

アセト酢酸メチルのラットを用いた
経口投与によるがん原性試験（混水試験）報告書

試験番号：0448

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APPENDIX A 1

IDENTITY OF METHYL ACETOACETATE IN THE 2-YEAR DRINKING WATER STUDY

IDENTITY OF METHYL ACETOACETATE IN THE 2-YEAR DRINKING WATER STUDY

Test Substance : Methyl Acetoacetate (Tokyo Kasei Kogyo Co., Ltd.)

A. Lot No. : GL01

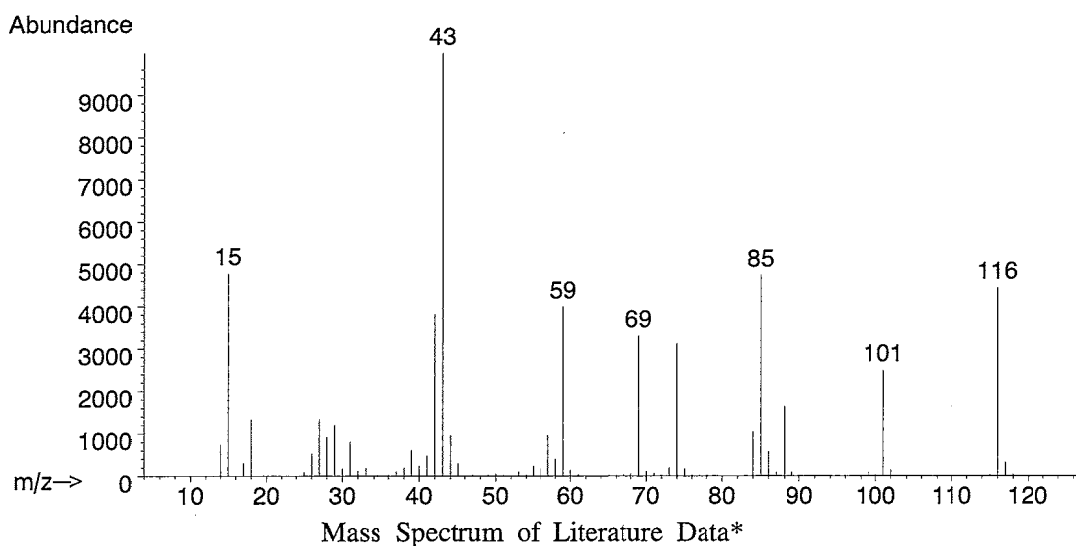
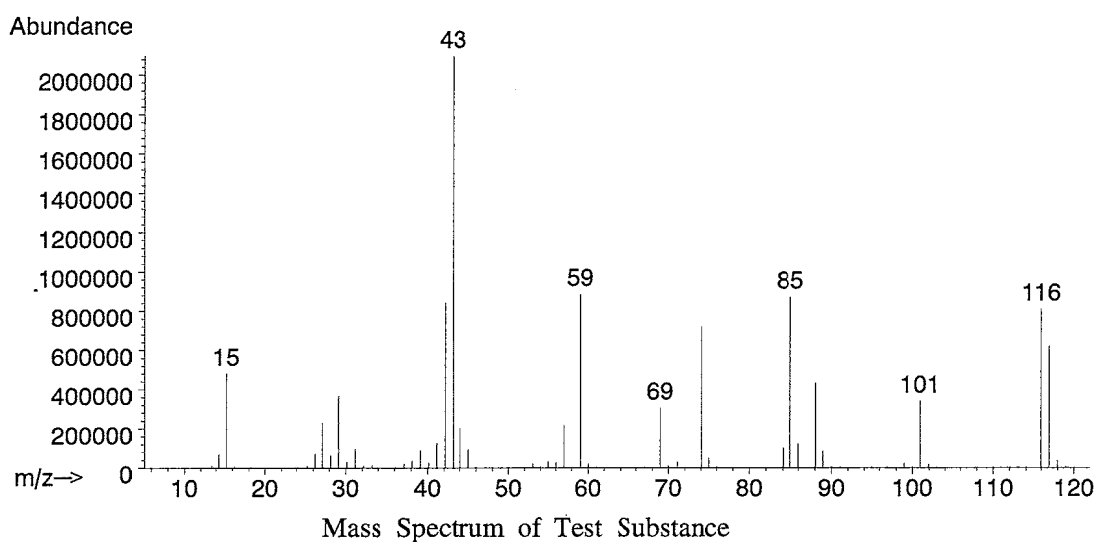
1. Spectral Data

Mass Spectrometry

Instrument : Hewlett Packard 5989B Mass Spectrometer

Ionization : EI (Electron Ionization)

Ionization Voltage : 70eV



Result: The mass spectrum was consistent with literature spectrum.

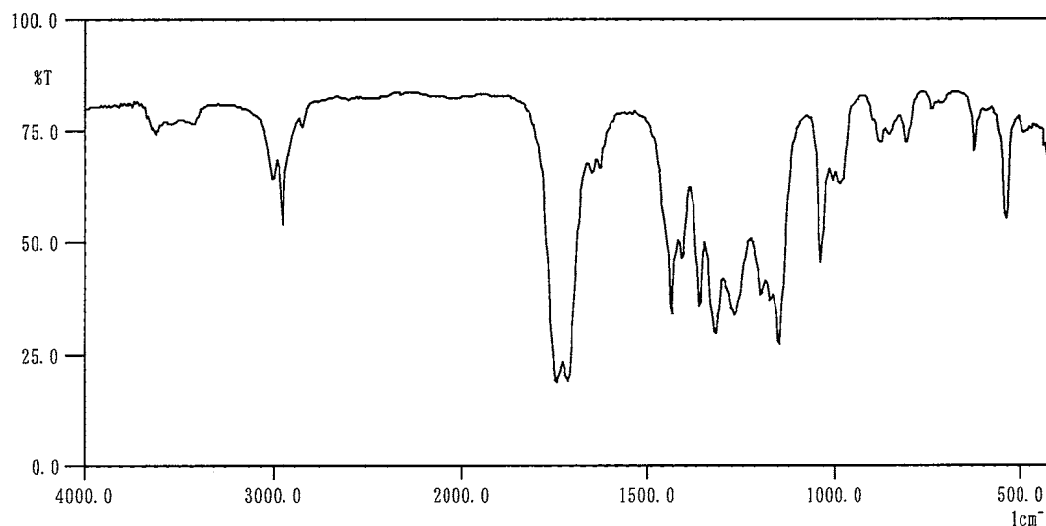
(*McLafferty FW, ed. 1994. Wiley Registry of Mass Spectral Data. 6th ed.
New York, NY : John Wiley and Sons.)

Infrared Spectrometry

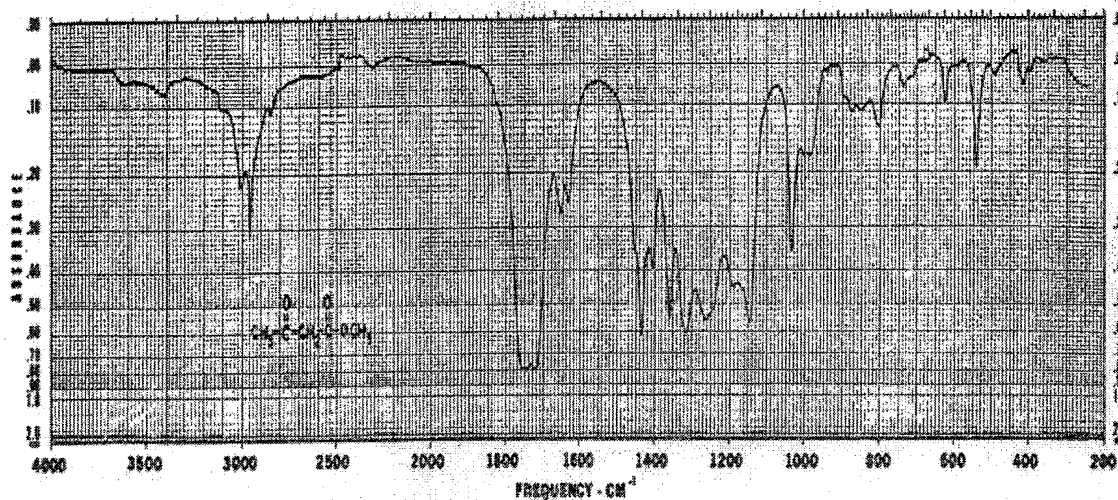
Instrument : Shimadzu FTIR-8200PC Infrared Spectrometer

Cell : KBr Liquid Cell

Resolution : 2 cm^{-1}



Infrared Spectrum of Test Substance



Infrared Spectrum of Literature Data*

Result: The infrared spectrum was consistent with literature spectrum.

(*Simons WW. 1978. The Sadtler Handbook of Infrared Spectra.

Philadelphia, PV : Sadtler Research Laboratories, 766)

- Conclusion: The test substance was identified as methyl acetoacetate by mass spectrum and infrared spectrum.

B. Lot No. : FGL01

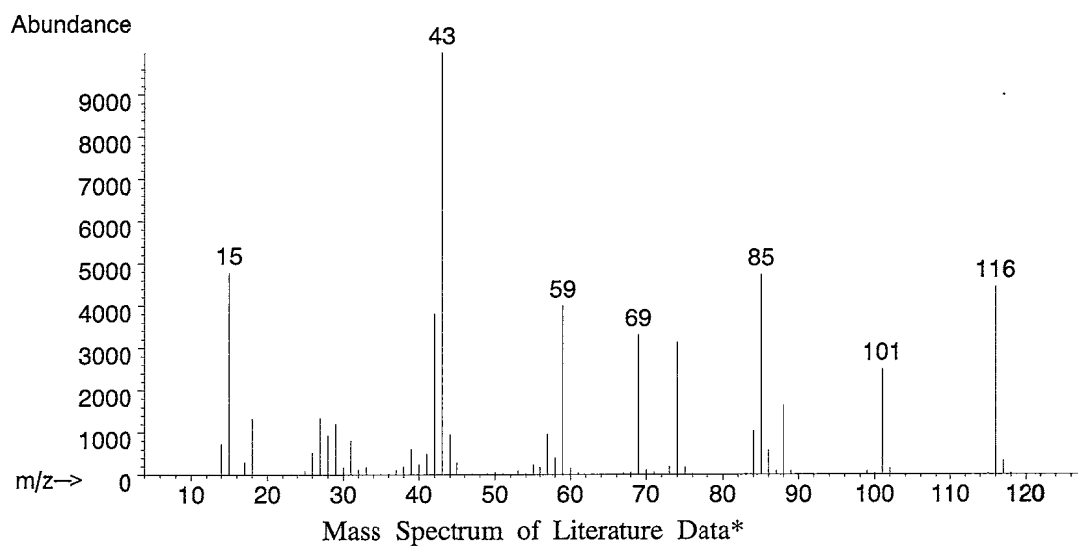
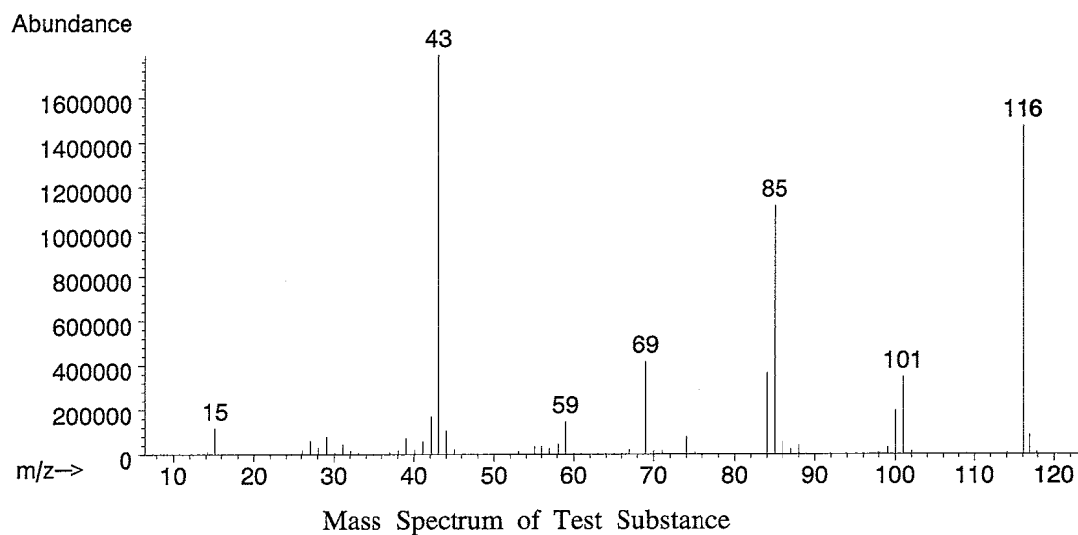
1. Spectral Data

Mass Spectrometry

Instrument : Hewlett Packard 5989B Mass Spectrometer

Ionization : EI (Electron Ionization)

Ionization Voltage : 70eV



Result: The mass spectrum was consistent with literature spectrum.

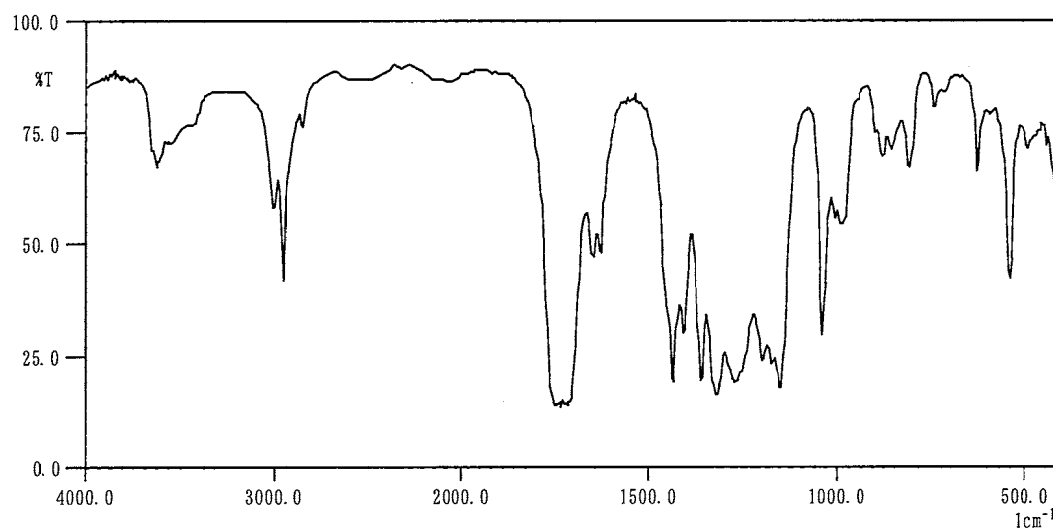
(*McLafferty FW, ed. 1994. Wiley Registry of Mass Spectral Data. 6th ed.
New York, NY : John Wiley and Sons.)

Infrared Spectrometry

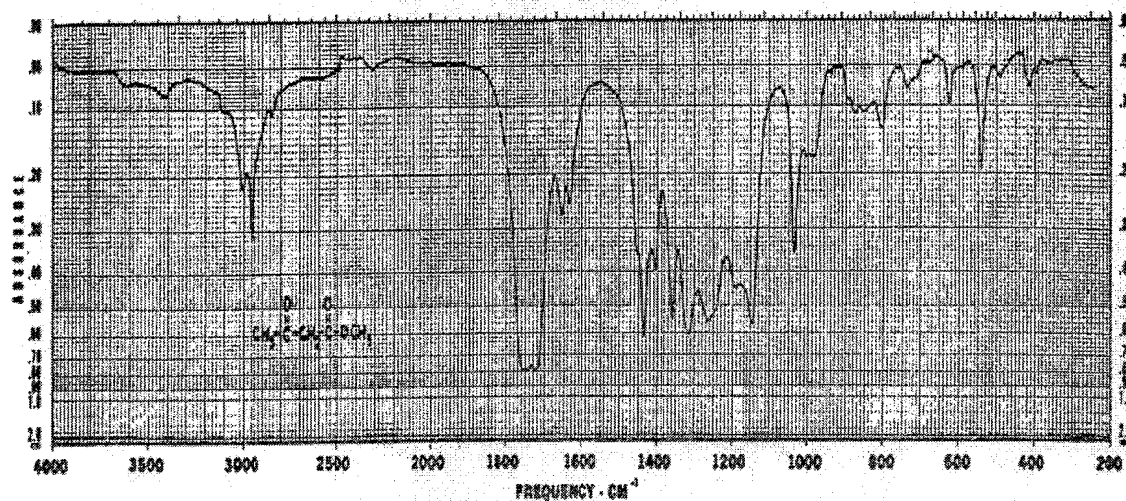
Instrument : Shimadzu FTIR-8200PC Infrared Spectrometer

Cell : KBr Liquid Cell

Resolution : 2 cm^{-1}



Infrared Spectrum of Test Substance



Infrared Spectrum of Literature Data*

Result: The infrared spectrum was consistent with literature spectrum.

(*Simons WW. 1978. The Sadtler Handbook of Infrared Spectra.
Philadelphia, PV : Sadtler Research Laboratories, 766)

- Conclusion: The test substance was identified as methyl acetoacetate by mass spectrum and infrared spectrum.

APPENDIX A 2

STABILITY OF METHYL ACETOACETATE IN THE 2-YEAR DRINKING WATER STUDY

STABILITY OF METHYL ACETOACETATE IN THE 2-YEAR DRINKING WATER STUDY

Test Substance : Methyl Acetoacetate (Tokyo Kasei Kogyo Co., Ltd.)

A. Lot No. : GL01

1. Sample : This lot was used from 2002.4.11 to 2003.6.30. The test substance was stored in a dark place at room temperature.

2. Gas Chromatography

Instrument : Hewlett Packard 5890A Gas Chromatograph

Column : INNOWAX (0.2 mm ϕ \times 50 m)

Column Temperature : 100 °C (1 min) \rightarrow (10 °C/min) \rightarrow 190 °C

Flow Rate : 1 mL/min

Detector : FID (Flame Ionization Detector)

Injection Volume : 1 μ L

Date (date analyzed)	Peak No.	Retention Time (min)	Area (%)
2002.03.13	1	6.578	100
2003.07.03	1	6.581	100

Result: Gas chromatography indicated one major peak (peak No.1) analyzed at 2002.3.13 and one major peak (peak No.1) analyzed at 2003.7.3. No new trace impurity peak in the test substance analyzed at 2003.7.3 was detected.

3. Conclusion: The test substance was stable for about 16 months in a dark place at room temperature.

B. Lot No. : FGL01

1. Sample : This lot was used from 2003.6.30 to 2004.4.15. The test substance was stored in a dark place at room temperature.

2. Gas Chromatography

Instrument : Hewlett Packard 5890A Gas Chromatograph

Column : INNOWAX (0.2 mm ϕ \times 50 m)

Column Temperature : 100 °C (1 min) \rightarrow (10 °C/min) \rightarrow 190 °C

Flow Rate : 1 mL/min

Detector : FID (Flame Ionization Detector)

Injection Volume : 1 μ L

Date (date analyzed)	Peak No.	Retention Time (min)	Area (%)
2003.06.19	1	6.585	100
2004.04.20	1	6.584	100

Result: Gas chromatography indicated one major peak (peak No.1) analyzed at 2003.6.19 and one major peak (peak No.1) analyzed at 2004.4.20. No new trace impurity peak in the test substance analyzed at 2004.4.20 was detected.

3. Conclusion: The test substance was stable for about 10 months in a dark place at room temperature.

APPENDIX A 3

CONCENTRATION OF METHYL ACETOACETATE IN FORMULATED WATER IN THE 2-YEAR DRINKING WATER STUDY

CONCENTRATION OF METHYL ACETOACETATE IN FORMULATED WATER IN THE 2-YEAR DRINKING WATER STUDY

Date Analyzed	Target Concentration		
	2000 ^a	6325	20000
2002.04.11	2050 (103) ^b	6250 (98.8)	20400 (102)
2002.06.13	2130 (107)	6620 (105)	20500 (103)
2002.09.05	2050 (103)	6560 (104)	20800 (104)
2002.11.28	2020 (101)	6400 (101)	20400 (102)
2003.02.20	1970 (98.5)	6330 (100)	20300 (102)
2003.05.15	2010 (101)	6260 (99.0)	20000 (100)
2003.08.07	2020 (101)	6380 (101)	20200 (101)
2003.10.30	1980 (99.0)	6270 (99.1)	20200 (101)
2004.01.22	1980 (99.0)	6200 (98.0)	19700 (98.5)

^a ppm

^b %

Analytical Method : The samples were analyzed by gas chromatography.

Instrument : Hewlett Packard 5890A Gas Chromatograph

Column : INNOWAX (0.2 mm ϕ \times 50 m)

Column Temperature : 100 °C (1 min) \rightarrow (10 °C/min) \rightarrow 190 °C

Flow Rate : 1 mL/min

Detector : FID (Flame Ionization Detector)

Injection Volume : 1 μ L

APPENDIX A 4

STABILITY OF METHYL ACETOACETATE IN FORMULATED WATER IN THE 2-YEAR DRINKING WATER STUDY

STABILITY OF METHYL ACETOACETATE IN FORMULATED WATER IN THE 2-YEAR DRINKING WATER STUDY

Date Prepared	Date Analyzed	Target Concentration	
		2000 ^a	20000
2002.03.07	2002.03.07	1990 (100) ^b	20200 (100)
	2002.03.11 ^c	1960 (98.5)	20200 (100)
	2002.03.15 ^c	1980 (99.5)	19700 (97.5)
	2002.03.19 ^c	2000 (101)	19500 (96.5)

^a ppm

^b % (Percentage was based on the concentration on date of preparation.)

^c Animal room samples

Analytical Method : The samples were analyzed by gas chromatography.

Instrument : Hewlett Packard 5890A Gas Chromatograph

Column : INNOWAX (0.2 mm ϕ \times 50 m)

Column Temperature : 100 °C (1 min) \rightarrow (10 °C/min) \rightarrow 190 °C

Flow Rate : 1 mL/min

Detector : FID (Flame Ionization Detector)

Injection Volume : 1 μ L

APPENDIX B 1

CLINICAL OBSERVATION : MALE

STUDY NO. : 0448
ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
REPORT TYPE : A1 104

CLINICAL OBSERVATION (SUMMARY)
ALL ANIMALS

SEX : MALE

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Clinical sign	Group Name	Administration Week-day														
		1-7	2-7	3-7	4-7	5-7	6-7	7-7	8-7	9-7	10-7	11-7	12-7	13-7	14-7	
DEATH	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
MORIBUND SACRIFICE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
LOCOMOTOR MOVEMENT DECR	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
ATAXIC GAIT	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
PARALYTIC GAIT	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
WASTING	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
PILOERECTION	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
LOSS OF HAIR	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

STUDY NO. : 0448
ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
REPORT TYPE : A1 104

CLINICAL OBSERVATION (SUMMARY)
ALL ANIMALS

SEX : MALE

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Clinical sign	Group Name	Administration Week-day													
		15-7	16-7	17-7	18-7	19-7	20-7	21-7	22-7	23-7	24-7	25-7	26-7	27-7	28-7
DEATH	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MORIBUND SACRIFICE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
LOCOMOTOR MOVEMENT DECR	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ATAXIC GAIT	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PARALYTIC GAIT	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WASTING	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PILOBRECTION	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
LOSS OF HAIR	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

STUDY NO. : 0448
ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
REPORT TYPE : A1 104

CLINICAL OBSERVATION (SUMMARY)
ALL ANIMALS

SEX : MALE

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Clinical sign	Group Name	Administration Week-day		32-7	33-7	34-7	35-7	36-7	37-7	38-7	39-7	40-7	41-7	42-7
		29-7	30-7											
DEATH	Control	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	1	1	1	1	1	1
	6325 ppm	0	0	0	0	0	0	0	1	1	1	1	1	1
	20000 ppm	0	0	0	0	0	0	0	0	0	0	1	1	1
MORIBUND SACRIFICE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0
LOCOMOTOR MOVEMENT DECR	Control	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0
ATAXIC GAIT	Control	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0
PARALYTIC GAIT	Control	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0
WASTING	Control	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0
PILOERECTON	Control	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0
LOSS OF HAIR	Control	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0

STUDY NO. : 0448
ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
REPORT TYPE : A1 104

CLINICAL OBSERVATION (SUMMARY)
ALL ANIMALS

SEX : MALE

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Clinical sign	Group Name	Administration Week-day			46-7	47-7	48-7	49-7	50-7	51-7	52-7	53-7	54-7	55-7	56-7
		43-7	44-7	45-7											
DEATH	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	6325 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	20000 ppm	2	2	3	3	3	3	4	4	4	4	4	4	4	4
MORIBUND SACRIFICE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	1	1	1
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
LOCOMOTOR MOVEMENT DECR	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ATAXIC GAIT	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PARALYTIC GAIT	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WASTING	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PILOERECTION	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
LOSS OF HAIR	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

STUDY NO. : 0448
ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
REPORT TYPE : A1 104

CLINICAL OBSERVATION (SUMMARY)
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SEX : MALE

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Clinical sign	Group Name	Administration Week-day			60-7	61-7	62-7	63-7	64-7	65-7	66-7	67-7	68-7	69-7	70-7
		57-7	58-7	59-7											
DEATH	Control	0	0	0	0	0	0	0	0	0	0	0	1	1	2
	2000 ppm	1	1	1	1	1	1	1	1	1	1	1	1	2	2
	6325 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	20000 ppm	4	4	5	5	5	5	6	6	6	6	6	6	6	6
MORIBUND SACRIFICE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
LOCOMOTOR MOVEMENT DECR	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ATAXIC GAIT	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PARALYTIC GAIT	Control	0	0	0	0	0	0	0	0	0	0	0	0	1	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WASTING	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PILOERECTOR	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
LOSS OF HAIR	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	1	1	1	1	1	1	1	1	1	1
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

STUDY NO. : 0448
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 REPORT TYPE : A1 104

CLINICAL OBSERVATION (SUMMARY)
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Clinical sign	Group Name	Administration Week-day		71-7	72-7	73-7	74-7	75-7	76-7	77-7	78-7	79-7	80-7	81-7	82-7	83-7	84-7
DEATH	Control	2	2	3	3	3	3	3	3	3	4	4	4	5	5	5	5
	2000 ppm	2	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3
	6325 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	20000 ppm	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
MORIBUND SACRIFICE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
LOCOMOTOR MOVEMENT DECR	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ATAXIC GAIT	Control	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PARALYTIC GAIT	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WASTING	Control	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PILORECTION	Control	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
LOSS OF HAIR	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

STUDY NO. : 0448
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 REPORT TYPE : A1 104

CLINICAL OBSERVATION (SUMMARY)
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Clinical sign	Group Name	Administration Week-day			88-7	89-7	90-7	91-7	92-7	93-7	94-7	95-7	96-7	97-7	98-7
		85-7	86-7	87-7											
DEATH	Control	5	5	5	5	5	6	6	6	7	8	8	9	9	9
	2000 ppm	3	3	3	3	3	3	3	3	3	3	3	4	4	4
	6325 ppm	2	3	4	4	4	4	4	4	4	4	5	5	6	6
	20000 ppm	6	6	6	7	7	7	7	8	8	8	8	8	8	8
MORIBUND SACRIFICE	Control	0	0	0	0	0	0	0	0	0	0	0	0	1	1
	2000 ppm	1	1	1	1	1	1	1	2	2	2	2	2	2	2
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	1	1
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
LOCOMOTOR MOVEMENT DECR	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ATAXIC GAIT	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PARALYTIC GAIT	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WASTING	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	6325 ppm	0	0	0	1	1	1	1	1	1	1	0	1	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PILORECTION	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	1	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	1	1	0	0
	20000 ppm	0	0	0	0	0	0	1	0	0	0	0	0	0	0
LOSS OF HAIR	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

STUDY NO. : 0448
ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
REPORT TYPE : A1 104

CLINICAL OBSERVATION (SUMMARY)
ALL ANIMALS

SEX : MALE

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Clinical sign	Group Name	Administration Week-day					
		99-7	100-7	101-7	102-7	103-7	104-7
DEATH	Control	9	9	9	10	11	11
	2000 ppm	5	5	6	6	6	6
	6325 ppm	6	6	7	7	8	8
	20000 ppm	8	8	8	9	11	11
MORIBUND SACRIFICE	Control	1	1	1	1	1	1
	2000 ppm	2	2	2	2	3	3
	6325 ppm	1	1	2	2	2	2
	20000 ppm	0	0	0	0	0	0
LOCOMOTOR MOVEMENT DECR	Control	0	0	0	0	0	0
	2000 ppm	0	0	0	1	0	0
	6325 ppm	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0
ATAXIC GAIT	Control	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0
PARALYTIC GAIT	Control	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0
	20000 ppm	0	1	1	1	0	0
WASTING	Control	1	1	1	1	0	0
	2000 ppm	1	1	0	0	0	0
	6325 ppm	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0
PILORECTION	Control	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0
	6325 ppm	0	2	1	1	0	0
	20000 ppm	0	1	1	1	0	0
LOSS OF HAIR	Control	0	0	0	0	0	0
	2000 ppm	1	1	0	0	0	0
	6325 ppm	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0

STUDY NO. : 0448
ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
REPORT TYPE : A1 104

CLINICAL OBSERVATION (SUMMARY)
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Clinical sign	Group Name	Administration Week-day													
		1-7	2-7	3-7	4-7	5-7	6-7	7-7	8-7	9-7	10-7	11-7	12-7	13-7	14-7
SOILED PERI-GENITALIA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EXOPHTHALMOS	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	1	2	2	2	2	2	2	2	2	2
EYE OPACITY	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	1	1	1	1	1	1	2	2	2
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CATARACT	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	1	1	1
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CORNEAL OPACITY	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ANTERIOR CHAMBER OPACITY	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	1	1	1	1	1	1	1	1	1
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EXTERNAL MASS	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
INTERNAL MASS	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

STUDY NO. : 0448
ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
REPORT TYPE : A1 104

CLINICAL OBSERVATION (SUMMARY)
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Clinical sign	Group Name	Administration Week-day		15-7	16-7	17-7	18-7	19-7	20-7	21-7	22-7	23-7	24-7	25-7	26-7	27-7	28-7
		15-7	16-7														
SOILED PERI-GENITALIA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EXOPHTHALMOS	Control	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
EYE OPACITY	Control	0	0	0	0	0	2	2	2	2	2	2	2	2	2	2	2
	2000 ppm	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1
	6325 ppm	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CATARACT	Control	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CORNEAL OPACITY	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1
	6325 ppm	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ANTERIOR CHAMBER OPACITY	Control	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EXTERNAL MASS	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1
INTERNAL MASS	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

STUDY NO. : 0448
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 REPORT TYPE : A1 104

CLINICAL OBSERVATION (SUMMARY)
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Clinical sign	Group Name	Administration Week-day													
		29-7	30-7	31-7	32-7	33-7	34-7	35-7	36-7	37-7	38-7	39-7	40-7	41-7	42-7
SOILED PERI-GENITALIA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EXOPHTHALMOS	Control	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	1	1	1	1	1	1	1	1	1	1	1	1
	20000 ppm	2	2	2	2	2	2	2	2	2	2	2	2	2	2
EYE OPACITY	Control	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	2000 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	6325 ppm	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	1	1	2
CATARACT	Control	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	1	1	2
CORNEAL OPACITY	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	6325 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ANTERIOR CHAMBER OPACITY	Control	1	1	2	2	2	2	2	2	2	1	1	1	1	1
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	1	1	1	1	1	1	1	1	1	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EXTERNAL MASS	Control	0	0	0	0	1	1	2	2	2	2	2	2	2	2
	2000 ppm	0	0	0	0	0	0	0	0	0	0	1	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
INTERNAL MASS	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

STUDY NO. : 0448
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 REPORT TYPE : A1 104

CLINICAL OBSERVATION (SUMMARY)
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Clinical sign	Group Name	Administration Week-day													
		43-7	44-7	45-7	46-7	47-7	48-7	49-7	50-7	51-7	52-7	53-7	54-7	55-7	56-7
SOILED PERI-GENITALIA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EXOPHTHALMOS	Control	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	20000 ppm	2	2	2	2	2	2	2	2	2	2	2	2	2	2
EYE OPACITY	Control	2	2	2	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	1	1	2	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	2	2	2	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	2	2	2	0	0	0	0	0	0	0	0	0	0	0
CATARACT	Control	1	1	1	1	1	1	1	1	1	1	1	1	1	2
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	1	1	1
	6325 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	20000 ppm	2	2	2	2	2	2	2	2	2	2	2	3	3	3
CORNEAL OPACITY	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	6325 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ANTERIOR CHAMBER OPACITY	Control	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	2000 ppm	0	0	1	1	1	1	1	1	1	1	1	1	1	2
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	1	1	1	1	1	1	2	2	1	1
EXTERNAL MASS	Control	2	2	3	3	3	2	2	2	2	2	2	2	2	2
	2000 ppm	0	0	1	1	0	0	1	1	1	1	1	0	0	0
	6325 ppm	1	1	1	1	1	1	1	0	0	0	0	0	0	1
	20000 ppm	1	1	0	0	0	0	0	0	0	0	0	0	0	0
INTERNAL MASS	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

STUDY NO. : 0448
ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
REPORT TYPE : A1 104

CLINICAL OBSERVATION (SUMMARY)
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Clinical sign	Group Name	Administration Week-day													
		57-7	58-7	59-7	60-7	61-7	62-7	63-7	64-7	65-7	66-7	67-7	68-7	69-7	70-7
SOILED PERI-GENITALIA	Control	0	0	0	0	0	0	0	0	0	0	0	0	1	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EXOPHTHALMOS	Control	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	20000 ppm	2	2	2	2	2	2	2	2	2	2	2	2	2	2
EYE OPACITY	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CATARACT	Control	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	2000 ppm	2	2	2	2	2	2	2	2	3	3	3	3	3	3
	6325 ppm	1	1	1	1	1	1	1	1	1	2	2	2	2	2
	20000 ppm	3	3	3	3	3	3	3	3	3	3	3	3	3	3
CORNEAL OPACITY	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	1	1	1	1	1	1	1	1	0	0	0	0	0	0
	6325 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ANTERIOR CHAMBER OPACITY	Control	1	1	1	1	1	1	1	1	1	1	2	1	1	1
	2000 ppm	1	1	1	1	1	1	1	1	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
EXTERNAL MASS	Control	2	2	2	2	2	4	4	3	3	3	3	3	3	3
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	1	1	1	1	1	1	1	1	1	3	3	4	4	5
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	1	1	2
INTERNAL MASS	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

