1501	12.0	.9	98.0	.14	129.0	34.0
1502	20.1	.5	120.0	.12	107.0	29.0
1503	18.7	.8	119.0	.14	120.0	32.0
1504	15.1	.7	125.0	.08	96.0	36.0
1505	16.6	.5	144.0	.07	114.0	53.0
1506	15.7	.8	140.0	.10	114.0	38.0
1507	13.8	.6	151.0	.12	114.0	27.0
1508	11.8	.5	132.0	.11	99.0	39.0
1509	18.0	.7	130.0	.13	109.0	33.0
1510	13.7	.6	165.0	.10	182.0	29.0
1511	14.5	.7	143.0	.12	114.0	31.0
1512	14.0	.5	122.0	.15	175.0	29.0
1513	14.7	.7	140.0	.13	106.0	27.0
1514	14.3	.8	143.0	.09	117.0	33.0
1515	14.1	.5	158.0	.16	96.0	43.0





PROJECT NO : 90831

INDIVIDUAL CLINICAL BIOCHEMICAL ANALYSES

APPENDIX NO. 9

WEEK 13 - FEMALES

ANIMAL NO.	ALKALINE PHOSPHATASE U/L	CA MG/DL	PHOSPHORUS MG/DL	CHOLESTEROL MG/DL	TRIGLYCERIDES MG/DL	TOTAL PROTEIN G/DL
GROUP 1 - AIR CONTROL						
1501	72.0	9.3	5.84	73.0	35.0	7.0
1502	38.0	9.3	5.33	78.0	57.0	6.5
1503	60.0	9.1	5.62	52.0	46.0	6.4
1504	64.0	9.3	6.54	82.0	53.0	6.1
1505	42.0	9.0	5.61	54.0	32.0	6.0
1506	64.0	9.5	7.34	35.0	29.0	6.1
1507	49.0	9.4	7.38	42.0	35.0	6.0
1508	45.0	9.7	6.85	82.0	43.0	6.4
1509	48.0	9.8	9.04	55.0	30.0	5.8
1510	64.0	9.1	6.30	59.0	53.0	6.4
1511	62.0	10.1	7.61	53.0	58.0	6.4
1512	63.0	10.1	7.81	38.0	29.0	6.4
1513	35.0	9.4	7.16	56.0	34.0	6.8
1514	64.0	9.8	6.48	36.0	18.0	6.1
1515	46.0	10.3	6.81	107.0	45.0	7.2

APPENDIX NO. 9 INDIVIDUAL CLINICAL BIOCHEMICAL ANALYSES PROJECT NO : 90831

WEEK 13 - FEMALES

GROUP	ANIMAL NO.	ALBUMIN G/DL	A/G RATIO	GLOBULIN G/DL	NA MEQ/L	K MEQ/L	CL MEQ/L
GROUP 1 - AIR CONTROL	1501	3.2	.84	3.8	143.0	4.47	101.0
	1502	3.2	.97	3.3	147.0	4.27	104.0
	1503	3.2	1.00	3.2	145.0	4.04	100.0
	1504	3.1	1.03	3.0	145.0	3.87	102.0
	1505	3.0	1.00	3.0	143.0	3.73	102.0
	1506	3.2	1.10	2.9	146.0	4.54	105.0
	1507	3.0	1.00	3.0	144.0	4.28	104.0
	1508	3.1	.94	3.3	146.0	4.44	103.0
	1509	2.8	.93	3.0	145.0	4.54	105.0
	1510	3.2	1.00	3.2	143.0	4.23	103.0
	1511	3.2	1.00	3.2	148.0	4.38	104.0
	1512	3.2	1.00	3.2	146.0	4.27	104.0
	1513	3.0	.79	3.8	143.0	4.54	105.0
	1514	3.0	.97	3.1	146.0	4.19	105.0
	1515	3.5	.95	3.7	144.0	4.50	104.0



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INDIVIDUAL CLINICAL BIOCHEMICAL ANALYSES

PROJECT NO : 90831

WEEK 13 - FEMALES

ANIMAL NO.	B.U.N. MG/DL	CREAT- ININE MG/DL	GLUCOSE MG/DL	TOTAL BILI- RUBIN MG/DL	AST U/L	ALT U/L
2501	17.0	.9	137.0	.10	90.0	37.0
2502	18.9	.6	151.0	.09	171.0	39.0
2503	21.0	.6	130.0	.08	108.0	34.0
2504	13.3	.6	123.0	.09	143.0	30.0
2505	14.3	.9	121.0	.10	146.0	36.0
2506	15.3	.6	157.0	.14	130.0	29.0
2507	14.8	.6	131.0	.10	87.0	31.0
2508	15.1	.6	145.0	.10	107.0	29.0
2509	18.7	.6	172.0	.20	126.0	40.0
2510	16.0	.7	131.0	.10	142.0	32.0
2511	14.2	.7	141.0	.10	117.0	31.0
2512	15.6	.5	138.0	.09	99.0	26.0
2513	17.2	.7	146.0	.11	101.0	23.0
2514	15.2	.7	126.0	.11	122.0	37.0
2515	13.6	.4	146.0	.10	97.0	27.0

GROUP 2 - CERIC OXIDE
LOW DOSE

APPENDIX NO. 9

INDIVIDUAL CLINICAL BIOCHEMICAL ANALYSES

PROJECT NO :90831

WEEK 13 - FEMALES

ANIMAL NO.	ALKALINE PHOS- PHATASE U/L	CA MG/DL	PHOS- PHORUS MG/DL	CHOLE- TEROL MG/DL	TRIGLY- CERIDES MG/DL	TOTAL PROTEIN G/DL
2501	37.0	9.4	5.25	77.0	45.0	6.4
2502	63.0	9.1	6.04	49.0	31.0	6.3
2503	65.0	9.7	6.93	56.0	27.0	6.0
2504	42.0	9.1	7.60	60.0	38.0	5.8
2505	46.0	9.6	6.13	75.0	43.0	6.5
2506	53.0	10.0	7.34	91.0	44.0	6.7
2507	45.0	9.9	6.95	93.0	60.0	6.1
2508	51.0	10.1	6.35	55.0	43.0	6.5
2509	59.0	10.5	8.02	73.0	46.0	6.5
2510	28.0	9.4	6.77	66.0	41.0	6.1
2511	78.0	9.3	6.86	47.0	29.0	5.7
2512	49.0	10.4	8.12	78.0	40.0	6.5
2513	50.0	9.4	7.19	51.0	33.0	5.9
2514	89.0	10.0	7.17	54.0	33.0	6.2
2515	55.0	9.7	6.31	85.0	34.0	6.7

GROUP 2 - CERIC OXIDE
LOW DOSE

APPENDIX NO. 9

INDIVIDUAL CLINICAL BIOCHEMICAL ANALYSES

PROJECT NO : 90831

WEEK 13 - FEMALES

ANIMAL NO.	ALBUMIN G/DL	A/G RATIO	GLOBULIN G/DL	NA MEQ/L	K MEQ/L	CL MEQ/L
2501	3.2	1.00	3.2	144.0	4.02	102.0
2502	3.1	.97	3.2	145.0	3.65	103.0
2503	3.1	1.07	2.9	144.0	3.97	101.0
2504	2.8	.93	3.0	143.0	4.32	103.0
2505	3.2	.97	3.3	144.0	4.94	104.0
2506	3.3	.97	3.4	142.0	3.99	101.0
2507	3.0	.97	3.1	145.0	4.30	103.0
2508	2.8	.76	3.7	143.0	4.20	103.0
2509	3.1	.91	3.4	144.0	4.65	102.0
2510	2.8	.85	3.3	142.0	4.33	103.0
2511	2.8	.97	2.9	147.0	4.26	105.0
2512	2.9	.81	3.6	144.0	4.56	104.0
2513	2.8	.90	3.1	146.0	4.43	105.0
2514	3.1	1.00	3.1	147.0	4.80	106.0
2515	3.1	.86	3.6	145.0	3.97	104.0

GROUP 2 - CERIC OXIDE
LOW DOSE



APPENDIX NO. 9

INDIVIDUAL CLINICAL BIOCHEMICAL ANALYSES

PROJECT NO : 90831

WEEK 13 - FEMALES

ANIMAL NO.	B.U.N. MG/DL	CREAT- ININE MG/DL	GLUCOSE MG/DL	TOTAL BILI- RUBIN MG/DL	AST U/L	ALT U/L
3501	16.2	.5	145.0	.08	115.0	37.0
3502	16.8	.6	131.0	.08	119.0	33.0
3503	15.6	.3	141.0	.12	119.0	36.0
3504	13.6	.8	126.0	.10	107.0	34.0
3505	15.5	.3	134.0	.09	130.0	34.0
3506	15.1	.7	148.0	.12	105.0	37.0
3507	16.5	.6	92.0	.12	160.0	32.0
3508	16.4	.6	120.0	.12	112.0	30.0
3509	15.1	.7	76.0	.12	144.0	37.0
3510	13.4	.7	147.0	.14	117.0	39.0
3511	17.4	.8	126.0	.10	165.0	38.0
3513	12.7	.7	167.0	.09	109.0	23.0
3514	12.4	.3	149.0	.15	94.0	35.0
3516	14.0	.5	137.0	.13	108.0	34.0
3517	14.5	.6	145.0	.10	101.0	52.0

GROUP 3 - CERIC OXIDE
INTERMEDIATE DOSE



PROJECT NO : 90831

INDIVIDUAL CLINICAL BIOCHEMICAL ANALYSES

APPENDIX NO. 9

WEEK 13 - FEMALES

ANIMAL NO.	ALKALINE PHOS- PHATASE U/L	CA MG/DL	PHOS- PHORUS MG/DL	CHOLE- TEROL MG/DL	TRIGLY- CERIDES MG/DL	TOTAL PROTEIN G/DL
3501	45.0	9.3	5.73	53.0	41.0	6.5
3502	61.0	9.3	6.83	37.0	45.0	6.1
3503	67.0	9.6	6.30	78.0	43.0	6.5
3504	53.0	9.5	6.76	62.0	27.0	7.1
3505	75.0	9.7	6.17	85.0	35.0	7.0
3506	73.0	9.6	7.73	43.0	27.0	6.1
3507	44.0	9.4	6.59	50.0	13.0	6.8
3508	43.0	10.1	5.96	78.0	21.0	7.3
3509	43.0	9.8	7.65	42.0	22.0	6.5
3510	63.0	9.5	6.55	40.0	45.0	6.3
3511	49.0	9.3	6.42	59.0	20.0	6.0
3513	58.0	9.9	7.26	49.0	42.0	5.9
3514	46.0	9.9	6.31	64.0	33.0	6.8
3516	34.0	9.8	7.56	44.0	29.0	6.2
3517	55.0	10.7	8.02	70.0	35.0	6.5

GROUP 3 - CERIC OXIDE INTERMEDIATE DOSE



APPENDIX NO. 9

INDIVIDUAL CLINICAL BIOCHEMICAL ANALYSES

PROJECT NO :90831

WEEK 13 - FEMALES

GROUP	ANIMAL NO.	ALBUMIN G/DL	A/G RATIO	GLOBULIN G/DL	NA MEQ/L	K MEQ/L	CL MEQ/L
GROUP 3 - CERIC OXIDE INTERMEDIATE DOSE	3501	3.2	.97	3.3	145.0	3.64	102.0
	3502	3.0	.97	3.1	147.0	4.47	106.0
	3503	3.2	.97	3.3	144.0	4.15	101.0
	3504	2.9	.69	4.2	142.0	3.93	103.0
	3505	3.4	.94	3.6	146.0	4.83	105.0
	3506	3.0	.97	3.1	146.0	4.31	103.0
	3507	3.3	.94	3.5	146.0	4.66	104.0
	3508	3.6	.97	3.7	147.0	4.60	105.0
	3509	3.1	.91	3.4	148.0	4.61	105.0
	3510	3.0	.91	3.3	144.0	4.21	104.0
	3511	3.1	1.07	2.9	147.0	4.20	105.0
	3513	3.1	1.11	2.8	145.0	4.57	104.0
	3514	3.3	.94	3.5	144.0	4.30	102.0
	3516	3.1	1.00	3.1	146.0	4.49	105.0
	3517	3.0	.86	3.5	146.0	4.30	105.0



APPENDIX NO. 9

INDIVIDUAL CLINICAL BIOCHEMICAL ANALYSES

PROJECT NO : 90831

WEEK 13 - FEMALES

ANIMAL NO.	B.U.N. MG/DL	CREAT- ININE MG/DL	GLUCOSE MG/DL	TOTAL BILI- RUBIN MG/DL	AST U/L	ALT U/L
4501	16.9	.8	133.0	.11	136.0	36.0
4502	19.8	.7	154.0	.09	142.0	35.0
4503	22.5	.7	138.0	.13	245.0	172.0
4504	14.3	.4	80.0	.10	140.0	32.0
4505	17.2	.7	103.0	.08	91.0	36.0
4506	19.1	.5	83.0	.11	138.0	30.0
4507	12.4	.6	151.0	.12	103.0	39.0
4508	11.7	.6	140.0	.14	118.0	38.0
4509	16.7	.6	114.0	.14	103.0	33.0
4510	16.2	.8	129.0	.10	91.0	33.0
4511	12.1	.7	129.0	.14	150.0	31.0
4513	10.2	.4	144.0	.12	114.0	35.0
4514	15.3	.6	130.0	.10	117.0	28.0
4515	14.5	.4	160.0	.10	129.0	26.0
4516	16.0	.4	113.0	.09	117.0	31.0

GROUP 4 - CERIC OXIDE
HIGH DOSE

APPENDIX NO. 9

INDIVIDUAL CLINICAL BIOCHEMICAL ANALYSES

PROJECT NO : 90831

WEEK 13 - FEMALES

ANIMAL NO.	ALKALINE PHOS- PHATASE U/L	CA MG/DL	PHOS- PHORUS MG/DL	CHOLE- TEROL MG/DL	TRIGLY- CERIDES MG/DL	TOTAL PROTEIN G/DL
4501	54.0	9.1	5.38	66.0	45.0	6.0
4502	63.0	9.2	5.60	36.0	69.0	6.3
4503	60.0	9.4	7.75	63.0	35.0	6.3
4504	62.0	9.4	7.66	53.0	29.0	6.9
4505	56.0	9.5	7.30	65.0	23.0	6.5
4506	49.0	9.7	6.00	64.0	28.0	6.9
4507	40.0	9.4	5.67	84.0	43.0	6.7
4508	48.0	10.0	6.90	57.0	56.0	6.5
4509	32.0	10.8	7.63	69.0	46.0	6.6
4510	54.0	9.4	6.47	48.0	46.0	6.0
4511	80.0	9.9	6.18	60.0	32.0	6.6
4513	53.0	9.9	6.46	54.0	45.0	6.5
4514	74.0	9.5	7.42	47.0	29.0	5.9
4515	36.0	10.0	6.41	61.0	35.0	6.6
4516	51.0	10.0	7.23	65.0	47.0	6.1

GROUP 4 - CERIC OXIDE
HIGH DOSE



APPENDIX NO. 9

INDIVIDUAL CLINICAL BIOCHEMICAL ANALYSES

PROJECT NO :90831

WEEK 13 - FEMALES

ANIMAL NO.	ALBUMIN G/DL	A/G RATIO	GLOBULIN G/DL	NA MEQ/L	K MEQ/L	CL MEQ/L
4501	3.0	1.00	3.0	143.0	4.33	102.0
4502	3.1	.97	3.2	142.0	4.26	103.0
4503	3.2	1.03	3.1	145.0	4.03	103.0
4504	3.2	.86	3.7	146.0	4.74	102.0
4505	3.1	.91	3.4	147.0	4.75	107.0
4506	3.5	1.03	3.4	147.0	4.49	103.0
4507	3.2	.91	3.5	144.0	3.42	101.0
4508	3.2	.97	3.3	146.0	4.25	104.0
4509	3.4	1.06	3.2	145.0	4.42	104.0
4510	2.9	.94	3.1	144.0	4.08	103.0
4511	3.2	.94	3.4	147.0	4.78	106.0
4513	3.2	.97	3.3	143.0	4.62	104.0
4514	3.0	1.03	2.9	146.0	4.34	106.0
4515	3.2	.94	3.4	146.0	4.54	104.0
4516	3.0	.97	3.1	145.0	4.36	105.0

GROUP 4 - CERIC OXIDE HIGH DOSE



APPENDIX NO. 10

PROJECT NO. 90831

INDIVIDUAL URINALYSIS
MALES AND FEMALES

The following footnotes have been used throughout the appendix:

Ns No sample

NSQ Not sufficient quantity

APPENDIX NO. 10 INDIVIDUAL URINALYSIS PROJECT NO. 90831
 HEALTH SCREEN MALES

ANIMAL NO.	CHEMICAL ANALYSIS										GROSS ANALYSIS			
	pH	GLU. mmol/L	BIL.	KET. mmol/L	BLOOD	PROT. g/L	UBG umol/L	NIT.	SPECIFIC GRAVITY	COLOR	APPEAR	VOLUME mL		
5001	6.5	-	-	±	-	-	3.2	-	1.015	Y	C	12.5		
5002	7.0	-	-	±	-	-	3.2	-	1.015	Y	C	8.0		
5003	7.0	-	-	-	-	-	3.2	-	1.010	LY	C	14.0		
5004	6.5	-	-	±	-	0.3	16.0	-	1.030	Y	C	2.5		
5005	7.0	-	-	≥7.8	-	0.3	16.0	-	1.025	Y	C	3.0		
5006	7.5	-	-	-	-	-	3.2	-	1.015	LY	C	10.0		
5007	6.5	-	-	±	-	±	16.0	-	1.025	Y	C	3.0		
5008	7.0	-	-	-	-	-	3.2	-	1.015	LY	C	9.0		
5009	7.0	-	-	-	-	-	3.2	-	1.015	LY	C	9.0		
5010	6.5	-	-	1.5	-	±	3.2	+	1.025	Y	C	6.0		

APPENDIX NO. 10
 INDIVIDUAL URINALYSIS
 HEALTH SCREEN
 MALES
 PROJECT NO. 90831

SEDIMENT MICROSCOPY												
ANIMAL NO.	WBC n/HPF	RBC n/HPF	EPC n/HPF	MUCOUS	BACTERIA	MISC.	PHOS.	URATE	OXALATE	URIC ACID	OTHER CRYSTALS	
5001	0-1	-	-	-	+++	-	+TP	+AU	-	-	-	
5002	0-1	-	-	-	+++	-	+TP	-	-	-	+CS	
5003	0-1	-	-	-	+++	-	++TP	-	-	-	-	
5004	-	-	-	-	++++	-	+TP	-	-	-	+CS	
5005	0-1	-	0-2	-	++++	-	+TP	-	-	-	-	
5006	-	-	-	-	+	-	+TP	-	-	-	-	
5007	0-1	-	-	-	+	-	+TP	-	-	-	-	
5008	0-1	-	-	-	+++	-	+AP+TP	-	-	-	-	
5009	0-1	-	0-1	-	+++	-	+TP	-	-	-	-	
5010	0-1	-	0-2	-	++++	-	+TP	-	-	-	-	



PROJECT NO. 90831

INDIVIDUAL URINALYSIS
HEALTH SCREEN
FEMALES

APPENDIX NO. 10

ANIMAL No.	CHEMICAL ANALYSIS										GROSS ANALYSIS			
	pH	GLU. mmol/L	BIL.	KET. mmol/L	BLOOD	PROT. g/L	UBG umol/L	NIT.	SPECIFIC GRAVITY	COLOR	APPEAR	VOLUME mL		
5501	7.0	-	-	-	-	-	3.2	-	1.010	LY	C	10.0		
5502	7.5	-	-	-	-	-	3.2	-	1.010	LY	C	7.0		
5503	7.0	-	-	1.5	-	-	3.2	-	1.020	Y	C	2.0		
5504	7.0	-	-	-	-	-	3.2	-	1.015	Y	C	2.5		
5505	7.0	-	-	3.9	-	-	3.2	-	1.020	Y	C	4.0		
5506	7.0	-	-	±	-	-	3.2	-	1.015	Y	C	2.5		
5507	6.5	-	-	1.5	-	±	16.0	-	1.025	Y	C	2.0		
5508	7.5	-	-	±	-	±	3.2	-	1.015	Y	C	3.5		
5509	6.5	-	-	-	-	-	3.2	-	1.020	Y	C	4.0		
5510	7.0	-	-	-	-	±	16.0	-	1.015	Y	C	3.5		



PROJECT NO. 90831

INDIVIDUAL URINALYSIS
HEALTH SCREEN
FEMALES

APPENDIX NO. 10

ANIMAL NO.	SEDIMENT MICROSCOPY										
	WBC n/HPF	RBC n/HPF	EPC n/HPF	MUCOUS	BACTERIA	MISC.	PHOS.	URATE	OXALATE	URIC ACID	OTHER CRYSTALS
5501	-	-	0-2	-	+++	-	+TP	-	-	-	+CS
5502	0-1	-	-	-	++	-	+TP	-	-	-	+CS
5503	-	-	0-1	-	+++	-	+TP	-	-	-	-
5504	0-1	-	0-1	-	+++	-	+TP	-	-	-	-
5505	0-1	0-2	-	-	+++	-	+TP	-	-	-	-
5506	0-1	-	-	-	++	-	+TP	-	-	-	+CS
5507	0-1	-	-	-	+++	-	+TP	-	-	-	-
5508	0-1	-	-	-	+++	-	+TP	-	-	-	+CS
5509	0-1	-	0-1	-	+	-	+TP	-	-	-	-
5510	0-1	-	0-2	-	+++	-	+TP	-	-	-	-



PROJECT NO. 90831

INDIVIDUAL URINALYSIS
WEEK 6
MALES

APPENDIX NO. 10

GROUP 1 - AIR CONTROL

ANIMAL NO.	CHEMICAL ANALYSIS							GROSS ANALYSIS				
	pH	GLU. mmol/L	BIL.	KET. mmol/L	BLOOD	PROT. g/L	UBG umol/L	NIT.	SPECIFIC GRAVITY	COLOR	APPEAR	VOLUME mL
1001	7.0	-	-	±	-	0.3	16.0	-	1.025	Y	C	7.5
1002	7.0	-	-	±	-	0.3	16.0	-	1.025	Y	C	8.0
1005	6.0	-	+	1.5	-	1.0	16.0	+	1.060	Y	C	1.5
1006	6.5	-	-	±	-	1.0	16.0	+	1.025	Y	C	7.0
1007	6.5	-	-	±	-	0.3	16.0	-	1.025	Y	C	10.0
1008	6.5	-	-	-	-	±	3.2	-	1.010	LtY	C	20.0
1009	5.0	-	+	±	-	≥3.0	16.0	+	1.124	Y	C	1.0
1010	7.0	-	-	-	-	0.3	3.2	-	1.015	LtY	C	10.5
1011 Ns												
1012	7.5	-	-	±	-	0.3	16.0	-	1.020	Y	C	13.0
1013	6.5	-	-	±	-	-	3.2	-	1.015	Y	C	20.0
1014	7.5	-	-	±	-	±	3.2	-	1.015	Y	C	13.5
1015	6.5	-	-	-	-	0.3	16.0	-	1.036	Y	C	6.0
1016	6.5	-	-	±	-	±	3.2	-	1.025	Y	C	15.0
1017	7.0	-	-	1.5	-	0.3	3.2	-	1.025	Y	C	7.0

PROJECT NO. 90831

INDIVIDUAL URINALYSIS
WEEK 6
MALES

APPENDIX NO. 10

GROUP 1 - AIR CONTROL

SEDIMENT MICROSCOPY

ANIMAL NO.	WBC n/HPF	RBC n/HPF	EPC n/HPF	MUCOUS	BACTERIA	MISC.	PHOS.	URATE	OXALATE	URIC ACID	OTHER CRYSTALS
1001	0-1	0-1	0-1	-	++	-	+TP	-	-	-	-
1002	0-1	-	0-1	-	++	-	-	-	-	-	+CC
1005	0-1	0-1	0-1	-	+	-	-	-	-	-	-
1006	2-3	-	-	-	++	+S	+TP	-	-	-	-
1007	0-2	3-5	0-2	-	+	-	+TP	-	-	-	-
1008	2-3	-	0-1	-	++	+S	-	-	-	-	+CS
1009	-	-	-	-	+	+S	+TP	-	-	-	-
1010	0-1	0-1	0-1	-	+	-	+TP	-	-	-	-
1011 Ns											
1012	0-1	0-1	1-2	++	++	-	+TP	-	-	-	+CC
1013	0-1	-	1-2	-	+	-	+TP	-	-	-	+CC
1014	0-1	1-2	0-1	-	-	-	+TP	-	-	-	-
1015	0-1	0-1	1-2	-	+	-	+TP	-	-	-	+CC
1016	2-3	0-1	1-2	-	+	-	-	-	-	-	+CS+CC
1017	0-1	0-1	0-1	-	+	+S	+TP	-	-	-	+CC

PROJECT NO. 90831

INDIVIDUAL URINALYSIS
WEEK 6
MALES

APPENDIX NO. 10

GROUP 2 - CERIC OXIDE LOW DOSE

ANIMAL NO.	CHEMICAL ANALYSIS										GROSS ANALYSIS			
	pH	GLU. mmol/L	BIL.	KET. mmol/L	BLOOD	PROT. g/L	UREG umol/L	NIT.	SPECIFIC GRAVITY	COLOR	APPEAR	VOLUME mL		
2001	6.0	-	-	-	-	0.3	16.0	-	1.032	Y	C	3.5		
2002	6.0	-	+	1.5	-	1.0	16.0	-	1.044	Y	Cl	4.0		
2003	7.0	-	-	±	-	0.3	3.2	-	1.025	Y	Cl	15.0		
2004	6.5	-	+	±	-	1.0	16.0	-	1.048	Y	C	5.0		
2005	6.0	-	+	±	-	1.0	16.0	-	1.050	Y	Cl	4.5		
2006	6.5	-	-	-	-	0.3	3.2	+	1.038	Y	C	2.5		
2007	6.0	-	-	±	-	0.3	16.0	-	1.048	Y	C	5.0		
2008	6.5	-	-	-	-	±	3.2	-	1.020	LtY	C	13.0		
2009	6.0	-	+	±	-	≥3.0	16.0	+	1.084	Y	C	1.0		
2010	6.0	-	-	±	-	±	3.2	+	1.015	LtY	C	13.0		
2011	7.0	-	+	±	-	0.3	16.0	+	1.025	Y	C	2.5		
2012	6.0	-	-	-	-	-	3.2	-	1.010	LtY	C	21.0		
2013	7.5	-	-	-	-	±	3.2	-	1.010	LtY	C	30.0		
2015	6.5	-	+	1.5	-	1.0	16.0	+	1.025	Y	C	2.0		
2016	6.5	-	+	1.5	-	≥3.0	16.0	+	1.064	Y	C	4.5		

PROJECT NO. 90831

INDIVIDUAL URINALYSIS
WEEK 6
MALES

APPENDIX NO. 10

GROUP 2 - CERIC OXIDE LOW DOSE

SEDIMENT MICROSCOPY

ANIMAL NO.	WBC n/HPF	RBC n/HPF	EPC n/HPF	MUCOUS	BACTERIA	MISC.	PHOS.	URATE	OXALATE	URIC ACID	OTHER CRYSTALS
2001	0-1	-	0-1	-	+	-	-	-	-	-	+CC
2002	1-2	0-1	15-20	++	++	+S	+TP	-	-	-	-
2003	0-1	-	1-2	+	++	+S	+TP	-	-	-	-
2004	1-2	2-3	1-2	+	+	-	-	-	-	-	+CS
2005	1-2	-	15-20	+	+	-	-	-	-	-	+CS
2006	0-1	-	-	-	++	+S	-	-	-	-	-
2007	0-1	-	-	-	++	+S	+TP	-	-	-	+CS
2008	0-1	-	0-1	-	-	-	+TP	-	-	-	-
2009	-	-	0-1	-	-	-	+TP	-	-	-	-
2010	0-1	-	0-1	-	-	+S	+TP	-	-	-	+CS+CC
2011	-	-	0-1	-	+	-	+TP	-	-	-	-
2012	1-2	-	1-2	-	+	+S	+TP	-	-	-	+CC
2013	0-1	-	1-2	-	+	+S	+TP	-	-	-	+CS
2015	0-1	-	0-1	-	+	+S	+TP	-	-	-	-
2016	0-1	-	1-2	-	+	-	+TP	-	-	-	-



PROJECT NO. 90631

INDIVIDUAL URINALYSIS
WEEK 6
MALES

APPENDIX NO. 10

GROUP 3 - CERIC OXIDE INTERMEDIATE DOSE

ANIMAL NO.	CHEMICAL ANALYSIS										GROSS ANALYSIS			
	pH	GLU. mmol/L	BIL.	KET. mmol/L	BLOOD	PROT. g/L	UBG umol/L	NIT.	SPECIFIC GRAVITY	COLOR	APPEAR	VOLUME mL		
3001	6.0	-	-	1.5	-	0.3	16.0	-	1.042	Y	C	2.5		
3002	7.0	-	-	1.5	-	0.3	3.2	+	1.025	Y	Cl	7.0		
3003	6.5	-	-	±	-	0.3	3.2	-	1.040	Y	C	6.0		
3004	6.0	-	+	-	-	0.3	16.0	-	1.048	Y	C	4.5		
3005	7.0	-	-	±	-	1.0	16.0	-	1.040	Y	Cl	7.0		
3006	7.0	-	-	±	-	0.3	3.2	-	1.025	Y	C	9.5		
3007	7.5	-	-	-	-	±	3.2	-	1.015	LtY	C	18.0		
3008	7.0	-	-	±	-	0.3	3.2	-	1.025	LtY	C	9.5		
3009	6.5	-	+	±	-	≥3.0	16.0	+	1.080	Y	C	1.5		
3010	7.0	-	+	1.5	++	≥3.0	16.0	+	1.056	Y	C	2.5		
3011	7.0	-	-	±	-	±	3.2	-	1.015	Y	C	14.0		
3012	7.0	-	-	±	-	0.3	3.2	+	1.020	Y	C	5.0		
3013	7.0	-	-	±	-	0.3	16.0	-	1.020	Y	C	10.5		
3014	7.0	-	-	±	-	0.3	3.2	-	1.015	LtY	C	22.0		
3015	7.5	-	-	-	-	-	3.2	-	1.020	LtY	C	7.0		
3016	7.0	-	-	±	-	0.3	3.2	-	1.020	LtY	C	7.0		

PROJECT NO. 90831

INDIVIDUAL URINALYSIS
WEEK 6
MALES

APPENDIX NO. 10

GROUP 3 - CERIC OXIDE INTERMEDIATE DOSE

SEDIMENT MICROSCOPY

ANIMAL NO.	WBC n/HPF	RBC n/HPF	EPC n/HPF	MUCOUS	BACTERIA	MISC.	PHOS.	URATE	OXALATE	URIC ACID	OTHER CRYSTALS
3001	0-1	-	1-2	-	++	+S	-	-	-	-	+CS
3002	0-1	-	1-2	-	+	+S	+TP	-	-	-	+CC+CS
3003	0-1	-	2-3	-	+	+S	+TP	-	-	-	-
3004	0-1	1-2	1-2	-	+	+S	-	-	-	-	-
3005	0-1	-	2-3	-	+	+S	+TP	-	-	-	+CS
3006	0-1	0-1	-	-	+	-	+TP	-	-	-	-
3007	-	-	0-1	-	+	+S	+TP	-	-	-	-
3008	0-1	-	0-1	-	+	+S	+TP	-	-	-	+CS
3009	-	-	-	-	+	-	+TP	-	-	-	-
3011	1-2	25-30	1-2	-	+	-	-	-	-	-	-
3012	0-1	-	0-1	-	-	-	+TP	-	-	-	+CS
3013	0-1	0-1	0-1	-	+	-	+TP	-	-	-	-
3014	0-1	-	0-1	+	-	-	+TP	-	-	-	+CS
3015	0-1	-	0-1	-	+	+S	-	-	-	-	-
3016	0-1	-	1-3	-	++	+S	+TP	-	-	-	-



PROJECT NO. 90831

INDIVIDUAL URINALYSIS
WEEK 6
MALES

APPENDIX NO. 10

GROUP 4 - CERIC OXIDE HIGH DOSE

ANIMAL NO.	CHEMICAL ANALYSIS							GROSS ANALYSIS				
	pH	GLJ. mmol/L	BIL.	KET. mmol/L	BLOOD	PROT. g/L	UBG umol/L	NIT.	SPECIFIC GRAVITY	COLOR	APPEAR	VOLUME mL
4001	6.5	-	-	±	-	0.3	16.0	-	1.025	Y	C	6.0
4002	6.5	-	+	±	-	≥3.0	16.0	+	1.056	Y	C	2.5
4003	6.5	-	-	±	-	0.3	3.2	-	1.020	Y	Cl	10.0
4004	6.5	-	-	1.5	-	0.3	3.2	+	1.025	Y	C	5.0
4005	7.5	-	-	1.5	-	0.3	16.0	+	1.025	Y	C	6.0
4006	7.0	-	-	±	-	0.3	16.0	-	1.025	Y	C	8.0
4007	7.0	-	-	-	-	±	3.2	-	1.015	LtY	C	10.0
4008	6.5	-	-	-	-	0.3	16.0	-	1.025	Y	C	4.0
4009	6.5	-	-	-	-	±	3.2	-	1.015	LtY	C	13.0
4010	5.0	-	+	±	-	1.0	16.0	+	1.060	Y	C	1.0
4011	6.5	-	-	-	-	-	3.2	-	1.007	LtY	C	35.0
4012	7.0	-	-	-	-	-	3.2	-	1.020	Y	C	5.5
4014	6.0	-	+	±	-	≥3.0	16.0	+	1.078	Y	C	1.0
4015	7.0	-	-	±	-	0.3	3.2	-	1.020	Y	C	11.0
4016	6.5	-	+	±	-	1.0	16.0	+	1.046	Y	C	3.0

PROJECT NO. 90831

INDIVIDUAL URINALYSIS
WEEK 6
MALES

APPENDIX NO. 10

GROUP 4 - CERIC OXIDE HIGH DOSE

SEDIMENT MICROSCOPY

ANIMAL NO.	WBC n/HPF	RBC n/HPF	EPC n/HPF	MUCOUS	BACTERIA	MISC.	PHOS.	URATE	OXALATE	URIC ACID	OTHER CRYSTALS
4001	0-1	0-1	0-1	-	+	+S	+TP	-	-	-	+OC
4002	1-2	1-2	0-1	-	+	+S	+TP	-	-	-	+OC
4003	0-1	-	0-1	-	+++	+S	+TP	-	-	-	-
4004	0-1	-	0-1	-	+	-	-	-	-	-	-
4005	0-1	-	1-2	-	+	-	+TP	-	-	-	+CS
4006	0-1	-	0-1	-	++	-	+TP	-	-	-	+CS
4007	1-2	-	0-1	-	+++	-	+TP	-	-	-	+CS
4008	0-1	-	0-1	-	+	+S	-	-	-	-	-
4009	-	-	0-1	-	++	+S	-	-	-	-	+CS
4010	-	-	0-1	-	+	-	+TP	-	-	-	-
4011	0-1	-	1-2	-	-	-	-	-	-	-	+OC
4012	0-1	-	1-2	-	+	+S	+TP	-	-	-	-
4014	1-2	0-1	0-1	-	+	+S	+TP	-	-	-	+OC
4015	0-1	-	3-4	-	+	+S	+TP	-	-	-	-
4016	0-1	-	1-2	+	+	-	+TP	-	-	-	-



PROJECT NO. 90831

INDIVIDUAL URINALYSIS
WEEK 6
FEMALES

APPENDIX NO. 10

GROUP 1 - AIR CONTROL

ANIMAL NO.	CHEMICAL ANALYSIS							GROSS ANALYSIS				
	pH	GLU. mmol/L	BIL.	KET. mmol/L	BLOOD	PROT. g/L	UBG umol/L	NIT.	SPECIFIC GRAVITY	COLOR	APPEAR	VOLUME mL
1501 NS							3.2	+	1.015	LtY	C	12.0
1502	5.5	-	-	-	-	-	16.0	-	1.025	Y	C	4.0
1503	7.0	-	-	-	-	0.3	16.0	-	1.066	Y	C	2.5
1504	6.0	-	+	-	-	1.0	3.2	+	1.040	Y	C	4.0
1505	6.0	-	-	-	-	0.3	16.0	-	1.025	Y	C	3.0
1506	7.0	-	-	±	-	±	16.0	-	1.075	DY	C	1.0
1507	7.0	-	+	-	-	1.0	16.0	+	1.010	LtY	C	16.0
1508	7.5	-	-	-	-	-	3.2	-	1.015	LtY	Cl	9.0
1509	8.0	-	-	-	-	-	3.2	-	1.020	LtY	C	5.0
1510	6.5	-	-	-	-	-	16.0	+	1.036	Y	C	1.0
1511	6.5	-	-	-	-	0.3	3.2	+	1.026	Y	C	2.5
1512	6.0	-	-	-	-	-	16.0	+	1.010	LtY	C	6.0
1513 NS							3.2	+	1.015	LtY	C	7.0
1514	7.0	-	-	-	-	-	16.0	+				
1515	8.5	-	-	-	-	-	3.2	+				



PROJECT NO. 90831

INDIVIDUAL URINALYSIS
WEEK 6
FEMALES

APPENDIX NO. 10

GROUP 1 - AIR CONTROL

SEDIMENT MICROSCOPY

ANIMAL NO.	WBC n/HPF	RBC n/HPF	EPC n/HPF	MUCOUS	BACTERIA	MISC.	PHOS.	URATE	OXALATE	URIC ACID	OTHER CRYSTALS
1501 NS											
1502	8-10	-	3-4	+	++	-	+TP	-	-	-	+CS
1503	3-4	-	0-2	-	+	-	+TP	-	-	-	+CS
1504	2-3	-	0-1	+	++	-	+TP	+AU	-	-	-
1505	0-2	-	2-3	+	+++	-	-	+AU	-	-	-
1506	0-1	0-1	-	-	-	-	+AP	-	-	-	+CS
1507	4-6	-	0-2	-	+	-	+TP	++AU	-	-	-
1508	0-2	-	0-1	-	+	-	+AP	-	-	-	-
1509	3-4	0-1	0-2	-	++	-	+AP+TP	-	-	-	-
1510	0-2	-	0-2	-	++	-	+TP	-	-	-	-
1511	0-1	-	0-1	-	+	-	-	-	-	-	+CS
1512	0-1	-	0-1	-	+	-	-	-	-	-	-
1513 NS											
1514	0-1	-	1-2	-	+	-	-	-	-	-	+CC+CS
1515	0-1	-	0-1	-	+++	-	-	-	-	-	+CC

PROJECT NO. 90831

INDIVIDUAL URINALYSIS
WEEK 6
FEMALES

APPENDIX NO. 10

GROUP 2 - CERIC OXIDE LOW DOSE

ANIMAL NO.	CHEMICAL ANALYSIS							GROSS ANALYSIS				
	pH	GLU. mmol/L	BIL.	KET. mmol/L	BLOOD	PROT. g/L	UBG umol/L	MIT.	SPECIFIC GRAVITY	COLOR	APPEAR	VOLUME mL
2501	7.0	-	-	-	-	-	3.2	-	1.020	LtY	C	8.0
2502	6.5	-	-	-	-	0.3	3.2	+	1.044	LtY	C	0.5
2503	7.0	-	-	-	-	-	3.2	-	1.015	LtY	C	13.5
2504	6.5	-	-	-	-	-	3.2	-	1.020	LtY	C	11.5
2505	6.0	-	-	-	-	0.3	3.2	+	1.048	Y	C	2.0
2506	5.5	-	-	-	-	-	3.2	-	1.015	Y	C	8.0
2507	7.5	-	-	-	-	-	3.2	-	1.020	Y	C	4.0
2508	7.0	-	-	-	-	-	3.2	-	1.015	LtY	C	14.0
2509	7.0	-	-	-	-	-	3.2	-	1.015	LtY	C	8.0
2510	6.5	-	-	-	-	-	3.2	-	1.025	Y	C	6.5
2511	7.5	-	-	-	-	0.3	16.0	+	1.025	Y	C	1.5
2512	6.0	-	-	-	-	0.3	16.0	+	1.044	Y	C	1.0
2513	6.5	-	-	-	-	0.3	16.0	+	1.048	Y	C	1.0
2514	6.5	-	-	-	-	-	3.2	+	1.015	LtY	C	6.0
2515	7.0	-	-	-	-	0.3	16.0	-	1.025	Y	C	4.5

PROJECT NO. 90831

INDIVIDUAL URINALYSIS
WEEK 6
FEMALES

APPENDIX NO. 10

GROUP 2 - CERIC OXIDE LOW DOSE

SEDIMENT MICROSCOPY

ANIMAL NO.	WBC n/HPF	RBC n/HPF	EPC n/HPF	MUCOUS	BACTERIA	MISC.	PHOS.	URATE	OXALATE	URIC ACID	OTHER CRYSTALS
2501	0-2	-	1-2	-	++	-	-	+AU	-	-	-
2502	0-1	-	0-2	-	+	-	-	+AU	-	-	-
2503	2-3	-	0-1	-	+	-	+TP	-	-	-	+CS
2504	3-4	-	0-2	-	+++	-	++TP	-	-	-	-
2505	3-4	-	0-2	-	+	-	+TP	-	-	-	-
2506	2-3	-	0-1	+	+	-	+++TP	-	-	-	+CS
2507	2-3	0-2	0-1	-	+	-	+TP	+AU	-	-	-
2508	3-4	-	0-2	-	+++	-	+TP	-	-	-	-
2509	2-3	-	0-1	-	+++	-	+TP	-	-	-	-
2510	2-3	-	1-2	-	+	-	+TP	-	-	-	-
2511	0-1	-	1-2	-	+	-	+TP	-	-	-	-
2512	0-1	-	0-1	-	+	-	-	-	-	-	-
2513	0-1	-	0-1	-	+	-	-	-	-	-	+CS
2514	0-1	0-1	1-2	-	+	-	-	-	-	-	+CC+CS
2515	0-1	0-1	0-1	-	+	-	-	-	-	-	-

PROJECT NO. 90831

INDIVIDUAL URINALYSIS
WEEK 6
FEMALES

APPENDIX NO. 10

GROUP 3 - CERIC OXIDE INTERMEDIATE DOSE

ANIMAL NO.	CHEMICAL ANALYSIS										GROSS ANALYSIS			
	pH	GLU. mmol/L	BIL.	KET. mmol/L	BLOOD	PROT. g/L	UBG umol/L	NIT.	SPECIFIC GRAVITY	COLOR	APPEAR	VOLUME mL		
3501	6.0	-	+	-	-	0.3	16.0	+	1.060	LtY	C	0.5		
3502	7.0	-	-	-	-	±	3.2	+	1.020	Y	C	3.0		
3503	7.0	-	-	-	-	-	3.2	-	1.010	LtY	C	14.0		
3504	7.0	-	-	-	-	-	16.0	+	1.015	LtY	C	7.5		
3505	6.0	-	-	-	-	-	3.2	-	1.010	Co	C	12.0		
3506	6.5	-	-	-	-	±	3.2	+	1.025	Y	C	3.0		
3507	5.5	-	-	-	-	-	3.2	-	1.015	Y	C	5.0		
3508	7.0	-	-	-	-	-	3.2	-	1.015	LtY	C	16.5		
3509	6.0	-	-	-	-	-	3.2	-	1.020	Y	C	3.5		
3510	7.0	-	-	-	-	-	3.2	-	1.010	LtY	C	8.0		
3511	7.0	-	-	-	-	-	3.2	+	1.015	LtY	C	6.0		
3513 NS														
3514	7.0	-	-	-	-	-	3.2	+	1.015	LtY	C	7.0		
3516	7.5	-	-	-	-	-	3.2	-	1.010	LtY	C	13.5		
3517	6.0	-	+	-	-	1.0	16.0	+	1.044	Y	C	0.5		

PROJECT NO. 90831

INDIVIDUAL URINALYSIS
WEEK 6
FEMALES

APPENDIX NO. 10

GROUP 3 - CERIC OXIDE INTERMEDIATE DOSE

SEDIMENT MICROSCOPY

ANIMAL NO.	WBC n/HPF	RBC n/HPF	EPC n/HPF	MUCOUS	BACTERIA	MISC.	PHOS.	URATE	OXALATE	URIC ACID	OTHER CRYSTALS
3501	0-2	-	0-1	-	+	-	+TP	+AU	-	-	+CS
3502	0-2	-	-	-	+++	-	+TP	-	-	-	+CS
3503	0-2	-	0-1	+	++	-	+TP	-	-	-	+CS
3504	0-2	-	1-2	-	++	-	+TP	-	-	-	+CS
3505	0-2	-	1-2	-	+	-	+TP	-	-	-	+CS
3506	3-4	-	2-3	-	+++	-	-	+AU	-	-	-
3507	2-3	-	-	-	+	-	-	+AU	-	-	-
3508	2-3	-	0-2	-	+++	-	+AP	-	-	-	-
3509	1-2	-	0-2	-	+	-	+TP	-	-	-	-
3510	0-2	-	1-2	-	+	-	+TP	-	-	-	-
3511	0-1	-	0-1	-	+	-	+TP	-	-	-	-
3513 Ns											
3514	2-3	-	0-1	-	+++	-	-	+AU	-	-	+CS
3516	0-2	-	0-1	-	+	-	+TP	-	-	-	+CS
3517	2-3	-	0-1	-	+	-	-	+AU	-	-	+CS

PROJECT NO. 90831

INDIVIDUAL URINALYSIS
WEEK 6
FEMALES

APPENDIX NO. 10

GROUP 4 - CERIC OXIDE HIGH DOSE

ANIMAL NO.	CHEMICAL ANALYSIS							GROSS ANALYSIS				
	pH	GLU. mmol/L	BIL.	KET. mmol/L	BLOOD	PROT. g/L	UBG umol/L	NIT.	SPECIFIC GRAVITY	COLOR	APPEAR	VOLUME mL
4501	6.5	-	-	-	-	-	3.2	+	1.015	LtY	C	4.0
4502	7.0	-	-	-	-	-	3.2	+	1.015	Y	C	7.5
4503	6.0	-	+	-	-	0.3	16.0	+	1.062	Y	C	0.5
4504	6.5	-	-	-	-	±	3.2	-	1.025	Y	C	3.0
4505	6.5	-	-	-	-	0.3	16.0	+	1.056	Y	C	1.0
4506	5.5	-	-	-	-	-	3.2	-	1.009	LtY	C	19.5
4507	6.0	-	-	-	-	-	3.2	-	1.025	DY	C	0.5
4508	6.0	-	-	-	-	-	3.2	+	1.020	Y	C	2.5
4509	5.5	-	-	-	-	-	3.2	-	1.036	DY	C	5.0
4510	6.5	-	-	-	-	-	3.2	-	1.006	Co	Cl	22.5
4511	7.0	-	-	-	-	0.3	16.0	-	1.040	Y	C	2.0
4513	6.0	-	+	-	-	0.3	16.0	+	1.064	Y	C	2.0
4514	7.0	-	-	-	-	-	3.2	-	1.020	LtY	C	9.0
4515	6.5	-	-	-	-	-	3.2	-	1.015	LtY	C	8.5
4516	6.5	-	-	-	-	-	3.2	-	1.020	LtY	C	4.5



PROJECT NO. 90831

INDIVIDUAL URINALYSIS
WEEK 6
FEMALES

APPENDIX NO. 10

GROUP 4 - CERIC OXIDE HIGH DOSE

ANIMAL NO.	SEDIMENT MICROSCOPY										
	WBC n/HPF	RBC n/HPF	EPC n/HPF	MUCOUS	BACTERIA	MISC.	PHOS.	URATE	OXALATE	URIC ACID	OTHER CRYSTALS
4501	0-2	-	0-1	-	++	-	-	+AU	-	-	+CS
4502	2-3	-	0-1	-	+++	-	+TP	-	-	-	+CS
4503	2-3	-	0-1	-	+	-	-	+AU	-	-	-
4504	0-2	0-1	3-4	+	+++	-	+TP	+AU	-	-	-
4505	1-2	0-1	1-2	-	+	-	-	-	-	-	-
4506	1-2	-	0-2	-	++	-	-	+AU	-	-	+CS
4507	0-1	-	0-2	-	-	-	+TP	-	-	-	+CS
4508	2-3	-	0-1	-	+	-	+TP	+AU	-	-	-
4509	2-4	-	0-1	-	+	-	-	+AU	-	-	+CS
4510	0-2	-	3-4	-	+	-	-	+AU	-	-	-
4511	0-1	-	0-2	-	+	-	-	+AU	-	-	+CS
4513	0-1	-	0-2	-	++	-	+TP	+AU	-	-	+CS
4514	3-4	-	0-1	-	+	-	-	+AU	-	-	+CS
4515	0-2	-	1-2	-	+++	-	-	+AU	-	-	+CS
4516	2-3	-	0-2	-	+	-	-	+AU	-	-	+CS

PROJECT NO. 90831

INDIVIDUAL URINALYSIS
WEEK 13
MALES

APPENDIX NO. 10

GROUP 1 - AIR CONTROL

ANIMAL NO.	CHEMICAL ANALYSIS										GROSS ANALYSIS			
	pH	GLU. mmol/L	BIL.	KET. mmol/L	BLOOD	PROT. g/L	UBG umol/L	NIT.	SPECIFIC GRAVITY	COLOR	APPEAR	VOLUME ml		
1001	7.0	-	-	-	-	-	3.2	-	1.015	Y	C	21.0		
1002	6.0	-	-	±	-	0.3	16.0	-	1.038	Y	C	2.0		
1005	6.5	-	-	±	-	0.3	3.2	-	1.025	Y	C	4.5		
1006 NSQ														
1007	7.0	-	-	±	-	0.3	16.0	-	1.025	Y	C	4.5		
1008	8.5	-	-	±	-	±	3.2	-	1.015	Y	C	10.0		
1009 NS														
1010	6.5	-	-	±	-	0.3	3.2	-	1.025	Y	Cl	3.0		
1011	6.5	-	-	±	-	±	3.2	-	1.020	Y	C	4.5		
1012	7.0	-	-	-	-	±	3.2	-	1.010	LtY	C	27.0		
1013	6.0	-	+	±	-	1.0	3.2	-	1.075	Y	C	1.0		
1014	6.5	-	-	±	-	0.3	3.2	-	1.020	Y	C	9.0		
1015	7.0	-	-	-	-	0.3	3.2	-	1.015	Y	C	27.0		
1016	7.0	-	-	±	-	0.3	16.0	-	1.025	Y	C	7.5		
1017	7.0	-	+	1.5	-	0.3	16.0	-	1.025	Y	C	1.5		

PROJECT NO. 90831

INDIVIDUAL URINALYSIS
WEEK 13
MALES

APPENDIX NO. 10

GROUP 1 - AIR CONTROL

SEDIMENT MICROSCOPY

ANIMAL NO.	WBC n/HPF	RBC n/HPF	EPC n/HPF	MUCOUS	BACTERIA	MISC.	PHOS.	URATE	OXALATE	URIC ACID	OTHER CRYSTALS
1001	3-5	-	2-3	-	+	+S	-	-	-	-	-
1002	1-2	-	1-2	-	+	-	-	-	-	-	-
1005	1-2	-	1-2	-	++	-	-	-	-	-	-
1006 NSQ											
1007	0-1	-	1-2	-	++	-	+TP	-	-	-	+CC
1008	1-2	-	1-2	-	+	-	+TP	-	-	-	+CC
1009 NS											
1010	3-5	-	1-2	-	++	-	+TP	-	-	-	-
1011	0-1	-	1-2	-	++	-	-	-	-	-	-
1012	0-1	-	1-2	-	++	-	-	-	-	-	-
1013	0-1	-	1-2	+	-	++S	+TP	-	-	-	-
1014	0-1	-	1-2	-	+	+S	-	-	-	-	-
1015	0-1	-	2-3	-	++	+S	+AP+TP	-	-	-	-
1016	1-2	-	1-2	-	+	-	+TP	-	-	-	-
1017	1-2	-	1-2	-	+	-	+TP	-	-	-	-

PROJECT NO. 90831

INDIVIDUAL URINALYSIS
WEEK 13
MALES

APPENDIX NO. 10

GROUP 2 - CERIC OXIDE LOW DOSE

ANIMAL NO.	CHEMICAL ANALYSIS							GROSS ANALYSIS				
	pH	GLU. mmol/L	BIL.	KET. mmol/L	BLOOD	PROT. g/L	UBG umol/L	NIT.	SPECIFIC GRAVITY	COLOR	APPEAR	VOLUME mL
2001	5.5	-	+	±	-	≥3.0	16.0	+	1.099	Y	Cl	0.5
2002	6.5	-	-	1.5	-	1.0	16.0	-	1.045	Y	C	6.5
2003	6.5	-	-	-	-	±	3.2	-	1.020	Y	C	17.0
2004	6.5	-	-	-	-	-	3.2	-	1.010	LtY	C	24.0
2005	7.0	-	-	±	-	0.3	16.0	-	1.025	Y	Cl	5.5
2006	6.5	-	-	±	-	1.0	16.0	-	1.051	Y	C	1.0
2007	6.5	-	-	±	-	0.3	16.0	-	1.025	Y	C	5.5
2008	6.0	-	-	±	-	1.0	3.2	+	1.060	Y	C	1.0
2009 NS												
2010	7.0	-	-	±	-	0.3	16.0	-	1.025	Y	C	9.0
2011	7.0	-	-	±	-	1.0	16.0	-	1.025	Y	C	2.5
2012	7.0	-	-	-	-	-	3.2	-	1.010	LtY	C	31.0
2013	7.0	-	-	-	-	±	3.2	-	1.015	Y	C	13.0
2015	6.5	-	-	±	-	0.3	3.2	-	1.020	Y	C	13.0
2016	7.5	-	-	±	-	0.3	3.2	-	1.015	Y	C	8.0

PROJECT NO. 90631

INDIVIDUAL URINALYSIS
WEEK 13
MALES

APPENDIX NO. 10

GROUP 2 - CERIC OXIDE LOW DOSE

SEDIMENT MICROSCOPY

ANTHAL NO.	WBC n/HPF	RBC n/HPF	EPC n/HPF	MUCOUS	BACTERIA	MISC.	PHOS.	URATE	OXALATE	URIC ACID	OTHER CRYSTALS
2001	0-1	-	0-1	-	+	++S	+TP	-	-	-	-
2002	0-1	-	3-4	+	+	-	-	-	-	-	-
2003	0-1	-	1-2	-	-	+S	-	-	-	-	+CS
2004	0-1	-	2-3	-	++	+S	-	-	-	-	-
2005	0-1	-	4-6	-	+	-	+TP	-	-	-	-
2006	0-1	-	0-1	+	+	-	+TP	+AU	-	-	-
2007	1-2	-	1-2	-	+	-	-	-	-	-	-
2008	0-1	-	0-1	-	+	-	-	-	-	-	-
2009 Ns											
2010	1-2	-	3-4	-	+	+S	+TP	-	-	-	-
2011	0-1	-	0-1	-	+	-	+TP	-	-	-	-
2012	1-2	-	1-2	-	++	+S	-	-	-	-	-
2013	0-1	-	0-1	-	+	+S	-	-	-	-	-
2015	-	-	0-2	-	+++	+S	+TP	-	-	-	-
2016	0-1	-	4-6	+	+	++S	+TP	-	-	-	-



PROJECT NO. 90831

INDIVIDUAL URINALYSIS
WEEK 13
MALES

APPENDIX NO. 10

GROUP 3 - CERIC OXIDE INTERMEDIATE DOSE

ANIMAL NO.	CHEMICAL ANALYSIS										GROSS ANALYSIS			
	pH	GLU. mmol/L	BIL.	KET. mmol/L	BLOOD	PROT. g/L	UBG umol/L	NIT.	SPECIFIC GRAVITY	COLOR	APPEAR	VOLUME mL		
3001	6.0	-	-	1.5	-	0.3	16.0	-	1.025	Y	C	2.0		
3002	6.0	-	+	±	-	1.0	16.0	-	1.069	Y	Cl	1.0		
3003	7.0	-	-	±	-	0.3	3.2	-	1.025	Y	Cl	4.5		
3004	6.0	-	-	-	-	±	3.2	-	1.015	Y	C	11.0		
3005	6.5	-	-	±	++	0.3	3.2	-	1.025	Y	C	10.5		
3006	6.5	-	-	1.5	-	1.0	3.2	-	1.048	Y	C	4.0		
3007	7.0	-	-	-	-	0.3	3.2	-	1.020	Y	C	8.0		
3008	7.0	-	-	-	-	±	3.2	-	1.020	Y	C	14.0		
3009	7.0	-	-	-	-	±	3.2	-	1.010	Y	C	16.0		
3011	6.5	-	+	±	-	1.0	16.0	-	1.063	Y	Cl	2.5		
3012	7.0	-	-	1.5	-	0.3	3.2	-	1.025	Y	Cl	4.0		
3013	6.5	-	+	1.5	-	1.0	16.0	-	1.025	Y	Cl	2.5		
3014	7.0	-	-	±	-	0.3	16.0	-	1.025	Y	Cl	7.0		
3015	7.5	-	-	±	-	0.3	16.0	-	1.015	Y	Cl	9.0		
3016	6.0	-	+	1.5	-	≥3.0	16.0	+	1.084	DY	C	0.5		

PROJECT NO. 90831

INDIVIDUAL URINALYSIS
WEEK 13
MALES

APPENDIX NO. 10

GROUP 3 - CERIC OXIDE INTERMEDIATE DOSE

ANIMAL NO.	SEDIMENT MICROSCOPY										
	WBC n/HPF	RBC n/HPF	EPC n/HPF	MUCOUS	BACTERIA	MISC.	PHOS.	URATE	OXALATE	URIC ACTD	OTHER CRYSTALS
3001	-	-	0-1	-	++	-	+TP	-	-	-	-
3002	0-1	-	0-2	-	+	++S	++TP	-	-	-	+CS
3003	0-1	-	-	-	+++	++S	+TP	-	-	-	-
3004	-	-	0-2	-	+	+S	+TP	-	-	-	-
3005	-	2-4	0-2	-	++	+S	+TP	-	-	-	+CS
3006	0-1	-	0-2	-	++	-	+TP	-	-	-	+CS
3007	-	-	0-1	-	+++	-	+TP	-	-	-	-
3008	-	-	0-1	-	++	+S	++TP	-	-	-	-
3009	-	-	0-1	-	+	+S	+AP+TP	-	-	-	+CS
3011	-	-	0-2	-	+	-	+TP	-	-	-	-
3012	0-1	-	0-2	-	+	-	++TP	-	-	-	+CS
3013	2-4	-	-	-	+	-	++TP	-	-	-	-
3014	-	-	0-2	-	++	-	++TP	-	-	-	-
3015	0-3	-	0-2	-	+++	-	++TP	-	-	-	-
3016	-	-	0-2	-	+	-	+TP	-	-	-	+CS

PROJECT NO. 90831

INDIVIDUAL URINALYSIS
WEEK 13
MALES

APPENDIX NO. 10

GROUP 4 - CERIC OXIDE HIGH DOSE

ANIMAL NO.	CHEMICAL ANALYSIS										GROSS ANALYSIS			
	pH	GLU. mmol/L	BIL.	KET. mmol/L	BLOOD	PROT. g/L	UBG umol/L	NIT.	SPECIFIC GRAVITY	COLOR	APPEAR	VOLUME mL		
4002	6.5	-	+	±	++	≥3.0	16.0	+	1.063	Y	C	1.0		
4003 NS														
4004	7.0	-	-	±	-	0.3	16.0	-	1.025	Y	Cl	4.0		
4005 NS														
4006	7.0	-	-	±	+	0.3	16.0	-	1.025	Y	Cl	7.5		
4007	6.5	-	+	±	-	0.3	16.0	-	1.048	Y	Cl	3.5		
4008 NSQ														
4009 NS														
4010	7.0	-	-	1.5	±	0.3	3.2	-	1.025	Y	C	9.0		
4011	7.0	-	-	1.5	-	0.3	3.2	-	1.025	Y	Cl	11.0		
4012	7.0	-	+	±	-	≥3.0	16.0	+	1.063	DY	Cl	1.5		
4014	6.5	-	-	-	±	±	3.2	-	1.020	Y	Cl	10.0		
4015	7.0	-	-	-	±	0.3	3.2	-	1.020	Y	C	12.0		
4016	6.5	-	-	±	+++	1.0	3.2	-	1.070	Y	Cl	18.0		