STUDY NO. : 0448
ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
REPORT TYPE : A1 104

CLINICAL OBSERVATION (SUMMARY)
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Clinical sign	Group Name	Administration Week-day													
		71-7	72-7	73-7	74-7	75-7	76-7	77-7	78-7	79-7	80-7	81-7	82-7	83-7	84-7
SOILED PERI-GENITALIA	Control	1	1	0	0	0	0	0	0	1	1	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EXOPHTHALMOS	Control	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	20000 ppm	2	2	2	2	2	2	2	2	2	2	1	1	1	1
EYE OPACITY	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CATARACT	Control	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	2000 ppm	3	3	3	3	3	3	3	3	3	3	4	4	4	4
	6325 ppm	2	2	2	2	2	2	2	3	3	3	3	3	3	3
	20000 ppm	3	3	3	3	3	3	3	3	3	3	4	4	4	4
CORNEAL OPACITY	Control	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ANTERIOR CHAMBER OPACITY	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
EXTERNAL MASS	Control	3	3	3	3	3	3	3	4	4	4	4	4	4	5
	2000 ppm	1	1	1	1	2	3	3	3	3	3	3	4	4	5
	6325 ppm	4	3	3	3	3	3	4	4	4	4	3	3	3	4
	20000 ppm	1	0	0	0	0	1	1	2	2	2	2	2	1	1
INTERNAL MASS	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

STUDY NO. : 0448
ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
REPORT TYPE : A1 104

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Clinical sign	Group Name	Administration Week-day													
		85-7	86-7	87-7	88-7	89-7	90-7	91-7	92-7	93-7	94-7	95-7	96-7	97-7	98-7
SOILED PERI-GENITALIA	Control	0	0	0	1	1	1	1	1	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	1	1	1	1	1	1	1	1	1	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EXOPHTHALMOS	Control	1	1	1	1	1	1	1	1	1	1	1	1	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	20000 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
EYE OPACITY	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CATARACT	Control	3	3	3	3	3	3	3	3	3	3	3	3	2	2
	2000 ppm	4	4	4	4	4	4	4	6	7	7	7	7	7	7
	6325 ppm	3	4	4	4	4	4	4	4	4	4	4	4	4	4
	20000 ppm	4	4	4	5	5	5	5	5	5	5	5	5	5	5
CORNEAL OPACITY	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	1	1	0	0	0	0	0	0	0
	6325 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	20000 ppm	0	0	0	0	1	1	1	1	1	1	1	1	1	1
ANTERIOR CHAMBER OPACITY	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	1	1
	20000 ppm	1	1	1	1	0	0	0	0	0	0	0	0	0	0
EXTERNAL MASS	Control	5	5	5	5	4	4	4	7	6	6	6	5	5	5
	2000 ppm	5	5	5	5	5	5	5	5	4	5	5	4	4	4
	6325 ppm	4	4	4	5	5	5	6	8	8	9	8	9	8	8
	20000 ppm	2	4	4	4	3	4	5	5	5	6	7	7	8	8
INTERNAL MASS	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	1	1	1	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

STUDY NO. : 0448
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 REPORT TYPE : A1 104

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Clinical sign	Group Name	Administration Week-day					
		99-7	100-7	101-7	102-7	103-7	104-7
SOILED PERI-GENITALIA	Control	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0
EXOPHTHALMOS	Control	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0
	6325 ppm	1	1	1	1	1	1
	20000 ppm	1	1	1	0	0	0
EYE OPACITY	Control	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0
CATARACT	Control	2	2	2	2	2	2
	2000 ppm	7	7	7	7	7	7
	6325 ppm	4	4	4	4	4	4
	20000 ppm	5	5	5	4	4	4
CORNEAL OPACITY	Control	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0
	6325 ppm	1	1	1	1	1	1
	20000 ppm	1	1	1	1	1	1
ANTERIOR CHAMBER OPACITY	Control	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0
	6325 ppm	1	1	0	0	0	0
	20000 ppm	0	1	1	1	1	1
EXTERNAL MASS	Control	5	5	6	6	5	5
	2000 ppm	4	4	3	5	6	6
	6325 ppm	7	7	6	6	6	8
	20000 ppm	8	8	8	8	8	8
INTERNAL MASS	Control	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0
	6325 ppm	0	1	0	0	1	1
	20000 ppm	0	0	0	0	0	0

STUDY NO. : 0448
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 REPORT TYPE : A1 104

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Clinical sign	Group Name	Administration Week-day													
		1-7	2-7	3-7	4-7	5-7	6-7	7-7	8-7	9-7	10-7	11-7	12-7	13-7	14-7
M. NOSE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. EYE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. PERI-MOUTH	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. ORAL CAVITY	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. MANDIBULAR	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. EAR	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. PERI EAR	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. NECK	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

STUDY NO. : 0448
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 REPORT TYPE : A1 104

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Clinical sign	Group Name	Administration Week-day														
		15-7	16-7	17-7	18-7	19-7	20-7	21-7	22-7	23-7	24-7	25-7	26-7	27-7	28-7	
M. NOSE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
M. EYE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
M. PERI-MOUTH	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
M. ORAL CAVITY	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
M. MANDIBULAR	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
M. EAR	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
M. PERI EAR	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
M. NECK	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

STUDY NO. : 0448
ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
REPORT TYPE : A1 104

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Clinical sign	Group Name	Administration Week-day													
		29-7	30-7	31-7	32-7	33-7	34-7	35-7	36-7	37-7	38-7	39-7	40-7	41-7	42-7
M. NOSE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. EYE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. PERI-MOUTH	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	1	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. ORAL CAVITY	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. MANDIBULAR	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. EAR	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. PERI EAR	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. NECK	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

STUDY NO. : 0448
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 REPORT TYPE : A1 104

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Clinical sign	Group Name	Administration Week-day														
		43-7	44-7	45-7	46-7	47-7	48-7	49-7	50-7	51-7	52-7	53-7	54-7	55-7	56-7	
M. NOSE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
M. EYE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
M. PERI-MOUTH	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	2000 ppm	0	0	1	1	0	0	0	0	0	0	0	0	0	0	
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
M. ORAL CAVITY	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	2000 ppm	0	0	0	0	0	0	0	0	1	1	1	0	0	0	
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
M. MANDIBULAR	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	2000 ppm	0	0	0	0	0	0	1	1	1	1	1	0	0	0	
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
M. EAR	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
M. PERI EAR	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
M. NECK	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

STUDY NO. : 0448
ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
REPORT TYPE : A1 104

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Clinical sign	Group Name	Administration Week-day													
		57-7	58-7	59-7	60-7	61-7	62-7	63-7	64-7	65-7	66-7	67-7	68-7	69-7	70-7
M. NOSE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. EYE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. PERI-MOUTH	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	1	1	1
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	1
M. ORAL CAVITY	Control	0	0	0	0	0	1	1	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. MANDIBULAR	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. EAR	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. PERI EAR	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. NECK	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

STUDY NO. : 0448
ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
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Clinical sign	Group Name	Administration Week-day			74-7	75-7	76-7	77-7	78-7	79-7	80-7	81-7	82-7	83-7	84-7
		71-7	72-7	73-7											
M. NOSE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. EYE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. PERI-MOUTH	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	20000 ppm	1	0	0	0	0	0	0	0	0	0	0	0	0	0
M. ORAL CAVITY	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	1	1	1	1	1	1	1	1	1
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. MANDIBULAR	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. EAR	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. PERT EAR	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. NECK	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

STUDY NO. : 0448
ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
REPORT TYPE : A1 104

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Clinical sign	Group Name	Administration Week-day				88-7	89-7	90-7	91-7	92-7	93-7	94-7	95-7	96-7	97-7	98-7
		85-7	86-7	87-7												
M. NOSE	Control	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0		0	0	1	1	1	1	1	1	1	1	1
M. EYE	Control	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	1	1	1		1	1	1	1	1	1	1	1	1	1	1
M. PERI-MOUTH	Control	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	1	1	1		1	1	1	1	2	2	2	2	2	2	2
	20000 ppm	0	1	1		1	0	0	0	0	0	0	0	0	0	0
M. ORAL CAVITY	Control	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	1	1	1		1	1	1	1	1	1	1	1	1	1	1
	6325 ppm	0	0	0		0	0	0	0	1	1	1	1	1	1	1
	20000 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
M. MANDIBULAR	Control	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
M. EAR	Control	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0		0	0	0	0	0	0	0	1	1	1	1
	20000 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
M. PERI EAR	Control	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	1	1		1	1	0	0	0	0	1	1	0	1	1
	6325 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
M. NECK	Control	0	0	0		0	0	0	0	1	1	1	1	1	1	1
	2000 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0

STUDY NO. : 0448
ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
REPORT TYPE : A1 104

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Clinical sign	Group Name	Administration Week-day					
		99-7	100-7	101-7	102-7	103-7	104-7
M. NOSE	Control	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0
	20000 ppm	1	1	1	1	1	1
M. EYE	Control	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0
	20000 ppm	1	1	1	1	1	1
M. PERI-MOUTH	Control	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0
	6325 ppm	1	1	1	1	1	1
	20000 ppm	0	0	0	0	0	0
M. ORAL CAVITY	Control	0	0	0	0	0	0
	2000 ppm	1	1	1	1	1	1
	6325 ppm	1	1	1	1	1	1
	20000 ppm	0	0	0	0	0	0
M. MANDIBULAR	Control	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0
M. EAR	Control	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0
	6325 ppm	1	1	1	1	1	1
	20000 ppm	0	0	0	0	0	0
M. PERI EAR	Control	0	0	0	0	0	0
	2000 ppm	1	1	1	1	1	1
	6325 ppm	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0
M. NECK	Control	1	1	1	1	1	1
	2000 ppm	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0

STUDY NO. : 0448
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 REPORT TYPE : A1 104

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Clinical sign	Group Name	Administration Week-day													
		1-7	2-7	3-7	4-7	5-7	6-7	7-7	8-7	9-7	10-7	11-7	12-7	13-7	14-7
M. FORELIMB	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. BREAST	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. ABDOMEN	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. ANTERIOR. DORSUM	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. POSTERIOR DORSUM	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. HINDLIMB	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. GENITALIA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. TAIL	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

STUDY NO. : 0448
ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
REPORT TYPE : A1 104

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Clinical sign	Group Name	Administration Week-day														
		15-7	16-7	17-7	18-7	19-7	20-7	21-7	22-7	23-7	24-7	25-7	26-7	27-7	28-7	
M. FORELIMB	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
M. BREAST	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
M. ABDOMEN	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
M. ANTERIOR DORSUM	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
M. POSTERIOR DORSUM	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	20000 ppm	0	0	0	0	0	0	0	1	1	1	1	1	1	1	
M. HINDLIMB	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
M. GENITALIA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
M. TAIL	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

STUDY NO. : 0448
ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
REPORT TYPE : A1 104

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Clinical sign	Group Name	Administration Week-day													
		29-7	30-7	31-7	32-7	33-7	34-7	35-7	36-7	37-7	38-7	39-7	40-7	41-7	42-7
M. FORELIMB	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. BREAST	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. ABDOMEN	Control	0	0	0	0	1	1	2	2	2	2	2	2	2	2
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. ANTERIOR DORSUM	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. POSTERIOR DORSUM	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
M. HINDLIMB	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. GENITALIA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. TAIL	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

STUDY NO. : 0448
ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
REPORT TYPE : A1 104

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Clinical sign	Group Name	Administration Week-day													
		43-7	44-7	45-7	46-7	47-7	48-7	49-7	50-7	51-7	52-7	53-7	54-7	55-7	56-7
M. FORELIMB	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. BREAST	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. ABDOMEN	Control	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. ANTERIOR. DORSUM	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. POSTERIOR DORSUM	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	1	1	0	0	0	0	0	0	0	0	0	0	0	0
M. HINDLIMB	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. GENITALIA	Control	0	0	1	1	1	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. TAIL	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	1	1	1	1	1	1	1	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

STUDY NO. : 0448
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 REPORT TYPE : A1 104

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Clinical sign	Group Name	Administration Week-day													
		57-7	58-7	59-7	60-7	61-7	62-7	63-7	64-7	65-7	66-7	67-7	68-7	69-7	70-7
M. FORELIMB	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. BREAST	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. ABDOMEN	Control	2	2	2	2	2	2	2	2	3	3	3	3	3	3
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	2	2	2	2	2
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. ANTERIOR DORSUM	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. POSTERIOR DORSUM	Control	0	0	0	0	0	1	1	1	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. HINDLIMB	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. GENITALIA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	1	1	1	1
M. TAIL	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

STUDY NO. : 0448
ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
REPORT TYPE : A1 104

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Clinical sign	Group Name	Administration Week-day													
		71-7	72-7	73-7	74-7	75-7	76-7	77-7	78-7	79-7	80-7	81-7	82-7	83-7	84-7
M. FORELIMB	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	1	1	1	1	1	1	2	2	2	2	1	1	1	1
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. BREAST	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. ABDOMEN	Control	3	3	3	3	3	3	3	3	3	3	3	3	3	3
	2000 ppm	0	0	0	0	1	1	1	1	1	1	1	1	1	1
	6325 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. ANTERIOR DORSUM	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	6325 ppm	1	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	1	1	1	1	1	0	0
M. POSTERIOR DORSUM	Control	0	0	0	0	0	0	0	1	1	1	1	1	1	2
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. HINDLIMB	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	1	1	1	1	1	1	1	1	1
M. GENITALIA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. TAIL	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	1	1	1
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

STUDY NO. : 0448
ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
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Clinical sign	Group Name	Administration Week-day													
		85-7	86-7	87-7	88-7	89-7	90-7	91-7	92-7	93-7	94-7	95-7	96-7	97-7	98-7
M. FORELIMB	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	1	1	1	1	1	1	1	1	1	1	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. BREAST	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	1	1	0	0	0
	6325 ppm	1	1	1	1	1	1	1	1	1	1	1	1	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	1	1
M. ABDOMEN	Control	3	3	3	3	3	3	3	4	3	3	3	2	1	1
	2000 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	6325 ppm	1	1	1	1	1	1	1	2	2	2	2	2	2	2
	20000 ppm	0	0	0	0	0	0	1	1	1	1	1	1	1	1
M. ANTERIOR DORSUM	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	1	1	1	1	1	1	1	1	1	1	1	1	2	1
	6325 ppm	0	0	0	0	0	0	0	0	0	1	1	1	1	1
	20000 ppm	0	1	1	1	1	1	1	1	1	2	3	3	3	3
M. POSTERIOR DORSUM	Control	2	2	2	2	1	1	1	2	2	2	2	2	2	2
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	1	1	1	1	1	1	1	1	1	1	1
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. HINDLIMB	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	1	0	0	0	0	0	0	0
	20000 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
M. GENITALIA	Control	0	0	0	0	0	0	0	0	0	0	0	0	1	1
	2000 ppm	1	1	1	1	1	1	2	2	2	2	2	2	1	1
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. TAIL	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	1	1	1	1	1	1	1	1	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

STUDY NO. : 0448
ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
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Clinical sign	Group Name	Administration Week-day					
		99-7	100-7	101-7	102-7	103-7	104-7
M. FORELIMB	Control	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0
M. BREAST	Control	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0
	20000 ppm	1	1	1	1	1	1
M. ABDOMEN	Control	1	1	1	1	1	1
	2000 ppm	1	1	1	1	1	1
	6325 ppm	2	2	1	1	1	1
	20000 ppm	1	1	1	1	2	2
M. ANTERIOR DORSUM	Control	0	0	1	1	1	1
	2000 ppm	1	1	0	2	3	3
	6325 ppm	1	1	1	1	2	3
	20000 ppm	3	3	3	4	3	4
M. POSTERIOR DORSUM	Control	2	2	2	2	1	1
	2000 ppm	0	0	0	1	1	1
	6325 ppm	1	1	1	1	0	1
	20000 ppm	0	0	0	0	0	0
M. HINDLIMB	Control	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0
	20000 ppm	1	1	1	1	1	1
M. GENITALIA	Control	1	1	1	1	1	1
	2000 ppm	1	1	0	0	0	0
	6325 ppm	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0
M. TAIL	Control	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0

STUDY NO. : 0448
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
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Clinical sign	Group Name	Administration Week-day													
		1-7	2-7	3-7	4-7	5-7	6-7	7-7	8-7	9-7	10-7	11-7	12-7	13-7	14-7
ANEMIA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CRUSTA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CICATRIX	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HEMORRHAGE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
IRREGULAR BREATHING	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RESPIRATORY SOUND ABNOR	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DEEP BREATHING	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RED URINE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
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Clinical sign	Group Name	Administration Week-day													
		15-7	16-7	17-7	18-7	19-7	20-7	21-7	22-7	23-7	24-7	25-7	26-7	27-7	28-7
ANEMIA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CRUSTA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CICATRIX	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HEMORRHAGE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
IRREGULAR BREATHING	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RESPIRATORY SOUND ABNOR	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DEEP BREATHING	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RED URINE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

STUDY NO. : 0448
ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
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Clinical sign	Group Name	Administration Week-day				32-7	33-7	34-7	35-7	36-7	37-7	38-7	39-7	40-7	41-7	42-7
		29-7	30-7	31-7												
ANEMIA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CRUSTA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CICATRIX	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HEMORRHAGE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
IRREGULAR BREATHING	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RESPIRATORY SOUND ABNOR	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DEEP BREATHING	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RED URINE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

STUDY NO. : 0448
ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
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Clinical sign	Group Name	Administration Week-day				46-7	47-7	48-7	49-7	50-7	51-7	52-7	53-7	54-7	55-7	56-7
		43-7	44-7	45-7												
ANEMIA	Control	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
CRUSTA	Control	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	1	1	1		1	1	1	1	2	2	2	2	2	2	2
	20000 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
CICATRIX	Control	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0		0	0	1	1	1	1	1	1	1	1	1
	20000 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
HEMORRHAGE	Control	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
IRREGULAR BREATHING	Control	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	1
	6325 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
RESPIRATORY SOUND ABNOR	Control	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	1
	6325 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
DEEP BREATHING	Control	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0		0	0	0	0	0	0	0	0	1	0	0
	6325 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
RED URINE	Control	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0

STUDY NO. : 0448
ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
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		57-7	58-7	59-7												
ANEMIA	Control	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
CRUSTA	Control	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	1	1	1		1	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
CICATRIX	Control	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	1	1	1		1	1	1	1	1	1	1	1	1	1	1
	20000 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
HEMORRHAGE	Control	0	0	0		0	0	0	0	0	0	0	0	0	1	0
	2000 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
IRREGULAR BREATHING	Control	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
RESPIRATORY SOUND ABNOR	Control	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
DEEP BREATHING	Control	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
RED URINE	Control	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0

STUDY NO. : 0448
ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
REPORT TYPE : A1 104

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Clinical sign	Group Name	Administration Week-day				74-7	75-7	76-7	77-7	78-7	79-7	80-7	81-7	82-7	83-7	84-7
		71-7	72-7	73-7												
ANEMIA	Control	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0		0	0	0	0	0	0	0	0	0	1	1
	6325 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
CRUSTA	Control	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	1
	6325 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
CICATRIX	Control	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	1	1	1		1	1	1	1	1	1	1	1	1	0	0
	20000 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
HEMORRHAGE	Control	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
IRREGULAR BREATHING	Control	0	0	0		0	0	1	1	1	1	1	0	0	0	0
	2000 ppm	0	0	0		1	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
RESPIRATORY SOUND ABNOR	Control	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
DEEP BREATHING	Control	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
RED URINE	Control	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0		0	0	0	0	0	1	1	0	0	0	0
	6325 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0

STUDY NO. : 0448
ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
REPORT TYPE : A1 104

CLINICAL OBSERVATION (SUMMARY)
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Clinical sign	Group Name	Administration Week-day													
		85-7	86-7	87-7	88-7	89-7	90-7	91-7	92-7	93-7	94-7	95-7	96-7	97-7	98-7
ANEMIA	Control	0	1	1	2	2	1	1	1	0	0	0	2	1	1
	2000 ppm	1	1	1	1	1	1	1	1	1	1	2	1	2	1
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	2	2	2
	20000 ppm	0	0	0	0	0	0	1	0	0	0	0	0	0	0
CRUSTA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	1	1	1	1	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CICATRIX	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HEMORRHAGE	Control	0	0	0	0	0	0	0	0	0	0	1	1	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
IRREGULAR BREATHING	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	1	0	0	1
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RESPIRATORY SOUND ABNOR	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DEEP BREATHING	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RED URINE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

STUDY NO. : 0448
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 REPORT TYPE : A1 104

CLINICAL OBSERVATION (SUMMARY)
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Clinical sign	Group Name	Administration Week-day					
		99-7	100-7	101-7	102-7	103-7	104-7
ANEMIA	Control	1	1	1	1	1	1
	2000 ppm	1	1	1	1	1	2
	6325 ppm	2	3	2	2	1	1
	20000 ppm	0	0	0	0	0	0
CRUSTA	Control	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0
CICATRIX	Control	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0
HEMORRHAGE	Control	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0
IRREGULAR BREATHING	Control	0	0	1	1	0	0
	2000 ppm	1	1	0	1	1	3
	6325 ppm	0	1	0	0	0	0
	20000 ppm	0	0	0	0	1	1
RESPIRATORY SOUND ABNOR	Control	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0
DEEP BREATHING	Control	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0
RED URINE	Control	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0
	20000 ppm	0	1	1	1	1	1

STUDY NO. : 0448
ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
REPORT TYPE : A1 104

CLINICAL OBSERVATION (SUMMARY)
ALL ANIMALS

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Clinical sign	Group Name	Administration Week-day													
		1-7	2-7	3-7	4-7	5-7	6-7	7-7	8-7	9-7	10-7	11-7	12-7	13-7	14-7
YELLOW URINE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SMALL STOOL	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
OLIGO-STOOL	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NON REMARKABLE	Control	50	50	50	50	50	50	50	50	50	50	50	50	50	50
	2000 ppm	50	50	50	50	50	50	50	50	50	50	50	50	50	50
	6325 ppm	50	50	50	50	50	49	49	49	49	49	49	48	48	48
	20000 ppm	50	50	50	50	49	48	48	48	48	48	48	48	48	48

(HAN190)

BAIS 4

STUDY NO. : 0448
ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
REPORT TYPE : A1 104

CLINICAL OBSERVATION (SUMMARY)
ALL ANIMALS

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Clinical sign	Group Name	Administration Week-day				18-7	19-7	20-7	21-7	22-7	23-7	24-7	25-7	26-7	27-7	28-7
		15-7	16-7	17-7												
YELLOW URINE	Control	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
SMALL STOOL	Control	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
OLIGO-STOOL	Control	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
NON REMARKABLE	Control	50	50	50		50	50	48	48	48	48	48	48	48	48	48
	2000 ppm	50	50	50		50	50	49	49	49	49	49	49	49	49	49
	6325 ppm	48	48	48		48	48	48	48	48	48	48	48	48	48	48
	20000 ppm	48	48	48		48	48	48	48	47	47	47	47	47	47	47

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STUDY NO. : 0448
ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
REPORT TYPE : A1 104

CLINICAL OBSERVATION (SUMMARY)
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Clinical sign	Group Name	Administration Week-day			32-7	33-7	34-7	35-7	36-7	37-7	38-7	39-7	40-7	41-7	42-7
		29-7	30-7	31-7											
YELLOW URINE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SMALL STOOL	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
OLIGO-STOOL	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NON REMARKABLE	Control	48	48	48	48	48	48	47	47	47	47	47	47	47	47
	2000 ppm	49	49	49	49	49	49	49	49	48	48	47	48	48	48
	6325 ppm	48	48	48	48	48	47	47	47	46	46	46	46	46	46
	20000 ppm	47	47	47	47	47	47	47	47	47	47	47	45	45	44

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STUDY NO. : 0448
ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
REPORT TYPE : A1 104

CLINICAL OBSERVATION (SUMMARY)
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Clinical sign	Group Name	Administration Week-day													
		43-7	44-7	45-7	46-7	47-7	48-7	49-7	50-7	51-7	52-7	53-7	54-7	55-7	56-7
YELLOW URINE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SMALL STOOL	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	1	1	1	0	1
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
OLIGO-STOOL	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	1	1	1	0	1
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NON REMARKABLE	Control	47	47	46	46	46	47	47	47	47	47	47	47	47	46
	2000 ppm	48	48	46	46	47	47	46	46	46	46	46	45	46	44
	6325 ppm	45	45	45	45	45	45	45	45	45	45	45	45	45	44
	20000 ppm	43	43	43	43	43	43	42	42	42	42	42	42	42	42

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STUDY NO. : 0448
ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
REPORT TYPE : A1 104

CLINICAL OBSERVATION (SUMMARY)
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Clinical sign	Group Name	Administration Week-day													
		57-7	58-7	59-7	60-7	61-7	62-7	63-7	64-7	65-7	66-7	67-7	68-7	69-7	70-7
YELLOW URINE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SMALL STOOL	Control	0	0	0	0	0	0	0	0	0	0	0	0	1	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
OLIGO-STOOL	Control	0	0	0	0	0	0	0	0	0	0	0	0	1	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NON REMARKABLE	Control	46	46	46	46	46	44	44	45	45	45	44	44	43	42
	2000 ppm	45	45	45	45	44	44	44	44	44	44	44	44	43	43
	6325 ppm	44	44	44	44	45	45	45	45	45	42	42	42	42	42
	20000 ppm	42	42	41	41	41	41	40	40	40	40	40	39	39	38

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STUDY NO. : 0448
ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
REPORT TYPE : A1 104

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Clinical sign	Group Name	Administration Week-day													
		71-7	72-7	73-7	74-7	75-7	76-7	77-7	78-7	79-7	80-7	81-7	82-7	83-7	84-7
YELLOW URINE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SMALL STOOL	Control	1	1	0	0	0	1	1	1	1	1	0	1	1	1
	2000 ppm	0	0	0	1	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
OLIGO-STOOL	Control	1	1	0	0	0	1	1	1	0	0	0	0	0	0
	2000 ppm	0	0	0	1	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NON REMARKABLE	Control	42	42	42	42	42	41	41	39	39	39	39	38	38	37
	2000 ppm	43	43	42	42	41	40	40	40	40	40	39	38	38	37
	6325 ppm	43	43	43	43	43	43	43	42	42	42	42	42	42	40
	20000 ppm	39	40	40	40	40	40	40	39	39	39	39	39	40	40

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STUDY NO. : 0448
ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
REPORT TYPE : A1 104

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Clinical sign	Group Name	Administration Week-day			88-7	89-7	90-7	91-7	92-7	93-7	94-7	95-7	96-7	97-7	98-7
		85-7	86-7	87-7											
YELLOW URINE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	1	0	0	0	0	0	0	0
SMALL STOOL	Control	0	0	1	1	1	0	0	0	0	0	0	0	0	1
	2000 ppm	0	0	0	0	0	0	0	0	0	1	1	0	1	2
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	20000 ppm	0	0	0	0	0	0	0	1	1	1	1	1	1	2
OLIGO-STOOL	Control	0	1	2	2	1	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	1	1	0	0	0
	6325 ppm	0	1	0	0	0	0	0	1	1	1	0	0	0	0
	20000 ppm	0	0	0	0	0	1	1	0	0	0	0	0	0	0
NON REMARKABLE	Control	38	38	37	37	38	38	38	35	35	34	34	33	32	31
	2000 ppm	37	37	37	37	38	37	37	35	34	34	34	34	32	32
	6325 ppm	40	38	38	37	37	37	36	34	34	33	33	31	30	30
	20000 ppm	40	38	38	36	37	35	34	34	34	33	32	32	31	30

(HAN190)

BAIS 4

STUDY NO. : 0448
ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
REPORT TYPE : A1 104

CLINICAL OBSERVATION (SUMMARY)
ALL ANIMALS

SEX : MALE

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Clinical sign	Group Name	Administration Week-day					
		99-7	100-7	101-7	102-7	103-7	104-7
YELLOW URINE	Control	0	0	0	0	0	0
	2000 ppm	0	0	0	0	1	1
	6325 ppm	0	1	0	0	0	0
	20000 ppm	0	0	0	0	0	0
SMALL STOOL	Control	1	1	1	0	0	0
	2000 ppm	2	2	1	2	1	3
	6325 ppm	1	1	0	0	0	0
	20000 ppm	2	2	2	2	0	1
OLIGO-STOOL	Control	0	0	0	0	0	0
	2000 ppm	0	0	0	1	0	2
	6325 ppm	0	2	1	1	0	0
	20000 ppm	0	2	2	3	1	2
NON REMARKABLE	Control	31	31	31	31	31	31
	2000 ppm	31	31	31	29	28	28
	6325 ppm	31	31	31	31	29	27
	20000 ppm	30	29	29	28	27	27

(HAN190)

BAIS 4

APPENDIX B 2

CLINICAL OBSERVATION : FEMALE

STUDY NO. : 0448
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 REPORT TYPE : A1 104

CLINICAL OBSERVATION (SUMMARY)
 ALL ANIMALS

SEX : FEMALE

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Clinical sign	Group Name	Administration		Week-day											
		1-7	2-7	3-7	4-7	5-7	6-7	7-7	8-7	9-7	10-7	11-7	12-7	13-7	14-7
DEATH	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MORIBUND SACRIFICE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
LOCOMOTOR MOVEMENT DECR	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HUNCHBACK POSITION	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ATAXIC GAIT	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PARALYTIC GAIT	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WASTING	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SOILED	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

STUDY NO. : 0448
ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
REPORT TYPE : A1 104

CLINICAL OBSERVATION (SUMMARY)
ALL ANIMALS

SEX : FEMALE

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Clinical sign	Group Name	Administration Week-day				18-7	19-7	20-7	21-7	22-7	23-7	24-7	25-7	26-7	27-7	28-7
		15-7	16-7	17-7												
DEATH	Control	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0		0	0	0	0	0	0	0	0	0	1	1
MORIBUND SACRIFICE	Control	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
LOCOMOTOR MOVEMENT DECR	Control	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
HUNCHBACK POSITION	Control	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
ATAXIC GAIT	Control	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
PARALYTIC GAIT	Control	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
WASTING	Control	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
SOILED	Control	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0

STUDY NO. : 0448
ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
REPORT TYPE : A1 104

CLINICAL OBSERVATION (SUMMARY)
ALL ANIMALS

SEX : FEMALE

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Clinical sign	Group Name	Administration Week-day													
		29-7	30-7	31-7	32-7	33-7	34-7	35-7	36-7	37-7	38-7	39-7	40-7	41-7	42-7
DEATH	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	2
MORIBUND SACRIFICE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
LOCOMOTOR MOVEMENT DECR	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HUNCHBACK POSITION	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ATAXIC GAIT	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PARALYTIC GAIT	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WASTING	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SOILED	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

STUDY NO. : 0448
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 REPORT TYPE : A1 104

CLINICAL OBSERVATION (SUMMARY)
 ALL ANIMALS

SEX : FEMALE

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Clinical sign	Group Name	Administration Week-day													
		43-7	44-7	45-7	46-7	47-7	48-7	49-7	50-7	51-7	52-7	53-7	54-7	55-7	56-7
DEATH	Control	0	1	1	1	1	1	1	1	1	1	1	1	1	1
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	2	2	2	2	2	4	4	5	5	6	6	6	6	6
MORIBUND SACRIFICE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
LOCOMOTOR MOVEMENT DECR	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HUNCHBACK POSITION	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ATAXIC GAIT	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PARALYTIC GAIT	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WASTING	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SOILED	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

STUDY NO. : 0448
ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
REPORT TYPE : A1 104

CLINICAL OBSERVATION (SUMMARY)
ALL ANIMALS

SEX : FEMALE

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Clinical sign	Group Name	Administration Week-day				60-7	61-7	62-7	63-7	64-7	65-7	66-7	67-7	68-7	69-7	70-7
		57-7	58-7	59-7												
DEATH	Control	1	1	1		1	1	1	1	1	1	1	1	1	1	1
	2000 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	6	6	6		6	6	6	6	6	6	6	6	7	7	7
MORIBUND SACRIFICE	Control	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
LOCOMOTOR MOVEMENT DECR	Control	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
HUNCHBACK POSITION	Control	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
ATAXIC GAIT	Control	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
PARALYTIC GAIT	Control	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
WASTING	Control	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
SOILED	Control	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0

STUDY NO. : 0448
ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
REPORT TYPE : A1 104

CLINICAL OBSERVATION (SUMMARY)
ALL ANIMALS

SEX : FEMALE

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Clinical sign	Group Name	Administration Week-day													
		71-7	72-7	73-7	74-7	75-7	76-7	77-7	78-7	79-7	80-7	81-7	82-7	83-7	84-7
DEATH	Control	1	1	1	2	2	2	2	2	2	2	2	3	4	4
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	1	1	1	1	1	1	1	1	1	1	1	2
	20000 ppm	7	7	8	8	9	9	10	10	11	11	11	13	14	14
MORIBUND SACRIFICE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	1	1	1	1	1	1	1	1	1	1
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	1
LOCOMOTOR MOVEMENT DECR	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HUNCHBACK POSITION	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ATAXIC GAIT	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PARALYTIC GAIT	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WASTING	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	1	1	1	1	1	1	1	1	1	1	1
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	1	0	0	0	0	0	0
SOILED	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

STUDY NO. : 0448
ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCr1j]
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Clinical sign	Group Name	Administration Week-day													
		85-7	86-7	87-7	88-7	89-7	90-7	91-7	92-7	93-7	94-7	95-7	96-7	97-7	98-7
DEATH	Control	4	4	5	6	7	8	9	9	9	9	9	9	9	10
	2000 ppm	0	0	0	0	0	0	0	0	0	1	1	2	2	2
	6325 ppm	3	3	4	4	4	5	5	5	5	5	5	6	6	7
	20000 ppm	15	15	15	16	17	17	17	17	18	18	18	18	18	18
MORIBUND SACRIFICE	Control	0	0	0	0	0	1	1	1	1	1	1	1	1	1
	2000 ppm	0	0	0	0	0	0	0	0	0	0	1	1	1	1
	6325 ppm	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	20000 ppm	1	1	1	1	1	1	1	1	1	1	2	3	3	4
LOCOMOTOR MOVEMENT DECR	Control	0	0	0	0	0	0	1	1	0	0	0	0	1	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HUNCHBACK POSITION	Control	0	0	0	0	0	0	0	0	0	0	0	1	1	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ATAXIC GAIT	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	1
PARALYTIC GAIT	Control	0	0	1	1	1	1	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WASTING	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	1	1	1	1	1	1	1	1	1	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SOILED	Control	0	0	1	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	1	0	0	0	0	0	0

STUDY NO. : 0448
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 REPORT TYPE : A1 104

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Clinical sign	Group Name	Administration Week-day					
		99-7	100-7	101-7	102-7	103-7	104-7
DEATH	Control	10	11	11	11	11	11
	2000 ppm	3	3	4	5	5	5
	6325 ppm	7	7	7	7	7	7
	20000 ppm	19	19	20	20	20	20
MORIBUND SACRIFICE	Control	1	1	1	1	1	1
	2000 ppm	2	2	2	2	2	2
	6325 ppm	3	3	3	3	3	3
	20000 ppm	4	5	5	5	5	5
LOCOMOTOR MOVEMENT DECR	Control	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0
HUNCHBACK POSITION	Control	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0
ATAXIC GAIT	Control	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0
PARALYTIC GAIT	Control	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0
WASTING	Control	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0
SOILED	Control	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0

STUDY NO. : 0448
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 REPORT TYPE : A1 104

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Clinical sign	Group Name	Administration Week-day													
		1-7	2-7	3-7	4-7	5-7	6-7	7-7	8-7	9-7	10-7	11-7	12-7	13-7	14-7
PILOERECTOR	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
LOSS OF HAIR	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SOILED PERI-GENITALIA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	1	0	0
EXOPHTHALMOS	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	1	1	1	1	1	1
EYE OPACITY	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CATARACT	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ANTERIOR CHAMBER OPACITY	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EXTERNAL MASS	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

STUDY NO. : 0448
ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
REPORT TYPE : A1 104

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Clinical sign	Group Name	Administration Week-day													
		15-7	16-7	17-7	18-7	19-7	20-7	21-7	22-7	23-7	24-7	25-7	26-7	27-7	28-7
PILOERECTON	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
LOSS OF HAIR	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SOILED PERI-GENITALIA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	1	0	0
	20000 ppm	0	0	0	0	0	1	1	0	0	0	0	2	1	1
EXOPHTHALMOS	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
EYE OPACITY	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	1	2	2	2	2	2	2	2	2	3	3	3	3	3
CATARACT	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	1	2	2	2	2	2	2	2	2	3	3	3	3	3
ANTERIOR CHAMBER OPACITY	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EXTERNAL MASS	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	1	1	1

STUDY NO. : 0448
ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
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Clinical sign	Group Name	Administration Week-day			32-7	33-7	34-7	35-7	36-7	37-7	38-7	39-7	40-7	41-7	42-7
		29-7	30-7	31-7											
PILOERRECTION	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
LOSS OF HAIR	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SOILED PERI-GENITALIA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	1	1	1	1	1	1
	20000 ppm	1	1	3	3	4	4	3	3	3	3	3	3	6	6
EXOPHTHALMOS	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
EYE OPACITY	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	1	1	1	1
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	3	3	3	3	3	3	3	3	3	3	3	3	3	3
CATARACT	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	1	1	1	1
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	3	3	3	3	3	3	3	3	3	3	3	3	3	3
ANTERIOR CHAMBER OPACITY	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EXTERNAL MASS	Control	1	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1

STUDY NO. : 0448
ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
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Clinical sign	Group Name	Administration Week-day				46-7	47-7	48-7	49-7	50-7	51-7	52-7	53-7	54-7	55-7	56-7
		43-7	44-7	45-7												
PILOERECTON	Control	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0
LOSS OF HAIR	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SOILED PERI-GENITALIA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	1	1	0	0	0	0	0	1	1	1	1	1	1	1	1
	20000 ppm	6	6	0	0	0	0	0	0	0	3	3	3	3	3	3
EXOPHTHALMOS	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
EYE OPACITY	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	3	3	3	0	0	0	0	0	0	0	0	0	0	0	0
CATARACT	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
ANTERIOR CHAMBER OPACITY	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EXTERNAL MASS	Control	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	1	2	2	2	2	1	1	1	1	1	2	2	2	2	2

STUDY NO. : 0448
ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
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Clinical sign	Group Name	Administration Week-day														
		57-7	58-7	59-7	60-7	61-7	62-7	63-7	64-7	65-7	66-7	67-7	68-7	69-7	70-7	
PILOERECTON	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
LOSS OF HAIR	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
SOILED PERI-GENITALIA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6325 ppm	1	1	1	1	1	1	1	1	1	1	1	0	0	0	
	20000 ppm	3	3	3	5	5	5	6	6	6	5	5	2	1	5	
EXOPHTHALMOS	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	20000 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
EYE OPACITY	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
CATARACT	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	2000 ppm	1	1	2	2	2	2	2	2	2	2	2	2	2	2	
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	20000 ppm	3	3	3	3	3	4	4	4	4	4	4	4	4	4	
ANTERIOR CHAMBER OPACITY	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
EXTERNAL MASS	Control	0	0	0	0	0	0	0	0	1	1	1	1	1	1	
	2000 ppm	0	0	0	1	2	2	2	2	3	3	3	3	3	3	
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	20000 ppm	2	2	2	2	2	2	2	3	3	3	3	3	3	3	

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		71-7	72-7	73-7	74-7	75-7	76-7	77-7	78-7	79-7	80-7	81-7	82-7	83-7	84-7
PILOBRECTION	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	1	1	1	0
LOSS OF HAIR	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SOILED PERI-GENITALIA	Control	0	1	2	1	1	1	1	1	1	1	1	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	1	1	1	0	0
	6325 ppm	0	1	1	1	1	1	1	1	1	1	1	1	1	1
	20000 ppm	5	5	4	5	4	4	4	4	4	4	6	5	5	4
EXOPHTHALMOS	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
EYE OPACITY	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CATARACT	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	4	4	4	4	4	4	4	4	3	4	5	5	5	5
ANTERIOR CHAMBER OPACITY	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	1	1	2	0	0	0	0	0
EXTERNAL MASS	Control	2	1	2	1	1	1	1	1	1	1	2	1	2	2
	2000 ppm	3	3	4	4	4	4	4	4	5	5	4	4	4	5
	6325 ppm	0	0	0	0	0	0	1	1	1	1	1	1	1	1
	20000 ppm	3	3	3	3	3	3	3	3	3	3	3	3	3	2

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		85-7	86-7	87-7	88-7	89-7	90-7	91-7	92-7	93-7	94-7	95-7	96-7	97-7	98-7
PILOERECTOR	Control	0	0	0	1	1	1	1	1	1	1	1	1	1	0
	2000 ppm	0	0	0	1	1	1	1	1	1	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	1	0	0	0	0	0	0
LOSS OF HAIR	Control	0	0	0	0	0	0	0	0	0	0	0	1	1	1
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	1	1	1
SOILED PERI-GENITALIA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	1	0	0	0	0	0	0	0	0	0	0	1	1	0
	20000 ppm	1	3	3	3	3	3	3	3	3	2	0	1	1	1
EXOPHTHALMOS	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
EYE OPACITY	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CATARACT	Control	0	0	0	0	0	1	1	1	1	1	1	1	1	1
	2000 ppm	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	6325 ppm	0	0	0	0	1	1	1	1	1	1	1	1	1	1
	20000 ppm	5	5	5	4	3	3	3	3	3	3	3	3	3	3
ANTERIOR CHAMBER OPACITY	Control	0	0	1	1	1	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EXTERNAL MASS	Control	3	3	5	5	7	6	5	5	5	5	5	5	5	5
	2000 ppm	4	4	5	5	6	6	6	7	8	7	7	7	7	8
	6325 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	2
	20000 ppm	1	1	1	1	1	1	0	0	1	1	1	2	2	2

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		99-7	100-7	101-7	102-7	103-7	104-7
PILOERECTON	Control	1	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0
LOSS OF HAIR	Control	1	1	1	1	1	1
	2000 ppm	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0
	20000 ppm	1	1	1	1	1	1
SOILED PERI-GENITALIA	Control	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0
	20000 ppm	1	1	1	1	1	0
EXOPHTHALMOS	Control	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0
	20000 ppm	1	1	1	1	1	1
EYE OPACITY	Control	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0
CATARACT	Control	1	1	1	1	1	1
	2000 ppm	2	2	1	1	1	1
	6325 ppm	1	1	1	1	1	1
	20000 ppm	3	3	3	3	3	3
ANTERIOR CHAMBER OPACITY	Control	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0
EXTERNAL MASS	Control	6	6	7	7	7	7
	2000 ppm	8	8	8	7	7	6
	6325 ppm	2	2	2	2	3	3
	20000 ppm	2	2	3	3	3	3

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		1-7	2-7	3-7	4-7	5-7	6-7	7-7	8-7	9-7	10-7	11-7	12-7	13-7	14-7
INTERNAL MASS	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. PERI-MOUTH	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. ORAL CAVITY	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. MANDIBULAR	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. EAR	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. FORELIMB	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. BREAST	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. ABDOMEN	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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		15-7	16-7	17-7	18-7	19-7	20-7	21-7	22-7	23-7	24-7	25-7	26-7	27-7	28-7
INTERNAL MASS	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	1	0	0	0	0	0	0	0
M. PERI-MOUTH	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. ORAL CAVITY	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. MANDIBULAR	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. EAR	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. FORELIMB	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	1	1	1
M. BREAST	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. ABDOMEN	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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		29-7	30-7											
INTERNAL MASS	Control	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0
M. PERI-MOUTH	Control	1	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0
M. ORAL CAVITY	Control	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0
M. MANDIBULAR	Control	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0
M. EAR	Control	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0
M. FORELIMB	Control	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1
M. BREAST	Control	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0
M. ABDOMEN	Control	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0

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		43-7	44-7	45-7	46-7	47-7	48-7	49-7	50-7	51-7	52-7	53-7	54-7	55-7	56-7
INTERNAL MASS	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. PERI-MOUTH	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	1	1	1	1	1	1	1	1	1	1	1	1
M. ORAL CAVITY	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	1	0	0	0	0	0	0	0	0	0	0	0	0
M. MANDIBULAR	Control	1	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. EAR	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. FORELIMB	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	1	1	1	1	1	0	0	0	0	0	0	0	0	0
M. BREAST	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	1	1	1
M. ABDOMEN	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

STUDY NO. : 0448
ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
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Clinical sign	Group Name	Administration Week-day													
		57-7	58-7	59-7	60-7	61-7	62-7	63-7	64-7	65-7	66-7	67-7	68-7	69-7	70-7
INTERNAL MASS	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. PERI-MOUTH	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
M. ORAL CAVITY	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. MANDIBULAR	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. EAR	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. FORELIMB	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. BREAST	Control	0	0	0	0	0	0	0	0	1	1	1	1	1	1
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
M. ABDOMEN	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	1	1	1	1	1	1	1	1	1	1	1
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

STUDY NO. : 0448
ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
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Clinical sign	Group Name	Administration Week-day													
		71-7	72-7	73-7	74-7	75-7	76-7	77-7	78-7	79-7	80-7	81-7	82-7	83-7	84-7
INTERNAL MASS	Control	1	1	0	0	0	0	0	0	0	0	0	0	0	1
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. PERI-MOUTH	Control	1	0	1	0	0	0	0	0	0	0	1	0	1	1
	2000 ppm	0	0	0	0	0	0	0	0	1	1	0	0	0	0
	6325 ppm	0	0	0	0	0	0	1	1	1	1	1	1	1	1
	20000 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	0
M. ORAL CAVITY	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. MANDIBULAR	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. EAR	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. FORELIMB	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. BREAST	Control	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	2000 ppm	0	0	1	1	1	1	1	1	1	1	1	1	1	1
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	0
M. ABDOMEN	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

STUDY NO. : 0448
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 REPORT TYPE : A1 104

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Clinical sign	Group Name	Administration Week-day													
		85-7	86-7	87-7	88-7	89-7	90-7	91-7	92-7	93-7	94-7	95-7	96-7	97-7	98-7
INTERNAL MASS	Control	1	1	1	1	1	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	1	0	0	0
	6325 ppm	0	0	0	1	1	1	1	1	1	1	1	1	1	1
	20000 ppm	0	0	0	0	0	1	1	1	0	0	0	0	0	0
M. PERI-MOUTH	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	1	1	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. ORAL CAVITY	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. MANDIBULAR	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. EAR	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. FORELIMB	Control	0	0	1	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. BREAST	Control	1	1	1	2	3	2	2	2	3	3	3	3	3	3
	2000 ppm	1	1	2	2	2	2	2	2	3	3	3	3	3	4
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. ABDOMEN	Control	1	1	1	1	2	2	2	2	2	2	2	2	2	2
	2000 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 REPORT TYPE : A1 104

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Clinical sign	Group Name	Administration Week-day					
		99-7	100-7	101-7	102-7	103-7	104-7
INTERNAL MASS	Control	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0
M. PERI-MOUTH	Control	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0
M. ORAL CAVITY	Control	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0
M. MANDIBULAR	Control	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0
M. EAR	Control	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0
M. FORELIMB	Control	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0
M. BREAST	Control	3	3	4	4	4	4
	2000 ppm	4	4	4	3	3	2
	6325 ppm	0	0	0	0	1	1
	20000 ppm	0	0	1	1	1	1
M. ABDOMEN	Control	2	2	2	2	2	2
	2000 ppm	2	2	1	1	1	1
	6325 ppm	1	1	1	1	1	1
	20000 ppm	0	0	0	0	0	0

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ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
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Clinical sign	Group Name	Administration Week-day													
		1-7	2-7	3-7	4-7	5-7	6-7	7-7	8-7	9-7	10-7	11-7	12-7	13-7	14-7
M. ANTERIOR. DORSUM	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. POSTERIOR DORSUM	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. HINDLIMB	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. GENITALIA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ANEMIA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ULCER	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HEMORRHIAGE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TORTICOLLIS	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
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		15-7	16-7	17-7												
M. ANTERIOR. DORSUM	Control	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
M. POSTERIOR DORSUM	Control	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
M. HINDLIMB	Control	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
M. GENITALIA	Control	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
ANEMIA	Control	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
ULCER	Control	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
HEMORRHIAGE	Control	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
TORTICOLLIS	Control	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0

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		29-7	30-7	31-7											
M. ANTERIOR. DORSUM	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. POSTERIOR DORSUM	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. HINDLIMB	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. GENITALIA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ANEMIA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ULCER	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HEMORRHIAGE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TORTICOLLIS	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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		43-7	44-7	45-7	46-7	47-7	48-7	49-7	50-7	51-7	52-7	53-7	54-7	55-7	56-7
M. ANTERIOR. DORSUM	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. POSTERIOR DORSUM	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. HINDLIMB	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. GENITALIA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	1	1	1	1
ANEMIA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	1	1	1	1	0	0	0	0	0	0	0	0	0
ULCER	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HEMORRHIAGE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TORTICOLLIS	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

STUDY NO. : 0448
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		57-7	58-7	59-7	60-7	61-7	62-7	63-7	64-7	65-7	66-7	67-7	68-7	69-7	70-7	
M. ANTERIOR. DORSUM	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	2000 ppm	0	0	0	0	0	0	0	0	1	1	1	1	1	1	
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
M. POSTERIOR DORSUM	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
M. HINDLIMB	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	2000 ppm	0	0	0	0	1	1	1	1	1	1	1	1	1	1	
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
M. GENITALIA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	20000 ppm	1	1	1	1	1	1	1	2	2	2	2	2	2	2	
ANEMIA	Control	0	0	0	0	0	0	0	0	0	1	1	0	0	0	
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6325 ppm	0	0	0	1	1	0	0	0	1	1	0	0	0	0	
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
ULCER	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
HEMORRHIAGE	Control	0	0	0	0	0	0	0	0	0	1	0	0	0	0	
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
TORTICOLLIS	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

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		71-7	72-7	73-7	74-7	75-7	76-7	77-7	78-7	79-7	80-7	81-7	82-7	83-7	84-7
M. ANTERIOR. DORSUM	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. POSTERIOR DORSUM	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	1	1
M. HINDLIMB	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. GENITALIA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	2	2	2	2	2	2	2	2	2	2	2	2	1	1
ANEMIA	Control	0	0	0	0	1	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	1	0	0	0	0	0	0	0	2	1
ULCER	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HEMORRHIAGE	Control	0	0	0	0	0	0	0	1	0	1	1	1	1	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	2	1	1	0	0
TORTICOLLIS	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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		85-7	86-7	87-7	88-7	89-7	90-7	91-7	92-7	93-7	94-7	95-7	96-7	97-7	98-7
M. ANTERIOR. DORSUM	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	1	1	1	1	1	1	1	2	2	2	2	2	2	2
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. POSTERIOR DORSUM	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	1	1	1	1	1	1	0	0	1	1	1	1	1	1
M. HINDLIMB	Control	1	1	1	1	1	1	0	0	0	0	0	0	0	0
	2000 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. GENITALIA	Control	0	0	1	1	1	1	1	1	1	1	1	1	1	1
	2000 ppm	0	0	0	0	1	1	1	1	1	1	1	1	1	1
	6325 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	1	1	1
ANEMIA	Control	0	0	1	1	1	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	1	2	2	2	2	1	1	1	1
	6325 ppm	0	0	1	1	1	1	1	1	1	1	1	1	1	1
	20000 ppm	0	0	0	0	0	0	0	0	0	1	1	0	0	0
ULCER	Control	0	0	0	1	1	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HEMORRHAGE	Control	0	1	0	1	1	1	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	1	1	1	1	1	1	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TORTICOLLIS	Control	0	0	1	1	1	1	1	1	1	1	1	1	1	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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		99-7	100-7	101-7	102-7	103-7	104-7
M. ANTERIOR. DORSUM	Control	0	0	0	0	0	0
	2000 ppm	2	2	2	2	2	2
	6325 ppm	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0
M. POSTERIOR DORSUM	Control	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0
	20000 ppm	1	1	1	1	1	1
M. HINDLIMB	Control	1	1	1	1	1	1
	2000 ppm	0	0	1	1	1	1
	6325 ppm	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0
M. GENITALIA	Control	1	1	1	1	1	1
	2000 ppm	1	1	1	1	1	1
	6325 ppm	1	1	1	1	1	1
	20000 ppm	1	1	1	1	1	1
ANEMIA	Control	0	0	0	0	0	0
	2000 ppm	0	0	1	1	1	1
	6325 ppm	0	0	0	0	1	0
	20000 ppm	0	0	0	0	0	0
ULCER	Control	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	1
	6325 ppm	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0
HEMORRHIAGE	Control	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0
TORTICOLLIS	Control	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0

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		1-7	2-7	3-7	4-7	5-7	6-7	7-7	8-7	9-7	10-7	11-7	12-7	13-7	14-7
IRREGULAR BREATHING	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ABNORMAL RESPIRATION	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RED URINE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
YELLOW URINE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BROWN URINE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SMALL STOOL	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
OLIGO STOOL	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NON REMARKABLE	Control	50	50	50	50	50	50	50	50	50	50	50	50	50	50
	2000 ppm	50	50	50	50	50	50	50	50	50	50	50	50	50	50
	6325 ppm	50	50	50	50	50	50	50	50	50	50	50	50	50	50
	20000 ppm	50	50	50	50	50	50	50	50	49	49	49	48	49	49

STUDY NO. : 0448
ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
REPORT TYPE : A1 104

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Clinical sign	Group Name	Administration Week-day													
		15-7	16-7	17-7	18-7	19-7	20-7	21-7	22-7	23-7	24-7	25-7	26-7	27-7	28-7
IRREGULAR BREATHING	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ABNORMAL RESPIRATION	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RED URINE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
YELLOW URINE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BROWN URINE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SMALL STOOL	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
OLIGO STOOL	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NON REMARKABLE	Control	50	50	50	50	50	50	50	50	50	50	50	50	50	49
	2000 ppm	50	50	50	50	50	50	50	50	50	50	50	50	50	50
	6325 ppm	50	50	50	50	50	50	50	50	50	50	50	49	50	50
	20000 ppm	48	47	47	47	47	46	45	47	47	46	46	43	43	43

STUDY NO. : 0448
ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
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Clinical sign	Group Name	Administration Week-day													
		29-7	30-7	31-7	32-7	33-7	34-7	35-7	36-7	37-7	38-7	39-7	40-7	41-7	42-7
IRREGULAR BREATHING	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	1
ABNORMAL RESPIRATION	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	1
RED URINE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
YELLOW URINE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BROWN URINE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SMALL STOOL	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
OLIGO STOOL	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NON REMARKABLE	Control	49	50	50	50	50	50	50	50	50	50	50	50	50	50
	2000 ppm	50	50	50	50	50	50	50	50	50	50	49	49	49	49
	6325 ppm	50	50	50	50	50	50	50	50	49	49	49	49	49	49
	20000 ppm	43	43	41	41	40	40	41	41	41	41	41	41	38	37

STUDY NO. : 0448
ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
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Clinical sign	Group Name	Administration Week-day													
		43-7	44-7	45-7	46-7	47-7	48-7	49-7	50-7	51-7	52-7	53-7	54-7	55-7	56-7
IRREGULAR BREATHING	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	1	1	1	1	0	0	0	0	0	0	0	0	0
ABNORMAL RESPIRATION	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	1	1	0	0	0	0	0	0	0	0	0	0	0
RED URINE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
YELLOW URINE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BROWN URINE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SMALL STOOL	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
OLIGO STOOL	Control	1	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NON REMARKABLE	Control	49	49	49	49	49	49	49	49	49	49	49	49	49	49
	2000 ppm	49	49	49	49	49	49	49	49	49	49	49	49	49	49
	6325 ppm	49	49	50	50	50	50	50	49	49	49	49	49	49	49
	20000 ppm	37	37	42	42	42	41	41	40	38	37	36	36	36	36

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Clinical sign	Group Name	Administration Week-day			60-7	61-7	62-7	63-7	64-7	65-7	66-7	67-7	68-7	69-7	70-7
		57-7	58-7	59-7											
IRREGULAR BREATHING	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ABNORMAL RESPIRATION	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RED URINE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	1	1	3
YELLOW URINE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BROWN URINE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SMALL STOOL	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	1	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
OLIGO STOOL	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NON REMARKABLE	Control	49	49	49	49	49	49	49	49	48	47	47	48	48	48
	2000 ppm	49	49	48	48	47	47	47	47	46	46	46	46	46	46
	6325 ppm	49	49	49	48	48	49	49	49	48	48	49	49	50	50
	20000 ppm	36	36	36	34	34	34	33	32	32	33	33	34	35	30

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ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
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Clinical sign	Group Name	Administration Week-day													
		71-7	72-7	73-7	74-7	75-7	76-7	77-7	78-7	79-7	80-7	81-7	82-7	83-7	84-7
IRREGULAR BREATHING	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ABNORMAL RESPIRATION	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RED URINE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	3	2	2	2	2	1	1	2
	20000 ppm	3	3	3	4	6	6	6	9	7	7	8	9	10	11
YELLOW URINE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BROWN URINE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SMALL STOOL	Control	0	0	1	0	1	0	0	0	0	0	0	1	0	0
	2000 ppm	0	1	1	1	1	1	1	1	1	1	1	1	1	1
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	1	0
OLIGO STOOL	Control	0	0	1	0	1	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NON REMARKABLE	Control	46	46	45	46	44	46	46	45	46	46	45	45	44	43
	2000 ppm	46	45	44	44	44	44	44	44	43	42	43	43	44	43
	6325 ppm	50	49	48	48	47	47	43	44	44	44	44	45	45	43
	20000 ppm	30	30	30	28	26	26	25	22	22	21	18	16	15	15

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Clinical sign	Group Name	Administration Week-day			88-7	89-7	90-7	91-7	92-7	93-7	94-7	95-7	96-7	97-7	98-7
		85-7	86-7	87-7											
IRREGULAR BREATHING	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ABNORMAL RESPIRATION	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RED URINE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	3	3	3	3	3	3	3	3	3	3	3	3	4	4
	20000 ppm	9	14	14	13	13	14	15	16	17	16	17	18	18	17
YELLOW URINE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	2	1	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	1	1	1	1	1
	20000 ppm	0	0	0	0	0	0	0	0	0	2	1	0	0	0
BROWN URINE	Control	0	0	0	2	1	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SMALL STOOL	Control	0	0	2	1	3	2	1	1	1	1	1	1	2	1
	2000 ppm	1	1	1	1	1	1	1	1	1	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0	0	0	0	0	1	1	2	1
	20000 ppm	0	0	0	0	0	0	0	1	0	2	1	0	0	1
OLIGO STOOL	Control	0	0	2	1	2	1	1	1	0	0	0	0	0	1
	2000 ppm	0	0	0	0	0	0	0	0	0	1	0	0	0	1
	6325 ppm	0	0	0	0	0	0	0	0	0	0	1	1	2	1
	20000 ppm	0	0	0	0	0	0	0	1	1	0	1	0	0	2
NON REMARKABLE	Control	42	42	35	35	33	33	33	33	33	33	33	32	31	31
	2000 ppm	44	44	43	43	42	41	41	40	39	39	39	39	38	37
	6325 ppm	40	41	39	39	39	38	38	38	38	38	38	36	34	34
	20000 ppm	20	15	15	15	15	13	12	12	10	10	9	7	7	6

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Clinical sign	Group Name	Administration Week-day					
		99-7	100-7	101-7	102-7	103-7	104-7
IRREGULAR BREATHING	Control	1	0	0	0	0	0
	2000 ppm	0	0	0	1	1	0
	6325 ppm	0	0	0	0	0	0
	20000 ppm	1	0	0	0	0	1
ABNORMAL RESPIRATION	Control	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0
RED URINE	Control	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0
	6325 ppm	4	5	5	6	6	7
	20000 ppm	16	16	16	16	16	16
YELLOW URINE	Control	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0
	6325 ppm	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0
BROWN URINE	Control	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	1
	6325 ppm	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0
SMALL STOOL	Control	1	0	0	0	0	0
	2000 ppm	0	0	1	1	1	0
	6325 ppm	0	0	0	0	0	0
	20000 ppm	1	0	0	0	0	1
OLIGO STOOL	Control	1	0	0	0	0	0
	2000 ppm	0	0	1	0	0	0
	6325 ppm	0	0	0	0	0	0
	20000 ppm	1	0	0	0	0	0
NON REMARKABLE	Control	30	30	30	30	30	30
	2000 ppm	36	36	35	33	33	35
	6325 ppm	34	33	33	32	30	30
	20000 ppm	6	6	4	4	4	4

APPENDIX C 1

BODY WEIGHT CHANGES : MALE

STUDY NO. : 0448
ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
UNIT : g
REPORT TYPE : A1 104
SEX : MALE

BODY WEIGHT CHANGES (SUMMARY)
ALL ANIMALS

PAGE : 1

Group Name	Administration week		1		2		3		4		5		6	
	0													
Control	125±	5	155±	9	183±	11	206±	12	223±	12	238±	12	249±	13
2000 ppm	125±	5	153±	8	183±	10	208±	11	225±	12	240±	12	251±	12
6325 ppm	125±	5	152±	7	182±	8	206±	9	223±	10	236±	10	246±	11
20000 ppm	125±	5	147±	6**	176±	9**	201±	10*	215±	11**	230±	12**	239±	14**

Significant difference ; * : $P \leq 0.05$ ** : $P \leq 0.01$

Test of Dunnett

(HAN260)

BALS 4

STUDY NO. : 0448
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 UNIT : g
 REPORT TYPE : A1 104
 SEX : MALE

BODY WEIGHT CHANGES (SUMMARY)
 ALL ANIMALS

PAGE : 2

Group Name	Administration		week											
	7		8		9		10		11		12		13	
Control	259 ±	14	268 ±	15	277 ±	15	284 ±	15	291 ±	15	297 ±	15	301 ±	15
2000 ppm	262 ±	13	272 ±	14	281 ±	15	288 ±	15	294 ±	15	300 ±	16	305 ±	16
6325 ppm	255 ±	12	265 ±	13	274 ±	14	279 ±	14	284 ±	14	289 ±	15*	293 ±	16
20000 ppm	248 ±	14**	256 ±	14**	264 ±	15**	268 ±	15**	272 ±	15**	275 ±	16**	280 ±	16**

Significant difference ; * : $P \leq 0.05$ ** : $P \leq 0.01$

Test of Dunnett

(HAN260)

BAIS 4

STUDY NO. : 0448
ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
UNIT : g
REPORT TYPE : A1 104
SEX : MALE

BODY WEIGHT CHANGES (SUMMARY)
ALL ANIMALS

PAGE : 3

Group Name	Administration week		14		18		22		26		30		34		38	
Control	304±	16	325±	17	340±	19	351±	18	361±	19	370±	21	376±	23		
2000 ppm	308±	17	329±	17	343±	19	352±	21	362±	22	370±	24	376±	20		
6325 ppm	297±	15	317±	17*	328±	18**	337±	19**	346±	22**	353±	25**	357±	18**		
20000 ppm	284±	16**	300±	17**	308±	19**	314±	20**	319±	23**	325±	23**	326±	26**		

Significant difference ; * : $P \leq 0.05$ ** : $P \leq 0.01$

Test of Dunnett

(HAN260)

BAIS 4

STUDY NO. : 0448
ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
UNIT : g
REPORT TYPE : A1 104
SEX : MALE

BODY WEIGHT CHANGES (SUMMARY)
ALL ANIMALS

PAGE : 4

Group Name	Administration week													
	42		46		50		54		58		62		66	
Control	382±	23	389±	25	396±	25	397±	26	404±	26	409±	26	411±	25
2000 ppm	381±	21	389±	21	396±	22	395±	25	403±	25	408±	25	410±	26
6325 ppm	361±	21**	367±	22**	372±	24**	371±	24**	379±	25**	383±	24**	385±	25**
20000 ppm	328±	28**	336±	25**	341±	27**	340±	28**	345±	30**	347±	29**	353±	25**

Significant difference ; * : $P \leq 0.05$ ** : $P \leq 0.01$

Test of Dunnett

(HAN260)

BAIS 4

STUDY NO. : 0448
ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
UNIT : g
REPORT TYPE : A1 104
SEX : MALE

BODY WEIGHT CHANGES (SUMMARY)
ALL ANIMALS

PAGE : 5

Group Name	Administration		week											
	70		74		78		82		86		90		94	
Control	415 ±	26	418 ±	30	417 ±	42	423 ±	28	422 ±	33	426 ±	30	426 ±	29
2000 ppm	414 ±	30	417 ±	36	419 ±	32	421 ±	31	418 ±	31	417 ±	30	410 ±	39
6325 ppm	390 ±	27**	391 ±	27**	393 ±	27**	395 ±	28**	397 ±	24**	395 ±	24**	392 ±	24**
20000 ppm	354 ±	25**	356 ±	24**	357 ±	24**	356 ±	23**	355 ±	24**	351 ±	22**	350 ±	24**

Significant difference ; * : $P \leq 0.05$ ** : $P \leq 0.01$

Test of Dunnett

(HAN260)

BAIS 4

STUDY NO. : 0448
ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
UNIT : g
REPORT TYPE : A1 104
SEX : MALE

BODY WEIGHT CHANGES (SUMMARY)
ALL ANIMALS

PAGE : 6

Group Name	Administration week					
	98		102		104	
Control	426±	35	419±	36	411±	32
2000 ppm	406±	39	398±	34	389±	36
6325 ppm	383±	19**	374±	20**	369±	20**
20000 ppm	345±	23**	338±	31**	335±	29**

Significant difference ; * : $P \leq 0.05$ ** : $P \leq 0.01$

Test of Dunnett

(HAN260)

BAIS 4

APPENDIX C 2

BODY WEIGHT CHANGES : FEMALE

STUDY NO. : 0448
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 UNIT : g
 REPORT TYPE : A1 104
 SEX : FEMALE

BODY WEIGHT CHANGES (SUMMARY)
 ALL ANIMALS

PAGE : 7

Group Name	Administration week		1		2		3		4		5		6	
	0													
Control	98±	3	114±	4	124±	5	134±	6	139±	6	146±	6	149±	7
2000 ppm	98±	3	112±	4	123±	5	133±	6	140±	6	146±	7	150±	8
6325 ppm	98±	3	111±	3**	124±	4	133±	5	141±	5	147±	6	151±	6
20000 ppm	98±	3	107±	4**	120±	5**	130±	6**	136±	7*	142±	7**	146±	7*

Significant difference ; * : $P \leq 0.05$ ** : $P \leq 0.01$

Test of Dunnett

(HAN260)

BAIS 4

STUDY NO. : 0448
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 UNIT : g
 REPORT TYPE : A1 104
 SEX : FEMALE

BODY WEIGHT CHANGES (SUMMARY)
 ALL ANIMALS

PAGE : 8

Group Name	Administration week											
	7		8		9		10		11		12	
Control	153±	8	156±	7	160±	8	163±	8	166±	9	168±	9
2000 ppm	154±	8	157±	9	160±	9	163±	10	166±	10	168±	10
6325 ppm	154±	6	157±	7	161±	7	164±	8	166±	8	167±	8
20000 ppm	149±	7*	151±	7**	154±	8**	157±	8**	158±	9**	160±	9**

Significant difference ; * : $P \leq 0.05$ ** : $P \leq 0.01$

Test of Dunnett

(HAN260)

BAIS 4

STUDY NO. : 0448
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 UNIT : g
 REPORT TYPE : A1 104
 SEX : FEMALE

BODY WEIGHT CHANGES (SUMMARY)
 ALL ANIMALS

PAGE : 9

Group Name	Administration week		14		18		22		26		30		34		38	
Control	171±	10	177±	10	184±	10	191±	10	195±	10	200±	10	202±	11		
2000 ppm	171±	10	176±	11	183±	11	188±	11	193±	12	197±	12	198±	12		
6325 ppm	170±	8	174±	8	181±	8	187±	9	191±	10	194±	10*	195±	11**		
20000 ppm	164±	9**	165±	10**	172±	10**	176±	12**	180±	10**	181±	11**	181±	12**		

Significant difference : * : $P \leq 0.05$ ** : $P \leq 0.01$

Test of Dunnett

(HAN260)

BAIS 4

STUDY NO. : 0448
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 UNIT : g
 REPORT TYPE : A1 104
 SEX : FEMALE