PROJECT NO. 90831

INDIVIDUAL URINALYSIS
WEEK 13
MALES

APPENDIX NO. 10

GROUP 4 - CERIC OXIDE HIGH DOSE

SEDIMENT MICROSCOPY

ANIMAL NO.	WBC n/HPF	RBC n/HPF	EPC n/HPF	MUCOUS	BACTERIA	MISC.	PHOS.	URATE	OXALATE	URIC ACID	OTHER CRYSTALS
4002	2-4	>50	0-2	-	+	-	+TP	-	-	-	+CS
4003 NS											
4004	0-2	-	0-3	-	++	-	++TP	-	-	-	+CS
4005 NS											
4006	0-2	2-4	0-3	-	+++	-	++AP++TP	-	-	-	-
4007	0-1	-	-	-	+	-	++TP	-	-	-	-
4008 NSQ											
4009 NS											
4010	0-2	2-4	-	-	+++	+S	++TP	-	-	-	+CS
4011	0-2	-	6-8	-	+++	+S	++TP	-	-	-	+CS
4012	0-3	-	0-2	-	+	+S	-	-	-	-	-
4014	2-4	0-2	-	-	+++	-	++TP	+AU	-	-	-
4015	0-1	0-2	-	-	+++	-	++TP	-	-	-	-
4016	12-15	>50	-	-	++	++S	+TP	-	-	-	-



PROJECT NO. 90831

INDIVIDUAL URINALYSIS
WEEK 13
FEMALES

APPENDIX NO. 10

GROUP 1 - AIR CONTROL

ANIMAL NO.	CHEMICAL ANALYSIS							GROSS ANALYSIS				
	pH	GLU. mmol/L	BIL.	KET. mmol/L	BLOOD	PROT. g/L	UBG umol/L	NIT.	SPECIFIC GRAVITY	COLOR	APPEAR	VOLUME mL
1501	6.0	-	-	-	+	0.3	3.2	-	1.015	DY	Cl	6.0
1502	6.5	-	-	-	-	-	3.2	+	1.025	Y	C	4.0
1503	6.5	-	-	-	-	0.3	3.2	-	1.025	Y	C	3.5
1504	6.5	-	-	-	-	±	3.2	-	1.020	Y	C	5.0
1505	6.0	-	+	-	-	1.0	16.0	+	1.068	Y	C	0.5
1506	7.0	-	-	-	-	±	3.2	-	1.025	Y	C	3.0
1507	7.0	-	-	-	-	±	3.2	-	1.020	LtY	C	7.0
1508	6.0	-	-	-	-	-	3.2	-	1.025	Y	C	4.0
1509	6.5	-	-	-	-	±	3.2	-	1.025	Y	C	3.5
1510 Ns												
1511	6.5	-	-	-	-	-	3.2	-	1.008	LtY	C	16.0
1512	6.5	-	-	±	-	0.3	16.0	+	1.048	Y	C	0.5
1513	6.5	-	-	-	-	-	3.2	-	1.015	Y	C	6.0
1514	7.0	-	-	-	-	±	3.2	+	1.025	Y	C	3.0
1515	6.5	-	-	-	-	0.3	3.2	-	1.025	Y	C	3.0

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PROJECT NO. 90831

INDIVIDUAL URINALYSIS
WEEK 13
FEMALES

APPENDIX NO. 10

GROUP 1 - AIR CONTROL

SEDIMENT MICROSCOPY

ANIMAL NO.	WBC n/HPF	RBC n/HPF	EPC n/HPF	MUCOUS	BACTERIA	MISC.	PHOS.	URATE	OXALATE	URIC ACID	OTHER CRYSTALS
1501	2-3	0-1	0-2	-	++	-	+TP	-	-	-	++CS
1502	0-1	-	0-1	-	++	-	+TP	-	-	-	+CS
1503	0-1	0-1	1-2	-	++	-	-	+AU	-	-	-
1504	2-3	0-1	0-2	+	++	-	-	+AU	-	-	+CS
1505	2-3	-	0-2	+	+	-	+TP	+AU	-	-	-
1506	3-4	-	0-2	+	++	-	++TP	+AU	-	-	+CS
1507	2-3	0-1	3-4	-	++	-	-	+AU	-	-	-
1508	3-4	0-1	2-3	+	++	-	-	+AU	-	-	+CS
1509	4-6	-	0-2	-	+++	-	+TP	+AU	-	-	-
1510	Ns	-	-	-	-	-	-	+AU	-	-	-
1511	0-2	-	0-1	+	+++	-	-	+AU	-	-	-
1512	0-1	-	0-2	-	+	-	-	+AU	-	-	-
1513	0-2	-	2-3	+	+++	-	-	+AU	-	-	+CS
1514	4-6	-	2-3	-	++	-	-	+AU	-	-	-
1515	0-2	-	2-3	-	+	-	+TP	+AU	-	-	-

PROJECT NO. 90831

INDIVIDUAL URINALYSIS
WEEK 13
FEMALES

APPENDIX NO. 10

GROUP 2 - CERIC OXIDE LOW DOSE

ANIMAL NO.	CHEMICAL ANALYSIS							GROSS ANALYSIS				
	pH	GLU. mmol/L	BIL.	KET. mmol/L	BLOOD	PROT. g/L	UBG umol/L	NIT.	SPECIFIC GRAVITY	COLOR	APPEAR	VOLUME mL
2501	6.0	-	-	-	-	±	3.2	-	1.025	Y	C	3.0
2502	7.5	-	-	-	-	-	3.2	-	1.010	LtY	C	14.0
2503	6.5	-	-	-	-	-	3.2	-	1.015	LtY	C	6.0
2504	7.0	-	-	-	-	-	3.2	+	1.010	Y	C	15.0
2505	7.0	-	-	-	-	-	3.2	-	1.015	Y	C	7.0
2506	6.5	-	-	-	-	±	3.2	+	1.025	Y	C	2.5
2507	5.5	-	-	-	-	-	3.2	-	1.015	Y	C	11.5
2508	6.5	-	-	-	-	-	3.2	-	1.015	Y	C	7.0
2509	7.0	-	-	-	-	0.3	3.2	-	1.025	Y	Cl	4.0
2510	6.5	-	-	-	-	±	3.2	-	1.025	Y	Cl	6.0
2511	7.0	-	-	-	-	0.3	3.2	+	1.025	Y	C	1.0
2512	6.5	-	-	-	-	-	3.2	+	1.015	Y	C	6.0
2513	6.5	-	-	-	-	0.3	3.2	+	1.025	Y	C	1.0
2514	6.0	-	-	-	-	0.3	16.0	-	1.042	Y	C	2.0
2515	6.5	-	-	±	-	±	3.2	-	1.025	Y	C	5.5

PROJECT NO. 90831

INDIVIDUAL URINALYSIS
WEEK 13
FEMALES

APPENDIX NO. 10

GROUP 2 - CERIC OXIDE LOW DOSE

SEDIMENT MICROSCOPY

ANIMAL NO.	WBC n/HPF	RBC n/HPF	EPC n/HPF	MUCOUS	BACTERIA	MISC.	PHOS.	URATE	OXALATE	URIC ACID	OTHER CRYSTALS
2501	0-2	-	0-1	-	+++	-	-	+AU	-	-	-
2502	0-2	-	1-2	-	+++	-	+TP	-	-	-	-
2503	0-1	-	0-2	-	+++	-	-	+AU	-	-	+CS
2504	2-3	-	0-1	-	+++	-	+TP	-	-	-	+CS
2505	2-3	-	0-1	-	+++	-	-	+AU	-	-	-
2506	0-2	-	0-1	-	+++	-	-	+AU	-	-	+CS
2507	2-3	-	0-1	-	+++	-	-	+AU	-	-	+CS
2508	3-4	-	0-1	-	+++	-	-	+AU	-	-	+CS
2509	0-1	-	0-1	-	+	-	+TP	-	-	-	-
2510	-	-	0-2	-	++	-	+TP	+AU	-	-	+CS
2511	0-1	-	0-1	-	++	-	+TP	-	-	-	-
2512	-	-	0-1	-	+++	-	-	+AU	-	-	+CS
2513	0-1	-	0-1	-	+	-	-	+AU	-	-	+CS
2514	-	-	0-1	-	+	-	+TP	+AU	-	-	+CS
2515	-	-	0-2	-	+++	-	-	+AU	-	-	+CS



PROJECT NO. 90831

INDIVIDUAL URINALYSIS
WEEK 13
FEMALES

APPENDIX NO. 10

GROUP 3 - CERIC OXIDE INTERMEDIATE DOSE

SEDIMENT MICROSCOPY

ANIMAL NO.	WBC n/HPF	RBC n/HPF	EPC n/HPF	MUCOUS	BACTERIA	MISC.	PHOS.	URATE	OXALATE	URIC ACID	OTHER CRYSTALS
3501 NS											
3502	-	-	0-1	-	++	-	+TP	+AU	-	-	+CS
3503	-	-	0-1	-	+++	-	-	+AU	-	-	-
3504	-	0-1	0-2	-	+	-	++TP	-	-	-	+CS
3505	-	-	0-1	-	+	-	-	+AU	-	-	+CS
3506	0-1	-	0-2	-	+++	-	+TP	-	-	-	+CS
3507	0-1	-	0-1	-	+	-	-	+AU	-	-	+CS
3508	-	-	0-1	-	++	-	-	-	-	-	+CS
3509	0-1	-	0-1	-	+	-	+TP	-	-	-	+CS
3510	-	-	0-1	-	+++	-	+TP	-	-	-	+CS
3511	0-1	-	-	-	++	-	-	+AU	-	-	-
3513	-	-	0-2	-	+++	-	-	+AU	-	-	-
3514	-	-	0-2	-	+++	-	+TP	+AU	-	-	-
3516	0-1	-	0-2	-	+++	-	-	+AU	-	-	-
3517 NS					++						



BIO-RESEARCH LABORATORIES LTD.

STUDY TITLE

A 13-WEEK INHALATION TOXICITY AND NEUROTOXICITY STUDY
BY NOSE-ONLY EXPOSURE OF A DRY POWDER AEROSOL
OF CERIC OXIDE IN THE ALBINO RAT

VOLUME IV

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United States EPA/TSCA (40 CFR Part 792).
Japanese MHW GLP Regulations (Notification No. 313 and revised rule Notification No. 870)
OECD guidelines No. 413

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PROJECT NO : 90931

ABSOLUTE ORGAN WEIGHTS (G)

APPENDIX NO. 11

MALES

GROUP	ANIMAL NO.	TERMINAL BODY WEIGHT (G)	LIVER	SPLEEN	HEART	LUNGS
GROUP 1 - AIR CONTROL	1001	513.3	12.924	1.018	1.842	1.733
	1002	512.3	11.904	.839	1.703	1.840
	1005	511.3	12.735	.788	1.580	1.745
	1006	439.0	11.668	.651	1.379	1.532
	1007	500.7	14.176	.816	1.583	1.571
	1008	416.9	10.354	.698	1.385	1.568
	1009	421.6	10.466	.631	1.642	1.464
	1010	501.2	11.957	.698	1.402	1.515
	1011	382.6	9.621	.753	1.526	1.458
	1012	523.9	13.073	.776	1.667	1.637
	1013	460.6	10.679	.693	1.411	1.576
	1014	519.7	14.314	.864	1.791	1.636
	1015	518.6	13.738	.713	1.584	1.658
	1016	540.2	14.816	1.008	1.756	1.694
	1017	513.6	12.948	.801	1.653	1.540



PROJECT NO : 90831

ABSOLUTE ORGAN WEIGHTS (G)

APPENDIX NO. 11

MALES

GROUP 1 - AIR CONTROL	ANIMAL NO.	THYROID/ PARA-THYROID	ADRENALS	KIDNEYS	GONADS	PRO-STATE
	1001	.027	.076	3.285	3.860	1.383
	1002	.031	.056	3.005	3.722	1.201
	1005	.026	.064	2.618	3.807	1.200
	1006	.021	.066	3.330	3.581	.952
	1007	.020	.058	3.020	3.390	1.210
	1008	.016	.059	3.043	2.977	1.210
	1009	.026	.060	2.689	3.182	1.361
	1010	.023	.050	2.565	3.308	1.608
	1011	.020	.069	2.565	3.192	.680
	1012	.021	.047	3.128	3.672	1.323
	1013	.020	.062	2.807	3.399	1.682
	1014	.027	.068	3.345	3.835	1.360
	1015	.019	.068	3.051	4.115	1.271
	1016	.025	.070	3.482	3.426	1.280
	1017	.028	.065	2.871	3.683	1.519

PROJECT NO : 90831

ABSOLUTE ORGAN WEIGHTS (G)

APPENDIX NO. II

MALES

ANIMAL NO.	BRAIN	PITUITARY	THYMUS
1001	2.293	.020	.297
1002	2.278	.016	.347
1005	2.199	.020	.210
1006	2.132	.016	.170
1007	2.033	.013	.194
1008	2.015	.013	.165
1009	2.094	.015	.172
1010	2.271	.011	.180
1011	2.047	.010	.248
1012	2.151	.015	.191
1013	2.238	.014	.239
1014	2.212	.016	.218
1015	2.162	.014	.166
1016	2.137	.013	.291
1017	2.133	.017	.238

PROJECT NO : 90831

ABSOLUTE ORGAN WEIGHTS (G)

APPENDIX NO. 11

MALES

ANIMAL NO.	TERMINAL BODY WEIGHT (G)	LIVER	SPLEEN	HEART	LUNGS
2001	481.8	12.790	.834	1.505	1.714
2002	506.8	14.938	1.074	1.669	1.593
2003	543.3	14.500	.815	2.001	2.061
2004	490.2	14.058	.715	1.638	1.869
2005	468.3	11.153	.923	1.541	1.743
2006	480.4	12.108	.806	1.538	1.646
2007	458.5	11.858	1.051	1.665	1.759
2008	460.5	12.204	.617	1.400	1.754
2009	399.1	9.887	.683	1.358	1.509
2010	538.8	15.715	.964	1.813	1.897
2011	425.9	9.491	.728	1.400	1.702
2012	462.9	9.770	.604	1.458	1.698
2013	420.2	10.686	.703	1.554	1.823
2015	467.2	10.964	.838	1.591	1.746
2016	538.6	13.465	.715	1.554	1.928

GROUP 2 - CERIC OXIDE
LOW DOSE

PROJECT NO : 90831

ABSOLUTE ORGAN WEIGHTS (G)

APPENDIX NO. 11

MALES

ANIMAL NO.	THYROID/ PARA-THYROID	ADRENALS	KIDNEYS	GONADS	PRO-STATE
2001	.023	.064	3.085	3.791	1.672
2002	.023	.052	3.326	3.489	1.350
2003	.020	.060	3.057	3.774	1.641
2004	.024	.054	3.145	3.479	1.216
2005	.022	.057	2.672	3.140	1.545
2006	.020	.055	2.957	3.594	1.008
2007	.023	.061	3.051	3.229	1.754
2008	.024	.062	2.815	3.916	1.217
2009	.016	.049	2.650	3.341	.759
2010	.020	.056	3.554	3.342	1.655
2011	.021	.056	2.764	3.461	1.394
2012	.022	.071	2.604	3.793	1.300
2013	.021	.063	2.786	3.771	1.869
2015	.023	.057	2.955	2.992	1.197
2016	.019	.060	3.054	3.541	1.236

GROUP 2 - CERIC OXIDE
LOW DOSE

PROJECT NO : 90831

ABSOLUTE ORGAN WEIGHTS (G)

APPENDIX NO. 11

MALES

ANIMAL NO.	BRAIN	PII-UITARY	THYMUS
2001	2.188	.016	.177
2002	2.184	.012	.211
2003	2.171	.012	.321
2004	2.187	.015	.173
2005	2.148	.014	.164
2006	2.121	.014	.258
2007	2.222	.017	.262
2008	2.106	.015	.334
2009	2.176	.013	.183
2010	2.126	.015	.259
2011	2.082	.013	.271
2012	2.059	.017	.225
2013	2.052	.016	.219
2015	2.069	.014	.227
2016	2.106	.020	.242

GROUP 2 - CERIC OXIDE
LOW DOSE

PROJECT NO : 90831

ABSOLUTE ORGAN WEIGHTS (G)

APPENDIX NO. 11

MALES

ANIMAL NO.	TERMINAL BODY WEIGHT (G)	LIVER	SPLEEN	HEART	LUNGS
3001	515.4	13.710	.738	1.684	2.209
3002	484.2	13.113	.819	1.685	2.606
3003	505.8	13.833	.780	1.444	2.329
3004	464.5	11.667	.621	1.491	2.241
3005	484.6	14.498	.868	1.615	2.584
3006	509.7	13.874	.888	1.478	2.969
3007	458.0	11.403	.953	1.485	2.758
3008	515.0	14.912	1.093	1.649	2.772
3009	488.6	11.944	.829	1.737	2.235
3011	483.8	13.080	.880	1.626	1.982
3012	478.9	11.607	1.051	1.381	2.869
3013	452.9	13.099	.948	1.550	2.764
3014	471.6	11.988	.926	1.661	3.033
3015	506.3	13.057	.823	1.499	3.065
3016	507.4	12.442	.773	1.552	2.201

GROUP 3 - CERIC OXIDE INTERMEDIATE DOSE

PROJECT NO : 90831

ABSOLUTE ORGAN WEIGHTS (G)

APPENDIX NO. 11

MALES

GROUP 3 - CERIC OXIDE INTERMEDIATE DOSE	ANIMAL NO.	THYROIDS, PARA- THYROIDS	ADRENALS	KIDNEYS	GONADS	PRO- STATE
	3001	.022	.048	3.064	3.688	1.506
	3002	.022	.059	2.754	3.562	.936
	3003	.017	.058	2.980	3.773	1.075
	3004	.020	.042	2.831	3.463	1.266
	3005	.024	.065	3.328	3.643	1.353
	3006	.019	.048	3.093	3.598	1.158
	3007	.028	.052	2.963	3.727	1.417
	3008	.019	.065	3.249	3.595	.997
	3009	.021	.061	2.801	3.496	1.471
	3011	.022	.048	2.886	3.245	1.046
	3012	.019	.044	2.931	3.597	1.008
	3013	.019	.066	3.002	4.082	1.761
	3014	.022	.055	2.798	4.008	1.265
	3015	.015	.055	2.898	3.484	1.048
	3016	.017	.062	3.036	3.354	1.541



PROJECT NO : 90831

ABSOLUTE ORGAN WEIGHTS (G)

APPENDIX NO. 11

MALES

ANIMAL NO.	BRAIN	PIT-UITARY	THYMUS
GROUP 3 - CERIC OXIDE INTERMEDIATE DOSE			
3001	2.171	.016	.238
3002	1.995	.013	.318
3003	2.195	.014	.332
3004	2.124	.011	.271
3005	2.182	.013	.348
3006	1.951	.015	.281
3007	2.088	.015	.279
3008	2.171	.014	.320
3009	2.194	.018	.206
3011	2.055	.012	.302
3012	2.066	.015	.272
3013	2.162	.013	.259
3014	2.135	.015	.262
3015	2.070	.015	.310
3016	2.213	.014	.304

PROJECT NO : 90831

ABSOLUTE ORGAN WEIGHTS (G)

APPENDIX NO. 11

MALES

ANIMAL NO.	TERMINAL BODY WEIGHT (G)	LIVER	SPLEEN	HEART	LUNGS
4002	386.6	9.102	.788	1.361	4.038
4003	537.6	12.936	.976	1.604	5.407
4004	393.9	9.358	.673	1.417	5.270
4005	472.8	12.883	1.266	1.502	4.932
4006	493.9	13.013	.719	1.552	5.000
4007	395.3	9.740	.784	1.567	5.349
4008	456.6	11.318	.840	1.573	4.332
4009	409.8	10.097	.774	1.393	3.784
4010	508.2	14.842	1.083	1.538	4.489
4011	494.6	12.801	.880	1.589	4.599
4012	440.1	11.077	.733	1.595	4.918
4014	418.3	11.068	.840	1.486	4.517
4015	463.2	12.853	.704	1.306	3.963
4016	582.5	16.643	1.088	2.739	4.677

GROUP 4 - CERIC OXIDE
HIGH DOSE

NO

PROJECT NO : 90831

ABSOLUTE ORGAN WEIGHTS (G)

APPENDIX NO. 11

MALES

ANIMAL NO.	THYROID/ PARA-THYROID	ADRENALS	KIDNEYS	GONADS	PRO-STATE
4002	.018	.059	2.338	3.294	1.187
4003	.017	.070	2.977	3.263	1.202
4004	.024	.055	2.351	3.322	1.196
4005	.027	.051	3.171	3.877	1.449
4006	.023	.062	3.129	3.912	1.391
4007	.016	.059	2.423	2.458	1.141
4008	.027	.060	2.748	3.560	1.622
4009	.030	.049	2.660	3.739	1.069
4010	.021	.066	3.274	3.641	1.536
4011	.023	.057	3.187	3.484	1.814
4012	.018	.056	2.577	3.357	1.126
4014	.017	.045	2.708	3.635	1.202
4015	.020	.055	2.932	3.613	.905
4016	.027	.065	3.670	3.555	2.198

GROUP 4 - CERIC OXIDE
HIGH DOSE



PROJECT NO : 90831

ABSOLUTE ORGAN WEIGHTS (G)

APPENDIX NO. 11

MALES

ANIMAL NO.	BRAIN	PITUITARY	THYMUS
GROUP 4 - CERIC OXIDE HIGH DOSE			
4002	2.016	.013	.185
4003	2.090	.014	.222
4004	2.161	.013	.169
4005	2.255	.015	.263
4006	2.268	.014	.215
4007	2.059	.014	.219
4008	2.172	.015	.209
4009	2.145	.014	.220
4010	2.099	.018	.305
4011	2.069	.016	.468
4012	2.183	.012	.213
4014	2.090	.013	.171
4015	2.069	.013	.283
4016	1.475	.020	.332



PROJECT NO : 90831

ABSOLUTE ORGAN WEIGHTS (G)

APPENDIX NO. 11

FEMALES

ANIMAL NO.	TERMINAL BODY WEIGHT (G)	LIVER	SPLEEN	HEART	LUNGS
GROUP 1 - AIR CONTROL					
1501	252.0	6.540	.530	.942	1.179
1502	254.5	6.682	.505	1.006	1.055
1503	253.7	6.665	.497	1.048	1.149
1504	247.0	6.835	.565	.956	1.190
1505	232.9	6.381	.639	.958	1.119
1506	244.8	5.842	.435	.900	1.072
1507	265.1	6.980	.661	.938	1.375
1508	262.4	7.084	.471	1.040	1.195
1509	221.4	5.733	.507	.857	1.105
1510	237.4	6.727	.510	1.049	1.147
1511	249.4	6.226	.567	.836	1.108
1512	207.6	6.273	.490	.902	1.085
1513	205.4	5.221	.463	1.012	1.088
1514	222.8	6.236	.491	.812	1.261
1515	256.2	6.953	.439	.998	1.044

PROJECT NO : 90831

ABSOLUTE ORGAN WEIGHTS (G)

APPENDIX NO. 11

FEMALES

GROUP	ANIMAL NO.	THYROIDIS/ PARA-THYROIDIS	ADRENALS	KIDNEYS	GONADS	UTERUS
GROUP 1 - AIR CONTROL	1501	.016	.057	1.907	.102	.617
	1502	.019	.055	1.575	.105	.969
	1503	.012	.051	1.647	.078	.635
	1504	.014	.064	1.817	.081	.413
	1505	.012	.070	1.765	.065	.509
	1506	.017	.071	1.606	.103	.541
	1507	.014	.066	1.853	.111	.502
	1508	.013	.063	1.857	.071	.485
	1509	.014	.053	1.505	.073	.558
	1510	.018	.056	1.699	.070	.719
	1511	.014	.056	1.760	.084	.833
	1512	.013	.054	1.710	.086	.626
	1513	.015	.046	1.565	.076	.805
	1514	.018	.067	1.528	.095	.611
	1515	.018	.050	1.607	.045	.594

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PROJECT NO : 90831

ABSOLUTE ORGAN WEIGHTS (G)

APPENDIX NO. 11

FEMALES

ANIMAL NO.	BRAIN	PIT-UITARY	THYMUS
GROUP 1 - AIR CONTROL			
1501	1.816	.019	.227
1502	1.929	.016	.174
1503	1.873	.018	.186
1504	1.938	.017	.194
1505	1.908	.017	.149
1506	1.977	.019	.193
1507	1.929	.016	.136
1508	1.937	.015	.189
1509	1.827	.013	.157
1510	2.007	.014	.224
1511	1.948	.014	.182
1512	1.910	.014	.259
1513	1.966	.019	.203
1514	2.005	.016	.146
1515	1.896	.024	.167



PROJECT NO : 90831

ABSOLUTE ORGAN WEIGHTS (G)

APPENDIX NO. 11

FEMALES

ANIMAL NO.	TERMINAL BODY WEIGHT (G)	LIVER	SPLEEN	HEART	LUNGS
2501	242.3	6.380	.504	.986	1.182
2502	219.5	6.005	.484	.818	1.194
2503	232.3	5.633	.596	.929	1.207
2504	243.7	6.898	.613	1.097	1.386
2505	216.8	5.873	.476	.880	1.165
2506	249.0	7.320	.562	.876	1.260
2507	256.6	6.825	.615	.901	1.537
2508	289.2	7.983	.681	1.104	1.271
2509	245.4	6.318	.550	.994	1.276
2510	263.8	7.713	.745	1.141	1.695
2511	230.9	6.092	.682	.862	1.304
2512	236.8	5.906	.632	.912	1.176
2513	236.1	6.274	.591	1.071	1.415
2514	219.1	6.070	.534	.893	1.371
2515	240.1	6.859	.500	.910	1.233

GROUP 2 - CERIC OXIDE
LOW DOSE

PROJECT NO :90831

ABSOLUTE ORGAN WEIGHTS (G)

APPENDIX NO. 11

FEMALES

ANIMAL NO.	THYROID/ PARA-THYROID	ADRENALS	KIDNEYS	GONADS	UTERUS
2501	.012	.060	1.653	.068	.515
2502	.012	.069	1.500	.056	.632
2503	.011	.046	1.561	.077	.541
2504	.016	.083	1.787	.078	.598
2505	.011	.063	1.656	.079	.540
2506	.018	.058	1.832	.053	1.441
2507	.017	.053	1.660	.084	.577
2508	.020	.074	1.759	.084	.381
2509	.013	.047	1.605	.060	.684
2510	.021	.069	1.912	.105	.588
2511	.019	.067	1.587	.093	.942
2512	.020	.051	1.691	.065	.506
2513	.017	.081	1.735	.069	1.533
2514	.015	.049	1.603	.071	.434
2515	.015	.046	1.670	.071	.555

GROUP 2 - CERIC OXIDE
LOW DOSE

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PROJECT NO : 90831

ABSOLUTE ORGAN WEIGHTS (G)

APPENDIX NO. 11

FEMALES

ANIMAL NO.	BRAIN	PITUITARY	THYMUS
2501	1.890	.016	.163
2502	1.938	.015	.126
2503	1.954	.013	.327
2504	1.837	.017	.132
2505	1.962	.017	.130
2506	2.014	.015	.225
2507	2.037	.016	.125
2508	1.941	.016	.223
2509	1.948	.015	.112
2510	1.866	.015	.232
2511	2.089	.014	.207
2512	2.008	.013	.197
2513	2.062	.014	.130
2514	2.067	.014	.081
2515	1.855	.017	.182

GROUP 2 - CERIC OXIDE
LOW DOSE

PROJECT NO : 90831

ABSOLUTE ORGAN WEIGHTS (G)

APPENDIX NO. 11

FEMALES

ANIMAL NO.	TERMINAL BODY WEIGHT (G)	LIVER	SPLEEN	HEART	LUNGS
GROUP 3 - CERIC OXIDE INTERMEDIATE DOSE					
3501	243.6	7.126	.522	1.069	1.838
3502	228.0	5.842	.577	.836	1.473
3503	269.1	7.003	.568	1.109	1.496
3504	229.5	6.774	.751	1.008	1.471
3505	233.4	6.763	.429	.984	1.381
3506	250.2	6.056	.559	.934	1.785
3507	216.6	5.672	.593	1.091	1.695
3508	250.5	6.199	.410	.885	1.500
3509	246.9	5.842	.427	1.080	2.535
3510	244.3	6.910	.605	1.113	1.788
3511	214.2	5.484	.561	.875	1.619
3513	237.2	5.942	.494	.889	1.583
3514	263.4	7.761	.543	1.070	1.779
3516	228.4	5.894	.596	.884	1.436
3517	202.8	5.399	.369	.804	1.386

PROJECT NO : 90831

ABSOLUTE ORGAN WEIGHTS (G)

APPENDIX NO. 11

FEMALES

ANIMAL NO.	THYROID/ PARA-THYROID	ADRENALS	KIDNEYS	GONADS	UTERUS
3501	.014	.074	1.816	.056	.656
3502	.018	.058	1.738	.093	.557
3503	.013	.046	1.684	.088	.645
3504	.013	.065	1.655	.100	.482
3505	.013	.050	1.442	.066	.602
3506	.016	.073	1.573	.112	.589
3507	.022	.072	1.452	.097	1.099
3508	.015	.051	1.620	.057	1.054
3509	.018	.075	1.563	.098	.456
3510	.016	.059	1.857	.098	.660
3511	.013	.061	1.455	.071	.486
3513	.016	.058	1.711	.092	.610
3514	.013	.066	1.924	.099	.867
3516	.020	.064	1.642	.076	.578
3517	.013	.051	1.519	.070	.453

GROUP 3 - CERIC OXIDE INTERMEDIATE DOSE

PROJECT NO : 90831

ABSOLUTE ORGAN WEIGHTS (G)

APPENDIX NO. 11

FEMALES

ANIMAL NO.	BRAIN	PITUITARY	THYMUS
3501	1.928	.020	.171
3502	1.958	.013	.150
3503	1.977	.015	.229
3504	1.895	.017	.243
3505	1.957	.017	.163
3506	1.897	.014	.213
3507	1.869	.015	.256
3508	1.863	.015	.209
3509	1.936	.015	.187
3510	1.913	.014	.199
3511	1.973	.013	.202
3513	1.985	.016	.284
3514	2.186	.021	.220
3516	1.932	.015	.162
3517	1.881	.011	.165

GROUP 3 - CERIC OXIDE INTERMEDIATE DOSE

PROJECT NO : 90831

ABSOLUTE ORGAN WEIGHTS (G)

APPENDIX NO. 11

FEMALES

ANIMAL NO.	TERMINAL BODY WEIGHT (G)	LIVER	SPLEEN	HEART	LUNGS
GROUP 4 - CERIC OXIDE HIGH DOSE					
4501	270.1	7.045	.497	.996	3.481
4502	232.7	6.405	.571	.946	3.388
4503	214.6	5.801	.448	.967	3.177
4504	214.4	6.031	.503	.964	3.651
4505	230.9	5.869	.479	1.012	2.760
4506	241.6	6.031	.575	.970	3.030
4507	230.0	6.221	.557	.956	2.707
4508	242.2	7.147	.521	.960	3.070
4509	223.5	6.103	.503	.896	3.195
4510	225.9	6.523	.566	.990	3.080
4511	224.5	5.503	.352	.826	2.750
4513	250.5	7.520	.610	1.113	3.426
4514	241.9	5.838	.555	.927	3.724
4515	249.7	7.264	.549	.942	3.304
4516	219.4	5.845	.501	.895	2.850

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PROJECT NO : 90831

ABSOLUTE ORGAN WEIGHTS (G)

APPENDIX NO. 11

FEMALES

ANIMAL NO.	THYROID/ PARA-THYROID	ADRENALS	KIDNEYS	GONADS	UTERUS
4501	.017	.057	1.720	.076	.415
4502	.014	.079	1.631	.092	.439
4503	.010	.056	1.398	.087	.496
4504	.021	.067	1.758	.095	.742
4505	.020	.070	1.465	.089	.682
4506	.014	.046	1.465	.070	.615
4507	.021	.070	1.737	.053	1.464
4508	.014	.077	1.777	.075	.525
4509	.016	.049	1.563	.090	.499
4510	.021	.058	1.546	.083	.580
4511	.012	.053	1.396	.064	.884
4513	.023	.071	1.974	.076	.695
4514	.014	.062	1.580	.078	.550
4515	.014	.064	1.818	.074	.498
4516	.016	.053	1.465	.079	.465

GROUP 4 - CERIC OXIDE
HIGH DOSE

PROJECT NO : 90831

ABSOLUTE ORGAN WEIGHTS (G)

APPENDIX NO. 11

FEMALES

ANIMAL NO.	BRAIN	PIT-UITARY	THYMUS
4501	2.063	.017	.121
4502	1.965	.016	.115
4503	1.905	.015	.163
4504	1.940	.015	.142
4505	1.944	.015	.162
4506	1.883	.017	.185
4507	1.942	.018	.222
4508	1.890	.016	.173
4509	1.888	.013	.159
4510	1.908	.016	.175
4511	1.957	.013	.172
4513	1.966	.020	.154
4514	1.920	.012	.269
4515	1.901	.015	.173
4516	1.890	.015	.091

GROUP 4 - CERIC OXIDE
HIGH DOSE

PROJECT NO : 90831

RELATIVE ORGAN WEIGHTS (G%)
(RELATIVE TO BODY WEIGHT)

APPENDIX NO. 12

MALES

ANIMAL NO.	TERMINAL BODY WEIGHT (G)	LIVER	SPLEEN	HEART	LUNGS
GROUP 1 - AIR CONTROL					
1001	513.3	2.518	.198	.359	.338
1002	512.3	2.324	.164	.332	.359
1005	511.3	2.491	.154	.309	.341
1006	439.0	2.658	.148	.314	.349
1007	500.7	2.831	.163	.316	.314
1008	416.9	2.484	.167	.332	.376
1009	421.6	2.482	.150	.389	.347
1010	501.2	2.386	.139	.280	.302
1011	382.6	2.515	.197	.399	.381
1012	523.9	2.495	.148	.318	.312
1013	460.6	2.318	.150	.306	.342
1014	519.7	2.754	.166	.345	.315
1015	518.6	2.649	.137	.305	.320
1016	540.2	2.743	.187	.325	.314
1017	513.6	2.521	.156	.322	.300



PROJECT NO : 90831

RELATIVE ORGAN WEIGHTS (G%)
(RELATIVE TO BODY WEIGHT)

APPENDIX NO. 12

MALES

ANIMAL NO.	THYROIDES/ PARA- THYROIDES	ADRENALS	KIDNEYS	GONADS	PRO- STATE
GROUP 1 - AIR CONTROL					
1001	.005	.015	.640	.752	.269
1002	.006	.011	.587	.727	.234
1005	.005	.012	.512	.745	.235
1006	.005	.015	.759	.816	.217
1007	.004	.012	.603	.677	.242
1008	.004	.014	.730	.714	.290
1009	.006	.014	.638	.755	.323
1010	.005	.010	.512	.660	.321
1011	.005	.018	.670	.834	.178
1012	.004	.009	.597	.701	.283
1013	.004	.013	.609	.738	.365
1014	.005	.013	.644	.738	.262
1015	.004	.013	.588	.793	.245
1016	.005	.013	.645	.634	.237
1017	.006	.013	.559	.717	.296

RELATIVE ORGAN WEIGHTS (G%)
(RELATIVE TO BODY WEIGHT)

APPENDIX NO. 12

MALES

ANIMAL NO.	BRAIN	PITUITARY	THYMUS
1001	.447	.004	.058
1002	.445	.003	.068
1005	.430	.004	.041
1006	.486	.004	.039
1007	.406	.003	.039
1008	.483	.003	.040
1009	.497	.004	.041
1010	.453	.002	.036
1011	.535	.003	.065
1012	.411	.003	.036
1013	.486	.003	.052
1014	.426	.003	.042
1015	.417	.003	.032
1016	.396	.002	.054
1017	.415	.003	.046

GROUP 1 - AIR CONTROL



PROJECT NO : 90831

RELATIVE ORGAN WEIGHTS (G%)
(RELATIVE TO BODY WEIGHT)

APPENDIX NO. 12

MALES

ANIMAL NO.	TERMINAL BODY WEIGHT (G)	LIVER	SPLEEN	HEART	LUNGS
2001	481.8	2.655	.173	.312	.356
2002	506.8	2.948	.212	.329	.314
2003	543.3	2.669	.150	.368	.379
2004	490.2	2.868	.146	.334	.381
2005	468.3	2.382	.197	.329	.372
2006	480.4	2.520	.168	.320	.343
2007	458.5	2.586	.229	.363	.384
2008	460.5	2.650	.134	.304	.381
2009	399.1	2.477	.171	.340	.378
2010	538.8	2.917	.179	.336	.352
2011	425.9	2.228	.171	.329	.400
2012	462.9	2.111	.130	.315	.358
2013	420.2	2.543	.167	.370	.434
2015	467.2	2.347	.179	.341	.374
2016	538.6	2.500	.133	.289	.358

GROUP 2 - CERIC OXIDE
LOW DOSE



PROJECT NO : 90831

RELATIVE ORGAN WEIGHTS (G%)
(RELATIVE TO BODY WEIGHT)

APPENDIX NO. 12

MALES

ANIMAL NO.	THYROID/ PAPA- THYROID	ADRENALS	KIDNEYS	GONADS	PRO- STATE
2001	.005	.013	.640	.787	.347
2002	.005	.010	.656	.688	.266
2003	.004	.011	.563	.695	.302
2004	.005	.011	.642	.710	.248
2005	.005	.012	.571	.671	.330
2006	.004	.011	.616	.748	.210
2007	.005	.013	.665	.704	.383
2008	.005	.013	.611	.850	.264
2009	.004	.012	.664	.837	.190
2010	.004	.010	.660	.620	.307
2011	.005	.013	.649	.813	.327
2012	.005	.015	.563	.819	.281
2013	.005	.015	.663	.897	.445
2015	.005	.012	.632	.640	.256
2016	.004	.011	.567	.657	.229

GROUP 2 - CERIC OXIDE
LOW DOSE



PROJECT NO : 90931

RELATIVE ORGAN WEIGHTS (G%)
(RELATIVE TO BODY WEIGHT)

MALES

ANIMAL NO.	BRAIN	PIT-UITARY	THYMUS
2001	.454	.003	.037
2002	.431	.002	.042
2003	.400	.002	.059
2004	.446	.003	.035
2005	.459	.003	.035
2006	.442	.003	.054
2007	.485	.004	.057
2008	.457	.003	.073
2009	.545	.003	.046
2010	.395	.003	.048
2011	.489	.003	.064
2012	.445	.004	.049
2013	.488	.004	.052
2015	.443	.003	.049
2016	.391	.004	.045

GROUP 2 - CERIC OXIDE
LOW DOSE

BIO

PROJECT NO : 90831

RELATIVE ORGAN WEIGHTS (G%)
(RELATIVE TO BODY WEIGHT)

APPENDIX NO. 12

MALES

ANIMAL NO.	TERMINAL BODY WT (G)	LIVER	SPLEEN	HEART	LUNGS
GROUP 3 - CERIC OXIDE INTERMEDIATE DOSE					
3001	515.4	2.660	.143	.327	.429
3002	484.2	2.709	.169	.348	.538
3003	505.8	2.735	.154	.285	.460
3004	464.5	2.512	.134	.321	.482
3005	484.6	2.992	.179	.333	.533
3006	509.7	2.722	.174	.290	.582
3007	458.0	2.490	.208	.324	.602
3008	515.0	2.896	.212	.320	.538
3009	488.6	2.445	.170	.356	.457
3011	483.8	2.704	.182	.336	.410
3012	478.9	2.424	.219	.288	.599
3013	452.9	2.892	.209	.342	.610
3014	471.6	2.542	.196	.352	.643
3015	506.3	2.579	.163	.296	.605
3016	507.4	2.452	.152	.306	.434

NO

PROJECT NO : 90831

RELATIVE ORGAN WEIGHTS (G%)
(RELATIVE TO BODY WEIGHT)

APPENDIX NO. 12

MALES

ANIMAL NO.	THYROIDES/ PARA- THYROIDES	ADRENALS	KIDNEYS	GOVADS	PRO- STATE
GROUP 3 - CERIC OXIDE					
INTERMEDIATE DOSE					
3001	.004	.009	.594	.716	.292
3002	.004	.012	.569	.736	.193
3003	.003	.012	.589	.746	.213
3004	.004	.009	.609	.746	.273
3005	.005	.013	.687	.752	.279
3006	.004	.009	.607	.706	.227
3007	.006	.011	.647	.814	.309
3008	.004	.013	.631	.698	.194
3009	.004	.013	.573	.716	.301
3011	.005	.010	.597	.671	.216
3012	.004	.009	.612	.751	.210
3013	.004	.015	.663	.901	.389
3014	.005	.012	.593	.850	.268
3015	.003	.011	.572	.688	.207
3016	.003	.012	.598	.661	.304

PROJECT NO : 90831

RELATIVE ORGAN WEIGHTS (G%)
(RELATIVE TO BODY WEIGHT)

APPENDIX NO. 12

MALES

ANIMAL NO.	BRAIN	PITUITARY	THYMUS
GROUP 3 - CERIC OXIDE			
INTERMEDIATE DOSE			
3001	.421	.003	.046
3002	.412	.003	.066
3003	.434	.003	.066
3004	.457	.002	.058
3005	.450	.003	.072
3006	.383	.003	.055
3007	.456	.003	.061
3008	.422	.003	.062
3009	.449	.004	.042
3011	.425	.003	.062
3012	.431	.003	.057
3013	.477	.003	.057
3014	.453	.003	.056
3015	.409	.003	.061
3016	.436	.003	.060

PROJECT NO : 90831

RELATIVE ORGAN WEIGHTS (G%)
(RELATIVE TO BODY WEIGHT)

APPENDIX NO. 12

MALES

ANIMAL NO. TERMINAL BODY WEIGHT (G)

LIVER

SPLEEN

HEART

LUNGS

GROUP 4 - CERIC OXIDE
HIGH DOSE

ANIMAL NO.	TERMINAL BODY WEIGHT (G)	LIVER	SPLEEN	HEART	LUNGS
4002	386.6	2.354	.204	.352	1.044
4003	537.6	2.406	.182	.298	1.006
4004	393.9	2.376	.171	.360	1.338
4005	472.8	2.725	.268	.318	1.043
4006	493.9	2.635	.146	.314	1.012
4007	395.3	2.464	.198	.396	1.353
4008	456.6	2.479	.184	.345	.949
4009	409.8	2.464	.189	.340	.923
4010	508.2	2.921	.213	.303	.883
4011	494.6	2.588	.178	.321	.930
4012	440.1	2.517	.167	.362	1.117
4014	418.3	2.646	.201	.355	1.080
4015	463.2	2.775	.152	.282	.856
4016	582.5	2.857	.187	.470	.803

PROJECT NO : 90831

RELATIVE ORGAN WEIGHTS (G%)
(RELATIVE TO BODY WEIGHT)

APPENDIX NO. 12

MALES

ANIMAL NO.	THYROIDIS/ PARA- THYROIDIS	ADRENALS	KIDNEYS	GONADS	PRO- STATE
GROUP 4 - CERIC OXIDE HIGH DOSE					
4002	.005	.015	.605	.852	.307
4003	.003	.013	.554	.607	.224
4004	.006	.014	.597	.843	.304
4005	.006	.011	.671	.820	.306
4006	.005	.013	.634	.792	.282
4007	.004	.015	.613	.622	.289
4008	.006	.013	.602	.780	.355
4009	.007	.012	.649	.912	.261
4010	.004	.013	.644	.716	.302
4011	.005	.012	.644	.704	.367
4012	.004	.013	.586	.763	.256
4014	.004	.011	.647	.869	.287
4015	.004	.012	.633	.780	.195
4016	.005	.011	.630	.610	.377

PROJECT NO : 90831

RELATIVE ORGAN WEIGHTS (G%)
(RELATIVE TO BODY WEIGHT)

APPENDIX NO. 12

MALES

ANIMAL NO.	BRAIN	PIT-UITARY	THYMUS
4002	.521	.003	.048
4003	.389	.003	.041
4004	.549	.003	.043
4005	.477	.003	.056
4006	.459	.003	.044
4007	.521	.004	.055
4008	.476	.003	.046
4009	.523	.003	.054
4010	.413	.003	.060
4011	.418	.003	.095
4012	.496	.003	.048
4014	.500	.003	.041
4015	.447	.003	.061
4016	.253	.003	.057

GROUP 4 - CERIC OXIDE
HIGH DOSE

PROJECT NO : 90831

RELATIVE ORGAN WEIGHTS (G%)
(RELATIVE TO BODY WEIGHT)

APPENDIX NO. 12

FEMALES

ANIMAL NO.	TERMINAL BODY WEIGHT (G)	LIVER	SPLEEN	HEART	LUNGS
GROUP 1 - AIR CONTROL					
1501	252.0	2.595	.210	.374	.468
1502	254.5	2.626	.198	.395	.415
1503	253.7	2.627	.196	.413	.453
1504	247.0	2.767	.229	.387	.482
1505	232.9	2.740	.274	.411	.480
1506	244.8	2.386	.178	.368	.438
1507	265.1	2.633	.249	.354	.519
1508	262.4	2.700	.179	.396	.455
1509	221.4	2.589	.229	.387	.499
1510	237.4	2.834	.215	.442	.483
1511	249.4	2.496	.227	.335	.444
1512	207.6	3.022	.236	.434	.523
1513	205.4	2.542	.225	.493	.530
1514	222.8	2.799	.220	.364	.566
1515	256.2	2.714	.171	.390	.407

PROJECT NO : 90831

RELATIVE ORGAN WEIGHTS (C%)
(RELATIVE TO BODY WEIGHT)

APPENDIX NO. 12

FEMALES

ANIMAL NO.	THYROIDIS/ PARA- THYROIDIS	ADRENALS	KIDNEYS	GONADS	UTERUS
GROUP 1 - AIR CONTROL					
1501	.006	.023	.757	.040	.245
1502	.007	.021	.619	.041	.381
1503	.005	.020	.649	.031	.250
1504	.006	.026	.736	.033	.167
1505	.005	.030	.758	.028	.219
1506	.007	.029	.656	.042	.221
1507	.005	.025	.699	.042	.189
1508	.005	.024	.708	.027	.185
1509	.006	.024	.680	.033	.252
1510	.008	.023	.716	.030	.303
1511	.005	.023	.706	.034	.334
1512	.006	.026	.824	.041	.302
1513	.007	.023	.762	.037	.392
1514	.008	.030	.686	.043	.274
1515	.007	.020	.627	.017	.232

PROJECT NO : 90831

RELATIVE ORGAN WEIGHTS (G%)
(RELATIVE TO BODY WEIGHT)

APPENDIX NO. 12

FEMALES

ANIMAL NO.	BRAIN	PITUITARY	THYMUS
1501	.721	.007	.090
1502	.758	.006	.069
1503	.739	.007	.073
1504	.785	.007	.079
1505	.819	.007	.064
1506	.808	.008	.079
1507	.728	.006	.051
1508	.738	.006	.072
1509	.825	.006	.071
1510	.845	.006	.094
1511	.781	.006	.073
1512	.920	.007	.125
1513	.957	.009	.099
1514	.900	.007	.066
1515	.740	.010	.065

GROUP 1 - AIR CONTROL

PROJECT NO :90831

RELATIVE ORGAN WEIGHTS (G%)
(RELATIVE TO BODY WEIGHT)

APPENDIX NO. 12

FEMALES

ANIMAL NO.	TERMINAL BODY WEIGHT (G)	LIVER	SPLEEN	HEART	LUNGS
2501	242.3	2.633	.208	.407	.488
2502	219.5	2.736	.221	.373	.544
2503	232.3	2.425	.257	.400	.520
2504	243.7	2.831	.252	.450	.569
2505	216.8	2.709	.220	.406	.537
2506	249.0	2.940	.226	.352	.506
2507	256.6	2.660	.240	.351	.599
2508	289.2	2.760	.235	.382	.439
2509	245.4	2.575	.224	.405	.520
2510	263.8	2.924	.282	.433	.643
2511	230.9	2.638	.295	.373	.565
2512	236.8	2.494	.267	.385	.497
2513	236.1	2.657	.250	.454	.599
2514	219.1	2.770	.244	.408	.626
2515	240.1	2.857	.208	.379	.514

GROUP 2 - CERIC OXIDE
LOW DOSE



PROJECT NO : 90831

RELATIVE ORGAN WEIGHTS (G%)
(RELATIVE TO BODY WEIGHT)

APPENDIX NO. 12

FEMALES

ANIMAL NO.	THYROIDS/ PARA- THYROIDS	ADRENALS	KIDNEYS	GONADS	UTERUS
GROUP 2 - CERIC OXIDE LOW DOSE					
2501	.005	.025	.682	.028	.213
2502	.005	.032	.683	.026	.288
2503	.005	.020	.672	.033	.233
2504	.007	.034	.733	.032	.245
2505	.005	.029	.764	.037	.249
2506	.007	.023	.736	.021	.579
2507	.007	.021	.647	.033	.225
2508	.007	.026	.608	.029	.132
2509	.005	.019	.654	.025	.279
2510	.008	.026	.725	.040	.223
2511	.008	.029	.687	.040	.408
2512	.008	.021	.714	.028	.214
2513	.007	.034	.735	.029	.649
2514	.007	.022	.732	.032	.198
2515	.006	.019	.696	.029	.231

PROJECT NO : 90831

RELATIVE ORGAN WEIGHTS (G%)
(RELATIVE TO BODY WEIGHT)

APPENDIX NO. 12

FEMALES

ANIMAL NO.	BRAIN	PIT-UITARY	THYMUS
2501	.780	.007	.067
2502	.893	.007	.057
2503	.841	.006	.141
2504	.754	.007	.054
2505	.905	.008	.060
2506	.809	.006	.090
2507	.794	.006	.049
2508	.671	.005	.077
2509	.794	.006	.046
2510	.707	.006	.088
2511	.905	.006	.090
2512	.848	.006	.083
2513	.873	.006	.055
2514	.943	.007	.037
2515	.773	.007	.076

GROUP 2 - CERIC OXIDE
LOW DOSE

PROJECT NO : 90831

RELATIVE ORGAN WEIGHTS (G%)
(RELATIVE TO BODY WEIGHT)

APPENDIX NO. 12

FEMALES

ANIMAL NO.	TERMINAL BODY WEIGHT (G)	LIVER	SPLEEN	HEART	LUNGS
GROUP 3 - CERIC OXIDE INTERMEDIATE DOSE					
3501	243.6	2.925	.214	.439	.755
3502	228.0	2.562	.253	.367	.646
3503	269.1	2.602	.211	.412	.556
3504	229.5	2.952	.327	.439	.641
3505	233.4	2.898	.184	.422	.592
3506	250.2	2.420	.223	.373	.713
3507	216.6	2.619	.274	.504	.783
3508	250.5	2.475	.164	.353	.599
3509	246.9	2.366	.173	.437	1.027
3510	244.3	2.828	.248	.456	.732
3511	214.2	2.560	.262	.408	.756
3513	237.2	2.505	.208	.375	.667
3514	263.4	2.946	.206	.406	.675
3516	228.4	2.581	.261	.387	.629
3517	202.8	2.662	.182	.396	.683

PROJECT NO : 90831

RELATIVE ORGAN WEIGHTS (G%)
(RELATIVE TO BODY WEIGHT)

APPENDIX NO. 12

FEMALES

ANIMAL NO.	THYROIDS/ PARA- THYROIDS	ADRENALS	KIDNEYS	GONADS	UTERUS
GROUP 3 - CERIC OXIDE INTERMEDIATE DOSE					
3501	.006	.030	.745	.023	.269
3502	.008	.026	.762	.041	.244
3503	.005	.017	.626	.033	.240
3504	.006	.028	.721	.044	.210
3505	.005	.021	.618	.028	.258
3506	.006	.029	.629	.045	.235
3507	.010	.033	.670	.045	.507
3508	.006	.021	.647	.023	.421
3509	.007	.030	.633	.040	.185
3510	.007	.024	.760	.040	.270
3511	.006	.028	.679	.033	.227
3513	.007	.024	.721	.039	.257
3514	.005	.025	.730	.038	.329
3516	.009	.028	.719	.033	.253
3517	.007	.025	.749	.035	.223

PROJECT NO : 90831

RELATIVE ORGAN WEIGHTS (G%)
(RELATIVE TO BODY WEIGHT)

APPENDIX NO. 12

FEMALES

ANIMAL NO.	BRAIN	PIT-UITARY	THYMUS
3501	.791	.008	.070
3502	.859	.006	.066
3503	.735	.006	.085
3504	.821	.007	.106
3505	.838	.007	.070
3506	.758	.006	.085
3507	.863	.007	.118
3508	.744	.006	.083
3509	.784	.006	.076
3510	.783	.006	.081
3511	.921	.006	.094
3513	.837	.007	.120
3514	.830	.008	.084
3516	.846	.007	.071
3517	.928	.005	.081

GROUP 3 - CERIC OXIDE
INTERMEDIATE DOSE

PROJECT NO : 90831

RELATIVE ORGAN WEIGHTS (G%)
(RELATIVE TO BODY WEIGHT)

APPENDIX NO. 12

FEMALES

ANIMAL NO.	TERMINAL BODY WEIGHT (G)	LIVER	SPLEEN	HEART	LUNGS
GROUP 4 - CERIC OXIDE HIGH DOSE					
4501	270.1	2.608	.184	.369	1.289
4502	232.7	2.752	.245	.407	1.456
4503	214.6	2.703	.209	.451	1.480
4504	214.4	2.813	.235	.450	1.703
4505	230.9	2.542	.207	.438	1.195
4506	241.6	2.496	.238	.401	1.254
4507	230.0	2.705	.242	.416	1.177
4508	242.2	2.951	.215	.396	1.269
4509	223.5	2.731	.225	.401	1.430
4510	225.9	2.888	.251	.439	1.363
4511	224.5	2.451	.157	.368	1.225
4513	250.5	3.002	.244	.444	1.368
4514	241.9	2.413	.229	.383	1.539
4515	249.7	2.909	.220	.377	1.323
4516	219.4	2.664	.228	.408	1.299

PROJECT NO : 90831

RELATIVE ORGAN WEIGHTS (G%)
(RELATIVE TO BODY WEIGHT)

APPENDIX NO. 12

FEMALES

ANIMAL NO.	THYROIDIS/ PARA-THYROIDIS	ADRENALS	KIDNEYS	GONADS	UTERUS
4501	.006	.021	.637	.028	.154
4502	.006	.034	.701	.040	.189
4503	.005	.026	.651	.041	.231
4504	.010	.031	.820	.044	.346
4505	.008	.030	.634	.039	.295
4506	.006	.019	.606	.029	.255
4507	.009	.031	.755	.023	.637
4508	.006	.032	.734	.031	.217
4509	.007	.022	.699	.040	.223
4510	.009	.026	.684	.037	.252
4511	.005	.024	.622	.028	.394
4513	.009	.028	.788	.030	.277
4514	.006	.026	.653	.032	.227
4515	.006	.026	.728	.030	.199
4516	.008	.024	.668	.036	.212

PROJECT NO : 90831

RELATIVE ORGAN WEIGHTS (G%)
(RELATIVE TO BODY WEIGHT)

APPENDIX NO. 12

FEMALES

ANIMAL NO.	BRAIN	PITUITARY	THYMUS
4501	.764	.006	.045
4502	.844	.007	.049
4503	.888	.007	.076
4504	.905	.007	.066
4505	.842	.006	.070
4506	.779	.007	.077
4507	.844	.008	.097
4508	.780	.007	.071
4509	.845	.006	.071
4510	.845	.007	.077
4511	.872	.006	.077
4513	.785	.008	.061
4514	.794	.005	.111
4515	.761	.006	.069
4516	.861	.007	.041

GROUP 4 - CERIC OXIDE
HIGH DOSE

NO

PROJECT NO : 90831

RELATIVE ORGAN WEIGHTS (G%)
(RELATIVE TO BRAIN WEIGHT)

APPENDIX NO. 13

MALES

ANIMAL NO.	BRAIN WEIGHT (G)	LIVER	SPLEEN	HEART
GROUP 1 - AIR CONTROL				
1001	2.293	563.628	44.396	80.331
1002	2.278	522.964	36.831	74.759
1005	2.199	579.127	35.834	71.851
1006	2.132	547.280	30.535	64.681
1007	2.033	697.295	40.138	77.865
1008	2.015	513.846	34.640	68.734
1009	2.094	499.809	30.134	78.415
1010	2.271	526.508	30.735	61.735
1011	2.047	470.005	36.786	74.548
1012	2.151	607.764	36.076	77.499
1013	2.238	477.167	30.965	63.047
1014	2.212	647.107	39.060	80.967
1015	2.162	635.430	32.979	73.265
1016	2.137	693.308	47.169	82.171
1017	2.133	607.032	37.553	77.496

PROJECT NO :90831

RELATIVE ORGAN WEIGHTS (G%)
(RELATIVE TO BRAIN WEIGHT)

APPENDIX NO. 13

MALES

ANIMAL NO.	LUNGS	THYROIDS/ PARA- THYROIDS	ADRENALS	KIDNEYS
GROUP 1 - AIR CONTROL				
1001	75.578	1.186	3.336	143.262
1002	80.773	1.356	2.436	131.914
1005	79.354	1.191	2.897	119.054
1006	71.857	.966	3.110	156.191
1007	77.275	.989	2.838	148.549
1008	77.816	.804	2.928	151.017
1009	69.914	1.227	2.846	128.415
1010	66.711	1.026	2.197	112.946
1011	71.226	.987	3.356	125.305
1012	76.104	.990	2.166	145.421
1013	70.420	.903	2.752	125.424
1014	73.960	1.212	3.074	151.221
1015	76.688	.888	3.150	141.119
1016	79.270	1.151	3.290	162.939
1017	72.199	1.327	3.038	134.599



NO

PROJECT NO : 90831

RELATIVE ORGAN WEIGHTS (G%)
(RELATIVE TO BRAIN WEIGHT)

APPENDIX NO. 13

MALES

ANIMAL NO.	GONADS	PRO-STATE	PITUITARY	THYMUS
GROUP 1 - AIR CONTROL				
1001	168.338	60.314	.863	12.952
1002	163.389	52.722	.702	15.233
1005	173.124	54.570	.900	9.550
1006	167.964	44.653	.769	7.974
1007	166.749	59.518	.664	9.543
1008	147.742	60.050	.645	8.189
1009	151.958	64.995	.716	8.214
1010	145.663	70.806	.480	7.926
1011	155.936	33.219	.493	12.115
1012	170.711	61.506	.697	8.880
1013	151.877	75.156	.648	10.679
1014	173.373	61.483	.705	9.855
1015	190.333	58.788	.657	7.678
1016	160.318	59.897	.618	13.617
1017	172.668	71.214	.788	11.158



PROJECT NO : 90831

RELATIVE ORGAN WEIGHTS (G%)
(RELATIVE TO BRAIN WEIGHT)

APPENDIX NO. 13

MALES

ANIMAL NO.	BRAIN WEIGHT (G)	LIVER	SPLEEN	HEART
GROUP 2 - CERIC OXIDE				
LOW DOSE				
2001	2.183	584.552	38.117	69.784
2002	2.184	683.974	49.176	76.419
2003	2.171	667.895	37.540	92.169
2004	2.187	642.798	32.693	74.897
2005	2.148	519.227	42.970	71.741
2006	2.121	570.863	38.001	72.513
2007	2.222	533.663	42.300	74.932
2008	2.106	579.487	29.297	66.477
2009	2.176	454.366	31.388	62.409
2010	2.126	739.182	45.343	85.278
2011	2.082	455.860	34.966	67.243
2012	2.059	474.502	29.335	70.811
2013	2.052	520.760	34.259	75.731
2015	2.069	529.918	40.503	76.897
2016	2.106	639.364	33.951	73.789



APPENDIX NO. 13

PROJECT. NO :90831

RELATIVE ORGAN WEIGHTS (%)
(RELATIVE TO BRAIN WEIGHT)

MALES

ANIMAL NO.	LUNGS	THYROIDIS/ PARA- THYROIDIS	ADRENALS	KIDNEYS
GROUP 2 - CERIC OXIDE LOW DOSE				
2001	78.336	1.037	2.911	140.996
2002	72.940	1.049	2.367	152.289
2003	94.933	.921	2.764	140.811
2004	85.460	1.088	2.451	143.804
2005	81.145	1.038	2.663	124.395
2006	77.605	.934	2.603	139.415
2007	79.163	1.053	2.763	137.309
2008	83.286	1.121	2.939	133.666
2009	69.347	.758	2.238	121.783
2010	89.229	.960	2.625	167.168
2011	81.748	1.004	2.671	132.757
2012	80.525	1.054	3.424	126.469
2013	88.840	1.028	3.051	135.770
2015	84.389	1.092	2.731	142.823
2016	91.548	.921	2.830	145.014

PROJECT NO : 90831

RELATIVE ORGAN WEIGHTS (G%)
(RELATIVE TO BRAIN WEIGHT)