BODY WEIGHT CHANGES (SUMMARY)
 ALL ANIMALS

PAGE : 10

Group Name	Administration week											
	42		46		50		54		58		62	66
Control	206 ± 12		210 ± 12		215 ± 13		220 ± 13		224 ± 14		230 ± 16	233 ± 16
2000 ppm	203 ± 13		206 ± 14		210 ± 14		213 ± 13		218 ± 15		222 ± 16	226 ± 18
6325 ppm	198 ± 11**		201 ± 13**		205 ± 13**		206 ± 13**		209 ± 14**		213 ± 16**	215 ± 16**
20000 ppm	183 ± 11**		184 ± 12**		188 ± 14**		188 ± 14**		190 ± 15**		192 ± 16**	195 ± 17**

Significant difference ; * : $P \leq 0.05$ ** : $P \leq 0.01$

Test of Dunnett

(HAN260)

BAIS 4

STUDY NO. : 0448
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 UNIT : g
 REPORT TYPE : A1 104
 SEX : FEMALE

BODY WEIGHT CHANGES (SUMMARY)
 ALL ANIMALS

PAGE : 11

Group Name	Administration week		74		78		82		86		90		94	
	70													
Control	239±	17	246±	18	248±	18	253±	19	254±	21	258±	24	262±	24
2000 ppm	231±	21	235±	23*	237±	24	241±	25	244±	26	249±	26	252±	29
6325 ppm	219±	17**	225±	18**	223±	18**	228±	19**	230±	20**	232±	20**	234±	21**
20000 ppm	195±	18**	197±	23**	199±	31**	205±	39**	200±	16**	200±	16**	201±	18**

Significant difference ; * : $P \leq 0.05$ ** : $P \leq 0.01$

Test of Dunnett

(HAN260)

BAIS 4

STUDY NO. : 0448
ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
UNIT : g
REPORT TYPE : A1 104
SEX : FEMALE

BODY WEIGHT CHANGES (SUMMARY)
ALL ANIMALS

PAGE : 12

Group Name	Administration week					
	98		102		104	
Control	267±	25	267±	20	267±	21
2000 ppm	257±	35	256±	23*	256±	26
6325 ppm	238±	23**	238±	21**	237±	22**
20000 ppm	203±	15**	203±	16**	204±	16**

Significant difference ; * : $P \leq 0.05$ ** : $P \leq 0.01$

Test of Dunnett

(HAN260)

BAIS 4

APPENDIX D 1

FOOD CONSUMPTION CHANGES : MALE

STUDY NO. : 0448
ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
UNIT : g
REPORT TYPE : A1 104
SEX : MALE

FOOD CONSUMPTION CHANGES (SUMMARY)
ALL ANIMALS

PAGE : 1

Group Name	Administration week						
	1	2	3	4	5	6	7
Control	13.5± 0.9	14.6± 1.1	15.3± 1.0	15.1± 0.8	15.3± 0.8	14.7± 0.9	14.8± 1.1
2000 ppm	13.2± 0.8	14.5± 1.0	15.5± 1.0	15.1± 0.8	15.3± 0.8	14.9± 0.9	15.1± 1.1
6325 ppm	12.9± 0.7**	14.0± 0.8**	14.9± 0.8	14.7± 0.8*	14.7± 0.7**	14.2± 0.8*	14.3± 0.9*
20000 ppm	11.7± 0.7**	13.4± 0.9**	14.4± 0.8**	14.1± 0.9**	14.3± 0.9**	13.6± 1.0**	13.7± 1.0**

Significant difference ; * : $P \leq 0.05$ ** : $P \leq 0.01$

Test of Dunnett

(HAN260)

BAIS 4

STUDY NO. : 0448
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 UNIT : g
 REPORT TYPE : A1 104
 SEX : MALE

FOOD CONSUMPTION CHANGES (SUMMARY)
 ALL ANIMALS

PAGE : 2

Group Name	Administration week						
	8	9	10	11	12	13	14
Control	14.9± 1.1	14.8± 1.0	14.7± 0.8	14.6± 0.8	14.4± 0.9	14.5± 0.9	13.8± 0.8
2000 ppm	15.1± 1.0	15.2± 0.9	14.8± 1.0	14.5± 1.0	14.4± 0.9	14.7± 1.0	13.9± 1.0
6325 ppm	14.2± 1.0**	14.2± 0.9**	13.9± 0.8**	13.9± 0.9**	13.7± 0.8**	14.0± 0.9*	13.3± 0.9*
20000 ppm	13.5± 1.0**	13.6± 1.0**	13.3± 1.0**	13.1± 0.9**	12.9± 0.9**	13.1± 0.9**	12.4± 0.8**

Significant difference : * : $P \leq 0.05$ ** : $P \leq 0.01$

Test of Dunnett

(HAN260)

BAIS 4

STUDY NO. : 0448
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 UNIT : g
 REPORT TYPE : A1 104
 SEX : MALE

FOOD CONSUMPTION CHANGES (SUMMARY)
 ALL ANIMALS

PAGE : 3

Group Name	Administration week						
	18	20	22	26	30	34	38
Control	14.1± 0.8	14.2± 0.9	14.6± 0.9	14.8± 0.8	14.5± 0.8	14.5± 1.0	14.1± 1.0
2000 ppm	14.3± 1.0	14.3± 1.0	14.8± 1.0	14.5± 0.9	14.6± 1.0	14.5± 1.0	14.4± 0.9
6325 ppm	13.6± 0.9*	13.5± 0.8**	14.1± 0.8**	14.0± 0.8**	14.1± 1.1	13.9± 1.1**	13.7± 0.8
20000 ppm	12.7± 0.9**	12.6± 0.9**	13.0± 1.0**	12.8± 0.8**	12.9± 1.0**	12.8± 0.9**	12.5± 1.2**

Significant difference ; * : $P \leq 0.05$ ** : $P \leq 0.01$

Test of Dunnett

(HAN260)

BAIS 4

STUDY NO. : 0448
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 UNIT : g
 REPORT TYPE : A1 104
 SEX : MALE

FOOD CONSUMPTION CHANGES (SUMMARY)
 ALL ANIMALS

PAGE : 4

Group Name	Administration week						
	42	46	50	54	58	62	66
Control	14.6± 0.9	14.8± 0.9	14.9± 1.0	14.6± 0.9	14.8± 1.0	15.3± 1.1	15.4± 1.0
2000 ppm	14.7± 0.9	15.1± 0.9	15.1± 0.9	15.0± 1.1	14.9± 1.3	15.8± 1.0*	15.6± 1.1
6325 ppm	14.2± 0.9	14.4± 0.9*	14.2± 1.0**	14.5± 0.9	14.3± 0.9*	15.2± 0.8	15.0± 0.9
20000 ppm	12.8± 1.2**	13.2± 1.0**	13.3± 1.1**	13.3± 1.5**	13.2± 1.1**	13.7± 1.1**	13.7± 1.0**

Significant difference : * : $P \leq 0.05$ ** : $P \leq 0.01$

Test of Dunnett

(HAN260)

BAIS 4

STUDY NO. : 0448
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 UNIT : g
 REPORT TYPE : A1 104
 SEX : MALE

FOOD CONSUMPTION CHANGES (SUMMARY)
 ALL ANIMALS

PAGE : 5

Group Name	Administration week		74		78		82		86		90		94	
	70													
Control	15.2± 1.1		15.2± 1.5		15.2± 2.1		15.2± 1.2		15.2± 1.9		15.5± 1.2		14.8± 1.4	
2000 ppm	15.3± 1.1		15.3± 1.3		15.6± 1.2		15.3± 1.0		15.3± 1.2		15.3± 1.1		14.4± 1.2	
6325 ppm	14.8± 1.0		14.7± 0.9		14.9± 1.0		14.6± 0.9**		14.6± 1.9*		14.5± 1.4**		14.2± 1.6	
20000 ppm	13.7± 1.1**		13.4± 0.9**		13.8± 0.9**		13.3± 0.9**		13.3± 0.8**		13.1± 1.2**		12.8± 1.2**	

Significant difference ; * : $P \leq 0.05$ ** : $P \leq 0.01$

Test of Dunnett

(HAN260)

BAIS 4

STUDY NO. : 0448
ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
UNIT : g
REPORT TYPE : A1 104
SEX : MALE

FOOD CONSUMPTION CHANGES (SUMMARY)
ALL ANIMALS

PAGE : 6

Group Name	Administration week		
	98	102	104
Control	15.1± 1.5	15.1± 1.5	14.6± 1.4
2000 ppm	14.5± 1.2	14.4± 2.4	13.6± 2.5
6325 ppm	14.2± 1.0*	14.2± 1.3*	14.0± 1.0
20000 ppm	12.8± 0.8**	12.9± 1.3**	12.4± 2.5**

Significant difference : * : $P \leq 0.05$ ** : $P \leq 0.01$

Test of Dunnett

(HAN260)

BAIS 4

APPENDIX D 2

FOOD CONSUMPTION CHANGES : FEMALE

STUDY NO. : 0448
ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
UNIT : g
REPORT TYPE : A1 104
SEX : FEMALE

FOOD CONSUMPTION CHANGES (SUMMARY)
ALL ANIMALS

PAGE : 7

Group Name	Administration week						
	1	2	3	4	5	6	7
Control	10.3± 0.5	10.3± 0.6	10.3± 0.6	10.1± 0.6	10.2± 0.6	9.8± 0.6	9.6± 0.5
2000 ppm	9.9± 0.5**	9.9± 0.7**	10.0± 0.6*	9.8± 0.6	10.0± 0.6	9.6± 0.7	9.4± 0.7
6325 ppm	9.5± 0.5**	9.8± 0.6**	9.9± 0.6**	9.6± 0.6**	9.8± 0.6**	9.5± 0.6*	9.1± 0.7**
20000 ppm	8.8± 0.5**	9.4± 0.6**	9.3± 0.7**	9.2± 0.6**	9.2± 0.6**	8.9± 0.6**	8.9± 0.6**

Significant difference ; * : $P \leq 0.05$ ** : $P \leq 0.01$

Test of Dunnett

(HAN260)

BAIS 4

STUDY NO. : 0448
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 UNIT : g
 REPORT TYPE : A1 104
 SEX : FEMALE

FOOD CONSUMPTION CHANGES (SUMMARY)
 ALL ANIMALS

PAGE : 8

Group Name	Administration week						
	8	9	10	11	12	13	14
Control	9.6± 0.5	9.8± 0.6	9.8± 0.6	9.8± 0.6	9.7± 0.7	10.0± 0.8	9.8± 0.7
2000 ppm	9.3± 0.6	9.5± 0.7	9.6± 0.7	9.5± 0.6*	9.5± 0.7	9.7± 0.6	9.6± 0.6
6325 ppm	9.1± 0.7**	9.4± 0.7**	9.3± 0.7**	9.2± 0.7**	9.1± 0.7**	9.5± 0.6**	9.1± 0.6**
20000 ppm	8.6± 0.5**	8.8± 0.6**	8.7± 0.7**	8.7± 0.7**	8.6± 0.7**	8.8± 0.7**	8.6± 0.6**

Significant difference ; * : $P \leq 0.05$ ** : $P \leq 0.01$

Test of Dunnett

(HAN260)

BAIS 4

STUDY NO. : 0448
ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
UNIT : g
REPORT TYPE : A1 104
SEX : FEMALE

FOOD CONSUMPTION CHANGES (SUMMARY)
ALL ANIMALS

PAGE : 9

Group Name	Administration week						
	18	20	22	26	30	34	38
Control	-	9.8± 0.6	10.4± 0.6	10.1± 0.7	10.1± 0.6	10.1± 0.6	10.1± 0.7
2000 ppm	-	9.6± 0.6	9.9± 0.7**	9.9± 0.6	9.9± 0.6	9.9± 0.6	9.7± 0.6**
6325 ppm	-	9.1± 0.7**	9.6± 0.6**	9.5± 0.6**	9.5± 0.8**	9.4± 0.6**	9.3± 0.6**
20000 ppm	-	8.7± 0.8**	9.1± 0.7**	8.9± 0.7**	8.9± 0.6**	8.8± 0.7**	8.8± 0.6**

Significant difference ; * : $P \leq 0.05$ ** : $P \leq 0.01$

Test of Dunnett

(HAN260)

BAIS 4

STUDY NO. : 0448
ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
UNIT : g
REPORT TYPE : A1 104
SEX : FEMALE

FOOD CONSUMPTION CHANGES (SUMMARY)
ALL ANIMALS

PAGE : 10

Group Name	Administration week						
	42	46	50	54	58	62	66
Control	10.4± 0.7	10.4± 0.7	10.6± 0.7	10.8± 0.7	11.0± 0.8	10.9± 0.9	10.8± 0.9
2000 ppm	10.3± 0.7	10.1± 0.7	10.3± 0.9	10.5± 0.7	10.7± 0.9	10.5± 0.7*	10.6± 0.8
6325 ppm	9.8± 0.7**	9.8± 0.8**	9.9± 0.7**	10.0± 0.7**	10.1± 0.7**	10.0± 0.9**	10.0± 0.8**
20000 ppm	8.9± 0.8**	9.2± 0.7**	9.0± 0.8**	9.3± 0.8**	9.4± 0.8**	9.1± 0.8**	9.2± 0.8**

Significant difference ; * : $P \leq 0.05$ ** : $P \leq 0.01$

Test of Dunnett

(HAN260)

BAIS 4

STUDY NO. : 0448
ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
UNIT : g
REPORT TYPE : A1 104
SEX : FEMALE

FOOD CONSUMPTION CHANGES (SUMMARY)
ALL ANIMALS

PAGE : 11

Group Name	Administration week		74		78		82		86		90		94	
	70													
Control	11.4± 1.1		11.1± 0.9		11.4± 1.3		11.2± 1.1		11.2± 1.7		11.8± 0.9		11.5± 1.0	
2000 ppm	10.9± 1.1*		10.6± 0.9		10.5± 0.8**		10.8± 0.9		11.0± 0.9		11.3± 1.0		10.9± 1.9	
6325 ppm	10.3± 1.0**		10.3± 1.1**		10.0± 0.8**		10.3± 0.9**		10.5± 1.0**		10.8± 0.9**		10.4± 1.1**	
20000 ppm	9.4± 0.8**		9.2± 1.0**		9.6± 1.7**		9.9± 1.9**		9.8± 0.9**		9.7± 1.1**		9.6± 1.8**	

Significant difference ; * : $P \leq 0.05$ ** : $P \leq 0.01$

Test of Dunnett

(HAN260)

BAIS 4

STUDY NO. : 0448
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 UNIT : g
 REPORT TYPE : A1 104
 SEX : FEMALE

FOOD CONSUMPTION CHANGES (SUMMARY)
 ALL ANIMALS

PAGE : 12

Group Name	Administration week		
	98	102	104
Control	11.9± 1.9	11.6± 1.0	12.0± 0.9
2000 ppm	11.5± 1.8	11.2± 1.0	11.3± 1.4*
6325 ppm	11.0± 1.3	10.5± 1.3**	10.7± 1.2**
20000 ppm	9.7± 1.5**	9.9± 1.2**	10.1± 1.4**

Significant difference ; * : $P \leq 0.05$ ** : $P \leq 0.01$

Test of Dunnett

(HAN260)

BAIS 4

APPENDIX E 1

WATER CONSUMPTION CHANGES : MALE

STUDY NO. : 0448
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 UNIT : g
 REPORT TYPE : A1 104
 SEX : MALE

WATER CONSUMPTION CHANGES (SUMMARY)
 ALL ANIMALS

PAGE : 1

Group Name	Administration week									
	1	2	3	4	5	6	7			
Control	17.7± 3.9	19.2± 4.0	19.0± 1.6	18.0± 1.6	18.8± 2.2	19.1± 2.5	19.5± 1.8			
2000 ppm	14.6± 1.1**	15.7± 1.2**	16.5± 1.3**	15.9± 1.4**	16.7± 1.2**	16.7± 1.6**	16.8± 1.2**			
6325 ppm	13.5± 0.8**	14.3± 1.0**	15.4± 1.1**	14.2± 1.2**	15.9± 2.3**	15.9± 1.9**	15.2± 2.1**			
20000 ppm	14.2± 7.0**	13.4± 1.5**	14.2± 1.3**	12.9± 2.1**	13.9± 1.5**	13.7± 1.4**	13.1± 1.4**			

Significant difference : * : $P \leq 0.05$ ** : $P \leq 0.01$

Test of Dunnett

(HAN260)

BAIS 4

STUDY NO. : 0448
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 UNIT : g
 REPORT TYPE : A1 104
 SEX : MALE

WATER CONSUMPTION CHANGES (SUMMARY)
 ALL ANIMALS

PAGE : 2

Group Name	Administration week									
	8		9		10		11		12	
Control	19.1± 1.7		18.7± 1.4		18.5± 1.7		17.8± 1.4		17.1± 1.2	
2000 ppm	16.2± 1.3**		16.0± 1.4**		15.4± 1.5**		14.8± 1.0**		14.3± 0.9**	
6325 ppm	14.5± 2.2**		13.8± 1.7**		13.2± 1.6**		13.1± 1.1**		12.8± 1.1**	
20000 ppm	12.2± 1.5**		11.8± 1.1**		11.0± 1.2**		10.8± 1.4**		10.2± 1.3**	

Significant difference ; * : $P \leq 0.05$ ** : $P \leq 0.01$

Test of Dunnett

(HAN260)

BAIS 4

STUDY NO. : 0448
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 UNIT : g
 REPORT TYPE : A1 104
 SEX : MALE

WATER CONSUMPTION CHANGES (SUMMARY)
 ALL ANIMALS

PAGE : 3

Group Name	Administration week						
	18	22	26	30	34	38	42
Control	17.0± 1.6	17.5± 1.6	17.0± 1.1	17.0± 1.2	17.8± 2.9	17.0± 1.2	17.9± 1.1
2000 ppm	15.1± 4.4**	14.6± 1.1**	14.7± 1.4**	15.3± 2.2**	15.4± 1.6**	14.9± 1.3**	15.7± 1.2**
6325 ppm	11.5± 0.9**	12.0± 1.2**	12.1± 1.3**	12.4± 1.3**	12.7± 1.4**	12.1± 1.2**	13.2± 1.4**
20000 ppm	10.1± 2.4**	10.4± 2.2**	10.8± 4.9**	10.6± 3.6**	10.5± 1.2**	11.1± 5.2**	11.4± 3.4**

Significant difference ; * : $P \leq 0.05$ ** : $P \leq 0.01$

Test of Dunnett

(HAN260)

BAIS 4

STUDY NO. : 0448
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 UNIT : g
 REPORT TYPE : A1 104
 SEX : MALE

WATER CONSUMPTION CHANGES (SUMMARY)
 ALL ANIMALS

PAGE : 4

Group Name	Administration week						
	46	50	54	58	62	66	70
Control	16.9± 1.2	17.2± 1.2	15.4± 2.2	16.7± 1.2	17.8± 4.4	17.2± 1.3	17.1± 1.6
2000 ppm	15.1± 2.4**	15.4± 1.1**	13.4± 1.6**	14.8± 1.7**	15.1± 1.5**	15.7± 2.0*	15.2± 1.4**
6325 ppm	12.2± 1.8**	12.6± 1.2**	11.0± 1.1**	12.4± 1.2**	12.3± 1.2**	12.3± 1.2**	12.5± 1.5**
20000 ppm	9.6± 2.0**	10.5± 1.7**	9.4± 1.6**	10.3± 1.3**	10.0± 1.6**	10.5± 1.3**	9.9± 1.5**

Significant difference ; * : $P \leq 0.05$ ** : $P \leq 0.01$

Test of Dunnett

(HAN260)

BAIS 4

STUDY NO. : 0448
ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
UNIT : g
REPORT TYPE : A1 104
SEX : MALE

WATER CONSUMPTION CHANGES (SUMMARY)
ALL ANIMALS

PAGE : 5

Group Name	Administration week									
	74		78		82		86		90	
Control	17.4± 2.0		17.8± 2.6		18.0± 2.1		18.4± 2.9		19.7± 2.9	
2000 ppm	15.4± 1.5**		16.3± 1.8*		16.7± 2.4		16.7± 2.4**		18.6± 2.6	
6325 ppm	13.2± 1.5**		14.1± 1.6**		14.6± 1.5**		13.8± 2.0**		14.7± 1.9**	
20000 ppm	10.8± 1.7**		11.6± 1.8**		11.6± 1.8**		11.7± 2.3**		12.3± 3.1**	

Significant difference ; * : $P \leq 0.05$ ** : $P \leq 0.01$

Test of Dunnett

(HAN260)

BAIS 4

STUDY NO. : 0448
ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
UNIT : g
REPORT TYPE : A1 104
SEX : MALE

WATER CONSUMPTION CHANGES (SUMMARY)
ALL ANIMALS

PAGE : 6

Group Name	Administration week			
	102		104	
Control	20.2±	3.8	20.4±	4.3
2000 ppm	16.4±	3.2**	16.2±	3.3**
6325 ppm	14.9±	2.6**	14.7±	1.9**
20000 ppm	13.0±	2.9**	12.0±	3.2**

Significant difference ; * : $P \leq 0.05$ ** : $P \leq 0.01$

Test of Dunnett

(HAN260)

BAIS 4

APPENDIX E 2

WATER CONSUMPTION CHANGES : FEMALE

STUDY NO. : 0448
ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
UNIT : g
REPORT TYPE : A1 104
SEX : FEMALE

WATER CONSUMPTION CHANGES (SUMMARY)
ALL ANIMALS

PAGE : 7

Group Name	Administration week									
	1	2	3	4	5	6	7			
Control	15.9± 2.5	17.6± 6.4	16.8± 3.9	17.9± 7.1	18.5± 8.3	17.8± 5.0	17.9± 5.5			
2000 ppm	12.2± 1.0**	12.4± 1.4**	12.2± 1.8**	12.6± 3.6**	12.3± 3.4**	12.3± 2.6**	12.1± 2.9**			
6325 ppm	11.2± 0.7**	11.3± 0.8**	11.1± 1.1**	10.9± 0.9**	10.8± 1.8**	10.7± 2.1**	10.2± 1.3**			
20000 ppm	10.6± 1.4**	10.7± 1.1**	10.1± 1.0**	9.8± 0.9**	9.6± 1.3**	9.9± 2.8**	9.6± 3.2**			

Significant difference ; * : $P \leq 0.05$ ** : $P \leq 0.01$

Test of Dunnett

(HAN260)

BAIS 4

STUDY NO. : 0448
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 UNIT : g
 REPORT TYPE : A1 104
 SEX : FEMALE

WATER CONSUMPTION CHANGES (SUMMARY)
 ALL ANIMALS

PAGE : 8

Group Name	Administration week									
	8	9	10	11	12	13	14			
Control	17.8± 5.6	17.6± 4.9	18.6± 5.9	20.7± 12.2	17.7± 6.0	19.3± 9.8	18.8± 8.1			
2000 ppm	12.4± 3.2**	11.8± 2.4**	12.3± 3.2**	12.0± 4.7**	11.4± 2.4**	12.0± 4.8**	11.8± 3.8**			
6325 ppm	10.0± 1.1**	10.0± 1.7**	10.1± 1.3**	9.6± 1.7**	9.1± 1.0**	9.9± 2.2**	9.7± 3.4**			
20000 ppm	8.7± 1.0**	10.1± 5.6**	10.4± 5.9**	9.4± 6.0**	8.5± 3.4**	8.2± 1.0**	8.2± 0.9**			

Significant difference : * : $P \leq 0.05$ ** : $P \leq 0.01$

Test of Dunnett

(HAN260)

BAIS 4

STUDY NO. : 0448
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 UNIT : g
 REPORT TYPE : A1 104
 SEX : FEMALE

WATER CONSUMPTION CHANGES (SUMMARY)
 ALL ANIMALS

PAGE : 9

Group Name	Administration		week											
	18		22		26		30		34		38		42	
Control	16.3 ±	7.1	19.9 ±	7.4	17.8 ±	5.6	18.6 ±	6.4	17.6 ±	5.9	17.1 ±	6.1	17.5 ±	5.0
2000 ppm	9.9 ±	2.7**	12.2 ±	3.1**	12.2 ±	4.0**	12.0 ±	2.6**	12.3 ±	3.0**	11.6 ±	2.9**	13.3 ±	4.8**
6325 ppm	7.4 ±	1.1**	9.9 ±	1.6**	9.4 ±	1.4**	9.3 ±	1.0**	10.2 ±	2.0**	9.2 ±	1.0**	10.3 ±	1.0**
20000 ppm	6.3 ±	1.2**	8.6 ±	1.2**	8.2 ±	1.1**	8.2 ±	1.7**	8.7 ±	2.5**	8.6 ±	3.7**	8.8 ±	1.4**

Significant difference ; * : $P \leq 0.05$ ** : $P \leq 0.01$

Test of Dunnett

(HAN260)

BAIS 4

STUDY NO. : 0448
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 UNIT : g
 REPORT TYPE : A1 104
 SEX : FEMALE

WATER CONSUMPTION CHANGES (SUMMARY)
 ALL ANIMALS

PAGE : 10

Group Name	Administration week									
	46	50	54	58	62	66	70			
Control	15.7± 3.3	16.3± 5.3	15.4± 3.5	15.0± 3.2	15.3± 3.7	16.1± 6.5	15.7± 4.0			
2000 ppm	10.9± 1.5**	12.5± 4.0**	12.8± 5.8**	11.8± 3.3**	11.3± 2.3**	11.2± 2.2**	11.3± 1.5**			
6325 ppm	9.8± 1.9**	10.0± 0.9**	10.0± 1.3**	9.9± 2.0**	9.5± 1.2**	9.8± 2.1**	10.0± 1.6**			
20000 ppm	8.0± 2.0**	8.5± 1.2**	8.5± 1.4**	8.4± 1.2**	8.1± 1.1**	8.8± 1.3**	9.2± 1.8**			

Significant difference : * : $P \leq 0.05$ ** : $P \leq 0.01$

Test of Dunnett

(HAN260)

BAIS 4

STUDY NO. : 0448
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 UNIT : g
 REPORT TYPE : A1 104
 SEX : FEMALE

WATER CONSUMPTION CHANGES (SUMMARY)
 ALL ANIMALS

PAGE : 11

Group Name	Administration week									
	74		78		82		86		90	
Control	14.7± 2.1		15.2± 3.4		15.3± 3.0		14.9± 3.5		16.2± 3.3	
2000 ppm	11.6± 1.9**		11.4± 1.6**		12.0± 1.7**		12.0± 1.7**		13.1± 2.2**	
6325 ppm	10.7± 2.0**		10.7± 2.6**		11.4± 2.9**		11.6± 2.5**		12.3± 2.6**	
20000 ppm	9.2± 1.8**		10.2± 2.2**		11.2± 2.6**		10.9± 2.1**		11.5± 2.5**	

Significant difference : * : $P \leq 0.05$ ** : $P \leq 0.01$

Test of Dunnett

(HAN260)

BAIS 4

STUDY NO. : 0448
ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
UNIT : g
REPORT TYPE : A1 104
SEX : FEMALE

WATER CONSUMPTION CHANGES (SUMMARY)
ALL ANIMALS

PAGE : 12

Group Name	Administration week	
	102	104
Control	15.9± 3.0	17.2± 3.9
2000 ppm	13.4± 2.2**	14.0± 4.1**
6325 ppm	13.6± 2.7**	14.1± 2.9**
20000 ppm	12.3± 2.4**	12.9± 1.9**

Significant difference : * : $P \leq 0.05$ ** : $P \leq 0.01$

Test of Dunnett

(HAN260)

BAIS 4

APPENDIX F 1

CHEMICAL INTAKE CHANGES : MALE

STUDY NO. : 0448
ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
UNIT : g/kg/d a y
REPORT TYPE : A1 104
SEX : MALE

CHEMICAL INTAKE CHANGES (SUMMARY)
ALL ANIMALS

PAGE : 1

Group Name	Administration (weeks)		2	3	4	5	6	7
	1							
Control	0.000± 0.000		0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000
2000 ppm	0.190± 0.010		0.171± 0.010	0.159± 0.013	0.141± 0.013	0.139± 0.010	0.133± 0.009	0.128± 0.008
6325 ppm	0.561± 0.023		0.498± 0.023	0.474± 0.028	0.402± 0.032	0.425± 0.056	0.408± 0.043	0.376± 0.050
20000 ppm	1.933± 0.904		1.525± 0.136	1.411± 0.104	1.194± 0.169	1.205± 0.111	1.147± 0.099	1.059± 0.094

(HAN300)

BAIS 4

STUDY NO. : 0448
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 UNIT : g/kg/d a y
 REPORT TYPE : A1 104
 SEX : MALE

CHEMICAL INTAKE CHANGES (SUMMARY)
 ALL ANIMALS

PAGE : 2

Group Name	Administration (weeks)		9	10	11	12	13	14
	8							
Control	0.000± 0.000		0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000
2000 ppm	0.119± 0.010		0.114± 0.009	0.107± 0.009	0.101± 0.005	0.096± 0.005	0.108± 0.037	0.098± 0.010
6325 ppm	0.345± 0.046		0.319± 0.034	0.299± 0.033	0.292± 0.023	0.281± 0.022	0.280± 0.018	0.271± 0.019
20000 ppm	0.955± 0.098		0.894± 0.062	0.825± 0.080	0.794± 0.087	0.739± 0.080	0.880± 0.387	0.804± 0.094

(HAN300)

BAIS 4

STUDY NO. : 0448
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 UNIT : g/kg/d a y
 REPORT TYPE : A1 104
 SEX : MALE

CHEMICAL INTAKE CHANGES (SUMMARY)
 ALL ANIMALS

PAGE : 3

Group Name	Administration (weeks)							
	18	22	26	30	34	38	42	
Control	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000
2000 ppm	0.091± 0.025	0.085± 0.005	0.083± 0.007	0.084± 0.011	0.083± 0.007	0.079± 0.006	0.082± 0.005	
6325 ppm	0.230± 0.015	0.231± 0.023	0.227± 0.021	0.227± 0.018	0.229± 0.024	0.214± 0.019	0.232± 0.021	
20000 ppm	0.675± 0.154	0.677± 0.137	0.686± 0.280	0.663± 0.220	0.649± 0.075	0.676± 0.288	0.698± 0.230	

(HAN300)

BAIS 4

STUDY NO. : 0448
ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
UNIT : g/kg/d a y
REPORT TYPE : A1 104
SEX : MALE

CHEMICAL INTAKE CHANGES (SUMMARY)
ALL ANIMALS

PAGE : 4

Group Name	Administration (weeks)									
	46	50	54	58	62	66	70			
Control	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000		
2000 ppm	0.078± 0.011	0.078± 0.005	0.068± 0.007	0.074± 0.008	0.074± 0.007	0.076± 0.009	0.074± 0.007			
6325 ppm	0.210± 0.028	0.214± 0.015	0.188± 0.018	0.208± 0.019	0.203± 0.017	0.202± 0.016	0.202± 0.017			
20000 ppm	0.572± 0.101	0.614± 0.077	0.554± 0.084	0.596± 0.068	0.576± 0.079	0.594± 0.071	0.558± 0.072			

(HAN300)

BAIS 4

STUDY NO. : 0448
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 UNIT : g/kg/d a y
 REPORT TYPE : A1 104
 SEX : MALE

CHEMICAL INTAKE CHANGES (SUMMARY)
 ALL ANIMALS

PAGE : 5

Group Name	Administration (weeks)		78	82	86	90	94	98
	74							
Control	0.000± 0.000		0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000
2000 ppm	0.074± 0.005		0.078± 0.011	0.080± 0.013	0.081± 0.013	0.090± 0.015	0.081± 0.020	0.078± 0.016
6325 ppm	0.213± 0.021		0.227± 0.026	0.234± 0.024	0.220± 0.031	0.237± 0.029	0.229± 0.036	0.223± 0.041
20000 ppm	0.607± 0.088		0.648± 0.092	0.652± 0.095	0.656± 0.124	0.704± 0.194	0.719± 0.179	0.659± 0.155

(HAN300)

BAIS 4

STUDY NO. : 0448
ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
UNIT : g/kg/day
REPORT TYPE : A1 104
SEX : MALE

CHEMICAL INTAKE CHANGES (SUMMARY)
ALL ANIMALS

PAGE : 6

Group Name	Administration (weeks)			
	102		104	
Control	0.000±	0.000	0.000±	0.000
2000 ppm	0.083±	0.017	0.084±	0.018
6325 ppm	0.253±	0.055	0.252±	0.039
20000 ppm	0.784±	0.274	0.709±	0.173

(HAN300)

BAIS 4

APPENDIX F 2

CHEMICAL INTAKE CHANGES : FEMALE

STUDY NO. : 0448
ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
UNIT : g/kg/d a y
REPORT TYPE : A1 104
SEX : FEMALE

CHEMICAL INTAKE CHANGES (SUMMARY)
ALL ANIMALS

PAGE : 7

Group Name	Administration (weeks)									
	1	2	3	4	5	6	7			
Control	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000		
2000 ppm	0.219± 0.016	0.201± 0.022	0.184± 0.026	0.180± 0.050	0.169± 0.051	0.164± 0.036	0.158± 0.038			
6325 ppm	0.638± 0.033	0.578± 0.033	0.525± 0.050	0.490± 0.036	0.465± 0.067	0.447± 0.087	0.417± 0.046			
20000 ppm	1.975± 0.229	1.787± 0.155	1.552± 0.122	1.439± 0.093	1.343± 0.140	1.355± 0.370	1.278± 0.383			

(HAN300)

BAIS 4

STUDY NO. : 0448
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCr1j]
 UNIT : g/kg/day
 REPORT TYPE : A1 104
 SEX : FEMALE

CHEMICAL INTAKE CHANGES (SUMMARY)
 ALL ANIMALS

PAGE : 8

Group Name	Administration (weeks)									
	8	9	10	11	12	13	14			
Control	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000		
2000 ppm	0.158± 0.040	0.148± 0.029	0.151± 0.039	0.146± 0.056	0.136± 0.027	0.143± 0.064	0.139± 0.048			
6325 ppm	0.401± 0.037	0.393± 0.057	0.389± 0.043	0.367± 0.061	0.345± 0.032	0.372± 0.078	0.361± 0.121			
20000 ppm	1.147± 0.104	1.311± 0.735	1.325± 0.758	1.173± 0.716	1.061± 0.379	1.018± 0.105	0.998± 0.095			

(HAN300)

BAIS 4

STUDY NO. : 0448
ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
UNIT : g/kg/day
REPORT TYPE : A1 104
SEX : FEMALE