MALES

ANIMAL NO.	GONADS	PRD-STATE	PIT-UTARY	THYMUS
GROUP 2 - CERIC OXIDE				
LOW DOSE				
2001	173.263	76.417	.750	8.090
2002	159.753	61.813	.540	9.661
2003	173.837	75.587	.553	14.786
2004	159.076	55.601	.695	7.910
2005	146.182	71.927	.670	7.635
2006	169.448	47.525	.646	12.164
2007	145.320	78.938	.779	11.791
2008	189.945	57.787	.726	15.859
2009	153.539	34.881	.584	8.410
2010	157.197	77.846	.701	12.183
2011	166.234	66.955	.648	13.016
2012	184.216	63.137	.806	10.928
2013	183.772	91.082	.785	10.673
2015	144.611	57.854	.696	10.971
2016	168.139	58.689	.931	11.491



PROJECT NO : 90831

RELATIVE ORGAN WEIGHTS (G%)
(RELATIVE TO BRAIN WEIGHT)

MALES

APPENDIX NO. 13

ANIMAL NO.	BRAIN WEIGHT (G)	LIVER	SPLEEN	HEART
GROUP 3 - CERIC OXIDE INTERMEDIATE DOSE				
3001	2.171	631.506	33.994	77.568
3002	1.995	657.293	41.053	84.461
3003	2.195	630.205	35.535	65.786
3004	2.124	549.294	29.237	70.198
3005	2.182	664.436	39.780	74.015
3006	1.951	711.122	45.515	75.756
3007	2.088	546.121	45.642	71.121
3008	2.171	686.872	50.345	75.956
3009	2.194	544.394	37.785	79.170
3011	2.055	636.496	42.822	79.124
3012	2.066	561.810	50.871	66.844
3013	2.162	605.874	43.848	71.693
3014	2.135	561.499	43.372	77.799
3015	2.070	630.773	39.758	72.415
3016	2.213	562.223	34.930	70.131



PROJECT NO :90831

RELATIVE ORGAN WEIGHTS (G%)
(RELATIVE TO BRAIN WEIGHT)

APPENDIX NO. 13

MALES

ANIMAL NO.	LUNGS	THYROIDIS/ PARA- THYROIDIS	ADRENALS	KIDNEYS
GROUP 3 - CERIC OXIDE INTERMEDIATE DOSE				
3001	101.750	1.027	2.220	141.133
3002	130.627	1.088	2.947	138.045
3003	106.105	.797	2.661	135.763
3004	105.508	.951	1.963	133.286
3005	118.423	1.114	2.984	152.521
3006	152.178	.994	2.455	158.534
3007	132.088	1.351	2.471	141.906
3008	127.683	.889	3.008	149.655
3009	101.869	.980	2.785	127.666
3011	96.448	1.085	2.316	140.438
3012	138.867	.944	2.149	141.868
3013	127.845	.888	3.057	138.853
3014	142.061	1.040	2.567	131.054
3015	148.068	.720	2.676	140.000
3016	99.458	.750	2.815	137.189

PROJECT NO : 90831

RELATIVE ORGAN WEIGHTS (G%)
(RELATIVE TO BRAIN WEIGHT)

MALES

APPENDIX NO. 13

ANIMAL NO.	GONADS	PROSTATE	PITUITARY	THYMUS
GROUP 3 - CERIC OXIDE INTERMEDIATE DOSE				
3001	169.876	69.369	.791	10.963
3002	178.546	46.917	.632	15.940
3003	171.891	48.975	.661	15.125
3004	163.041	59.605	.541	12.759
3005	166.957	62.007	.591	15.949
3006	184.418	59.354	.779	14.403
3007	178.496	67.864	.704	13.362
3008	165.592	45.924	.654	14.740
3009	159.344	67.046	.839	9.389
3011	157.908	50.900	.608	14.696
3012	174.105	48.790	.712	13.166
3013	188.807	81.452	.587	11.980
3014	187.728	59.251	.689	12.272
3015	168.309	50.628	.715	14.976
3016	151.559	69.634	.624	13.737



PROJECT NO : 90831

RELATIVE ORGAN WEIGHTS (G%)
(RELATIVE TO BRAIN WEIGHT)

MALES

APPENDIX NO. 13

ANIMAL NO.	BRAIN WEIGHT (G)	LIVER	SPLEEN	HEART
GROUP 4 - CERIC OXIDE HIGH DOSE				
4002	2.016	451.488	39.087	67.510
4003	2.090	618.947	46.699	76.746
4004	2.161	433.040	31.143	65.572
4005	2.255	571.308	56.142	66.608
4006	2.269	573.766	31.702	68.430
4007	2.059	473.045	38.077	76.105
4008	2.172	521.087	38.674	72.422
4009	2.145	470.723	36.084	64.942
4010	2.099	707.099	51.596	73.273
4011	2.069	618.705	42.533	76.752
4012	2.183	507.421	33.578	73.065
4014	2.090	529.569	40.191	71.100
4015	2.069	621.218	34.026	63.122
4016	1.475	1128.339	73.763	185.695

PROJECT NO : 90831

RELATIVE ORGAN WEIGHTS (G%)
(RELATIVE TO BRAIN WEIGHT)

MALES

APPENDIX NO. 13

ANIMAL NO.	LUNGS	THYROIDIS/ PARA- THYROIDIS	ADRENALS	KIDNEYS
GROUP 4 - CERIC OXIDE HIGH DOSE				
4002	200.299	.893	2.907	115.972
4003	258.708	.799	3.340	142.440
4004	243.869	1.101	2.545	108.792
4005	218.714	1.193	2.279	140.621
4006	220.459	1.010	2.747	137.963
4007	259.786	.797	2.846	117.678
4008	199.448	1.225	2.772	126.519
4009	176.410	1.380	2.261	124.009
4010	213.864	.981	3.149	155.979
4011	222.281	1.121	2.755	154.036
4012	225.286	.843	2.579	118.049
4014	216.124	.828	2.148	129.569
4015	191.542	.947	2.673	141.711
4016	317.085	1.844	4.434	248.814

PROJECT NO :90831

RELATIVE ORGAN WEIGHTS (G%)
(RELATIVE TO BRAIN WEIGHT)

APPENDIX NO. 13

MALES

ANIMAL NO.	GONADS	PRJ-STATE	PIT-UITARY	THYMUS
GROUP 4 - CERIC OXIDE HIGH DOSE				
4002	163.393	58.879	.650	9.177
4003	156.124	57.512	.670	10.622
4004	153.725	55.345	.611	7.820
4005	171.929	64.257	.652	11.663
4006	172.487	61.332	.626	9.480
4007	119.378	55.415	.699	10.636
4008	163.904	74.678	.677	9.622
4009	174.312	49.837	.657	10.256
4010	173.464	73.178	.838	14.531
4011	168.391	87.675	.797	22.620
4012	153.779	51.580	.563	9.757
4014	173.923	57.512	.612	8.182
4015	174.625	43.741	.609	13.678
4016	241.017	149.017	1.329	22.508



PROJECT NO : 90831

RELATIVE ORGAN WEIGHTS (G%)
(RELATIVE TO BRAIN WEIGHT)

APPENDIX NO. 13

FEMALES

ANIMAL NO.	BRAIN WEIGHT (G)	LIVER	SPLEEN	HEART
GROUP 1 - AIR CONTROL				
1501	1.816	360.132	22.185	51.872
1502	1.929	346.397	26.179	52.151
1503	1.873	355.846	26.535	55.953
1504	1.938	352.683	29.154	49.329
1505	1.908	334.434	33.491	50.210
1506	1.977	295.498	22.003	45.524
1507	1.929	361.845	34.266	48.626
1508	1.937	365.720	24.316	53.691
1509	1.827	313.793	27.750	46.907
1510	2.007	335.177	25.411	52.267
1511	1.948	319.610	29.107	42.916
1512	1.910	328.429	25.654	47.225
1513	1.966	265.565	23.550	51.475
1514	2.005	311.022	24.489	40.499
1515	1.896	366.719	23.154	52.637



PROJECT NO : 90831

RELATIVE ORGAN WEIGHTS (G%)
(RELATIVE TO BRAIN WEIGHT)

FEMALES

APPENDIX NO. 13

ANIMAL NO.	LUNGS	THYROIDS/ PARA- THYROIDS	ADRENALS	KIDNEYS
GROUP 1 - AIR CONTROL				
1501	64.923	.887	3.166	105.011
1502	54.692	.975	2.836	81.649
1503	61.345	.630	2.702	87.934
1504	61.404	.717	3.318	93.756
1505	58.648	.624	3.679	92.505
1506	54.224	.865	3.576	81.234
1507	71.280	.715	3.396	96.060
1508	61.693	.650	3.258	95.870
1509	60.482	.761	2.928	82.375
1510	57.150	.917	2.765	84.654
1511	56.879	.703	2.890	90.349
1512	56.806	.691	2.806	89.529
1513	55.341	.758	2.355	79.603
1514	62.893	.903	3.332	76.209
1515	55.063	.928	2.658	84.757

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PROJECT NO : 90831

RELATIVE ORGAN WEIGHTS (G%)
(RELATIVE TO BRAIN WEIGHT)

APPENDIX NO. 13

FEMALES

ANIMAL NO.	GONADS	UTERUS	PITUITARY	THYMUS
GROUP 1 - AIR CONTROL				
1501	5.595	33.976	1.024	12.500
1502	5.438	50.233	.814	9.020
1503	4.170	33.903	.940	9.931
1504	4.169	21.311	.862	10.010
1505	3.381	26.677	.907	7.809
1506	5.225	27.365	.961	9.762
1507	5.734	26.024	.809	7.050
1508	3.660	25.039	.769	9.757
1509	4.012	30.542	.733	8.593
1510	3.508	35.825	.683	11.161
1511	4.292	42.762	.734	9.343
1512	4.497	32.775	.733	13.560
1513	3.871	40.946	.966	10.326
1514	4.738	30.474	.818	7.282
1515	2.358	31.329	1.287	8.808

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PROJECT NO : 90831

RELATIVE ORGAN WEIGHTS (G%)
(RELATIVE TO BRAIN WEIGHT)

APPENDIX NO. 13

FEMALES

ANIMAL NO.	BRAIN WEIGHT (G)	LIVER	SPLEEN	HEART
GROUP 2 - CERIC OXIDE				
LOW DOSE				
2501	1.890	337.566	26.667	52.169
2502	1.938	309.856	24.974	42.208
2503	1.954	288.280	30.502	47.544
2504	1.837	375.504	33.370	59.717
2505	1.962	299.337	24.261	44.852
2506	2.014	363.456	27.905	43.496
2507	2.037	335.052	30.191	44.232
2508	1.941	411.283	35.085	56.878
2509	1.948	324.333	28.234	51.027
2510	1.866	413.344	39.925	61.147
2511	2.089	291.623	32.647	41.264
2512	2.008	294.124	31.474	45.418
2513	2.062	304.268	28.661	51.940
2514	2.067	293.662	25.835	43.203
2515	1.855	369.757	26.954	49.057

PROJECT NO : 90831

RELATIVE ORGAN WEIGHTS (G%)
(RELATIVE TO BRAIN WEIGHT)

APPENDIX NO. 13

FEMALES

ANIMAL NO.	LUNGS	THYROIDIS/ PARA- THYROIDIS	ADRENALS	KIDNEYS
GROUP 2 - CERIC OXIDE LOW DOSE				
2501	62.540	.635	3.185	87.460
2502	61.610	.614	3.571	77.394
2503	61.771	.553	2.339	79.887
2504	75.449	.893	4.507	97.278
2505	59.378	.550	3.211	84.404
2506	62.562	.899	2.895	90.963
2507	75.454	.839	2.617	81.492
2508	65.482	1.046	3.812	90.623
2509	65.503	.667	2.408	82.392
2510	90.836	1.109	3.698	102.465
2511	62.422	.886	3.212	75.969
2512	58.566	1.001	2.525	84.213
2513	68.623	.820	3.904	84.142
2514	66.328	.745	2.351	77.552
2515	66.469	.830	2.453	90.027



PROJECT NO : 90831

RELATIVE ORGAN WEIGHTS (G%)
(RELATIVE TO BRAIN WEIGHT)

APPENDIX NO. 13

FEMALES

ANIMAL NO.	GONADS	UTERUS	PIT-UITARY	THYMUS
GROUP 2 - CERIC OXIDE				
LOW DOSE				
2501	3.577	27.249	.852	8.624
2502	2.905	32.611	.779	6.502
2503	3.920	27.687	.676	16.735
2504	4.257	32.553	.947	7.186
2505	4.037	27.523	.872	6.626
2506	2.651	71.549	.750	11.172
2507	4.138	28.326	.771	6.136
2508	4.338	19.629	.814	11.489
2509	3.090	35.113	.749	5.749
2510	5.611	31.511	.820	12.433
2511	4.461	45.093	.665	9.909
2512	3.257	25.199	.657	9.811
2513	3.346	74.345	.689	6.305
2514	3.430	20.997	.701	3.919
2515	3.811	29.919	.938	9.811



PROJECT NO : 90831

RELATIVE ORGAN WEIGHTS (G%)
(RELATIVE TO BRAIN WEIGHT)

APPENDIX NO. 13

FEMALES

ANIMAL NO.	BRAIN WEIGHT (G)	LIVER	SPLEEN	HEART
GROUP 3 - CERIC OXIDE INTERMEDIATE DOSE				
3501	1.928	369.606	27.075	55.446
3502	1.959	298.213	29.454	42.675
3503	1.977	354.224	28.730	56.095
3504	1.885	359.363	39.841	53.475
3505	1.957	345.580	21.921	50.281
3506	1.897	319.241	29.468	49.236
3507	1.869	303.478	31.728	58.373
3508	1.863	332.743	22.008	47.504
3509	1.936	301.756	22.056	55.785
3510	1.913	361.213	31.626	58.181
3511	1.973	277.952	28.434	44.349
3513	1.985	299.345	24.887	44.786
3514	2.186	355.032	24.840	48.948
3516	1.932	305.072	30.849	45.756
3517	1.881	287.028	19.617	42.743



PROJECT NO : 90831

RELATIVE ORGAN WEIGHTS (G%)
(RELATIVE TO BRAIN WEIGHT)

APPENDIX NO. 13

FEMALES

ANIMAL NO.	LUNGS	THYROIDIS/ PARA- THYROIDIS	ADRENALS	KIDNEYS
GROUP 3 - CERIC OXIDE INTERMEDIATE DOSE				
3501	95.332	.742	3.833	94.191
3502	75.191	.904	2.981	88.719
3503	75.670	.637	2.307	85.180
3504	78.037	.700	3.454	87.798
3505	70.567	.654	2.545	73.684
3506	94.096	.849	3.864	82.920
3507	90.690	1.188	3.858	77.689
3508	80.515	.811	2.759	86.957
3509	130.940	.909	3.869	80.733
3510	93.466	.842	3.100	97.073
3511	82.058	.669	3.077	73.746
3513	79.748	.831	2.912	86.196
3514	81.382	.608	3.028	88.015
3516	74.327	1.051	3.318	84.990
3517	73.684	.707	2.690	80.755



PROJECT NO : 90831

RELATIVE ORGAN WEIGHTS (G%)
(RELATIVE TO BRAIN WEIGHT)

APPENDIX NO. 13

FEMALES

ANIMAL NO.	GONADS	UTERUS	PITUITARY	THYMUS
GROUP 3 - CERIC OXIDE INTERMEDIATE DOSE				
3501	2.884	34.025	1.037	8.869
3502	4.752	28.433	.669	7.657
3503	4.426	32.625	.769	11.583
3504	5.310	25.570	.881	12.891
3505	3.352	30.761	.848	8.329
3506	5.909	31.049	.749	11.228
3507	5.169	58.801	.829	13.697
3508	3.081	56.575	.789	11.218
3509	5.062	23.554	.785	9.659
3510	5.102	34.501	.727	10.403
3511	3.619	24.633	.674	10.238
3513	4.640	30.730	.821	14.307
3514	4.538	39.661	.961	10.064
3516	3.939	29.917	.787	8.385
3517	3.721	24.083	.590	8.772



PROJECT NO : 90831

RELATIVE ORGAN WEIGHTS (G%)
(RELATIVE TO BRAIN WEIGHT)

APPENDIX NO. 13

FEMALES

ANIMAL NO.	BRAIN WEIGHT (G)	LIVER	SPLEEN	HEART
GROUP 4 - CERTIC OXIDE HIGH DOSE				
4501	2.063	341.493	24.091	48.279
4502	1.965	325.954	29.059	48.143
4503	1.905	304.514	23.517	50.761
4504	1.940	310.876	25.928	49.691
4505	1.944	301.903	24.640	52.058
4506	1.883	320.287	30.536	51.514
4507	1.942	320.340	28.682	49.228
4508	1.890	378.148	27.566	50.794
4509	1.888	323.252	26.642	47.458
4510	1.908	341.876	29.665	51.887
4511	1.957	281.196	17.987	42.207
4513	1.966	382.503	31.027	56.612
4514	1.920	304.063	28.906	48.281
4515	1.901	382.115	28.880	49.553
4516	1.890	309.259	26.508	47.354



PROJECT NO : 90831

RELATIVE ORGAN WEIGHTS (G%)
(RELATIVE TO BRAIN WEIGHT)

APPENDIX NO. 13

FEMALES

ANIMAL NO.	LUNGS	THYROIDIS/ PARA- THYROIDIS	ADRENALS	KIDNEYS
4501	169.739	.848	2.763	83.374
4502	172.417	.702	4.025	83.003
4503	166.772	.530	2.924	73.386
4504	188.196	1.103	3.438	90.619
4505	141.975	1.008	3.601	75.360
4506	160.913	.759	2.427	77.801
4507	139.392	1.061	3.625	89.444
4508	162.434	.767	4.074	94.021
4509	169.227	.874	2.569	82.786
4510	161.426	1.090	3.024	81.027
4511	140.521	.998	2.718	71.334
4513	174.262	1.155	3.596	100.407
4514	193.958	.755	3.214	82.292
4515	173.803	.726	3.372	95.634
4516	150.794	.873	2.788	77.513

GROUP 4 - CERIC OXIDE
HIGH DOSE

PROJECT NO : 90931

RELATIVE ORGAN WEIGHTS (G%)
(RELATIVE TO BRAIN WEIGHT)

APPENDIX NO. 13

FEMALES

ANIMAL NO.	GONADS	UTERUS	PITUITARY	THYMUS
GROUP 4 - CERIC OXIDE HIGH DOSE				
4501	3.694	20.116	.814	5.865
4502	4.702	22.341	.799	5.852
4503	4.572	26.037	.777	8.556
4504	4.918	38.247	.799	7.320
4505	4.604	35.082	.772	8.333
4506	3.733	32.661	.892	9.825
4507	2.750	75.386	.906	11.432
4508	3.952	27.778	.852	9.153
4509	4.746	26.430	.667	8.422
4510	4.340	30.398	.844	9.172
4511	3.250	45.171	.644	8.789
4513	3.881	35.351	1.033	7.833
4514	4.073	28.646	.641	14.010
4515	3.882	26.197	.810	9.100
4516	4.164	24.603	.778	4.815

APPENDIX NO. 14

PROJECT NO. 90831

INDIVIDUAL GROSS PATHOLOGICAL FINDINGS
HEALTH SCREEN
MALES

ANIMAL NO.	ORGAN	FINDINGS
5001	Kidney	Cyst: Single, left.
5002	Lymph node pancreatic	Enlargement.
5003		No abnormal findings.
5004	Thymus	Area dark: Multiple.
5005	Thymus	Area dark: Multiple.
5006		No abnormal findings.
5007		No abnormal findings.
5008		No abnormal findings.
5009		No abnormal findings.
5010		No abnormal findings.

APPENDIX NO. 14

PROJECT NO. 90831

INDIVIDUAL GROSS PATHOLOGICAL FINDINGS
HEALTH SCREEN
FEMALES

ANIMAL NO.	ORGAN	FINDINGS
5501		No abnormal findings.
5502		No abnormal findings.
5503		No abnormal findings.
5504		No abnormal findings.
5505	Kidney	Cyst: Multiple, bilateral.
5506		No abnormal findings.
5507		No abnormal findings.
5508		No abnormal findings.
5509	Kidney	Area depressed: Pale, single, left.
5510		No abnormal findings.

INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

APPENDIX NO. 14
PROJECT NO.: 90831

GROUP 1 AIR CONTROL STUDY WEEK OF DEATH 14 (DAY 92) GRADE
ANIMAL NO. 1001 MALE FINDING

TISSUE

GROSS PATHOLOGICAL FINDINGS

LYMPH NODE MANDIBULAR ENLARGEMENT
RIGHT. (2)

LYMPH NODE PANCREATIC ENLARGEMENT
(1)

ALL OTHER TISSUES WERE UNREMARKABLE

HISTOPATHOLOGICAL FINDINGS

ADRENAL VACUULATION, CORTICAL
LOCALLY EXTENSIVE, BILATERAL. 2

HEART INFILTRATION, MONONUCLEAR CELL
MULTIFOCAL. 1

LYMPH NODE MANDIBULAR PLASMACYTOSIS AND/OR HISTIOCYTOSIS, MEDULLARY
(2) 2

LYMPH NODE PANCREATIC NO ABNORMAL FINDINGS
(1)

ALL OTHER EXAMINED TISSUES WERE UNREMARKABLE

GROSS GRADE CODE: * - NOT SUBMITTED

HISTO GRADE CODE: 1 - SLIGHT, 2 - MILD, 3 - MODERATE, 4 - SEVERE, P - PRESENT, * - NOT TABULATED

#B-- BENIGN, #M- MALIGNANT

INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

APPENDIX NO. 14
PROJECT NO.: 90831

GROUP	ANIMAL NO.	CONTROL	SEX	STUDY WEEK OF DEATH	DAY	FINDING	GRADE
1	1002	AIR CONTROL	MALE	14	(DAY 92)		

GROSS PATHOLOGICAL FINDINGS

ALL TISSUES WERE UNREMARKABLE

HISTOPATHOLOGICAL FINDINGS

2

ADRENAL VACUOLATION, CORTICAL
LOCALLY EXTENSIVE, BILATERAL.

1

HEART INFILTRATION, MONONUCLEAR CELL
FOCAL.

ALL OTHER EXAMINED TISSUES WERE UNREMARKABLE

GROSS GRADE CODE: # - NOT SUBMITTED #D- BENIGN, #M- MALIGNANT
HISTO GRADE CODE: 1- SLIGHT, 2- MILD, 3- MODERATE, 4- SEVERE, P- PRESENT, *- NOT TABULATED



INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

APPENDIX NO. 14
PROJECT NO. 1 90831

GROUP 1 AIR CONTROL STUDY WEEK OF DEATH 14 (DAY 92) GRADE
ANIMAL NO. 1005 MALE FINDING

GROSS PATHOLOGICAL FINDINGS

KIDNEY AREA DEPRESSED
DARK, SINGLE, RIGHT. (2)
LYMPH NODE MANDIBULAR ENLARGEMENT
LEFT. (1)
URINARY BLADDER DILATATION
(3)

ALL OTHER TISSUES WERE UNREMARKABLE

HISTOPATHOLOGICAL FINDINGS

ADRENAL VACUOLATION, CORTICAL 2
LOCALLY EXTENSIVE, BILATERAL.
KIDNEY NO ABNORMAL FINDINGS
(2)
LYMPH NODE MANDIBULAR PLASMOCYTOSIS AND/OR HISTIOCYTOSIS, MEDULLARY 3
UNILATERAL. (1)
URINARY BLADDER DILATATION 2
(3)

ALL OTHER EXAMINED TISSUES WERE UNREMARKABLE

GROSS GRADE CODE: 4- NOT SUBMITTED

HISTO GRADE CODE: 1- SLIGHT, 2- MILD, 3- MODERATE, 4- SEVERE, P- PRESENT, *- NOT TABULATED

#D- BENIGN, #M- MALIGNANT

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INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

APPENDIX NO. 14
PROJECT NO.: 90831

GROUP 1 AIR CONTROL STUDY WEEK OF DEATH 14 (DAY 92) GRADE
ANIMAL NO. 1006 MALE FINDING

TISSUE

GROSS PATHOLOGICAL FINDINGS

LIVER AREA PALE
SINGLE, FISSURE, MEDIAN LOBE; MULTIPLE, NEAR HILUS, VENTRAL
PORTION OF RIGHT LOBE. (1)

LYMPH NODE MANDIBULAR AREA DARK
MULTIPLE, RIGHT. (2)

ALL OTHER TISSUES WERE UNREMARKABLE

HISTOPATHOLOGICAL FINDINGS

HEART INFILTRATION, MONONUCLEAR CELL
MULTIFOCAL. 1

LIVER VACUOLATION, HEPATOCELLULAR
FOCAL, SUBCAPSULAR. (1) 1

LYMPH NODE MANDIBULAR NO ABNORMAL FINDINGS
(2)

PARATHYROID ONE PARATHYROID UNAVAILABLE
NOT PRESENT IN SECTION.

PROSTATE PROSTATITIS
ACUTE, MULTIFOCAL. 1

SPINAL CORD CERVICAL UNAVAILABLE
NOT FOUND IN WET TISSUES.

GROSS GRADE CODE: *- NOT SUBMITTED



INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

APPENDIX NO. 14
PROJECT NO.: 90831

GROUP	ANIMAL NO.	SEX	STUDY WEEK OF DEATH	DAY (DAY 92)	FINDING	GRADE
1	1006	(cont'd) MALE	14			

TISSUE

THYROID

1
CYST, ULTIMBRANCHIAL/THYROGLOSSAL REMNANTS
UNILATERAL.

ALL OTHER EXAMINED TISSUES WERE UNREMARKABLE

GROSS GRADE CODE: * - NOT SUBMITTED

HISTO GRADE CODE: 1- SLIGHT, 2- MILD, 3- MODERATE, 4- SEVERE, P- PRESENT, * - NOT TABULATED #B- BENIGN, #M- MALIGNANT



INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

APPENDIX NO. 14
PROJECT NO. 1 90831

GROUP	STUDY WEEK OF DEATH	(DAY 92)	GRADE
1 AIR CONTROL	14	FINDING	
ANIMAL NO. 1007 MALE			
TISSUE			

GROSS PATHOLOGICAL FINDINGS

ALL TISSUES WERE UNREMARKABLE

HISTOPATHOLOGICAL FINDINGS

HEART	1
INFILTRATION, MONONUCLEAR CELL FOCAL.	

ALL OTHER EXAMINED TISSUES WERE UNREMARKABLE

GROSS GRADE CODE: *- NOT SUBMITTED #D- BENIGN, #M- MALIGNANT
 HISTO GRADE CODE: 1- SLIGHT, 2- MILD, 3- MODERATE, 4- SEVERE, P- PRESENT, *- NOT TABULATED



INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

APPENDIX NO. 14
PROJECT NO.: 90831

GROUP 1 AIR CONTROL STUDY WEEK OF DEATH 14 (DAY 92) GRADE
ANIMAL NO. 1008 MALE FINDING

GROSS PATHOLOGICAL FINDINGS

KIDNEY AREA DEPRESSED
DARK, SINGLE, LEFT. (2)

LIVER AREA RAISED
PALE, SINGLE, FISSURE, MEDIAN LOBE. (1)

ALL OTHER TISSUES WERE UNREMARKABLE

HISTOPATHOLOGICAL FINDINGS

KIDNEY FIBROPLASIA
FOCAL, WITH SUBACUTE INFLAMMATION. (2) 1

LIVER VACUOLATION, HEPATOCELLULAR
LOCALLY EXTENSIVE. (1) 2

PARATHYROID ONE PARATHYROID UNAVAILABLE
NOT PRESENT IN SECTION.

THYROID CYST, ULTIBRANCHIAL/THYROGLOSSAL REMNANTS
UNILATERAL. 1

ALL OTHER EXAMINED TISSUES WERE UNREMARKABLE

GROSS GRADE CODE: * - NOT SUBMITTED #B- BENIGN, #M- MALIGNANT
HISTO GRADE CODE: 1- SLIGHT, 2- MILD, 3- MODERATE, 4- SEVERE, P- PRESENT, *- NOT TABULATED

INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

APPENDIX NO. 14
PROJECT NO.: 90831

GROUP	STUDY WEEK OF DEATH	GRADE
1 AIR CONTROL	14 (DAY 92)	
ANIMAL NO. 1009 MALE	FINDING	
TISSUE		

GROSS PATHOLOGICAL FINDINGS

ALL TISSUES WERE UNREMARKABLE

HISTOPATHOLOGICAL FINDINGS

HEART INFILTRATION, MONONUCLEAR CELL FOCAL.

PARATHYROID ONE PARATHYROID UNAVAILABLE NOT PRESENT IN SECTION.

ALL OTHER EXAMINED TISSUES WERE UNREMARKABLE

GROSS GRADE CODE: * - NOT SUBMITTED

HISTO GRADE CODE: 1- SLIGHT, 2- MILD, 3- MODERATE, 4- SEVERE, P- PRESENT, * - NOT TABULATED

#U- BENIGN, #M- MALIGNANT

INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

APPENDIX NO. 14
PROJECT NO.: 90831

GROUP 1 AIR CONTROL STUDY WEEK OF DEATH 14 (DAY 92) GRADE
ANIMAL NO. 1010 MALE FINDING
TISSUE

GROSS PATHOLOGICAL FINDINGS

LYMPH NODE MANDIBULAR ENLARGEMENT
BILATERAL. [1]

ALL OTHER TISSUES WERE UNREMARKABLE

HISTOPATHOLOGICAL FINDINGS

ADRENAL VACUOLATION, CORTICAL
LOCALLY EXTENSIVE, BILATERAL. 2

LYMPH NODE MANDIBULAR PLASMOCYTOSIS AND/OR HISTIOCYTOSIS, MEDULLARY
BILATERAL. [1] 2

PARATHYROID ONE PARATHYROID UNAVAILABLE
NOT PRESENT IN SECTION.

THYROID CYST, ULTIMBRANCHIAL/THYROGLOSSAL REMNANTS
BILATERAL. 1

ALL OTHER EXAMINED TISSUES WERE UNREMARKABLE

GROSS GRADE CODE: * - NOT SUBMITTED #E- BENIGN, #M- MALIGNANT
HISTO GRADE CODE: 1- SLIGHT, 2- MILD, 3- MODERATE, 4- SEVERE, P- PRESENT, *- NOT TABULATED



APPENDIX NO. 14
 PROJECT NO. 90831

INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

GROUP 1 AIR CONTROL
 ANIMAL NO. 1011 MALE STUDY WEEK OF DEATH 14 (DAY 92)
 TISSUE FINDING GRADE

GROSS PATHOLOGICAL FINDINGS

ALL TISSUES WERE UNREMARKABLE

HISTOPATHOLOGICAL FINDINGS

HEART INFILTRATION, MONONUCLEAR CELL
 MULTIFOCAL. 1

PARATHYROID UNAVAILABLE
 NOT PRESENT IN SECTION.

ALL OTHER EXAMINED TISSUES WERE UNREMARKABLE

GROSS GRADE CODE: * - NOT SUBMITTED #B - BENIGN, #M - MALIGNANT
 HISTO GRADE CODE: 1 - SLIGHT, 2 - MILD, 3 - MODERATE, 4 - SEVERE, P - PRESENT, * - NOT TABULATED

APPENDIX NO. 14 INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS
PROJECT NO.: 90831

GROUP 1 AIR CONTROL STUDY WEEK OF DEATH 14 (DAY 92) GRADE
ANIMAL NO. 1012 MALE TISSUE FINDING

GROSS PATHOLOGICAL FINDINGS

ALL TISSUES WERE UNREMARKABLE

HISTOPATHOLOGICAL FINDINGS

ADRENAL	VACUOLATION, CORTICAL LOCALLY EXTENSIVE, BILATERAL.	1
HEART	INFILTRATION, MONONUCLEAR CELL FOCAL.	1
PROSTATE	PROSTATITIS ACUTE, FOCAL.	1

ALL OTHER EXAMINED TISSUES WERE UNREMARKABLE

GROSS GRADE CODE: # - NOT SUBMITTED
HISTO GRADE CODE: 1 - SLIGHT, 2 - MILD, 3 - MODERATE, 4 - SEVERE, P - PRESENT, * - NOT TABULATED

#D - BENIGN, #M - MALIGNANT

INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

APPENDIX NO. 14
PROJECT NO.: 90831

GROUP	STUDY WEEK OF DEATH	GRADE
1 AIR CONTROL	14 (DAY 92)	
ANIMAL NO. 1013 MALE	FINDING	
TISSUE		

GROSS PATHOLOGICAL FINDINGS

ALL TISSUES WERE UNREMARKABLE

HISTOPATHOLOGICAL FINDINGS

ADRENAL

VACUOLATION, CORTICAL
LOCALLY EXTENSIVE, BILATERAL.

3

THYROID

CYST, ULTIMBRANCHIAL/THYROGLOSSAL REMNANTS
UNILATERAL.

1

ALL OTHER EXAMINED TISSUES WERE UNREMARKABLE

GROSS GRADE CODE: * - NOT SUBMITTED

HISTO GRADE CODE: 1 - SLIGHT, 2 - MILD, 3 - MODERATE, 4 - SEVERE, P - PRESENT, * - NOT TABULATED

#B - BENIGN, #M - MALIGNANT



INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

APPENDIX NO. 14
PROJECT NO.: 90831

GROUP 1 AIR CONTROL
ANIMAL NO. 1014 MALE
STUDY WEEK OF DEATH 14 (DAY 92)
FINDING
TISSUE
GRADE

GROSS PATHOLOGICAL FINDINGS

LIVER AREA RAISED
PALE, FIRM, SINGLE, NEAR HILUS, VENTRAL PORTION OF RIGHT LOBE.
[1]

LYMPH NODE MANDIBULAR ENLARGEMENT
RIGHT. [2]

ALL OTHER TISSUES WERE UNREMARKABLE

HISTOPATHOLOGICAL FINDINGS

EYE FOLD/ROSETTE, RETINAL
LOCALLY EXTENSIVE, UNILATERAL.
1

HEART INFILTRATION, MONONUCLEAR CELL
MULTIFOCAL.
1

LIVER NO ABNORMAL FINDINGS
[1]

LYMPH NODE MANDIBULAR PLASMACYTOSIS AND/OR HISTIOCYTOSIS, MEDULLARY
[2] 2

PARATHYROID UNAVAILABLE
NOT PRESENT IN SECTION.

GROSS GRADE CODE: *- NOT SUBMITTED
HISTO GRADE CODE: 1- SLIGHT, 2- MILD, 3- MODERATE, 4- SEVERE, P- PRESENT, *- NOT TABULATED, #B- BENIGN, #M- MALIGNANT

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INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

APPENDIX NO. 14
PROJECT NO.: 90831

GROUP 1 AIR CONTROL STUDY WEEK OF DEATH 14 (DAY 92) GRADE
ANIMAL NO. 1014 (cont'd) MALE FINDING

TISSUE

1

PROSTATE

PROSTATITIS
ACUTE, MULTIFOCAL.

ALL OTHER EXAMINED TISSUES WERE UNREMARKABLE

GROSS GRADE CODE: * - NOT SUBMITTED #0- BENIGN, #M- MALIGNANT
HISTO GRADE CODE: 1- SLIGHT, 2- MILD, 3- MODERATE, 4- SEVERE, P- PRESENT, *- NOT TABULATED



INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

APPENDIX NO. 14
PROJECT NO.: 90931

GROUP	ANIMAL NO.	SEX	STUDY WEEK OF DEATH	DATE (DAY 92)	FINDING	GRADE
1	AIR CONTROL	MALE	14	(DAY 92)		

GROSS PATHOLOGICAL FINDINGS

ALL TISSUES WERE UNREMARKABLE

HISTOPATHOLOGICAL FINDINGS

KIDNEY	CYST	2
	UNILATERAL.	
	FIBROPLASIA	1
	SEGMENTAL, WITH TUBULAR BASOPHILIA AND SUBACUTE INFLAMMATION.	
MAMMARY GLAND	NO GLANDULAR TISSUE IN SECTION	
PROSTATE	PROSTATITIS ACUTE, FOCAL.	1

ALL OTHER EXAMINED TISSUES WERE UNREMARKABLE

GROSS GRADE CODE: * - NOT SUBMITTED

HISTO GRADE CODE: 1 - SLIGHT, 2 - MILD, 3 - MODERATE, 4 - SEVERE, P - PRESENT, * - NOT TABULATED

#B - BENIGN, #M - MALIGNANT

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INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

APPENDIX NO. 14
PROJECT NO.: 90831

GROUP 1 AIR CONTROL STUDY WEEK OF DEATH 14 (DAY 92) GRADE
ANIMAL NO. 1016 MALE FINDING
TISSUE

GROSS PATHOLOGICAL FINDINGS

LYMPH NODE MANDIBULAR AREA DARK MULTIPLE, BILATERAL. [1]

ALL OTHER TISSUES WERE UNREMARKABLE

HISTOPATHOLOGICAL FINDINGS

ADRENAL VACUOLATION, CORTICAL LOCALLY EXTENSIVE, BILATERAL. 2

LYMPH NODE MANDIBULAR HEMORRHAGE FOCAL TO MULTIFOCAL, BILATERAL. 1
[1]

PARATHYROID ONE PARATHYROID UNAVAILABLE NOT PRESENT IN SECTION.

PITUITARY CYST 1

THYROID CYST, ULTIMOBRANCHIAL/THYROGLOSSAL REMNANTS UNILATERAL. 1

ALL OTHER EXAMINED TISSUES WERE UNREMARKABLE

GROSS GRADE CODE: #- NOT SUBMITTED

HISTO GRADE CODE: 1- SLIGHT, 2- MILD, 3- MODERATE, 4- SEVERE, P- PRESENT, *- NOT TABULATED

#0- BENIGN, #M- MALIGNANT



INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

APPENDIX NO. 14
PROJECT NO. 90831

GROUP 1 AIR CONTROL STUDY WEEK OF DEATH 14 (DAY 92) GRADE
ANIMAL NO. 1017 MALE FINDING

GROSS PATHOLOGICAL FINDINGS

LIVER AREA PALE
SINGLE, NEAR HILUS, VENTRAL PORTION OF RIGHT LOBE. (1)

ALL OTHER TISSUES WERE UNREMARKABLE

HISTOPATHOLOGICAL FINDINGS

ADRENAL VACUOLATION, CORTICAL
LOCALLY EXTENSIVE, BILATERAL. 2

EYE ATROPHY, RETINAL
LOCALLY EXTENSIVE, UNILATERAL. 2

LIVER NO ABNORMAL FINDINGS
(1)

PITUITARY NO ABNORMAL FINDINGS
PARS NERVOSA NOT PRESENT.

ALL OTHER EXAMINED TISSUES WERE UNREMARKABLE

GROSS GRADE CODE: * - NOT SUBMITTED #0- BENIGN, #M- MALIGNANT
HISTO GRADE CODE: 1- SLIGHT, 2- MILD, 3- MODERATE, 4- SEVERE, P- PRESENT, *- NOT TABULATED



INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

APPENDIX NO. 14
PROJECT NO. 1 90831

GROUP 2 CERIC OXIDE LOW DOSE
ANIMAL NO. 2001 MALE STUDY WEEK OF DEATH 14 (DAY 92)
TISSUE FINDING GRADE

GROSS PATHOLOGICAL FINDINGS

LYMPH NODE MANDIBULAR ENLARGEMENT
RIGHT. (1)

ALL OTHER TISSUES WERE UNREMARKABLE

HISTOPATHOLOGICAL FINDINGS

LARYNX METAPLASIA 1
BASE OF EPIGLOTTIS.

LUNG PIGMENT ACCUMULATION 2
INTRACELLULAR, MULTIFOCAL.

LYMPH NODE MANDIBULAR PLASMACYTOSIS AND/OR HISTIOCYTOSIS, MEDULLARY 2
(1)

ALL OTHER EXAMINED TISSUES WERE UNREMARKABLE

GROSS GRADE CODE: * - NOT SUBMITTED #B- BENIGN, #M- MALIGNANT
HISTO GRADE CODE: 1- SLIGHT, 2- MILD, 3- MODERATE, 4- SEVERE, P- PRESENT, *- NOT TABULATED

INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

APPENDIX NO. 14
PROJECT NO. 90831

GROUP 2 CERIC OXIDE LOW DOSE
ANIMAL NO. 2002 MALE STUDY WEEK OF DEATH 14 (DAY 92)
TISSUE FINDING GRADE

GROSS PATHOLOGICAL FINDINGS

KIDNEY AREA PALE SINGLE, RIGHT. [2]
LIVER AREA PALE SINGLE, FISSURE, MEDIAN LOBE. [1]
LYMPH NODE BRONCHIAL DISCOLORATION PALE. [3]

ALL OTHER TISSUES WERE UNREMARKABLE

HISTOPATHOLOGICAL FINDINGS

CAVITY NASAL PIGMENT ACCUMULATION INTRAFOLLICULAR (LEVEL III). 1
KIDNEY NO ABNORMAL FINDINGS [2]
LARYNX PIGMENT ACCUMULATION INTRAFOLLICULAR. 1
LIVER VACUULATION, HEPATOCELLULAR FOCAL. [1] 1
LUNG PIGMENT ACCUMULATION 2

GROSS GRADE CODE: N- NOT SUBMITTED #B- BENIGN, #M- MALIGNANT
HISTO GRADE CODE: 1- SLIGHT, 2- MILD, 3- MODERATE, 4- SEVERE, P- PRESENT, N- NOT TABULATED



INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

APPENDIX NO. 14
PROJECT NO.: 90831

GROUP 2 CERIC OXIDE LOW DOSE
ANIMAL NO. 2002 (cont'd) MALE STUDY WEEK OF DEATH 14 (DAY 92)
TISSUE FINDING GRADE

LUNG (cont'd) INTRACELLULAR, MULTIFOCAL.
LYMPH NODE BRONCHIAL PIGMENT ACCUMULATION 1
MULTIFOCAL. [3]
HYPERPLASIA, LYMPHOID 1

ALL OTHER EXAMINED TISSUES WERE UNREMARKABLE

CROSS GRADE CODE: * - NOT SUBMITTED #B - BENIGN, #M - MALIGNANT
HISTO GRADE CODE: 1 - SLIGHT, 2 - MILD, 3 - MODERATE, 4 - SEVERE, P - PRESENT, * - NOT TABULATED

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INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

APPENDIX NO. 14
PROJECT NO. 1 90831

GROUP 2 CERIC OXIDE LOW DOSE
ANIMAL NO. 2003 MALE STUDY WEEK OF DEATH 14 (DAY 92)
TISSUE FINDING GRADE

GROSS PATHOLOGICAL FINDINGS

LYMPH NODE MANDIBULAR AREA DARK MULTIPLE, BILATERAL. [2]

SPLEEN CYST MULTIPLE, EDGE. [1]

LYMPH NODE BRONCHIAL ENLARGEMENT [3]
DISCOLORATION PALE. [4]

ALL OTHER TISSUES WERE UNREMARKABLE

HISTOPATHOLOGICAL FINDINGS

CAVITY NASAL PIGMENT ACCUMULATION INTRAFOLLICULAR (LEVEL III). 1

LUNG PIGMENT ACCUMULATION INTRACELLULAR, MULTIFOCAL, EPITHELIAL HYPERPLASIA, ALVEOLAR MULTIFOCAL. 2

LYMPH NODE MANDIBULAR HEMORRHAGE MULTIFOCAL, UNILATERAL. [2] 1

- 1092 -

GROSS GRADE CODE: # - NOT SUBMITTED #B - BENIGN, #M - MALIGNANT
HISTO GRADE CODE: 1 - SLIGHT, 2 - MILD, 3 - MODERATE, 4 - SEVERE, P - PRESENT, * - NOT TABULATED

APPENDIX NO. 14
PROJECT NO. 90831

INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

GROUP 2 CERIC OXIDE LOW DOSE
ANIMAL NO. 2003 (cont'd) MALE STUDY WEEK OF DEATH 14 (DAY 92)
TISSUE FINDING GRADE

SPLEEN	CYST, CAPSULAR (1)	2
LYMPH NODE BRONCHIAL	PIGMENT ACCUMULATION MULTIFOCAL. (4) HYPERPLASIA, LYMPHOID (3)	2 2

ALL OTHER EXAMINED TISSUES WERE UNREMARKABLE

GROSS GRADE CODE: * - NOT SUBMITTED #B- BENIGN, #M- MALIGNANT
HISTO GRADE CODE: 1- SLIGHT, 2- MILD, 3- MODERATE, 4- SEVERE, P- PRESENT, *- NOT TABULATED

APPENDIX NO. 14 INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS
 PROJECT NO. 1 90831

GROUP 2 CERIC OXIDE LOW DOSE
 ANIMAL NO. 2004 MALE STUDY WEEK OF DEATH 14 (DAY 92)
 TISSUE FINDING GRADE

GROSS PATHOLOGICAL FINDINGS

LIVER AREA PALE
 SINGLE, FISSURE, MEDIAN LOBE. (1)

LYMPH NODE BRONCHIAL ENLARGEMENT
 (4)
 DISCOLORATION
 PALE. (5)

LYMPH NODE MEDIASTINAL ENLARGEMENT
 (2)
 DISCOLORATION
 PALE. (3)

ALL OTHER TISSUES WERE UNREMARKABLE

HISTOPATHOLOGICAL FINDINGS

CAVITY NASAL PIGMENT ACCUMULATION
 INTRAFOLLICULAR (LEVEL III). 1

LARYNX PIGMENT ACCUMULATION
 MUCOSAL. 1

LIVER VACUOLATION, HEPATOCELLULAR
 LOCALLY EXTENSIVE. (1) 2

- 1094 -

GROSS GRADE CODE: * - NOT SUBMITTED #B- BENIGN, #M- MALIGNANT
 HISTO GRADE CODE: 1- SLIGHT, 2- MILD, 3- MODERATE, 4- SEVERE, P- PRESENT, *- NOT TABULATED

BIO

INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

APPENDIX NO. 14
PROJECT NO. 1 90831

GROUP 2 CERIC OXIDE LOW DOSE STUDY WEEK OF DEATH 14 (DAY 92)
ANIMAL NO. 2004 (cont'd) MALE
TISSUE FINDING GRADE

LUNG PIGMENT ACCUMULATION 2

INTRACELLULAR, MULTIFOCAL.
MINERALIZATION
VASCULAR, FOCAL.

LYMPH NODE BRONCHIAL PIGMENT ACCUMULATION 2

MULTIFOCAL. (5)
HYPERPLASIA, LYMPHOID
(4)

LYMPH NODE MEDIASTINAL PIGMENT ACCUMULATION 2

MULTIFOCAL. (3)
HYPERPLASIA, LYMPHOID
(2)

ALL OTHER EXAMINED TISSUES WERE UNREMARKABLE

GROSS GRADE CODE: * - NOT SUBMITTED

HISTO GRADE CODE: 1 - SLIGHT, 2 - MILD, 3 - MODERATE, 4 - SEVERE, P - PRESENT, * - NOT TABULATED

#D - BENIGN, #M - MALIGNANT



INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

APPENDIX NO. 14
PROJECT NO.: 90031

GROUP 2 CERIC OXIDE LOW DOSE
ANIMAL NO. 2005 MALE STUDY WEEK OF DEATH 14 (DAY 92)
TISSUE FINDING GRADE

GROSS PATHOLOGICAL FINDINGS

LYMPH NODE BRONCHIAL DISCOLORATION
PALE. (1)

ALL OTHER TISSUES WERE UNREMARKABLE

HISTOPATHOLOGICAL FINDINGS

CAVITY NASAL PIGMENT ACCUMULATION
INTRAFOCULAR (LEVEL III). 1

LARYNX METAPLASIA
BASE OF EPIGLOTTIS. 1

LUNG PIGMENT ACCUMULATION
INTRACELLULAR, MULTIFOCAL. 2

LYMPH NODE BRONCHIAL PIGMENT ACCUMULATION
MULTIFOCAL. (1) 1

ALL OTHER EXAMINED TISSUES WERE UNREMARKABLE

GROSS GRADE CODE: * - NOT SUBMITTED

HISTO GRADE CODE: 1 - SLIGHT, 2 - MILD, 3 - MODERATE, 4 - SEVERE, P - PRESENT, * - NOT TABULATED #D - BENIGN, #M - MALIGNANT

INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

APPENDIX NO. 14
PROJECT NO.: 90831

GROUP 2 CERIC OXIDE LOW DOSE
ANIMAL NO. 2006 MALE STUDY WEEK OF DEATH 14 (DAY 92)
TISSUE FINDING GRADE

GROSS PATHOLOGICAL FINDINGS

LYMPH NODE BRONCHIAL DISCOLORATION PALE, (1)

ALL OTHER TISSUES WERE UNREMARKABLE

HISTOPATHOLOGICAL FINDINGS

CAVITY NASAL PIGMENT ACCUMULATION INTRAFOLLICULAR (LEVEL III), 1

LUNG PIGMENT ACCUMULATION INTRACELLULAR, MULTIFOCAL, 2

LYMPH NODE BRONCHIAL PIGMENT ACCUMULATION MULTIFOCAL, (1) 1
HYPERPLASIA, LYMPHOID 1

ALL OTHER EXAMINED TISSUES WERE UNREMARKABLE

GROSS GRADE CODE: *- NOT SUBMITTED

HISTO GRADE CODE: 1- SLIGHT, 2- MILD, 3- MODERATE, 4- SEVERE, P- PRESENT, *- NOT TABULATED #D- BENIGN, #M- MALIGNANT



INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

APPENDIX NO. 14
PROJECT NO.: 90831

GROUP 2 CERIC OXIDE LOW DOSE
ANIMAL NO. 2007 MALE STUDY WEEK OF DEATH 14 (DAY 92)
TISSUE FINDING GRADE

GROSS PATHOLOGICAL FINDINGS

LIVER AREA PALE
SINGLE, FISSURE, MEDIAN LOBE. [1]

LYMPH NODE MANDIBULAR ENLARGEMENT
LEFT. [2]
FOCI DARK
BILATERAL. [3]

LYMPH NODE BRONCHIAL ENLARGEMENT
[4]
DISCOLORATION
PALE. [5]

ALL OTHER TISSUES WERE UNREMARKABLE

HISTOPATHOLOGICAL FINDINGS

CAVITY NASAL PIGMENT ACCUMULATION
INTRAFOCULAR (LEVEL III). 1

LARYNX PIGMENT ACCUMULATION
INTRAFOCULAR. 1

LIVER NO ABNORMAL FINDINGS
[1]

GROSS GRADE CODE: * - NOT SUBMITTED #B- BENIGN, #M- MALIGNANT
HISTO GRADE CODE: 1- SLIGHT, 2- MILD, 3- MODERATE, 4- SEVERE, P- PRESENT, * - NOT TABULATED

INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

APPENDIX NO. 14
PROJECT NO.: 90831

GROUP 2 CERIC OXIDE LOW DOSE
ANIMAL NO. 2007 (cont'd) MALE STUDY WEEK OF DEATH: 14 (DAY 92)
TISSUE FINDING GRADE

LUNG	PIGMENT ACCUMULATION INTRACELLULAR, MULTIFOCAL.	2
LYMPH NODE MANDIBULAR	PLASMACYTOSIS AND/OR HISTIOCYTOSIS, MEDULLARY UNILATERAL. (2) HEMORRHAGE MULTIFOCAL, BILATERAL. (3)	3 2
LYMPH NODE BRONCHIAL	PIGMENT ACCUMULATION MULTIFOCAL. (5) HYPERPLASIA, LYMPHOID (4)	2 1

ALL OTHER EXAMINED TISSUES WERE UNREMARKABLE

GROSS GRADE CODE: * - NOT SUBMITTED #D- ECNIGN, #M- MALIGNANT
HISTO GRADE CODE: 1- SLIGHT, 2- MILD, 3- MODERATE, 4- SEVERE, P- PRESENT, *- NOT TABULATED

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INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

APPENDIX NO. 14
PROJECT NO. 1 90831

GROUP 2 CERIC OXIDE LOW DOSE
ANIMAL NO. 2008 MALE STUDY WEEK OF DEATH 14 (DAY 92)
TISSUE FINDING GRADE

GROSS PATHOLOGICAL FINDINGS

KIDNEY DILATATION
PELVIS, LEFT. (3)

LIVER AREA PALE
SINGLE, NEAR HILUS, VENTRAL PORTION OF RIGHT LOBE. (1)

LYMPH NODE BRONCHIAL DISCOLORATION
PALE. (2)

ALL OTHER TISSUES WERE UNREMARKABLE

HISTOPATHOLOGICAL FINDINGS

KIDNEY NO ABNORMAL FINDINGS
(3)

LARYNX METAPLASIA
BASE OF EPIGLOTTIS.
PIGMENT ACCUMULATION
INTRAFOLLICULAR. 1

LIVER VACUULATION, HEPATOCELLULAR
MULTIFOCAL. (1) 1

LUNG PIGMENT ACCUMULATION 2

1100

GROSS GRADE CODE: # - NOT SUBMITTED

HISTO GRADE CODE: 1 - SLIGHT, 2 - MILD, 3 - MODERATE, 4 - SEVERE, P - PRESENT, * - NOT TABULATED

#B - BENIGN, #M - MALIGNANT

110

INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

APPENDIX NO. 14
PROJECT NO. 1 90031

GROUP 2 CERIC OXIDE LOW DOSE
ANIMAL NO. 2008 (cont'd) MALE STUDY WEEK OF DEATH 14 (DAY 92)
TISSUE FINDING GRADE

LUNG (cont'd) INTRACELLULAR, MULTIFOCAL.

LYMPH NODE BRONCHIAL PIGMENT ACCUMULATION 1
MULTIFOCAL. (2)
HYPERPLASIA, LYMPHOID 1

ALL OTHER EXAMINED TISSUES WERE UNREMARKABLE

GROSS GRADE CODE: * - NOT SUBMITTED

HISTO GRADE CODE: 1 - SLIGHT, 2 - MILD, 3 - MODERATE, 4 - SEVERE, P - PRESENT, * - NOT TABULATED

#B - BENIGN, #M - MALIGNANT

APPENDIX NO. 14 INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS
 PROJECT NO.: 90831

GROUP 2 CERIC OXIDE LOW DOSE
 ANIMAL NO. 2009 MALE STUDY WEEK OF DEATH 14 (DAY 92)
 TISSUE FINDING GRADE

GROSS PATHOLOGICAL FINDINGS

LIVER AREA PALE
 SINGLE, NEAR HILUS, VENTRAL PORTION OF RIGHT LOBE. (1)

LYMPH NODE BRONCHIAL DISCOLORATION
 PALE. (2)

ALL OTHER TISSUES WERE UNREMARKABLE

HISTOPATHOLOGICAL FINDINGS

CAVITY NASAL RHINITIS 2
 SUPPURATIVE, LOCALLY EXTENSIVE, WITH EPITHELIAL HYPERPLASIA
 AND FOCAL ATROPHY.
 PIGMENT ACCUMULATION 1
 INTRAFOLLICULAR (LEVEL III).

LARYNX PIGMENT ACCUMULATION 1
 INTRAFOLLICULAR.

LIVER VACUOLATION, HEPATOCELLULAR 1
 LOCALLY EXTENSIVE. (1)

LUNG PIGMENT ACCUMULATION 2
 INTRACELLULAR, MULTIFOCAL.

LYMPH NODE BRONCHIAL PIGMENT ACCUMULATION 1

GROSS GRADE CODE: * - NOT SUBMITTED #B - BENIGN, #M - MALIGNANT
 HISTO GRADE CODE: 1 - SLIGHT, 2 - MILD, 3 - MODERATE, 4 - SEVERE, P - PRESENT, * - NOT TABULATED

INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

APPENDIX NO. 14
PROJECT NO. 1 90031

GROUP 2 CERIC OXIDE LOW DOSE
ANIMAL NO. 2009 (cont'd) MALE STUDY WEEK OF DEATH 14 (DAY 92)
TISSUE FINDING GRADE

LYMPH NODE BRONCHIAL (cont'd)
MULTIFOCAL, [2]
HYPERPLASIA, LYMPHOID

1

ALL OTHER EXAMINED TISSUES WERE UNREMARKABLE

GROSS GRADE CODE: * - NOT SUBMITTED #B - BENIGN, #M - MALIGNANT
HISTO GRADE CODE: 1 - SLIGHT, 2 - MILD, 3 - MODERATE, 4 - SEVERE, P - PRESENT, * - NOT TABULATED

INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

APPENDIX NO. 14
PROJECT NO. 90831

GROUP 2 CERIC OXIDE LOW DOSE
ANIMAL NO. 2010 MALE STUDY WEEK OF DEATH 14 (DAY 92)
TISSUE FINDING GRADE

GROSS PATHOLOGICAL FINDINGS

LYMPH NODE BRONCHIAL DISCOLORATION
PALE. (1)

ALL OTHER TISSUES WERE UNREMARKABLE

HISTOPATHOLOGICAL FINDINGS

CAVITY NASAL PIGMENT ACCUMULATION
INTRAFOLLICULAR (LEVEL III). 1

LUNG PIGMENT ACCUMULATION
INTRACELLULAR, MULTIFOCAL. 2

LYMPH NODE BRONCHIAL PIGMENT ACCUMULATION
MULTIFOCAL. (1) 2
HYPERPLASIA, LYMPHOID 1

ALL OTHER EXAMINED TISSUES WERE UNREMARKABLE

GROSS GRADE CODE: *- NOT SUBMITTED

HISTO GRADE CODE: 1- SLIGHT, 2- MILD, 3- MODERATE, 4- SEVERE, P- PRESENT, *- NOT TABULATED #D- BENIGN, #M- MALIGNANT

INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

APPENDIX NO. 14
PROJECT NO.: 90831

GROUP 2 CERIC OXIDE LOW DOSE
ANIMAL NO. 2011 MALE STUDY WEEK OF DEATH 14 (DAY 92)
TISSUE FINDING GRADE

GROSS PATHOLOGICAL FINDINGS

LYMPH NODE BRONCHIAL DISCOLORATION
PALE. (1)

ALL OTHER TISSUES WERE UNREMARKABLE

HISTOPATHOLOGICAL FINDINGS

CAVITY NASAL 1
PIGMENT ACCUMULATION
INTRAFOLLICULAR (LEVEL III).

LUNG 2
PIGMENT ACCUMULATION
INTRACELLULAR, MULTIFOCAL.

LYMPH-NODE BRONCHIAL 2
HYPERPLASIA, LYMPHOID
PIGMENT ACCUMULATION
MULTIFOCAL. (1)

ALL OTHER EXAMINED TISSUES WERE UNREMARKABLE

GROSS GRADE CODE: # - NOT SUBMITTED

HISTO GRADE CODE: 1- SLIGHT, 2- MILD, 3- MODERATE, 4- SEVERE, P- PRESENT, *- NOT TABULATED #U- BENIGN, #M- MALIGNANT

APPENDIX NO. 14
PROJECT NO. 90831

INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

GROUP 2 CERIC OXIDE LOW DOSE
ANIMAL NO. 2012 MALE STUDY WEEK OF DEATH 14 (DAY 92)
TISSUE FINDING GRADE

GROSS PATHOLOGICAL FINDINGS

LIVER AREA PALE
SINGLE, FISSURE, MEDIAN LOBE. (1)

ALL OTHER TISSUES WERE UNREMARKABLE

HISTOPATHOLOGICAL FINDINGS

LIVER VACUOLATION, HEPATOCELLULAR FOCAL. (1) 1

LUNG PIGMENT ACCUMULATION INTRACELLULAR, MULTIFOCAL. 2

ALL OTHER EXAMINED TISSUES WERE UNREMARKABLE

GROSS GRADE CODE: * - NOT SUBMITTED #D- BENIGN, #M- MALIGNANT
HISTO GRADE CODE: 1- SLIGHT, 2- MILD, 3- MODERATE, 4- SEVERE, P- PRESENT, *- NOT TABULATED

INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

APPENDIX NO. 14
PROJECT NO.: 90831

GROUP 2 CERIC OXIDE LOW DOSE
ANIMAL NO. 2013 MALE STUDY WEEK OF DEATH 14 (DAY 92)
TISSUE FINDING GRADE

GROSS PATHOLOGICAL FINDINGS

LIVER AREA PALE SINGLE, NEAR HILUS, VENTRAL PORTION OF RIGHT LOBE. [1]

LYMPH NODE BRONCHIAL ENLARGEMENT [4]
DISCOLORATION PALE. [5]

LYMPH NODE MEDIASTINAL ENLARGEMENT [2]
DISCOLORATION PALE. [3]

ALL OTHER TISSUES WERE UNREMARKABLE

HISTOPATHOLOGICAL FINDINGS

CAVITY NASAL PIGMENT ACCUMULATION INTRAFOLLICULAR (LEVEL III). 1

LIVER VACUOLATION, HEPATOCELLULAR FOCAL. [1] 1

LUNG PIGMENT ACCUMULATION INTRACELLULAR, MULTIFOCAL. 2

GROSS GRADE CODE: #- NOT SUBMITTED
HISTO GRADE CODE: 1- SLIGHT, 2- MILD, 3- MODERATE, 4- SEVERE, P- PRESENT, *- NOT TABULATED #B- BENIGN, #M- MALIGNANT



INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

APPENDIX NO. 14
PROJECT NO.: 90831

GROUP 2 CERIC OXIDE LOW DOSE STUDY WEEK OF DEATH 14 (DAY 92)
ANIMAL NO. 2013 (cont'd) MALE
TISSUE FINDING GRADE

LYMPH NODE BRONCHIAL	HYPERPLASIA, LYMPHOID (4)	1
	PIGMENT ACCUMULATION MULTIFOCAL. (5)	2
LYMPH NODE MEDIASTINAL	PIGMENT ACCUMULATION MULTIFOCAL. (3)	2
	HYPERPLASIA, LYMPHOID (2)	2

ALL OTHER EXAMINED TISSUES WERE UNREMARKABLE

GROSS GRADE CODE: * - NOT SUBMITTED #D- BENIGN, #M- MALIGNANT
HISTO GRADE CODE: 1- SLIGHT, 2- MILD, 3- MODERATE, 4- SEVERE, P- PRESENT, *- NOT TABULATED



INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

APPENDIX NO. 14
PROJECT NO.: 90831

GROUP 2 CERIC OXIDE LOW DOSE
ANIMAL NO. 2015 MALE STUDY WEEK OF DEATH 14 (DAY 92)
TISSUE FINDING GRADE

GROSS PATHOLOGICAL FINDINGS

LIVER AREA PALE
MULTIPLE, FISSURE, MEDIAN LOBE; SINGLE, NEAR HILUS, VENTRAL
PORTION OF RIGHT LOBE. (1)

LYMPH NODE BRONCHIAL DISCOLORATION
PALE. (2)

ALL OTHER TISSUES WERE UNREMARKABLE

HISTOPATHOLOGICAL FINDINGS

BRONCHUS PIGMENT ACCUMULATION
MUCOSAL. 1

CAVITY NASAL PIGMENT ACCUMULATION
INTRAFOLLICULAR (LEVEL III). 1

LIVER VACUOLATION, HEPATOCELLULAR
MULTIFOCAL TO LOCALLY EXTENSIVE. (1) 2

LUNG PIGMENT ACCUMULATION
INTRACELLULAR, MULTIFOCAL. 2

LYMPH NODE BRONCHIAL PIGMENT ACCUMULATION
MULTIFOCAL. (2) 2

1109

GROSS GRADE CODE: * - NOT SUBMITTED #B- BENIGN, #M- MALIGNANT
HISTO GRADE CODE: 1- SLIGHT, 2- MILD, 3- MODERATE, 4- SEVERE, P- PRESENT, *- NOT TABULATED

INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

APPENDIX NO. 14
PROJECT NO.: 90831

GROUP 2 CERIC OXIDE LOW DOSE GRADE
ANIMAL NO. 2015 (cont'd) MALE STUDY WEEK OF DEATH 14 (DAY 92)
FINDING

TISSUE

2

LYMPH NODE BRONCHIAL HYPERPLASIA, LYMPHOID

ALL OTHER EXAMINED TISSUES WERE UNREMARKABLE

GROSS GRADE CODE: # - NOT SUBMITTED #D- BENIGN, #M- MALIGNANT
HISTO GRADE CODE: 1- SLIGHT, 2- MILD, 3- MODERATE, 4- SEVERE, P- PRESENT, *- NOT TABULATED

INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

APPENDIX NO. 14
PROJECT NO.: 90931

GROUP 2 CERIC OXIDE LOW DOSE
ANIMAL NO. 2016 MALE STUDY WEEK OF DEATH 14 (DAY 92)
TISSUE FINDING GRADE

GROSS PATHOLOGICAL FINDINGS

KIDNEY DILATATION
PELVIS, LEFT. (4)

LIVER AREA PALE
MULTIPLE, NEAR HILUS, VENTRAL PORTION OF RIGHT LOBE. (1)

PITUITARY CYST
SINGLE. (3)

LYMPH NODE BRONCHIAL DISCOLORATION
PALE. (2)

ALL OTHER TISSUES WERE UNREMARKABLE

HISTOPATHOLOGICAL FINDINGS

CAVITY NASAL PIGMENT ACCUMULATION
INTRAFOLLICULAR (LEVEL III). 1

KIDNEY DILATATION, PELVIS
(4) 1

LARYNX PIGMENT ACCUMULATION
INTRAFOLLICULAR. 1

LIVER NO ABNORMAL FINDINGS

- 1111 -

GROSS GRADE CODE: *- NOT SUBMITTED #B- BENIGN, #M- MALIGNANT
HISTO GRADE CODE: 1- SLIGHT, 2- MILD, 3- MODERATE, 4- SEVERE, P- PRESENT, *- NOT TABULATED

INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

APPENDIX NO. 14
PROJECT NO. 90631

GROUP 2 CERIC OXIDE LOW DOSE
ANIMAL NO. 2016 (cont'd) MALE STUDY WEEK OF DEATH: 14 (DAY 92)
TISSUE FINDING GRADE

LIVER	(cont'd)	(1)	
LUNG	PIGMENT ACCUMULATION INTRACELLULAR, MULTIFOCAL.	2	
PITUITARY	CYST	2	
LYMPH NODE BRONCHIAL	PIGMENT ACCUMULATION MULTIFOCAL. (2)	1	

ALL OTHER EXAMINED TISSUES WERE UNREMARKABLE

GROSS GRADE CODE: 1- SLIGHT, 2- MILD, 3- MODERATE, 4- SEVERE, P- PRESENT, *- NOT TABULATED, #B- BENIGN, #M- MALIGNANT
HISTO GRADE CODE: 1- NOT SUBMITTED

INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

APPENDIX NO. 14
PROJECT NO. 90031

GROUP 3 CERIC OXIDE INTERMEDIATE DOSE
ANIMAL NO. 3001 MALE STUDY WEEK OF DEATH 14 (DAY 92)
TISSUE FINDING GRADE

GROSS PATHOLOGICAL FINDINGS

LIVER AREA PALE SINGLE, NEAR HILUS, VENTRAL PORTION OF RIGHT LOBE. (1)

LUNG AREA PALE MULTIPLE. (4)

LYMPH NODE BRONCHIAL ENLARGEMENT (5)
DISCOLORATION PALE. (6)

LYMPH NODE MEDIASTINAL ENLARGEMENT (2)
DISCOLORATION PALE. (3)

ALL OTHER TISSUES WERE UNREMARKABLE

HISTOPATHOLOGICAL FINDINGS

CAVITY NASAL PIGMENT ACCUMULATION INTRAFOLLICULAR (LEVEL III). 1

LARYNX PIGMENT ACCUMULATION MUCOSAL. 1

1113

GROSS GRADE CODE: * - NOT SUBMITTED #B- BENIGN, #M- MALIGNANT
HISTO GRADE CODE: 1 - SLIGHT, 2 - MILD, 3 - MODERATE, 4 - SEVERE, P - PRESENT, * - NOT TABULATED

APPENDIX NO. 14
PROJECT NO. 90031

INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

GROUP 3 CERIC OXIDE INTERMEDIATE DOSE
ANIMAL NO. 3001 (cont'd) MALE STUDY WEEK OF DEATH: 14 (DAY 92)
TISSUE FINDING GRADE

LARYNX	METAPLASIA BASE OF EPIGLOTTIS.	1
LIVER	NO ABNORMAL FINDINGS {1}	
LUNG	PIGMENT ACCUMULATION INTRA- AND EXTRACELLULAR, MULTIFOCAL. {4} EPITHELIAL HYPERPLASIA, ALVEOLAR MULTIFOCAL.	3 1
LYMPH NODE BRONCHIAL	HYPERPLASIA, LYMPHOID {5}	2
	PIGMENT ACCUMULATION MULTIFOCAL. {6}	3
LYMPH NODE MEDIASTINAL	HYPERPLASIA, LYMPHOID {2}	2
	PIGMENT ACCUMULATION MULTIFOCAL. {3}	3

ALL OTHER EXAMINED TISSUES WERE UNREMARKABLE

GROSS GRADE CODE: * - NOT SUBMITTED

HISTO GRADE CODE: 1 - SLIGHT, 2 - MILD, 3 - MODERATE, 4 - SEVERE, P - PRESENT, * - NOT TABULATED #B - BENIGN, #M - MALIGNANT

INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

APPENDIX NO. 14
PROJECT NO.: 90831

GROUP	INTERMEDIATE DOSE	STUDY WEEK OF DEATH	14 (DAY 92)	GRADE
3	CERIC OXIDE			
ANIMAL NO.	3002	MALE		
TISSUE			FINDING	

GROSS PATHOLOGICAL FINDINGS

LUNG AREA PALE MULTIPLE. [6]

LYMPH NODE MANDIBULAR FOCI DARK BILATERAL. [1] ENLARGEMENT LEFT. [2]

PROSTATE AREA PALE MULTIPLE. [7]

LYMPH NODE BRONCHIAL DISCOLORATION PALE. [4] ENLARGEMENT [5]

LYMPH NODE PANCREATIC AREA DARK MULTIPLE. [3]

ALL OTHER TISSUES WERE UNREMARKABLE

HISTOPATHOLOGICAL FINDINGS

BRONCHUS PIGMENT ACCUMULATION MUCOSAL AND INTRALUMINAL. 1

GROSS GRADE CODE: * - NOT SUBMITTED #D- BENIGN, #M- MALIGNANT
HISTO GRADE CODE: 1- SLIGHT, 2- MILD, 3- MODERATE, 4- SEVERE, P- PRESENT, *- NOT TABULATED

110

APPENDIX NO. 14 INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS
PROJECT NO.: 90831

GROUP 3 CERIC OXIDE INTERMEDIATE DOSE
ANIMAL NO. 3002 (cont'd) MALE STUDY WEEK OF DEATH 14 (DAY 92)
TISSUE FINDING GRADE

CAVITY NASAL	PIGMENT ACCUMULATION INTRAFOLLICULAR (LEVEL III).	1
LARYNX	PIGMENT ACCUMULATION MUCOSAL.	1
LUNG	PIGMENT ACCUMULATION EXTRA- AND INTRACELLULAR, DIFFUSE. [6] EPITHELIAL HYPERPLASIA, ALVEOLAR MULTIFOCAL.	4
LYMPH NODE MANDIBULAR	PLASMACYTOSIS AND/OR HISTIOCYTOSIS, MEDULLARY UNILATERAL. [2] HEMORRHAGE MULTIFOCAL TO LOCALLY EXTENSIVE, UNILATERAL. [1]	2
PROSTATE	PROSTATITIS SUBACUTE, MULTIFOCAL TO LOCALLY EXTENSIVE. [7]	2
LYMPH NODE BRONCHIAL	PIGMENT ACCUMULATION MULTIFOCAL. [4] HYPERPLASIA, LYMPHOID [5]	3
LYMPH NODE PANCREATIC	HEMORRHAGE MULTIFOCAL TO LOCALLY EXTENSIVE. [3]	2

- 1116 -

ALL OTHER EXAMINED TISSUES WERE UNREMARKABLE

GROSS GRADE CODE: * - NOT SUBMITTED #D- BENIGN, #M- MALIGNANT
HISTO GRADE CODE: 1- SLIGHT, 2- MILD, 3- MODERATE, 4- SEVERE, P- PRESENT, *- NOT TABULATED

APPENDIX NO. 14
 PROJECT NO. 1 90831

INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

GROUP 3 CERIC OXIDE INTERMEDIATE DOSE
 ANIMAL NO. 3003 MALE STUDY WEEK OF DEATH 14 (DAY 92)
 TISSUE FINDING GRADE

GROSS PATHOLOGICAL FINDINGS

LUNG AREA PALE MULTIPLE. [5]
 LYMPH NODE MANDIBULAR AREA DARK MULTIPLE, BILATERAL. [1]
 ENLARGEMENT BILATERAL. [2]
 LYMPH NODE BRONCHIAL ENLARGEMENT [6]
 DISCOLORATION PALE. [7]
 LYMPH NODE MEDIASTINAL ENLARGEMENT [3]
 DISCOLORATION PALE. [4]

ALL OTHER TISSUES WERE UNREMARKABLE

HISTOPATHOLOGICAL FINDINGS

BRONCHUS PIGMENT ACCUMULATION MUCOSAL. 1
 CAVITY NASAL PIGMENT ACCUMULATION 1

GROSS GRADE CODE: #- NOT SUBMITTED #B- BENIGN, #M- MALIGNANT
 HISTO GRADE CODE: 1- SLIGHT, 2- MILD, 3- MODERATE, 4- SEVERE, P- PRESENT, #- NOT TABULATED

APPENDIX NO. 14
 PROJECT NO.: 90831

INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

GROUP 3 CERIC OXIDE INTERMEDIATE DOSE
 ANIMAL NO. 3003 (cont'd) MALE STUDY WEEK OF DEATH 14 (DAY 92)
 TISSUE FINDING GRADE

TISSUE	FINDING	GRADE
CAVITY NASAL	(cont'd) INTRAFOLLICULAR (LEVEL III).	
LARYNX	METAPLASIA BASE OF EPIGLOTTIS.	1
LUNG	PIGMENT ACCUMULATION INTRA- AND EXTRACELLULAR, MULTIFOCAL. [5]	3
Lymph Node Mandibular	PLASMACYTOSIS AND/OR HISTIOCYTOSIS, MEDULLARY BILATERAL. [2] HEMORRHAGE MULTIFOCAL, BILATERAL. [1]	3 1
Lymph Node Bronchial	PIGMENT ACCUMULATION MULTIFOCAL. [7] HYPERPLASIA, LYMPHOID [6]	2 2
Lymph Node Mediastinal	HYPERPLASIA, LYMPHOID [3] PIGMENT ACCUMULATION MULTIFOCAL. [4]	2 2

ALL OTHER EXAMINED TISSUES WERE UNREMARKABLE

GROSS GRADE CODE: # - NOT SUBMITTED #B - BENIGN, #M - MALIGNANT
 HISTO GRADE CODE: 1 - SLIGHT, 2 - MILD, 3 - MODERATE, 4 - SEVERE, P - PRESENT, * - NOT TABULATED 1118

BIO

INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

APPENDIX NO. 14
PROJECT NO.: 90831

GROUP 3 CERIC OXIDE INTERMEDIATE DOSE GRADE
ANIMAL NO. 3004 MALE STUDY WEEK OF DEATH 14 (DAY 92) FINDING
TISSUE

GROSS PATHOLOGICAL FINDINGS

LUNG AREA PALE MULTIPLE. (5)

LYMPH NODE BRONCHIAL ENLARGEMENT (3)
DISCOLORATION PALE. (4)

LYMPH NODE MEDIASTINAL ENLARGEMENT (1)
DISCOLORATION PALE. (2)

ALL OTHER TISSUES WERE UNREMARKABLE

HISTOPATHOLOGICAL FINDINGS

CAVITY NASAL PIGMENT ACCUMULATION INTRAFOLLICULAR (LEVEL III). 1

LUNG PIGMENT ACCUMULATION INTRA- AND EXTRACELLULAR, MULTIFOCAL. (5)
EPITHELIAL HYPERPLASIA, ALVEOLAR MULTIFOCAL. 3

LYMPH NODE BRONCHIAL PIGMENT ACCUMULATION 2

GROSS GRADE CODE: # - NOT SUBMITTED
HISTO GRADE CODE: 1 - SLIGHT, 2 - MILD, 3 - MODERATE, 4 - SEVERE, P - PRESENT, * - NOT TABULATED

#B - BENIGN, #M - MALIGNANT

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INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

APPENDIX NO. 14
PROJECT NO.: 90831

GROUP 3 CERIC OXIDE INTERMEDIATE DOSE
ANIMAL NO. 3004 (cont'd) MALE STUDY WEEK OF DEATH 14 (DAY 92)
TISSUE FINDING GRADE

LYMPH NODE BRONCHIAL (cont'd)	MULTIFOCAL. [4] HYPERPLASIA, LYMPHOID [3]	2
LYMPH NODE MEDIASTINAL	PIGMENT ACCUMULATION MULTIFOCAL. [2] HYPERPLASIA, LYMPHOID [1]	2
		2

ALL OTHER EXAMINED TISSUES WERE UNREMARKABLE

GROSS GRADE CODE: * - NOT SUBMITTED #B - BENIGN, #M - MALIGNANT
HISTO GRADE CODE: 1 - SLIGHT, 2 - MILD, 3 - MODERATE, 4 - SEVERE, P - PRESENT, * - NOT TABULATED



INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

APPENDIX NO. 14
PROJECT NO. 1 90031

GROUP 3 CERIC OXIDE INTERMEDIATE DOSE
ANIMAL NO. 3005 MALE STUDY WEEK OF DEATH: 14 (DAY 92)
TISSUE FINDING GRADE

GROSS PATHOLOGICAL FINDINGS

LIVER AREA PALE
SINGLE, NEAR HILUS, DORSAL SURFACE, VENTRAL PORTION OF RIGHT LOBE. [1]

LUNG AREA PALE
MULTIPLE, EDGE. [4]

URINARY BLADDER DILATATION
[5]

LYMPH NODE BRONCHIAL DISCOLORATION
PALE. [2]
ENLARGEMENT
[3]

ALL OTHER TISSUES WERE UNREMARKABLE

HISTOPATHOLOGICAL FINDINGS

CAVITY NASAL PIGMENT ACCUMULATION
INTRAFOLLICULAR (LEVEL III). 1

LARYNX METAPLASIA
BASE OF EPIGLOTTIS. 1

LIVER VACUOLATION, HEPATOCELLULAR 1

GROSS GRADE CODE: * - NOT SUBMITTED #B - BENIGN, #M - MALIGNANT
HISTO GRADE CODE: 1 - SLIGHT, 2 - MILD, 3 - MODERATE, 4 - SEVERE, P - PRESENT, * - NOT TABULATED

INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

APPENDIX NO. 14
PROJECT NO.: 90031

GROUP 3 CERIC OXIDE INTERMEDIATE DOSE
ANIMAL NO. 3005 (cont'd) MALE STUDY WEEK OF DEATH 14 (DAY 92)
TISSUE FINDING GRADE

LIVER	(cont'd)	FOCAL. [1]	
LUNG		PIGMENT ACCUMULATION INTRA- AND EXTRACELLULAR, MULTIFOCAL. [4] EPITHELIAL HYPERPLASIA, ALVEOLAR MULTIFOCAL.	3 1
URINARY BLADDER		DILATATION [5]	2
LYMPH NODE BRONCHIAL		PIGMENT ACCUMULATION MULTIFOCAL. [2] HYPERPLASIA, LYMPHOID [3]	2 2

ALL OTHER EXAMINED TISSUES WERE UNREMARKABLE

GROSS GRADE CODE: * - NOT SUBMITTED #B - BENIGN, #M - MALIGNANT
HISTO GRADE CODE: 1 - SLIGHT, 2 - MILD, 3 - MODERATE, 4 - SEVERE, P - PRESENT, * - NOT TABULATED

APPENDIX NO. 14
PROJECT NO.: 90831

INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

GROUP 3 CERIC OXIDE INTERMEDIATE DOSE
ANIMAL NO. 3006 (cont'd) MALE STUDY WEEK OF DEATH 14 (DAY 92)
TISSUE FINDING GRADE

LARYNX	PIGMENT ACCUMULATION MUCOSAL.	1
LIVER	VACUULATION, HEPATOCELLULAR FOCAL. (1)	1
LUNG	PIGMENT ACCUMULATION INTRA- AND EXTRACELLULAR, DIFFUSE. (4) EPITHELIAL HYPERPLASIA, ALVEOLAR MULTIFOCAL.	4 1
TRACHEA	PIGMENT ACCUMULATION MUCOSAL.	1
LYMPH NODE BRONCHIAL	PIGMENT ACCUMULATION MULTIFOCAL. (6) HYPERPLASIA, LYMPHOID (5)	2 2
LYMPH NODE MEDIASTINAL	HYPERPLASIA, LYMPHOID (2) PIGMENT ACCUMULATION MULTIFOCAL. (3)	2 2

ALL OTHER EXAMINED TISSUES WERE UNREMARKABLE

GROSS GRADE CODE: * - NOT SUBMITTED
HISTO GRADE CODE: 1- SLIGHT, 2- MILD, 3- MODERATE, 4- SEVERE, P-- PRESENT, *- NOT TABULATED

#B- BENIGN, #M- MALIGNANT

INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

APPENDIX NO. 14
PROJECT NO.: 90831

GROUP 3 CERIC OXIDE INTERMEDIATE DOSE
ANIMAL NO. 3006 MALE STUDY WEEK OF DEATH 14 (DAY 92)
TISSUE FINDING GRADE

GROSS PATHOLOGICAL FINDINGS

LIVER AREA PALE
SINGLE, FISSURE, MEDIAN LOBE. [1]

LUNG AREA PALE
MULTIPLE. [4]

LYMPH NODE BRONCHIAL ENLARGEMENT
[5]
DISCOLORATION
PALE. [6]

LYMPH NODE MEDIASTINAL ENLARGEMENT
[2]
DISCOLORATION
PALE. [3]

ALL OTHER TISSUES WERE UNREMARKABLE

HISTOPATHOLOGICAL FINDINGS

BRONCHUS PIGMENT ACCUMULATION
INTRALUMINAL.

CAVITY NASAL PIGMENT ACCUMULATION
INTRAFOLLICULAR (LEVEL III).

GROSS GRADE CODE: * - NOT SUBMITTED

HISTO GRADE CODE: 1 - SLIGHT, 2 - MILD, 3 - MODERATE, 4 - SEVERE, P - PRESENT, * - NOT TABULATED

#D - BENIGN, #M - MALIGNANT

INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

APPENDIX NO. 14
PROJECT NO.: 90831

GROUP 3 CERIC OXIDE INTERMEDIATE DOSE
ANIMAL NO. 3007 MALE STUDY WEEK OF DEATH 14 (DAY 92)
TISSUE FINDING GRADE

GROSS PATHOLOGICAL FINDINGS

KIDNEY DILATATION
PELVIS, LEFT. [6]

LUNG AREA PALE
MULTIPLE. [5]

LYMPH NODE BRONCHIAL ENLARGEMENT
[3]
DISCOLORATION
PALE. [4]

LYMPH NODE MEDIASTINAL ENLARGEMENT
[1]
DISCOLORATION
PALE. [2]

ALL OTHER TISSUES WERE UNREMARKABLE

HISTOPATHOLOGICAL FINDINGS

BRONCHUS PIGMENT ACCUMULATION
MUCOSAL. 1

CAVITY NASAL PIGMENT ACCUMULATION
INTRA-FOLLICULAR (LEVEL III). 1

GROSS GRADE CODE: * - NOT SUBMITTED #B- BENIGN, #M- MALIGNANT
HISTO GRADE CODE: 1- SLIGHT, 2- MILD, 3- MODERATE, 4- SEVERE, P- PRESENT, *- NOT TABULATED

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INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

APPENDIX NO. 14
PROJECT NO.: 90831

GROUP 3 CERIC OXIDE INTERMEDIATE DOSE
ANIMAL NO. 3007 (cont'd) MALE STUDY WEEK OF DEATH 14 (DAY 92)
TISSUE FINDING GRADE

KIDNEY	DILATATION, PELVIS (6)	3
LARYNX	METAPLASIA BASE OF EPIGLOTTIS. PIGMENT ACCUMULATION INTRAFOLLICULAR.	1
LUNG	PIGMENT ACCUMULATION INTRA- AND EXTRACELLULAR, DIFFUSE. (5) EPITHELIAL HYPERPLASIA, ALVEOLAR MULTIFOCAL.	4
Lymph Node Bronchial	HYPERPLASIA, LYMPHOID (3) PIGMENT ACCUMULATION MULTIFOCAL. (4)	2
Lymph Node Mediastinal	HYPERPLASIA, LYMPHOID (1) PIGMENT ACCUMULATION MULTIFOCAL. (2)	3

ALL OTHER EXAMINED TISSUES WERE UNREMARKABLE

GROSS GRADE CODE: # - NOT SUBMITTED #B- BENIGN, #M- MALIGNANT
HISTO GRADE CODE: 1- SLIGHT, 2- MILD, 3- MODERATE, 4- SEVERE, P- PRESENT, * - NOT TABULATED

BIO

INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

APPENDIX NO. 14
PROJECT NO. 1 90031

GROUP 3 CERIC OXIDE INTERMEDIATE DOSE
ANIMAL NO. 3000 MALE STUDY WEEK OF DEATH 14 (DAY 92)
TISSUE FINDING GRADE

GROSS PATHOLOGICAL FINDINGS

LUNG AREA PALE
MULTIPLE, EDGE. (3)

LYMPH NODE BRONCHIAL DISCOLORATION
PALE; (1)
ENLARGEMENT
(2)

ALL OTHER TISSUES WERE UNREMARKABLE

HISTOPATHOLOGICAL FINDINGS

CAVITY NASAL PIGMENT ACCUMULATION
INTRA-FOLLICULAR (LEVEL III). 1

LARYNX PIGMENT ACCUMULATION
INTRA-FOLLICULAR. 1

LUNG PIGMENT ACCUMULATION
INTRA- AND EXTRACELLULAR, DIFFUSE. (3) 4
EPITHELIAL HYPERPLASIA, ALVEOLAR
MULTIFOCAL. 1

LYMPH NODE BRONCHIAL PIGMENT ACCUMULATION
MULTIFOCAL TO LOCALLY EXTENSIVE. (1) 3

GROSS GRADE CODE: # - NOT SUBMITTED
HISTO GRADE CODE: 1 - SLIGHT, 2 - MILD, 3 - MODERATE, 4 - SEVERE, P - PRESENT, # - NOT TABULATED, B - BENIGN, #M - MALIGNANT

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INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

APPENDIX NO. 14
PROJECT NO.: 50631

GROUP 3 CERIC OXIDE INTERMEDIATE DOSE
ANIMAL NO. 3008 (cont'd) MALE STUDY WEEK OF DEATH: 14 (DAY 92)
TISSUE FINDING GRADE

LYMPH NODE BRONCHIAL HYPERPLASIA, LYMPHOID [2] 2

ALL OTHER EXAMINED TISSUES WERE UNREMARKABLE

GROSS GRADE CODE: * - NOT SUBMITTED #B- BENIGN, #M- MALIGNANT
HISTO GRADE CODE: 1- SLIGHT, 2- MILD, 3- MODERATE, 4- SEVERE, P- PRESENT, * - NOT TABULATED

110

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INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

APPENDIX NO. 14
PROJECT NO.: 90031

GROUP 3 CERIC OXIDE INTERMEDIATE DOSE
ANIMAL NO. 3009 MALE STUDY WEEK OF DEATH 14 (DAY 92)
FINDING

GRADE

GROSS PATHOLOGICAL FINDINGS

LUNG AREA PALE MULTIPLE. [1]
URINARY BLADDER THICKENING WALL. [4]
AREA DARK MULTIPLE, MUCOSA. [5]

LYMPH NODE BRONCHIAL ENLARGEMENT [2]
DISCOLORATION PALE. [3]

ALL OTHER TISSUES WERE UNREMARKABLE

HISTOPATHOLOGICAL FINDINGS

CAVITY NASAL PIGMENT ACCUMULATION INTRAFOLLICULAR (LEVEL III). 1

LARYNX PIGMENT ACCUMULATION MUCOSAL. 1

LUNG PIGMENT ACCUMULATION INTRACELLULAR, MULTIFOCAL. [1] 3

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GROSS GRADE CODE: # - NOT SUBMITTED

HISTO GRADE CODE: 1 - SLIGHT, 2 - MILD, 3 - MODERATE, 4 - SEVERE, P - PRESENT, N - NOT TABULATED #B - BENIGN, #M - MALIGNANT

INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

APPENDIX NO. 14
PROJECT NO. 1 90831

GROUP 3 CERIC OXIDE INTERMEDIATE DOSE
ANIMAL NO. 3009 (cont'd) MALE STUDY WEEK OF DEATH 14 (DAY 92)
TISSUE FINDING GRADE

URINARY BLADDER 1
HEMORRHAGE
MULTIFOCAL. (5)
NO CORRELATION WITH GROSS FINDING [4]

LYMPH NODE BRONCHIAL 3
PIGMENT ACCUMULATION
MULTIFOCAL. (3)
HYPERPLASIA, LYMPHOID (2)

ALL OTHER EXAMINED TISSUES WERE UNREMARKABLE

GROSS GRADE CODE: *-- NOT SUBMITTED #B-- BENIGN, #M-- MALIGNANT
HISTO GRADE CODE: 1- SLIGHT, 2- MILD, 3- MODERATE, 4- SEVERE, P-- PRESENT, *- NOT TABULATED

INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

APPENDIX NO. 14
PROJECT NO.: 90831

GROUP 3 CERIC OXIDE INTERMEDIATE DOSE GRADE
ANIMAL NO. 3011 MALE STUDY WEEK OF DEATH 14 (DAY 92)
TISSUE FINDING

GROSS PATHOLOGICAL FINDINGS

LIVER AREA PALE
SINGLE, CAUDATE LOBE, LEFT LOBE, VENTRAL PORTION OF RIGHT LOBE. [1]
AREA RAISED
PALE, FIRM, SINGLE, NEAR HILUS, RIGHT PORTION OF MEDIAN LOBE, VENTRAL PORTION OF RIGHT LOBE. [2]

LUNG AREA PALE
MULTIPLE. [8]

LYMPH NODE MANDIBULAR ENLARGEMENT
LEFT. [4]

STOMACH AREA DARK
MULTIPLE, MUCOSA, GLANDULAR PORTION. [3]

LYMPH NODE BRONCHIAL DISCOLORATION
PALE. [6]
ENLARGEMENT [7]

LYMPH NODE MEDIASTINAL AREA DARK
MULTIPLE. [5]

ALL OTHER TISSUES WERE UNREMARKABLE

GROSS GRADE CODE: * - NOT SUBMITTED #D- BENIGN, #M- MALIGNANT
HISTO GRADE CODE: 1- SLIGHT, 2- MILD, 3- MODERATE, 4- SEVERE, P- PRESENT, *- NOT TABULATED



APPENDIX NO. 14 INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS
 PROJECT NO.: 90831

GROUP 3 CERIC OXIDE INTERMEDIATE DOSE
 ANIMAL NO. 3011 (cont'd) MALE STUDY WEEK OF DEATH 14 (DAY 92)
 TISSUE FINDING GRADE

HISTOPATHOLOGICAL FINDINGS

CAVITY NASAL	PIGMENT ACCUMULATION INTRA-FOLLICULAR (LEVEL III).	1
LARYNX	PIGMENT ACCUMULATION MUCOSAL.	1
LIVER	NECROSIS MULTIFOCAL TO LOCALLY EXTENSIVE, WITH FIBROPLASIA AND ACUTE TO SUBACUTE INFLAMMATION. (1,2)	2
LUNG	PIGMENT ACCUMULATION INTRACELLULAR, MULTIFOCAL. (8)	3
LYMPH NODE HANDBULBAR	PLASMACYTOSIS AND/OR HISTIOCYTOSIS, MEDULLARY (4)	4
STOMACH	NO ABNORMAL FINDINGS (3)	
LYMPH NODE BRONCHIAL	PIGMENT ACCUMULATION MULTIFOCAL TO LOCALLY EXTENSIVE. (6) HYPERPLASIA, LYMPHOID (7)	2 2
LYMPH NODE MEDIASTINAL	HEMORRHAGE	1

GROSS GRADE CODE: *- NOT SUBMITTED #D- BENIGN, #M- MALIGNANT
 HISTO GRADE CODE: 1- SLIGHT, 2- MILD, 3- MODERATE, 4- SEVERE, P- PRESENT, *- NOT TABULATED



INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

APPENDIX NO. 14
PROJECT NO.: 90831

GROUP	ANIMAL NO.	TISSUE	INTERMEDIATE DOSE	STUDY WEEK OF DEATH	FINDING	GRADE
3	3011 (cont'd)	MALE		14 (DAY 92)		

LYMPH NODE MEDIASTINAL (cont'd)

LOCALLY EXTENSIVE. (S)

ALL OTHER EXAMINED TISSUES WERE UNREMARKABLE

GROSS GRADE CODE: ■- NOT SUBMITTED

HISTO GRADE CODE: 1- SLIGHT, 2- MILD, 3- MODERATE, 4- SEVERE, P- PRESENT, *- NOT TABULATED #D- BENIGN, #H- MALIGNANT

INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

APPENDIX NO. 14
PROJECT NO.: 90831

GROUP 3 CERIC OXIDE INTERMEDIATE DOSE
ANIMAL NO. 3012 MALE STUDY WEEK OF DEATH 14 (DAY 92)
TISSUE FINDING GRADE

GROSS PATHOLOGICAL FINDINGS

LUNG AREA PALE MULTIPLE. (3)

PROSTATE AREA PALE MULTIPLE. (6)

LYMPH NODE BRONCHIAL ENLARGEMENT (4)
DISCOLORATION PALE. (5)

LYMPH NODE MEDIASTINAL ENLARGEMENT (1)
DISCOLORATION PALE. (2)

ALL OTHER TISSUES WERE UNREMARKABLE

HISTOPATHOLOGICAL FINDINGS

BRONCHUS PIGMENT ACCUMULATION MUCOSAL AND INTRALUMINAL. 1

CAVITY NASAL PIGMENT ACCUMULATION INTRAFOLLICULAR (LEVEL III). 1

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GROSS GRADE CODE: *-- NOT SUBMITTED

HISTO GRADE CODE: 1- SLIGHT, 2- MILD, 3- MODERATE, 4- SEVERE, P- PRESENT, *-- NOT TABULATED

#B- BENIGN, #M- MALIGNANT



INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

APPENDIX NO. 14
PROJECT NO.: 50031

GROUP 3 CERIC OXIDE INTERMEDIATE DOSE
ANIMAL NO. 3012 (cont'd) MALE STUDY WEEK OF DEATH 14 (DAY 92)
TISSUE FINDING GRADE

TISSUE	FINDING	GRADE
LARYNX	METAPLASIA BASE OF EPYGLOTTIS. PIGMENT ACCUMULATION MUCOSAL.	1
LUNG	PIGMENT ACCUMULATION INTRA- AND EXTRACELLULAR, DIFFUSE. [3] EPITHELIAL HYPERPLASIA, ALVEOLAR MULTIFOCAL.	4
PROSTATE	PROSTITIS SUBACUTE, MULTIFOCAL TO LOCALLY EXTENSIVE. [6]	2
LYMPH NODE BRONCHIAL	PIGMENT ACCUMULATION MULTIFOCAL. [5] HYPERPLASIA, LYMPHOID [4]	3
LYMPH NODE MEDIASTINAL	HYPERPLASIA, LYMPHOID [1] PIGMENT ACCUMULATION MULTIFOCAL. [2]	2

ALL OTHER EXAMINED TISSUES WERE UNREMARKABLE

GROSS GRADE CODE: *- NOT SUBMITTED
HISTO GRADE CODE: 1- SLIGHT, 2- MILD, 3- MODERATE, 4- SEVERE, P- PRESENT, *- NOT TABULATED #B- BENIGN, #M- MALIGNANT

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INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

APPENDIX NO. 14
PROJECT NO. 90831

GROUP 3 CERIC OXIDE INTERMEDIATE DOSE
ANIMAL NO. 3013 MALE STUDY WEEK OF DEATH 14 (DAY 92)
TISSUE FINDING GRADE

GROSS PATHOLOGICAL FINDINGS

LIVER AREA PALE SINGLE, NEAR HILUS, VENTRAL PORTION OF RIGHT LOBE. (1)

LUNG AREA PALE MULTIPLE. (6)
AREA DARK MULTIPLE. (7)

LYMPH NODE BRONCHIAL ENLARGEMENT (4)
DISCOLORATION PALE. (5)

LYMPH NODE MEDIASTINAL ENLARGEMENT (2)
DISCOLORATION PALE. (3)

ALL OTHER TISSUES WERE UNREMARKABLE

HISTOPATHOLOGICAL FINDINGS

CAVITY NASAL PIGMENT ACCUMULATION INTRAFOLLICULAR (LEVEL III). 1

LARYNX METAPLASIA 1

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GROSS GRADE CODE: * - NOT SUBMITTED #D - BENIGN, #M - MALIGNANT
HISTO GRADE CODE: 1 - SLIGHT, 2 - MILD, 3 - MODERATE, 4 - SEVERE, P - PRESENT, * - NOT TABULATED

APPENDIX NO. 14
PROJECT NO. 90031

INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

GROUP 3 CERIC OXIDE
ANIMAL NO. 3013 (cont'd) MALE
TISSUE

INTERMEDIATE DOSE
STUDY WEEK OF DEATH 14 (DAY 92)
FINDING

GRADE

LARYNX

(cont'd)

BASE OF EPIGLOTTIS.

LIVER

VACUOLATION, HEPATOCELLULAR
MULTIFOCAL, WITH ACUTE INFLAMMATION AND NECROSIS. (1)

LUNG

PIGMENT ACCUMULATION
INTRA- AND EXTRACELLULAR, DIFFUSE. (6)
EPITHELIAL HYPERPLASIA, ALVEOLAR
MULTIFOCAL.
NO CORRELATION WITH GROSS FINDING
(7)

LYMPH NODE BRONCHIAL

PIGMENT ACCUMULATION
MULTIFOCAL TO LOCALLY EXTENSIVE. (5)
HYPERPLASIA, LYMPHOID
(4)

LYMPH NODE MEDIASTINAL

HYPERPLASIA, LYMPHOID
(2)
NO CORRELATION WITH GROSS FINDING
(3)

ALL OTHER EXAMINED TISSUES WERE UNREMARKABLE

GROSS GRADE CODE: * - NOT SUBMITTED
HISTO GRADE CODE: 1 - SLIGHT, 2 - MILD, 3 - MODERATE, 4 - SEVERE, P - PRESENT, * - NOT TABULATED

#D - BENIGN, #M - MALIGNANT

APPENDIX NO. 14
PROJECT NO. 1 90031

INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

GROUP 3 CERIC OXIDE INTERMEDIATE DOSE
ANIMAL NO. 3014 MALE STUDY WEEK OF DEATH 14 (DAY 92)
TISSUE FINDING GRADE

GROSS PATHOLOGICAL FINDINGS

LIVER AREA PALE
SINGLE, NEAR HILUS, RIGHT PORTION OF MEDIAN LOBE. (1)

LUNG AREA PALE
MULTIPLE. (6)
UNCOLLAPSED
(7)

LYMPH NODE MANDIBULAR
ENLARGEMENT
RIGHT. (2)
FOCI DARK
RIGHT. (3)

LYMPH NODE BRONCHIAL
ENLARGEMENT
(4)
DISCOLORATION
PALE. (5)

ALL OTHER TISSUES WERE UNREMARKABLE

HISTOPATHOLOGICAL FINDINGS

CAVITY NASAL PIGMENT ACCUMULATION
INTRAFOLLICULAR (LEVEL II,III). 1

LARYNX METAPLASIA 1

GROSS GRADE CODE: 1 - NOT SUBMITTED #B- BENIGN, #M- MALIGNANT
HISTO GRADE CODE: 1 - SLIGHT, 2 - MILD, 3 - MODERATE, 4 - SEVERE, P- PRESENT, * - NOT TABULATED

INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

APPENDIX NO. 14
PROJECT NO. 90031

GROUP 3 CERIC OXIDE INTERMEDIATE DOSE
ANIMAL NO. 3014 (cont'd) MALE STUDY WEEK OF DEATH 14 (DAY 92)
TISSUE FINDING GRADE

LARYNX (cont'd) BASE OF EPIGLOTTIS.

LIVER VACUOLATION, HEPATOCELLULAR FOCAL. (1) 1

LUNG PIGMENT ACCUMULATION INTRA- AND EXTRACELLULAR, DIFFUSE. (6,7) 4
EPITHELIAL HYPERPLASIA, ALVEOLAR 2
MULTIFOCAL. (6,7) 2

LYMPH NODE MANDIBULAR PLASMACYTOSIS AND/OR HISTIOCYTOSIS, MEDULLARY (2) 2
NO CORRELATION WITH GROSS FINDING (3)

LYMPH NODE BRONCHIAL PIGMENT ACCUMULATION MULTIFOCAL. (5) 3
HYPERPLASIA, LYMPHOID (4) 2

ALL OTHER EXAMINED TISSUES WERE UNREMARKABLE

GROSS GRADE CODE: *- NOT SUBMITTED

HISTO GRADE CODE: 1- SLIGHT, 2- MILD, 3- MODERATE, 4- SEVERE, *- NOT TABULATED #B- BENIGN, #M- MALIGNANT



INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

APPENDIX NO. 14
PROJECT NO.: 50831

GROUP 3 CERIC OXIDE INTERMEDIATE DOSE
ANIMAL NO. 3015 MALE STUDY WEEK OF DEATH 14 (DAY 92)
TISSUE FINDING GRADE

GROSS PATHOLOGICAL FINDINGS

LIVER AREA PALE
SINGLE, NEAR HILUS, VENTRAL PORTION OF RIGHT LOBE. [1]

LUNG AREA PALE
MULTIPLE. [8]
UNCOLLAPSED [9]

LYMPH NODE MANDIBULAR ENLARGEMENT
RIGHT. [2]
AREA DARK
MULTIPLE, RIGHT. [3]

LYMPH NODE BRONCHIAL ENLARGEMENT
[6]
DISCOLORATION
PALE. [7]

LYMPH NODE MEDIASTINAL ENLARGEMENT
[4]
DISCOLORATION
PALE. [5]

ALL OTHER TISSUES WERE UNREMARKABLE

HISTOPATHOLOGICAL FINDINGS

CAVITY NASAL PIGMENT ACCUMULATION

GROSS GRADE CODE: #-- NOT SUBMITTED
HISTO GRADE CODE: 1-- SLIGHT, 2-- MILD, 3-- MODERATE, 4-- SEVERE, P-- PRESENT, *-- NOT TABULATED #B-- BENIGN, #M-- MALIGNANT

110

INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

APPENDIX NO. 14
PROJECT NO.: 90031

GROUP 3 CERIC OXIDE INTERMEDIATE DOSE
ANIMAL NO. 3015 (cont'd) MALE STUDY WEEK OF DEATH 14 (DAY 92)
TISSUE FINDING GRADE

TISSUE	FINDING	GRADE
CAVITY NASAL	(cont'd) INTRAFOLLICULAR (LEVEL II,III).	
LARYNX	METAPLASIA BASE OF EPIGLOTTIS.	1
LIVER	VACUULATION, HEPATOCELLULAR FOCAL. (1)	1
LUNG	PIGMENT ACCUMULATION INTRA- AND EXTRACELLULAR, DIFFUSE. (8,9) EPITHELIAL HYPERPLASIA, ALVEOLAR MULTIFOCAL.	4
Lymph Node Mandibular	PLASMACYTOSIS AND/OR HISTIOCYTOSIS, MEDULLARY (2) NO CORRELATION WITH GROSS FINDING (3).	3
Lymph Node Bronchial	PIGMENT ACCUMULATION MULTIFOCAL. (7) HYPERPLASIA, LYMPHOID (6)	2
Lymph Node Mediastinal	PIGMENT ACCUMULATION MULTIFOCAL. (5) HYPERPLASIA, LYMPHOID	2
		3

1141

GROSS GRADE CODE: #- NOT SUBMITTED
HISTO GRADE CODE: 1- SLIGHT, 2- MILD, 3- MODERATE, 4- SEVERE, P- PRESENT, *- NOT TABULATED, #B- BENIGN, #M- MALIGNANT



APPENDIX NO. 14 INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS
 PROJECT NO. 1 90831

GROUP 3 CERIC OXIDE INTERMEDIATE DOSE GRADE
 ANIMAL NO. 3015 (cont'd) MALE STUDY WEEK OF DEATH 14 (DAY 92)
 TISSUE FINDING

LYMPH NODE MEDIASTINAL (cont'd) [4]

ALL OTHER EXAMINED TISSUES WERE UNREMARKABLE

GROSS GRADE CODE: * - NOT SUBMITTED #B- BENIGN, #M- MALIGNANT
 HISTO GRADE CODE: 1- SLIGHT, 2- MILD, 3- MODERATE, 4- SEVERE, P- PRESENT, * - NOT TABULATED

10

APPENDIX NO. 14 INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS
PROJECT NO.: 90031

GROUP 3 CERIC OXIDE INTERMEDIATE DOSE
ANIMAL NO. 3016 MALE STUDY WEEK OF DEATH 14 (DAY 92)
TISSUE FINDING GRADE

GROSS PATHOLOGICAL FINDINGS

LUNG AREA PALE
MULTIPLE. [4]

THYROID SMALL
RIGHT LOBE. [3]

LYMPH NODE BRONCHIAL ENLARGEMENT
[5]
DISCOLORATION
PALE. [6]

LYMPH NODE MEDIASTINAL ENLARGEMENT
[1]
DISCOLORATION
PALE. [2]

ALL OTHER TISSUES WERE UNREMARKABLE

HISTOPATHOLOGICAL FINDINGS

CAVITY NASAL PIGMENT ACCUMULATION
INTRAFOLLICULAR (LEVEL III). 1

LARYNX METAPLASIA
BASE OF EPIGLOTTIS. 1

- 1143 -

GROSS GRADE CODE: #- NOT SUBMITTED #D- BENIGN, #M- MALIGNANT
HISTO GRADE CODE: 1- SLIGHT, 2- MILD, 3- MODERATE, 4- SEVERE, P- PRESENT, *- NOT TABULATED

INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

APPENDIX NO. 14
PROJECT NO. 1 90031

GROUP 3 CERIC OXIDE INTERMEDIATE DOSE
ANIMAL NO. 3016 (cont'd) MALE STUDY WEEK OF DEATH 14 (DAY 92)

GRADE

FINDING

TISSUE

LARYNX	PIGMENT ACCUMULATION INTRALUMINAL AND MUCOSAL.	1
LUNG	PIGMENT ACCUMULATION INTRACELLULAR, MULTIFOCAL. (4)	3
THYROID	NO ABNORMAL FINDINGS (3)	
LYMPH NODE BRONCHIAL	HYPERPLASIA, LYMPHOID (5) PIGMENT ACCUMULATION MULTIFOCAL. (6)	2
LYMPH NODE MEDIASTINAL	HYPERPLASIA, LYMPHOID (1) PIGMENT ACCUMULATION MULTIFOCAL. (2)	2

ALL OTHER EXAMINED TISSUES WERE UNREMARKABLE

GROSS GRADE CODE: * - NOT SUBMITTED

HISTO GRADE CODE: 1 - SLIGHT, 2 - MILD, 3 - MODERATE, 4 - SEVERE, P - PRESENT, * - NOT TABULATED #D - BENIGN, #M - MALIGNANT

10

APPENDIX NO. 14
PROJECT NO. 90031

INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

GROUP 4 CERIC OXIDE HIGH DOSE
ANIMAL NO. 4001 MALE STUDY WEEK OF DEATH 11 (DAY 72)
TISSUE FINDING GRADE

GROSS PATHOLOGICAL FINDINGS

LUNG DISCOLORATION
PALE. (4)
AREA DARK
MULTIPLE. (5)
UNCOLLAPSED
(8)

THYMUS AREA DARK
MULTIPLE. (1)

LYMPH NODE BRONCHIAL ENLARGEMENT
(6)
DISCOLORATION
PALE. (7)

LYMPH NODE MEDIASTINAL ENLARGEMENT
(2)
DISCOLORATION
PALE. (3)

ALL OTHER TISSUES WERE UNREMARKABLE

HISTOPATHOLOGICAL FINDINGS

BRONCHUS PIGMENT ACCUMULATION 1

GROSS GRADE CODE: * - NOT SUBMITTED

HISTO GRADE CODE: 1 - SLIGHT, 2 - MILD, 3 - MODERATE, 4 - SEVERE, P - PRESENT, * - NOT TABULATED B - BENIGN, M - MALIGNANT



INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

APPENDIX NO. 14
PROJECT NO. 1 90031

GROUP 4 CERIC OXIDE HIGH DOSE
ANIMAL NO. 4001 (cont'd) MALE STUDY WEEK OF DEATH 11 (DAY 72)
TISSUE FINDING GRADE

TISSUE	FINDING	GRADE
BRONCHUS (cont'd)	INTRALUMINAL.	
CAVITY NASAL	PIGMENT ACCUMULATION INTRAFOILICULAR (LEVEL III).	1
CECUM	POSTMORTEM CHANGE	*
COLON	POSTMORTEM CHANGE	*
DUODENUM	POSTMORTEM CHANGE	*
ILEUM	POSTMORTEM CHANGE	*
JEJUNUM	POSTMORTEM CHANGE	*
LARYNX	METAPLASIA BASE OF EPIGLOTTIS. PIGMENT ACCUMULATION INTRALUMINAL AND MUCOSAL.	1 2
LUNG	PIGMENT ACCUMULATION DIFFUSE, EXTRA- AND INTRACELLULAR, WITH CONGESTION. (4,5,8)	4
PARATHYROID	ONE PARATHYROID UNAVAILABLE NOT PRESENT IN SECTION.	
THYMUS	HEMORRHAGE	3

GROSS GRADE CODE: * - NOT SUBMITTED
HISTO GRADE CODE: 1- SLIGHT, 2- MILD, 3- MODERATE, 4- SEVERE, P- PRESENT, *- NOT TABULATED, #B- BENIGN, #M- MALIGNANT

INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

APPENDIX NO. 14
PROJECT NO. 1 90031

GROUP 4 CERIC OXIDE HIGH DOSE
ANIMAL NO. 4001 (cont'd) MALE STUDY WEEK OF DEATH 11 (DAY 72)
TISSUE FINDING GRADE

TISSUE	FINDING	GRADE
THYMUS	(cont'd) MULTIFOCAL TO LOCALLY EXTENSIVE. [1]	
THYROID	CYST, ULTIMBRANCHIAL/THYROGLOSSAL REMNANTS UNILATERAL.	1
TRACHEA	PIGMENT ACCUMULATION INTRALUMINAL.	1
LYMPH NODE BRONCHIAL	PIGMENT ACCUMULATION MULTIFOCAL. [7]	3
	HYPERPLASIA, LYMPHOID [6]	3
LYMPH NODE MEDIASTINAL	UNAVAILABLE NOT FOUND IN WET TISSUES. [2,3]	

ALL OTHER EXAMINED TISSUES WERE UNREMARKABLE

GROSS GRADE CODE: #- NOT SUBMITTED #B- BENIGN, #M- MALIGNANT
HISTO GRADE CODE: 1- SLIGHT, 2- MILD, 3- MODERATE, 4- SEVERE, P- PRESENT, *- NOT TABULATED

110

INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

APPENDIX NO. 14
PROJECT NO. 90031

GROUP 4 CERIC OXIDE HIGH DOSE
ANIMAL NO. 4002 MALE STUDY WEEK OF DEATH 14 (DAY 92)
TISSUE FINDING GRADE

GROSS PATHOLOGICAL FINDINGS

KIDNEY AREA DEPRESSED
DARK, SINGLE, LEFT. (1)
DILATATION
PELVIS, BILATERAL. (2)

LUNG DISCOLORATION
PALE. (3)
UNCOLLAPSED
(6)

LYMPH NODE BRONCHIAL DISCOLORATION
PALE. (4)
ENLARGEMENT
(5)

ALL OTHER TISSUES WERE UNREMARKABLE

HISTOPATHOLOGICAL FINDINGS

BRONCHUS PIGMENT ACCUMULATION
INTRALUMINAL. 1

CAVITY NASAL PIGMENT ACCUMULATION
INTRA-FOLLICULAR (LEVEL III). 1

KIDNEY DILATATION, PELVIS 2

1148

GROSS GRADE CODE: * - NOT SUBMITTED #B - BENIGN, #M - MALIGNANT
HISTO GRADE CODE: 1 - SLIGHT, 2 - MILD, 3 - MODERATE, 4 - SEVERE, P - PRESENT, * - NOT TABULATED

110

INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

APPENDIX NO. 14
PROJECT NO. 90031

GROUP 4 CERIC OXIDE HIGH DOSE
ANIMAL NO. 4002 (cont'd) MALE STUDY WEEK OF DEATH 14 (DAY 92)

GRADE

FINDING

TISSUE

KIDNEY (cont'd)

BILATERAL.
NO CORRELATION WITH GROSS FINDING
[1]

LARYNX

METAPLASIA
BASE OF EPIGLOTTIS.
PIGMENT ACCUMULATION
INTRAFOLLICULAR.

LIVER

PIGMENT ACCUMULATION
INTRACELLULAR, SINUSOIDAL, MULTIFOCAL.

LUNG

PIGMENT ACCUMULATION
EXTRA- AND INTRACELLULAR, DIFFUSE. (3,6)
EPITHELIAL HYPERPLASIA, ALVEOLAR
MULTIFOCAL TO LOCALLY EXTENSIVE. (3,6)

LYMPH NODE MANDIBULAR

HYPERPLASIA, LYMPHOID

PARATHYROID

UNAVAILABLE
NOT PRESENT IN SECTION.

SPLEEN

PIGMENT ACCUMULATION
MULTIFOCAL.

THYMUS

HEMORRHAGE

1149

GROSS GRADE CODE: * - NOT SUBMITTED
HISTO GRADE CODE: 1 - SLIGHT, 2 - MILD, 3 - MODERATE, 4 - SEVERE, P - PRESENT, * - NOT TABULATED, #B - BENIGN, #M - MALIGNANT

110

APPENDIX NO. 14 INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS
PROJECT NO.: 90031

GROUP 4 CERIC OXIDE HIGH DOSE
ANIMAL NO. 4002 (cont'd) MALE STUDY WEEK OF DEATH 14 (DAY 92)
TISSUE FINDING GRADE

THYRUS (cont'd) FOCAL.

TRACHEA PIGMENT ACCUMULATION INTRALUMINAL. 1

LYMPH NODE BRONCHIAL PIGMENT ACCUMULATION MULTIFOCAL TO LOCALLY EXTENSIVE. (4) 3
HYPERPLASIA, LYMPHOID (5) 2

ALL OTHER EXAMINED TISSUES WERE UNREMARKABLE

GROSS GRADE CODE: * - NOT SUBMITTED

HISTO GRADE CODE: 1 - SLIGHT, 2 - MILD, 3 - MODERATE, 4 - SEVERE, P - PRESENT, * - NOT TABULATED #B - BENIGN, #M - MALIGNANT

11

11

110

APPENDIX NO. 14 INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS
PROJECT NO.: 98831

GROUP 4 CERIC OXIDE HIGH DOSE
ANIMAL NO. 4003 MALE STUDY WEEK OF DEATH 14 (DAY 92)
TISSUE FINDING GRADE

GROSS PATHOLOGICAL FINDINGS

LIVER AREA PALE
SINGLE, FISSURE, MEDIAN LOBE; NEAR HILUS, VENTRAL PORTION OF
RIGHT LOBE. {1}

LUNG DISCOLORATION
PALE. {4}
UNCOLLAPSED
{5}

LYMPH NODE MANDIBULAR AREA DARK
MULTIPLE, BILATERAL. {2}

THYRUS AREA DARK
MULTIPLE. {3}

LYMPH NODE BRONCHIAL ENLARGEMENT
{6}
DISCOLORATION
PALE. {7}

ALL OTHER TISSUES WERE UNREMARKABLE

HISTOPATHOLOGICAL FINDINGS

ADRENAL VACUOLATION, CORTICAL 2

GROSS GRADE CODE: # - NOT SUBMITTED #B - BENIGN, #M - MALIGNANT
HISTO GRADE CODE: 1 - SLIGHT, 2 - MODERATE, 4 - SEVERE, P - PRESENT, * - NOT TABULATED

110

INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

APPENDIX NO. 14
PROJECT NO. 1 90831

GROUP 4 CERIC OXIDE HIGH DOSE
ANIMAL NO. 4003 (cont'd) MALE STUDY WEEK OF DEATH 14 (DAY 92)
TISSUE FINDING

GRADE

ADRENAL (cont'd)

LOCALLY EXTENSIVE, BILATERAL.

BRONCHUS

PIGMENT ACCUMULATION
INTRALUMINAL.

1

CAVITY NASAL

PIGMENT ACCUMULATION
INTRA-FOLLICULAR (LEVEL II,III).

1

COLON

PARASITE
INTRALUMINAL.

1

KIDNEY

CYST
UNILATERAL.

1

LARYNX

METAPLASIA
BASE OF EPIGLOTTIS.
LARYNGITIS

1

PROLIFERATIVE, MULTIFOCAL, WITH FOREIGN BODY.
PIGMENT ACCUMULATION
INTRALUMINAL AND MUCOSAL.

2

1

LIVER

VACUOLATION, HEPATOCELLULAR
FOCAL, SUBCAPSULAR. (1)

1

LUNG

PIGMENT ACCUMULATION
EXTRA- AND INTRACELLULAR, DIFFUSE. (4,5)

4

- 1152 -

GROSS GRADE CODE: *- NOT SUBMITTED

HISTO GRADE CODE: 1- SLIGHT, 2- MILD, 3- MODERATE, 4- SEVERE, P- PRESENT, *- NOT TABULATED

00- BENIGN, #M- MALIGNANT

110

INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

APPENDIX NO. 14
PROJECT NO. 90031

GROUP 4 CERIC OXIDE HIGH DOSE
ANIMAL NO. 4003 (cont'd) MALE STUDY WEEK OF DEATH 14 (DAY 92)

GRADE

TISSUE

FINDING

LUNG
EPITHELIAL HYPERPLASIA, ALVEOLAR
MULTIFOCAL TO LOCALLY EXTENSIVE. [4,5]
HYPERPLASIA, LYMPHOID
MULTIFOCAL.

3
1

LYMPH NODE MANDIBULAR
HEMORRHAGE
FOCAL, BILATERAL. [2]
PIGMENT ACCUMULATION
MULTIFOCAL.

1
1

PARATHYROID
ONE PARATHYROID UNAVAILABLE
NOT PRESENT IN SECTION.

SPLEEN
PIGMENT ACCUMULATION
MULTIFOCAL.

1

THYRUS
HEMORRHAGE
MULTIFOCAL. [3]

1

TRACHEA
PIGMENT ACCUMULATION
INTRALUMINAL.

1

LYMPH NODE BRONCHIAL
HYPERPLASIA, LYMPHOID
[6]
PIGMENT ACCUMULATION
MULTIFOCAL TO LOCALLY EXTENSIVE. [7]

3
3

1153

ALL OTHER EXAMINED TISSUES WERE UNREMARKABLE

GROSS GRADE CODE: * - NOT SUBMITTED

HISTO GRADE CODE: 1 - SLIGHT, 2 - MILD, 3 - MODERATE, 4 - SEVERE, P - PRESENT, * - NOT TABULATED

#B - BENIGN, #M - MALIGNANT

110

APPENDIX NO. 14 INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS
PROJECT NO. 90831

GROUP 4 CERIC OXIDE HIGH DOSE
ANIMAL NO. 4004 MALE STUDY WEEK OF DEATH 14 (DAY 92)
TISSUE FINDING GRADE

GROSS PATHOLOGICAL FINDINGS

LIVER MASS APPROXIMATELY 15X5X5 MM, PALE, FIRM, WELL DEFINED, LEFT LOBE.
(11)

LUNG UNCOLLAPSED
(5)
DISCOLORATION
PALE. (6)

LYMPH NODE MANDIBULAR ENLARGEMENT
BILATERAL. (2)

LYMPH NODE BRONCHIAL ENLARGEMENT
(7)
DISCOLORATION
PALE. (8)

LYMPH NODE MEDIASTINAL ENLARGEMENT
(3)
DISCOLORATION
PALE. (4)

ALL OTHER TISSUES WERE UNREMARKABLE

HISTOPATHOLOGICAL FINDINGS

BRONCHUS PIGMENT ACCUMULATION 1

GROSS GRADE CODE: # - NOT SUBMITTED #B- BENIGN, #M- MALIGNANT
HISTO GRADE CODE: 1- SLIGHT, 2- MILD, 3- MODERATE, 4- SEVERE, P- PRESENT, * - NOT TABULATED

INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

APPENDIX NO. 14
PROJECT NO. 1 90031

GROUP 4 CERIC OXIDE HIGH DOSE
ANIMAL NO. 4004 (cont'd) MALE STUDY WEEK OF DEATH 14 (DAY 92)

GRADE

FINDING

TISSUE

BRONCHUS (cont'd)

INTRALUMINAL.

CAVITY NASAL

PIGMENT ACCUMULATION
INTRA-FOLLICULAR (LEVEL III).

LARYNX

METAPLASIA
BASE OF EPIGLOTTIS.
PIGMENT ACCUMULATION
MUCOSAL.

LIVER

PIGMENT ACCUMULATION
INTRACELLULAR, SINUSOIDAL, MULTIFOCAL.
NO CORRELATION WITH GROSS FINDING
(1)

LUNG

PIGMENT ACCUMULATION
EXTRA- AND INTRACELLULAR, DIFFUSE. (5,6)
EPITHELIAL HYPERPLASIA, ALVEOLAR
MULTIFOCAL TO LOCALLY EXTENSIVE. (5,6)
HYPERPLASIA, LYMPHOID
MULTIFOCAL.