CHEMICAL INTAKE CHANGES (SUMMARY)
ALL ANIMALS

PAGE : 9

Group Name	Administration (weeks)									
	18	22	26	30	34	38	42			
Control	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000		
2000 ppm	0.113± 0.034	0.134± 0.038	0.130± 0.041	0.125± 0.030	0.126± 0.036	0.118± 0.033	0.131± 0.045			
6325 ppm	0.270± 0.035	0.346± 0.051	0.317± 0.041	0.310± 0.026	0.331± 0.058	0.300± 0.025	0.329± 0.028			
20000 ppm	0.761± 0.130	0.999± 0.109	0.932± 0.101	0.918± 0.176	0.953± 0.244	0.949± 0.369	0.960± 0.138			

(HAN300)

BAIS 4

STUDY NO. : 0448
ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
UNIT : g/kg/d a y
REPORT TYPE : A1 104
SEX : FEMALE

CHEMICAL INTAKE CHANGES (SUMMARY)
ALL ANIMALS

PAGE : 10

Group Name	Administration (weeks)		50		54		58		62		66		70	
	46													
Control	0.000±	0.000	0.000±	0.000	0.000±	0.000	0.000±	0.000	0.000±	0.000	0.000±	0.000	0.000±	0.000
2000 ppm	0.107±	0.016	0.119±	0.039	0.121±	0.057	0.108±	0.029	0.102±	0.024	0.099±	0.021	0.098±	0.012
6325 ppm	0.307±	0.055	0.309±	0.026	0.307±	0.037	0.300±	0.058	0.284±	0.038	0.289±	0.059	0.288±	0.047
20000 ppm	0.876±	0.239	0.909±	0.097	0.899±	0.130	0.885±	0.119	0.846±	0.112	0.905±	0.142	0.945±	0.206

(HAN300)

BAIS 4

STUDY NO. : 0448
ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
UNIT : g/kg/d a y
REPORT TYPE : A1 104
SEX : FEMALE

CHEMICAL INTAKE CHANGES (SUMMARY)
ALL ANIMALS

PAGE : 11

Group Name	Administration (weeks)		78	82	86	90	94	98
	74							
Control	0.000± 0.000		0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000
2000 ppm	0.099± 0.017		0.098± 0.021	0.102± 0.026	0.100± 0.027	0.107± 0.026	0.098± 0.019	0.099± 0.018
6325 ppm	0.299± 0.053		0.305± 0.084	0.319± 0.089	0.321± 0.071	0.334± 0.070	0.319± 0.064	0.350± 0.083
20000 ppm	0.939± 0.202		1.034± 0.206	1.100± 0.228	1.098± 0.219	1.158± 0.253	1.152± 0.258	1.246± 0.325

(HAN300)

BAIS 4

STUDY NO. : 0448
ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
UNIT : g/kg/day
REPORT TYPE : A1 104
SEX : FEMALE

CHEMICAL INTAKE CHANGES (SUMMARY)
ALL ANIMALS

PAGE : 12

Group Name	Administration (weeks)			
	102		104	
Control	0.000±	0.000	0.000±	0.000
2000 ppm	0.106±	0.019	0.110±	0.034
6325 ppm	0.363±	0.078	0.379±	0.084
20000 ppm	1.217±	0.245	1.276±	0.203

(HAN300)

BAIS 4

APPENDIX G 1

HEMATOLOGY : MALE

STUDY NO. : 0448
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 MEASURE. TIME : 1
 SEX : MALE

HEMATOLOGY (SUMMARY)
 ALL ANIMALS (105W)

REPORT TYPE : A1

PAGE : 1

Group Name	NO. of Animals	RED BLOOD CELL 10 ⁶ /μl		HEMOGLOBIN g/dl		HEMATOCRIT %		MCV fl		MCH pg		MCHC g/dl		PLATELET 10 ³ /μl	
Control	38	8.41±	0.99	14.4±	1.7	43.1±	4.7	51.3±	1.3	17.2±	0.8	33.4±	1.2	848±	266
2000 ppm	39	8.36±	1.40	14.2±	2.4	42.7±	5.6	52.1±	7.8	17.0±	1.2	33.0±	2.4	820±	264
6325 ppm	40	8.34±	1.59	14.3±	2.7	42.9±	7.2	52.1±	5.9	17.3±	2.0	33.1±	1.9	799±	308
20000 ppm	38	8.82±	1.04	15.2±	1.8*	44.8±	4.9	50.9±	1.1	17.2±	0.6	33.9±	0.9	705±	139**

Significant difference ; * : $P \leq 0.05$

** : $P \leq 0.01$

Test of Dunnett

(HCL070)

BAIS 4

STUDY NO. : 0448
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 MEASURE. TIME : 1
 SEX : MALE

HEMATOLOGY (SUMMARY)
 ALL ANIMALS (105W)

REPORT TYPE : A1

PAGE : 2

Group Name	NO. of Animals	WBC 10 ³ /μl		Differential N-BAND		WBC (%) N-SEG		EOSINO		BASO		MONO		LYMPHO		OTHER	
Control	38	5.73±	2.68	1±	1	44±	9	2±	1	0±	0	5±	1	49±	9	1±	2
2000 ppm	39	18.80±	84.08	0±	1	42±	11	2±	1	0±	0	5±	2	46±	11	5±	18
6325 ppm	40	7.07±	9.69	1±	1	40±	11	2±	1	0±	0	4±	2	50±	13	5±	15
20000 ppm	38	5.74±	2.94	1±	1	40±	10	2±	1	0±	0	4±	2	51±	11	2±	10

Significant difference : * : $P \leq 0.05$

** : $P \leq 0.01$

Test of Dunnett

(HCL070)

BAIS 4

APPENDIX G 2

HEMATOLOGY : FEMALE

STUDY NO. : 0448

ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]

MEASURE. TIME : 1

SEX : FEMALE

REPORT TYPE : A1

HEMATOLOGY (SUMMARY)

ALL ANIMALS (105W)

PAGE : 3

Group Name	NO. of Animals	RED BLOOD CELL 10 ⁶ /μl		HEMOGLOBIN g/dl		HEMATOCRIT %		MCV fl		MCH pg		MCHC g/dl		PLATELET 10 ³ /μl	
Control	38	8.19±	0.59	14.9±	1.1	43.1±	2.7	52.7±	1.8	18.2±	0.7	34.6±	0.9	634±	144
2000 ppm	43	7.73±	1.13*	14.2±	1.9*	41.1±	4.8	53.6±	3.8	18.4±	1.4	34.4±	1.5	612±	136
6325 ppm	40	7.86±	1.22**	14.5±	2.1*	42.0±	6.4*	53.6±	2.9	18.5±	0.9	34.5±	0.9	674±	166
20000 ppm	24	7.80±	0.56**	14.2±	0.8**	41.4±	2.2**	53.2±	2.5	18.3±	0.8	34.4±	0.6	679±	82*

Significant difference : * : $P \leq 0.05$ ** : $P \leq 0.01$

Test of Dunnett

(HCL070)

BAIS 4

STUDY NO. : 0448
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 MEASURE. TIME : 1
 SEX : FEMALE

HEMATOLOGY (SUMMARY)
 ALL ANIMALS (105W)

REPORT TYPE : A1

PAGE : 4

Group Name	NO. of Animals	WBC 10 ³ /μl		Differential N-BAND		WBC (%) N-SBG		EOSINO		BASO		MONO		LYMPHO		OTHER	
Control	38	3.15±	1.25	0±	1	38±	8	2±	1	0±	0	4±	1	55±	9	1±	3
2000 ppm	43	4.92±	8.52	1±	1	33±	10	2±	2	0±	0	4±	2	54±	15	6±	18
6325 ppm	40	4.33±	6.31	1±	1	35±	11	2±	1	0±	0	4±	1	53±	15	6±	19
20000 ppm	24	3.18±	1.58	1±	2	37±	8	2±	1	0±	0	4±	2	54±	9	2±	5

Significant difference ; * : $P \leq 0.05$

** : $P \leq 0.01$

Test of Dunnett

(HCL070)

BAIS 4

APPENDIX H 1

BIOCHEMISTRY : MALE

STUDY NO. : 0448
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 MEASURE. TIME : 1
 SEX : MALE

BIOCHEMISTRY (SUMMARY)
 ALL ANIMALS (105W)

REPORT TYPE : A1

PAGE : 1

Group Name	NO. of Animals	TOTAL PROTEIN g/dl		ALBUMIN g/dl		A/G RATIO		T-BILIRUBIN mg/dl		GLUCOSE mg/dl		T-CHOLESTEROL mg/dl		TRIGLYCERIDE mg/dl	
Control	38	6.7±	0.5	2.9±	0.2	0.8±	0.1	0.18±	0.04	171±	24	181±	53	82±	51
2000 ppm	41	6.6±	0.4	2.9±	0.3	0.8±	0.1	0.31±	0.74	165±	28	160±	38	74±	48
6325 ppm	40	6.6±	0.3	2.9±	0.2	0.8±	0.1*	0.36±	0.99	171±	21	151±	39**	71±	43
20000 ppm	38	6.5±	0.4**	3.0±	0.2	0.9±	0.1**	0.18±	0.03	168±	20	145±	41**	50±	35**

Significant difference ; * : $P \leq 0.05$ ** : $P \leq 0.01$

Test of Dunnett

(HCL074)

BAIS 4

STUDY NO. : 0448
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 MEASURE. TIME : 1
 SEX : MALE

BIOCHEMISTRY (SUMMARY)
 ALL ANIMALS (105W)

REPORT TYPE : A1

PAGE : 2

Group Name	NO. of Animals	PHOSPHOLIPID mg/dl		AST I U/l		ALT I U/l		LDH I U/l		ALP I U/l		G-GTP I U/l		CK I U/l	
Control	38	255±	75	87±	28	39±	11	188±	75	203±	58	6±	3	98±	16
2000 ppm	41	234±	81	151±	340	69±	148	554±	2138	265±	266	7±	9	117±	79
6325 ppm	40	219±	54*	109±	116	51±	35	218±	351	264±	106**	7±	7	97±	31
20000 ppm	38	209±	60**	99±	99	46±	23	156±	78**	225±	60	6±	3	99±	20

Significant difference ; * : $P \leq 0.05$ ** : $P \leq 0.01$

Test of Dunnett

(HCL074)

BATS 4

STUDY NO. : 0448
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 MEASURE. TIME : 1
 SEX : MALE REPORT TYPE : A1

BIOCHEMISTRY (SUMMARY)
 ALL ANIMALS (105W)

PAGE : 3

Group Name	NO. of Animals	UREA NITROGEN mg/dl		CREATININE mg/dl		SODIUM mEq/l		POTASSIUM mEq/l		CHLORIDE mEq/l		CALCIUM mg/dl		INORGANIC PHOSPHORUS mg/dl	
Control	38	18.4±	2.4	0.5±	0.1	143±	1	3.4±	0.2	106±	2	10.5±	0.4	4.2±	0.5
2000 ppm	41	18.3±	2.5	0.5±	0.1	143±	2	3.6±	0.5	106±	2	10.5±	0.3	4.2±	1.0
6325 ppm	40	18.6±	2.4	0.5±	0.1	143±	1	3.6±	0.3*	106±	2	10.5±	0.3	4.2±	0.5
20000 ppm	38	19.4±	4.9	0.5±	0.1	143±	2	3.5±	0.3*	106±	1	10.4±	0.3	4.0±	0.5

Significant difference ; * : $P \leq 0.05$ ** : $P \leq 0.01$

Test of Dunnett

(HCL074)

BAIS 4

APPENDIX H 2

BIOCHEMISTRY : FEMALE

STUDY NO. : 0448
ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
MEASURE. TIME : 1
SEX : FEMALE

BIOCHEMISTRY (SUMMARY)
ALL ANIMALS (105W)

REPORT TYPE : A1

PAGE : 4

Group Name	NO. of Animals	TOTAL PROTEIN g /dl		ALBUMIN g /dl		A/G RATIO		T-BILIRUBIN mg /dl		GLUCOSE mg /dl		T-CHOLESTEROL mg /dl		TRIGLYCERIDE mg /dl	
Control	38	6.9±	0.4	3.5±	0.3	1.0±	0.1	0.16±	0.03	159±	13	131±	25	44±	30
2000 ppm	43	6.9±	0.5	3.5±	0.3	1.0±	0.1	0.19±	0.16	155±	21	129±	21	51±	46
6325 ppm	40	6.8±	0.5	3.4±	0.3	1.0±	0.2	0.15±	0.05	155±	21	128±	35	41±	20
20000 ppm	24	6.4±	0.5**	3.4±	0.3	1.1±	0.1*	0.15±	0.05	148±	18	129±	25	42±	30

Significant difference ; * : $P \leq 0.05$ ** : $P \leq 0.01$

Test of Dunnett

(HCL074)

BAIS 4

STUDY NO. : 0448
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 MEASURE. TIME : 1
 SEX : FEMALE REPORT TYPE : A1

BIOCHEMISTRY (SUMMARY)
 ALL ANIMALS (105W)

PAGE : 5

Group Name	NO. of Animals	PHOSPHOLIPID mg/dl		AST I U/l		ALT I U/l		LDH I U/l		ALP I U/l		G-GTP I U/l		CK I U/l	
Control	38	227±	43	161±	112	70±	44	215±	62	140±	59	2±	1	94±	23
2000 ppm	43	230±	36	197±	208	65±	38	378±	618	146±	86	2±	2	198±	602
6325 ppm	40	227±	52	120±	63	46±	15*	238±	147	141±	55	2±	2	102±	41
20000 ppm	24	232±	40	109±	95**	44±	23**	176±	79*	151±	67	2±	2	109±	30

Significant difference : * : $P \leq 0.05$ ** : $P \leq 0.01$

Test of Dunnett

(HCL074)

BAIS 4

STUDY NO. : 0448
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 MEASURE. TIME : 1
 SEX : FEMALE

BIOCHEMISTRY (SUMMARY)
 ALL ANIMALS (105W)

REPORT TYPE : A1

PAGE : 6

Group Name	NO. of Animals	UREA NITROGEN mg/dl		CREATININE mg/dl		SODIUM mEq/l		POTASSIUM mEq/l		CHLORIDE mEq/l		CALCIUM mg/dl		INORGANIC PHOSPHORUS mg/dl	
Control	38	16.7±	1.8	0.5±	0.1	141±	1	3.4±	0.3	104±	2	10.5±	0.3	3.8±	0.7
2000 ppm	43	16.4±	1.7	0.5±	0.1	141±	1	3.4±	0.5	104±	2	10.6±	0.3	4.1±	0.7
6325 ppm	40	17.9±	3.3	0.5±	0.0	141±	1	3.5±	0.4	103±	2	10.7±	0.4	4.3±	0.6**
20000 ppm	24	18.4±	3.2*	0.5±	0.1	141±	2	3.4±	0.3	104±	2	10.5±	0.3	4.4±	0.7**

Significant difference ; * : $P \leq 0.05$ ** : $P \leq 0.01$

Test of Dunnett

(HCL074)

BAIS 4

APPENDIX I 1

URINALYSIS : MALE

STUDY NO. : 0448
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 MEASURE. TIME : 1
 SEX : MALE REPORT TYPE : A1

URINALYSIS

PAGE : 1

Group Name	NO. of Animals	pH								CHI	Protein						CHI	Glucose						CHI	Ketone body						CHI	Bilirubin					CHI
		5.0	6.0	6.5	7.0	7.5	8.0	8.5	—		±	+	2+	3+	4+	—		±	+	2+	3+	4+	—		±	+	2+	3+	4+	—		+	2+	3+			
Control	38	0	1	5	18	11	3	0		0	0	0	12	22	4		38	0	0	0	0	0		34	4	0	0	0	0		38	0	0	0			
2000 ppm	41	0	2	11	18	8	2	0		0	0	1	3	30	7	*	41	0	0	0	0	0		29	11	1	0	0	0		39	1	0	1			
6325 ppm	40	0	0	4	14	12	9	1		0	0	1	6	26	7		40	0	0	0	0	0		32	6	2	0	0	0		39	0	0	1			
20000 ppm	39	0	1	18	7	11	2	0	*	0	0	1	7	27	4		39	0	0	0	0	0		26	13	0	0	0	0	*	39	0	0	0			

Significant difference ; * : $P \leq 0.05$ ** : $P \leq 0.01$

Test of CHI SQUARE

(HCL101)

BAIS 4

STUDY NO. : 0448
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 MEASURE. TIME : 1
 SEX : MALE REPORT TYPE : A1

URINALYSIS

PAGE : 2

Group Name	NO. of Animals	Occult blood					Urobilinogen						
		—	±	+	2+	3+	CHI	±	+	2+	3+	4+	CHI
Control	38	36	0	1	0	1		38	0	0	0	0	
2000 ppm	41	37	1	1	2	0		40	0	1	0	0	
6325 ppm	40	34	2	1	0	3		40	0	0	0	0	
20000 ppm	39	30	3	1	1	4		39	0	0	0	0	

Significant difference : * : $P \leq 0.05$ ** : $P \leq 0.01$

Test of CHI SQUARE

(HCL101)

BATS 4

APPENDIX I 2

URINALYSIS : FEMALE

STUDY NO. : 0448
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 MEASURE. TIME : 1
 SEX : FEMALE REPORT TYPE : A1

URINALYSIS

PAGE : 3

Group Name	NO. of Animals	pH								CHI	Protein					CHI	Glucose					CHI	Ketone body					CHI	Bilirubin				CHI	
		5.0	6.0	6.5	7.0	7.5	8.0	8.5	—		±	+	2+	3+	4+		—	±	+	2+	3+		4+	—	±	+	2+		3+	4+	—	+		2+
Control	38	0	0	2	5	7	20	4		0	1	15	11	7	4		38	0	0	0	0	0		10	28	0	0	0	0		38	0	0	0
2000 ppm	43	0	0	7	8	12	15	1		0	0	4	16	18	5	*	43	0	0	0	0	0		9	32	2	0	0	0		42	0	1	0
6325 ppm	40	0	1	13	11	6	6	3	**	0	1	0	15	17	7	**	40	0	0	0	0	0		19	20	1	0	0	0		40	0	0	0
20000 ppm	25	0	6	8	4	3	3	1	**	0	0	1	3	14	7	**	25	0	0	0	0	0		6	19	0	0	0	0		25	0	0	0

Significant difference ; * : $P \leq 0.05$ ** : $P \leq 0.01$

Test of CHI SQUARE

(HCL101)

BAIS 4

STUDY NO. : 0448
ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
MEASURE. TIME : 1
SEX : FEMALE REPORT TYPE : A1

URINALYSIS

PAGE : 4

Group Name	NO. of Animals	Occult blood					Urobilinogen						
		—	±	+	2+	3+	CHI	±	+	2+	3+	4+	CHI
Control	38	36	0	1	0	1		38	0	0	0	0	
2000 ppm	43	37	1	0	1	4		43	0	0	0	0	
6325 ppm	40	19	1	1	1	18	**	40	0	0	0	0	
20000 ppm	25	1	0	0	0	24	**	25	0	0	0	0	

Significant difference : * : $P \leq 0.05$ ** : $P \leq 0.01$

Test of CHI SQUARE

(HCL101)

BATS 4

APPENDIX J 1

GROSS FINDINGS : MALE

ALL ANIMALS

STUDY NO. : 0448
ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
REPORT TYPE : A1
SEX : MALE

GROSS FINDINGS (SUMMARY)
ALL ANIMALS (0-105W)

PAGE : 1

Organ	Findings	Group Name NO. of Animals	Control		2000 ppm		6325 ppm		20000 ppm	
			50	(%)	50	(%)	50	(%)	50	(%)
skin/app	nodule		1	(2)	1	(2)	4	(8)	3	(6)
subcutis	jaundice		0	(0)	0	(0)	2	(4)	0	(0)
	nodule		1	(2)	0	(0)	0	(0)	0	(0)
	mass		7	(14)	8	(16)	6	(12)	8	(16)
lung	red		1	(2)	1	(2)	0	(0)	1	(2)
	white zone		1	(2)	1	(2)	0	(0)	2	(4)
	red zone		0	(0)	2	(4)	1	(2)	3	(6)
	brown zone		0	(0)	0	(0)	0	(0)	2	(4)
	nodule		5	(10)	4	(8)	2	(4)	2	(4)
lymph node	enlarged		0	(0)	1	(2)	1	(2)	1	(2)
spleen	enlarged		2	(4)	4	(8)	8	(16)	3	(6)
	white zone		1	(2)	2	(4)	0	(0)	0	(0)
	black zone		1	(2)	0	(0)	0	(0)	0	(0)
	nodule		0	(0)	0	(0)	2	(4)	0	(0)
	deformed		1	(2)	1	(2)	0	(0)	0	(0)
heart	white zone		1	(2)	0	(0)	0	(0)	0	(0)
tongue	nodule		1	(2)	0	(0)	0	(0)	0	(0)
salivary gl	nodule		1	(2)	0	(0)	0	(0)	0	(0)
forestomach	ulcer		0	(0)	1	(2)	0	(0)	1	(2)
	erosion		0	(0)	0	(0)	0	(0)	1	(2)
gl stomach	nodule		0	(0)	0	(0)	1	(2)	1	(2)
	ulcer		0	(0)	1	(2)	0	(0)	0	(0)

STUDY NO. : 0448
ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
REPORT TYPE : A1
SEX : MALE

GROSS FINDINGS (SUMMARY)
ALL ANIMALS (0-105W)

PAGE : 2

Organ	Findings	Group Name NO. of Animals	Control		2000 ppm		6325 ppm		20000 ppm	
			50	(%)	50	(%)	50	(%)	50	(%)
gl stomach	erosion		0	(0)	0	(0)	0	(0)	1	(2)
duodenum	nodule		1	(2)	0	(0)	0	(0)	0	(0)
cecum	gas		0	(0)	0	(0)	1	(2)	0	(0)
liver	pale		2	(4)	0	(0)	0	(0)	0	(0)
	white zone		0	(0)	1	(2)	0	(0)	1	(2)
	red zone		1	(2)	1	(2)	0	(0)	0	(0)
	rough		0	(0)	2	(4)	1	(2)	0	(0)
	herniation		9	(18)	10	(20)	6	(12)	3	(6)
pancreas	nodule		0	(0)	0	(0)	0	(0)	1	(2)
kidney	enlarged		1	(2)	0	(0)	0	(0)	0	(0)
	white zone		0	(0)	1	(2)	1	(2)	0	(0)
	nodule		0	(0)	1	(2)	0	(0)	0	(0)
	granular		6	(12)	6	(12)	0	(0)	2	(4)
urin bladd	nodule		0	(0)	0	(0)	0	(0)	1	(2)
	urine:marked retention		2	(4)	2	(4)	0	(0)	1	(2)
	urine:red		1	(2)	1	(2)	0	(0)	0	(0)
pituitary	enlarged		4	(8)	2	(4)	2	(4)	3	(6)
	red zone		2	(4)	6	(12)	4	(8)	1	(2)
	nodule		3	(6)	3	(6)	3	(6)	1	(2)
thyroid	enlarged		5	(10)	3	(6)	0	(0)	2	(4)
	nodule		1	(2)	0	(0)	0	(0)	0	(0)
adrenal	enlarged		0	(0)	1	(2)	3	(6)	2	(4)

STUDY NO. : 0448
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 REPORT TYPE : A1
 SEX : MALE

GROSS FINDINGS (SUMMARY)
 ALL ANIMALS (0-105W)

PAGE : 3

Organ	Findings	Group Name NO. of Animals	Control		2000 ppm		6325 ppm		20000 ppm	
			50	(%)	50	(%)	50	(%)	50	(%)
testis	enlarged		0	(0)	1	(2)	0	(0)	0	(0)
	nodule		32	(64)	38	(76)	35	(70)	36	(72)
semin ves	red		0	(0)	1	(2)	0	(0)	0	(0)
prostate	red		0	(0)	1	(2)	0	(0)	0	(0)
	nodule		0	(0)	1	(2)	0	(0)	0	(0)
prep/cli gl	nodule		2	(4)	0	(0)	0	(0)	0	(0)
brain	red zone		2	(4)	0	(0)	0	(0)	1	(2)
	nodule		1	(2)	0	(0)	0	(0)	1	(2)
spinal cord	red zone		0	(0)	1	(2)	0	(0)	0	(0)
eye	turbid		0	(0)	0	(0)	2	(4)	0	(0)
	white		3	(6)	7	(14)	4	(8)	5	(10)
Zymbal gl	nodule		0	(0)	1	(2)	1	(2)	0	(0)
bone	nodule		0	(0)	1	(2)	0	(0)	1	(2)
mediastinum	mass		0	(0)	1	(2)	0	(0)	0	(0)
peritoneum	nodule		3	(6)	1	(2)	3	(6)	0	(0)
retroperit	mass		0	(0)	3	(6)	0	(0)	0	(0)
abdominal c	hemorrhage		1	(2)	2	(4)	0	(0)	0	(0)
	ascites		1	(2)	1	(2)	0	(0)	0	(0)
thoracic ca	hemorrhage		0	(0)	0	(0)	1	(2)	1	(2)
	pleural fluid		0	(0)	1	(2)	0	(0)	2	(4)
other	lip:nodule		0	(0)	2	(4)	1	(2)	0	(0)
	eye lid:nodule		0	(0)	0	(0)	0	(0)	1	(2)

STUDY NO. : 0448
ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
REPORT TYPE : A1
SEX : MALE

GROSS FINDINGS (SUMMARY)
ALL ANIMALS (0-105W)

PAGE : 4

Organ	Findings	Group Name NO. of Animals	Control		2000 ppm		6325 ppm		20000 ppm	
			50	(%)	50	(%)	50	(%)	50	(%)
other	ear:nodule		0	(0)	0	(0)	1	(2)	0	(0)
	hindlimb:nodule		0	(0)	0	(0)	1	(2)	0	(0)
	lower jaw:nodule		0	(0)	2	(4)	0	(0)	0	(0)
	nose:nodule		0	(0)	0	(0)	0	(0)	1	(2)
whole body	anemic		0	(0)	0	(0)	2	(4)	0	(0)

(HPT080)

BAIS 4

APPENDIX J 2

GROSS FINDINGS : MALE DEAD AND MORIBUND ANIMALS

STUDY NO. : 0448
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCr1j]
 REPORT TYPE : A1
 SEX : MALE

GROSS FINDINGS (SUMMARY)
 DEAD AND MORIBUND ANIMALS (0-105W)

PAGE : 1

Organ	Findings	Group Name NO. of Animals	Control	2000 ppm	6325 ppm	20000 ppm
			12 (%)	9 (%)	10 (%)	11 (%)
skin/app	nodule		0 (0)	1 (11)	2 (20)	1 (9)
subcutis	jaundice		0 (0)	0 (0)	1 (10)	0 (0)
	nodule		1 (8)	0 (0)	0 (0)	0 (0)
	mass		3 (25)	1 (11)	2 (20)	0 (0)
lung	red		1 (8)	1 (11)	0 (0)	1 (9)
	red zone		0 (0)	0 (0)	0 (0)	2 (18)
	nodule		1 (8)	0 (0)	2 (20)	2 (18)
lymph node	enlarged		0 (0)	0 (0)	1 (10)	1 (9)
spleen	enlarged		1 (8)	2 (22)	4 (40)	1 (9)
	black zone		1 (8)	0 (0)	0 (0)	0 (0)
	nodule		0 (0)	0 (0)	1 (10)	0 (0)
heart	white zone		1 (8)	0 (0)	0 (0)	0 (0)
salivary gl	nodule		1 (8)	0 (0)	0 (0)	0 (0)
forestomach	ulcer		0 (0)	1 (11)	0 (0)	0 (0)
	erosion		0 (0)	0 (0)	0 (0)	1 (9)
gl stomach	ulcer		0 (0)	1 (11)	0 (0)	0 (0)
	erosion		0 (0)	0 (0)	0 (0)	1 (9)
cecum	gas		0 (0)	0 (0)	1 (10)	0 (0)
liver	pale		2 (17)	0 (0)	0 (0)	0 (0)
	white zone		0 (0)	0 (0)	0 (0)	1 (9)
	red zone		0 (0)	1 (11)	0 (0)	0 (0)
	herniation		2 (17)	2 (22)	3 (30)	1 (9)

STUDY NO. : 0448
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 REPORT TYPE : A1
 SEX : MALE

GROSS FINDINGS (SUMMARY)
 DEAD AND MORIBUND ANIMALS (0-105W)

PAGE : 2

Organ	Findings	Group Name NO. of Animals	Control	2000 ppm	6325 ppm	20000 ppm
			12 (%)	9 (%)	10 (%)	11 (%)
pancreas	nodule		0 (0)	0 (0)	0 (0)	1 (9)
kidney	enlarged		1 (8)	0 (0)	0 (0)	0 (0)
	white zone		0 (0)	1 (11)	1 (10)	0 (0)
	nodule		0 (0)	1 (11)	0 (0)	0 (0)
urin bladd	urine:marked retention		2 (17)	2 (22)	0 (0)	1 (9)
	urine:red		1 (8)	1 (11)	0 (0)	0 (0)
pituitary	enlarged		3 (25)	0 (0)	2 (20)	1 (9)
	red zone		0 (0)	1 (11)	1 (10)	0 (0)
	nodule		0 (0)	1 (11)	1 (10)	0 (0)
thyroid	enlarged		1 (8)	0 (0)	0 (0)	0 (0)
	nodule		1 (8)	0 (0)	0 (0)	0 (0)
adrenal	enlarged		0 (0)	0 (0)	1 (10)	1 (9)
testis	nodule		4 (33)	3 (33)	2 (20)	1 (9)
semin ves	red		0 (0)	1 (11)	0 (0)	0 (0)
prostate	red		0 (0)	1 (11)	0 (0)	0 (0)
prep/cli gl	nodule		2 (17)	0 (0)	0 (0)	0 (0)
brain	red zone		2 (17)	0 (0)	0 (0)	1 (9)
	nodule		1 (8)	0 (0)	0 (0)	0 (0)
spinal cord	red zone		0 (0)	1 (11)	0 (0)	0 (0)
eye	turbid		0 (0)	0 (0)	1 (10)	0 (0)
	white		1 (8)	0 (0)	0 (0)	1 (9)
Zymbal gl	nodule		0 (0)	0 (0)	1 (10)	0 (0)

STUDY NO. : 0448
ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
REPORT TYPE : A1
SEX : MALE

GROSS FINDINGS (SUMMARY)
DEAD AND MORIBUND ANIMALS (0-105W)

PAGE : 3

Organ	Findings	Group Name	Control	2000 ppm	6325 ppm	20000 ppm
		NO. of Animals	12 (%)	9 (%)	10 (%)	11 (%)
bone	nodule		0 (0)	1 (11)	0 (0)	1 (9)
peritoneum	nodule		0 (0)	1 (11)	1 (10)	0 (0)
retroperit	mass		0 (0)	2 (22)	0 (0)	0 (0)
abdominal c	hemorrhage		1 (8)	2 (22)	0 (0)	0 (0)
	ascites		1 (8)	1 (11)	0 (0)	0 (0)
thoracic ca	hemorrhage		0 (0)	0 (0)	1 (10)	1 (9)
	pleural fluid		0 (0)	1 (11)	0 (0)	2 (18)
other	lip:nodule		0 (0)	1 (11)	0 (0)	0 (0)
	hindlimb:nodule		0 (0)	0 (0)	1 (10)	0 (0)
	lower jaw:nodule		0 (0)	1 (11)	0 (0)	0 (0)
whole body	anemic		0 (0)	0 (0)	1 (10)	0 (0)

APPENDIX J 3

GROSS FINDINGS : MALE SACRIFICED ANIMALS

STUDY NO. : 0448
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 REPORT TYPE : A1
 SEX : MALE

GROSS FINDINGS (SUMMARY)
 SACRIFICED ANIMALS (105W)

PAGE : 1

Organ	Findings	Group Name NO. of Animals	Control	2000 ppm	6325 ppm	20000 ppm
			38 (%)	41 (%)	40 (%)	39 (%)
skin/app	nodule		1 (3)	0 (0)	2 (5)	2 (5)
subcutis	jaundice		0 (0)	0 (0)	1 (3)	0 (0)
	mass		4 (11)	7 (17)	4 (10)	8 (21)
lung	white zone		1 (3)	1 (2)	0 (0)	2 (5)
	red zone		0 (0)	2 (5)	1 (3)	1 (3)
	brown zone		0 (0)	0 (0)	0 (0)	2 (5)
	nodule		4 (11)	4 (10)	0 (0)	0 (0)
lymph node	enlarged		0 (0)	1 (2)	0 (0)	0 (0)
spleen	enlarged		1 (3)	2 (5)	4 (10)	2 (5)
	white zone		1 (3)	2 (5)	0 (0)	0 (0)
	nodule		0 (0)	0 (0)	1 (3)	0 (0)
	deformed		1 (3)	1 (2)	0 (0)	0 (0)
tongue	nodule		1 (3)	0 (0)	0 (0)	0 (0)
forestomach	ulcer		0 (0)	0 (0)	0 (0)	1 (3)
gl stomach	nodule		0 (0)	0 (0)	1 (3)	1 (3)
duodenum	nodule		1 (3)	0 (0)	0 (0)	0 (0)
liver	white zone		0 (0)	1 (2)	0 (0)	0 (0)
	red zone		1 (3)	0 (0)	0 (0)	0 (0)
	rough		0 (0)	2 (5)	1 (3)	0 (0)
	herniation		7 (18)	8 (20)	3 (8)	2 (5)
kidney	granular		6 (16)	6 (15)	0 (0)	2 (5)
urin bladd	nodule		0 (0)	0 (0)	0 (0)	1 (3)

STUDY NO. : 0448
ANIMAL : RAT F344/DuCr1j[F344/DuCrj]
REPORT TYPE : A1
SEX : MALE

GROSS FINDINGS (SUMMARY)
SACRIFICED ANIMALS (105W)