LYMPH NODE MANDIBULAR

HYPERPLASIA, LYMPHOID
(2)
PIGMENT ACCUMULATION
MULTIFOCAL.

GROSS GRADE CODE: * - NOT SUBMITTED
HISTO GRADE CODE: 1 - SLIGHT, 2 - MILD, 3 - MODERATE, 4 - SEVERE, P - PRESENT, * - NOT TABULATED

#B - BENIGN, #M - MALIGNANT

NO

INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

APPENDIX NO. 14
PROJECT NO. 90031

GROUP 4 CERIC OXIDE HIGH DOSE
ANIMAL NO. 4004 (cont'd) MALE STUDY WEEK OF DEATH 14 (DAY 92)
TISSUE FINDING GRADE

PARATHYROID ONE PARATHYROID UNAVAILABLE
NOT PRESENT IN SECTION.

SPLEEN PIGMENT ACCUMULATION
MULTIFOCAL. 1

THYROID CYST, ULTIMBRANCHIAL/THYRIGLOSSAL REMNANTS
UNILATERAL. 1

TRACHEA PIGMENT ACCUMULATION
INTRALUMINAL. 1

LYMPH NODE BRONCHIAL HYPERPLASIA, LYMPHOID
(7) 2
PIGMENT ACCUMULATION
MULTIFOCAL TO LOCALLY EXTENSIVE. (8) 3

LYMPH NODE MEDIASTINAL HYPERPLASIA, LYMPHOID
(3) 2
PIGMENT ACCUMULATION
MULTIFOCAL. (4) 3

ALL OTHER EXAMINED TISSUES WERE UNREMARKABLE

GROSS GRADE CODE: # - NOT SUBMITTED
HISTO GRADE CODE: 1 - SLIGHT, 2 - MILD, 3 - MODERATE, 4 - SEVERE, P - PRESENT, * - NOT TABULATED

#B - BENIGN, #M - MALIGNANT



INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

APPENDIX NO. 14
PROJECT NO. 1 90031

GROUP 4 CERIC OXIDE HIGH DOSE
ANIMAL NO. 4005 MALE STUDY WEEK OF DEATH 14 (DAY 92)
TISSUE FINDING GRADE

GROSS PATHOLOGICAL FINDINGS

LUNG DISCOLORATION
PALE, [1]
UNCOLLAPSED
(2)

URINARY BLADDER DILATATION
(5)

LYMPH NODE BRONCHIAL DISCOLORATION
PALE, [3]
ENLARGEMENT
(4)

ALL OTHER TISSUES WERE UNREMARKABLE

HISTOPATHOLOGICAL FINDINGS

ADRENAL VACUOLATION, CORTICAL
LOCALLY EXTENSIVE, BILATERAL. 1

BRONCHUS PIGMENT ACCUMULATION
INTRALUMINAL. 1

CAVITY NASAL PIGMENT ACCUMULATION
INTRAFOLLICULAR (LEVEL III). 1

GROSS GRADE CODE: * - NOT SUBMITTED

HISTO GRADE CODE: 1 - SLIGHT, 2 - MILD, 3 - MODERATE, 4 - SEVERE, P - PRESENT, * - NOT TABULATED, #B - BENIGN, #M - MALIGNANT

INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

APPENDIX NO. 14
PROJECT NO.: 90831

GROUP 4 CERIC OXIDE HIGH DOSE
ANIMAL NO. 4005 (cont'd) MALE STUDY WEEK OF DEATH 14 (DAY 92)
TISSUE FINDING GRADE

LARYNX	METAPLASIA BASE OF EPIGLOTTIS. PIGMENT ACCUMULATION MUCOSAL.	1
LUNG	PIGMENT ACCUMULATION EXTRA- AND INTRACELLULAR, DIFFUSE. (1,2) EPITHELIAL HYPERPLASIA, ALVEOLAR MULTIFOCAL TO LOCALLY EXTENSIVE. (1,2) HYPERPLASIA, LYMPHOID MULTIFOCAL.	4 3 1
TRACHEA	PIGMENT ACCUMULATION INTRALUMINAL.	1
URINARY BLADDER	DILATATION (5)	2
LYMPH NODE BRONCHIAL	PIGMENT ACCUMULATION MULTIFOCAL TO LOCALLY EXTENSIVE. (3) HYPERPLASIA, LYMPHOID (4)	3 3

ALL OTHER EXAMINED TISSUES WERE UNREMARKABLE

GROSS GRADE CODE: * - NOT SUBMITTED

HISTO GRADE CODE: 1 - SLIGHT, 2 - MILD, 3 - MODERATE, 4 - SEVERE, P - PRESENT, * - NOT TABULATED

#B - BENIGN, #M - MALIGNANT

110

INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

APPENDIX NO. 14
PROJECT NO. 90031

GROUP 4 CERIC OXIDE HIGH DOSE
ANIMAL NO. 4006 MALE STUDY WEEK OF DEATH 14 (DAY 92)
TISSUE FINDING GRADE

GROSS PATHOLOGICAL FINDINGS

KIDNEY DILATATION
PELVIS, LEFT. [1]

LUNG DISCOLORATION
PALE. [4]
UNCOLLAPSED [5]

LYMPH NODE BRONCHIAL ENLARGEMENT [6]
DISCOLORATION
PALE. [7]

LYMPH NODE MEDIASTINAL ENLARGEMENT [2]
DISCOLORATION
PALE. [3]

ALL OTHER TISSUES WERE UNREMARKABLE

HISTOPATHOLOGICAL FINDINGS

ADRENAL VACUOLATION, CORTICAL
LOCALLY EXTENSIVE, BILATERAL. 2

BRONCHUS PIGMENT ACCUMULATION 1

1159

GROSS GRADE CODE: # - NOT SUBMITTED

HISTO GRADE CODE: 1 - SLIGHT, 2 - MILD, 3 - MODERATE, 4 - SEVERE, P - PRESENT, * - NOT TABULATED, #B - BENIGN, #M - MALIGNANT



INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

APPENDIX NO. 14
PROJECT NO.: 90031

GROUP 4 CERIC OXIDE HIGH DOSE STUDY WEEK OF DEATH 14 (DAY 92)
ANIMAL NO. 4006 (cont'd) MALE
TISSUE FINDING GRADE

TISSUE	FINDING	GRADE
BRONCHUS (cont'd)	INTRALUMINAL.	
CAVITY NASAL	PIGMENT ACCUMULATION INTRAFOOLLICULAR (LEVEL III).	1
KIDNEY	DILATATION, PELVIS UNILATERAL. (1)	2
LARYNX	METAPLASIA BASE OF EPIGLOTTIS.	1
LIVER	PIGMENT ACCUMULATION INTRACELLULAR, SINUSOIDAL, MULTIFOCAL.	1
LUNG	PIGMENT ACCUMULATION EXTRA- AND INTRACELLULAR, DIFFUSE. [4,5] EPITHELIAL HYPERPLASIA, ALVEOLAR MULTIFOCAL TO LOCALLY EXTENSIVE. [4,5] HYPERPLASIA, LYMPHOID MULTIFOCAL.	4 3 1
LYMPH NODE MANDIBULAR	PIGMENT ACCUMULATION MULTIFOCAL.	1
MUSCLE SKELETAL	INFILTRATION, MONONUCLEAR CELL LOCALLY EXTENSIVE.	2

1160

GROSS GRADE CODE: # - NOT SUBMITTED #B- BENIGN, #M- MALIGNANT
HISTO GRADE CODE: 1- SLIGHT, 2- MILD, 3- MODERATE, 4- SEVERE, P- PRESENT, * - NOT TABULATED



APPENDIX NO. 14 INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS
 PROJECT NO. 1 90031

GROUP 4 CERIC OXIDE HIGH DOSE
 ANIMAL NO. 4006 (cont'd) MALE STUDY WEEK OF DEATH 14 (DAY 92)
 TISSUE FINDING GRADE

PARATHYROID	ONE PARATHYROID UNAVAILABLE NOT PRESENT IN SECTION.	
SPLEEN	PIGMENT ACCUMULATION MULTIFOCAL.	1
THYROID	CYST, ULTIMOBRANCHIAL/THYROGLOSSAL REMNANTS UNILATERAL.	1
TRACHEA	PIGMENT ACCUMULATION INTRALUMINAL.	1
URINARY BLADDER	DILATATION	2
LYMPH NODE BRONCHIAL	PIGMENT ACCUMULATION MULTIFOCAL TO LOCALLY EXTENSIVE. (7) HYPERPLASIA, LYMPHOID (6)	3
LYMPH NODE MEDIASTINAL	HYPERPLASIA, LYMPHOID (2) PIGMENT ACCUMULATION MULTIFOCAL TO LOCALLY EXTENSIVE. (3)	3

ALL OTHER EXAMINED TISSUES WERE UNREMARKABLE

GROSS GRADE CODE: #- NOT SUBMITTED #B- BENIGN, #M- MALIGNANT
 HISTO GRADE CODE: 1- SLIGHT, 2- MILD, 3- MODERATE, 4- SEVERE, P- PRESENT, *- NOT TABULATED

APPENDIX NO. 14
PROJECT NO. 90031

INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

GROUP 4 CERIC OXIDE HIGH DOSE
ANIMAL NO. 4007 MALE STUDY WEEK OF DEATH 14 (DAY 92)
TISSUE FINDING GRADE

GROSS PATHOLOGICAL FINDINGS

LUNG UNCOLLAPSED (4)
DISCOLORATION PALE. (5)

PITUITARY CYST SINGLE. (9)

PROSTATE AREA PALE
MULTIPLE, DORSAL PORTION. (8)

SPLEEN CYST MULTIPLE, EDGE. (1)

LYMPH NODE BRONCHIAL ENLARGEMENT (6)
DISCOLORATION PALE. (7)

LYMPH NODE MEDIASTINAL ENLARGEMENT (2)
DISCOLORATION PALE. (3)

ALL OTHER TISSUES WERE UNREMARKABLE

GROSS GRADE CODE: * - NOT SUBMITTED

HISTO GRADE CODE: 1 - SLIGHT, 2 - MILD, 3 - MODERATE, 4 - SEVERE, P - PRESENT, * - NOT TABULATED, #B - BENIGN, #M - MALIGNANT

INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

APPENDIX NO. 14
PROJECT NO. 1 98831

GROUP 4 CERIC OXIDE HIGH DOSE
ANIMAL NO. 4007 (cont'd) MALE STUDY WEEK OF DEATH 14 (DAY 92)
TISSUE FINDING GRADE

HISTOPATHOLOGICAL FINDINGS

BRONCHUS	PIGMENT ACCUMULATION INTRALUMINAL.	1
CAVITY NASAL	PIGMENT ACCUMULATION INTRA-FOLLICULAR (LEVEL III).	1
LARYNX	METAPLASIA BASE OF EPIGLOTTIS.	1
LUNG	PIGMENT ACCUMULATION EXTRA- AND INTRACELLULAR, DIFFUSE. (4,5) EPITHELIAL HYPERPLASIA, ALVEOLAR MULTIFOCAL TO LOCALLY EXTENSIVE. (4,5) HYPERPLASIA, LYMPHOID MULTIFOCAL.	4 3 1
LYMPH NODE MANDIBULAR	PIGMENT ACCUMULATION MULTIFOCAL.	1
PARATHYROID	UNAVAILABLE NOT PRESENT IN SECTION.	
PITUITARY	NO ABNORMAL FINDINGS (9)	
PROSTATE	PROSTATITIS	2

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GROSS GRADE CODE: * - NOT SUBMITTED
HISTO GRADE CODE: 1- SLIGHT, 2- MILD, 3- MODERATE, 4- SEVERE, P- PRESENT, *- NOT TABULATED, #B- BENIGN, #M- MALIGNANT



APPENDIX NO. 14 INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS
 PROJECT NO. 1 90031

GROUP 4 CERIC OXIDE HIGH DOSE
 ANIMAL NO. 4007 (cont'd) MALE STUDY WEEK OF DEATH 14 (DAY 92)
 TISSUE FINDING GRADE

PROSTATE (cont'd) SUBACUTE, MULTIFOCAL TO LOCALLY EXTENSIVE. (B)

SPLEEN CYST, CAPSULAR (1) 2

TRACHEA PIGMENT ACCUMULATION INTRALUMINAL. 1

LYMPH NODE BRONCHIAL PIGMENT ACCUMULATION MULTIFOCAL TO LOCALLY EXTENSIVE. (7) 3
 LYMPH NODE BRONCHIAL HYPERPLASIA, LYMPHOID (6) 2

LYMPH NODE MEDIASTINAL HYPERPLASIA, LYMPHOID (2) 3
 LYMPH NODE MEDIASTINAL PIGMENT ACCUMULATION MULTIFOCAL TO LOCALLY EXTENSIVE. (3) 3

ALL OTHER EXAMINED TISSUES WERE UNREMARKABLE

GROSS GRADE CODE: * - NOT SUBMITTED #B - BENIGN, #M - MALIGNANT
 HISTO GRADE CODE: 1 - SLIGHT, 2 - MILD, 3 - MODERATE, 4 - SEVERE, P - PRESENT, * - NOT TABULATED

BIO

APPENDIX NO. 14
PROJECT NO.: 90831

INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

GROUP	ANIMAL NO.	SEX	STUDY WEEK OF DEATH	GRADE
4	4008	MALE	14 (DAY 92)	

TISSUE	FINDING	GRADE
LUNG	DISCOLORATION PALE. [5] UNCOLLAPSED [6]	
LYMPH NODE MANDIBULAR	ENLARGEMENT RIGHT. [1]	
LYMPH NODE BRONCHIAL	ENLARGEMENT [2] DISCOLORATION PALE. [3]	
LYMPH NODE MEDIASTINAL	DISCOLORATION PALE. [4]	
ADRENAL	VACUOLATION, CORTICAL LOCALLY EXTENSIVE, BILATERAL.	1
BRONCHUS	PIGMENT ACCUMULATION INTRALUMINAL.	1

GROSS PATHOLOGICAL FINDINGS

LUNG DISCOLORATION PALE. [5]
UNCOLLAPSED [6]

LYMPH NODE MANDIBULAR ENLARGEMENT RIGHT. [1]

LYMPH NODE BRONCHIAL ENLARGEMENT [2]
DISCOLORATION PALE. [3]

LYMPH NODE MEDIASTINAL DISCOLORATION PALE. [4]

ALL OTHER TISSUES WERE UNREMARKABLE

HISTOPATHOLOGICAL FINDINGS

ADRENAL VACUOLATION, CORTICAL
LOCALLY EXTENSIVE, BILATERAL.

BRONCHUS PIGMENT ACCUMULATION
INTRALUMINAL.

GROSS GRADE CODE: # - NOT SUBMITTED
HISTO GRADE CODE: 1 - SLIGHT, 2 - MILD, 3 - MODERATE, 4 - SEVERE, P - PRESENT, * - NOT TABULATED, #B - DESIGN, #M - MALIGNANT

INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

APPENDIX NO. 14
PROJECT NO. 90831

GROUP 4 CERIC OXIDE HIGH DOSE
ANIMAL NO. 4009 (cont'd) MALE STUDY WEEK OF DEATH 14 (DAY 92)

GRADE

TISSUE	FINDING	GRADE
CAVITY NASAL	PIGMENT ACCUMULATION INTRAFOLLICULAR (LEVEL III).	1
LARYNX	PIGMENT ACCUMULATION INTRAFOLLICULAR. METAPLASIA BASE OF EPIGLOTTIS.	1
LUNG	HYPERPLASIA, LYMPHOID MULTIFOCAL. PIGMENT ACCUMULATION EXTRA- AND INTRACELLULAR, DIFFUSE. (5,6) EPITHELIAL HYPERPLASIA, ALVEOLAR MULTIFOCAL TO LOCALLY EXTENSIVE. (5,6)	1 4 3
LYMPH NODE MANDIBULAR	PLASMACYTOSIS AND/OR HISTIOCYTOSIS, MEDULLARY (1)	2
PARATHYROID	ONE PARATHYROID UNAVAILABLE NOT PRESENT IN SECTION.	
THYROID	CYST, ULTIMOBRANCHIAL/THYROGLOSSAL REMNANTS UNILATERAL.	1
TRACHEA	PIGMENT ACCUMULATION INTRALUMINAL AND MUCOSAL.	1
LYMPH NODE BRONCHIAL	PIGMENT ACCUMULATION	3

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GROSS GRADE CODE: # - NOT SUBMITTED
HISTO GRADE CODE: 1 - SLIGHT, 2 - MILD, 3 - MODERATE, 4 - SEVERE, P - PRESENT, * - NOT TABULATED, #B - BENIGN, #M - MALIGNANT

BIO

INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

APPENDIX NO. 14
PROJECT NO. 90031

GROUP 4 CERIC OXIDE HIGH DOSE
ANIMAL NO. 4008 (cont'd) MALE STUDY WEEK OF DEATH 14 (DAY 92)

GRADE

FINDING

TISSUE

LYMPH NODE BRONCHIAL (cont'd)

MULTIFOCAL TO LOCALLY EXTENSIVE. [3]
HYPERPLASIA, LYMPHOID
[2]

3

LYMPH NODE MEDIASTINAL

PIGMENT ACCUMULATION
MULTIFOCAL. [4]
HYPERPLASIA, LYMPHOID

2

1

ALL OTHER EXAMINED TISSUES WERE UNREMARKABLE

GROSS GRADE CODE: * - NOT SUBMITTED

HISTO GRADE CODE: 1 - SLIGHT, 2 - MILD, 3 - MODERATE, 4 - SEVERE, P - PRESENT, * - NOT TABULATED

#B - BENIGN, #M - MALIGNANT

110

INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

APPENDIX NO. 14
PROJECT NO.: 90831

GROUP 4 CERIC OXIDE HIGH DOSE
ANIMAL NO. 4009 (cont'd) MALE STUDY WEEK OF DEATH 14 (DAY 92)
TISSUE FINDING GRADE

LARYNX (cont'd)

INTRALUMINAL AND MUCOSAL.
METAPLASIA
BASE OF EPIGLOTTIS.

1

LUNG

PIGMENT ACCUMULATION
EXTRA- AND INTRACELLULAR, DIFFUSE. [5,6]
EPITHELIAL HYPERPLASIA, ALVEOLAR
MULTIFOCAL TO LOCALLY EXTENSIVE. [5,6]
HYPERPLASIA, LYMPHOID
MULTIFOCAL.

4

3

1

PARATHYROID

UNAVAILABLE
NOT PRESENT IN SECTION.

PITUITARY

NO ABNORMAL FINDINGS
PARS NERVOSA NOT PRESENT.

THYROID

CYST, ULTIHBRANCHIAL/THYROGLOSSAL REMNANTS
BILATERAL.

1

TRACHEA

PIGMENT ACCUMULATION
INTRALUMINAL.

1

LYMPH NODE BRONCHIAL

PIGMENT ACCUMULATION
MULTIFOCAL TO LOCALLY EXTENSIVE. [4]
HYPERPLASIA, LYMPHOID

3

3

- 1168 -

GROSS GRADE CODE: # - NOT SUBMITTED #D- BENIGN, #M- MALIGNANT
HISTO GRADE CODE: 1- SLIGHT, 2- MILD, 3- MODERATE, 4- SEVERE, P- PRESENT, *- NOT TABULATED

BIO

APPENDIX NO. 14 INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS
PROJECT NO.: 90031

GROUP 4 CERIC OXIDE HIGH DOSE
ANIMAL NO. 4009 (cont'd) MALE STUDY WEEK OF DEATH 14 (DAY 92)
TISSUE FINDING UNMDE

LYMPH NODE BRONCHIAL (cont'd) [3]

LYMPH NODE MEDIASTINAL
HYPERPLASIA, LYMPHOID
(1)
PIGMENT ACCUMULATION
MULTIFOCAL TO LOCALLY EXTENSIVE. (2)

2
3

ALL OTHER EXAMINED TISSUES WERE UNREMARKABLE

GROSS GRADE CODE: * - NOT SUBMITTED
HISTO GRADE CODE: 1 - SLIGHT, 2 - MILD, 3 - MODERATE, 4 - SEVERE, P - PRESENT, N - NOT TABULATED

*B - BENIGN, *M - MALIGNANT

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INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

APPENDIX NO. 14
PROJECT NO.: 90831

GROUP	4	CERIC OXIDE	HIGH DOSE	STUDY WEEK OF DEATH	14	(DAY 92)	FINDING	GRADE
ANIMAL NO.	4010	MALE						
TISSUE								

GROSS PATHOLOGICAL FINDINGS

LIVER AREA PALE
SINGLE, FISSURE, MEDIAN LOBE. [1]

LUNG DISCOLORATION
PALE. [5]
UNCOLLAPSED
[6]

LYMPH NODE MANDIBULAR ENLARGEMENT
BILATERAL. [2]

LYMPH NODE BRONCHIAL ENLARGEMENT
[7]
DISCOLORATION
PALE. [8]

LYMPH NODE MEDIASTINAL ENLARGEMENT
[3]
DISCOLORATION
PALE. [4]

ALL OTHER TISSUES WERE UNREMARKABLE

HISTOPATHOLOGICAL FINDINGS

BRONCHUS PIGMENT ACCUMULATION 1

GROSS GRADE CODE: # - NOT SUBMITTED

HISTO GRADE CODE: 1- SLIGHT, 2- MILD, 3- MODERATE, 4- SEVERE, P- PRESENT, *- NOT TABULATED #B- BENIGN, #M- MALIGNANT



INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

APPENDIX NO. 14
PROJECT NO. 90831

GROUP 4 CERIC OXIDE HIGH DOSE
ANIMAL NO. 4010 (cont'd) MALE STUDY WEEK OF DEATH 14 (DAY 92)

GRADE

FINDING

TISSUE

BRONCHUS

(cont'd)

INTRALUMINAL AND MUCOSAL.

CAVITY NASAL

PIGMENT ACCUMULATION
INTRAFOLLICULAR (LEVEL III).

HEART

INFILTRATION, MONONUCLEAR CELL
FOCAL.

LARYNX

METAPLASIA
BASE OF EPIGLOTTIS.

LIVER

PIGMENT ACCUMULATION
INTRACELLULAR, SINUSOIDAL, MULTIFOCAL.
NO CORRELATION WITH GROSS FINDING
(1)

LUNG

PIGMENT ACCUMULATION
EXTRA- AND INTRACELLULAR, DIFFUSE. (5,6)
EPITHELIAL HYPERPLASIA, ALVEOLAR
MULTIFOCAL.
HYPERPLASIA, LYMPHOID
MULTIFOCAL.

LYMPH NODE MANDIBULAR

PLASMACYTOSIS AND/OR HISTIOCYTOSIS, MEDULLARY
BILATERAL. (2)
HEMORRHAGE

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GROSS GRADE CODE: * - NOT SUBMITTED #B- BENIGN, #M- MALIGNANT
HISTO GRADE CODE: 1- SLIGHT, 2- MILD, 3- MODERATE, 4- SEVERE, P- PRESENT, *- NOT TABULATED

110

INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

APPENDIX NO. 14
PROJECT NO.: 90031

GROUP 4 CERIC OXIDE HIGH DOSE
ANIMAL NO. 4010 (cont'd) MALE STUDY WEEK OF DEATH 14 (DAY 92)
TISSUE FINDING GRADE

LYMPH NODE MANDIBULAR (cont'd) MULTIFOCAL, UNILATERAL.

PARATHYROID ONE PARATHYROID UNAVAILABLE NOT PRESENT IN SECTION.

TRACHEA PIGMENT ACCUMULATION INTRALUMINAL. 1

LYMPH NODE BRONCHIAL PIGMENT ACCUMULATION MULTIFOCAL TO LOCALLY EXTENSIVE. [8] 4
HYPERPLASIA, LYMPHOID [7] 2

LYMPH NODE MEDIASTINAL HYPERPLASIA, LYMPHOID [3] 2
PIGMENT ACCUMULATION MULTIFOCAL TO LOCALLY EXTENSIVE. [4] 3

ALL OTHER EXAMINED TISSUES WERE UNREMARKABLE

GROSS GRADE CODE: * - NOT SUBMITTED #B - BENIGN, #M - MALIGNANT
HISTO GRADE CODE: 1 - SLIGHT, 2 - MILD, 3 - MODERATE, 4 - SEVERE, P - PRESENT, * - NOT TABULATED

NO

APPENDIX NO. 14 INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS
PROJECT NO. 90031

GROUP 4 CERIC OXIDE HIGH DOSE STUDY WEEK OF DEATH 14 (DAY 92) GRADE
ANIMAL NO. 4011 MALE FINDING

GROSS PATHOLOGICAL FINDINGS

LUNG DISCOLORATION
PALE. (4)
UNCOLLAPSED (3)

THYMUS AREA DARK
MULTIPLE. (1)

LYMPH NODE BRONCHIAL DISCOLORATION
PALE. (2)
ENLARGEMENT (3)

ALL OTHER TISSUES WERE UNREMARKABLE

HISTOPATHOLOGICAL FINDINGS

ADRENAL VACUULATION, CORTICAL
LOCALLY EXTENSIVE, UNILATERAL. 2

BRONCHUS PIGMENT ACCUMULATION
INTRALUMINAL. 1

CAVITY NASAL PIGMENT ACCUMULATION
INTRAFOLLICULAR (LEVEL III). 1

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GROSS GRADE CODE: * - NOT SUBMITTED #B- BENIGN, #M- MALIGNANT
HISTO GRADE CODE: 1- SLIGHT, 2- MILD, 3- MODERATE, 4- SEVERE, P- PRESENT, * - NOT TABULATED

INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

APPENDIX NO. 14
PROJECT NO. 1 90831

GROUP 4 CERIC OXIDE HIGH DOSE
ANIMAL NO. 4011 (cont'd) MALE STUDY WEEK OF DEATH 14 (DAY 92)
TISSUE FINDING GRADE

LARYNX	METAPLASIA BASE OF EPIGLOTTIS. PIGMENT ACCUMULATION INTRALUMINAL AND MUCOSAL.	1 1
LIVER	PIGMENT ACCUMULATION INTRACELLULAR, SINUSOIDAL, MULTIFOCAL.	1
LUNG	PIGMENT ACCUMULATION EXTRA- AND INTRACELLULAR, DIFFUSE. [4,5] EPITHELIAL HYPERPLASIA, ALVEOLAR MULTIFOCAL TO LOCALLY EXTENSIVE. [4,5] HYPERPLASIA, LYMPHOID MULTIFOCAL.	4 3 1
LYMPH NODE MANDIBULAR	PIGMENT ACCUMULATION MULTIFOCAL.	1
PARATHYROID	ONE PARATHYROID UNAVAILABLE NOT PRESENT IN SECTION.	
SPLEEN	PIGMENT ACCUMULATION MULTIFOCAL.	1
THYMUS	NO ABNORMAL FINDINGS (1)	
THYROID	CYST, ULTIORBRANCHIAL/THYROGLOSSAL REMNANTS	1

GROSS GRADE CODE: # - NOT SUBMITTED
HISTO GRADE CODE: 1 - SLIGHT, 2 - MILD, 3 - MODERATE, 4 - SEVERE, P - PRESENT, * - NOT TABULATED, #B - BENIGN, #M - MALIGNANT

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INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

APPENDIX NO. 14
PROJECT NO. 90031

GROUP 4 CERIC OXIDE HIGH DOSE
ANIMAL NO. 4011 (cont'd) MALE STUDY WEEK OF DEATH 14 (DAY 92)
TISSUE FINDING GRADE

THYROID	(cont'd)	BILATERAL.	
TRACHEA		PIGMENT ACCUMULATION INTRALUMINAL.	1
LYMPH NODE BRONCHIAL		PIGMENT ACCUMULATION MULTIFOCAL TO LOCALLY EXTENSIVE. (2) HYPERPLASIA, LYMPHOID (3)	3 2

ALL OTHER EXAMINED TISSUES WERE UNREMARKABLE

GROSS GRADE CODE: * - NOT SUBMITTED #B- BENIGN, #M- MALIGNANT
HISTO GRADE CODE: 1- SLIGHT, 2- MILD, 3- MODERATE, 4- SEVERE, P- PRESENT, * - NOT TABULATED

110

INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

APPENDIX NO. 14
PROJECT NO. 1 90831

GROUP	ANIMAL NO.	SEX	STUDY WEEK OF DEATH	AGE	HIGH DOSE	FINDING	GRADE
4	4012	MALE	14	(DAY 92)			

GROSS PATHOLOGICAL FINDINGS

LUNG
DISCOLORATION
PALE. [5]
UNCOLLAPSED
[6]

LYMPH NODE BRONCHIAL
ENLARGEMENT
[3]
DISCOLORATION
PALE. [4]

LYMPH NODE MEDIASTINAL
ENLARGEMENT
[1]
DISCOLORATION
PALE. [2]

ALL OTHER TISSUES WERE UNREMARKABLE

HISTOPATHOLOGICAL FINDINGS

BRONCHUS
PIGMENT ACCUMULATION
MUCOSAL AND INTRALUMINAL. 1

CAVITY NASAL
PIGMENT ACCUMULATION
INTRA-FOLLICULAR (LEVEL III). 1

LARYNX
METAPLASIA 1

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GROSS GRADE CODE: * - NOT SUBMITTED #B- BENIGN, #M- MALIGNANT
HISTO GRADE CODE: 1- SLIGHT, 2- MILD, 3- MODERATE, 4- SEVERE, P- PRESENT, * - NOT TABULATED

INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

APPENDIX NO. 14
PROJECT NO.: 90831

GROUP 4 CERIC OXIDE HIGH DOSE STUDY WEEK OF DEATH 14 (DAY 92)
ANIMAL NO. 4012 (cont'd) MALE FINDING GRADE
TISSUE

TISSUE	FINDING	GRADE
LARYNX	(cont'd) BASE OF EPIGLOTTIS. PIGMENT ACCUMULATION INTRALUMINAL AND MUCOSAL.	1
LIVER	PIGMENT ACCUMULATION INTRACELLULAR, SINUSOIDAL, MULTIFOCAL.	1
LUNG	PIGMENT ACCUMULATION EXTRA- AND INTRACELLULAR, DIFFUSE. (5,6) EPITHELIAL HYPERPLASIA, ALVEOLAR MULTIFOCAL TO LOCALLY EXTENSIVE. (5,6) HYPERPLASIA, LYMPHOID MULTIFOCAL.	4 3 1
LYMPH NODE MANDIBULAR	PIGMENT ACCUMULATION MULTIFOCAL.	1
MAMMARY GLAND	NO GLANDULAR TISSUE IN SECTION	
PARATHYROID	ONE PARATHYROID UNAVAILABLE NOT PRESENT IN SECTION.	
SPLEEN	PIGMENT ACCUMULATION MULTIFOCAL.	1
THYROID	CYST, ULTIMBRANCHIAL/THYROIDGLASSAL REMNANTS	1

GROSS GRADE CODE: # - NOT SUBMITTED
HISTO GRADE CODE: 1 - SLIGHT, 2 - MILD, 3 - MODERATE, 4 - SEVERE, P - PRESENT, * - NOT TABULATED, #B - BENIGN, #M - MALIGNANT



INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

APPENDIX NO. 14
PROJECT NO. 90831

GROUP 4 CERIC OXIDE HIGH DOSE
ANIMAL NO. 4012 (cont'd) MALE STUDY WEEK OF DEATH 14 (DAY 92)
TISSUE FINDING GRADE

TISSUE	FINDING	GRADE
THYROID	(cont'd) UNILATERAL.	
TRACHEA	PIGMENT ACCUMULATION INTRALUMINAL.	1
Lymph Node BRONCHIAL	PIGMENT ACCUMULATION MULTIFOCAL TO LOCALLY EXTENSIVE. (4) HYPERPLASIA, LYMPHOID (3)	2
Lymph Node MEDIASTINAL	HYPERPLASIA, LYMPHOID (1) PIGMENT ACCUMULATION MULTIFOCAL TO LOCALLY EXTENSIVE. (2)	2
		3

ALL OTHER EXAMINED TISSUES WERE UNREMARKABLE

GROSS GRADE CODE: # - NOT SUBMITTED #B- BENIGN, #M- MALIGNANT
HISTO GRADE CODE: 1- SLIGHT, 2- MILD, 3- MODERATE, 4- SEVERE, P- PRESENT, *-- NOT TABULATED

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APPENDIX NO. 14
PROJECT NO. 90831
INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

GROUP 4 CERIC OXIDE HIGH DOSE
ANIMAL NO. 4014 MALE STUDY WEEK OF DEATH 14 (DAY 92)
TISSUE FINDING GRADE

CROSS PATHOLOGICAL FINDINGS

LUNG DISCOLORATION
PALE. [3]
UNCOLLAPSED [4]

PROSTATE AREA RAISED
PALE, FIRM, MULTIPLE, VENTRAL PORTION. [5]

THYRUS SMALL [6]

LYMPH NODE BRONCHIAL DISCOLORATION
PALE. [1]
ENLARGEMENT [2]

ALL OTHER TISSUES WERE UNREMARKABLE

HISTOPATHOLOGICAL FINDINGS

ADRENAL VACUOLATION, CORTICAL
LOCALLY EXTENSIVE, BILATERAL. 1

BRONCHUS PIGMENT ACCUMULATION
MUCOSAL. 1

GROSS GRADE CODE: # - NOT SUBMITTED #B- BENIGN, #M- MALIGNANT
HISTO GRADE CODE: 1- SLIGHT, 2- MILD, 3- MODERATE, 4- SEVERE, P- PRESENT, * - NOT TABULATED

INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

APPENDIX NO. 14
PROJECT NO. 90831

GROUP 4 CERIC OXIDE HIGH DOSE
ANIMAL NO. 4014 (cont'd) MALE STUDY WEEK OF DEATH 14 (DAY 92)
TISSUE FINDING GRADE

CAVITY NASAL	PIGMENT ACCUMULATION INTRAFOOLLICULAR (LEVEL III).	1
HEART	INFILTRATION, MONONUCLEAR CELL MULTIFOCAL.	1
LARYNX	METAPLASIA BASE OF EPIGLOTTIS, PIGMENT ACCUMULATION INTRAFOOLLICULAR.	1
LUNG	PIGMENT ACCUMULATION EXTRA- AND INTRACELLULAR, DIFFUSE. [3,4] EPITHELIAL HYPERPLASIA, ALVEOLAR MULTIFOCAL TO LOCALLY EXTENSIVE. [3,4]	4
LYMPH NODE MANDIBULAR	PLASMACYTOSIS AND/OR HISTIOCYTOSIS, MEDULLARY	3
PARATHYROID	UNAVAILABLE NOT PRESENT IN SECTION.	2
PROSTATE	NO ABNORMAL FINDINGS [5]	
THYMUS	NO ABNORMAL FINDINGS [6]	
TRACHEA	PIGMENT ACCUMULATION	1

GROSS GRADE CODE: # - NOT SUBMITTED #B - BENIGN, #M - MALIGNANT
HISTO GRADE CODE: 1 - SLIGHT, 2 - MILD, 3 - MODERATE, 4 - SEVERE, P - PRESENT, * - NOT TABULATED

INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

APPENDIX NO. 14
PROJECT NO.: 90831

GROUP 4 CERIC OXIDE HIGH DOSE
ANIMAL NO. 4014 (cont'd) MALE STUDY WEEK OF DEATH 14 (DAY 92)
TISSUE FINDING GRADE

TRACHEA (cont'd) INTRALUMINAL AND MUCOSAL.

LYMPH NODE BRONCHIAL PIGMENT ACCUMULATION 2
MULTIFOCAL TO LOCALLY EXTENSIVE. (1)
HYPERPLASIA, LYMPHOID 2
(2)

ALL OTHER EXAMINED TISSUES WERE UNREMARKABLE

GROSS GRADE CODE: #- NOT SUBMITTED #B- BENIGN, #M- MALIGNANT
HISTO GRADE CODE: 1- SLIGHT, 2- MILD, 3- MODERATE, 4- SEVERE, P- PRESENT, *- NOT TABULATED

110

INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

APPENDIX NO. 14
PROJECT NO. 7 90031

GROUP	4	CERIC OXIDE	HIGH DOSE	STUDY WEEK OF DEATH	14	(DAY 92)	FINDING	GRADE
ANIMAL NO.	4015	MALE						
TISSUE								

GROSS PATHOLOGICAL FINDINGS

LUNG DISCOLORATION
PALE. (5)
UNCOLLAPSED
(6)

LYMPH NODE BRONCHIAL ENLARGEMENT
(3)
DISCOLORATION
PALE. (4)

LYMPH NODE MEDIASTINAL ENLARGEMENT
(1)
DISCOLORATION
PALE. (2)

ALL OTHER TISSUES WERE UNREMARKABLE

HISTOPATHOLOGICAL FINDINGS

BRONCHUS PIGMENT ACCUMULATION
MUCOSAL AND INTRALUMINAL. 1

CAVITY NASAL PIGMENT ACCUMULATION
INTRAFOLLICULAR (LEVEL III). 1

LARYNX PIGMENT ACCUMULATION 1

GROSS GRADE CODE: * - NOT SUBMITTED #B - BENIGN, #M - MALIGNANT
HISTO GRADE CODE: 1 - SLIGHT, 2 - MILD, 3 - MODERATE, 4 - SEVERE, P - PRESENT, * - NOT TABULATED

110

INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

APPENDIX NO. 14.
PROJECT NO.: 50031

GROUP 4 CERIC OXIDE HIGH DOSE
ANIMAL NO. 4015 (cont'd) MALE STUDY WEEK OF DEATH 14 (DAY 92)

GRADE

FINDING

TISSUE

LARYNX (cont'd)

MUCOSAL.

LUNG

PIGMENT ACCUMULATION
EXTRA- AND INTRACELLULAR, DIFFUSE. (5,6)
EPITHELIAL HYPERPLASIA, ALVEOLAR
MULTIFOCAL TO LOCALLY EXTENSIVE. (5,6)
HYPERPLASIA, LYMPHOID
MULTIFOCAL.

4

3

1

PARATHYROID

UNAVAILABLE
NOT PRESENT IN SECTION.

THYROID

CYST, ULTINDERANCHIAL/THYROGLOSSAL REMNANTS
UNILATERAL.

1

TRACHEA

PIGMENT ACCUMULATION
MUCOSAL AND INTRALUMINAL.

1

LYMPH NODE BRONCHIAL

PIGMENT ACCUMULATION
MULTIFOCAL. (4)
HYPERPLASIA, LYMPHOID
(3)

2

3

LYMPH NODE MEDIASTINAL

HYPERPLASIA, LYMPHOID
(1)
PIGMENT ACCUMULATION

3

3

1183

GROSS GRADE CODE: * - NOT SUBMITTED

HISTO GRADE CODE: 1- SLIGHT, 2- MILD, 3- MODERATE, 4- SEVERE, P- PRESENT, *- NOT TABULATED

#B- BENIGN, #M- MALIGNANT

INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

APPENDIX NO. 14
PROJECT NO. 90031

GROUP	ANIMAL NO.	TISSUE	FINDING	GRADE
4	4015 (cont'd)	CERIC OXIDE	STUDY WEEK OF DEATH 14 (DAY 92)	
			MALE	
			HIGH DOSE	

LYMPH NODE MEDIASTINAL (cont'd) MULTIFOCAL TO LOCALLY EXTENSIVE. (2)

ALL OTHER EXAMINED TISSUES WERE UNREMARKABLE

CROSS GRADE CODE: *- NOT SUBMITTED *B- BENIGN, *M- MALIGNANT
HISTO GRADE CODE: 1- SLIGHT, 2- MILD, 3- MODERATE, 4- SEVERE, P- PRESENT, *- NOT TABULATED

INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

APPENDIX NO. 14
PROJECT NO. 1 90031

GROUP 4 CERIC OXIDE HIGH DOSE
ANIMAL NO. 4016 MALE STUDY WEEK OF DEATH 14 (DAY 92)
TISSUE FINDING GRADE

GROSS PATHOLOGICAL FINDINGS

KIDNEY FOCI DARK
BILATERAL. [1]
DILATATION
PELVIS, LEFT. [9]

LUNG UNCOLLAPSED
[5]
DISCOLORATION
PALE. [6]

LYMPH NODE MANDIBULAR ENLARGEMENT
BILATERAL. [2]

LYMPH NODE BRONCHIAL ENLARGEMENT
[7]
DISCOLORATION
PALE. [8]

LYMPH NODE MEDIASTINAL ENLARGEMENT
[3]
DISCOLORATION
PALE. [4]

ALL OTHER TISSUES WERE UNREMARKABLE

HISTOPATHOLOGICAL FINDINGS

BRONCHUS PIGMENT ACCUMULATION 1

GROSS GRADE CONF: *- NOT SUBMITTED

110

INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

APPENDIX NO. 14
PROJECT NO. 1 90031

GROUP 4 CERIC OXIDE HIGH DOSE
ANIMAL NO. 4016 (cont'd) MALE STUDY WEEK OF DEATH 14 (DAY 92)

GRADE

TISSUE	FINDING	GRADE
BRONCHUS (cont'd)	MUCOSAL AND INTRALUMINAL.	
CAVITY NASAL	HYPERTROPHY AND/OR HYPERPLASIA, GOBLET CELL LOCALLY EXTENSIVE. PIGMENT ACCUMULATION INTRAFOILICULAR (LEVEL II, III).	2 1
KIDNEY	DILATATION, TUBULAR MULTIFOCAL, WITH TUBULAR BASOPHILIA AND INTRATUBULAR HEMORRHAGE. (1) DILATATION, PELVIS UNILATERAL. (9)	2 1
LARYNX	PIGMENT ACCUMULATION MUCOSAL.	1
LUNG	PIGMENT ACCUMULATION EXTRA- AND INTRACELLULAR, DIFFUSE. (5,6) EPITHELIAL HYPERPLASIA, ALVEOLAR MULTIFOCAL. HYPERPLASIA, LYMPHOID MULTIFOCAL.	4 2 1
LYMPH NODE MANDIBULAR	PLASMACYTOSIS AND/OR HISTIOCYTOSIS, MEDULLARY BILATERAL. (2)	4
PITUITARY	CYST	1

GROSS GRADE CODE: * - NOT SUBMITTED
HISTO GRADE CODE: 1 - SLIGHT, 2 - MILD, 3 - MODERATE, 4 - SEVERE, P - PRESENT, * - NOT TABULATED #B - BENIGN, #M - MALIGNANT



APPENDIX NO. 14
PROJECT NO.: 90031

INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

GROUP 4 CERIC OXIDE HIGH DOSE
ANIMAL NO. 4016 (cont'd) MALE STUDY WEEK OF DEATH 14 (DAY 92)
TISSUE FINDING GRADE

TISSUE	FINDING	GRADE
THYROID	CYST, ULTIMBRANCHIAL/THYROIDAL REMNANTS UNILATERAL.	1
LYMPH NODE BRONCHIAL	HYPERPLASIA, LYMPHOID [7]	2
	PIGMENT ACCUMULATION MULTIFOCAL TO LOCALLY EXTENSIVE. [8]	3
LYMPH NODE MEDIASTINAL	HYPERPLASIA, LYMPHOID [3]	2
	PIGMENT ACCUMULATION MULTIFOCAL TO LOCALLY EXTENSIVE. [4]	3

ALL OTHER EXAMINED TISSUES WERE UNREMARKABLE

GROSS GRADE CODE: * - NOT SUBMITTED #B - BENIGN, #M - MALIGNANT
HISTO GRADE CODE: 1 - SLIGHT, 2 - MILD, 3 - MODERATE, 4 - SEVERE, P - PRESENT, * - NOT TABULATED

APPENDIX NO. 14 INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS
PROJECT NO.: 90831

GROUP 1 AIR CONTROL STUDY WEEK OF DEATH 14 (DAY 92) GRADE
ANIMAL NO. 1501 FEMALE FINDING

GROSS PATHOLOGICAL FINDINGS

LYMPH NODE MANDIBULAR ENLARGEMENT
BILATERAL. [2]
FOCI DARK
BILATERAL. [3]

LYMPH NODE MEDIASTINAL DISCOLORATION
DARK. [4]

LYMPH NODE PANCREATIC ENLARGEMENT
[1]

ALL OTHER TISSUES WERE UNREMARKABLE

HISTOPATHOLOGICAL FINDINGS

LYMPH NODE MANDIBULAR PLASMACYTOSIS AND/OR HISTIOCYTOSIS, MEDULLARY
BILATERAL. [2] 2
HEMORRHAGE
MULTIFOCAL, UNILATERAL. [3] 2

PARATHYROID UNAVAILABLE
NOT PRESENT IN SECTION.

LYMPH NODE MEDIASTINAL HEMORRHAGE
LOCALLY EXTENSIVE. [4] 3

GROSS GRADE CODE: * - NOT SUBMITTED #B- BENIGN, #H- MALIGNANT
HISTO GRADE CODE: 1 - SLIGHT, 2 - MILD, 3 - MODERATE, 4 - SEVERE, P - PRESENT, * - NOT TABULATED

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INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

APPENDIX NO. 14
PROJECT NO.: 90831

GROUP	ANIMAL NO.	SEX	STUDY WEEK OF DEATH	DAY (DAY 92)	FINDING	GRADE
1	AIR CONTROL	FEMALE				

TISSUE

LYMPH NODE PANCREATIC NO CORRELATION WITH GROSS FINDING
[1]

ALL OTHER EXAMINED TISSUES WERE UNREMARKABLE

GROSS GRADE CODE: * - NOT SUBMITTED
HISTO GRADE CODE: 1 - SLIGHT, 2 - MILD, 3 - MODERATE, 4 - SEVERE, P - PRESENT, * - NOT TABULATED

#B - BENIGN, #M - MALIGNANT

INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

APPENDIX NO. 14
PROJECT NO.: 90831

GROUP 1. AIR CONTROL
ANIMAL NO. 1502 FEMALE STUDY WEEK OF DEATH 14 (DAY 92)
TISSUE FINDING GRADE

GROSS PATHOLOGICAL FINDINGS

ALL TISSUES WERE UNREMARKABLE

HISTOPATHOLOGICAL FINDINGS

ADRENAL

FOCAL CORTICAL HYPERTROPHY
WITH VACUOLATION, UNILATERAL.

1

PARATHYROID

UNAVAILABLE
NOT PRESENT IN SECTION.

THYROID

CYST, ULTIMOBRANCHIAL/THYROGLOSSAL REMNANTS
BILATERAL.

1

ALL OTHER EXAMINED TISSUES WERE UNREMARKABLE

GROSS GRADE CODE: * - NOT SUBMITTED

HISTO GRADE CODE: 1 - SLIGHT, 2 - MILD, 3 - MODERATE, 4 - SEVERE, P - PRESENT, * - NOT TABULATED #B - BENIGN, #M - MALIGNANT

INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

APPENDIX NO. 14
PROJECT NO. 90831

GROUP 1 AIR CONTROL STUDY WEEK OF DEATH 14 (DAY 92) GRADE
ANIMAL NO. 1503 FEMALE TISSUE FINDING

GROSS PATHOLOGICAL FINDINGS

LYMPH NODE PANCREATIC ENLARGEMENT (1)

ALL OTHER TISSUES WERE UNREMARKABLE

HISTOPATHOLOGICAL FINDINGS

THYROID CYST, ULTIMODRANCHIAL/THYROGLOSSAL REMNANTS UNILATERAL. 1

LYMPH NODE PANCREATIC NO ABNORMAL FINDINGS (1)

ALL OTHER EXAMINED TISSUES WERE UNREMARKABLE

GROSS GRADE CODE: *- NOT SUBMITTED #B- BENIGN, #M- MALIGNANT
HISTO GRADE CODE: 1- SLIGHT, 2- MILD, 3- MODERATE, 4- SEVERE, P- PRESENT, *- NOT TABULATED

INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

APPENDIX NO. 14
PROJECT NO.: 90831

GROUP 1, AIR CONTROL
ANIMAL NO. 1504 FEMALE STUDY WEEK OF DEATH 14 (DAY 92)
TISSUE FINDING GRADE

GROSS PATHOLOGICAL FINDINGS

ALL TISSUES WERE UNREMARKABLE

HISTOPATHOLOGICAL FINDINGS

CAVITY NASAL 1
ATROPHY, OLFACTORY EPITHELIUM
FOCAL, TURBINATE.

LYMPH NODE MANDIBULAR 1
HEMORRHAGE
FOCAL.

PARATHYROID
ONE PARATHYROID UNAVAILABLE
NOT PRESENT IN SECTION.

ALL OTHER EXAMINED TISSUES WERE UNREMARKABLE

GROSS GRADE CODE: # - NOT SUBMITTED

HISTO GRADE CODE: 1- SLIGHT, 2- MILD, 3- MODERATE, 4- SEVERE, P-- PRESENT, *-- NOT TABULATED #B- BENIGN, #M- MALIGNANT



INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

APPENDIX NO. 14
PROJECT NO.: 90831

GROUP 1 AIR CONTROL STUDY WEEK OF DEATH 14 (DAY 92) GRADE
ANIMAL NO. 1505 FEMALE FINDING
TISSUE

GROSS PATHOLOGICAL FINDINGS

ALL TISSUES WERE UNREMARKABLE

HISTOPATHOLOGICAL FINDINGS

PARATHYROID UNAVAILABLE
NOT PRESENT IN SECTION.

ALL EXAMINED TISSUES WERE UNREMARKABLE

GROSS GRADE CODE: * - NOT SUBMITTED #B - BENIGN, #M - MALIGNANT
HISTO GRADE CODE: 1 - SLIGHT, 2 - MILD, 3 - MODERATE, 4 - SEVERE, P - PRESENT, * - NOT TABULATED

BIO

APPENDIX NO. 14 INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS
PROJECT NO. 90831

GROUP 1 AIR CONTROL STUDY WEEK OF DEATH 14 (DAY 92) GRADE
ANIMAL NO. 1506 FEMALE TISSUE FINDING

GROSS PATHOLOGICAL FINDINGS

THYROID ENLARGEMENT
RIGHT LOBE. [1]

ALL OTHER TISSUES WERE UNREMARKABLE

HISTOPATHOLOGICAL FINDINGS

PARATHYROID ONE PARATHYROID UNAVAILABLE
NOT PRESENT IN SECTION.

THYROID 1
CYST, ULTIMBRANCHIAL/THYROGLOSSAL REMNANTS
UNILATERAL.
NO CORRELATION WITH GROSS FINDING
[1]

ALL OTHER EXAMINED TISSUES WERE UNREMARKABLE

GROSS GRADE CODE: *--NOT SUBMITTED #B- BENIGN, #M- MALIGNANT
HISTO GRADE CODE: 1- SLIGHT, 2- MILD, 3- MODERATE, 4- SEVERE, P-- PRESENT, *-- NOT TABULATED

INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

APPENDIX NO. 14
PROJECT NO.: 98831

GROUP	ANIMAL NO.	SEX	STUDY WEEK OF DEATH	DAY (DAY 92)	FINDING	GRADE
1	1507	FEMALE	14	(DAY 92)		

GROSS PATHOLOGICAL FINDINGS

ALL TISSUES WERE UNREMARKABLE

HISTOPATHOLOGICAL FINDINGS

PARATHYROID
ONE PARATHYROID UNAVAILABLE
NOT PRESENT IN SECTION.

ALL OTHER EXAMINED TISSUES WERE UNREMARKABLE

GROSS GRADE CODE: * - NOT SUBMITTED
HISTO GRADE CODE: 1 - SLIGHT, 2 - MILD, 3 - MODERATE, 4 - SEVERE, P - PRESENT, * - NOT TABULATED #B - BENIGN, #M - MALIGNANT

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INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

APPENDIX NO. 14
PROJECT NO.: 90831

GROUP	ANIMAL NO.	SEX	STUDY WEEK OF DEATH	AGE	FINDING	GRADE
1	1509	FEMALE	14	(DAY 92)		

GROSS PATHOLOGICAL FINDINGS

ALL TISSUES WERE UNREMARKABLE

HISTOPATHOLOGICAL FINDINGS

PARATHYROID
ONE PARATHYROID UNAVAILABLE
NOT PRESENT IN SECTION.

ALL OTHER EXAMINED TISSUES WERE UNREMARKABLE

GROSS GRADE CODE: * - NOT SUBMITTED

HISTO-GRADE CODE: 1- SLIGHT, 2- MILD, 3- MODERATE, 4- SEVERE, P- PRESENT, *- NOT TABULATED #B- BENIGN, #M- MALIGNANT

110

APPENDIX NO. 14 INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS
PROJECT NO.: 90831

GROUP 1 AIR CONTROL STUDY WEEK OF DEATH 14 (DAY 92) GRADE
ANIMAL NO. 1510 FEMALE TISSUE FINDING

GROSS PATHOLOGICAL FINDINGS

KIDNEY DILATATION PELVIS, LEFT. [2]
LIVER AREA PALE SINGLE, FISSURE, MEDIAN LOBE. [1]

ALL OTHER TISSUES WERE UNREMARKABLE

HISTOPATHOLOGICAL FINDINGS

KIDNEY DILATATION, PELVIS UNILATERAL. [2] 2
LIVER VACUOLATION, HEPATOCELLULAR FOCAL, SUBCAPSULAR. [1] 1
PARATHYROID UNAVAILABLE NOT PRESENT IN SECTION.

ALL OTHER EXAMINED TISSUES WERE UNREMARKABLE

GROSS GRADE CODE: *- NOT SUBMITTED #B- BENIGN, #M- MALIGNANT
HISTO GRADE CODE: 1- SLIGHT, 2- MILD, 3- MODERATE, 4- SEVERE, P- PRESENT, *- NOT TABULATED

110

APPENDIX NO. 14 INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS
PROJECT NO.: 90831

GROUP 1 AIR CONTROL STUDY WEEK OF DEATH 14 (DAY 92) GRADE
ANIMAL NO. 1511 FEMALE FINDING

GROSS PATHOLOGICAL FINDINGS

LIVER AREA PALE
SINGLE, FISSURE, MEDIAN LOBE. (1)

LYMPH NODE MANDIBULAR AREA DARK
MULTIPLE, BILATERAL. (2)

ALL OTHER TISSUES WERE UNREMARKABLE

HISTOPATHOLOGICAL FINDINGS

LIVER VACUOLATION, HEPATOCELLULAR
FOCAL, SUBCAPSULAR. (1)

LYMPH NODE MANDIBULAR HEMORRHAGE
MULTIFOCAL, UNILATERAL. (2)

ALL OTHER EXAMINED TISSUES WERE UNREMARKABLE

GROSS GRADE CODE: * - NOT SUBMITTED #B- BENIGN, #M- MALIGNANT
HISTO GRADE CODE: 1- SLIGHT, 2- MILD, 3- MODERATE, 4- SEVERE, P- PRESENT, *- NOT TABULATED



INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

APPENDIX NO. 14
PROJECT NO.: 90831

GROUP 1 AIR CONTROL STUDY WEEK OF DEATH 14 (DAY 92)
ANIMAL NO. 1512 FEMALE TISSUE FINDING GRADE

GROSS PATHOLOGICAL FINDINGS

ALL TISSUES WERE UNREMARKABLE

HISTOPATHOLOGICAL FINDINGS

PARATHYROID

ONE PARATHYROID UNAVAILABLE
NOT PRESENT IN SECTION.

THYROID

1
CYST, ULTIMORRANCHIAL/TIYROGLOSSAL REMNANTS
UNILATERAL.

ALL OTHER EXAMINED TISSUES WERE UNREMARKABLE

GROSS GRADE CODE: # - NOT SUBMITTED

HISTO GRADE CODE: 1- SLIGHT, 2- MILD, 3- MODERATE, 4- SEVERE, P- PRESENT, X- NOT TABULATED #B- BENIGN, #M- MALIGNANT

INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

APPENDIX NO. 14
PROJECT NO.: 90831

GROUP 1 AIR CONTROL STUDY WEEK OF DEATH 14 (DAY 92) GRADE
ANIMAL NO. 1513 FEMALE FINDING

GROSS PATHOLOGICAL FINDINGS

KIDNEY ADHESION TO CAPSULE, RIGHT. (2)

LIVER AREA PALE SINGLE, NEAR HILUS, VENTRAL PORTION OF RIGHT LOBE. (1)

LYMPH NODE MANDIBULAR ENLARGEMENT RIGHT. (3)

ALL OTHER TISSUES WERE UNREMARKABLE

HISTOPATHOLOGICAL FINDINGS

KIDNEY ADHESION, CAPSULAR FOCAL, WITH ADIPOSE TISSUE. (2) 1

LIVER VACUOLATION, HEPATOCELLULAR FOCAL, SUBCAPSULAR. (1) 1

LYMPH NODE MANDIBULAR PLASMOCYTOSIS AND/OR HISTIOCYTOSIS, MEDULLARY (3) 2

PARATHYROID ONE PARATHYROID UNAVAILABLE NOT PRESENT IN SECTION.

ALL OTHER EXAMINED TISSUES WERE UNREMARKABLE

GROSS GRADE CODE: * - NOT SUBMITTED
HISTO GRADE CODE: 1- SLIGHT, 2- MILD, 3- MODERATE, 4- SEVERE, P- PRESENT, * - NOT TABULATED

#0- BENIGN, #M- MALIGNANT



APPENDIX NO. 14
 PROJECT NO.: 90831

INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

GROUP 1 AIR CONTROL
 ANIMAL NO. 1514 FEMALE STUDY WEEK OF DEATH 14 (DAY 92)
 TISSUE FINDING GRADE

GROSS PATHOLOGICAL FINDINGS

ALL TISSUES WERE UNREMARKABLE

HISTOPATHOLOGICAL FINDINGS

ALL EXAMINED TISSUES WERE UNREMARKABLE

GROSS GRADE CODE: * - NOT SUBMITTED
 HISTO GRADE CODE: 1- SLIGHT, 2- MILD, 3- MODERATE, 4- SEVERE, P- PRESENT, * - NOT TABULATED #D- BENIGN, #M- MALIGNANT

INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

APPENDIX NO. 14
PROJECT NO.: 90831

GROUP 1 AIR CONTROL
ANIMAL NO. 1515 FEMALE STUDY WEEK OF DEATH 14 (DAY 92)
TISSUE FINDING GRADE

GROSS PATHOLOGICAL FINDINGS

LIVER AREA RAISED
PALE, FIRM, SINGLE, FISSURE, MEDIAN LOBE. (1)

PITUITARY ENLARGEMENT
(2)

ALL OTHER TISSUES WERE UNREMARKABLE

HISTOPATHOLOGICAL FINDINGS

LIVER ACCESSORY HEPATIC TISSUE
WITH VACUOLATION. (1)

PITUITARY NO ABNORMAL FINDINGS
(2)

THYROID CYST, ULTIMOBRANCHIAL/THYROGLOSSAL REMNANTS
BILATERAL.

ALL OTHER EXAMINED TISSUES WERE UNREMARKABLE

GROSS GRADE CODE: *- NOT SUBMITTED

HISTO GRADE CODE: 1- SLIGHT, 2- MILD, 3- MODERATE, 4- SEVERE, P- PRESENT, *- NOT TABULATED #B- BENIGN, #M- MALIGNANT

BIO

APPENDIX NO. 14 INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS
PROJECT NO.: 90831

GROUP 2 CERIC OXIDE LOW DOSE
ANIMAL NO. 2501 FEMALE STUDY WEEK OF DEATH 14 (DAY 92)
TISSUE FINDING GRADE

GROSS PATHOLOGICAL FINDINGS

LYMPH NODE BRONCHIAL DISCOLORATION
PALE. [2]

LYMPH NODE MEDIASTINAL DISCOLORATION
PALE. [1]

ALL OTHER TISSUES WERE UNREMARKABLE

HISTOPATHOLOGICAL FINDINGS

LUNG PIGMENT ACCUMULATION
INTRACELLULAR, MULTIFOCAL. 2

LYMPH NODE BRONCHIAL HYPERPLASIA, LYMPHOID
PIGMENT ACCUMULATION
MULTIFOCAL. [2] 2

LYMPH NODE MEDIASTINAL HYPERPLASIA, LYMPHOID
PIGMENT ACCUMULATION
MULTIFOCAL. [1] 2

ALL OTHER EXAMINED TISSUES WERE UNREMARKABLE

GROSS GRADE CODE: * - NOT SUBMITTED #B- BENIGN, #M- MALIGNANT
HISTO GRADE CODE: 1- SLIGHT, 2- MILD, 3- MODERATE, 4- SEVERE, P- PRESENT, * - NOT TABULATED

INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

APPENDIX NO. 14
PROJECT NO. 1 90831

GROUP 2 CERIC OXIDE LOW DOSE GRADE
ANIMAL NO. 2502 FEMALE STUDY WEEK OF DEATH 14 (DAY 92) FINDING

GROSS PATHOLOGICAL FINDINGS

LYMPH NODE BRONCHIAL DISCOLORATION
PALE. [2]

LYMPH NODE MEDIASTINAL DISCOLORATION
PALE. [1]

ALL OTHER TISSUES WERE UNREMARKABLE

HISTOPATHOLOGICAL FINDINGS

CAVITY NASAL 1
PIGMENT ACCUMULATION
INTRAFOLLICULAR (LEVEL III).