PAGE : 2

Organ	Findings	Group Name NO. of Animals	Control	2000 ppm	6325 ppm	20000 ppm
			38 (%)	41 (%)	40 (%)	39 (%)
pituitary	enlarged		1 (3)	2 (5)	0 (0)	2 (5)
	red zone		2 (5)	5 (12)	3 (8)	1 (3)
	nodule		3 (8)	2 (5)	2 (5)	1 (3)
thyroid	enlarged		4 (11)	3 (7)	0 (0)	2 (5)
adrenal	enlarged		0 (0)	1 (2)	2 (5)	1 (3)
testis	enlarged		0 (0)	1 (2)	0 (0)	0 (0)
	nodule		28 (74)	35 (85)	33 (83)	35 (90)
prostate	nodule		0 (0)	1 (2)	0 (0)	0 (0)
brain	nodule		0 (0)	0 (0)	0 (0)	1 (3)
eye	turbid		0 (0)	0 (0)	1 (3)	0 (0)
	white		2 (5)	7 (17)	4 (10)	4 (10)
Zymbal gl	nodule		0 (0)	1 (2)	0 (0)	0 (0)
mediastinum	mass		0 (0)	1 (2)	0 (0)	0 (0)
peritoneum	nodule		3 (8)	0 (0)	2 (5)	0 (0)
retroperit	mass		0 (0)	1 (2)	0 (0)	0 (0)
other	lip:nodule		0 (0)	1 (2)	1 (3)	0 (0)
	eye lid:nodule		0 (0)	0 (0)	0 (0)	1 (3)
	ear:nodule		0 (0)	0 (0)	1 (3)	0 (0)
	lower jaw:nodule		0 (0)	1 (2)	0 (0)	0 (0)
	nose:nodule		0 (0)	0 (0)	0 (0)	1 (3)
whole body	anemic		0 (0)	0 (0)	1 (3)	0 (0)

APPENDIX J 4

GROSS FINDINGS : FEMALE

ALL ANIMALS

STUDY NO. : 0448
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 REPORT TYPE : A1
 SEX : FEMALE

GROSS FINDINGS (SUMMARY)
 ALL ANIMALS (0-105W)

PAGE : 5

Organ	Findings	Group Name NO. of Animals	Control		2000 ppm		6325 ppm		20000 ppm	
			50	(%)	50	(%)	50	(%)	50	(%)
skin/app	nodule		1	(2)	1	(2)	1	(2)	3	(6)
subcutis	jaundice		1	(2)	1	(2)	1	(2)	0	(0)
	mass		9	(18)	9	(18)	2	(4)	5	(10)
lung	red		0	(0)	0	(0)	0	(0)	2	(4)
	white zone		2	(4)	1	(2)	1	(2)	0	(0)
	red zone		0	(0)	1	(2)	0	(0)	0	(0)
	brown zone		0	(0)	1	(2)	0	(0)	0	(0)
	nodule		1	(2)	0	(0)	1	(2)	2	(4)
	cyst		0	(0)	0	(0)	0	(0)	1	(2)
lymph node	enlarged		2	(4)	0	(0)	0	(0)	3	(6)
	red zone		0	(0)	1	(2)	0	(0)	0	(0)
thymus	nodule		1	(2)	0	(0)	0	(0)	0	(0)
spleen	enlarged		2	(4)	7	(14)	6	(12)	6	(12)
	atrophic		0	(0)	1	(2)	0	(0)	0	(0)
heart	white zone		1	(2)	0	(0)	0	(0)	0	(0)
oral cavity	nodule		0	(0)	0	(0)	2	(4)	0	(0)
forestomach	thick		0	(0)	0	(0)	0	(0)	1	(2)
gl stomach	black zone		0	(0)	0	(0)	0	(0)	1	(2)
	nodule		1	(2)	0	(0)	0	(0)	0	(0)
liver	enlarged		0	(0)	1	(2)	0	(0)	0	(0)
	pale		0	(0)	0	(0)	0	(0)	1	(2)
	white zone		0	(0)	1	(2)	1	(2)	1	(2)

STUDY NO. : 0448
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 REPORT TYPE : A1
 SEX : FEMALE

GROSS FINDINGS (SUMMARY)
 ALL ANIMALS (0-105W)

PAGE : 6

Organ	Findings	Group Name NO. of Animals	Control		2000 ppm		6325 ppm		20000 ppm	
			50	(%)	50	(%)	50	(%)	50	(%)
liver	red zone		1	(2)	1	(2)	0	(0)	1	(2)
	nodule		0	(0)	0	(0)	1	(2)	2	(4)
	deformed		0	(0)	0	(0)	1	(2)	0	(0)
	rough		3	(6)	3	(6)	3	(6)	0	(0)
	adhesion		0	(0)	1	(2)	0	(0)	0	(0)
	herniation		11	(22)	8	(16)	10	(20)	8	(16)
kidney	enlarged		0	(0)	0	(0)	0	(0)	1	(2)
	white zone		1	(2)	1	(2)	1	(2)	0	(0)
	black zone		0	(0)	0	(0)	0	(0)	1	(2)
	nodule		0	(0)	0	(0)	1	(2)	0	(0)
	cyst		0	(0)	0	(0)	0	(0)	1	(2)
	granular		1	(2)	0	(0)	1	(2)	0	(0)
pituitary	hydronephrosis		1	(2)	0	(0)	0	(0)	0	(0)
	enlarged		6	(12)	9	(18)	4	(8)	6	(12)
	red		0	(0)	0	(0)	1	(2)	0	(0)
	red zone		4	(8)	11	(22)	3	(6)	8	(16)
	nodule		6	(12)	4	(8)	10	(20)	2	(4)
	cyst		0	(0)	0	(0)	0	(0)	1	(2)
thyroid	enlarged		1	(2)	1	(2)	1	(2)	2	(4)
	nodule		0	(0)	0	(0)	1	(2)	1	(2)
adrenal	enlarged		1	(2)	3	(6)	1	(2)	1	(2)
ovary	enlarged		0	(0)	0	(0)	1	(2)	1	(2)

STUDY NO. : 0448
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 REPORT TYPE : A1
 SEX : FEMALE

GROSS FINDINGS (SUMMARY)
 ALL ANIMALS (0-105W)

PAGE : 7

Organ	Findings	Group Name NO. of Animals	Control		2000 ppm		6325 ppm		20000 ppm	
			50	(%)	50	(%)	50	(%)	50	(%)
ovary	nodule		1	(2)	0	(0)	0	(0)	0	(0)
	cyst		1	(2)	5	(10)	2	(4)	3	(6)
uterus	nodule		11	(22)	4	(8)	4	(8)	9	(18)
prep/cli gl	nodule		0	(0)	0	(0)	0	(0)	1	(2)
brain	red zone		0	(0)	1	(2)	0	(0)	2	(4)
	nodule		0	(0)	1	(2)	0	(0)	0	(0)
eye	white		2	(4)	2	(4)	1	(2)	5	(10)
muscle	nodule		1	(2)	1	(2)	0	(0)	0	(0)
bone	nodule		1	(2)	0	(0)	0	(0)	0	(0)
pleura	nodule		1	(2)	0	(0)	0	(0)	0	(0)
mediastinum	mass		2	(4)	0	(0)	0	(0)	0	(0)
peritoneum	nodule		0	(0)	1	(2)	0	(0)	1	(2)
abdominal c	hemorrhage		1	(2)	0	(0)	1	(2)	0	(0)
	ascites		0	(0)	0	(0)	1	(2)	0	(0)
mesenterium	nodule		0	(0)	0	(0)	1	(2)	0	(0)
thoracic ca	pleural fluid		1	(2)	2	(4)	0	(0)	0	(0)
other	ear:nodule		0	(0)	0	(0)	1	(2)	0	(0)
	lower jaw:nodule		1	(2)	0	(0)	0	(0)	0	(0)
	nose:nodule		0	(0)	0	(0)	1	(2)	0	(0)
whole body	anemic		0	(0)	0	(0)	0	(0)	1	(2)

APPENDIX J 5

GROSS FINDINGS : FEMALE DEAD AND MORIBUND ANIMALS

STUDY NO. : 0448
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 REPORT TYPE : A1
 SEX : FEMALE

GROSS FINDINGS (SUMMARY)
 DEAD AND MORIBUND ANIMALS (0-105W)

PAGE : 4

Organ	Findings	Group Name NO. of Animals	Control	2000 ppm	6325 ppm	20000 ppm
			12 (%)	7 (%)	10 (%)	25 (%)
skin/app	nodule		0 (0)	0 (0)	0 (0)	2 (8)
subcutis	jaundice		1 (8)	1 (14)	1 (10)	0 (0)
	mass		1 (8)	3 (43)	0 (0)	2 (8)
lung	red		0 (0)	0 (0)	0 (0)	2 (8)
	red zone		0 (0)	1 (14)	0 (0)	0 (0)
	nodule		1 (8)	0 (0)	0 (0)	2 (8)
lymph node	enlarged		2 (17)	0 (0)	0 (0)	3 (12)
	red zone		0 (0)	1 (14)	0 (0)	0 (0)
thymus	nodule		1 (8)	0 (0)	0 (0)	0 (0)
spleen	enlarged		2 (17)	1 (14)	3 (30)	5 (20)
	atrophic		0 (0)	1 (14)	0 (0)	0 (0)
oral cavity	nodule		0 (0)	0 (0)	1 (10)	0 (0)
forestomach	thick		0 (0)	0 (0)	0 (0)	1 (4)
gl stomach	black zone		0 (0)	0 (0)	0 (0)	1 (4)
liver	pale		0 (0)	0 (0)	0 (0)	1 (4)
	white zone		0 (0)	0 (0)	0 (0)	1 (4)
	nodule		0 (0)	0 (0)	1 (10)	1 (4)
	rough		1 (8)	1 (14)	1 (10)	0 (0)
	herniation		1 (8)	1 (14)	1 (10)	3 (12)
kidney	enlarged		0 (0)	0 (0)	0 (0)	1 (4)
	white zone		0 (0)	1 (14)	0 (0)	0 (0)
	hydronephrosis		1 (8)	0 (0)	0 (0)	0 (0)

STUDY NO. : 0448
ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
REPORT TYPE : A1
SEX : FEMALE

GROSS FINDINGS (SUMMARY)
DEAD AND MORIBUND ANIMALS (0-105W)

PAGE : 5

Organ	Findings	Group Name NO. of Animals	Control	2000 ppm	6325 ppm	20000 ppm
			12 (%)	7 (%)	10 (%)	25 (%)
pituitary	enlarged		4 (33)	1 (14)	2 (20)	3 (12)
	red		0 (0)	0 (0)	1 (10)	0 (0)
	red zone		1 (8)	1 (14)	0 (0)	3 (12)
	nodule		0 (0)	0 (0)	1 (10)	0 (0)
	cyst		0 (0)	0 (0)	0 (0)	1 (4)
thyroid	enlarged		0 (0)	0 (0)	0 (0)	1 (4)
adrenal	enlarged		1 (8)	1 (14)	0 (0)	0 (0)
ovary	enlarged		0 (0)	0 (0)	0 (0)	1 (4)
	nodule		1 (8)	0 (0)	0 (0)	0 (0)
	cyst		0 (0)	0 (0)	1 (10)	1 (4)
uterus	nodule		2 (17)	0 (0)	0 (0)	2 (8)
prep/cli gl	nodule		0 (0)	0 (0)	0 (0)	1 (4)
brain	red zone		0 (0)	1 (14)	0 (0)	2 (8)
	nodule		0 (0)	1 (14)	0 (0)	0 (0)
eye	white		0 (0)	1 (14)	0 (0)	2 (8)
bone	nodule		1 (8)	0 (0)	0 (0)	0 (0)
pleura	nodule		1 (8)	0 (0)	0 (0)	0 (0)
mediastinum	mass		2 (17)	0 (0)	0 (0)	0 (0)
peritoneum	nodule		0 (0)	0 (0)	0 (0)	1 (4)
abdominal c	hemorrhage		1 (8)	0 (0)	1 (10)	0 (0)
	ascites		0 (0)	0 (0)	1 (10)	0 (0)
thoracic ca	pleural fluid		1 (8)	2 (29)	0 (0)	0 (0)

STUDY NO. : 0448
ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
REPORT TYPE : A1
SEX : FEMALE

GROSS FINDINGS (SUMMARY)
DEAD AND MORIBUND ANIMALS (0-105W)

PAGE : 6

Organ	Findings	Group Name		Control		2000 ppm		6325 ppm		20000 ppm	
		NO. of Animals		12	(%)	7	(%)	10	(%)	25	(%)
other	lower jaw:nodule			1	(8)	0	(0)	0	(0)	0	(0)
	nose:nodule			0	(0)	0	(0)	1	(10)	0	(0)
whole body	anemic			0	(0)	0	(0)	0	(0)	1	(4)

(HPT080)

BAIS 4

APPENDIX J 6

GROSS FINDINGS : FEMALE SACRIFICED ANIMALS

STUDY NO. : 0448
ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
REPORT TYPE : A1
SEX : FEMALE

GROSS FINDINGS (SUMMARY)
SACRIFICED ANIMALS (105W)

PAGE : 3

Organ	Findings	Group Name NO. of Animals	Control		2000 ppm		6325 ppm		20000 ppm	
			38	(%)	43	(%)	40	(%)	25	(%)
skin/app	nodule		1	(3)	1	(2)	1	(3)	1	(4)
subcutis	mass		8	(21)	6	(14)	2	(5)	3	(12)
lung	white zone		2	(5)	1	(2)	1	(3)	0	(0)
	brown zone		0	(0)	1	(2)	0	(0)	0	(0)
	nodule		0	(0)	0	(0)	1	(3)	0	(0)
	cyst		0	(0)	0	(0)	0	(0)	1	(4)
spleen	enlarged		0	(0)	6	(14)	3	(8)	1	(4)
heart	white zone		1	(3)	0	(0)	0	(0)	0	(0)
oral cavity	nodule		0	(0)	0	(0)	1	(3)	0	(0)
gl stomach	nodule		1	(3)	0	(0)	0	(0)	0	(0)
liver	enlarged		0	(0)	1	(2)	0	(0)	0	(0)
	white zone		0	(0)	1	(2)	1	(3)	0	(0)
	red zone		1	(3)	1	(2)	0	(0)	1	(4)
	nodule		0	(0)	0	(0)	0	(0)	1	(4)
	deformed		0	(0)	0	(0)	1	(3)	0	(0)
	rough		2	(5)	2	(5)	2	(5)	0	(0)
	adhesion		0	(0)	1	(2)	0	(0)	0	(0)
	herniation		10	(26)	7	(16)	9	(23)	5	(20)
kidney	white zone		1	(3)	0	(0)	1	(3)	0	(0)
	black zone		0	(0)	0	(0)	0	(0)	1	(4)
	nodule		0	(0)	0	(0)	1	(3)	0	(0)
	cyst		0	(0)	0	(0)	0	(0)	1	(4)

STUDY NO. : 0448
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 REPORT TYPE : A1
 SEX : FEMALE

GROSS FINDINGS (SUMMARY)
 SACRIFICED ANIMALS (105W)

PAGE : 4

Organ	Findings	Group Name NO. of Animals	Control	2000 ppm	6325 ppm	20000 ppm
			38 (%)	43 (%)	40 (%)	25 (%)
kidney	granular		1 (3)	0 (0)	1 (3)	0 (0)
pituitary	enlarged		2 (5)	8 (19)	2 (5)	3 (12)
	red zone		3 (8)	10 (23)	3 (8)	5 (20)
	nodule		6 (16)	4 (9)	9 (23)	2 (8)
thyroid	enlarged		1 (3)	1 (2)	1 (3)	1 (4)
	nodule		0 (0)	0 (0)	1 (3)	1 (4)
adrenal	enlarged		0 (0)	2 (5)	1 (3)	1 (4)
ovary	enlarged		0 (0)	0 (0)	1 (3)	0 (0)
	cyst		1 (3)	5 (12)	1 (3)	2 (8)
uterus	nodule		9 (24)	4 (9)	4 (10)	7 (28)
eye	white		2 (5)	1 (2)	1 (3)	3 (12)
muscle	nodule		1 (3)	1 (2)	0 (0)	0 (0)
peritoneum	nodule		0 (0)	1 (2)	0 (0)	0 (0)
mesenterium	nodule		0 (0)	0 (0)	1 (3)	0 (0)
other	ear:nodule		0 (0)	0 (0)	1 (3)	0 (0)

APPENDIX K 1

ORGAN WEIGHT, ABSOLUTE : MALE

STUDY NO. : 0448
ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
REPORT TYPE : A1
SEX : MALE
UNIT: g

ORGAN WEIGHT:ABSOLUTE (SUMMARY)
SURVIVAL ANIMALS (105W)

PAGE : 1

Group Name	NO. of Animals	Body Weight		ADRENALS		TESTES		HEART		LUNGS		KIDNEYS	
Control	38	388±	32	0.069±	0.010	3.009±	0.966	1.193±	0.098	1.350±	0.073	2.571±	0.225
2000 ppm	41	366±	35	0.094±	0.184	3.394±	1.494	1.159±	0.083	1.473±	0.405	2.653±	0.298
6325 ppm	40	349±	20**	0.064±	0.018**	3.168±	1.061	1.135±	0.118*	1.349±	0.210	2.497±	0.127
20000 ppm	39	319±	31**	0.061±	0.024**	3.021±	1.102	1.044±	0.086**	1.238±	0.112**	2.407±	0.217**

Significant difference ; * : $P \leq 0.05$ ** : $P \leq 0.01$

Test of Dunnett

(HCL040)

BATS 4

STUDY NO. : 0448
ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
REPORT TYPE : A1
SEX : MALE
UNIT: g

ORGAN WEIGHT:ABSOLUTE (SUMMARY)
SURVIVAL ANIMALS (105W)

PAGE : 2

Group Name	NO. of Animals	SPLEEN		LIVER		BRAIN	
Control	38	0.995±	0.435	10.396±	1.253	2.053±	0.043
2000 ppm	41	1.193±	1.345	10.038±	1.383	2.057±	0.049
6325 ppm	40	1.210±	1.357	9.514±	0.957*	2.049±	0.038
20000 ppm	39	0.818±	0.537**	8.405±	0.949**	2.029±	0.045*

Significant difference : * : $P \leq 0.05$ ** : $P \leq 0.01$

Test of Dunnett

(HCL040)

BAIS 4

APPENDIX K 2

ORGAN WEIGHT, ABSOLUTE : FEMALE

STUDY NO. : 0448
ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
REPORT TYPE : A1
SEX : FEMALE
UNIT: g

ORGAN WEIGHT:ABSOLUTE (SUMMARY)
SURVIVAL ANIMALS (105W)

PAGE : 3

Group Name	NO. of Animals	Body Weight		ADRENALS		OVARIES		HEART		LUNGS		KIDNEYS	
Control	38	250±	21	0.066±	0.008	0.114±	0.023	0.855±	0.057	0.995±	0.065	1.709±	0.135
2000 ppm	43	240±	24	0.147±	0.507	0.142±	0.188	0.840±	0.056	1.015±	0.183	1.739±	0.146
6325 ppm	40	223±	21**	0.065±	0.015	0.347±	1.511	0.813±	0.079**	1.024±	0.304*	1.793±	0.238
20000 ppm	25	191±	19**	0.067±	0.033**	0.106±	0.021	0.783±	0.104**	0.944±	0.117**	1.707±	0.156

Significant difference ; * : $P \leq 0.05$ ** : $P \leq 0.01$

Test of Dunnett

(HCL040)

BAIS 4

STUDY NO. : 0448
ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
REPORT TYPE : A1
SEX : FEMALE
UNIT: g

ORGAN WEIGHT:ABSOLUTE (SUMMARY)
SURVIVAL ANIMALS (105W)

PAGE : 4

Group Name	NO. of Animals	SPLEEN		LIVER		BRAIN	
Control	38	0.573±	0.176	6.480±	0.809	1.894±	0.039
2000 ppm	43	1.013±	1.458	6.571±	1.491	1.880±	0.038
6325 ppm	40	0.717±	0.732	6.062±	1.059*	1.863±	0.038**
20000 ppm	25	0.523±	0.394**	5.508±	0.845**	1.840±	0.048**

Significant difference : * : $P \leq 0.05$ ** : $P \leq 0.01$ Test of Dunnett

(HCL040)

BAIS 4

APPENDIX L 1

ORGAN WEIGHT, RELATIVE : MALE

STUDY NO. : 0448
ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
REPORT TYPE : A1
SEX : MALE
UNIT: %

ORGAN WEIGHT:RELATIVE (SUMMARY)
SURVIVAL ANIMALS (105W)

PAGE : 1

Group Name	NO. of Animals	Body Weight (g)	ADRENALS	TESTES	HEART	LUNGS	KIDNEYS
Control	38	388± 32	0.018± 0.002	0.783± 0.264	0.309± 0.026	0.350± 0.027	0.665± 0.060
2000 ppm	41	366± 35	0.027± 0.054	0.926± 0.395	0.319± 0.031	0.412± 0.163**	0.735± 0.146**
6325 ppm	40	349± 20**	0.018± 0.005	0.909± 0.303	0.326± 0.036*	0.389± 0.072**	0.718± 0.045**
20000 ppm	39	319± 31**	0.019± 0.008	0.943± 0.329	0.329± 0.031*	0.391± 0.047**	0.759± 0.085**

Significant difference ; * : $P \leq 0.05$

** : $P \leq 0.01$

Test of Dunnett

(HCL042)

BATS 4

STUDY NO. : 0448
ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
REPORT TYPE : A1
SEX : MALE
UNIT: %

ORGAN WEIGHT:RELATIVE (SUMMARY)
SURVIVAL ANIMALS (105W)

PAGE : 2

Group Name	NO. of Animals	SPLEEN	LIVER	BRAIN
Control	38	0.257± 0.113	2.682± 0.232	0.533± 0.044
2000 ppm	41	0.336± 0.431	2.751± 0.353	0.568± 0.062
6325 ppm	40	0.355± 0.434	2.737± 0.316	0.590± 0.037**
20000 ppm	39	0.257± 0.181	2.640± 0.238	0.643± 0.081**

Significant difference ; * : $P \leq 0.05$ ** : $P \leq 0.01$

Test of Dunnett

(HCL042)

BAIS 4

APPENDIX L 2

ORGAN WEIGHT, RELATIVE : FEMALE

STUDY NO. : 0448
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 REPORT TYPE : A1
 SEX : FEMALE
 UNIT: %

ORGAN WEIGHT:RELATIVE (SUMMARY)
 SURVIVAL ANIMALS (105W)

PAGE : 3

Group Name	NO. of Animals	Body Weight (g)	ADRENALS	OVARIES	HEART	LUNGS	KIDNEYS
Control	38	250± 21	0.027± 0.004	0.046± 0.011	0.344± 0.027	0.401± 0.039	0.687± 0.056
2000 ppm	43	240± 24	0.063± 0.218	0.057± 0.060	0.353± 0.038	0.427± 0.084	0.729± 0.070*
6325 ppm	40	223± 21**	0.030± 0.008*	0.158± 0.690**	0.367± 0.039*	0.462± 0.139**	0.807± 0.085**
20000 ppm	25	191± 19**	0.035± 0.016**	0.056± 0.014**	0.416± 0.094**	0.502± 0.104**	0.901± 0.105**

Significant difference ; * : $P \leq 0.05$ ** : $P \leq 0.01$

Test of Dunnett

(HCL042)

BAIS 4

STUDY NO. : 0448
ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
REPORT TYPE : A1
SEX : FEMALE
UNIT: %

ORGAN WEIGHT:RELATIVE (SUMMARY)
SURVIVAL ANIMALS (105W)

PAGE : 4

Group Name	NO. of Animals	SPLEEN	LIVER	BRAIN
Control	38	0.231± 0.072	2.605± 0.324	0.764± 0.069
2000 ppm	43	0.426± 0.599	2.736± 0.523	0.792± 0.087
6325 ppm	40	0.320± 0.310	2.717± 0.326	0.843± 0.073**
20000 ppm	25	0.287± 0.278	2.900± 0.417**	0.975± 0.110**

Significant difference : * : $P \leq 0.05$ ** : $P \leq 0.01$ Test of Dunnett

(HCL042)

BAIS 4

APPENDIX M 1

HISTOPATHOLOGICAL FINDINGS :
NON-NEOPLASTIC LESIONS : MALE
ALL ANIMALS

STUDY NO. : 0448
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 REPORT TYPE : A1
 SEX : MALE

HISTOPATHOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)
 ALL ANIMALS (0-105W)

PAGE : 1

Organ	Findings	Group Name	Control				2000 ppm				6325 ppm				20000 ppm			
		No. of Animals on Study	50				50				50				50			
		Grade	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)

{Integumentary system/appandage}

skin/app		<50>	<50>	<50>	<50>												
	inflammation	0 (0)	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 (2)	0 (0)	0 (0)
	basal cell activation	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1 (2)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
	scar:dermis	0 (0)	0 (0)	0 (0)	0 (0)	1 (2)	0 (0)	0 (0)	0 (0)	1 (2)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	2 (4)	0 (0)
	scab	0 (0)	0 (0)	0 (0)	0 (0)	1 (2)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
	epidermal cyst	0 (0)	0 (0)	0 (0)	0 (0)	1 (2)	0 (0)	0 (0)	0 (0)	0 (0)	2 (4)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
	subcutis	<50>	<50>	<50>	<50>												
	cyst	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 (2)	0 (0)	0 (0)	0 (0)
	inflammation	1 (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)

{Respiratory system}

nasal cavit		<50>	<49>	<50>	<50>											
	hemorrhage	1 (2)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1 (2)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)

Grade 1 : Slight 2 : Moderate 3 : Marked 4 : Severe
 < a > a : Number of animals examined at the site
 b : Number of animals with lesion
 (c) c : b / a * 100
 Significant difference ; * : P ≤ 0.05 ** : P ≤ 0.01 Test of Chi Square

STUDY NO. : 0448
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 REPORT TYPE : A1
 SEX : MALE

HISTOPATHOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)
 ALL ANIMALS (0-105W)

PAGE : 2

Organ	Findings	Group Name	Control				2000 ppm				6325 ppm				20000 ppm			
		No. of Animals on Study	50				50				50				50			
		Grade	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Respiratory system}																		
nasal cavit			<50>				<49>				<50>				<50>			
	thrombus		0	0	0	0	0	1	0	0	2	0	1	0	0	0	2	0
			(0)	(0)	(0)	(0)	(0)	(2)	(0)	(0)	(4)	(0)	(2)	(0)	(0)	(0)	(4)	(0)
	mineralization		26	0	0	0	19	0	0	0	26	0	0	0	25	0	0	0
			(52)	(0)	(0)	(0)	(39)	(0)	(0)	(0)	(52)	(0)	(0)	(0)	(50)	(0)	(0)	(0)
	eosinophilic change:olfactory epithelium		29	15	5	0	24	17	4	0	26	17	6	0	24	16	7	0
			(58)	(30)	(10)	(0)	(49)	(35)	(8)	(0)	(52)	(34)	(12)	(0)	(48)	(32)	(14)	(0)
	eosinophilic change:respiratory epithelium		12	0	0	0	13	1	0	0	9	0	0	0	12	2	0	0
			(24)	(0)	(0)	(0)	(27)	(2)	(0)	(0)	(18)	(0)	(0)	(0)	(24)	(4)	(0)	(0)
	inflammation:foreign body		7	1	0	0	16	0	0	0	7	0	0	0	4	0	0	0
		(14)	(2)	(0)	(0)	(33)	(0)	(0)	(0)	(14)	(0)	(0)	(0)	(8)	(0)	(0)	(0)	
inflammation:respiratory epithelium		4	0	0	0	2	0	0	0	7	0	0	0	4	1	0	0	
		(8)	(0)	(0)	(0)	(4)	(0)	(0)	(0)	(14)	(0)	(0)	(0)	(8)	(2)	(0)	(0)	
respiratory metaplasia:gland		20	0	0	0	21	0	0	0	23	0	0	0	21	0	0	0	
		(40)	(0)	(0)	(0)	(43)	(0)	(0)	(0)	(46)	(0)	(0)	(0)	(42)	(0)	(0)	(0)	
necrosis:respiratory epithelium		0	0	0	0	0	1	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)	

Grade 1 : Slight 2 : Moderate 3 : Marked 4 : Severe
 < a > a : Number of animals examined at the site
 b : Number of animals with lesion
 (c) c : b / a * 100
 Significant difference ; * : P ≤ 0.05 ** : P ≤ 0.01 Test of Chi Square

STUDY NO. : 0448
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 REPORT TYPE : A1
 SEX : MALE

HISTOPATHOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)
 ALL ANIMALS (0-105W)

PAGE : 3

		Group Name	Control				2000 ppm				6325 ppm				20000 ppm			
		No. of Animals on Study	50				50				50				50			
Organ_____	Findings_____	Grade	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Respiratory system}																		
larynx			<50>				<50>				<50>				<49>			
	inflammation		4	0	0	0	7	1	0	0	9	0	0	0	9	0	0	0
		(8)	(0)	(0)	(0)	(14)	(2)	(0)	(0)	(18)	(0)	(0)	(0)	(18)	(0)	(0)	(0)	(0)
lung			<50>				<50>				<50>				<50>			
	congestion		2	3	0	0	2	0	0	0	1	3	0	0	1	8	0	0
		(4)	(6)	(0)	(0)	(4)	(0)	(0)	(0)	(2)	(6)	(0)	(0)	(2)	(16)	(0)	(0)	
	hemorrhage		0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0
		(0)	(0)	(0)	(0)	(2)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(2)	(0)	(0)	(0)
	inflammation		0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0
		(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(2)	(0)	(0)	(0)	(2)	(0)	(0)	(0)
	foreign body granuloma		0	1	0	0	3	0	0	0	0	0	0	0	0	0	0	0
		(0)	(2)	(0)	(0)	(6)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	accumulation of foamy cells		1	0	0	0	1	1	0	0	0	0	0	0	3	0	0	0
	(2)	(0)	(0)	(0)	(2)	(2)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(6)	(0)	(0)	(0)	
bronchiolar-alveolar cell hyperplasia		3	0	0	0	4	0	0	0	2	1	0	0	5	0	0	0	
	(6)	(0)	(0)	(0)	(8)	(0)	(0)	(0)	(0)	(4)	(2)	(0)	(0)	(10)	(0)	(0)	(0)	
thickening:pleura		0	0	0	0	0	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)	

Grade 1 : Slight 2 : Moderate 3 : Marked 4 : Severe
 < a > a : Number of animals examined at the site
 b : Number of animals with lesion
 (c) c : b / a * 100
 Significant difference ; * : P ≤ 0.05 ** : P ≤ 0.01 Test of Chi Square

STUDY NO. : 0448
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 REPORT TYPE : A1
 SEX : MALE

HISTOPATHOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)
 ALL ANIMALS (0-105W)

PAGE : 4

Organ_____	Findings_____	Group Name	Control				2000 ppm				6325 ppm				20000 ppm			
		No. of Animals on Study	50				50				50				50			
		Grade	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
(Hematopoietic system)																		
bone marrow			<50>				<49>				<50>				<50>			
	hemorrhage		1 (2)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1 (2)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
	granulation		5 (10)	1 (2)	0 (0)	0 (0)	4 (8)	0 (0)	0 (0)	0 (0)	7 (14)	0 (0)	0 (0)	0 (0)	4 (8)	1 (2)	0 (0)	0 (0)
	increased hematopoiesis		3 (6)	0 (0)	0 (0)	0 (0)	4 (8)	0 (0)	0 (0)	0 (0)	5 (10)	0 (0)	0 (0)	0 (0)	1 (2)	0 (0)	0 (0)	0 (0)
	erythropoiesis:increased		0 (0)	0 (0)	0 (0)	0 (0)	1 (2)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
lymph node			<50>				<50>				<50>				<50>			
	congestion		0 (0)	0 (0)	0 (0)	0 (0)	1 (2)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
	lymphadenitis		0 (0)	0 (0)	0 (0)	0 (0)	1 (2)	0 (0)	0 (0)	0 (0)	1 (2)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
spleen			<50>				<50>				<50>				<50>			
	hemorrhage		0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1 (2)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)

Grade 1 : Slight 2 : Moderate 3 : Marked 4 : Severe
 < a > a : Number of animals examined at the site
 b : Number of animals with lesion
 (c) c : b / a * 100
 Significant difference ; * : P ≤ 0.05 ** : P ≤ 0.01 Test of Chi Square

STUDY NO. : 0448
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 REPORT TYPE : A1
 SEX : MALE

HISTOPATHOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)
 ALL ANIMALS (0-105W)

PAGE : 5

Organ	Findings	Group Name No. of Animals on Study Grade				Control 50				2000 ppm 50				6325 ppm 50				20000 ppm 50			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Hematopoietic system}																					
spleen		<50>				<50>				<50>				<50>				<50>			
	necrosis:focal	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		(0)	(2)	(0)	(0)	(0)	(2)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	deposit of hemosiderin	2	2	0	0	2	0	0	0	1	1	0	0	2	1	0	0	2	1	0	0
		(4)	(4)	(0)	(0)	(4)	(0)	(0)	(0)	(2)	(2)	(0)	(0)	(4)	(2)	(0)	(0)	(4)	(2)	(0)	(0)
	granulation	0	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)	(0)	(2)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	fibrosis	2	2	0	0	0	1	1	0	2	0	1	0	0	0	0	0	0	0	0	0
		(4)	(4)	(0)	(0)	(0)	(2)	(2)	(0)	(4)	(0)	(2)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	extramedullary hematopoiesis	4	2	0	0	2	1	0	0	0	2	1	0	0	2	1	0	2	1	0	0
		(8)	(4)	(0)	(0)	(4)	(2)	(0)	(0)	(0)	(4)	(2)	(0)	(0)	(4)	(2)	(0)	(4)	(2)	(0)	(0)
	capsule hyperplasia	1	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)
{Circulatory system}																					
heart		<50>				<50>				<50>				<50>				<50>			
	thrombus	0	2	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)

Grade 1 : Slight 2 : Moderate 3 : Marked 4 : Severe
 < a > a : Number of animals examined at the site
 b : Number of animals with lesion
 (c) c : b / a * 100
 Significant difference ; * : P ≤ 0.05 ** : P ≤ 0.01 Test of Chi Square

STUDY NO. : 0448
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 REPORT TYPE : A1
 SEX : MALE

HISTOPATHOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)
 ALL ANIMALS (0-105W)