LUNG 2
PIGMENT ACCUMULATION
INTRACELLULAR, MULTIFOCAL.

LYMPH NODE BRONCHIAL 1 2
HYPERPLASIA, LYMPHOID
PIGMENT ACCUMULATION
MULTIFOCAL. [2]

LYMPH NODE MEDIASTINAL 1 2
HYPERPLASIA, LYMPHOID
PIGMENT ACCUMULATION
MULTIFOCAL. [1]

ALL OTHER EXAMINED TISSUES WERE UNREMARKABLE

GROSS GRADE CODE: *- NOT SUBMITTED
HISTO-GRADE CODE: 1- SLIGHT, 2- MILD, 3- MODERATE, 4- SEVERE, P- PRESENT, *- NOT TABULATED

0B- BENIGN, 4M- MALIGNANT

APPENDIX NO. 14
PROJECT NO.: 90831

INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

GROUP 2 CERIC OXIDE LOW DOSE
ANIMAL NO. 2503 FEMALE STUDY WEEK OF DEATH 14 (DAY 92)
TISSUE FINDING GRADE

GROSS PATHOLOGICAL FINDINGS

KIDNEY
CYST
SINGLE, LEFT. [2]

LYMPH NODE BRONCHIAL
DISCOLORATION
PALE. [1]

ALL OTHER TISSUES WERE UNREMARKABLE

HISTOPATHOLOGICAL FINDINGS

CAVITY NASAL
HYPERTROPHY AND/OR HYPERPLASIA, GORLET CELL
LOCALLY EXTENSIVE, VENTRAL MEATUS (LEVEL 1). 2

KIDNEY
NO ABNORMAL FINDINGS
[2]

LUNG
PIGMENT ACCUMULATION
INTRACELLULAR, MULTIFOCAL. 2

LYMPH NODE BRONCHIAL
PIGMENT ACCUMULATION
MULTIFOCAL. [1] 2
HYPERPLASIA, LYMPHOID 2

ALL OTHER EXAMINED TISSUES WERE UNREMARKABLE

GROSS GRADE CODE: * - NOT SUBMITTED #B- BENIGN, #M- MALIGNANT
HISTO GRADE CODE: 1- SLIGHT, 2- MILD, 3- MODERATE, 4- SEVERE, P- PRESENT, * - NOT TABULATED

BIO

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INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

APPENDIX NO. 14
PROJECT NO.: 90831

GROUP 2 CERIC OXIDE LOW DOSE
ANIMAL NO. 2504 FEMALE STUDY WEEK OF DEATH 14 (DAY 92)
TISSUE FINDING GRADE

GROSS PATHOLOGICAL FINDINGS

ADRENAL ENLARGEMENT
BILATERAL. [1]

LYMPH NODE BRONCHIAL DISCOLORATION
PALE. [3]

LYMPH NODE MEDIASTINAL DISCOLORATION
PALE. [2]

ALL OTHER TISSUES WERE UNREMARKABLE

HISTOPATHOLOGICAL FINDINGS

ADRENAL NO ABNORMAL FINDINGS
[1] 1

CAVITY NASAL PIGMENT ACCUMULATION
INTRAFOCULAR (LEVEL III). 1

LARYNX METAPLASIA
BASE OF EPIGLOTTIS. 2

LUNG PIGMENT ACCUMULATION
INTRACELLULAR, MULTIFOCAL. 2

LYMPH NODE BRONCHIAL PIGMENT ACCUMULATION 2

GROSS GRADE CODE: * - NOT SUBMITTED #B- BENIGN, #M- MALIGNANT
HISTO GRADE CODE: 1- SLIGHT, 2- MILD, 3- MODERATE, 4- SEVERE, P- PRESENT, *- NOT TABULATED

INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

APPENDIX NO. 14
PROJECT NO.: 90831

GROUP 2 CERIC OXIDE LOW DOSE
ANIMAL NO. 2504 (cont'd) FEMALE STUDY WEEK OF DEATH 14 (DAY 92)
TISSUE FINDING GRADE

LYMPH NODE BRONCHIAL (cont'd)	MULTIFOCAL. (3)	2
	HYPERPLASIA, LYMPHOID	
LYMPH NODE MEDIASTINAL	HYPERPLASIA, LYMPHOID	2
	PIGMENT ACCUMULATION	2
	MULTIFOCAL. (2)	

ALL OTHER EXAMINED TISSUES WERE UNREMARKABLE

GROSS GRADE CODE: * - NOT SUBMITTED #D - BENIGN, #M - MALIGNANT
HISTO GRADE CODE: 1 - SLIGHT, 2 - MILD, 3 - MODERATE, 4 - SEVERE, P - PRESENT, * - NOT TABULATED

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INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

APPENDIX NO. 14
PROJECT NO.: 90831

GROUP 2 CERIC OXIDE LOW DOSE
ANIMAL NO. 2505 FEMALE STUDY WEEK OF DEATH 14 (DAY 92)
TISSUE FINDING GRADE

CROSS PATHOLOGICAL FINDINGS

KIDNEY AREA DEPRESSED
PALE, SINGLE, RIGHT. [1]

LUNG FOCI PALE
EDGE, RIGHT APICAL LOBE, LEFT LOBE. [3]

LYMPH NODE BRONCHIAL DISCOLORATION
PALE. [4]

LYMPH NODE MEDIASTINAL DISCOLORATION
PALE. [2]

ALL OTHER TISSUES WERE UNREMARKABLE

HISTOPATHOLOGICAL FINDINGS

KIDNEY NO ABNORMAL FINDINGS
[1]

LUNG PIGMENT ACCUMULATION
INTRACELLULAR, MULTIFOCAL. [3]

LYMPH NODE BRONCHIAL PIGMENT ACCUMULATION
MULTIFOCAL. [4]
HYPERPLASIA, LYMPHOID

1209

GROSS GRADE CODE: * - NOT SURMITTED #D - BENIGN, #M - MALIGNANT
HISTO GRADE CODE: 1 - SLIGHT, 2 - MILD, 3 - MODERATE, 4 - SEVERE, P - PRESENT, * - NOT TABULATED

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INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

APPENDIX NO. 14
PROJECT NO.: 90631

GROUP 2 CERIC OXIDE LOW DOSE
ANIMAL NO. 2506 FEMALE STUDY WEEK OF DEATH 14 (DAY 92)
TISSUE FINDING GRADE

GROSS PATHOLOGICAL FINDINGS

LYMPH NODE BRONCHIAL DISCOLORATION
PALE. (1)

ALL OTHER TISSUES WERE UNREMARKABLE

HISTOPATHOLOGICAL FINDINGS

LARYNX	METAPLASIA BASE OF EPIGLOTTIS.	1
LUNG	PIGMENT ACCUMULATION INTRACELLULAR, MULTIFOCAL.	2
LYMPH NODE BRONCHIAL	PIGMENT ACCUMULATION MULTIFOCAL. (1) HYPERPLASIA, LYMPHOID	2

ALL OTHER EXAMINED TISSUES WERE UNREMARKABLE

GROSS GRADE CODE: *- NOT SUBMITTED

HISTO GRADE CODE: 1- SLIGHT, 2- MILD, 3- MODERATE, 4- SEVERE, P- PRESENT, *- NOT TABULATED

#B- BENIGN, #M- MALIGNANT

BIO

INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

APPENDIX NO. 14
PROJECT NO.: 90831

GROUP 2 CERIC OXIDE LOW DOSE
ANIMAL NO. 2505 (cont'd) FEMALE STUDY WEEK OF DEATH 14 (DAY 92)
TISSUE FINDING GRADE

LYMPH NODE MEDIASTINAL
HYPERPLASIA, LYMPHOID
PIGMENT ACCUMULATION
MULTIFOCAL. [2]

2
1

ALL OTHER EXAMINED TISSUES WERE UNREMARKABLE

GROSS GRADE CODE: * - NOT SUBMITTED
HISTO GRADE CODE: 1 - SLIGHT, 2 - MILD, 3 - MODERATE, 4 - SEVERE, P - PRESENT, * - NOT TABULATED #B - BENIGN, #M - MALIGNANT

INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

APPENDIX NO. 14
PROJECT NO.: 90831

GROUP 2 CERIC OXIDE LOW DOSE
ANIMAL NO. 2507 FEMALE STUDY WEEK OF DEATH 14 (DAY 92)
TISSUE FINDING GRADE

GROSS PATHOLOGICAL FINDINGS

LYMPH NODE BRONCHIAL DISCOLORATION PALE. (2)

LYMPH NODE MEDIASTINAL DISCOLORATION PALE. (1)

ALL OTHER TISSUES WERE UNREMARKABLE

HISTOPATHOLOGICAL FINDINGS

LARYNX METAPLASIA BASE OF EPIGLOTTIS. 1

LUNG PIGMENT ACCUMULATION INTRACELLULAR, MULTIFOCAL. 2

LYMPH NODE BRONCHIAL HYPERPLASIA, LYMPHOID PIGMENT ACCUMULATION MULTIFOCAL. (2) 2 1

LYMPH NODE MEDIASTINAL PIGMENT ACCUMULATION MULTIFOCAL. (1) HYPERPLASIA, LYMPHOID 2 2

ALL OTHER EXAMINED TISSUES WERE UNREMARKABLE

GROSS GRADE CODE: *- NOT SUBMITTED #B- BENIGN, #M- MALIGNANT
HISTO GRADE CODE: 1- SLIGHT, 2- MILD, 3- MODERATE, 4- SEVERE, P- PRESENT, *- NOT TABULATED



APPENDIX NO. 14 INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS
 PROJECT NO.: 90831

GROUP 2 CERIC OXIDE LOW DOSE
 ANIMAL NO. 2508 FEMALE STUDY WEEK OF DEATH 14 (DAY 92)
 TISSUE FINDING GRADE

GROSS PATHOLOGICAL FINDINGS

LUNG FOCI PALE
 EDGE, RIGHT APICAL LOBE, LEFT LOBE. [4]

LYMPH NODE MANDIBULAR ENLARGEMENT
 RIGHT. [1]

LYMPH NODE BRONCHIAL DISCOLORATION
 PALE. [3]

LYMPH NODE MEDIASTINAL DISCOLORATION
 PALE. [2]

ALL OTHER TISSUES WERE UNREMARKABLE

HISTOPATHOLOGICAL FINDINGS

CAVITY NASAL PIGMENT ACCUMULATION
 INTRAFOLLICULAR (LEVEL III). 1

LUNG PIGMENT ACCUMULATION
 INTRACELLULAR, MULTIFOCAL. [4] 2

LYMPH NODE MANDIBULAR PLASMACYTOSIS AND/OR HISTIOCYTOSIS, MEDULLARY
 [1] 3

LYMPH NODE BRONCHIAL PIGMENT ACCUMULATION 1

GROSS GRADE CODE: * - NOT SUBMITTED #B- BENIGN, #M- MALIGNANT
 HISTO GRADE CODE: 1- SLIGHT, 2- MILD, 3- MODERATE, 4- SEVERE, P- PRESENT, * - NOT TABULATED

INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

APPENDIX NO. 14
PROJECT NO.: 90031

GROUP 2 CERIC OXIDE LOW DOSE
ANIMAL NO. 2508 (cont'd) FEMALE STUDY WEEK OF DEATH 14 (DAY 92)
TISSUE FINDING GRADE

LYMPH NODE BRONCHIAL (cont'd)	MULTIFOCAL, [3]	1
	HYPERPLASIA, LYMPHOID	
LYMPH NODE MEDIASTINAL	HYPERPLASIA, LYMPHOID	2
	PIGMENT ACCUMULATION	1
	MULTIFOCAL, [2]	

ALL OTHER EXAMINED TISSUES WERE UNREMARKABLE

GROSS GRADE CODE: #- NOT SUBMITTED

HISTO GRADE CODE: 1- SLIGHT, 2- MILD, 3- MODERATE, 4- SEVERE, P- PRESENT, *- NOT TABULATED #B- BENIGN, #M- MALIGNANT

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INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

APPENDIX NO. 14
PROJECT NO.: 90831

GROUP 2 CERIC OXIDE LOW DOSE
ANIMAL NO. 2509 FEMALE STUDY WEEK OF DEATH 14 (DAY 92)
TISSUE FINDING GRADE

GROSS PATHOLOGICAL FINDINGS

LYMPH NODE BRONCHIAL DISCOLORATION
PALE. (1)

ALL OTHER TISSUES WERE UNREMARKABLE

HISTOPATHOLOGICAL FINDINGS

LUNG PIGMENT ACCUMULATION
INTRACELLULAR, MULTIFOCAL. 2

LYMPH NODE BRONCHIAL PIGMENT ACCUMULATION
MULTIFOCAL. (1) 2
HYPERPLASIA, LYMPHOID 2

ALL OTHER EXAMINED TISSUES WERE UNREMARKABLE

GROSS GRADE CODE: #- NOT SUBMITTED

HISTO GRADE CODE: 1- SLIGHT, 2- MILD, 3- MODERATE, 4- SEVERE, P- PRESENT, *- NOT TABULATED #B- BENIGN, #M- MALIGNANT

APPENDIX NO. 14 INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS
PROJECT NO.: 90031

GROUP 2 CERIC OXIDE LOW DOSE
ANIMAL NO. 2510 FEMALE STUDY WEEK OF DEATH 14 (DAY 92)
TISSUE FINDING GRADE

GROSS PATHOLOGICAL FINDINGS

LYMPH NODE MANDIBULAR ENLARGEMENT
BILATERAL. [1]

LYMPH NODE BRONCHIAL ENLARGEMENT
[3]
DISCOLORATION
PALE. [4]

LYMPH NODE MEDIASTINAL DISCOLORATION
PALE. [2]

ALL OTHER TISSUES WERE UNREMARKABLE

HISTOPATHOLOGICAL FINDINGS

ESJNG PIGMENT ACCUMULATION
INTRACELLULAR, MULTIFOCAL. 2

LYMPH NODE MANDIBULAR PLASMACYTOSIS AND/OR HISTIOCYTOSIS, MEDULLARY
BILATERAL. [1] 3

LYMPH NODE BRONCHIAL PIGMENT ACCUMULATION
MULTIFOCAL. [4] 2
HYPERPLASIA, LYMPHOID
[3] 2

- 1216 -

GROSS GRADE CODE: * - NOT SUBMITTED #D - BENIGN, #M - MALIGNANT
HISTO GRADE CODE: 1 - SLIGHT, 2 - MILD, 3 - MODERATE, 4 - SEVERE, P - PRESENT, * - NOT TABULATED

INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

APPENDIX NO. 14
PROJECT NO.: 90631

GROUP 3 CERIC OXIDE INTERMEDIATE DOSE
ANIMAL NO. 3501 (cont'd) FEMALE STUDY WEEK OF DEATH 14 (DAY 92)
FINDING

TISSUE	FINDING	GRADE
LUNG	EPITHELIAL HYPERPLASIA, ALVEOLAR MULTIFOCAL.	1
Lymph Node Bronchial	PIGMENT ACCUMULATION MULTIFOCAL. {5}	2
	HYPERPLASIA, LYMPHOID {4}	2
Lymph Node Mediastinal	HYPERPLASIA, LYMPHOID {1}	3
	PIGMENT ACCUMULATION MULTIFOCAL. {2}	3

ALL OTHER EXAMINED TISSUES WERE UNREMARKABLE

GROSS GRADE CODE: # - NOT SUBMITTED #B- BENIGN, #M- MALIGNANT
HISTO GRADE CODE: 1- SLIGHT, 2- MILD, 3- MODERATE, 4- SEVERE, P- PRESENT, *- NOT TABULATED

BIO

INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

APPENDIX NO. 14
PROJECT NO. 1 90031

GROUP 4 CERIC OXIDE HIGH DOSE
ANIMAL NO. 4009 MALE STUDY WEEK OF DEATH 14 (DAY 92)
TISSUE FINDING GRADE

GROSS PATHOLOGICAL FINDINGS

LUNG DISCOLORATION
PALE. [5]
UNCOLLAPSED [6]

LYMPH NODE BRONCHIAL ENLARGEMENT [3]
DISCOLORATION
PALE. [4]

LYMPH NODE MEDIASTINAL ENLARGEMENT [1]
DISCOLORATION
PALE. [2]

ALL OTHER TISSUES WERE UNREMARKABLE

HISTOPATHOLOGICAL FINDINGS

BRONCHUS PIGMENT ACCUMULATION INTRALUMINAL. 1

CAVITY NASAL PIGMENT ACCUMULATION INTRAFOLLICULAR (LEVEL III). 1

LARYNX PIGMENT ACCUMULATION 1

GROSS GRADE CODE: # - NOT SUBMITTED #B- BENIGN, #M- MALIGNANT
HISTO GRADE CODE: 1- SLIGHT, 2- MILD, 3- MODERATE, 4- SEVERE, P- PRESENT, * - NOT TABULATED

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INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

APPENDIX NO. 14
PROJECT NO. 1 90831

GROUP 3 CERIC OXIDE INTERMEDIATE DOSE
ANIMAL NO. 3502 FEMALE STUDY WEEK OF DEATH 14 (DAY 92)
TISSUE FINDING GRADE

GROSS PATHOLOGICAL FINDINGS

LUNG AREA PALE
MULTIPLE. (5)

LYMPH NODE BRONCHIAL ENLARGEMENT
(3)
DISCOLORATION
PALE. (4)

LYMPH NODE MEDIASTINAL ENLARGEMENT
(1)
DISCOLORATION
PALE. (2)

ALL OTHER TISSUES WERE UNREMARKABLE

HISTOPATHOLOGICAL FINDINGS

CAVITY NASAL PIGMENT ACCUMULATION
INTRAFOLLICULAR (LEVEL III). 1

LARYNX PIGMENT ACCUMULATION
INTRAFOLLICULAR. 1
METAPLASIA
BASE OF EPIGLOTTIS. 1

LUNG PIGMENT ACCUMULATION 3

GROSS GRADE CODE: * - NOT SUBMITTED #D - BENIGN, #M - MALIGNANT
HISTO GRADE CODE: 1 - SLIGHT, 2 - MILD, 3 - MODERATE, 4 - SEVERE, P - PRESENT, * - NOT TABULATED

INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

APPENDIX NO. 14
PROJECT NO.: 90031

GROUP 3 CERIC OXIDE INTERMEDIATE DOSE
ANIMAL NO. 3502 (cont'd) FEMALE STUDY WEEK OF DEATH 14 (DAY 92)

GRADE

FINDING

TISSUE

LUNG (cont'd) INTRACELLULAR, MULTIFOCAL. [5]

LYMPH NODE BRONCHIAL PIGMENT ACCUMULATION 2
MULTIFOCAL. [4]
HYPERPLASIA, LYMPHOID 2
[3]

LYMPH NODE MEDIASTINAL HYPERPLASIA, LYMPHOID 3
[1]
PIGMENT ACCUMULATION 3
MULTIFOCAL. [2]

ALL OTHER EXAMINED TISSUES WERE UNREMARKABLE

GROSS GRADE CODE: #-- NOT SUBMITTED #D-- BENIGN, #M-- MALIGNANT
HISTO GRADE CODE: 1-- SLIGHT, 2-- MILD, 3-- MODERATE, 4-- SEVERE, P-- PRESENT, *-- NOT TABULATED



INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

APPENDIX NO. 14
PROJECT NO.: 90831

GROUP 3 CERIC OXIDE INTERMEDIATE DOSE
ANIMAL NO. 3503 FEMALE STUDY WEEK OF DEATH 14 (DAY 92)
TISSUE FINDING GRADE

GROSS PATHOLOGICAL FINDINGS

KIDNEY AREA DEPRESSED
DARK, MULTIPLE, LEFT. [2]
LIVER AREA PALE
SINGLE, FISSURE, MEDIAN LOBE. [1]
LUNG AREA PALE
MULTIPLE. [5]
LYMPH NODE BRONCHIAL ENLARGEMENT
[3]
DISCOLORATION
PALE. [4]

ALL OTHER TISSUES WERE UNREMARKABLE

HISTOPATHOLOGICAL FINDINGS

KIDNEY INFILTRATION, MONONUCLEAR CELL
FOCAL, WITH TISSUE LOSS. [2] 1
LIVER VACUOLATION, HEPATOCELLULAR
FOCAL, SUBCAPSULAR. [1] 1
LUNG PIGMENT ACCUMULATION 3

1221

GROSS GRADE CODE: # - NOT SUBMITTED #B- BENIGN, #M- MALIGNANT
HISTO GRADE CODE: 1- SLIGHT, 2- MILD, 3- MODERATE, 4- SEVERE, P- PRESENT, *- NOT TABULATED

BIO

INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

APPENDIX NO. 14
PROJECT NO.: 90831

GROUP 3 CERIC OXIDE INTERMEDIATE DOSE
ANIMAL NO. 3503 (cont'd) FEMALE STUDY WEEK OF DEATH 14 (DAY 92)
TISSUE FINDING GRADE

LUNG (cont'd) INTRACELLULAR, MULTIFOCAL. [5]

LYMPH NODE BRONCHIAL PIGMENT ACCUMULATION 2
MULTIFOCAL TO LOCALLY EXTENSIVE. [4] 2
HYPERPLASIA, LYMPHOID [3]

ALL OTHER EXAMINED TISSUES WERE UNREMARKABLE

GROSS GRADE CODE: # - NOT SUBMITTED #B- BENIGN, #M- MALIGNANT
HISTO GRADE CODE: 1- SLIGHT, 2- MILD, 3- MODERATE, 4- SEVERE, P- PRESENT, * - NOT TABULATED

INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

APPENDIX NO. 14
PROJECT NO.: 90031

GROUP J CERIC OXIDE INTERMEDIATE DOSE GRADE
ANIMAL NO. 3504 FEMALE STUDY WEEK OF DEATH 14 (DAY 92) FINDING
TISSUE

GROSS PATHOLOGICAL FINDINGS

LUNG AREA PALE
MULTIPLE. [6]

LYMPH NODE MANDIBULAR ENLARGEMENT
RIGHT. [3]

LYMPH NODE BRONCHIAL ENLARGEMENT
[4]

DISCOLORATION
PALE. [5]

LYMPH NODE MEDIASTINAL DISCOLORATION
PALE. [2]

ENLARGEMENT
[7]

LYMPH NODE PANCREATIC ENLARGEMENT
[1]

ALL OTHER TISSUES WERE UNREMARKABLE

HISTOPATHOLOGICAL FINDINGS

CAVITY NASAL PIGMENT ACCUMULATION
INTRA-FOLLICULAR (LEVEL III). 1

GROSS GRADE CODE: * - NOT SUBMITTED #D - BENIGN, #M - MALIGNANT
HISTO GRADE CODE: 1 - SLIGHT, 2 - MILD, 3 - MODERATE, 4 - SEVERE, P - PRESENT, * - NOT TABULATED

PIO

INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

APPENDIX NO. 14
PROJECT NO.: 90631

GROUP 3 CERIC OXIDE INTERMEDIATE DOSE
ANIMAL NO. 3504 (cont'd) FEMALE STUDY WEEK OF DEATH 14 (DAY 92)

GRADE

FINDING

TISSUE

1

LARYNX

METAPLASIA
BASE OF EPIGLOTTIS.

3

LUNG

PIGMENT ACCUMULATION
INTRACELLULAR, MULTIFOCAL. [6]

3

LYMPH NODE MANDIBULAR

PLASMACYTOSIS AND/OR HISTIOCYTOSIS, MEDULLARY
[3]

3

LYMPH NODE BRONCHIAL

PIGMENT ACCUMULATION
MULTIFOCAL. [5]
HYPERPLASIA, LYMPHOID
[4]

2

LYMPH NODE MEDIASTINAL

HYPERPLASIA, LYMPHOID
[7]
PIGMENT ACCUMULATION
MULTIFOCAL. [2]

2

LYMPH NODE PANCREATIC

PIGMENT ACCUMULATION
MULTIFOCAL.
HYPERPLASIA, LYMPHOID
[1]

1224

ALL OTHER EXAMINED TISSUES WERE UNREMARKABLE

GROSS GRADE CODE: # - NOT SUBMITTED #B- BENIGN, #M- MALIGNANT
HISTO GRADE CODE: 1- SLIGHT, 2- MILD, 3- MODERATE, 4- SEVERE, P- PRESENT, * - NOT TABULATED

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INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

APPENDIX NO. 14
PROJECT NO.: 90631

GROUP	INTERMEDIATE DOSE	STUDY WEEK OF DEATH	GRADE
3	CERIC OXIDE	14 (DAY 92)	
ANIMAL NO. 3505	FEMALE	FINDING	
TISSUE			

GROSS PATHOLOGICAL FINDINGS

LUNG AREA PALE MULTIPLE. [5]

LYMPH NODE BRONCHIAL ENLARGEMENT [3]
DISCOLORATION PALE. [4]

LYMPH NODE MEDIASTINAL ENLARGEMENT [1]
DISCOLORATION PALE. [2]

ALL OTHER TISSUES WERE UNREMARKABLE

HISTOPATHOLOGICAL FINDINGS

CAVITY NASAL PIGMENT ACCUMULATION INTRAFOLLICULAR (LEVEL III). 1

LUNG PIGMENT ACCUMULATION INTRACELLULAR, MULTIFOCAL. [5] 3

LYMPH NODE BRONCHIAL PIGMENT ACCUMULATION MULTIFOCAL. [4] 3

GROSS GRADE CODE: *- NOT SUBMITTED #B- BENIGN, #H- MALIGNANT
HISTO GRADE CODE: 1- SLIGHT, 2- MILD, 3- MODERATE, 4- SEVERE, P- PRESENT, *- NOT TABULATED



INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

APPENDIX NO. 14
PROJECT NO.: 90831

GROUP 3 CERIC OXIDE INTERMEDIATE DOSE
ANIMAL NO. 3505 (cont'd) FEMALE STUDY WEEK OF DEATH 14 (DAY 92)
TISSUE FINDING GRADE

LYMPH NODE BRONCHIAL	HYPERPLASIA, LYMPHOID [3]	2
LYMPH NODE MEDIASTINAL	PIGMENT ACCUMULATION MULTIFOCAL. [2] HYPERPLASIA, LYMPHOID [1]	3
		2

ALL OTHER EXAMINED TISSUES WERE UNREMARKABLE

GROSS GRADE CODE: * - NOT SUBMITTED #D - BENIGN, #H - MALIGNANT
HISTO GRADE CODE: 1 - SLIGHT, 2 - MILD, 3 - MODERATE, 4 - SEVERE, P - PRESENT, * - NOT TABULATED

APPENDIX NO. 14
 PROJECT NO.: 90831

INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

GROUP 3 CERIC OXIDE INTERMEDIATE DOSE
 ANIMAL NO. 3506 FEMALE STUDY WEEK OF DEATH 14 (DAY 92)
 TISSUE FINDING GRADE

GROSS PATHOLOGICAL FINDINGS

LUNG AREA PALE
 MULTIPLE. (3)

LYMPH NODE BRONCHIAL ENLARGEMENT
 (1)

DISCOLORATION
 PALE. (2)

ALL OTHER TISSUES WERE UNREMARKABLE

HISTOPATHOLOGICAL FINDINGS

BRONCHUS PIGMENT ACCUMULATION
 MUCOSAL. 1

LUNG PIGMENT ACCUMULATION
 INTRA- AND EXTRACELLULAR, DIFFUSE. (3)
 HYPERPLASIA, LYMPHOID
 MULTIFOCAL. 4

LYMPH NODE BRONCHIAL EPITHELIAL HYPERPLASIA, ALVEOLAR
 MULTIFOCAL. 1

LYMPH NODE BRONCHIAL PIGMENT ACCUMULATION
 MULTIFOCAL. (2) 3

HYPERPLASIA, LYMPHOID 3

GROSS GRADE CODE: #- NOT SUBMITTED #B- BENIGN, #H- MALIGNANT
 HISTO GRADE CODE: 1- SLIGHT, 2- MILD, 3- MODERATE, 4- SEVERE, P- PRESENT, *- NOT TABULATED



APPENDIX NO. 14 INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS
PROJECT NO.: 90831

GROUP 3 CERIC OXIDE INTERMEDIATE DOSE
ANIMAL NO. 3506 (cont'd) FEMALE STUDY WEEK OF DEATH 14 (DAY 92)
TISSUE FINDING GRADE

LYMPH NODE BRONCHIAL (cont'd) (11)

ALL OTHER EXAMINED TISSUES WERE UNREMARKABLE

GROSS GRADE CODE: #- NOT SUBMITTED #B- BENIGN, #N- MALIGNANT
HISTO GRADE CODE: 1- SLIGHT, 2- MILD, 3- MODERATE, 4- SEVERE, P-- PRESENT, *- NOT TABULATED





APPENDIX NO. 14
PROJECT NO.: 90831

INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

GROUP 3 CERIC OXIDE INTERMEDIATE DOSE
ANIMAL NO. 3507 FEMALE STUDY WEEK OF DEATH 14 (DAY 92)
TISSUE FINDING GRADE

GROSS PATHOLOGICAL FINDINGS

LIVER AREA PALE
SINGLE, FISSURE, MEDIAN LOBE. (1)

LUNG AREA PALE
MULTIPLE. (7)

LYMPH NODE MANDIBULAR ENLARGEMENT
LEFT. (2)

LYMPH NODE BRONCHIAL ENLARGEMENT
(5)
DISCOLORATION
PALE. (6)

LYMPH NODE MEDIASTINAL ENLARGEMENT
(3)
DISCOLORATION
PALE. (4)

ALL OTHER TISSUES WERE UNREMARKABLE

HISTOPATHOLOGICAL FINDINGS

CAVITY NASAL PIGMENT ACCUMULATION
INTRAFOLLICULAR (LEVEL III). 1

GROSS GRADE CODE: * - NOT SUBMITTED #B- BENIGN, #M- MALIGNANT
HISTO GRADE CODE: 1- SLIGHT, 2- MILD, 3- MODERATE, 4- SEVERE, P- PRESENT, * - NOT TABULATED

APPENDIX NO. 14 INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS
PROJECT NO.: 90831

GROUP 3 CERIC OXIDE INTERMEDIATE DOSE
ANIMAL NO. 3507 (cont'd) FEMALE STUDY WEEK OF DEATH 14 (DAY 92)
TISSUE FINDING GRADE

LIVER	VACUOLATION, HEPATOCELLULAR FOCAL. [1]	1
LUNG	PIGMENT ACCUMULATION INTRACELLULAR, MULTIFOCAL. [7] EPITHELIAL HYPERPLASIA, ALVEOLAR FOCAL.	3 1
LYMPH NODE MANDIBULAR	PLASMACYTOSIS AND/OR HISTIOCYTOSIS, MEDULLARY [2]	2
LYMPH NODE BRONCHIAL	PIGMENT ACCUMULATION MULTIFOCAL. [6] HYPERPLASIA, LYMPHOID [5]	2 2
LYMPH NODE MEDIASTINAL	HYPERPLASIA, LYMPHOID [3] PIGMENT ACCUMULATION MULTIFOCAL TO LOCALLY EXTENSIVE. [4]	2 3

ALL OTHER EXAMINED TISSUES WERE UNREMARKABLE

GROSS GRADE CODE: * - NOT SUBMITTED
HISTO GRADE CODE: 1 - SLIGHT, 2 - MILD, 3 - MODERATE, 4 - SEVERE, P - PRESENT, * - NOT TABULATED #B - BENIGN, #M - MALIGNANT

INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

APPENDIX NO. 14
PROJECT NO.: 90031

GROUP 3 CERIC OXIDE INTERMEDIATE DOSE
ANIMAL NO. 3500 FEMALE STUDY WEEK OF DEATH 14 (DAY 92)
TISSUE FINDING GRADE

GROSS PATHOLOGICAL FINDINGS

LIVER AREA PALE
SINGLE, FISSURE, MEDIAN LOBE. (1)

LUNG AREA PALE
MULTIPLE. (6)

LYMPH NODE BRONCHIAL ENLARGEMENT (4)
DISCOLORATION PALE. (5)

LYMPH NODE MEDIASTINAL ENLARGEMENT (2)
DISCOLORATION PALE. (3)

ALL OTHER TISSUES WERE UNREMARKABLE

HISTOPATHOLOGICAL FINDINGS

LARYNX METAPLASIA
DISEASE OF EPIGLOTTIS.
PIGMENT ACCUMULATION
INTRAFOLLICULAR.

LIVER VACUOLATION, HEPATOCELLULAR

GROSS GRADE CODE: * - NOT SUBMITTED #B - BENIGN, #M - MALIGNANT
HISTO GRADE CODE: 1 - SLIGHT, 2 - MILD, 3 - MODERATE, 4 - SEVERE, P - PRESENT, * - NOT TABULATED

INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

APPENDIX NO. 14
PROJECT NO.: 90031

GROUP 3 CERIC OXIDE INTERMEDIATE DOSE
ANIMAL NO. 3508 (cont'd) FEMALE STUDY WEEK OF DEATH 14 (DAY 92)
TISSUE FINDING GRADE

TISSUE	FINDING	GRADE
LIVER	(cont'd) FOCAL. (1)	
LUNG	PIGMENT ACCUMULATION INTRACELLULAR, MULTIFOCAL. (6)	3
LYMPH NODE BRONCHIAL	PIGMENT ACCUMULATION MULTIFOCAL. (5) HYPERPLASIA, LYMPHOID (4)	3
LYMPH NODE MEDIASTINAL	HYPERPLASIA, LYMPHOID (2) PIGMENT ACCUMULATION MULTIFOCAL. (3)	2
		3

ALL OTHER EXAMINED TISSUES WERE UNREMARKABLE

GROSS GRADE CODE: #- NOT SUBMITTED
HISTO GRADE CODE: 1- SLIGHT, 2- MILD, 3- MODERATE, 4- SEVERE, P- PRESENT, *- NOT TABULATED, #B- BENIGN, #M- MALIGNANT

APPENDIX NO. 14
 PROJECT NO.: 90831

INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

GROUP 3 CERIC OXIDE INTERMEDIATE DOSE
 ANIMAL NO. 3509 FEMALE STUDY WEEK OF DEATH 14 (DAY 92)
 TISSUE FINDING GRADE

GROSS PATHOLOGICAL FINDINGS

KIDNEY CYST SINGLE, LEFT. [4]
 LUNG AREA PALE MULTIPLE. [3]
 LYMPH NODE BRONCHIAL ENLARGEMENT [1]
 DISCOLORATION PALE. [2]

ALL OTHER TISSUES WERE UNREMARKABLE

HISTOPATHOLOGICAL FINDINGS

BRONCHUS PIGMENT ACCUMULATION INTRALUMINAL. 1
 CAVITY NASAL PIGMENT ACCUMULATION INTRAFOLLICULAR (LEVEL III). 1
 KIDNEY CYST [4] 1
 LARYNX LARYNGITIS 2

GROSS GRADE CODE: * - NOT SUBMITTED #D - DENIGN, #M - MALIGNANT
 HISTO GRADE CODE: 1 - SLIGHT, 2 - MILD, 3 - MODERATE, 4 - SEVERE, P - PRESENT, K - NOT TABULATED

APPENDIX NO. 14 INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS
PROJECT NO.: 90831

GROUP 3 CERIC OXIDE INTERMEDIATE DOSE GRADE
ANIMAL NO. 3509 (cont'd) FEMALE STUDY WEEK OF DEATH 14 (DAY 92) FINDING

TISSUE	FINDING	GRADE
LARYNX	(cont'd) SUBACUTE, WITH EPITHELIAL HYPERPLASIA AND FOREIGN BODY.	
LUNG	PIGMENT ACCUMULATION INTRA- AND EXTRACELLULAR, DIFFUSE. [3]	4
TRACHEA	PIGMENT ACCUMULATION INTRALUMINAL.	1
LYMPH NODE BRONCHIAL	PIGMENT ACCUMULATION MULTIFOCAL. [2] HYPERPLASIA, LYMPHOID [1]	2

ALL OTHER EXAMINED TISSUES WERE UNREMARKABLE

GROSS GRADE CODE: # - NOT SUBMITTED

HISTO GRADE CODE: 1- SLIGHT, 2- MILD, 3- MODERATE, 4- SEVERE, P- PRESENT, *- NOT TABULATED #B- BENIGN, #M- MALIGNANT

INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

APPENDIX NO. 14
PROJECT NO. 1 90831

GROUP	INTERMEDIATE DOSE	STUDY WEEK OF DEATH	14 (DAY 92)	GRADE
3	CERIC OXIDE	WEEK OF DEATH	14 (DAY 92)	
ANIMAL NO. 3510	FEMALE	FINDING		
TISSUE				

GROSS PATHOLOGICAL FINDINGS

LUNG
AREA PALE
MULTIPLE. [5]

LYMPH NODE BRONCHIAL
ENLARGEMENT [3]
DISCOLORATION
PALE. [4]

LYMPH NODE MEDIASTINAL
ENLARGEMENT (1)
DISCOLORATION
PALE. [2]

ALL OTHER TISSUES WERE UNREMARKABLE

HISTOPATHOLOGICAL FINDINGS

BRONCHUS
PIGMENT ACCUMULATION
INTRALUMINAL AND MUCOSAL. 1

CAVITY NASAL
PIGMENT ACCUMULATION
INTRA-FOLLICULAR (LEVEL III). 1

LARYNX
PIGMENT ACCUMULATION
INTRALUMINAL AND MUCOSAL. 1

GROSS GRADE CODE: * - NOT SUBMITTED
HISTO GRADE CODE: 1 - SLIGHT, 2 - MILD, 3 - MODERATE, 4 - SEVERE, P - PRESENT, # - NOT TABULATED, #B - BENIGN, #H - MALIGNANT

INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

APPENDIX NO. 14
PROJECT NO. 7 90031

GROUP 3 CERIC OXIDE INTERMEDIATE DOSE
ANIMAL NO. 3510 (cont'd) FEMALE STUDY WEEK OF DEATH 14 (DAY 92)

GRADE

FINDING

TISSUE

1

LARYNX

METAPLASIA
BASE OF EPIGLOTTIS.

3

LUNG

PIGMENT ACCUMULATION
INTRACELLULAR, MULTIFOCAL. (5)
EPITHELIAL HYPERPLASIA, ALVEOLAR
MULTIFOCAL.

3

LYMPH NODE BRONCHIAL

HYPERPLASIA, LYMPHOID
(3)

4

PIGMENT ACCUMULATION
MULTIFOCAL. (4)

2

LYMPH NODE MEDIASTINAL

HYPERPLASIA, LYMPHOID
(1)

3

PIGMENT ACCUMULATION
MULTIFOCAL. (2)

ALL OTHER EXAMINED TISSUES WERE UNREMARKABLE

GROSS GRADE CODE: * - NOT SUBMITTED

HISTO GRADE CODE: 1 - SLIGHT, 2 - MILD, 3 - MODERATE, 4 - SEVERE, P - PRESENT, * - NOT TABULATED

#B - BENIGN, #M - MALIGNANT



INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

APPENDIX NO. 14
PROJECT NO.: 90831

GROUP 3 CERIC OXIDE INTERMEDIATE DOSE
ANIMAL NO. 3511 FEMALE STUDY WEEK OF DEATH 14 (DAY 92)

GRADE

FINDING

TISSUE

GROSS PATHOLOGICAL FINDINGS

LIVER AREA PALE
SINGLE, FISSURE, MEDIAN LOBE. (1)

LUNG AREA PALE
MULTIPLE. (4)

LYMPH NODE BRONCHIAL ENLARGEMENT
(2)
DISCOLORATION
PALE. (3)

ALL OTHER TISSUES WERE UNREMARKABLE

HISTOPATHOLOGICAL FINDINGS

CAVITY NASAL PIGMENT ACCUMULATION
INTRAFOLLICULAR (LEVEL III). 1

LARYNX METAPLASIA
BASE OF EPIGLOTTIS. 1
PIGMENT ACCUMULATION
MUCOSAL. 1

LIVER VACUOLATION, HEPATOCELLULAR
FOCAL, SUBCAPSULAR. (1) 1

GROSS GRADE CODE: * - NOT SUBMITTED

HISTO GRADE CODE: 1 - SLIGHT, 2 - MILD, 3 - MODERATE, 4 - SEVERE, P - PRESENT, * - NOT TABULATED #B - BENIGN, #M - MALIGNANT

INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

APPENDIX NO. 14
PROJECT NO. 90031

GROUP 3 CERIC OXIDE INTERMEDIATE DOSE
ANIMAL NO. 3511 (cont'd) FEMALE STUDY WEEK OF DEATH 14 (DAY 92)

GRADE

FINDING

LUNG	PIGMENT ACCUMULATION INTRACELLULAR, MULTIFOCAL. [4]	3
LYMPH NODE BRONCHIAL	PIGMENT ACCUMULATION MULTIFOCAL TO LOCALLY EXTENSIVE. [3] HYPERPLASIA, LYMPHOID [2]	3 2

ALL OTHER EXAMINED TISSUES WERE UNREMARKABLE

GROSS GRADE CODE: * - NOT SUBMITTED
HISTO GRADE CODE: 1 - SLIGHT, 2 - MILD, 3 - MODERATE, 4 - SEVERE, P - PRESENT, * - NOT TABULATED #B - BENIGN, #M - MALIGNANT

110

APPENDIX NO. 14
PROJECT NO.: 90831
INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

GROUP 3 CERIC OXIDE INTERMEDIATE DOSE
ANIMAL NO. 3513 FEMALE STUDY WEEK OF DEATH 14 (DAY 92)
TISSUE FINDING GRADE

GROSS PATHOLOGICAL FINDINGS

LUNG AREA PALE MULTIPLE. (4)

LYMPH NODE BRONCHIAL ENLARGEMENT (2)
DISCOLORATION PALE. (3)

LYMPH NODE MEDIASTINAL DISCOLORATION PALE. (1)

ALL OTHER TISSUES WERE UNREMARKABLE

HISTOPATHOLOGICAL FINDINGS

BRONCHUS PIGMENT ACCUMULATION MUCOSAL. 1

CAVITY NASAL PIGMENT ACCUMULATION INTRAFOLLICULAR (LEVEL III). 1

LARYNX PIGMENT ACCUMULATION INTRAFOLLICULAR. 1

LUNG PIGMENT ACCUMULATION 3

- 1239 -

GROSS GRADE CODE: * - NOT SUBMITTED #D - BENIGN, #M - MALIGNANT
HISTO GRADE CODE: 1 - SLIGHT, 2 - MILD, 3 - MODERATE, 4 - SEVERE, P - PRESENT, * - NOT TABULATED

INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

APPENDIX NO. 14
PROJECT NO.: 90831

GROUP 3 CERIC OXIDE INTERMEDIATE DOSE
ANIMAL NO. 3513 (cont'd) FEMALE STUDY WEEK OF DEATH 14 (DAY 92)
TISSUE FINDING GRADE

TISSUE	FINDING	GRADE
LUNG	(cont'd) INTRACELLULAR, MULTIFOCAL. [4] EPITHELIAL HYPERPLASIA, ALVEOLAR MULTIFOCAL.	1
LYMPH NODE BRONCHIAL	PIGMENT ACCUMULATION MULTIFOCAL TO LOCALLY EXTENSIVE. [3] HYPERPLASIA, LYMPHOID [2]	2
LYMPH NODE MEDIASTINAL	PIGMENT ACCUMULATION MULTIFOCAL TO LOCALLY EXTENSIVE. [1] HYPERPLASIA, LYMPHOID	3

ALL OTHER EXAMINED TISSUES WERE UNREMARKABLE

GROSS GRADE CODE: *- NOT SUBMITTED #B- BENIGN, #M- MALIGNANT
HISTO GRADE CODE: 1- SLIGHT, 2- MILD, 3- MODERATE, 4- SEVERE, P- PRESENT, *- NOT TABULATED

INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

APPENDIX NO. 14
PROJECT NO.: 90031.

GROUP 3 CERIC OXIDE INTERMEDIATE DOSE
ANIMAL NO. 3514 FEMALE STUDY WEEK OF DEATH 14 (DAY 92)
TISSUE FINDING GRADE

GROSS PATHOLOGICAL FINDINGS

LUNG AREA PALE
MULTIPLE. (5)

LYMPH NODE BRONCHIAL ENLARGEMENT (3)
DISCOLORATION PALE. (4)

LYMPH NODE MEDIASTINAL ENLARGEMENT (1)
DISCOLORATION PALE. (2)

ALL OTHER TISSUES WERE UNREMARKABLE

HISTOPATHOLOGICAL FINDINGS

CAVITY NASAL PIGMENT ACCUMULATION
INTRAFOLLICULAR (LEVEL III). 1

LARYNX PIGMENT ACCUMULATION
MUCOSAL. 1

LUNG PIGMENT ACCUMULATION
INTRACELLULAR, MULTIFOCAL. (5) 3

GROSS GRADE CODE: * - NOT SUBMITTED
HISTO GRADE CODE: 1- SLIGHT, 2- MILD, 3- MODERATE, 4- SEVERE, P- PRESENT, * - NOT TABULATED, #B- BENIGN, #M- MALIGNANT

APPENDIX NO. 14
PROJECT NO.: 90031

INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

GROUP 3 CERIC OXIDE INTERMEDIATE DOSE
ANIMAL NO. 3514 (cont'd) FEMALE STUDY WEEK OF DEATH 14 (DAY 92)
TISSUE FINDING GRADE

LYMPH NODE BRONCHIAL	PIGMENT ACCUMULATION MULTIFOCAL. (4) HYPERPLASIA, LYMPHOID (3)	2
LYMPH NODE MEDIASTINAL	HYPERPLASIA, LYMPHOID (1) PIGMENT ACCUMULATION MULTIFOCAL. (2)	2 3

ALL OTHER EXAMINED TISSUES WERE UNREMARKABLE

GROSS GRADE CODE: * - NOT SUBMITTED #B - BENIGN, #M - MALIGNANT
HISTO GRADE CODE: 1 - SLIGHT, 2 - MILD, 3 - MODERATE, 4 - SEVERE, P - PRESENT, * - NOT TABULATED



APPENDIX NO. 14
PROJECT NO.: 90831

INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

GROUP 3 CERIC OXIDE INTERMEDIATE DOSE
ANIMAL NO. 3516 FEMALE STUDY WEEK OF DEATH 14 (DAY 92)
TISSUE FINDING GRADE

GROSS PATHOLOGICAL FINDINGS

LIVER AREA RAISED
PALE, FIRM, SINGLE, FISSURE, MEDIAN LOBE. [1]

LUNG AREA PALE
MULTIPLE. [2]

LYMPH NODE BRONCHIAL DISCOLORATION
PALE. [3]

ALL OTHER TISSUES WERE UNREMARKABLE

HISTOPATHOLOGICAL FINDINGS

CAVITY NASAL ATROPHY, OLFACTORY EPITHELIUM
FOCAL (LEVEL II) 1
PIGMENT ACCUMULATION 1
INTRAFOLLICULAR (LEVEL III).

LARYNX PIGMENT ACCUMULATION
INTRAFOLLICULAR. 1

LIVER VACUOLATION, HEPATOCELLULAR
FOCAL, SURCAPSULAR. [1] 2

LUNG PIGMENT ACCUMULATION 3

- 1243 -

GROSS GRADE CODE: * - NOT SUBMITTED #B - BENIGN, #M - MALIGNANT
HISTO GRADE CODE: 1 - SLIGHT, 2 - MILD, 3 - MODERATE, 4 - SEVERE, P - PRESENT, * - NOT TABULATED

INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

APPENDIX NO. 14
PROJECT NO.: 90831

GROUP 3 CERIC OXIDE INTERMEDIATE DOSE GRADE
ANIMAL NO. 3516 (cont'd) FEMALE STUDY WEEK OF DEATH 14 (DAY 92)
TISSUE FINDING

LUNG (cont'd) INTRACELLULAR, MULTIFOCAL. (2)

LYMPH NODE BRONCHIAL PIGMENT ACCUMULATION 2
MULTIFOCAL. (3)
HYPERPLASIA, LYMPHOID 2

ALL OTHER EXAMINED TISSUES WERE UNREMARKABLE

GROSS GRADE CODE: * - NOT SUBMITTED #B- BENIGN, #M- MALIGNANT
HISTO GRADE CODE: 1- SLIGHT, 2- MILD, 3- MODERATE, 4- SEVERE, P- PRESENT, *- NOT TABULATED



INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

APPENDIX NO. 14
PROJECT NO.: 90831

GROUP 3 CERIC OXIDE INTERMEDIATE DOSE
ANIMAL NO. 3517 FEMALE STUDY WEEK OF DEATH 14 (DAY 92)
TISSUE FINDING GRADE

GROSS PATHOLOGICAL FINDINGS

LUNG AREA PALE MULTIPLE. [4]

LYMPH NODE MANDIBULAR ENLARGEMENT RIGHT. [1]

LYMPH NODE BRONCHIAL DISCOLORATION PALE. [2]
ENLARGEMENT [3]

ALL OTHER TISSUES WERE UNREMARKABLE

HISTOPATHOLOGICAL FINDINGS

LUNG PIGMENT ACCUMULATION INTRACELLULAR, MULTIFOCAL. [4]

LYMPH NODE MANDIBULAR PLASMACYTOSIS AND/OR HISTIOCYTOSIS, MEDULLARY [1]

LYMPH NODE BRONCHIAL PIGMENT ACCUMULATION MULTIFOCAL. [2]
HYPERPLASIA, LYMPHOID [3]

ALL OTHER EXAMINED TISSUES WERE UNREMARKABLE

GROSS GRADE CODE: * - NOT SUBMITTED

HISTO GRADE CODE: 1 - SLIGHT, 2 - MILD, 3 - MODERATE, 4 - SEVERE, P - PRESENT, * - NOT TABULATED

#D - BENIGN, #M - MALIGNANT

INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

APPENDIX NO. 14
PROJECT NO.: 90031

GROUP 4 CERIC OXIDE HIGH DOSE
ANIMAL NO. 4501 FEMALE STUDY WEEK OF DEATH 14 (DAY 92)
TISSUE FINDING GRADE

GROSS PATHOLOGICAL FINDINGS

- LUNG UNCOLLAPSED [3]
DISCOLORATION PALE. [4]
- LYMPH NODE BRONCHIAL DISCOLORATION PALE. [2]
ENLARGEMENT [5]
- LYMPH NODE MEDIASTINAL DISCOLORATION PALE. [6]
- LYMPH NODE PANCREATIC DISCOLORATION PALE. [1]

ALL OTHER TISSUES WERE UNREMARKABLE

HISTOPATHOLOGICAL FINDINGS

- BRONCHUS PIGMENT ACCUMULATION INTRALUMINAL. 1
- CAVITY NASAL HYPERTROPHY AND/OR HYPERPLASIA, GORLET CELL VENTRAL MEATUS (LEVEL I). 1

GROSS GRADE CODE: * - NOT SUBMITTED

HISTO GRADE CODE: 1 - SLIGHT, 2 - MILD, 3 - MODERATE, 4 - SEVERE, P - PRESENT, * - NOT TABULATED

#B - BENIGN, #M - MALIGNANT

INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

APPENDIX NO. 14
PROJECT NO.: 50831

GROUP 4 CERIC OXIDE HIGH DOSE
ANIMAL NO. 4501 (cont'd) FEMALE STUDY WEEK OF DEATH 14 (DAY 92)
TISSUE FINDING

GRADE

CAVITY NASAL	PIGMENT ACCUMULATION INTRAFOLLICULAR (LEVEL III).	1
LARYNX	METAPLASIA BASE OF EPIGLOTTIS.	1
LIVER	PIGMENT ACCUMULATION INTRACELLULAR, SINUSOIDAL, MULTIFOCAL.	1
LUNG	PIGMENT ACCUMULATION EXTRA- AND INTRACELLULAR, DIFFUSE. (3,4) EPITHELIAL HYPERPLASIA, ALVEOLAR MULTIFOCAL.	4
Lymph Node Mandibular	PIGMENT ACCUMULATION MULTIFOCAL.	1
Spleen	PIGMENT ACCUMULATION MULTIFOCAL.	1
Thyroid	CYST, ULTIMOBRANCHIAL/THYROIDGLOSSAL REMNANTS UNILATERAL.	1
Trachea	PIGMENT ACCUMULATION INTRALUMINAL.	1
Lymph Node Bronchial	PIGMENT ACCUMULATION	3

GROSS GRADE CODE: * - NOT SUBMITTED
HISTO GRADE CODE: 1 - SLIGHT, 2 - MILD, 3 - MODERATE, 4 - SEVERE, P - PRESENT, * - NOT TABULATED, #B - BENIGN, #M - MALIGNANT

INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

APPENDIX NO. 14
PROJECT NO.: 50831

GROUP 4 CERIC OXIDE HIGH DOSE
ANIMAL NO. 4501 (cont'd) FEMALE STUDY WEEK OF DEATH 14 (DAY 92)
TISSUE FINDING GRADE

LYMPH NODE BRONCHIAL (cont'd)	MULTIFOCAL TO LOCALLY EXTENSIVE. (2) HYPERPLASIA, LYMPHOID (5)	2
LYMPH NODE MEDIASTINAL	PIGMENT ACCUMULATION MULTIFOCAL. (6)	3
LYMPH NODE PANCREATIC	PIGMENT ACCUMULATION MULTIFOCAL. (1)	3

ALL OTHER EXAMINED TISSUES WERE UNREMARKABLE

GROSS GRADE CODE: * - NOT SUBMITTED #B - BENIGN, #M - MALIGNANT
HISTO GRADE CODE: 1 - SLIGHT, 2 - MILD, 3 - MODERATE, 4 - SEVERE, P - PRESENT, * - NOT TABULATED

110

INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

APPENDIX NO. 14
PROJECT NO.: 90831

GROUP	4	CERIC OXIDE	HIGH DOSE	STUDY WEEK OF DEATH	14	(DAY 92)	GRADE
ANIMAL NO.	4502	FEMALE					
TISSUE						FINDING	

GROSS PATHOLOGICAL FINDINGS

LUNG
DISCOLORATION
PALE. [5]
UNCOLLAPSED
[6]

LYMPH NODE BRONCHIAL
ENLARGEMENT
[3]
DISCOLORATION
PALE. [4]

LYMPH NODE MEDIASTINAL
ENLARGEMENT
[1]
DISCOLORATION
PALE. [2]

ALL OTHER TISSUES WERE UNREMARKABLE

HISTOPATHOLOGICAL FINDINGS

BRONCHUS
PIGMENT ACCUMULATION
MUCOSAL AND INTRALUMINAL.

CAVITY NASAL
PIGMENT ACCUMULATION
WITH EXUDATE, MULTIFOCAL (LEVEL I, II, III, IV);
INTRAFOILICULAR (LEVEL III).

1

2

GROSS GRADE CODE: * - NOT SUBMITTED
HISTO GRADE CODE: 1 - SLIGHT, 2 - MILD, 3 - MODERATE, 4 - SEVERE, P - PRESENT, * - NOT TABULATED #B - BENIGN, #M - MALIGNANT

INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

APPENDIX NO. 14
PROJECT NO.: 90031

GROUP 4 CERIC OXIDE HIGH DOSE
ANIMAL NO. 4502 (cont'd) FEMALE STUDY WEEK OF DEATH 14 (DAY 92)

GRADE

FINDING

TISSUE

LARYNX	PIGMENT ACCUMULATION INTRALUMINAL AND MUCOSAL.	1
LIVER	PIGMENT ACCUMULATION INTRACELLULAR, SINUSOIDAL, MULTIFOCAL.	1
LUNG	PIGMENT ACCUMULATION EXTRA- AND INTRACELLULAR, DIFFUSE. (5,6) EPITHELIAL HYPERPLASIA, ALVEOLAR MULTIFOCAL.	4
PARATHYROID	ONE PARATHYROID UNAVAILABLE NOT PRESENT IN SECTION.	1
SPLEEN	PIGMENT ACCUMULATION MULTIFOCAL.	1
TRACHEA	PIGMENT ACCUMULATION INTRALUMINAL.	1
LYMPH NODE BRONCHIAL	PIGMENT ACCUMULATION MULTIFOCAL. (4) HYPERPLASIA, LYMPHOID (3)	3
LYMPH NODE MEDIASTINAL	PIGMENT ACCUMULATION MULTIFOCAL. (2)	2

- 1250 -

GROSS GRADE CODE: * - NOT SUBMITTED
HISTO GRADE CODE: 1 - SLIGHT, 2 - MILD, 3 - MODERATE, 4 - SEVERE, P - PRESENT, * - NOT TABULATED

B - BENIGN, M - MALIGNANT

BIO

INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

APPENDIX NO. 14
PROJECT NO.: 90031

GROUP	ANIMAL NO.	SEX	STUDY WEEK	WEEK OF DEATH	DAY	GRADE
4	4502	(cont'd) FEMALE	14	(DAY 92)		

2

LYMPH NODE MEDIASTINAL HYPERPLASIA, LYMPHOID
 III

ALL OTHER EXAMINED TISSUES WERE UNREMARKABLE

GROSS GRADE CODE: *- NOT SUBMITTED #B- BENIGN, #M- MALIGNANT
 HISTO GRADE CODE: 1- SLIGHT, 2- MILD, 3- MODERATE, 4- SEVERE, P- PRESENT, *- NOT TABULATED

BIO

INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

APPENDIX NO. 14
PROJECT NO. 90031

GROUP 4 CERIC OXIDE HIGH DOSE
ANIMAL NO. 4503 FEMALE STUDY WEEK OF DEATH 14 (DAY 92)
TISSUE FINDING GRADE

GROSS PATHOLOGICAL FINDINGS

LUNG
AREA PALE
MULTIPLE. (3)
UNCOLLAPSED
(4)

LYMPH NODE BRONCHIAL
ENLARGEMENT
(1)
DISCOLORATION
PALE. (2)

ALL OTHER TISSUES WERE UNREMARKABLE

HISTOPATHOLOGICAL FINDINGS

BRONCHUS
PIGMENT ACCUMULATION
INTRALUMINAL. 1

CAVITY NASAL
PIGMENT ACCUMULATION
INTRAFOLLICULAR (LEVEL III). 1

LIVER
PIGMENT ACCUMULATION
INTRACELLULAR, SINUSOIDAL, MULTIFOCAL. 1

LUNG
PIGMENT ACCUMULATION
EXTRA- AND INTRACELLULAR, DIFFUSE. (3,4) 4

GROSS GRADE CODE: * - NOT SUBMITTED #B - BENIGN, #M - MALIGNANT
HISTO GRADE CODE: 1 - SLIGHT, 2 - MILD, 3 - MODERATE, 4 - SEVERE, P - PRESENT, N - NOT TABULATED

INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

APPENDIX NO.14
PROJECT NO.1 90831

GROUP 4 CERIC OXIDE HIGH DOSE
ANIMAL NO. 4503 (cont'd) FEMALE STUDY WEEK OF DEATH 14 (DAY 92)

GRADE

FINDING

TISSUE

LUNG	EPITHELIAL HYPERPLASIA, ALVEOLAR MULTIFOCAL. (3,4) HYPERPLASIA, LYMPHOID MULTIFOCAL.	2
LYMPH NODE MANDIBULAR	PIGMENT ACCUMULATION MULTIFOCAL.	1
PARATHYROID	ONE PARATHYROID UNAVAILABLE NOT PRESENT IN SECTION.	
SPLEEN	PIGMENT ACCUMULATION MULTIFOCAL.	1
TRACHEA	PIGMENT ACCUMULATION INTRALUMINAL.	1
LYMPH NODE BRONCHIAL	PIGMENT ACCUMULATION MULTIFOCAL. (2) HYPERPLASIA, LYMPHOID (1)	3
		2

ALL OTHER EXAMINED TISSUES WERE UNREMARKABLE

GROSS GRADE CODE: * - NOT SUBMITTED

HISTO GRADE CODE: 1 - SLIGHT, 2 - MILD, 3 - MODERATE, 4 - SEVERE, P - PRESENT, * - NOT TABULATED

#B - BENIGN, #M - MALIGNANT

INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

APPENDIX NO. 14
PROJECT NO.: 90831

GROUP 2 CERIC OXIDE LOW DOSE
ANIMAL NO. 2510 (cont'd) FEMALE STUDY WEEK OF DEATH 14 (DAY 92)
TISSUE FINDING GRADE

LYMPH NODE MEDIASTINAL
HYPERPLASIA, LYMPHOID
PIGMENT ACCUMULATION
MULTIFOCAL. (2) 2
2

ALL OTHER EXAMINED TISSUES WERE UNREMARKABLE

GROSS GRADE CODE: * - NOT SUBMITTED #B- BENIGN, #M- MALIGNANT
HISTO GRADE CODE: 1- SLIGHT, 2- MILD, 3- MODERATE, 4- SEVERE, P- PRESENT, *- NOT TADULATED

APPENDIX NO. 14 INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS
PROJECT NO.: 90831

GROUP 2 CERIC OXIDE LOW DOSE
ANIMAL NO. 2511 FEMALE STUDY WEEK OF DEATH 14 (DAY 92)
TISSUE FINDING GRADE

GROSS PATHOLOGICAL FINDINGS

LUNG FOCI PALE
LEFT LOBE, RIGHT APICAL LOBE, RIGHT CARDIAC LOBE. [2]
LYMPH NODE BRONCHIAL DISCOLORATION
PALE. [3]
LYMPH NODE MEDIASTINAL DISCOLORATION
PALE. [1]

ALL OTHER TISSUES WERE UNREMARKABLE

HISTOPATHOLOGICAL FINDINGS

LUNG 2
PIGMENT ACCUMULATION
INTRACELLULAR, MULTIFOCAL. [2]
LYMPH NODE BRONCHIAL UNAVAILABLE
NOT FOUND IN WET TISSUES. [3]
LYMPH NODE MEDIASTINAL 2
PIGMENT ACCUMULATION
MULTIFOCAL. [1]
HYPERPLASIA, LYMPHOID 2

ALL OTHER EXAMINED TISSUES WERE UNREMARKABLE

GROSS GRADE CODE: * - NOT SUBMITTED #B- BENIGN, #H- MALIGNANT
HISTO GRADE CODE: 1- SLIGHT, 2- MILD, 3- MODERATE, 4- SEVERE, P- PRESENT, * - NOT TABULATED



INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

APPENDIX NO. 14
PROJECT NO.: 90831

GROUP 2 CERIC OXIDE LOW DOSE
ANIMAL NO. 2512 FEMALE STUDY WEEK OF DEATH 14 (DAY 92)
TISSUE FINDING GRADE

GROSS PATHOLOGICAL FINDINGS

LYMPH NODE MANDIBULAR ENLARGEMENT
BILATERAL. [1]

LYMPH NODE BRONCHIAL DISCOLORATION
PALE. [2]

ALL OTHER TISSUES WERE UNREMARKABLE

HISTOPATHOLOGICAL FINDINGS

LUNG PIGMENT ACCUMULATION
INTRACELLULAR, MULTIFOCAL. 2

LYMPH NODE MANDIBULAR PLASMOCYTOSIS AND/OR HISTIOCYTOSIS, MEDULLARY
BILATERAL. [1] 2

LYMPH NODE BRONCHIAL HYPERPLASIA, LYMPHOID
PIGMENT ACCUMULATION
MULTIFOCAL. [2] 2
1

ALL OTHER EXAMINED TISSUES WERE UNREMARKABLE

GROSS GRADE CODE: * - NOT SUBMITTED

HISTO GRADE CODE: 1 - SLIGHT, 2 - MILD, 3 - MODERATE, 4 - SEVERE, P - PRESENT, * - NOT TABULATED #B - BENIGN, #M - MALIGNANT

INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

APPENDIX NO. 14
PROJECT NO.: 90031

GROUP 2 CERIC OXIDE LOW DOSE
ANIMAL NO. 2513 FEMALE STUDY WEEK OF DEATH 14 (DAY 92)
TISSUE FINDING GRADE

GROSS PATHOLOGICAL FINDINGS

LIVER AREA RAISED
PALE, FIRH, SINGLE, FISSURE, MEDIAN LOBE. [1]
AREA PALE
SINGLE, NEAR HILUS, VENTRAL PORTION OF RIGHT LOBE. [2]

LYMPH NODE MANDIBULAR FOCI DARK
RIGHT. [3]

LYMPH NODE BRONCHIAL DISCOLORATION
PALE. [5]

LYMPH NODE MEDIASTINAL DISCOLORATION
PALE. [4]

ALL OTHER TISSUES WERE UNREMARKABLE

HISTOPATHOLOGICAL FINDINGS

LIVER VACUOLATION, HEPATOCELLULAR
MULTIFOCAL, SUBCAPSULAR. [1,2] 2

LUNG PIGMENT ACCUMULATION
INTRACELLULAR, MULTIFOCAL. 2

LYMPH. NODE MANDIBULAR HEMORRHAGE 1

- 1257 -

GROSS GRADE CODE: # - NOT SUBMITTED #B- BENIGN, #M- MALIGNANT
HISTO GRADE CODE: 1- SLIGHT, 2- MILD, 3- MODERATE, 4- SEVERE, P- PRESENT, *- NOT TABULATED



INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

APPENDIX NO. 14
PROJECT NO.: 90831

GROUP 2 CERIC OXIDE LOW DOSE
ANIMAL NO. 2513 (cont'd) FEMALE STUDY WEEK OF DEATH 14 (DAY 92)
TISSUE FINDING GRADE

LYMPH NODE MANDIBULAR (cont'd) FOCAL. [3]

LYMPH NODE BRONCHIAL PIGMENT ACCUMULATION
MULTIFOCAL. [5]
HYPERPLASIA, LYMPHOID

LYMPH NODE MEDIASTINAL HYPERPLASIA, LYMPHOID
PIGMENT ACCUMULATION
MULTIFOCAL. [4]

1
2
2
2

ALL OTHER EXAMINED TISSUES WERE UNREMARKABLE

GROSS GRADE CODE: * - NOT SUBMITTED

HISTO GRADE CODE: 1 - SLIGHT, 2 - MILD, 3 - MODERATE, 4 - SEVERE, P - PRESENT, * - NOT TABULATED

#B - BENIGN, #M - MALIGNANT





INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

APPENDIX NO. 14
PROJECT NO.: 90831

GROUP 2 CERIC OXIDE LOW DOSE
ANIMAL NO. 2514 FEMALE STUDY WEEK OF DEATH 14 (DAY 92)
TISSUE FINDING GRADE

GROSS PATHOLOGICAL FINDINGS

LUNG FOCI PALE
EDGE, RIGHT APICAL LOBE. [4]

THYMUS SMALL
[3]

LYMPH NODE BRONCHIAL DISCOLORATION
PALE. [5]

LYMPH NODE MEDIASTINAL ENLARGEMENT
[1]
DISCOLORATION
PALE. [2]

ALL OTHER TISSUES WERE UNREMARKABLE

HISTOPATHOLOGICAL FINDINGS

LUNG PIGMENT ACCUMULATION
INTRACELLULAR, MULTIFOCAL. [4] 2

THYMUS NO ABNORMAL FINDINGS
[3]

LYMPH NODE BRONCHIAL PIGMENT ACCUMULATION 2

1259

GROSS GRADE CODE: * - NOT SUBMITTED #D- BENIGN, #M- MALIGNANT
HISTO GRADE CODE: 1- SLIGHT, 2- MODERATE, 3- SEVERE, 4- NOT TABULATED, x- PRESENT, x- NOT TABULATED

INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

APPENDIX NO. 14
PROJECT NO.: 90031

GROUP 2 CERIC OXIDE LOW DOSE
ANIMAL NO. 2514 (cont'd) FEMALE STUDY WEEK OF DEATH 14 (DAY 92)
TISSUE FINDING GRADE

LYMPH NODE BRONCHIAL (cont'd)	MULTIFOCAL. (5) HYPERPLASIA, LYMPHOID	1
LYMPH NODE MEDIASTINAL	HYPERPLASIA, LYMPHOID (1) PIGMENT ACCUMULATION MULTIFOCAL. (2)	2 2

ALL OTHER EXAMINED TISSUES WERE UNREMARKABLE

GROSS GRADE CODE: +- NOT SUBMITTED #B- BENIGN, #M- MALIGNANT
HISTO GRADE CODE: 1- SLIGHT, 2- MILD, 3- MODERATE, 4- SEVERE, P- PRESENT, *- NOT TABULATED

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APPENDIX NO. 14
 PROJECT NO.: 90831

INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

GROUP 2 CERIC OXIDE LOW DOSE
 ANIMAL NO. 2515 FEMALE STUDY WEEK OF DEATH 14 (DAY 92)
 TISSUE FINDING GRADE

GROSS PATHOLOGICAL FINDINGS

LYMPH NODE MANDIBULAR ENLARGEMENT LEFT. [1]

LYMPH NODE BRONCHIAL DISCOLORATION PALE. [2]

ALL OTHER TISSUES WERE UNREMARKABLE

HISTOPATHOLOGICAL FINDINGS

LUNG PIGMENT ACCUMULATION INTRACELLULAR, MULTIFOCAL. 2

LYMPH NODE MANDIBULAR PLASMACYTOSIS AND/OR HISTIOCYTOSIS, MEDULLARY [1] 2

LYMPH NODE BRONCHIAL PIGMENT ACCUMULATION MULTIFOCAL. [2] 1
 HEMORRHAGE MULTIFOCAL. 1

ALL OTHER EXAMINED TISSUES WERE UNREMARKABLE

GROSS GRADE CODE: * - NOT SUBMITTED #B- BENIGN, #M- MALIGNANT
 HISTO GRADE CODE: 1- SLIGHT, 2- MILD, 3- MODERATE, 4- SEVERE, P- PRESENT, * - NOT TABULATED

INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

APPENDIX NO. 14
PROJECT NO.: 90831

GROUP 3 CERIC OXIDE INTERMEDIATE DOSE GRADE
ANIMAL NO. 3501 FEMALE STUDY WEEK OF DEATH 14 (DAY 92) FINDING
TISSUE

GROSS PATHOLOGICAL FINDINGS

LUNG AREA PALE MULTIPLE. [3]

LYMPH NODE BRONCHIAL ENLARGEMENT [4]
DISCOLORATION PALE. [5]

LYMPH NODE MEDIASTINAL ENLARGEMENT [1]
DISCOLORATION PALE. [2]

ALL OTHER TISSUES WERE UNREMARKABLE

HISTOPATHOLOGICAL FINDINGS

CAVITY NASAL PIGMENT ACCUMULATION INTRAFOLLICULAR (LEVEL II,III). 1

LARYNX METAPLASIA BASE OF EPIGLOTTIS. 1

LUNG PIGMENT ACCUMULATION INTRACELLULAR, DIFFUSE. [3] 4

GROSS GRADE CODE: * - NOT SUBMITTED #B - BENIGN, #M - MALIGNANT
HISTO GRADE CODE: 1 - SLIGHT, 2 - MILD, 3 - MODERATE, 4 - SEVERE, P - PRESENT, * - NOT TABULATED



INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

APPENDIX NO. 14
PROJECT NO. 1 90831

GROUP 4 CERIC OXIDE HIGH DOSE
ANIMAL NO. 4504 FEMALE STUDY WEEK OF DEATH 14 (DAY 92)
FINDING
GRADE

GROSS PATHOLOGICAL FINDINGS

KIDNEY AREA DEPRESSED
DARK, SINGLE, RIGHT. [1]

LUNG UNCOLLAPSED
[6]
DISCOLORATION
PALE. [7]

LYMPH NODE MANDIBULAR ENLARGEMENT
RIGHT. [2]

THYMUS AREA DARK
MULTIPLE, RIGHT LOBE. [5]

LYMPH NODE BRONCHIAL ENLARGEMENT
[8]
DISCOLORATION
PALE. [9]

LYMPH NODE MEDIASTINAL ENLARGEMENT
[3]
DISCOLORATION
PALE. [4]

ALL OTHER TISSUES WERE UNREMARKABLE

GROSS GRADE CODE: * - NOT SUBMITTED #B - BENIGN, #M - MALIGNANT
HISTO GRADE CODE: 1 - SLIGHT, 2 - MILD, 3 - MODERATE, 4 - SEVERE, P - PRESENT, * - NOT TABULATED



INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

APPENDIX NO. 14
PROJECT NO.: 90031

GROUP 4 CERIC OXIDE HIGH DOSE
ANIMAL NO. 4504 (cont'd) FEMALE STUDY WEEK OF DEATH 14 (DAY 92)
TISSUE FINDING GRADE

HISTOPATHOLOGICAL FINDINGS

TISSUE	FINDING	GRADE
BRONCHUS	PIGMENT ACCUMULATION INTRALUMINAL.	1
CAVITY NASAL	HYPERTROPHY AND/OR HYPERPLASIA, GOBLET CELL VENTRAL MEATUS (LEVEL I). PIGMENT ACCUMULATION INTRA-FOLLICULAR (LEVEL III).	1
KIDNEY	NO ABNORMAL FINDINGS (1)	
LARYNX	PIGMENT ACCUMULATION INTRALUMINAL AND MUCOSAL. METAPLASIA BASE OF EPIGLOTTIS.	1
LUNG	PIGMENT ACCUMULATION EXTRA- AND INTRACELLULAR, DIFFUSE. (6,7) EPITHELIAL HYPERPLASIA, ALVEOLAR MULTIFOCAL. HYPERPLASIA, LYMPHOID MULTIFOCAL.	4
LYMPH NODE MANDIBULAR	PLASMACYTOSIS AND/OR HISTIOCYTOSIS, MEDULLARY (2)	3

GROSS GRADE CODE: * - NOT SUBMITTED
#B - BENIGN, #M - MALIGNANT
1 - SLIGHT, 2 - MILD, 3 - MODERATE, 4 - SEVERE, P - PRESENT, * - NOT TABULATED

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INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

APPENDIX NO. 14
PROJECT NO. 90831

GROUP 4 CERIC OXIDE HIGH DOSE
ANIMAL NO. 4504 (cont'd) FEMALE STUDY WEEK OF DEATH 14 (DAY 92)
TISSUE FINDING GRADE

PARATHYROID ONE PARATHYROID UNAVAILABLE
NOT PRESENT IN SECTION.

THYMIUS HEMORRHAGE 2
MULTIFOCAL. (5)

TRACHEA PIGMENT ACCUMULATION 1
INTRALUMINAL AND MUCOSAL.

LYMPH NODE BRONCHIAL PIGMENT ACCUMULATION 2
MULTIFOCAL TO LOCALLY EXTENSIVE. (9)
HYPERPLASIA, LYMPHOID (8)

LYMPH NODE MEDIASTINAL PIGMENT ACCUMULATION 3
MULTIFOCAL TO LOCALLY EXTENSIVE. (4)
HYPERPLASIA, LYMPHOID (3)

ALL OTHER EXAMINED TISSUES WERE UNREMARKABLE

GROSS GRADE CODE: * - NOT SUBMITTED

HISTO GRADE CODE: 1 - SLIGHT, 2 - MILD, 3 - MODERATE, 4 - SEVERE, P - PRESENT, * - NOT TABULATED

#B - BENIGN, #M - MALIGNANT



APPENDIX NO. 14 INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS
 PROJECT NO.: 90031

GROUP 4 CERIC OXIDE HIGH DOSE
 ANIMAL NO. 4505 FEMALE STUDY WEEK OF DEATH 14 (DAY 92)
 TISSUE FINDING GRADE

GROSS PATHOLOGICAL FINDINGS

LUNG DISCOLORATION
 PALE. [5]
 UNCOLLAPSED [6]

LYMPH NODE BRONCHIAL ENLARGEMENT [3]
 DISCOLORATION
 PALE. [4]

LYMPH NODE MEDIASTINAL ENLARGEMENT [1]
 DISCOLORATION
 PALE. [2]

ALL OTHER TISSUES WERE UNREMARKABLE

HISTOPATHOLOGICAL FINDINGS

BRONCHUS PIGMENT ACCUMULATION
 INTRALUMINAL. 1

CAVITY NASAL PIGMENT ACCUMULATION
 INTRAFOLLICULAR (LEVEL III). 1

LARYNX METAPLASIA 1

GROSS GRADE CODE: * - NOT SUBMITTED #D - BENIGN, #M - MALIGNANT
 HISTO GRADE CODE: 1 - SLIGHT, 2 - MILD, 3 - MODERATE, 4 - SEVERE, P - PRESENT, * - NOT TABULATED



INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

APPENDIX NO. 14
PROJECT NO.: 50031

GROUP 4 CERIC OXIDE HIGH DOSE
ANIMAL NO. 4505 (cont'd) FEMALE STUDY WEEK OF DEATH 14 (DAY 92)
TISSUE FINDING GRADE

TISSUE	FINDING	GRADE
LARYNX (cont'd)	BASE OF EPIGLOTTIS.	1
	PIGMENT ACCUMULATION INTRALUMINAL AND MUCOSAL.	4
LUNG	PIGMENT ACCUMULATION EXTRA- AND INTRACELLULAR, DIFFUSE. (5,6)	2
	HYPERPLASIA, LYMPHOID MULTIFOCAL. EPITHELIAL HYPERPLASIA, ALVEOLAR MULTIFOCAL.	2
PARATHYROID	ONE PARATHYROID UNAVAILABLE NOT PRESENT IN SECTION.	
TRACHEA	PIGMENT ACCUMULATION INTRALUMINAL AND MUCOSAL.	1
LYMPH NODE BRONCHIAL	PIGMENT ACCUMULATION MULTIFOCAL TO LOCALLY EXTENSIVE. (4)	3
	HYPERPLASIA, LYMPHOID (3)	3
LYMPH NODE MEDIASTINAL	PIGMENT ACCUMULATION MULTIFOCAL TO LOCALLY EXTENSIVE. (2)	3
	HYPERPLASIA, LYMPHOID (1)	2

ALL OTHER EXAMINED TISSUES WERE UNREMARKABLE

GROSS GRADE CODE: # - NOT SUBMITTED
HISTO GRADE CODE: 1- SLIGHT, 2- MILD, 3- MODERATE, 4- SEVERE. P- PRESENT, * - NOT TABULATED #P- BENIGN, #M- MALIGNANT



INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

APPENDIX NO. 14
PROJECT NO. 1 90831

GROUP 4 CERIC OXIDE HIGH DOSE
ANIMAL NO. 4506 FEMALE STUDY WEEK OF DEATH 14 (DAY 92)
TISSUE FINDING GRADE

GROSS PATHOLOGICAL FINDINGS

LUNG DISCOLORATION
PALE. [3]
UNCOLLAPSED
[4]

LYMPH NODE BRONCHIAL ENLARGEMENT
[1]
DISCOLORATION
PALE. [2]

ALL OTHER TISSUES WERE UNREMARKABLE

HISTOPATHOLOGICAL FINDINGS

BRONCHUS PIGMENT ACCUMULATION
INTRALUMINAL. 1

CAVITY NASAL PIGMENT ACCUMULATION
INTRAFOLLICULAR (LEVEL III). 1

LARYNX METAPLASIA
BASE OF EPIGLOTTIS.
PIGMENT ACCUMULATION
MUCOSAL. 1

LUNG PIGMENT ACCUMULATION 4

GROSS GRADE CODE: *- NOT SUBMITTED #D- BENIGN, #H- MALIGNANT
HISTO GRADE CODE: 1- SLIGHT, 2- MILD, 3- MODERATE, 4- SEVERE, P- PRESENT, *- NOT TABULATED

APPENDIX NO.14
PROJECT NO.1 90031

INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

GROUP 4 CERIC OXIDE HIGH DOSE
ANIMAL NO. 4506 (cont'd) FEMALE STUDY WEEK OF DEATH 14 (DAY 92)
TISSUE FINDING GRADE

LUNG (cont'd)
EXTRA- AND INTRACELLULAR, DIFFUSE. [3,4]
HYPERPLASIA, LYMPHOID
MULTIFOCAL. 1
EPITHELIAL HYPERPLASIA, ALVEOLAR
MULTIFOCAL. 1

PARATHYROID
UNAVAILABLE.
NOT PRESENT IN SECTION.

TRACHEA
PIGMENT ACCUMULATION
MUCOSAL. 1

LYMPH NODE BRONCHIAL
PIGMENT ACCUMULATION
MULTIFOCAL TO LOCALLY EXTENSIVE. [2] 3
HYPERPLASIA, LYMPHOID
[1] 2

ALL OTHER EXAMINED TISSUES WERE UNREMARKABLE

GROSS GRADE CODE: *-- NOT SUBMITTED #B- BENIGN, #M- MALIGNANT
HISTO GRADE CODE: 1- SLIGHT, 2- MILD, 3- MODERATE, 4- SEVERE, P-- PRESENT, *- NOT TABULATED



INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

PENDIX NO. 14
OBJECT NO. 1 90831

GROUP 4 CERIC OXIDE HIGH DOSE
ANIMAL NO. 4507 FEMALE STUDY WEEK OF DEATH 14 (DAY 92)
TISSUE FINDING GRADE

GROSS PATHOLOGICAL FINDINGS

UNCOLLAPSED
(5)
DISCOLORATION
PALE. (6)

ENLARGEMENT
(3)
DISCOLORATION
PALE. (4)

ENLARGEMENT
(1)
DISCOLORATION
PALE. (2)

ALL OTHER TISSUES WERE UNREMARKABLE

HISTOPATHOLOGICAL FINDINGS

TRONCHUS
PIGMENT ACCUMULATION
INTRALUMINAL. 1

CAVITY NASAL
PIGMENT ACCUMULATION
INTRA-FOLLICULAR (LEVEL III). 1

RETINA
FOLD/ROSETTE, RETINAL 2

GROSS GRADE CODE: * - NOT SUBMITTED #B- BENIGN, #M- MALIGNANT
HISTO GRADE CODE: 1- SLIGHT, 2- MILD, 3- MODERATE, 4- SEVERE, P- PRESENT, *- NOT TABULATED

APPENDIX NO. 14 INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS
 PROJECT NO.: 90031

GROUP 4 CERIC OXIDE HIGH DOSE STUDY WEEK OF DEATH 14 (DAY 92)
 ANIMAL NO. 4507 (cont'd) FEMALE FINDING GRADE
 TISSUE

TISSUE	FINDING	GRADE
YE (cont'd)	LOCALLY EXTENSIVE, UNILATERAL.	
ARYNX	METAPLASIA BASE OF EPIGLOTTIS.	1
UNG	PIGMENT ACCUMULATION EXTRA- AND INTRACELLULAR, DIFFUSE. (5,6) EPITHELIAL HYPERPLASIA, ALVEOLAR MULTIFOCAL.	4 1
ARATHYROID	ONE PARATHYROID UNAVAILABLE NOT PRESENT IN SECTION.	
HYROID	CYST, ULTIMBRANCHIAL/THYROIDAL REMNANTS UNILATERAL.	1
RACHEA	PIGMENT ACCUMULATION INTRALUMINAL AND MUCOSAL.	1
LYMPH NODE BRONCHIAL	PIGMENT ACCUMULATION MULTIFOCAL TO LOCALLY EXTENSIVE. (4) HYPERPLASIA, LYMPHOID (3)	3 3
LYMPH NODE MEDIASTINAL	HYPERPLASIA, LYMPHOID (1)	3

GROSS GRADE CODE: * - NOT SUBMITTED #B- BENIGN, #M- MALIGNANT
 HISTO GRADE CODE: 1- SLIGHT, 2- MILD, 3- MODERATE, 4- SEVERE, P- PRESENT, *- NOT TABULATED

INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

APPENDIX NO. 14
PROJECT NO.: 90031

GROUP 4 CERIC OXIDE HIGH DOSE
ANIMAL NO. 4507 (cont'd) FEMALE STUDY WEEK OF DEATH 14 (DAY 92)
TISSUE FINDING GRADE

LYMPH NODE MEDIASTINAL PIGMENT ACCUMULATION 3
MULTIFOCAL TO LOCALLY EXTENSIVE. (2)

ALL OTHER EXAMINED TISSUES WERE UNREMARKABLE

GROSS GRADE CODE: * - NOT SUBMITTED #B- BENIGN, #M- MALIGNANT
HISTO GRADE CODE: 1- SLIGHT, 2- MILD, 3- MODERATE, 4- SEVERE, P- PRESENT, N- NOT TABULATED

INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

APPENDIX NO. 14

PROJECT NO.: 90831

GROUP 4 CERIC OXIDE HIGH DOSE (DAY 92)
 ANIMAL NO. 4500 FEMALE STUDY WEEK OF DEATH 14 (DAY 92)
 TISSUE FINDING GRADE

GROSS PATHOLOGICAL FINDINGS

LUNG DISCOLORATION
 PALE. [5]
 UNCOLLAPSED
 [6]

LYMPH NODE BRONCHIAL ENLARGEMENT
 [3]
 DISCOLORATION
 PALE. [4]

LYMPH NODE MEDIASTINAL ENLARGEMENT
 [1]
 DISCOLORATION
 PALE. [2]

ALL OTHER TISSUES WERE UNREMARKABLE

HISTOPATHOLOGICAL FINDINGS

BRONCHUS PIGMENT ACCUMULATION
 INTRALUMINAL. 1

CAVITY NASAL PIGMENT ACCUMULATION
 INTRAFOLLICULAR (LEVEL III). 1

ARYNX METAPLASIA 1

GROSS GRADE CODE: * - NOT SUBMITTED

HISTO GRADE CODE: 1 - SLIGHT, 2 - MILD, 3 - MODERATE, 4 - SEVERE, P - PRESENT, * - NOT TABULATED

OB - BENIGN, OH - MALIGNANT



INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

APPENDIX NO. 14
PROJECT NO.: 90031

GROUP 4 CERIC OXIDE HIGH DOSE
ANIMAL NO. 4508 (cont'd) FEMALE STUDY WEEK OF DEATH 14 (DAY 92)
TISSUE FINDING GRADE

TISSUE	FINDING	GRADE
LARYNX (cont'd)	BASE OF EPIGLOTTIS, PIGMENT ACCUMULATION MUCOSAL.	1
	PIGMENT ACCUMULATION EXTRA- AND INTRACELLULAR, DIFFUSE. (5,6) EPITHELIAL HYPERPLASIA, ALVEOLAR MULTIFOCAL. HYPERPLASIA, LYMPHOID MULTIFOCAL.	4
LUNG	PIGMENT ACCUMULATION EXTRA- AND INTRACELLULAR, DIFFUSE. (5,6) EPITHELIAL HYPERPLASIA, ALVEOLAR MULTIFOCAL. HYPERPLASIA, LYMPHOID MULTIFOCAL.	2
PARATHYROID	UNAVAILABLE NOT PRESENT IN SECTION.	1
TRACHEA	PIGMENT ACCUMULATION MUCOSAL AND INTRALUMINAL.	3
LYMPH NODE BRONCHIAL	PIGMENT ACCUMULATION MULTIFOCAL TO LOCALLY EXTENSIVE. (4) HYPERPLASIA, LYMPHOID {3}	2
LYMPH NODE MEDIASTINAL	PIGMENT ACCUMULATION MULTIFOCAL TO LOCALLY EXTENSIVE. (2) HYPERPLASIA, LYMPHOID {1}	3
		2

ALL OTHER EXAMINED TISSUES WERE UNREMARKABLE

GROSS GRADE CODE: * - NOT SUBMITTED
HISTO. GRADE CODE: 1 - SLIGHT, 2 - MILD, 3 - MODERATE, 4 - SEVERE, P - PRESENT, * - NOT TABULATED, #B - BENIGN, #M - MALIGNANT

APPENDIX NO. 14 INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS
PROJECT NO.: 90831

GROUP 4 CERIC OXIDE HIGH DOSE
ANIMAL NO. 4509 FEMALE STUDY WEEK OF DEATH 14 (DAY 92)
TISSUE FINDING GRADE

GROSS PATHOLOGICAL FINDINGS

LUNG DISCOLORATION
PALE, [1]
UNCOLLAPSED
[2]

LYMPH NODE BRONCHIAL DISCOLORATION
PALE, [3]
ENLARGEMENT
[4]

ALL OTHER TISSUES WERE UNREMARKABLE

HISTOPATHOLOGICAL FINDINGS

BRONCHUS PIGMENT ACCUMULATION
INTRALUMINAL. 1

CAVITY NASAL PIGMENT ACCUMULATION
INTRAFOLLICULAR (LEVEL II, III). 1

LUNG PIGMENT ACCUMULATION
EXTRA- AND INTRACELLULAR, DIFFUSE. [1,2] 4
EPITHELIAL HYPERPLASIA, ALVEOLAR
MULTIFOCAL. 2
HYPERPLASIA, LYMPHOID 1

GROSS GRADE CODE: * - NOT SUBMITTED #B- BENIGN, #H- MALIGNANT
HISTO GRADE CODE: 1- SLIGHT, 2- MILD, 3- MODERATE, 4- SEVERE, P- PRESENT, *- NOT TABULATED



INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

APPENDIX NO. 14
PROJECT NO.: 90831

GROUP 4 CERIC OXIDE HIGH DOSE
ANIMAL NO. 4509 (cont'd) FEMALE STUDY WEEK OF DEATH 14 (DAY 92)
TISSUE FINDING GRADE

UNG (cont'd) MULTIFOCAL.

ARATHYROID UNAVAILABLE
NOT PRESENT IN SECTION.

RACHEA PIGMENT ACCUMULATION 1
INTRALUMINAL AND MUCOSAL.

LYMPH NODE BRONCHIAL PIGMENT ACCUMULATION 3
MULTIFOCAL TO LOCALLY EXTENSIVE. (3)
HYPERPLASIA, LYMPHOID (4)

ALL OTHER EXAMINED TISSUES WERE UNREMARKABLE

GROSS GRADE CODE: * - NOT SUBMITTED
HISTO GRADE CODE: 1 - SLIGHT, 2 - MILD, 3 - MODERATE, 4 - SEVERE, P - PRESENT, * - NOT TABULATED #B - BENIGN, #M - MALIGNANT



INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

PENDIX NO. 14
OBJECT NO. 1 90831

GROUP	DOSE	WEEK OF DEATH	DAY	FINDING	GRADE
1	4 CERIC OXIDE	HIGH	14	(DAY 92)	
2	4510 FEMALE	STUDY			

GROSS PATHOLOGICAL FINDINGS

ADHESION TO CAPSULE, RIGHT. [1]
DILATATION PELVIS, RIGHT. [8]

UNCOLLAPSED [6]
DISCOLORATION PALE. [7]

ENLARGEMENT [4]
DISCOLORATION [5]

ENLARGEMENT [2]
DISCOLORATION PALE. [3]

ALL OTHER TISSUES WERE UNREMARKABLE

HISTOPATHOLOGICAL FINDINGS

BRONCHUS PIGMENT ACCUMULATION

GROSS GRADE CODE: * - NOT SUBMITTED #B - BENIGN, #M - MALIGNANT
 HISTO GRADE CODE: 1 - SLIGHT, 2 - MILD, 3 - MODERATE, 4 - SEVERE, P - PRESENT, * - NOT TABULATED

INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

APPENDIX NO. 14
PROJECT NO.: 90031

GROUP 4 CERIC OXIDE HIGH DOSE
ANIMAL NO. 4510 (cont'd) FEMALE STUDY WEEK OF DEATH 14 (DAY 92)
TISSUE FINDING GRADE

TISSUE	FINDING	GRADE
ROUNCHUS	(cont'd) MUCOSAL AND INTRALUMINAL.	
CAVITY NASAL	PIGMENT ACCUMULATION INTRAFOLLICULAR (LEVEL III).	1
KIDNEY	DILATATION, PELVIS UNILATERAL. (8) NO CORRELATION WITH GROSS FINDING (1)	1
ARYNX	METAPLASIA BASE OF EPIGLOTTIS. PIGMENT ACCUMULATION INTRAFOLLICULAR.	1
LIVER	PIGMENT ACCUMULATION INTRACELLULAR, SINUSOIDAL, MULTIFOCAL.	1
LUNG	PIGMENT ACCUMULATION EXTRA- AND INTRACELLULAR, DIFFUSE. (6,7) EPITHELIAL HYPERPLASIA, ALVEOLAR MULTIFOCAL.	4
Lymph Node Mandibular	PIGMENT ACCUMULATION MULTIFOCAL.	2
PARATHYROID	ONE PARATHYROID UNAVAILABLE	1

GROSS GRADE CODE: *- NOT SUBMITTED
HISTO-GRADE CODE: 1- SLIGHT, 2- MODERATE, 3- SEVERE, 4- NOT TABULATED, *- BENIGN, #M- MALIGNANT

BIO

APPENDIX NO. 14 INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS
PROJECT NO.: 90031

GROUP 4 CERIC OXIDE HIGH DOSE
ANIMAL NO. 4510 (cont'd) FEMALE STUDY WEEK OF DEATH 14 (DAY 92)
TISSUE FINDING GRADE

TISSUE	FINDING	GRADE
PARATHYROID	(cont'd) NOT PRESENT IN SECTION.	
TRACHEA	PIGMENT ACCUMULATION INTRALUMINAL AND MUCOSAL.	1
Lymph Node BRONCHIAL	PIGMENT ACCUMULATION MULTIFOCAL. [5] HYPERPLASIA, LYMPHOID [4]	4
Lymph Node MEDIASTINAL	PIGMENT ACCUMULATION MULTIFOCAL. [3] HYPERPLASIA, LYMPHOID [2]	4

ALL OTHER EXAMINED TISSUES WERE UNREMARKABLE

GROSS GRADE CODE: *- NOT SUBMITTED #B- BENIGN, #M- MALIGNANT
HISTO GRADE CODE: 1- SLIGHT, 2- MILD, 3- MODERATE, 4- SEVERE, P- PRESENT, *- NOT TABULATED



INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

APPENDIX NO. 14
PROJECT NO.: 90831

GROUP 4 CERIC OXIDE HIGH DOSE
ANIMAL NO. 4511 FEMALE STUDY WEEK OF DEATH 14 (DAY 92)
TISSUE FINDING GRADE

GROSS PATHOLOGICAL FINDINGS

LUNG DISCOLORATION
PALE. [4]
UNCOLLAPSED
[5]

LYMPH NODE BRONCHIAL ENLARGEMENT
[2]
DISCOLORATION
PALE. [3]

LYMPH NODE MEDIASTINAL DISCOLORATION
PALE. [1]

ALL OTHER TISSUES WERE UNREMARKABLE

HISTOPATHOLOGICAL FINDINGS

BRONCHUS PIGMENT ACCUMULATION
INTRALUMINAL. 1

CAVITY NASAL PIGMENT ACCUMULATION
INTRAFOLLICULAR (LEVEL II, III). 1

EYE FOLD/ROSETTE, RETINAL
FOCAL, UNILATERAL. 1

GROSS GRADE CODE: * - NOT SUBMITTED #B - BENIGN, #M - MALIGNANT
HISTO GRADE CODE: 1 - SLIGHT, 2 - MILD, 3 - MODERATE, 4 - SEVERE, P - PRESENT, * - NOT TABULATED

INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

APPENDIX NO. 14
PROJECT NO.: 90831

TISSUE	FINDING	GRADE
GROUP 4 CERIC OXIDE HIGH DOSE	STUDY WEEK OF DEATH 14 (DAY 92)	
MINIMAL NO. 4511 (cont'd) FEMALE		
ARYNX	PIGMENT ACCUMULATION MUCOSAL.	1
LIVER	PIGMENT ACCUMULATION INTRACELLULAR, SINUSOIDAL, MULTIFOCAL.	1
UNG	PIGMENT ACCUMULATION EXTRA- AND INTRACELLULAR, DIFFUSE. [4,5] EPITHELIAL HYPERPLASIA, ALVEOLAR MULTIFOCAL.	4 2
RACHEA	PIGMENT ACCUMULATION INTRALUMINAL AND MUCOSAL.	1
LYMPH NODE BRONCHIAL	PIGMENT ACCUMULATION MULTIFOCAL TO LOCALLY EXTENSIVE. [3] HYPERPLASIA, LYMPHOID [2]	3 3
LYMPH NODE MEDIASTINAL	HYPERPLASIA, LYMPHOID NO CORRELATION WITH GROSS FINDING [1]	1

ALL OTHER EXAMINED TISSUES WERE UNREMARKABLE

GROSS GRADE CODE: # - NOT SUBMITTED
HISTO GRADE CODE: 1 - SLIGHT, 2 - MILD, 3 - MODERATE, 4 - SEVERE, P - PRESENT, * - NOT TABULATED

#B - BENIGN, #M - MALIGNANT

APPENDIX NO. 14
PROJECT NO.: 90031

INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

GROUP 4 CERIC OXIDE HIGH DOSE
ANIMAL NO. 4513 FEMALE STUDY WEEK OF DEATH 14 (DAY 92)
TISSUE FINDING GRADE

GROSS PATHOLOGICAL FINDINGS

LUNG DISCOLORATION
PALE. [5]
UNCOLLAPSED
[6]

LYMPH NODE BRONCHIAL ENLARGEMENT
[3]
DISCOLORATION
PALE. [4]

LYMPH NODE MEDIASTINAL ENLARGEMENT
[1]
DISCOLORATION
PALE. [2]

ALL OTHER TISSUES WERE UNREMARKABLE

HISTOPATHOLOGICAL FINDINGS

BRONCHUS PIGMENT ACCUMULATION
MUCOSAL AND INTRALUMINAL. 1

CAVITY NASAL PIGMENT ACCUMULATION
INTRAFOLLICULAR (LEVEL II, III). 1

KIDNEY CYST 1

GROSS GRADE CODE: * - NOT SUBMITTED #B- BENIGN, #M- MALIGNANT
HISTO GRADE CODE: 1- SLIGHT, 2- MILD, 3- MODERATE, 4- SEVERE, P- PRESENT, N- NOT TABULATED

INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

APPENDIX NO. 14
PROJECT NO.: 90831

GROUP	ANIMAL NO.	TISSUE	EXAMINATION	STUDY WEEK OF DEATH	FINDING	GRADE
4	4513 (cont'd)	FEMALE	HIGH DOSE	14 (DAY 92)		
		KIDNEY	(cont'd)		UNILATERAL.	
		LARYNX			METAPLASIA BASE OF EPIGLOTTIS. PIGMENT ACCUMULATION INTRAFOLLICULAR.	1
		LUNG			PIGMENT ACCUMULATION EXTRA- AND INTRACELLULAR, DIFFUSE. (5,6) EPITHELIAL HYPERPLASIA, ALVEOLAR MULTIFOCAL.	4
		LYMPH NODE MANDIBULAR			PIGMENT ACCUMULATION MULTIFOCAL.	2
		PARATHYROID			UNAVAILABLE NOT PRESENT IN SECTION.	1
		LYMPH NODE BRONCHIAL			PIGMENT ACCUMULATION MULTIFOCAL TO LOCALLY EXTENSIVE. (4) HYPERPLASIA, LYMPHOID (3)	4
		LYMPH NODE MEDIASTINAL			HYPERPLASIA, LYMPHOID (1) PIGMENT ACCUMULATION	3

1283

CROSS GRADE CODE: * - NOT SUBMITTED
HISTO GRADE CODE: 1- SLIGHT, 2- MILD, 3- MODERATE, 4- SEVERE, P- PRESENT, *- NOT TABULATED, #B- BENIGN, #M- MALIGNANT

INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

APPENDIX NO. 14
PROJECT NO.: 90831

GROUP 4 CERIC OXIDE HIGH DOSE GRADE
ANIMAL NO. 4513 (cont'd) FEMALE STUDY WEEK OF DEATH 14 (DAY 92) FINDING

LYMPH NODE MEDIASTINAL (cont'd) MULTIFOCAL TO LOCALLY EXTENSIVE. (2)

ALL OTHER EXAMINED TISSUES WERE UNREMARKABLE

GROSS GRADE CODE: * - NOT SUBMITTED #B - BENIGN, #N - MALIGNANT
HISTO GRADE CODE: 1 - SLIGHT, 2 - MILD, 3 - MODERATE, 4 - SEVERE, P - PRESENT, * - NOT TABULATED

NO

INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

APPENDIX NO. 14
PROJECT NO.: 90031

GROUP	4	CERIC OXIDE	HIGH DOSE	STUDY WEEK OF DEATH	14 (DAY 92)	FINDING	GRADE
ANIMAL NO.	4514	FEMALE					
TISSUE							

GROSS PATHOLOGICAL FINDINGS

UNG
DISCOLORATION
PALE. [5]
UNCOLLAPSED
[6]

YMPH NODE BRONCHIAL
ENLARGEMENT
[3]
DISCOLORATION
PALE. [4]

YMPH NODE MEDIASTINAL
ENLARGEMENT
[1]
DISCOLORATION
PALE. [2]

ALL OTHER TISSUES WERE UNREMARKABLE

HISTOPATHOLOGICAL FINDINGS

TRONCHUS
PIGMENT ACCUMULATION
INTRALUMINAL. 1

CAVITY NASAL
PIGMENT ACCUMULATION
INTRA-FOLLICULAR (LEVEL III). 1

ARYNX
METAPLASIA 1

GROSS GRADE CODE: *- NOT SUBMITTED #B- BENIGN, #M- MALIGNANT
 HISTO GRADE CODE: 1- SLIGHT, 2- MILD, 3- MODERATE, 4- SEVERE, P- PRESENT, *- NOT TABULATED

INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

APPENDIX NO. 14
PROJECT NO.: 50831

GROUP 4 CERIC OXIDE HIGH DOSE
ANIMAL NO. 4514 (cont'd) FEMALE STUDY WEEK OF DEATH 14 (DAY 92)
TISSUE FINDING GRADE

TISSUE	FINDING	GRADE
LARYNX	(cont'd) BASE OF EPIGLOTTIS. PIGMENT ACCUMULATION INTRAFOOLLICULAR.	1
LUNG	PIGMENT ACCUMULATION EXTRA- AND INTRACELLULAR, DIFFUSE. (5,6) EPITHELIAL HYPERPLASIA, ALVEOLAR MULTIFOCAL TO LOCALLY EXTENSIVE.	4 2
PARATHYROID	UNAVAILABLE NOT PRESENT IN SECTION.	
THYROID	CYST, ULTINDRANCHIAL/THYROGLOSSAL REMNANTS UNILATERAL.	1
TRACHEA	PIGMENT ACCUMULATION INTRALUMINAL.	1
LYMPH NODE BRONCHIAL	PIGMENT ACCUMULATION MULTIFOCAL. [4] HYPERPLASIA, LYMPHOID [3]	2 2
LYMPH NODE MEDIASTINAL	HYPERPLASIA, LYMPHOID [1] PIGMENT ACCUMULATION	2 2

GROSS GRADE CODE: * - NOT SUBMITTED
HISTO GRADE CODE: 1 - SLIGHT, 2 - MILD, 3 - MODERATE, 4 - SEVERE, P - PRESENT, * - NOT TABULATED #B - BENIGN, #M - MALIGNANT



INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

APPENDIX NO. 14
PROJECT NO.: 90031

GROUP	ANIMAL NO.	SEX	STUDY WEEK OF DEATH	GRADE
4	4514 (cont'd)	FEMALE	14 (DAY 92)	

GROUP 4 CERIC OXIDE HIGH DOSE
FINDING

TISSUE

LYMPH NODE MEDIASTINAL (cont'd)
MULTIFOCAL. (2)

ALL OTHER EXAMINED TISSUES WERE UNREMARKABLE

GROSS GRADE CODE: * - NOT SUBMITTED
HISTO GRADE CODE: 1 - SLIGHT, 2 - MILD, 3 - MODERATE, 4 - SEVERE, P - PRESENT, * - NOT TABULATED #B - BENIGN, #M - MALIGNANT

INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

APPENDIX NO. 14
PROJECT NO.: 90831

GROUP 4 CERIC OXIDE HIGH DOSE
ANIMAL NO. 4515 FEMALE STUDY WEEK OF DEATH 14 (DAY 92)
TISSUE FINDING GRADE

GROSS PATHOLOGICAL FINDINGS

UNG DISCOLORATION
PALE. [3]
UNCOLLAPSED
[4]

LYMPH NODE BRONCHIAL ENLARGEMENT
[1]
DISCOLORATION
PALE. [2]

ALL OTHER TISSUES WERE UNREMARKABLE

HISTOPATHOLOGICAL FINDINGS

BRONCHUS PIGMENT ACCUMULATION
INTRALUMINAL. 1

CAVITY NASAL PIGMENT ACCUMULATION
INTRA-FOLLICULAR (LEVEL III). 1

UNG PIGMENT ACCUMULATION
EXTRA- AND INTRACELLULAR, DIFFUSE. [3,4] 4
EPITHELIAL HYPERPLASIA, ALVEOLAR
MULTIFOCAL. 2
HYPERPLASIA, LYMPHOID 2

GROSS GRADE CODE: * - NOT SUBMITTED #B- BENIGN, #M- MALIGNANT
HISTO GRADE CODE: 1- SLIGHT, 2- MILD, 3- MODERATE, 4- SEVERE, P- PRESENT, *- NOT TABULATED

INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

APPENDIX NO. 14
PROJECT NO.: 90831

GROUP 4 CERIC OXIDE HIGH DOSE
ANIMAL NO. 4515 (cont'd) FEMALE STUDY WEEK OF DEATH 14 (DAY 92)

GRADE

FINDING

TISSUE

TISSUE	FINDING	GRADE
UNG.	(cont'd) MULTIFOCAL.	
LYMPH NODE MANDIBULAR	PIGMENT ACCUMULATION MULTIFOCAL.	1
STRATHYROID	UNAVAILABLE NOT PRESENT IN SECTION.	
RAGHEA	PIGMENT ACCUMULATION INTRALUMINAL.	1
LYMPH NODE BRONCHIAL	PIGMENT ACCUMULATION MULTIFOCAL TO LOCALLY EXTENSIVE. (2)	3
	HYPERPLASIA, LYMPHOID (1)	4

ALL OTHER EXAMINED TISSUES WERE UNREMARKABLE

GROSS GRADE CODE: * - NOT SUBMITTED

HISTO GRADE CODE: 1- SLIGHT, 2- MILD, 3- MODERATE, 4- SEVERE, P- PRESENT, * - NOT TABULATED

#B- BENIGN, #M- MALIGNANT



INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

APPENDIX NO. 14
PROJECT NO.: 90031

GROUP 4 CERIC OXIDE HIGH DOSE
ANIMAL NO. 4516 FEMALE STUDY WEEK OF DEATH 14 (DAY 92)
TISSUE FINDING GRADE

GROSS PATHOLOGICAL FINDINGS

LIVER AREA PALE
SINGLE, NEAR HILUS, VENTRAL PORTION OF RIGHT LOBE. [1]

LUNG DISCOLORATION
PALE. [4]
UNCOLLAPSED [5]

THYROID SMALL
[6]

LYMPH NODE BRONCHIAL ENLARGEMENT
[2]
DISCOLORATION
PALE. [3]

ALL OTHER TISSUES WERE UNREMARKABLE

HISTOPATHOLOGICAL FINDINGS

BRONCHUS PIGMENT ACCUMULATION
MUCOSAL AND INTRALUMINAL. 1

CAVITY NASAL PIGMENT ACCUMULATION
INTRAFOLLICULAR (LEVEL III). 1

GROSS GRADE CODE: * - NOT SUBMITTED #B- BENIGN, #M- MALIGNANT
HISTO GRADE CODE: 1- SLIGHT, 2- MILD, 3- MODERATE, 4- SEVERE, P- PRESENT, * - NOT TABULATED

INDIVIDUAL GROSS AND HISTOPATHOLOGICAL FINDINGS

APPENDIX NO. 14
PROJECT NO.: 90831

GROUP 4 CERIC OXIDE HIGH DOSE
VIMAL NO. 4516 (cont'd) FEMALE STUDY WEEK OF DEATH 14 (DAY 92)
TISSUE FINDING GRADE

TISSUE	FINDING	GRADE
LIVER	VACUOLATION, HEPATOCELLULAR FOCAL. [1]	1
LUNG	PIGMENT ACCUMULATION EXTRA- AND INTRACELLULAR, DIFFUSE. [4,5] EPITHELIAL HYPERPLASIA, ALVEOLAR MULTIFOCAL.	4 2
LYMPH NODE MANDIBULAR	PIGMENT ACCUMULATION MULTIFOCAL.	1
LYMUS	NO ABNORMAL FINDINGS [6]	
MACHEA	PIGMENT ACCUMULATION INTRALUMINAL.	1
LYMPH NODE BRONCHIAL	PIGMENT ACCUMULATION MULTIFOCAL TO LOCALLY EXTENSIVE. [3] HYPERPLASIA, LYMPHOID [2]	3 3

ALL OTHER EXAMINED TISSUES WERE UNREMARKABLE

GROSS GRADE CODE: * - NOT SUBMITTED
HISTO GRADE CODE: 1 - SLIGHT, 2 - MILD, 3 - MODERATE, 4 - SEVERE, P - PRESENT, * - NOT TABULATED

#B - BENIGN, #M - MALIGNANT



PMI Feeds, Inc.
1401 S. Hanley Road
St. Louis, MO 63144

(314) 768-4100
(314) 768-4765 Fax

PROJECT NO. 90831

TO RICHMOND, IN

CC DAN HOPKINS, 1W
RICHMOND, IN

LAB NO 314081 ENTERED 07/19/93 REPORTED 07/28/93 RMI 5002

CERTIFIED RODENT DIET CHECKERS
LOT NUMBER JUL 17 93 2B

ASSAY	ANALYSIS	UNITS
PROTEIN (N X 6.25)	21.8	%
FAT (ACID HYDRO.)	5.82	%
FIBER (CRUDE)	4.21	%
ARSENIC	0.425	PPM
CADMIUM	0.150	PPM
CALCIUM	0.835	%
LEAD	0.219	PPM
MERCURY	LESS THAN 0.05 PPM	
PHOSPHORUS	0.708	%
SELENIUM	0.250	PPM

ORGANOPHOSPHATE PEST

	(PPM)		(PPM)
DIAZINON.....	LESS THAN 0.02	PARATHION.....	LESS THAN 0.02
DISULFOTON.....	LESS THAN 0.02	THIMET.....	LESS THAN 0.02
ETHION.....	LESS THAN 0.02	THIODAN.....	LESS THAN 0.02
MALATHION.....	0.09	TRITHION.....	LESS THAN 0.02
METHYL PARATHION...	LESS THAN 0.02		

PESTICIDE & PCB

	(PPM)		(PPM)
ALDRIN.....	LESS THAN 0.02	ENDRIN.....	LESS THAN 0.02
ALPHA-BHC.....	LESS THAN 0.02	HCB.....	LESS THAN 0.02
BETA-BHC.....	LESS THAN 0.02	HEPTACHLOR.....	LESS THAN 0.02
DELTA-BHC.....	LESS THAN 0.02	HEPTACHLOR EPOXIDE.	LESS THAN 0.02
CHLORDANE.....	LESS THAN 0.02	LINDANE.....	LESS THAN 0.02
DDE.....	LESS THAN 0.02	METHOXYCHLOR.....	LESS THAN 0.02
DDT..(TOTAL).....	LESS THAN 0.02	MIREX.....	LESS THAN 0.02



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1401 S. Hanley Road
St. Louis, MO 63144

PROJECT NO. 90831

(314) 768-4100

(314) 768-4767

CC DAN HOPKINS, 1W
RICHMOND, IN

LAB NO 315926 ENTERED 07/29/93 REPORTED 08/10/93 RHI 5002

CERTIFIED RODENT DIET CHECKERS
LOT NUMBER JUL 27 93 25

ASSAY	ANALYSIS	UNITS
PROTEIN (N X 6.25)	21.5	%
FAT (ACID HYDRO.)	5.73	%
FIBER (CRUDE)	4.75	%
ARSENIC	0.265	PPM
CADMIUM	0.124	PPM
CALCIUM	0.811	%
LEAD	0.263	PPM
MERCURY	LESS THAN 0.05	PPM
PHOSPHORUS	0.690	%
SELENIUM	0.281	PPM

ORGANOPHOSPHATE PEST

	(PPM)		(PPM)
DIAZINON.....	LESS THAN 0.02	PARATHION.....	LESS THAN 0.02
DISULFOTON.....	LESS THAN 0.02	THIMET.....	LESS THAN 0.02
ETHION.....	LESS THAN 0.02	THIODAN.....	LESS THAN 0.02
MALATHION.....	0.04	TRITHION.....	LESS THAN 0.02
METHYL PARATHION...	LESS THAN 0.02		

PESTICIDE & PCB

	(PPM)		(PPM)
ALDRIN.....	LESS THAN 0.02	ENDRIN.....	LESS THAN 0.02
ALPHACHLOR.....	LESS THAN 0.02	HCB.....	LESS THAN 0.02
BETA.....	LESS THAN 0.02	HEPTACHLOR.....	LESS THAN 0.02
DELTA.....	LESS THAN 0.02	HEPTACHLOR EPOXIDE..	LESS THAN 0.02
CHLORDAN.....	LESS THAN 0.02	LINDANE.....	LESS THAN 0.02
DDE.....	LESS THAN 0.02	METHOXYCHLOR.....	LESS THAN 0.02
DDT..(TOT).....	LESS THAN 0.02	MIREX.....	LESS THAN 0.02



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St. Louis, MO 63144

5926
(314) 768-4100
DIET CHECKERS Fax

PROJECT NO. 90831

PAGE 2

LOT NUMBER JUL 27 93 2B

PESTICIDE & PCB (CONTINUED)
DIELDRIN..... LESS THAN 0.02 PCB..... LESS THAN 0.15

AFLATOXIN
TOTAL: LESS THAN 5 PPB

- FOR ADDITIONAL INFORMATION, PLEASE CONTACT:
- (1) FOR ASSAY METHODOLOGY - MICHAEL J. MURPHY 314-982-3562
 - (2) FOR NUTRITIONAL INTERPRETATION-DR DAN HOPKINS 314-768-4576
 - (3) ALL OTHER QUESTIONS-RICHMOND, IN., MANUFACTURING PLANT 317-962-9561

RESULTS ARE
SUITABLE FOR USE ON ANIMALS

REVIEWED BY: Christian Beaudry 21-01-94



PMI Feeds, Inc.
1401 S. Hanley Road
St. Louis, MO 63144

(314) 768-4100
(314) 768-4765 Fax

PROJECT NO. 90831

TO RICHMOND, IN

CC RICHMOND, IN
DAN HOPKINS, 1W

LAB NO 224600 ENTERED 09/17/92 REPORTED 09/23/92 RHI 5002

CERTIFIED RODENT DIET CHECKERS
LOT NUMBER SEP 15 93 1B

ASSAY	ANALYSIS	UNITS
PROTEIN (N X 6.25)	21.6	%
FAT (ACID HYDRO.)	2.74	%
FIBER (CRUDE)	4.22	%
ARSENIC	0.374	PPM
CADMIUM	0.131	PPM
CALCIUM	0.747	%
LEAD	0.235	PPM
MERCURY	LESS THAN 0.05	PPM
PHOSPHORUS	0.640	%
SELENIUM	0.239	PPM

ORGANOPHOSPHATE PEST

	(PPM)		(PPM)
DIAZINON.....	LESS THAN 0.02	PARATHION.....	LESS THAN 0.02
DISULFOTON.....	LESS THAN 0.02	THIMET.....	LESS THAN 0.02
ETHION.....	LESS THAN 0.02	THIODAN.....	LESS THAN 0.02
MALATHION.....	0.03	TRITHION.....	LESS THAN 0.02
METHYL PARATHION...	LESS THAN 0.02		

PESTICIDE & PCB

	(PPM)		(PPM)
ALDRIN.....	LESS THAN 0.02	ENDRIN.....	LESS THAN 0.02
ALPHA-BHC.....	LESS THAN 0.02	HCB.....	LESS THAN 0.02
BETA-BHC.....	LESS THAN 0.02	HEPTACHLOR.....	LESS THAN 0.02
DELTA-BHC.....	LESS THAN 0.02	HEPTACHLOR EPOXIDE.	LESS THAN 0.02
CHLORDANE.....	LESS THAN 0.02	LINDANE.....	LESS THAN 0.02
DDE.....	LESS THAN 0.02	METHOXYCHLOR.....	LESS THAN 0.02
DDT..(TOTAL).....	LESS THAN 0.02	MIREX.....	LESS THAN 0.02



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St. Louis, MO 63144

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CERTIFIED RODENT DIET CHECKERS
LOT NUMBER SEP 16 93 1B

PESTICIDE & PCB (CONTINUED)
DIELDRIN..... LESS THAN 0.02 PCB..... LESS THAN 0.15

AFLATOXIN
TOTAL: LESS THAN 5 PPB

- FOR ADDITIONAL INFORMATION, PLEASE CONTACT:
- (1) FOR ASSAY METHODOLOGY - MICHAEL J. MURPHY 314-982-2862
 - (2) FOR NUTRITIONAL INTERPRETATION-DR DAN HOPKINS 314-768-4576
 - (3) ALL OTHER QUESTIONS-RICHMOND, IN., MANUFACTURING PLANT 317-962-9561

RESULTS ARE
SUITABLE FOR USE ON ANIMALS

REVIEWED BY:  31-01-94
Christian Beaudry

Bio Recherche Lab. Ltd.
 87 Senneville
 Senneville Qc.
 H9X 3R3

Date: September 9, 1993
 Date received: September 3, 1993
 Project number: 305533

Attention: Mr. Christian Beaudry

Certificate of analysis

Parameters

Samples

	Bldg 2 room 2-157 tank	Bldg 2 room 2-157 membrane	Bldg 2 room 2-157 U.V.	Bldg 2 oom 2-157 return
Total bacterial count/ml				
20 C, 72 hres	142	14	4240	14
35 C, 48 hres	155	17	2940	12
Total Colif./100ml	<2	<2	<2	<2
Fecal colif./100ml	0	0	0	0
Pseudomonas aer./ 100ml	0	0	0	0

1325 rue Newton
 Boucherville
 Québec
 J4B 5H2
 Téléphone:
 514.655.9510
 Fax:
 514.655.7426

✓ 121 Boul. Hébert
 Pointe Claire
 Québec
 H9R 1H6
 Téléphone:
 514.655.2000
 Fax:

France Lafleur
 France Lafleur
 microbiologiste

REVIEWED BY: *[Signature]* 21-09-93
 Christian Beaudry

Bio Recherche Lab. Ltd.
87 Senneville
Senneville Qc.
H9X 3R3

Date: September 13, 1993
Date received: September 10, 1993
Project number: 305 761

Attention: Mr. Christian Beaudry

Certificate of analysis

Parameters

Samples

Bldg 2
room 157
U.V.

Total bacterial count/ml

20 C, 72 hres

L.A.

35 C, 48 hres

24

Total Colif./100ml

<2

Fecal colif./100ml

0

Pseudomonas aer./ 100 ml

0

L.A.: Laboratory accident

1325 rue Newton
Boucherville
Québec
J4B 5H2
Téléphone:
514.655.9510
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514.655.7426

121 Boul. Hymus
Pointe Claire
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Téléphone:
514.697.3411
Fax:
514.697.2000

France Lafleur

France Lafleur
microbiologiste

REVIEWED BY:

Christian Beaudry
2-9-93
Christian Beaudry

APPENDIX NO. 16

- 1300 -

Les Laboratoires
ECO•CNFS

PROJECT NO. 90831

Bio Recherche Lab. Ltd.
87 Senneville
Senneville Qc.
H9X 3R3

Date: September 20, 1993
Date received: September 15, 1993
Project number: 305898

Attention: Mr. Christian Beaudry

Certificate of analysis

Parameters

Samples

Bldg 2
room 157
U.V.

Total bacterial count/ml

20 C, 72 hres

7

35 C, 48 hres

7

Total Colif./100ml

-

Fecal colif./100ml

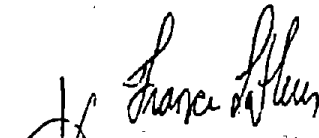
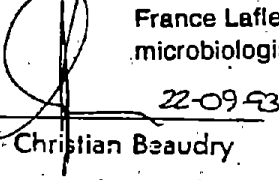
-

Pseudomonas aer./ 100 ml

-

1325 rue Newton
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J4B 5H2
Téléphone:
514.655.9510
Fax:
514.655.7426

✓ 121 Boul. Hymus
Pointe Claire
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Téléphone:
514.697.3421
Fax:
514.697.2060


France Lafleur
microbiologiste
REVIEWED BY:  22-09-93
Christian Beaudry

BIO

MEMORANDUM

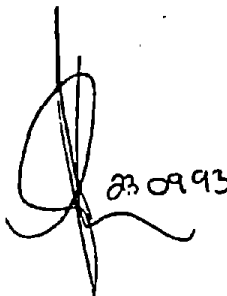
APPENDIX NO. 16

PROJECT NO. 90831

DESTINATAIRE/TO: G. Lulham, C. Perkin cc: Water file ✓
EXPÉDITEUR/FROM: C. Beaudry G. Goldsmith
DATE/DATE: September 21, 1993 Q.A. Units
OBJECT/SUBJECT: Microbiological water analysis result

Results from microbiological analysis performed on September 3, 10 and 15, 1993 have been reviewed. Water from all buildings is considered suitable for use on animals. Certificates of analysis are kept in the appropriate binder and can be consulted upon request.