PAGE : 6

		Group Name	Control				2000 ppm				6325 ppm				20000 ppm			
		No. of Animals on Study	50				50				50				50			
Organ_____	Findings_____	Grade	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Circulatory system}																		
heart			<50>				<50>				<50>				<50>			
	mineralization		2	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0
			(4)	(2)	(0)	(0)	(0)	(0)	(0)	(0)	(2)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	inflammatory cell nest		0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(2)	(0)	(0)	(0)	(2)	(0)	(0)	(0)
	myocardial fibrosis		6	40	3	0	11	38	1	0	7	43	0	0	14	32	1	0
			(12)	(80)	(6)	(0)	(22)	(76)	(2)	(0)	(14)	(86)	(0)	(0)	(28)	(64)	(2)	(0)
	endocarditis		0	0	0	0	0	1	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)
	subendocardial fibrosis		0	1	0	0	1	1	0	0	2	0	0	0	1	2	0	0
			(0)	(2)	(0)	(0)	(2)	(2)	(0)	(0)	(4)	(0)	(0)	(0)	(2)	(4)	(0)	(0)
{Digestive system}																		
tooth			<50>				<50>				<50>				<50>			
	inflammation		0	1	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)
	dysplasia		0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(2)	(0)	(0)

Grade 1 : Slight 2 : Moderate 3 : Marked 4 : Severe
 < a > a : Number of animals examined at the site
 b : Number of animals with lesion
 (c) c : b / a * 100
 Significant difference ; * : P ≤ 0.05 ** : P ≤ 0.01 Test of Chi Square

STUDY NO. : 0448
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 REPORT TYPE : A1
 SEX : MALE

HISTOPATHOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)
 ALL ANIMALS (0-105W)

PAGE : 7

		Group Name	Control				2000 ppm				6325 ppm				20000 ppm				
		No. of Animals on Study	50				50				50				50				
Organ	Findings	Grade	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	
(Digestive system)																			
tongue			<50>				<50>				<50>				<50>				
	squamous cell hyperplasia		1 (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)
	arteritis		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 (2)	0 (0)	0 (0)	0 (0)	
salivary gl			<50>				<50>				<50>				<50>				
	abscess		0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1 (2)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
esophagus			<50>				<50>				<50>				<50>				
	dilatation		0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1 (2)	0 (0)	0 (0)	0 (0)	2 (4)	0 (0)	0 (0)	0 (0)
stomach			<50>				<50>				<50>				<50>				
	mineralization		1 (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)
	basal cell hyperplasia		0 (0)	0 (0)	0 (0)	0 (0)	1 (2)	1 (2)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
	erosion:forestomach		0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1 (2)	0 (0)	0 (0)	0 (0)	0 (0)	1 (2)	0 (0)	1 (2)	0 (0)	0 (0)	0 (0)	0 (0)

Grade 1 : Slight 2 : Moderate 3 : Marked 4 : Severe
 < a > a : Number of animals examined at the site
 b : Number of animals with lesion
 (c) c : b / a * 100
 Significant difference ; * : P ≤ 0.05 ** : P ≤ 0.01 Test of Chi Square

STUDY NO. : 0448
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 REPORT TYPE : A1
 SEX : MALE

HISTOPATHOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)
 ALL ANIMALS (0-105W)

PAGE : 8

Organ	Findings	Group Name No. of Animals on Study				Control 50				2000 ppm 50				6325 ppm 50				20000 ppm 50			
		Grade																			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Digestive system}																					
stomach		<50>				<50>				<50>				<50>				<50>			
	ulcer:forestomach	0	0	0	0	1	1	0	0	0	1	0	0	1	1	0	0	1	1	0	0
		(0)	(0)	(0)	(0)	(2)	(2)	(0)	(0)	(0)	(2)	(0)	(0)	(0)	(2)	(0)	(0)	(2)	(2)	(0)	(0)
	hyperplasia:forestomach	0	0	0	0	1	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0
		(0)	(0)	(0)	(0)	(2)	(0)	(0)	(0)	(0)	(0)	(2)	(0)	(0)	(0)	(2)	(0)	(0)	(0)	(0)	(0)
	erosion:glandular stomach	1	0	0	0	3	0	0	0	4	0	0	0	4	0	0	0	2	0	0	0
		(2)	(0)	(0)	(0)	(6)	(0)	(0)	(0)	(8)	(0)	(0)	(0)	(8)	(0)	(0)	(0)	(4)	(0)	(0)	(0)
	hyperplasia:glandular stomach	0	0	0	0	0	0	0	0	0	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)	(0)	(2)	(0)	(0)	(0)
small intes		<50>				<50>				<50>				<50>				<50>			
	erosion	0	1	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)
liver		<50>				<50>				<50>				<50>				<50>			
	herniation	9	0	0	0	11	0	0	0	6	0	0	0	6	0	0	0	4	0	0	0
		(18)	(0)	(0)	(0)	(22)	(0)	(0)	(0)	(12)	(0)	(0)	(0)	(12)	(0)	(0)	(0)	(8)	(0)	(0)	(0)
	angiectasis	2	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		(4)	(0)	(0)	(0)	(2)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)

Grade 1 : Slight 2 : Moderate 3 : Marked 4 : Severe
 < a > a : Number of animals examined at the site
 b b : Number of animals with lesion
 (c) c : b / a * 100
 Significant difference ; * : P ≤ 0.05 ** : P ≤ 0.01 Test of Chi Square

STUDY NO. : 0448
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 REPORT TYPE : A1
 SEX : MALE

HISTOPATHOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)
 ALL ANIMALS (0-105W)

PAGE : 9

		Group Name	Control				2000 ppm				6325 ppm				20000 ppm			
		No. of Animals on Study	50				50				50				50			
Organ_____	Findings_____	Grade	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
<hr/>																		
{Digestive system}																		
liver			<50>				<50>				<50>				<50>			
	necrosis:central		0	2	0	0	0	0	0	0	1	0	0	0	0	0	0	0
			(0)	(4)	(0)	(0)	(0)	(0)	(0)	(0)	(2)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	lymphocytic infiltration		0	0	0	0	0	0	0	0	2	0	0	0	1	0	0	0
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(4)	(0)	(0)	(0)	(2)	(0)	(0)	(0)
	granulation		45	0	0	0	44	0	0	0	40	6	0	0 *	37	3	0	0
			(90)	(0)	(0)	(0)	(88)	(0)	(0)	(0)	(80)	(12)	(0)	(0)	(74)	(6)	(0)	(0)
	clear cell focus		0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0
		(0)	(0)	(0)	(0)	(0)	(0)	(2)	(0)	(0)	(0)	(0)	(0)	(2)	(0)	(0)	(0)	
	acidophilic cell focus		11	1	1	0	8	2	0	0	9	0	2	0	2	0	0	0 *
			(22)	(2)	(2)	(0)	(16)	(4)	(0)	(0)	(18)	(0)	(4)	(0)	(4)	(0)	(0)	(0)
	basophilic cell focus		9	0	0	0	4	0	0	0	9	0	0	0	5	0	0	0
			(18)	(0)	(0)	(0)	(8)	(0)	(0)	(0)	(18)	(0)	(0)	(0)	(10)	(0)	(0)	(0)
	spongiosis hepatitis		3	0	0	0	5	0	0	0	0	0	0	0	0	1	0	0
			(6)	(0)	(0)	(0)	(10)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(2)	(0)	(0)
	bile duct hyperplasia		28	21	0	0	26	21	0	0	28	18	0	0	25	19	0	0
			(56)	(42)	(0)	(0)	(52)	(42)	(0)	(0)	(56)	(36)	(0)	(0)	(50)	(38)	(0)	(0)

Grade 1 : Slight 2 : Moderate 3 : Marked 4 : Severe
 < a > a : Number of animals examined at the site
 b : Number of animals with lesion
 (c) c : b / a * 100
 Significant difference ; * : $P \leq 0.05$ ** : $P \leq 0.01$ Test of Chi Square

STUDY NO. : 0448
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 REPORT TYPE : A1
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HISTOPATHOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)
 ALL ANIMALS (0-105W)

PAGE : 10

Organ	Findings	Group Name No. of Animals on Study Grade	Control				2000 ppm				6325 ppm				20000 ppm			
			50				50				50				50			
			1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Digestive system}																		
liver			<50>				<50>				<50>				<50>			
	focal fatty change		2	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)
pancreas			<50>				<50>				<50>				<50>			
	atrophy		12	1	0	0	10	3	1	0	11	3	1	0	8	1	1	0
			(24)	(2)	(0)	(0)	(20)	(6)	(2)	(0)	(22)	(6)	(2)	(0)	(16)	(2)	(2)	(0)
	capsule hyperplasia		1	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)
{Urinary system}																		
kidney			<50>				<50>				<50>				<50>			
	thrombus		0	0	0	0	0	0	1	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)
	cyst		1	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0
			(2)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(4)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	basophilic change		0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(2)	(0)	(0)	(0)	(0)	(0)	(0)	(0)

Grade 1 : Slight 2 : Moderate 3 : Marked 4 : Severe
 < a > a : Number of animals examined at the site
 b : Number of animals with lesion
 (c) c : b / a * 100
 Significant difference : * : P ≤ 0.05 ** : P ≤ 0.01 Test of Chi Square

STUDY NO. : 0448
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 REPORT TYPE : A1
 SEX : MALE

HISTOPATHOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)
 ALL ANIMALS (0-105W)

PAGE : 11

Organ	Findings	Group Name No. of Animals on Study Grade				Control 50				2000 ppm 50				6325 ppm 50				20000 ppm 50			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Urinary system}																					
kidney		<50>				<50>				<50>				<50>				<50>			
	inflammatory infiltration	0	1	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)
	scar	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)	(6)	(0)	(0)	(0)
	chronic nephropathy	27	11	3	0	33	12	1	0	47	0	0	0 **	38	3	0	0 *				
		(54)	(22)	(6)	(0)	(66)	(24)	(2)	(0)	(94)	(0)	(0)	(0)	(76)	(6)	(0)	(0)				
	papillary necrosis	0	1	0	0	1	2	0	0	1	0	0	0	10	1	0	0 **				
		(0)	(2)	(0)	(0)	(2)	(4)	(0)	(0)	(2)	(0)	(0)	(0)	(20)	(2)	(0)	(0)				
	mineralization:cortico-medullary junction	0	1	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)
	mineralization:papilla	0	0	0	0	3	0	0	0	3	0	0	0	2	0	0	0				
		(0)	(0)	(0)	(0)	(6)	(0)	(0)	(0)	(6)	(0)	(0)	(0)	(4)	(0)	(0)	(0)				
	mineralization:pelvis	1	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)				
	mineralization:cortex	1	1	0	0	2	0	0	0	1	0	0	0	0	0	0	0				
		(2)	(2)	(0)	(0)	(4)	(0)	(0)	(0)	(2)	(0)	(0)	(0)	(0)	(0)	(0)	(0)				

Grade 1 : Slight 2 : Moderate 3 : Marked 4 : Severe
 < a > a : Number of animals examined at the site
 b : Number of animals with lesion
 (c) c : b / a * 100
 Significant difference : * : P ≤ 0.05 ** : P ≤ 0.01 Test of Chi Square

STUDY NO. : 0448
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 REPORT TYPE : A1
 SEX : MALE

HISTOPATHOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)
 ALL ANIMALS (0-105W)

PAGE : 12

Organ	Findings	Group Name No. of Animals on Study Grade	Control 50				2000 ppm 50				6325 ppm 50				20000 ppm 50			
			1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Urinary system}																		
kidney			<50>				<50>				<50>				<50>			
	urothelial hyperplasia:pelvis		0	0	0	0	1	1	0	0	0	1	0	0	1	0	0	0
			(0)	(0)	(0)	(0)	(2)	(2)	(0)	(0)	(0)	(2)	(0)	(0)	(2)	(0)	(0)	(0)
	atypical tubule hyperplasia		0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0
			(0)	(2)	(0)	(0)	(0)	(0)	(0)	(0)	(2)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	eosinophilic droplet:proximal tubule		0	0	0	0	0	1	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)
urin bladd			<50>				<50>				<49>				<50>			
	dilatation		0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(2)	(0)	(0)	(0)
	ulcer		0	1	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)
	hemorrhage		0	0	0	0	2	1	0	0	1	0	0	0	0	0	0	0
			(0)	(0)	(0)	(0)	(4)	(2)	(0)	(0)	(2)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	inflammatory infiltration		1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
			(2)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(2)	(0)	(0)	(0)
	transitional cell hyperplasia		1	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0
			(2)	(0)	(0)	(0)	(2)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(2)	(0)	(0)	(0)

Grade 1 : Slight 2 : Moderate 3 : Marked 4 : Severe
 < a > a : Number of animals examined at the site
 b : Number of animals with lesion
 (c) c : b / a * 100
 Significant difference ; * : P ≤ 0.05 ** : P ≤ 0.01 Test of Chi Square

STUDY NO. : 0448
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 REPORT TYPE : A1
 SEX : MALE

HISTOPATHOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)
 ALL ANIMALS (0-105W)

PAGE : 13

Organ	Findings	Group Name No. of Animals on Study Grade	Control				2000 ppm				6325 ppm				20000 ppm			
			50				50				50				50			
			1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	

{Endocrine system}

pituitary

angiectasis	<div><50></div> <div>0000 (0) (0) (0) (0)</div>	<div><50></div> <div>1000 (2) (0) (0) (0)</div>	<div><50></div> <div>1100 (2) (2) (0) (0)</div>	<div><50></div> <div>2200 (4) (4) (0) (0)</div>
hemorrhage	<div>0000 (0) (0) (0) (0)</div>	<div>0000 (0) (0) (0) (0)</div>	<div>0030 (0) (0) (6) (0)</div>	<div>0000 (0) (0) (0) (0)</div>
cyst	<div>4100 (8) (2) (0) (0)</div>	<div>101000 (20) (2) (0) (0)</div>	<div>4200 (8) (4) (0) (0)</div>	<div>2000 (4) (0) (0) (0)</div>
mineralization	<div>0200 (0) (4) (0) (0)</div>	<div>0000 (0) (0) (0) (0)</div>	<div>0000 (0) (0) (0) (0)</div>	<div>0000 (0) (0) (0) (0)</div>
hyperplasia	<div>11300 (22) (6) (0) (0)</div>	<div>10400 (20) (8) (0) (0)</div>	<div>7610 (14) (12) (2) (0)</div>	<div>9300 (18) (6) (0) (0)</div>
Rathke pouch	<div>4000 (8) (0) (0) (0)</div>	<div>2100 (4) (2) (0) (0)</div>	<div>2000 (4) (0) (0) (0)</div>	<div>1100 (2) (2) (0) (0)</div>
focal hypertrophy	<div>5000 (10) (0) (0) (0)</div>	<div>5000 (10) (0) (0) (0)</div>	<div>7000 (14) (0) (0) (0)</div>	<div>6000 (12) (0) (0) (0)</div>
congestion	<div><50></div> <div>0000 (0) (0) (0) (0)</div>	<div><50></div> <div>1000 (2) (0) (0) (0)</div>	<div><50></div> <div>0000 (0) (0) (0) (0)</div>	<div><50></div> <div>0000 (0) (0) (0) (0)</div>

Grade

1 : Slight2 : Moderate3 : Marked4 : Severe

< a >

a : Number of animals examined at the site

b

b : Number of animals with lesion

(c)

c : b / a * 100

Significant difference ;

* : P ≤ 0.05** : P ≤ 0.01

Test of Chi Square

STUDY NO. : 0448
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 REPORT TYPE : A1
 SEX : MALE

HISTOPATHOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)
 ALL ANIMALS (0-105W)

PAGE : 14

Organ	Findings	Group Name No. of Animals on Study Grade	Control 50				2000 ppm 50				6325 ppm 50				20000 ppm 50			
			1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Endocrine system}																		
thyroid	C-cell hyperplasia		<50>				<50>				<50>				<50>			
			16	0	0	0	16	0	0	0	9	0	0	0	5	0	0	0 *
			(32)	(0)	(0)	(0)	(32)	(0)	(0)	(0)	(18)	(0)	(0)	(0)	(10)	(0)	(0)	(0)
	focal follicular cell hyperplasia		1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
			(2)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(2)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
parathyroid	cyst		<50>				<50>				<50>				<50>			
			1	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)
	hyperplasia		1	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)
adrenal	hemorrhage		<50>				<50>				<50>				<50>			
			0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(2)	(0)
	mineralization		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)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	osseous metaplasia		0	0	0	0	0	1	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)

Grade 1 : Slight 2 : Moderate 3 : Marked 4 : Severe
 < a > a : Number of animals examined at the site
 b : Number of animals with lesion
 (c) c : b / a * 100
 Significant difference : * : P ≤ 0.05 ** : P ≤ 0.01 Test of Chi Square

STUDY NO. : 0448
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 REPORT TYPE : A1
 SEX : MALE

HISTOPATHOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)
 ALL ANIMALS (0-105W)

PAGE : 15

Organ	Findings	Group Name No. of Animals on Study Grade	Control 50				2000 ppm 50				6325 ppm 50				20000 ppm 50			
			1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Endocrine system}																		
adrenal			<50>				<50>				<50>				<50>			
	hyperplasia:cortical cell		3	0	0	0	2	0	0	0	0	0	0	0	2	0	0	0
			(6)	(0)	(0)	(0)	(4)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(4)	(0)	(0)	(0)
	hyperplasia:medulla		2	0	0	0	1	1	0	0	0	1	0	0	3	1	0	0
			(4)	(0)	(0)	(0)	(2)	(2)	(0)	(0)	(0)	(2)	(0)	(0)	(6)	(2)	(0)	(0)
	focal fatty change:cortex		7	1	0	0	5	0	0	0	9	0	0	0	9	1	0	0
			(14)	(2)	(0)	(0)	(10)	(0)	(0)	(0)	(18)	(0)	(0)	(0)	(18)	(2)	(0)	(0)
{Reproductive system}																		
testis			<50>				<50>				<50>				<50>			
	mineralization		4	0	0	0	5	0	0	0	4	0	0	0	3	1	0	0
			(8)	(0)	(0)	(0)	(10)	(0)	(0)	(0)	(8)	(0)	(0)	(0)	(6)	(2)	(0)	(0)
	interstitial cell hyperplasia		14	0	0	0	9	0	0	0	12	0	0	0	13	0	0	0
			(28)	(0)	(0)	(0)	(18)	(0)	(0)	(0)	(24)	(0)	(0)	(0)	(26)	(0)	(0)	(0)
semin ves			<50>				<50>				<49>				<50>			
	hemorrhage		0	0	0	0	1	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)

Grade 1 : Slight 2 : Moderate 3 : Marked 4 : Severe
 < a > a : Number of animals examined at the site
 b : Number of animals with lesion
 (c) c : b / a * 100
 Significant difference ; * : P ≤ 0.05 ** : P ≤ 0.01 Test of Chi Square

STUDY NO. : 0448
ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
REPORT TYPE : A1
SEX : MALE

HISTOPATHOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)
ALL ANIMALS (0-105W)

PAGE : 16

		Group Name	Control				2000 ppm				6325 ppm				20000 ppm			
		No. of Animals on Study	50				50				50				50			
Organ	Findings	Grade	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Reproductive system}																		
prostate			<50>				<50>				<49>				<50>			
	hemorrhage		0	0	0	0	1	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)
	degeneration		1	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)
	inflammation		4	0	0	0	4	0	0	0	0	0	0	0	1	0	0	0
			(8)	(0)	(0)	(0)	(8)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(2)	(0)	(0)	(0)
	granulation		1	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0
			(2)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(4)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	hyperplasia		10	0	0	0	9	2	0	0	8	1	0	0	5	0	0	0
			(20)	(0)	(0)	(0)	(18)	(4)	(0)	(0)	(16)	(2)	(0)	(0)	(10)	(0)	(0)	(0)
mammary gl			<50>				<50>				<50>				<50>			
	duct ectasia		0	1	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)
	galactoceles		3	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
			(6)	(0)	(0)	(0)	(2)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
{Nervous system}																		
brain			<50>				<50>				<50>				<50>			
	hemorrhage		1	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)

Grade 1 : Slight 2 : Moderate 3 : Marked 4 : Severe
< a > a : Number of animals examined at the site
b : Number of animals with lesion
(c) c : b / a * 100
Significant difference ; * : P ≤ 0.05 ** : P ≤ 0.01 Test of Chi Square

STUDY NO. : 0448
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 REPORT TYPE : A1
 SEX : MALE

HISTOPATHOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)
 ALL ANIMALS (0-105W)

PAGE : 17

Organ	Findings	Group Name No. of Animals on Study Grade	Control				2000 ppm				6325 ppm				20000 ppm			
			50				50				50				50			
			1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Nervous system}																		
spinal cord	hemorrhage		<50>				<50>				<50>				<49>			
			1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
			(2)	(0)	(0)	(0)	(0)	(2)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	gliosis		0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(2)	(0)	(0)	(0)
{Special sense organs/appendage}																		
eye	hemorrhage		<50>				<50>				<50>				<50>			
			0	0	0	0	1	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)
	cataract		1	2	0	0	2	5	0	0	1	6	0	0	0	4	0	0
			(2)	(4)	(0)	(0)	(4)	(10)	(0)	(0)	(2)	(12)	(0)	(0)	(0)	(8)	(0)	(0)
	retinal atrophy		24	21	4	0	23	13	9	0	28	9	8	0 *	34	8	6	0 *
			(48)	(42)	(8)	(0)	(46)	(26)	(18)	(0)	(56)	(18)	(16)	(0)	(68)	(16)	(12)	(0)
	keratitis		0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0
			(0)	(0)	(0)	(0)	(2)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(2)	(0)	(0)	(0)
Harder gl	degeneration		<50>				<50>				<50>				<50>			
			2	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
			(4)	(0)	(0)	(0)	(2)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)

Grade 1 : Slight 2 : Moderate 3 : Marked 4 : Severe
 < a > a : Number of animals examined at the site
 b b : Number of animals with lesion
 (c) c : b / a * 100
 Significant difference ; * : P ≤ 0.05 ** : P ≤ 0.01 Test of Chi Square

STUDY NO. : 0448
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 REPORT TYPE : A1
 SEX : MALE

HISTOPATHOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)
 ALL ANIMALS (0-105W)

PAGE : 18

Organ_____	Findings_____	Group Name	Control				2000 ppm				6325 ppm				20000 ppm			
		No. of Animals on Study	50				50				50				50			
		Grade	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Special sense organs/appendage}																		
Harder gl			<50>				<50>				<50>				<50>			
	lymphocytic infiltration		5	0	0	0	3	0	0	0	3	0	0	0	3	0	0	0
			(10)	(0)	(0)	(0)	(6)	(0)	(0)	(0)	(6)	(0)	(0)	(0)	(6)	(0)	(0)	(0)
nasolacr d			<50>				<50>				<50>				<50>			
	inflammation		0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(2)	(0)	(0)	(0)	(0)	(0)	(0)
{Musculoskeletal system}																		
bone			<50>				<49>				<50>				<50>			
	hyperplasia		0	0	0	0	1	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)	
			<50>				<50>				<50>				<50>			
	osteosclerosis		1	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)	
{Body cavities}																		
adipose			<50>				<50>				<50>				<50>			
	granulation		1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
			(2)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(2)	(0)	(0)	(0)	

Grade 1 : Slight 2 : Moderate 3 : Marked 4 : Severe
 < a > a : Number of animals examined at the site
 b : Number of animals with lesion
 (c) c : b / a * 100
 Significant difference : * : P ≤ 0.05 ** : P ≤ 0.01 Test of Chi Square

APPENDIX M 2

HISTOPATHOLOGICAL FINDINGS :
NON-NEOPLASTIC LESIONS : MALE
DEAD AND MORIBUND ANIMALS

STUDY NO. : 0448
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 REPORT TYPE : A1
 SEX : MALE

HISTOPATHOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)
 DEAD AND MORIBUND ANIMALS (0-105W)

PAGE : 1

		Group Name	Control				2000 ppm				6325 ppm				20000 ppm			
		No. of Animals on Study	12				9				10				11			
Organ	Findings	Grade	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Integumentary system/appandage}																		
skin/app			<12>				< 9>				<10>				<11>			
	inflammation		0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(9)	(0)	(0)
			<12>				< 9>				<10>				<11>			
	scar:dermis		0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0
			(0)	(0)	(0)	(0)	(11)	(0)	(0)	(0)	(10)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
subcutis			<12>				< 9>				<10>				<11>			
	inflammation		1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			(8)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
{Respiratory system}																		
nasal cavit			<12>				< 8>				<10>				<11>			
	hemorrhage		1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
			(8)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(10)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
			<12>				< 8>				<10>				<11>			
	thrombus		0	0	0	0	0	0	0	0	2	0	1	0	0	0	2	0
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(20)	(0)	(10)	(0)	(0)	(0)	(18)	(0)
			<12>				< 8>				<10>				<11>			
	mineralization		6	0	0	0	4	0	0	0	6	0	0	0	2	0	0	0
			(50)	(0)	(0)	(0)	(50)	(0)	(0)	(0)	(60)	(0)	(0)	(0)	(18)	(0)	(0)	(0)

Grade 1 : Slight 2 : Moderate 3 : Marked 4 : Severe
 < a > a : Number of animals examined at the site
 b : Number of animals with lesion
 (c) c : b / a * 100
 Significant difference ; * : P ≤ 0.05 ** : P ≤ 0.01 Test of Chi Square

STUDY NO. : 0448
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 REPORT TYPE : A1
 SEX : MALE

HISTOPATHOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)
 DEAD AND MORIBUND ANIMALS (0-105W)

PAGE : 2

Organ_____	Findings_____	Group Name	Control				2000 ppm				6325 ppm				20000 ppm			
		No. of Animals on Study	12				9				10				11			
		Grade	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
(Respiratory system)																		
nasal cavit			<12>				< 8>				<10>				<11>			
	eosinophilic change:olfactory epithelium	8	3	0	0	2	2	0	0	7	1	1	0	8	0	0	0	
		(67)	(25)	(0)	(0)	(25)	(25)	(0)	(0)	(70)	(10)	(10)	(0)	(73)	(0)	(0)	(0)	
	eosinophilic change:respiratory epithelium	2	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	
		(17)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(30)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	
	inflammation:foreign body	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	
		(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(10)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	
	inflammation:respiratory epithelium	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	
		(0)	(0)	(0)	(0)	(13)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(9)	(0)	(0)	
	respiratory metaplasia:gland	2	0	0	0	2	0	0	0	3	0	0	0	1	0	0	0	
		(17)	(0)	(0)	(0)	(25)	(0)	(0)	(0)	(30)	(0)	(0)	(0)	(9)	(0)	(0)	(0)	
larynx			<12>				< 9>				<10>				<11>			
	inflammation	1	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	
		(8)	(0)	(0)	(0)	(11)	(11)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	
lung			<12>				< 9>				<10>				<11>			
	congestion	2	3	0	0	1	0	0	0	1	3	0	0	0	8	0	0	
		(17)	(25)	(0)	(0)	(11)	(0)	(0)	(0)	(10)	(30)	(0)	(0)	(0)	(73)	(0)	(0)	

Grade 1 : Slight 2 : Moderate 3 : Marked 4 : Severe
 < a > a : Number of animals examined at the site
 b : Number of animals with lesion
 (c) c : b / a * 100
 Significant difference : * : P ≤ 0.05 ** : P ≤ 0.01 Test of Chi Square

STUDY NO. : 0448
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 REPORT TYPE : A1
 SEX : MALE

HISTOPATHOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)
 DEAD AND MORIBUND ANIMALS (0-105W)

PAGE : 3

Organ	Findings	Group Name No. of Animals on Study Grade	Control 12				2000 ppm 9				6325 ppm 10				20000 ppm 11			
			1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Respiratory system}																		
lung			<12>				< 9>				<10>				<11>			
	foreign body granuloma		0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
			(0)	(0)	(0)	(0)	(11)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	thickening:pleura		0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(9)	(0)	(0)	(0)
{Hematopoietic system}																		
bone marrow			<12>				< 8>				<10>				<11>			
	granulation		1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			(8)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	increased hematopoiesis		3	0	0	0	2	0	0	0	3	0	0	0	0	0	0	0
			(25)	(0)	(0)	(0)	(25)	(0)	(0)	(0)	(30)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	erythropoiesis:increased		0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
			(0)	(0)	(0)	(0)	(13)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
spleen			<12>				< 9>				<10>				<11>			
	hemorrhage		0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(10)	(0)	(0)	(0)	(0)	(0)

Grade 1 : Slight 2 : Moderate 3 : Marked 4 : Severe
 < a > a : Number of animals examined at the site
 b : Number of animals with lesion
 (c) c : b / a * 100
 Significant difference ; * : P ≤ 0.05 ** : P ≤ 0.01 Test of Chi Square

STUDY NO. : 0448
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 REPORT TYPE : A1
 SEX : MALE

HISTOPATHOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)
 DEAD AND MORIBUND ANIMALS (0-105W)

PAGE : 4

Organ	Findings	Group Name No. of Animals on Study Grade	Control 12				2000 ppm 9				6325 ppm 10				20000 ppm 11			
			1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Hematopoietic system}																		
spleen			<12>				< 9>				<10>				<11>			
	deposit of hemosiderin		2 (17)	2 (17)	0 (0)	0 (0)	2 (22)	0 (0)	0 (0)	0 (0)	1 (10)	1 (10)	0 (0)	0 (0)	1 (9)	1 (9)	0 (0)	0 (0)
	extramedullary hematopoiesis		0 (0)	2 (17)	0 (0)	0 (0)	2 (22)	1 (11)	0 (0)	0 (0)	0 (0)	1 (10)	1 (10)	0 (0)	1 (9)	1 (9)	0 (0)	0 (0)
	capsule hyperplasia		1 (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 (0)	0 (0)	0 (0)
{Circulatory system}																		
heart			<12>				< 9>				<10>				<11>			
	thrombus		0 (0)	2 (17)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
	mineralization		2 (17)	1 (8)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1 (10)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
	inflammatory cell nest		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 (9)	0 (0)	0 (0)	0 (0)
	myocardial fibrosis		3 (25)	8 (67)	1 (8)	0 (0)	3 (33)	6 (67)	0 (0)	0 (0)	3 (30)	7 (70)	0 (0)	0 (0)	2 (18)	5 (45)	1 (9)	0 (0)

Grade 1 : Slight 2 : Moderate 3 : Marked 4 : Severe
 < a > a : Number of animals examined at the site
 b : Number of animals with lesion
 (c) c : b / a * 100
 Significant difference : * : P ≤ 0.05 ** : P ≤ 0.01 Test of Chi Square

STUDY NO. : 0448
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 REPORT TYPE : A1
 SEX : MALE

HISTOPATHOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)
 DEAD AND MORIBUND ANIMALS (0-105W)

PAGE : 5

Organ	Findings	Group Name No. of Animals on Study Grade	Control 12				2000 ppm 9				6325 ppm 10				20000 ppm 11			
			1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Circulatory system}																		
heart	endocarditis		<12>				< 9>				<10>				<11>			
			0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
			(0)	(0)	(0)	(0)	(0)	(11)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	subendocardial fibrosis		<12>				< 9>				<10>				<11>			
			0	1	0	0	0	1	0	0	1	0	0	0	0	1	0	0
			(0)	(8)	(0)	(0)	(0)	(11)	(0)	(0)	(10)	(0)	(0)	(0)	(0)	(9)	(0)	(0)
{Digestive system}																		
esophagus	dilatation		<12>				< 9>				<10>				<11>			
			0	0	0	0	0	0	0	0	0	1	0	0	0	2	0	0
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(10)	(0)	(0)	(0)	(18)	(0)	(0)
stomach	mineralization		<12>				< 9>				<10>				<11>			
			1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			(8)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	erosion:forestomach		<12>				< 9>				<10>				<11>			
			0	0	0	0	0	1	0	0	0	0	1	0	1	0	0	0
			(0)	(0)	(0)	(0)	(0)	(11)	(0)	(0)	(0)	(0)	(10)	(0)	(9)	(0)	(0)	(0)
	ulcer:forestomach		<12>				< 9>				<10>				<11>			
			0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0
			(0)	(0)	(0)	(0)	(11)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(9)	(0)	(0)	(0)

Grade 1 : Slight 2 : Moderate 3 : Marked 4 : Severe
 < a > a : Number of animals examined at the site
 b : Number of animals with lesion
 (c) c : b / a * 100
 Significant difference : * : P ≤ 0.05 ** : P ≤ 0.01 Test of Chi Square

STUDY NO. : 0448
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 REPORT TYPE : A1
 SEX : MALE

HISTOPATHOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)
 DEAD AND MORIBUND ANIMALS (0-105W)

PAGE : 6

Organ	Findings	Group Name	Control				2000 ppm				6325 ppm				20000 ppm			
		No. of Animals on Study	12				9				10				11			
		Grade	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
(Digestive system)																		
stomach	hyperplasia:forestomach		<12>				< 9>				<10>				<11>			
		0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0
		(0)	(0)	(0)	(0)	(11)	(0)	(0)	(0)	(0)	(0)	(10)	(0)	(0)	(0)	(0)	(0)	(0)
	erosion:glandular stomach	1	0	0	0	1	0	0	0	1	0	0	0	1	0	0	0	0
		(8)	(0)	(0)	(0)	(11)	(0)	(0)	(0)	(10)	(0)	(0)	(0)	(9)	(0)	(0)	(0)	(0)
liver	herniation		<12>				< 9>				<10>				<11>			
		2	0	0	0	2	0	0	0	3	0	0	0	2	0	0	0	0
		(17)	(0)	(0)	(0)	(22)	(0)	(0)	(0)	(30)	(0)	(0)	(0)	(18)	(0)	(0)	(0)	(0)
	necrosis:central	0	2	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
		(0)	(17)	(0)	(0)	(0)	(0)	(0)	(0)	(10)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	granulation	8	0	0	0	3	0	0	0	5	1	0	0	4	1	0	0	0
		(67)	(0)	(0)	(0)	(33)	(0)	(0)	(0)	(50)	(10)	(0)	(0)	(36)	(9)	(0)	(0)	(0)
	acidophilic cell focus	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		(8)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	basophilic cell focus	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)	(20)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	spongiosis hepatitis	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
		(0)	(0)	(0)	(0)	(11)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
Grade	1 : Slight	2 : Moderate		3 : Marked		4 : Severe												
< a >	a : Number of animals examined at the site																	
b	b : Number of animals with lesion																	
(c)	c : b / a * 100																	
Significant difference ; * : P ≤ 0.05 ** : P ≤ 0.01 Test of Chi Square																		

STUDY NO. : 0448
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 REPORT TYPE : A1
 SEX : MALE

HISTOPATHOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)
 DEAD AND MORIBUND ANIMALS (0-105W)