Thank you



Handwritten signature and date: 23 09 93

BIO

APPENDIX NO. 16

MEMORANDUM

- 1302 -

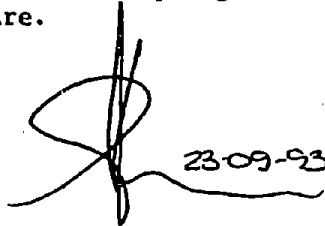
PROJECT NO. 90831

DESTINATAIRE/TO: Water file cc: G. Goldsmith
EXPÉDITEUR/FROM: C. Beaudry Q.A. Unit
DATE/DATE: September 23, 1993
OBJECT/SUBJECT: Microbiological water analysis result - Sep. 3, 10, 15, 1993

The certificates of analysis for water samples taken on Sep. 3, 10 and 15, 1993 were reviewed and they indicate that:

- The first sample collected on September 3 from Building 2 U.V. light was contaminated. A second sample has been collected on September 10 and unfortunately the ECO-CNFS LAB. mentioned a laboratory accident. A third sample has been performed on September 15 and the result was within the acceptable range. The high bacterial count reported for the first sampling was caused by contamination during sampling procedure.

Thank you



23-09-93

Bio Recherche Lab. Ltd.
87 Senneville
Senneville Qc.
H9X 3R3

Date: January 11, 1994
Date received: December 02, 1993
Analysed: December 03, 1993
Project number: 308 643
Revised: March 14, 1994

Attention: Ghislaine Morin

Certificate of analysis

Parameters

Samples

	Bldg 2 room 157 tank	Bgdg 2 room 157 membrane	Bldg 2 room 157 U.V.	Bldg 2 room 157 return
Total bacterial count/ml				
20 C, 72 hres	670	800	0	970
35 C, 48 hres	490	1700	0	1020
Total Colif./100 ml	<2	<2	<2	<2
Fecal colif./100ml	0	0	0	0
Pseudomonas aer./ 100 ml	0	0	0	0

1325 rue Newton
Boucherville
Québec
J4B 5H2
Téléphone:
514.655.9510
Fax:
514.655.7426

France Lafleur
France Lafleur
microbiologiste

RESULTS ARE
SUITABLE FOR USE ON ANIMALS

REVIEWED BY:

Christian Beaudry
Christian Beaudry

230304

✓ 121 Boul. Hymus
Pointe Claire
Québec
H9R 1E6
Téléphone:
514.697.3211
Fax:
514.697.2090

Bio Recherche Lab. Ltd.
87 Senneville
Senneville Qc.
H9X 3R3

Date: January 11, 1994
Date received: December 09, 1993
Project number: 308 882

Attention: Mr. Christian Beaudry

Certificate of analysis

Parameters

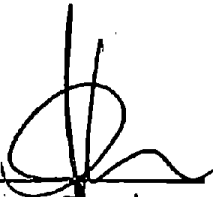
Samples

	Bldg 2 room 157 membrane	Bldg 2 room 157 return	Bldg 2 room 157 tank
Total bacterial count/ml			
20 C, 72 hres	131	268	75
35 C, 48 hres	147	239	64
Total Colif./100ml	<2	<2	<2
Fecal colif./100ml	0	0	0
Pseudomonas aer./ 100 ml	0	0	0

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Pointe Claire
Québec
H9R 1E6
Telephone:
514.697.3403
Fax:
514.697.2093

REVIEWED BY:


Christian Beaudry 25-01-94


France Lafleur
microbiologiste

BIO

APPENDIX NO. 16

PROJECT NO. 90831

MEMORANDUM

DESTINATAIRE/TO: G. Lulham, C. Perkin ✓

cc: Water file
G. Goldsmith
Q.A. Unit

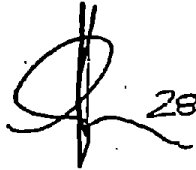
EXPÉDITEUR/FROM: C. Beaudry

DATE/DATE: January 21, 1994

OBJECT/SUBJECT: Microbiological water analysis result, December 1993

Results from microbiological analysis performed on December 03 and 09, 1993 have been reviewed. Water from all buildings was considered suitable for use on animals. Certificates of analysis are kept in the appropriate binder and can be consulted upon request.

Thank you

 28-1-94



MEMORANDUM

PROJECT NO. 90831

DESTINATAIRE/TO: Water file

cc: C. Beaudry
G. Goldsmith
Q.A. Unit

EXPÉDITEUR/FROM: G. Morin

DATE/DATE: January 21, 1994

OBJECT/SUBJECT: Microbiological water analysis result December 1993

The microbiological water analysis of sampling performed on December ⁰² 03 and 09, 1993 were reviewed and indicated that:

-The first sample collected in Building No. 2 on December ⁰² 03, 1993 from the membrane, the return line and the tank were contaminated. The membrane has been cleaned and disinfected with formaldehyde. A second samples have been collected on December 09, 1993 and the results were within the acceptable range.

G. Morin 21-01-94
[Signature] 28-01-94

Ⓐ Wrong entry G. Morin 23-3-94

Ⓑ Wrong entry [Signature] 30-03-94

APPENDIX NO. 16

Laboratoires
Eco•CNFS Inc.

PROJECT NO. 90831

CERTIFICATE OF ANALYSIS

CLIENT : BIO RECHERCHES LAB LTD
ATTENTION : GHYSLAINE MORIN
ADRESS : 87 SENNEVILLE, QUÉ.
: H9X 3R3

PROJECT NUMBER :308643
DATE OF RECEPTION :3 DÉCEMBRE 1993
SAMPLING DATE :2 DÉCEMBRE 1993
PURCHASE ORDER :

COMMENTS :

LABORATORY NUMBERS IDENTIFICATION	WATER SAMPLES (mg/L)		
	12 BUILD 5 TANK	13 BUILD 2 TANK	14 BUILD 3 END OF LINE
Appearance	Clear & Bright	Clear & Bright	Clear & Bright
Alkalinity in CaCO3	1.9	2.6	22
Chlorides	<0.5	<0.5	4.8
Conductivity (µmhos/cm)	-	-	-
Colors (TCV)	<3	<3	<3
Dissolved solids	73	18	102
Fluorides	<0.05	<0.05	<0.05
Nitrates in N	0.72	<0.05	0.52
Nitrites in N	<0.05	<0.05	<0.05
Odor	Odorless	Odorless	Odorless
Phenols	<0.002	<0.002	<0.002
Sulfides	<0.05	<0.05	<0.05
Sulphates	2.6	<0.5	27
Arsenic	<0.001	<0.001	<0.001
Cadmium	<0.0003	<0.0003	<0.0003
Calcium	0.06	0.03	15.9
Chromium	<0.001	<0.001	<0.001
Copper	0.03	0.02	0.06
Iron	0.02	0.04	0.05
Manganese	<0.01	<0.01	<0.01
Mercury	<0.0002	<0.0002	<0.0002
pH	5.7	6.0	7.0
Lead	0.001	0.001	<0.001
Selenium	<0.001	<0.001	<0.001
Zinc	0.03	<0.01	<0.01

Any sample pertaining to this report will be kept 30 days after report date.

REVIEWED BY:

Christian Beaudry

Chemist :

Date :

29 Mars 1994

Signature
Michel Godin
1994-032
QC 2000

APPENDIX NO. 16

Laboratoires
Eco•CNFS Inc.

PROJECT NO. 90831

ANALYSIS CERTIFICAT

CLIENT : BIO RESEARCH LTD.
RESPONSABLE : GHISLAINE MORIN
ADRESS : 87 SENNEVILLE
: SENNEVILLE, QUEBEC
: H9X 3R3

PROJECT # : 308643
RECEPTION DATE : 3/12/93
SAMPLING DATE : 02/12/93
P.O. # : _____

REMARK :

LABORATORY NUMBER	WATER SAMPLE (mg/L)	
	1	2
IDENTIFICATION	BUILD.TANK #5	BUILD.TANK #2
Organochlorinated Pesticide		
Lindane	< 0.00001	< 0.00001
Heptachlor	< 0.00001	< 0.00001
Aldrin	< 0.00001	< 0.00001
Toxaphene	< 0.0001	< 0.0001
Endrin	< 0.00001	< 0.00001
4,4'-DDT	< 0.00001	< 0.00001
Methoxychlor	< 0.00001	< 0.00001
Polychlorinated biphenyls	< 0.0001	< 0.0001
Phenoxy Acids		
2,4-D	< 0.0001	< 0.0001
2,4,5-TP	< 0.0001	< 0.0001

QUALITY CONTROL	Recovery	Recovery
RECOVERY STANDARD	%	%
Nonachlorobiphenyl	72	108
2,4,6-Tribromophenol	95	85

REVIEWED BY: Christian Beaudry 4-4-94



All samples will be kept 30 days after the emission of the certificat.

Supervisor : [Signature]

Chemist : [Signature]
Date : 03/25/94

MEMORANDUM

PROJECT NO. 90831

DESTINATAIRE/TO: Water file

cc: C. Beaudry
G. Goldsmith
Q.A. Unit

EXPÉDITEUR/FROM: G. Morin

DATE/DATE: March 31, 1994

OBJECT/SUBJECT: Chemical water analysis result, December 1993

The chemical analysis of water sampling performed on December 02, 1993 were reviewed and indicated that:

-The sample collected in Building No. 2, 5 and ultra pure water indicated a PH value slightly below the acceptable range. However the water is considered acceptable for use of animals since this parameter is not generally considered health related. the Animal Resources Manager will take action only if the PH results are excessive and could result in health problems. No related clinical signs on animals using this water have been observed since the sampling.

Thank you

G. Morin 31-03-94
[Signature] 31-03-94

BIO

APPENDIX NO. 16

MEMORANDUM

- 1310 -

PROJECT NO. 90831

DESTINATAIRE/TO: G. Lulham, C. Perkin

cc: Water file
G. Goldsmith
Q.A. Unit


EXPÉDITEUR/FROM: C. Beaudry

DATE/DATE: March 31, 1994

OBJECT/SUBJECT: Chemical water analysis result, December 1993

Results from chemical analysis of water sampling performed on December 02, 1993 have been reviewed. Water from buildings 2, 3, 5 and ultra pure water is considered suitable for use on animals. Certificates of analysis are kept in the appropriate binder and can be consulted upon request.

Thank you


310374

APPENDIX NO. 17

PROJECT NO. 90831

SIEGE SOCIAL : 25, QUAI PAUL
TEL. (1) 47.68.12.34

RHONE-POULENC CHIMIE
UMER 92408 COLRBEVOIE CEDEX
SOCIETE ANONYME AU CAPITAL DE 2402500000 DE FRF
NANTERRE B642014526



PRODUCT : OPALINE BROYEE

CUSTOMER : RHONE POULENC INC. C/O SILVEY SHIPPING CO
ADDRESS : BLDG. 75, SUITE 211
NORTH HANGAR ROAD, JFK INTL AIRPORT
JAMAICA, NY 11430
U.S.A.

ORDER NR : 287998 WEIGHT : 200,000 KG
EXPEDITION NR : 287998/00001
BRANCH OFFICE ORDER REFERENCE : 25903
CLIENT ORDER REFERENCE : 125903

CERTIFICATE OF ANALYSIS

BATCH : 9019101 WEIGHT : 200,000 KG

DETERMINATIONS	UNITS	RESULTS
LOSS ON IGNITION	%/TEL <	0.50
* FE2O3	PPM/TEL <	100.0
> 63 MIC. (250 MESH)	%/TEL =	2.10
* PR6O11	PPM/OT <	25.0
* ND2O3	PPM/OT <	25.0

PRODUCT QUALITY MANAGER

RHONE-POULENC CHIMIE - LA ROCHELLE
SEPTEMBER 14, 1992
ENVOI : J.GLEBA/SHELTON
) : STATISTICAL QUALITY CONTROL CERTIF : 92/ 3376

RECEIVED
SEP 24 1992
Rhone-Poulenc Chimie Inc.

16 SEP. 1992

APPENDIX NO. 17

OPALINE UNGROUND

TECHNICAL DATA SHEET

Formula : CeO₂

C.A.S. : 1306-38-3

"AS IS" BASIS			RARE EARTH OXIDE BASIS		
Buff agglomerates 0.1 to 5 mm			CeO ₂%	99.95	min
LOI (1000°C).....%	1	max	Pr ₆ O ₁₁ppm	25	max
Total REO.....%	99	min	Nd ₂ O ₃ppm	25	max
Fe ₂ O ₃ppm	75	max			

Lot Size : 500 kg

PACKAGING : 50 kg plastic drum.

SAFETY : Material Safety Data Sheet is available which describes the safety precautions to be used with the product.

514009/6



RHÔNE-POULENC BASIC CHEMICALS CO.
FINE INORGANIC CHEMICALS

ONE CORPORATE DRIVE, BOX 881
SHELTON, CT 06484
TEL: (203) 925-3685
TELEX: 4750055
FAX: (203) 925-8182

All information is offered in good faith, without guarantee or obligation for the accuracy or sufficiency thereof, or the results obtained, and is accepted at user's risk. Nothing herein shall be construed as a recommendation for uses which infringe valid patents or as extending a license under valid patents.

APPENDIX NO. 18



BIO-RESEARCH LABORATORIES LTD.

CONFIDENTIAL

PROTOCOL

A 13-WEEK INHALATION TOXICITY AND NEUROTOXICITY
STUDY BY NOSE-ONLY EXPOSURE OF A DRY POWDER AEROSOL
OF CERIC OXIDE IN THE ALBINO RAT

All phases of the study performed at Bio-Research Laboratories will comply with the EPA TSCA Good Laboratory Practice Standards (40 CFR Part 792), Japanese MEW Good Laboratory Practice Regulations (Notification No. 313 and subsequent revised rule Notification No. 870) and OECD guidelines (No. 413). All procedures conducted at these laboratories will be in accordance with Bio-Research's Standard Operating Procedures.

For: Rhône-Poulenc Inc.
PO Box 12014
2 T.W. Alexander Drive
Research Triangle Park, NC
U.S.A.

Project No.: 90831

Date: August 6, 1993

Page 1 of 19 Pages

MONTREAL

87 Seneville Rd., Seneville, Quebec H9X 3R3, Canada
Tel: (514) 630-8200, Cable: BIOCAN Fax: (514) 457-5663

BIO

APPENDIX NO. 18

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PROJECT NO. 90831

PAGE 2 OF 19 PAGES

PROTOCOL

PURPOSE To investigate the potential toxicity of a powder aerosol of ceric oxide (CeO_2) during daily inhalation administration to the rat for a minimum of 13 consecutive weeks.

PROJECT NO. 90831

PROTOCOL DATE August 6, 1993

SPONSOR Rhône-Poulenc Inc.
PO Box 12014
2 T.W. Alexander Drive
Research Triangle Park, NC
U.S.A.

TESTING FACILITY Bio-Research Laboratories Ltd.
87 Senneville Road
Senneville, Quebec
Canada H9X 3R3

TEST ARTICLE Ceric oxide

ROUTE OF ADMINISTRATION Nose-only inhalation

GROUPS AND TREATMENT One air control and 3 treated groups each consisting of 15 males and 15 females. (Total number of animals: 70 males and 70 females including 10/sex for a health screen examination) plus an appropriate number of spares.

DURATION OF TREATMENT 13 weeks minimum

STUDY DIRECTOR A. Viau, B.Sc.

BIO

APPENDIX NO. 18

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PROJECT NO. 90831
PAGE 3 OF 19 PAGES

BEHAVIORAL
TOXICOLOGIST

P. Beyrouty, B.Sc.

PATHOLOGISTS

P. Tellier, D.V.M., Dip.Path., M.Sc.
Diplomate A.C.V.P.
Vice President, Pathology

B. Broxup, B.V.Sc., D.V.Sc., M.R.C.V.S.
Director, Scientific Development

R. Stejskal, M.S.Dr., Ph.D.
Associate Scientific Director, Pathology

N. Hamelin, D.V.M., Dip.Path., M.Sc.
Senior Pathologist

W. Evering, D.V.M., Ph.D.
M. Chagnon, D.V.M., Dip.Path., M.Sc.
Staff Pathologists

PARTICIPATING
SCIENTISTS

G.W. Lulham, M.Sc.
Director, Toxicology

C. Banks, B.Sc.
Scientific Director, Inhalation Toxicology

Y. Deschamps, Ph.D.
Director, Clinical Laboratories

A. Provencher, D.V.M., Dip.Clin.Path.
Staff Scientist, Clinical Laboratories

P. Burnett, B.Sc.
Manager, Analytical Chemistry

K. Robinson, B.Sc.
Scientific Director,
Reproductive Toxicology

QUALITY ASSURANCE
MANAGEMENT

P. Sidney, B.Sc.
Director, Quality Assurance and Support Services

A. Gagné, B.Sc.
Manager, Quality Assurance

APPENDIX NO. 18

CLINICAL
VETERINARIAN
AND ANIMAL
RESOURCES MANAGER C. Beaudry, D.V.M.

CLINICAL
VETERINARIAN S. Faubert, D.V.M.

PROPOSED TREATMENT
STARTING DATE To be determined *

PROPOSED TREATMENT
COMPLETION DATE To be determined *

TARGET DATE FOR
COMPLETION
OF AUDITED
DRAFT REPORT As per contract

TEST SYSTEM

<u>Species</u>	<u>Rattus norvegicus</u>
<u>Strain</u>	Sprague-Dawley CD (Cr1: CD ^R (SD)BR)
<u>Source</u>	Charles River Canada Inc. St. Constant, Quebec, Canada
<u>Age</u>	Approximately 7 weeks at the onset of treatment
<u>Weight</u>	Males approximately 250-300 g and females approxi- mately 150-200 g at the onset of treatment
<u>Acclimation Period</u>	<u>Circa 2 weeks</u>

Actual age, weight, acclimation period and number of animals received to be documented in the final report.

REASON FOR CHOICE OF TEST SYSTEM

The rat is a standard species for use in inhalation toxicity and neurotoxicity studies.

* A detailed study schedule relating to all critical phases of this study will be issued prior to the commencement of dosing.

APPENDIX NO. 18

RATIONALE FOR STUDY CONDUCT

The requirements for, and use of animals in, this research are the responsibility of the Sponsor, in that the research does not unnecessarily duplicate previous animal experiments and is being conducted in the absence of acceptable non-animal alternatives to accomplish its objective.

TEST ARTICLE

Identity	Ceric oxide (CeO ₂)
Supplier	Sponsor

The test article will be characterized by the Sponsor. All data relevant to such analyses will be retained by the Sponsor who will provide a test article Certificate of Analysis for inclusion in the study report.

Details of purity, stability, storage conditions and handling precautions will be supplied by the Sponsor. These documents will be retained in the Pharmacy Department of Bio-Research Laboratories Ltd.

With the exception of an archive sample, all test article remaining at study termination will be returned to the Sponsor.

REASON FOR CHOICE OF ROUTE OF ADMINISTRATION

The inhalation route has been selected since this is a possible route of exposure in humans.

ABSORPTION OF TEST ARTICLE

It is not the intention of this study to investigate the absorption of the test article.

HANDLING OF TEST ARTICLE

The test article will be stored at room temperature and out of direct light. Each container of test article will be labeled with the project number, identity of the contents, a unique identification number, a lot number, an expiration date, storage conditions and handling precautions, as appropriate. A log book will be maintained indicating where and when individual test article containers are used.

Samples of test material (5 g) will be returned to the Sponsor, both before and after the treatment period, in order to assess the stability of the test article during treatment.

ANIMAL MANAGEMENT

On arrival, all animals will be subjected to a general physical examination by a qualified member of the veterinary staff to ensure "normal" health status 1.

Animals will be housed individually in stainless-steel wire-mesh bottomed cages, equipped with an automatic watering valve. All cages will be clearly labeled with a color-coded cage card indicating project, group and animal numbers, sex and dosage level.

Each animal will be uniquely identified using the AIMS tail tattoo system, with the exception of health screen animals which will be identified by means of a standard system of ear notching.

The animal room environment and photoperiod will be controlled (targeted conditions: 12-15 air changes/hour, temperature $22 \pm 3^{\circ}\text{C}$, humidity $50 \pm 20\%$, 12 hours light and 12 hours dark).

DIET

All animals will have access to a standard certified commercial laboratory diet (PMI Certified Rodent Chow 5002: PMI Feeds, Inc.) except during treatment, urinalysis, prior to bleeding and necropsy. Animals will also be provided with tap water ad libitum (except during exposure) which has been softened, purified by reverse osmosis and sterilized by ultraviolet light.

Maximum allowable concentrations of contaminants in the diet (e.g., heavy metals, aflatoxin, organophosphate, chlorinated hydrocarbons, PCBs) are controlled and routinely analyzed by the manufacturers.

Periodic analysis of the water is subcontracted to management authorized analytical laboratories which are audited by the Quality Assurance Department of Bio-Research Laboratories Ltd. The analytical results are retained in the archives of Bio-Research Laboratories Ltd.

It is considered that there are no known contaminants in the dietary materials that could influence the toxicity of the test article.

ACCLIMATION AND RANDOMIZATION

An acclimation period of approximately 2 weeks will be allowed between animal receipt and the start of treatment in order to acclimate the rats to the laboratory environment.

Before the assignment of animals to treatment groups, 10 male and 10 female rats will be selected from the total population using computer generated random numbers for the provision of blood samples, urine samples

BIO

and gross pathology examination for health-screen purposes. The results of these investigations will be available prior to the commencement of treatment.

Approximately 1 week before treatment initiation, all rats will be weighed and assigned to treatment groups using a computer-based randomization procedure which ensures homogeneity of group means and variances for body weight. Males and females will be processed separately. Rats in poor health or at the extremes of the body weight range will not be assigned to treatment groups.

Where relevant, any animals considered unacceptable for use in the study will normally be replaced from additional animals included with the batch of animals ordered for the study.

Animals will be randomized into the following groups:

<u>Group/ Identification</u>	<u>Target Exposure Level (mg/L)</u>	<u>Animal No.</u>	
		<u>Males</u>	<u>Females</u>
1 Air control	0	1001-1015	1501-1515
2 Low dose	0.01	2001-2015	2501-2515
3 Intermediate dose	0.1	3001-3015	3501-3515
4 High dose	1.0	4001-4015	4501-4515

Approximately 2 weeks after the start of treatment, all spares remaining unassigned to groups will be discarded from the study.

Reason for Dose Level Selection

The dose levels will be selected according to the proposed human exposure, existing toxicity data and any limitations imposed by the exposure apparatus and procedure as well as the stability of the experimental atmosphere.

TREATMENT

1. Experimental Design

The air control group (Group 1) will be restrained and handled in the same manner as the test groups. The air control rats will be exposed to filtered conditioned air only, using a system identical to that of the test groups. The 3 levels of exposure to the test article will be achieved by varying the rate of test article introduction into the exposure chamber.

BIO

2. Description of Inhalation Exposure Equipment

Standard stainless-steel cylindrical "flow-through" nose-only inhalation chambers (chamber volume approximately 127 L) will be utilized in this experiment. The body of each chamber has 60 separate ports in three separate rows into which can be inserted the conical front section of a polycarbonate restraint cone. The top section of the inhalation chamber has an opening for inlet air into which the test article can be introduced. The bottom section of the chamber has a corresponding air extraction port and a drain valve for cleaning. The chamber is mounted on a transport cart such that the chamber can be easily rotated. The chambers will be operated under slight negative pressure to prevent outward leakage of the test atmospheres.

The cones which serve to restrain individual rats are custom-molded polycarbonate tubes of three different sizes which can accommodate weanling rats, young adults and adult rats. One end of the cone is tapered to approximately fit the shape of the rat's head and the diameter of the cylindrical portion of the cone is such that it is difficult for the rat to turn in the cone. The back portion of the cone is sealed with a plastic cap. The cone containing the rat is fastened to the inhalation chamber by means of a bracket with the nose portion of the cone protruding through a gasket into the chamber. This permits the rat to inhale the test or control atmospheres within the inhalation chamber without otherwise coming in contact with the atmosphere.

During the acclimation period, the rats will be conditioned to the laboratory setting and restraint cones. The rats will be acclimated to the restraint cones over a period of at least 3 days.

The flow rate through the inhalation chamber will be set at a level determined in preliminary work to be adequate to maintain a chamber environment of 20-24°C, 30-70% relative humidity and at least 19% O₂ (prior to test article introduction) with the present animal load. A Sihi low-pressure vacuum pump will be used to exhaust the inhalation chamber at the required flow rate and draw the contaminated air through a purifying system.

The inhalation chamber and test article generation system for the test groups will be contained within separate ventilated walk-in fumehoods to prevent possible contamination of the room air with trace amounts of the test article.

3. Duration of Exposure

The rats will be subjected to "nose-only" exposure for six hours a day, 5 days each week for a minimum of 13 weeks. Rats will be exposed up to the day preceding scheduled necropsy. For each test

group, time zero will be defined as that point in time at which approximately 95% of the desired concentration of test article has been established within the chamber. Flow rate through the chamber will be calculated to yield a t_{95} (the time required to build up 95% of the target concentration) of no more than approximately 5 minutes. The t_{95} and t_{05} (the time to decay to 5% of the established concentration) will be calculated and reported.

During exposure, aerosol will be actively generated for 360 minutes (for the duration of the t_{95} plus 355 minutes). Following 360 minutes of continuous operation, aerosol generation will be stopped, and the chamber concentration allowed to decay for the calculated t_{05} . The rats will then be removed from the exposure chamber and will be returned to their home cages.

4. Atmosphere Generation System

The test atmospheres will be established using a fluid energy air mill supplied with conditioned and filtered compressed air. Chamber concentration will be controlled by varying the rate of test article introduction into the chamber.

MONITORING OF EXPERIMENTAL ATMOSPHERES

1. Prestudy Chamber Atmosphere Validation

Prior to the start of treatment, a target chamber aerosol concentration for each dose level will be established and the gravimetric concentrations of each atmosphere determined from open-face glass fiber filter samples collected at a representative animal breathing point.

Analysis of the aerosol particle size distribution will be performed for each dose level using an Andersen 1 ACFM Cascade Impactor.

The homogeneity of chamber atmosphere distribution will be evaluated for the low and high dose test article chambers. Three ports will be sampled in sequence on the top and bottom animal levels of the chamber in duplicate. The overall mean of each run with the standard deviation will be determined.

2. Chamber Concentrations

Chamber concentrations of aerosol will be measured hourly each day from the animal breathing zone using a gravimetric method. Should the weight of any sample vary by 20% or more from samples previously obtained on this study, the sampling will be repeated immediately. Each test atmosphere will be continually monitored throughout the exposure period by a precalibrated real-time aerosol monitor (RAM) to provide instantaneous qualitative feedback on temporal atmosphere

concentration stability. Filters from the first day of treatment, and monthly thereafter will be forwarded to the Sponsor for chemical analysis.

Nominal chamber concentrations will be calculated from the airflow through the chamber and the quantities of test compound used.

3. Particle Size Analysis

Analysis of the aerosol particle size distribution at a representative animal breathing point in each of the test atmospheres will be performed weekly using an Andersen 1ACFM cascade impactor operated at a flow rate of 28.3 LPM (Liters Per Minute). Sampling durations will be selected to collect approximately 10 mg of test article. The method used will consist of classification into a series of size ranges followed by gravimetric analysis.

From the deposit collected at each stage, the mass median aerodynamic diameter and its geometric standard deviation (MMAD \pm GSD) will be calculated.

4. Chamber Conditions

Chamber airflow, temperature and humidity will be recorded hourly during the exposure period.

OBSERVATIONS

Dated and signed records of activities relating to the day-to-day running and maintenance of the study within the animal room as well as the activities relating to the observations and examinations outlined in this protocol will be recorded in the Project Log Book.

1. Clinical Examination

All animals will be examined within the cage twice daily for mortality and morbidity. Also, each animal will be examined before and after exposure for signs of reaction to treatment. In addition, animals will be examined hourly during exposure for any overt signs of reaction to treatment. A complete examination for clinical signs will be performed weekly. Additional examinations may be performed if considered necessary. Mortalities and observed clinical signs will be individually recorded.

Moribund animals will be sacrificed for humane reasons at the discretion of the attending clinical veterinarian and/or study director (in consultation with the Sponsor, if possible), blood samples will be obtained, and a detailed internal and external gross examination will be performed. Any animal not considered able to

survive will be sampled for blood, killed and subjected to post mortem examination.

2. Body Weight

Body weight will be measured for each animal weekly, commencing the day of randomization and extending throughout the treatment period. In addition, each animal will be weighed on the days of behavioral testing and immediately before sacrifice at necropsy.

3. Food Consumption

Individual food consumption will be measured weekly commencing the day of randomization and extending throughout the treatment period.

4. Functional Observational Battery (FOB)

All animals will be tested prior to commencement of treatment, on Day 1 (post-dosing) and once during each of Weeks 4, 8 and 13. Testing will be performed by the same trained technicians, wherever possible, who will be blind to the animal's treatment.

4.1 Qualitative

Observations in Home Cage

body position
tremors, twitches,
convulsions
bizarre/stereotypic behavior

Removal from Home Cage

ease of removal
vocalization

Observations in Arena

rearing
ataxic, hypotonic and
impaired gait
overall gait incapacity
bizarre/stereotypic behavior
palpebral closure
tremors, twitches,
convulsions
piloerection
respiratory rate/pattern
locomotor activity level
arousal
grooming
defecation
urination
olfactory response

Handling Observations

lacrimation
pupil size
salivation
urinary staining
diarrhea
body and abdominal tones
extensor thrust
corneal reflex
pinna reflex
toe and tail pinch
visual placing

On Surface

auricular startle
air righting reflex

On Top of Box

positional passivity

4.2 Quantitative

4.2.1 Grip Strength

Before the start of testing and following completion of testing on each day, the Chatillon strain gauges will be checked using calibration weights and the readings recorded.

Forelimb

The dial on the gauge will be set to "0". The rat will be held by the body and/or tail and allowed to grip the mesh, and then will be pulled slowly and steadily until it releases its grip. Maximum strain will be recorded two times alternating with hindlimb grip testing.

Hindlimb

The dial on the gauge will be set to "0". The rat will be allowed to set its hindpaws against the mesh and will be pulled backward by the base of the tail until it releases its grip. The maximum strain will be recorded two times alternating with forelimb grip testing.

4.2.2 Hindlimb Splay

Landing foot spread will be measured using inking of the hind feet. Hindlimb splay will be recorded twice. The ink will be wiped off the feet after testing using a paper towel dampened with water.

4.2.3 Body Temperature

The rectal probe will be gently inserted, the reading allowed to stabilize and the temperature then recorded.

The functional observational battery will be performed with equipment built for this purpose. The arena is a 2' square of plexiglass placed on a raised platform. The tests will be conducted in the room housing the animals, where temperature, humidity and photoperiod are monitored. Odors in the room will be minimized by maintaining adequate air changes and cleaning of equipment, as necessary.

5. Motor Activity

Following the FOB assessments the animals will be transferred to a testing room where activity levels will be measured individually in figure 8 enclosures. Animals will be tested prior to commencement of treatment, and during Weeks 4, 8 and 13. Animals from the control and treated groups will be balanced across enclosures, where possible, using a preassigned distribution. The sessions will be of 1-hour duration and activity counts will be recorded by a microcomputer in 6 successive 10-minute intervals.

In the testing room, temperature and humidity will be monitored and a background sound level of approximately 70 dBA and an illumination of approximately 1000-1200 Lux maintained throughout testing. Light levels in the testing room will be measured before the start of testing and following completion of testing on each day. The sound level will be recorded on a continuous basis throughout testing on each day.

In addition to the "diagnostic" function in the system, a check of each beam will be made by manually "breaking" each beam a predetermined number of times and verifying that the "breaks" were properly recorded. These checks will be made at least prior to the start of testing and at the completion of testing on each day.

6. Laboratory Investigations

Prior to commencement of treatment, laboratory investigations (hematology, clinical biochemistry and urinalysis) will be performed on the 10 male and 10 female "health screen" animals.

Hematology and biochemistry will be performed in Week 6 and on all surviving animals at study termination (at necropsy). Food will be removed overnight from animals to be sampled for hematology and biochemistry. Blood samples will be collected from the tail vein in Week 6 and from the abdominal aorta at necropsy.

Urine samples will be collected in Weeks 6 and 13 (after the final FOB assessment) from individual animals placed in metabolism cages overnight (approximately 16-hour collection period) during which time they will be deprived of food.

6.1 Hematology (using EDTA or Citrate* as anticoagulant)

Parameters examined:

red blood cell count	mean platelet volume (MPV)
hemoglobin	white blood cell count
hematocrit	(total and
erythrocyte indices	differential)
(calculated: MCV, MCH,	prothrombin time (PT)*
MCHC and RDW)	blood cell morphology
platelet count	

Bone marrow smears will be prepared as described in TERMINAL PROCEDURES, Section 3. Tissue Preservation.

6.2 Clinical Biochemistry (using no anticoagulant)

Parameters examined:

alkaline phosphatase (ALP)	creatinine
alanine amino-transferase	total protein
(ALT)	albumin
aspartate amino-transferase	globulin (calculated)
(AST)	A/G ratio (calculated)
total bilirubin	sodium
cholesterol	chloride
triglycerides	potassium
glucose	calcium
blood urea nitrogen (BUN)	inorganic phosphorus

6.3 Urinalysis

Parameters examined:

color and appearance	bile pigment (bilirubin)
pH	urobilinogen
glucose	protein
ketones	nitrite
blood (hemoglobin)	microscopy of
volume	centrifuged deposit
specific gravity	

TERMINAL PROCEDURES1. Gross Pathology

Prior to commencement of treatment, 10 male and 10 female "health screen" animals will be sacrificed by exsanguination from the abdominal aorta following anesthesia by intraperitoneal injection of

sodium pentobarbital and blood sample collection. These animals will be subjected to external and internal gross examination. Tissues will not normally be preserved.

In order to avoid autolytic change, a complete necropsy will be conducted immediately on any animal sacrificed during the study or at its termination. If an animal is found dead, necropsy will be completed as soon as possible after the time of death and, if necessary, the carcass will be stored in a refrigerator (circa 4°C) prior to necropsy. All necropsies performed during regular working hours will be conducted under the supervision of a pathologist.

All animals found dead or sacrificed for humane reasons during the study will be subjected to necropsy and tissue samples will be preserved. Animals sacrificed for humane reasons will also have blood samples collected.

All preterminally and terminally sacrificed animals will be killed by exsanguination following anesthesia by intraperitoneal injection of sodium pentobarbital. All animals will be fasted overnight before scheduled sacrifice.

Terminal body weight will be recorded at time of necropsy.

For all animals, necropsy will consist of an external examination, including identification of all clinically recorded lesions, as well as a detailed internal examination.

2. Organ Weight Assessment

For each animal sacrificed at study termination, the following organs will be dissected free of fat and weighed:

adrenals	pituitary
brain	prostate
heart	spleen
kidneys	thymus
liver	thyroid lobes and parathyroids
lungs	(lobes weighed together)
ovaries/testes	uterus

Paired organs will be weighed together.

Organ weights relative to both body and brain weights will be calculated.

3. Tissue Preservation

On completion of the necropsy of each animal, the following tissues and organs will be retained. Neutral buffered 10% formalin will be used for fixation and preservation unless otherwise indicated.

abnormalities	liver (sample of	sciatic nerve
animal	2 lobes)	seminal vesicles
identification *	lungs (all lobes) ++	skeletal muscle
adrenals	lymph nodes	skin (inguinal)
aorta (thoracic)	(bronchial,	spinal cord
bone and marrow	mandibular	(cervical)
(sternum) **	and mesenteric)	spleen
brain (3 levels)	mammary gland	stomach
bronchi	(inguinal) +	testes *
cecum	nasal cavities and	thymus
colon	sinuses	thyroid lobes (and
duodenum	(4 levels) **	parathyroids) +
epididymides *	optic nerves **	tissue masses (and
esophagus	ovaries	drainage
eyes *	pancreas	lymph nodes)
heart (including	pharynx	tongue
section of aorta)	pituitary	trachea
ileum	prostate	urinary bladder
jejunum	rectum *	uterus (and cervix)
kidneys	salivary gland	vagina
larynx	(submandibular)	

- * Fixed in Zenker's fluid (sacrificed animals only).
- ** Decalcified prior to sectioning.
- + Examined histopathologically only if present in routine sections of eyes (optic nerves), thyroid lobes (parathyroids), or skin (mammary gland).
- ++ Lungs will be infused with neutral buffered 10% formalin (sacrificed animals only).
- * Retained but not processed.

For all sacrificed animals, three femoral bone marrow smears will be prepared and stained with May-Grünwald-Giemsa but only evaluated if hematology or pathology findings dictate (additional cost).

Additional tissue samples may be taken at the discretion of the supervising pathologist to elucidate abnormal findings.

4. Histopathology

Tissues listed above from animals in Groups 1 and 4, all animals that die prematurely, and respiratory tissues (nasal cavities and sinuses, pharynx, pharynx, trachea and lungs) and gross lesions from animals in Groups 2 and 3 will be prepared for histopathological examination by embedding in paraffin wax, sectioning and staining with hematoxylin and eosin. These tissues will be examined microscopically.

STATISTICS

Numerical data obtained during the conduct of the study will be subjected to calculation of group mean values and standard deviation. The data will be analyzed for homogeneity of variance using Bartlett's test (FOB count data may be transformed before analysis).

Homogeneous data will be analyzed using Analysis of Variance and the significance of differences between the control and treated groups will be assessed using Dunnett's 't' test. Heterogeneous data will be analyzed using Kruskal-Wallis test and the significance of differences between the control and treated groups will be assessed using Dunn's test.

Motor activity counts will be analyzed using repeat measures analysis and graphical presentation of the data will be made.

Where appropriate, frequency data will be analyzed by comparing the control group to the tested groups using Fisher's exact probability test.

Further statistical evaluation can be undertaken after consultation with the Sponsor and may involve additional costs and a reporting time longer than that specified in the study contract.

ANIMAL CARE AND USE COMMITTEE APPROVAL

The protocol and any amendment(s) or procedures involving the care and use of animals in this study will be reviewed and approved by Bio-Research's Animal Care and Use Committee (ACUC) prior to conduct. During the study, the care and use of animals will be conducted in accordance with the regulations of the USDA Animal Welfare Act, (relevant sections of 9 CFR Parts 2 and 3) and the Canadian Council on Animal Care (CCAC).

QUALITY ASSURANCE

The Quality Assurance Department of Bio-Research Laboratories Ltd. will undertake and document inspections and audits of critical phases of the study performed at Bio-Research Laboratories Ltd. during its conduct and audit the study report. Data audits will be conducted according to MIL-STANDARD 105D, where appropriate.

Authorized designates of the Sponsor may inspect their study during regular working hours for quality assurance purposes.

COMMUNICATION

As necessary during the study, the study director will take appropriate action, in consultation with the clinical veterinarian and Sponsor (if

possible), to minimize discomfort and pain to animals, provided such action will not interfere with the objectives or outcome of the study.

Untoward changes or events occurring during the study will be communicated to the Sponsor by telephone or telefax. Agreed upon changes in study conduct or design will be documented in protocol amendments. Before such changes are implemented, their cost and effect upon study or report timing will be agreed upon with the Sponsor and will be confirmed in writing (telefax and/or letter) as soon as practical.

Copies of each protocol amendment will be sent to the Sponsor whose formal approval will be indicated by the return of 1 signed copy to Bio-Research Laboratories Ltd.

FINAL REPORT

A complete detailed audited draft report will be submitted to the Sponsor within the time frame specified in the contract. Subsequent to any modifications or corrections (agreed upon by the Sponsor and Bio-Research Laboratories Ltd.), 2 copies of a final version of the report will be issued.


ARCHIVES

All raw data, samples of test and control articles, specimens and documents generated at Bio-Research Laboratories Ltd. during this study, together with the original copy of the protocol (including amendments, if any) and the final report, will be retained in the scientific archives of Bio-Research Laboratories Ltd.

Such materials will remain archived at Bio-Research Laboratories Ltd. for a minimum of 5 years, after which the Sponsor will be contacted for transfer or disposal approval. Should the Sponsor request return of any or all of these specimens or materials, such shipment and the insurance thereof will be at the Sponsor's expense. Details of storage of such materials and/or their return to the Sponsor will be as per contract.


BIO

This protocol has been verified and approved by:



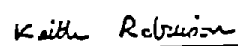
for: A. Viau, B.Sc.
Study Director
Senior Research Scientist,
Inhalation Toxicology
Toxicology Division
Bio-Research Laboratories Ltd.

6 August 1993
Date




C. Banks, B.Sc.
Scientific Director, Inhalation Toxicology
Toxicology Division
Bio-Research Laboratories Ltd.

6 August 1993
Date




K. Robinson, B.Sc.
Scientific Director, Reproductive Toxicology
Toxicology Division
Bio-Research Laboratories Ltd.

August 6, 1993
Date



G. W. Lulham, M.Sc.
Director, Toxicology
Toxicology Division
Bio-Research Laboratories Ltd.

6 August 1993
Date



J. Rieth, Ph.D., D.A.B.T.
Rhône-Poulenc Inc.

13 August 1993
Date



PROTOCOL AMENDMENT NO. 1

PROJECT NO. 90831

PROTOCOL DATE August 6, 1993

PROJECT TITLE A 13-Week Inhalation Toxicity and Neurotoxicity Study
by Nose-Only Exposure of a Dry Powder Aerosol of
Ceric Oxide in the Albino Rat

SPONSOR Rhône-Poulenc Canada Inc.
2000 Argentia Road
Plaza 3, Suite 400
Mississauga, Ontario
Canada L5N 1V9

TESTING FACILITY Bio-Research Laboratories Ltd.
87 Senneville Road
Senneville, Quebec
Canada H9X 3R3

AMENDMENT DATE October 19, 1993

AMENDMENTS

1. Page 1 of 19 pages,

Amended to read:

Rhône-Poulenc Canada Inc.
2000 Argentia Road
Plaza 3, Suite 400
Mississauga, Ontario
Canada L5N 1V9

Reason for amendment:

Change of address at Sponsor request.



2. Page 2 of 19 pages, SPONSOR

Amended to read:

Rhône-Poulenc Canada Inc.
2000 Argentia Road
Plaza 3, Suite 400
Mississauga, Ontario
Canada L5N 1V9

Reason for amendment:

Change of address at Sponsor request.

3. Page 4 of 19 pages,

Amended to read:

PROPOSED TREATMENT
STARTING DATE

September 13, 1993 *

PROPOSED TREATMENT
COMPLETION DATE

December 19, 1993 *

TARGET DATE FOR
COMPLETION
OF AUDITED
DRAFT REPORT

April, 1994

Reason for amendment:

Clarification.

4. Page 5 of 19 pages, TEST ARTICLE, first sentence

Amended to read:

The test article (CAS Number 1306-38-3) will be characterized by the Sponsor.

Reason for amendment:

Clarification.



5. Page 6 of 19 pages, ANIMAL MANAGEMENT, first paragraph

Amended to read:

On arrival, all animals will be subjected to a general physical examination by a qualified member of the veterinary staff to ensure "normal" health status.

Reason for amendment:

Typographical error.

6. Page 7 of 19 pages, ACCLIMATION AND RANDOMIZATION, fourth paragraph

Amended to read:

Animals will be randomized into the following groups:

<u>Group/ Identification</u>	<u>Target Exposure Level (mg/L)</u>	<u>Animal No.</u>	
		<u>Males</u>	<u>Females</u>
1 Air control	0	1001-1015	1501-1515
2 Low dose	0.005	2001-2015	2501-2515
3 Intermediate dose	0.05	3001-3015	3501-3515
4 High dose	0.5	4001-4015	4501-4515

Reason for amendment:

At Sponsor request and based on a TLV of 5 mg/m³ for respirable nuisance dusts.

7. Page 7 of 19 pages, Reason for Dose Level Selection

Amended to read:

The dose levels will be selected according to the proposed human exposure (TLV of 5 mg/m³ for respirable nuisance dusts), existing toxicity data and any limitations imposed by the exposure apparatus and procedure as well as the stability of the experimental atmosphere.

Reason for amendment:

Additional information for dose level selection.

8. Page 8 of 19 pages, Duration of Exposure, first paragraph, third sentence and second paragraph

Amended to read:

For each test group, time zero, the time at which animals will be placed on the chamber, will be defined as that point in time at which approximately 95% of the desired concentration of test article has been established within the chamber. Flow rate through the chamber will be calculated to yield a t_{95} (the time required to build up 95% of the target concentration) of no more than approximately 5 minutes. The t_{95} and t_{05} (the time to decay to 5% of the established concentration) will be calculated and reported.

During exposure, aerosol will be actively generated for 365 minutes (for the duration of the t_{95} plus 360 minutes). Following 365 minutes of continuous operation, aerosol generation will be stopped, and the chamber concentration allowed to decay for the calculated t_{05} . The rats will be removed from the exposure chamber when the generator is stopped and will be returned to their home cages.

Reason for amendment:

Actual procedures to be used during treatment.

9. Page 9 of 19 pages, Atmosphere Generation System, first sentence

Amended to read:

The test atmospheres will be established using a fluid energy air mill supplied with conditioned and filtered compressed air and fed by a linear track system.

Reason for amendment:

Clarification.

10. Page 9 of 19 pages, Chamber Concentrations, first paragraph, last sentence

Amended to read:

Filters from the second day of treatment of males and females, and monthly thereafter will be forwarded to the Sponsor for chemical analysis.

Reason for amendment:

At Sponsor request.

11. Page 10 of 19 pages, Particle Size Analysis, second sentence

Amended to read:

Sampling durations will be selected to collect approximately 10 mg of test article, if possible.

Reason for amendment:

Collection may be less than 10 mg due to the limitation imposed by the new target chamber concentrations.

12. Page 14 of 19 pages,

Add the following:

7. Ophthalmology

Funduscopy (indirect ophthalmoscopy) and biomicroscopic (slit lamp) examinations will be performed on all animals prior to commencement of treatment and during the last week of treatment on animals in the high dose and control groups. If changes in the eye are detected, animals in the low and intermediate will also be examined (additional cost).

Reason for amendment:

Observations to be performed on the study.

13. Page 16 of 19 pages, Histopathology, first sentence

Amended to read:

Tissues listed above from animals in Groups 1 and 4, all animals that die prematurely, and respiratory tissues (nasal cavities and sinuses, pharynx, larynx, trachea and lungs) and gross lesions from animals in Groups 2 and 3 will be prepared for histopathological examination by embedding in paraffin wax, sectioning and staining with hematoxylin and eosin.

Reason for amendment:

Typographical error.

14. Page 18 of 19 pages, ARCHIVES, first paragraph

Amended to read:

All raw data, samples of test article (except test article and gravimetric samples sent to the Sponsor), specimens and documents generated at Bio-Research Laboratories Ltd. during this study, together with the original copy of the protocol (including amendments, if any) and the final report, will be retained in the scientific archives of Bio-Research Laboratories Ltd.

Reason for amendment:

Clarification.

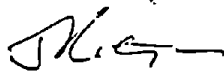
This protocol amendment has been verified and approved by:



A. Viau, B.Sc.
Senior Research Scientist,
Inhalation Toxicology
Toxicology Division
Bio-Research Laboratories Ltd.

October 19, 1993

Date



J. Rieth, Ph.D., D.A.B.T.
Rhône-Poulenc

19 October 1993

Date



PROTOCOL AMENDMENT NO. 2

PROJECT NO. 90831

PROTOCOL DATE August 6, 1993

PROJECT TITLE A 13-Week Inhalation Toxicity and Neurotoxicity Study
by Nose-Only Exposure of a Dry Powder Aerosol of
Ceric Oxide in the Albino Rat

SPONSOR Rhône-Poulenc Canada Inc.
2000 Argentinia Road
Plaza 3, Suite 400
Mississauga, Ontario
Canada L5N 1V9

TESTING FACILITY Bio-Research Laboratories Ltd.
87 Senneville Road
Senneville, Quebec
Canada H9X 3R3

AMENDMENT DATE December 9, 1993

AMENDMENTS

1. Page 16 of 19 pages, 3. Tissue Preservation

Add the following:

Femur *

Reason for amendment:

At Sponsor request.

2. Point No. 13, protocol amendment no. 1

Amended to read:

Tissues listed above from animals in Groups 1 and 4, all animals that die prematurely, and respiratory tissues (nasal cavities and sinuses, pharynx, larynx, trachea, lungs and bronchi) and gross lesions from animals in Groups 2 and 3 will be prepared



for histopathological examination by embedding in paraffin wax,
sectioning and staining with hematoxylin and eosin.

Reason for amendment:

Clarification.

This protocol amendment has been verified and approved by:

A. Viau, B.Sc.
Senior Research Scientist,
Inhalation Toxicology
Toxicology Division
Bio-Research Laboratories Ltd.

December 9, 1993

Date

J. Rieth, Ph.D., D.A.B.T.
Rhône-Poulenc

13 April 1994

Date



PROTOCOL AMENDMENT NO. 3

PROJECT NO. 90831

PROTOCOL DATE August 6, 1993

PROJECT TITLE A 13-Week Inhalation Toxicity and Neurotoxicity Study
by Nose-Only Exposure of a Dry Powder Aerosol of
Cerium Oxide in the Albino Rat

SPONSOR Rhône-Poulenc Canada Inc.
2000 Argentea Road
Plaza 3, Suite 400
Mississauga, Ontario
Canada L5N 1V9

TESTING FACILITY Bio-Research Laboratories Ltd.
87 Senneville Road
Senneville, Quebec
Canada H9X 3R3

AMENDMENT DATE April 13, 1994

AMENDMENTS

1. Page 3 of 19 pages, PARTICIPATING SCIENTISTS
Add the following:

C.J. Perkin, B.Sc., D.A.B.T.
Director, Scientific Operations
Toxicology Division

P. Blouin, D.V.M., Ph.D., Diplomate A.C.V.O.
Ophthalmologist

Reason for amendment:

Omitted from the protocol.
2. Page 8 of 19 pages, 2. Description of Inhalation Exposure Equipment,
first paragraph, first and second sentences

APPENDIX NO. 18

Amended to read:

Standard stainless-steel cylindrical "flow-through" nose-only inhalation chambers (chamber volume approximately 80.6 L) will be utilized in this experiment. The body of each chamber has 40 separate ports in two separate rows into which can be inserted the conical front section of a polycarbonate restraint cone.

Reason for amendment:

Actual chamber size used on the study.

3. Point No. 13, protocol amendment no. 1


Amended to read:

Tissues listed above from animals in Groups 1 and 4, all animals that die prematurely, and respiratory tissues (nasal cavities and sinuses, pharynx, larynx, trachea, lungs and bronchi) and gross lesions from animals in Groups 2 and 3 will be prepared for histopathological examination by embedding in paraffin wax, sectioning and staining with hematoxylin and eosin.

Reason for amendment:

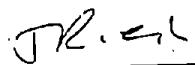
Clarification.

This protocol amendment has been verified and approved by:



A. Viau, B.Sc.
Senior Research Scientist,
Inhalation Toxicology
Toxicology Division
Bio-Research Laboratories Ltd.

April 13, 1994
Date



J. Rieth, Ph.D., D.A.B.T.
Rhône-Poulenc

13 April 1994
Date



PROTOCOL AMENDMENT NO. 4

PROJECT NO. 90831

PROTOCOL DATE August 6, 1993

PROJECT TITLE A 13-Week Inhalation Toxicity and Neurotoxicity Study
by Nose-Only Exposure of a Dry Powder Aerosol of
Ceric Oxide in the Albino Rat

SPONSOR Rhône-Poulenc Canada Inc.
2000 Argentinia Road
Plaza 3, Suite 400
Mississauga, Ontario
Canada L5N 1V9

TESTING FACILITY Bio-Research Laboratories Ltd.
87 Senneville Road
Senneville, Quebec
Canada H9X 3R3

AMENDMENT DATE June 7, 1994

AMENDMENTS

1. Page 5 of 19 pages, TEST ARTICLE, third paragraph

Amended to read:

With the exception of an archive sample, all test article remaining following completion of studies with CeO₂ will be returned to the Sponsor.

Reason for amendment:

Clarification.

2. Page 17 of 19 pages, STATISTICS fourth paragraph

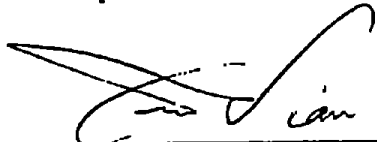
Amended to read:

Where appropriate, frequency data, gross pathology and histopathology findings will be analyzed by comparing the control group to the tested groups using Fisher's exact probability test.

Reason for amendment:

Additional statistical analysis performed at the Sponsor's request.

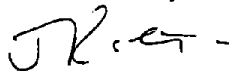
This protocol amendment has been verified and approved by:



A. Viau, B.Sc.
Senior Research Scientist,
Inhalation Toxicology
Toxicology Division
Bio-Research Laboratories Ltd.

June 7, 1994

Date



J. Rieth, Ph.D., D.A.B.T.
Rhône-Poulenc

10 June 1994

Date



APPENDIX NO. 19

RHÔNE-POULENC

- 1344 -

CEINHALDOC

PROJECT NO. 90831

**RHÔNE-POULENC BASIC CHEMICALS CO.
FINE INORGANIC CHEMICALS**

6213 HIGHWAY 332 EAST
FREEPORT, TX 77541
TEL: (409) 233-7871
FAX: (409) 233-4682

MAY - 9 1994
J. P. RIETH

May 2, 1994

Dr. Joseph P. Rieth
Toxicology Dept.
Rhone-Poulenc
P.O. Box 12014, 2 Alexander Dr.
Research Triangle Park, NC 27709

Dear Joe:

We have completed analysis of sixty (60) filters from Bio-Research project no. 90831. The filters were extracted with nitric acid according to our basic procedure #LAB-0121 which was modified to fit this project. A copy of the modified procedure is attached. The extract solution from each filter was analyzed by Inductively Coupled Plasma - Atomic Emission Spectroscopy (ICP-AES) for Cerium Oxide content. The readings were mathematically adjusted to express the results as milligrams of Cerium Oxide per filter. The results are reported in attachment #2.

Bio-Research sent us ten test filters for validation of our procedures. Results from those filters indicated that we were able to extract and measure the Cerium Oxide. See Attachment #1 for details. You will notice a consistent difference between our results and the weights reported by Bio-Research amounting to an average of -4%. We are not certain what causes the difference but speculate that it reflects; (1) an incomplete extraction of Cerium Oxide from the filters or (2) when the filter samples were being taken, some other particulate matter was present in the air.

Instrument readings were recorded on log sheets which are stored in our laboratory files for a minimum of three years. In the event this is not compatible with your document retention requirements, copies of the log sheets are attached.

Since we did not know what statistical treatments you needed, we are reporting our findings simply as milligrams of Cerium Oxide per filter. Also, the data is stored on a floppy disk using Microsoft Word For Windows. If it will be easier for you to use the data from a disk, let us know and we will send a copy.

Excellence in Performance - Pride in Achievement

APPENDIX NO. 19

PROJECT NO. 90831

CEINHALDOC



The extract solutions will be stored in our lab until June 1, 1994. If you see a need to retain them longer, please let us know before that date.

We hope these results are adequate for your needs. If we can answer any questions or be of additional service, please feel free to let us know.

Sincerely,

A handwritten signature in cursive script that reads "John D. Edwards".

John D. Edwards
Laboratory Supervisor

Attachment #1

VALIDATION SAMPLES

Sample No.	Wt Cerium Oxide*(mg)	Cerium Oxide by ICP-AES (mg)	Difference (mg)	Difference %
1	2.12	1.96	-0.16	7.5
2	1.78	1.72	-0.06	3.4
3	1.97	1.82	-0.15	7.6
4	1.77	1.76	-0.01	0.6
5	2.09	1.99	-0.10	4.8
6	1.95	1.89	-0.06	3.1
7	1.99	1.90	-0.09	4.5
8	2.05	2.03	-0.02	1.0
9	2.15	2.07	-0.08	3.7
10	2.19	2.10	-0.09	4.1
Average				4.0
Standard Deviation				2.3

* - As reported by Bio-Research

ANALYSIS OF CERIUM OXIDE COLLECTED ON FILTERS DURING BIO-RESEARCH PROJECT NO. 90831

Label On Vial			Filter Analysis By ICP-AES
Day	Group	Sample Number	CeO ₂ (mg)
2	1	1	0.01
		3	0.01
		5	0.01
	2	5	1.85
		7	0.98
		9	1.61
	3	1	2.98
		3	2.03
		5	1.83
	4	1	2.13
		3	1.78
		5	2.19
9	1	1	0.02
		3	0.01
		5	0.01
	2	3	1.70
		5	1.56
		7	1.34
	3	1	2.08
		3	1.90
		5	1.83
	4	5	1.98
		7	1.89
		9	2.21
31	1	1	0.02
		3	0.01
		5	0.03
	2	1	1.79
		3	1.79
		9	2.41
	3	1	1.62
		3	1.84
		5	2.91
	4	1	2.25
		5	1.77
		7	1.78

Label On Vial			Filter Analysis By ICP-AES
Day	Group	Sample Number	CeO ₂ (mg)
51	1	1	0.01
		3	0.01
		5	0.01
	2	1	2.22
		3	1.70
		5	1.99
	3	3	1.97
		5	2.33
		7	1.56
	4	1	2.05
		3	1.87
		5	1.57
86	1	1	0.05
		3	0.01
		5	0.01
	2	3	1.84
		7	1.54
		8	1.98
	3	1	1.64
		3	1.89
		5	1.87
	4	1	2.11
		5	1.96
		8	1.95
Reagent Blank			<0.01

DOCUMENT: LAB-0.0

	<p>RHONE-POULENC FREEPORT PLANT 6213 HIGHWAY 332 EAST FREEPORT, TX 77541</p> <p>METHOD FOR DISSOLUTION OF CERIUM OXIDE FROM FILTER DISCS</p>	
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1. SCOPE

- 1.1 As part of Bio-Research Project No. 90831 (Bio-Research Laboratories, Ltd, Senneville, Quebec, Canada), filter discs impregnated with Cerium Oxide were sent to the Freeport Lab for confirmation of Cerium content.
- 1.2 Since cerium is constantly present in the Freeport laboratory, every effort was made to reduce the risk of contamination. This included the use of a remote hood with new and dedicated glassware.

2. PRINCIPLE

- 2.1 The CeO_2 from the filter discs are dissolved with nitric acid using a procedure based on Analytical Method #LAB-0121.
- 2.2 The nitric acid solution is then analyzed by ICP using the basic procedure described in Analytical Method #LAB-0501.

3. EQUIPMENT

- 3.1 See Analytical Methods #LAB-0121 and #LAB-0501.

4. REAGENTS

- 4.1 See Analytical Methods #LAB-0121 and #LAB-0501.

5. SAFETY

- 5.1 See Analytical Methods #LAB-0121 and #LAB-0501.

APPENDIX NO. 19

6. PROCEDURE

- 6.1 Place filter disc with sample into a 150 mL beaker. Carefully examine the glass container which stored the filter disc for residue. Rinse any residue into the beaker using DI water.
- 6.2 Add 20 to 30 mL DI water and place teflon coated stir bar into the beaker.
- 6.3 Place beaker on a magnetic stirrer and begin mixing.
- 6.4 While mixing add the following:
 - ~5 mL concentrated HNO₃
 - 3 to 4 drops dilute HF solution (prepared by diluting 1 mL 50% HF to 10 mL using DI water).
 - 3 to 4 drops dilute H₂O₂ solution (prepared by diluting 1 mL 50% H₂O₂ to 10 mL using DI water).
 - 10 to 20 mL DI water.
- 6.5 Digest the mixture on a hot plate with continuous stirring using high heat for 45 to 60 minutes. Maintain the volume in the beaker to 20 to 30 mL by adding DI water.
- 6.6 Filter the mixture through Whatman #5 or #42 filter paper into a 100 mL volumetric flask. Rinse the beaker with DI water thoroughly to get complete transfer. Then rinse the residue on the filter paper several times with warm DI water.
- 6.7 Fill to the mark with DI water. Mix and analyze by ICP for CeO₂ content.

7. CALCULATIONS

- 7.1 Use the following formula:



$$\text{mg CeO}_2 \text{ on filter disc} = \frac{X}{10}$$

Where X = the direct CeO₂ reading from the ICP in mg/L.

8. STATISTICS

8.1 See validation statistics in a separate report.

9. COMMENTS

9.1 None

10. REFERENCES

10.1 Analytical Methods #LAB-0121 and #LAB-0501.

APPENDIX NO. 19

PROJECT NO. 90831



Issue Date: 16 DECEMBER 1992
Expire Date: 15 DECEMBER 1995

Certificate No.: 30081.3

ISO 9000

CERTIFICATE OF COMPLIANCE

This is to certify that the Quality Management System of:

**RHONE-POULENC BASIC CHEMICALS CO.
 6213 HIGHWAY 332 EAST
 FREEPORT, TEXAS 77541**

has been assessed by ABS Quality Evaluations, Inc. (ABS QE) and found to be in compliance with the following quality standards:

ISO 9002

The Quality Management System is applicable to:

**MANUFACTURE OF SEPARATED RARE EARTH PRODUCTS,
 ISOCYANATE RESINS, AND AGRICULTURAL INTERMEDIATE CHEMICALS**



Elizabeth A. Potts
 on behalf of
 ABS Quality Evaluations, Inc.



ACCREDITED BY
 THE DUTCH COUNCIL
 FOR CERTIFICATION



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Validity is subject to the organization and procedures being audited twice annually and the Company reporting in the interim any major changes to quality standard elements to ABS Quality Evaluations, Inc. in writing.