PAGE : 7

Organ	Findings	Group Name	Control				2000 ppm				6325 ppm				20000 ppm			
		No. of Animals on Study	12				9				10				11			
		Grade	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Digestive system}																		
liver			<12>				< 9>				<10>				<11>			
	bile duct hyperplasia		11	0	0	0	5	1	0	0	7	0	0	0	5	0	0	0
			(92)	(0)	(0)	(0)	(56)	(11)	(0)	(0)	(70)	(0)	(0)	(0)	(45)	(0)	(0)	(0)
	focal fatty change		1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			(8)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
pancreas			<12>				< 9>				<10>				<11>			
	atrophy		3	0	0	0	1	1	0	0	1	1	1	0	1	0	0	0
			(25)	(0)	(0)	(0)	(11)	(11)	(0)	(0)	(10)	(10)	(10)	(0)	(9)	(0)	(0)	(0)
{Urinary system}																		
kidney			<12>				< 9>				<10>				<11>			
	thrombus		0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
			(0)	(0)	(0)	(0)	(0)	(0)	(11)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	cyst		1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			(8)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	basophilic change		0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(10)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
Grade	1 : Slight				2 : Moderate				3 : Marked				4 : Severe					
< a >	a : Number of animals examined at the site																	
b	b : Number of animals with lesion																	
(c)	c : b / a * 100																	
Significant difference : * : P ≤ 0.05 ** : P ≤ 0.01 Test of Chi Square																		
(HPT150)																		

STUDY NO. : 0448
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 REPORT TYPE : A1
 SEX : MALE

HISTOPATHOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)
 DEAD AND MORIBUND ANIMALS (0-105W)

PAGE : 8

		Group Name	Control				2000 ppm				6325 ppm				20000 ppm			
		No. of Animals on Study	12				9				10				11			
		Grade	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Organ	Findings		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Urinary system}																		
kidney			<12>				< 9>				<10>				<11>			
	inflammatory infiltration		0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			(0)	(8)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	chronic nephropathy		4	1	0	0	3	3	0	0	7	0	0	0	5	0	0	0
			(33)	(8)	(0)	(0)	(33)	(33)	(0)	(0)	(70)	(0)	(0)	(0)	(45)	(0)	(0)	(0)
	papillary necrosis		0	1	0	0	1	1	0	0	1	0	0	0	3	0	0	0
			(0)	(8)	(0)	(0)	(11)	(11)	(0)	(0)	(10)	(0)	(0)	(0)	(27)	(0)	(0)	(0)
	mineralization:cortico-medullary junction		0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			(0)	(8)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	mineralization:pelvis		1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			(8)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	mineralization:cortex		1	1	0	0	2	0	0	0	1	0	0	0	0	0	0	0
			(8)	(8)	(0)	(0)	(22)	(0)	(0)	(0)	(10)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
urin bladd			<12>				< 9>				< 9>				<11>			
	dilatation		0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(9)	(0)	(0)	(0)
	ulcer		0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			(0)	(8)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)

Grade 1 : Slight 2 : Moderate 3 : Marked 4 : Severe
 < a > a : Number of animals examined at the site
 b : Number of animals with lesion
 (c) c : b / a * 100
 Significant difference ; * : P ≤ 0.05 ** : P ≤ 0.01 Test of Chi Square

STUDY NO. : 0448
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 REPORT TYPE : A1
 SEX : MALE

HISTOPATHOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)
 DEAD AND MORIBUND ANIMALS (0-105W)

PAGE : 9

Organ	Findings	Group Name No. of Animals on Study Grade	Control 12				2000 ppm 9				6325 ppm 10				20000 ppm 11			
			1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Urinary system}																		
urin bladd			<12>				< 9>				< 9>				<11>			
	hemorrhage		0	0	0	0	2	1	0	0	1	0	0	0	0	0	0	0
			(0)	(0)	(0)	(0)	(22)	(11)	(0)	(0)	(11)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	inflammatory infiltration		1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			(8)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	transitional cell hyperplasia		1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
			(8)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(9)	(0)	(0)	(0)
{Endocrine system}																		
pituitary			<12>				< 9>				<10>				<11>			
	hemorrhage		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)	(20)	(0)	(0)	(0)	(0)	(0)
	cyst		1	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0
			(8)	(0)	(0)	(0)	(33)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	mineralization		0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			(0)	(17)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	hyperplasia		2	0	0	0	2	0	0	0	0	1	0	0	0	0	0	0
			(17)	(0)	(0)	(0)	(22)	(0)	(0)	(0)	(0)	(10)	(0)	(0)	(0)	(0)	(0)	(0)

Grade 1 : Slight 2 : Moderate 3 : Marked 4 : Severe
 < a > a : Number of animals examined at the site
 b : Number of animals with lesion
 (c) c : b / a * 100
 Significant difference ; * : P ≤ 0.05 ** : P ≤ 0.01 Test of Chi Square

STUDY NO. : 0448
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 REPORT TYPE : A1
 SEX : MALE

HISTOPATHOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)
 DEAD AND MORIBUND ANIMALS (0-105W)

PAGE : 10

Organ	Findings	Group Name No. of Animals on Study Grade	Control 12				2000 ppm 9				6325 ppm 10				20000 ppm 11			
			1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Endocrine system}																		
pituitary			<12>				< 9>				<10>				<11>			
	Rathke pouch		1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
			(8)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(9)	(0)	(0)	(0)
	focal hypertrophy		0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0
			(0)	(0)	(0)	(0)	(11)	(0)	(0)	(0)	(10)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
thyroid			<12>				< 9>				<10>				<11>			
	C-cell hyperplasia		0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(10)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
parathyroid			<12>				< 9>				<10>				<11>			
	cyst		1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			(8)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	hyperplasia		1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			(8)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
adrenal			<12>				< 9>				<10>				<11>			
	hemorrhage		0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(9)	(0)
	mineralization		0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			(0)	(17)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)

Grade 1 : Slight 2 : Moderate 3 : Marked 4 : Severe
 < a > a : Number of animals examined at the site
 b : Number of animals with lesion
 (c) c : b / a * 100
 Significant difference ; * : P ≤ 0.05 ** : P ≤ 0.01 Test of Chi Square

STUDY NO. : 0448
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 REPORT TYPE : A1
 SEX : MALE

HISTOPATHOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)
 DEAD AND MORIBUND ANIMALS (0-105W)

PAGE : 11

Organ	Findings	Group Name No. of Animals on Study Grade	Control 12				2000 ppm 9				6325 ppm 10				20000 ppm 11			
			1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Endocrine system}																		
adrenal	hyperplasia:cortical cell		<12>				< 9>				<10>				<11>			
			1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
			(8)	(0)	(0)	(0)	(11)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	hyperplasia:medulla		0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0
			(0)	(0)	(0)	(0)	(0)	(11)	(0)	(0)	(0)	(0)	(0)	(0)	(9)	(0)	(0)	(0)
	focal fatty change:cortex		2	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0
			(17)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(10)	(0)	(0)	(0)	(9)	(0)	(0)	(0)
{Reproductive system}																		
testis	mineralization		<12>				< 9>				<10>				<11>			
			2	0	0	0	1	0	0	0	2	0	0	0	0	0	0	0
			(17)	(0)	(0)	(0)	(11)	(0)	(0)	(0)	(20)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	interstitial cell hyperplasia		2	0	0	0	2	0	0	0	3	0	0	0	1	0	0	0
			(17)	(0)	(0)	(0)	(22)	(0)	(0)	(0)	(30)	(0)	(0)	(0)	(9)	(0)	(0)	(0)
semin ves	hemorrhage		<12>				< 9>				< 9>				<11>			
			0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
			(0)	(0)	(0)	(0)	(11)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)

Grade 1 : Slight 2 : Moderate 3 : Marked 4 : Severe
 < a > a : Number of animals examined at the site
 b : Number of animals with lesion
 (c) c : b / a * 100
 Significant difference : * : P ≤ 0.05 ** : P ≤ 0.01 Test of Chi Square

STUDY NO. : 0448
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 REPORT TYPE : A1
 SEX : MALE

HISTOPATHOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)
 DEAD AND MORIBUND ANIMALS (0-105W)

PAGE : 12

Organ	Findings	Group Name No. of Animals on Study Grade	Control 12				2000 ppm 9				6325 ppm 10				20000 ppm 11			
			1 (%)	2 (%)	3 (%)	4 (%)	1 (%)	2 (%)	3 (%)	4 (%)	1 (%)	2 (%)	3 (%)	4 (%)	1 (%)	2 (%)	3 (%)	4 (%)
{Reproductive system}																		
prostate	hemorrhage		<12>				< 9>				< 9>				<11>			
		0 (0)	0 (0)	0 (0)	0 (0)	1 (11)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	
	inflammation	1 (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 (0)	0 (0)	0 (0)	
		hyperplasia	1 (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 (0)	0 (0)	0 (0)
mammary gl	duct ectasia		<12>				< 9>				<10>				<11>			
		0 (0)	1 (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 (0)	0 (0)	
	galactoceles	1 (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 (0)	0 (0)	0 (0)	
{Nervous system}																		
brain	hemorrhage		<12>				< 9>				<10>				<11>			
		1 (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 (0)	0 (0)	0 (0)	
Grade 1 : Slight 2 : Moderate 3 : Marked 4 : Severe																		
< a > a : Number of animals examined at the site																		
b b : Number of animals with lesion																		
(c) c : b / a * 100																		
Significant difference ; * : P ≤ 0.05 ** : P ≤ 0.01 Test of Chi Square																		

STUDY NO. : 0448
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 REPORT TYPE : A1
 SEX : MALE

HISTOPATHOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)
 DEAD AND MORIBUND ANIMALS (0-105W)

PAGE : 13

		Group Name	Control				2000 ppm				6325 ppm				20000 ppm			
		No. of Animals on Study	12				9				10				11			
Organ	Findings	Grade	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
(Nervous system)																		
spinal cord			<12>				< 9>				<10>				<10>			
	hemorrhage		1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
			(8)	(0)	(0)	(0)	(0)	(11)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	gliosis		0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(10)	(0)	(0)	(0)
(Special sense organs/appendage)																		
eye			<12>				< 9>				<10>				<11>			
	hemorrhage		0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
			(0)	(0)	(0)	(0)	(11)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	cataract		1	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0
			(8)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(10)	(0)	(0)	(0)	(9)	(0)	(0)
	retinal atrophy		10	0	1	0	3	1	0	0 *	6	2	1	0	9	0	1	0
			(83)	(0)	(8)	(0)	(33)	(11)	(0)	(0)	(60)	(20)	(10)	(0)	(82)	(0)	(9)	(0)
	keratitis		0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
			(0)	(0)	(0)	(0)	(11)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
Harder gl			<12>				< 9>				<10>				<11>			
	degeneration		0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
			(0)	(0)	(0)	(0)	(11)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)

Grade 1 : Slight 2 : Moderate 3 : Marked 4 : Severe
 < a > a : Number of animals examined at the site
 b b : Number of animals with lesion
 (c) c : b / a * 100
 Significant difference ; * : P ≤ 0.05 ** : P ≤ 0.01 Test of Chi Square

STUDY NO. : 0448
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 REPORT TYPE : A1
 SEX : MALE

HISTOPATHOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)
 DEAD AND MORIBUND ANIMALS (0-105W)

PAGE : 14

Organ_____	Findings_____	Group Name No. of Animals on Study Grade	Control 12				2000 ppm 9				6325 ppm 10				20000 ppm 11			
			1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Special sense organs/appendage}																		
Harder gl	lymphocytic infiltration		<12>				< 9>				<10>				<11>			
		1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	(8)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	
nasolacr d	inflammation		<12>				< 9>				<10>				<11>			
		0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	
	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(10)	(0)	(0)	(0)	(0)	(0)	(0)	
{Musculoskeletal system}																		
bone	hyperplasia		<12>				< 8>				<10>				<11>			
		0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	
	(0)	(0)	(0)	(0)	(13)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	
Grade	1 : Slight	2 : Moderate	3 : Marked	4 : Severe														
< a >	a : Number of animals examined at the site																	
b	b : Number of animals with lesion																	
(c)	c : b / a * 100																	
Significant difference ; * : P ≤ 0.05 ** : P ≤ 0.01 Test of Chi Square																		

(HPT150)

BAIS4

APPENDIX M 3

HISTOPATHOLOGICAL FINDINGS :
NON-NEOPLASTIC LESIONS : MALE
SACRIFICED ANIMALS

STUDY NO. : 0448
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 REPORT TYPE : A1
 SEX : MALE

HISTOPATHOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)
 SACRIFICED ANIMALS (105W)

PAGE : 1

		Group Name	Control				2000 ppm				6325 ppm				20000 ppm			
		No. of Animals on Study	38				41				40				39			
Organ	Findings	Grade	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Integumentary system/appandage}																		
skin/app			<38>				<41>				<40>				<39>			
	basal cell activation		0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(3)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	scar:dermis		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)	(5)	(0)	(0)
	scab		0	0	0	0	1	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)
	epidermal cyst		0	0	0	0	1	0	0	0	0	2	0	0	0	0	0	0
			(0)	(0)	(0)	(0)	(2)	(0)	(0)	(0)	(0)	(5)	(0)	(0)	(0)	(0)	(0)	(0)
subcutis			<38>				<41>				<40>				<39>			
	cyst		0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(3)	(0)	(0)	(0)
{Respiratory system}																		
nasal cavit			<38>				<41>				<40>				<39>			
	thrombus		0	0	0	0	0	1	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)
Grade	1 : Slight 2 : Moderate 3 : Marked 4 : Severe																	
< a >	a : Number of animals examined at the site																	
b	b : Number of animals with lesion																	
(c)	c : b / a * 100																	
Significant difference ; * : P ≤ 0.05 ** : P ≤ 0.01 Test of Chi Square																		
(HPT150)																		

BAIS4

STUDY NO. : 0448
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 REPORT TYPE : A1
 SEX : MALE

HISTOPATHOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)
 SACRIFICED ANIMALS (105W)

PAGE : 2

		Group Name	Control				2000 ppm				6325 ppm				20000 ppm				
		No. of Animals on Study	38				41				40				39				
Organ	Findings	Grade	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	
{Respiratory system}																			
nasal cavit	mineralization		<38>				<41>				<40>				<39>				
		20	0	0	0	15	0	0	0	20	0	0	0	23	0	0	0		
	(53)	(0)	(0)	(0)	(37)	(0)	(0)	(0)	(50)	(0)	(0)	(0)	(59)	(0)	(0)	(0)			
	eosinophilic change:olfactory epithelium	21	12	5	0	22	15	4	0	19	16	5	0	16	16	7	0		
		(55)	(32)	(13)	(0)	(54)	(37)	(10)	(0)	(48)	(40)	(13)	(0)	(41)	(41)	(18)	(0)		
	eosinophilic change:respiratory epithelium	10	0	0	0	13	1	0	0	6	0	0	0	12	2	0	0		
		(26)	(0)	(0)	(0)	(32)	(2)	(0)	(0)	(15)	(0)	(0)	(0)	(31)	(5)	(0)	(0)		
	inflammation:foreign body	7	1	0	0	16	0	0	0	6	0	0	0	4	0	0	0		
(18)		(3)	(0)	(0)	(39)	(0)	(0)	(0)	(15)	(0)	(0)	(0)	(10)	(0)	(0)	(0)			
	inflammation:respiratory epithelium	4	0	0	0	1	0	0	0	7	0	0	0	4	0	0	0		
		(11)	(0)	(0)	(0)	(2)	(0)	(0)	(0)	(18)	(0)	(0)	(0)	(10)	(0)	(0)	(0)		
	respiratory metaplasia:gland	18	0	0	0	19	0	0	0	20	0	0	0	20	0	0	0		
		(47)	(0)	(0)	(0)	(46)	(0)	(0)	(0)	(50)	(0)	(0)	(0)	(51)	(0)	(0)	(0)		
	necrosis:respiratory epithelium	0	0	0	0	0	1	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)		
	larynx	inflammation		<38>				<41>				<40>				<38>			
			3	0	0	0	6	0	0	0	9	0	0	0	9	0	0	0	
			(8)	(0)	(0)	(0)	(15)	(0)	(0)	(0)	(23)	(0)	(0)	(0)	(24)	(0)	(0)	(0)	

Grade 1 : Slight 2 : Moderate 3 : Marked 4 : Severe
 < a > a : Number of animals examined at the site
 b b : Number of animals with lesion
 (c) c : b / a * 100
 Significant difference ; * : P ≤ 0.05 ** : P ≤ 0.01 Test of Chi Square

STUDY NO. : 0448
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 REPORT TYPE : A1
 SEX : MALE

HISTOPATHOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)
 SACRIFICED ANIMALS (105W)

PAGE : 3

Organ	Findings	Group Name No. of Animals on Study Grade				Control 38				2000 ppm 41				6325 ppm 40				20000 ppm 39			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Respiratory system}																					
lung		<38>				<41>				<40>				<39>							
	congestion	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
		(0)	(0)	(0)	(0)	(2)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(3)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	hemorrhage	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
		(0)	(0)	(0)	(0)	(2)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(3)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	inflammation	0	0	0	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)	(3)	(0)	(0)	(0)	(3)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	foreign body granuloma	0	1	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		(0)	(3)	(0)	(0)	(5)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	accumulation of foamy cells	1	0	0	0	1	1	0	0	0	0	0	0	3	0	0	0	0	0	0	0
		(3)	(0)	(0)	(0)	(2)	(2)	(0)	(0)	(0)	(0)	(0)	(0)	(8)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	bronchiolar-alveolar cell hyperplasia	3	0	0	0	4	0	0	0	2	1	0	0	5	0	0	0	0	0	0	0
		(8)	(0)	(0)	(0)	(10)	(0)	(0)	(0)	(5)	(3)	(0)	(0)	(13)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
{Hematopoietic system}																					
bone marrow		<38>				<41>				<40>				<39>							
	hemorrhage	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
		(3)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(3)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)

Grade 1 : Slight 2 : Moderate 3 : Marked 4 : Severe
 < a > a : Number of animals examined at the site
 b : Number of animals with lesion
 (c) c : b / a * 100
 Significant difference ; * : P ≤ 0.05 ** : P ≤ 0.01 Test of Chi Square

STUDY NO. : 0448
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 REPORT TYPE : A1
 SEX : MALE

HISTOPATHOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)
 SACRIFICED ANIMALS (105W)

PAGE : 4

Organ	Findings	Group Name No. of Animals on Study Grade	Control 38				2000 ppm 41				6325 ppm 40				20000 ppm 39			
			1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Hematopoietic system}																		
bone marrow			<38>				<41>				<40>				<39>			
	granulation		4 (11)	1 (3)	0 (0)	0 (0)	4 (10)	0 (0)	0 (0)	0 (0)	7 (18)	0 (0)	0 (0)	0 (0)	4 (10)	1 (3)	0 (0)	0 (0)
	increased hematopoiesis		0 (0)	0 (0)	0 (0)	0 (0)	2 (5)	0 (0)	0 (0)	0 (0)	2 (5)	0 (0)	0 (0)	0 (0)	1 (3)	0 (0)	0 (0)	0 (0)
lymph node			<38>				<41>				<40>				<39>			
	congestion		0 (0)	0 (0)	0 (0)	0 (0)	1 (2)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
	lymphadenitis		0 (0)	0 (0)	0 (0)	0 (0)	1 (2)	0 (0)	0 (0)	0 (0)	1 (3)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
spleen			<38>				<41>				<40>				<39>			
	necrosis:focal		0 (0)	1 (3)	0 (0)	0 (0)	0 (0)	1 (2)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
	deposit of hemosiderin		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 (3)	0 (0)	0 (0)	0 (0)
	granulation		0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1 (3)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)

Grade 1 : Slight 2 : Moderate 3 : Marked 4 : Severe
 < a > a : Number of animals examined at the site
 b : Number of animals with lesion
 (c) c : b / a * 100
 Significant difference : * : P ≤ 0.05 ** : P ≤ 0.01 Test of Chi Square

STUDY NO. : 0448
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 REPORT TYPE : A1
 SEX : MALE

HISTOPATHOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)
 SACRIFICED ANIMALS (105W)

PAGE : 5

		Group Name	Control				2000 ppm				6325 ppm				20000 ppm			
		No. of Animals on Study	38				41				40				39			
Organ	Findings	Grade	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Hematopoietic system}																		
spleen			<38>				<41>				<40>				<39>			
	fibrosis		2	2	0	0	0	1	1	0	2	0	1	0	0	0	0	0
			(5)	(5)	(0)	(0)	(0)	(2)	(2)	(0)	(5)	(0)	(3)	(0)	(0)	(0)	(0)	(0)
	extramedullary hematopoiesis		4	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0
			(11)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(3)	(0)	(0)	(3)	(0)	(0)	(0)
{Circulatory system}																		
heart			<38>				<41>				<40>				<39>			
	inflammatory cell nest		0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(3)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	myocardial fibrosis		3	32	2	0	8	32	1	0	4	36	0	0	12	27	0	0 *
			(8)	(84)	(5)	(0)	(20)	(78)	(2)	(0)	(10)	(90)	(0)	(0)	(31)	(69)	(0)	(0)
	subendocardial fibrosis		0	0	0	0	1	0	0	0	1	0	0	0	1	1	0	0
			(0)	(0)	(0)	(0)	(2)	(0)	(0)	(0)	(3)	(0)	(0)	(0)	(3)	(3)	(0)	(0)
{Digestive system}																		
tooth			<38>				<41>				<40>				<39>			
	inflammation		0	1	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)

Grade 1 : Slight 2 : Moderate 3 : Marked 4 : Severe
 < a > a : Number of animals examined at the site
 b : Number of animals with lesion
 (c) c : b / a * 100
 Significant difference : * : P ≤ 0.05 ** : P ≤ 0.01 Test of Chi Square

STUDY NO. : 0448
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 REPORT TYPE : A1
 SEX : MALE

HISTOPATHOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)
 SACRIFICED ANIMALS (105W)

PAGE : 6

Organ	Findings	Control No. of Animals on Study Grade				2000 ppm 41				6325 ppm 40				20000 ppm 39			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Digestive system}																	
tooth		<38>				<41>				<40>				<39>			
	dysplasia	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
		(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(3)	(0)	(0)
tongue		<38>				<41>				<40>				<39>			
	squamous cell hyperplasia	1	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)
	arteritis	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
		(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(3)	(0)	(0)	(0)
salivary gl		<38>				<41>				<40>				<39>			
	abscess	0	0	0	0	0	0	1	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)
stomach		<38>				<41>				<40>				<39>			
	basal cell hyperplasia	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0
		(0)	(0)	(0)	(0)	(2)	(2)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	ulcer:forestomach	0	0	0	0	0	1	0	0	0	1	0	0	0	1	0	0
		(0)	(0)	(0)	(0)	(0)	(2)	(0)	(0)	(0)	(3)	(0)	(0)	(0)	(3)	(0)	(0)
	erosion:glandular stomach	0	0	0	0	2	0	0	0	3	0	0	0	1	0	0	0
		(0)	(0)	(0)	(0)	(5)	(0)	(0)	(0)	(8)	(0)	(0)	(0)	(3)	(0)	(0)	(0)

Grade 1 : Slight 2 : Moderate 3 : Marked 4 : Severe
 < a > a : Number of animals examined at the site
 b : Number of animals with lesion
 (c) c : b / a * 100
 Significant difference ; * : P ≤ 0.05 ** : P ≤ 0.01 Test of Chi Square

STUDY NO. : 0448
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 REPORT TYPE : A1
 SEX : MALE

HISTOPATHOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)
 SACRIFICED ANIMALS (105W)

PAGE : 7

Organ	Findings	Control No. of Animals on Study Grade				2000 ppm 41				6325 ppm 40				20000 ppm 39			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Digestive system}																	
stomach		<38>				<41>				<40>				<39>			
	hyperplasia:glandular stomach	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
		(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(3)	(0)	(0)	(0)
small intes		<38>				<41>				<40>				<39>			
	erosion	0	1	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)
liver		<38>				<41>				<40>				<39>			
	herniation	7	0	0	0	9	0	0	0	3	0	0	0	2	0	0	0
		(18)	(0)	(0)	(0)	(22)	(0)	(0)	(0)	(8)	(0)	(0)	(0)	(5)	(0)	(0)	(0)
	angiectasis	2	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
		(5)	(0)	(0)	(0)	(2)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	lymphocytic infiltration	0	0	0	0	0	0	0	0	2	0	0	0	1	0	0	0
		(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(5)	(0)	(0)	(0)	(3)	(0)	(0)	(0)
	granulation	37	0	0	0	41	0	0	0	35	5	0	0 *	33	2	0	0
		(97)	(0)	(0)	(0)	(100)	(0)	(0)	(0)	(88)	(13)	(0)	(0)	(85)	(5)	(0)	(0)
	clear cell focus	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0
		(0)	(0)	(0)	(0)	(0)	(2)	(0)	(0)	(0)	(0)	(0)	(0)	(3)	(0)	(0)	(0)
Grade 1 : Slight 2 : Moderate 3 : Marked 4 : Severe																	
< a > a : Number of animals examined at the site																	
b b : Number of animals with lesion																	
(c) c : b / a * 100																	
Significant difference ; * : P ≤ 0.05 ** : P ≤ 0.01 Test of Chi Square																	

STUDY NO. : 0448
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 REPORT TYPE : A1
 SEX : MALE

HISTOPATHOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)
 SACRIFICED ANIMALS (105W)

PAGE : 8

Organ	Findings	Group Name No. of Animals on Study Grade				Control 38				2000 ppm 41				6325 ppm 40				20000 ppm 39			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Digestive system}																					
liver		<38>				<41>				<40>				<39>							
	acidophilic cell focus	10	1	1	0	8	2	0	0	9	0	2	0	2	0	0	0	0	0	0	0 *
		(26)	(3)	(3)	(0)	(20)	(5)	(0)	(0)	(23)	(0)	(5)	(0)	(5)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	basophilic cell focus	9	0	0	0	4	0	0	0	7	0	0	0	5	0	0	0	0	0	0	0
		(24)	(0)	(0)	(0)	(10)	(0)	(0)	(0)	(18)	(0)	(0)	(0)	(13)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
pancreas	spongiosis hepatitis	3	0	0	0	4	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
		(8)	(0)	(0)	(0)	(10)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(3)	(0)	(0)	(0)	(0)	(0)	(0)
	bile duct hyperplasia	17	21	0	0	21	20	0	0	21	18	0	0	20	19	0	0	0	0	0	0
		(45)	(55)	(0)	(0)	(51)	(49)	(0)	(0)	(53)	(45)	(0)	(0)	(51)	(49)	(0)	(0)	(0)	(0)	(0)	(0)
	focal fatty change	1	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)
kidney		<38>				<41>				<40>				<39>							
	atrophy	9	1	0	0	9	2	1	0	10	2	0	0	7	1	1	0	0	0	0	0
		(24)	(3)	(0)	(0)	(22)	(5)	(2)	(0)	(25)	(5)	(0)	(0)	(18)	(3)	(3)	(0)	(0)	(0)	(0)	(0)
cyst	capsule hyperplasia	1	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)
		<38>				<41>				<40>				<39>							
cyst		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)	(5)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
		<38>				<41>				<40>				<39>							

Grade 1 : Slight 2 : Moderate 3 : Marked 4 : Severe
 < a > a : Number of animals examined at the site
 b : Number of animals with lesion
 (c) c : b / a * 100
 Significant difference ; * : P ≤ 0.05 ** : P ≤ 0.01 Test of Chi Square

STUDY NO. : 0448
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 REPORT TYPE : A1
 SEX : MALE

HISTOPATHOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)
 SACRIFICED ANIMALS (105W)

PAGE : 9

Organ	Findings	Group Name No. of Animals on Study Grade	Control 38				2000 ppm 41				6325 ppm 40				20000 ppm 39			
			1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Urinary system}																		
kidney			<38>				<41>				<40>				<39>			
	scar		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)	(8)	(0)	(0)	(0)
	chronic nephropathy		23	10	3	0	30	9	1	0	40	0	0	0 **	33	3	0	0 *
			(61)	(26)	(8)	(0)	(73)	(22)	(2)	(0)	(100)	(0)	(0)	(0)	(85)	(8)	(0)	(0)
	papillary necrosis		0	0	0	0	0	1	0	0	0	0	0	0	7	1	0	0 *
			(0)	(0)	(0)	(0)	(0)	(2)	(0)	(0)	(0)	(0)	(0)	(0)	(18)	(3)	(0)	(0)
	mineralization:papilla		0	0	0	0	3	0	0	0	3	0	0	0	2	0	0	0
		(0)	(0)	(0)	(0)	(7)	(0)	(0)	(0)	(8)	(0)	(0)	(0)	(5)	(0)	(0)	(0)	
urin bladd	urothelial hyperplasia:pelvis		0	0	0	0	1	1	0	0	0	1	0	0	1	0	0	0
			(0)	(0)	(0)	(0)	(2)	(2)	(0)	(0)	(0)	(3)	(0)	(0)	(3)	(0)	(0)	(0)
	atypical tubule hyperplasia		0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0
			(0)	(3)	(0)	(0)	(0)	(0)	(0)	(0)	(3)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	eosinophilic droplet:proximal tubule		0	0	0	0	0	1	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)
	inflammatory infiltration		0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(3)	(0)	(0)	(0)
Grade			1 : Slight	2 : Moderate	3 : Marked	4 : Severe												
< a >			a : Number of animals examined at the site															
b			b : Number of animals with lesion															
(c)			c : b / a * 100															
Significant difference ;			* : P ≤ 0.05 ** : P ≤ 0.01 Test of Chi Square															

STUDY NO. : 0448
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 REPORT TYPE : A1
 SEX : MALE

HISTOPATHOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)
 SACRIFICED ANIMALS (105W)

PAGE : 10

Organ	Findings	Control No. of Animals on Study Grade				2000 ppm 41				6325 ppm 40				20000 ppm 39			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Urinary system}																	
urin bladd		<38>				<41>				<40>				<39>			
	transitional cell hyperplasia	0	0	0	0	1	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)
{Endocrine system}																	
pituitary		<38>				<41>				<40>				<39>			
	angiectasis	0	0	0	0	1	0	0	0	1	1	0	0	2	2	0	0
		(0)	(0)	(0)	(0)	(2)	(0)	(0)	(0)	(3)	(3)	(0)	(0)	(5)	(5)	(0)	(0)
	hemorrhage	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
		(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(3)	(0)	(0)	(0)	(0)	(0)
	cyst	3	1	0	0	7	1	0	0	4	2	0	0	2	0	0	0
		(8)	(3)	(0)	(0)	(17)	(2)	(0)	(0)	(10)	(5)	(0)	(0)	(5)	(0)	(0)	(0)
	hyperplasia	9	3	0	0	8	4	0	0	7	5	1	0	9	3	0	0
		(24)	(8)	(0)	(0)	(20)	(10)	(0)	(0)	(18)	(13)	(3)	(0)	(23)	(8)	(0)	(0)
	Rathke pouch	3	0	0	0	2	1	0	0	2	0	0	0	0	1	0	0
		(8)	(0)	(0)	(0)	(5)	(2)	(0)	(0)	(5)	(0)	(0)	(0)	(0)	(3)	(0)	(0)
	focal hypertrophy	5	0	0	0	4	0	0	0	6	0	0	0	6	0	0	0
		(13)	(0)	(0)	(0)	(10)	(0)	(0)	(0)	(15)	(0)	(0)	(0)	(15)	(0)	(0)	(0)

Grade 1 : Slight 2 : Moderate 3 : Marked 4 : Severe
 < a > a : Number of animals examined at the site
 b : Number of animals with lesion
 (c) c : b / a * 100
 Significant difference ; * : $P \leq 0.05$ ** : $P \leq 0.01$ Test of Chi Square

STUDY NO. : 0448
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 REPORT TYPE : A1
 SEX : MALE

HISTOPATHOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)
 SACRIFICED ANIMALS (105W)

PAGE : 11

Organ	Findings	Group Name No. of Animals on Study Grade	Control 38				2000 ppm 41				6325 ppm 40				20000 ppm 39			
			1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Endocrine system}																		
thyroid			<38>				<41>				<40>				<39>			
	congestion		0	0	0	0	1	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)
	C-cell hyperplasia		16	0	0	0	16	0	0	0	8	0	0	0	5	0	0	0 **
			(42)	(0)	(0)	(0)	(39)	(0)	(0)	(0)	(20)	(0)	(0)	(0)	(13)	(0)	(0)	(0)
	focal follicular cell hyperplasia		1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
			(3)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(3)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
adrenal			<38>				<41>				<40>				<39>			
	osseous metaplasia		0	0	0	0	0	1	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)
	hyperplasia:cortical cell		2	0	0	0	1	0	0	0	0	0	0	0	2	0	0	0
			(5)	(0)	(0)	(0)	(2)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(5)	(0)	(0)	(0)
	hyperplasia:medulla		2	0	0	0	1	0	0	0	0	1	0	0	2	1	0	0
			(5)	(0)	(0)	(0)	(2)	(0)	(0)	(0)	(0)	(3)	(0)	(0)	(5)	(3)	(0)	(0)
	focal fatty change:cortex		5	1	0	0	5	0	0	0	8	0	0	0	8	1	0	0
			(13)	(3)	(0)	(0)	(12)	(0)	(0)	(0)	(20)	(0)	(0)	(0)	(21)	(3)	(0)	(0)
{Reproductive system}																		
testis			<38>				<41>				<40>				<39>			
	mineralization		2	0	0	0	4	0	0	0	2	0	0	0	3	1	0	0
			(5)	(0)	(0)	(0)	(10)	(0)	(0)	(0)	(5)	(0)	(0)	(0)	(8)	(3)	(0)	(0)

Grade 1 : Slight 2 : Moderate 3 : Marked 4 : Severe
 < a > a : Number of animals examined at the site
 b b : Number of animals with lesion
 (c) c : b / a * 100
 Significant difference ; * : P ≤ 0.05 ** : P ≤ 0.01 Test of Chi Square

STUDY NO. : 0448
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 REPORT TYPE : A1
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HISTOPATHOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)
 SACRIFICED ANIMALS (105W)

PAGE : 12

Organ	Findings	Control No. of Animals on Study Grade				2000 ppm 41				6325 ppm 40				20000 ppm 39			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Reproductive system}																	
testis	interstitial cell hyperplasia	<38>				<41>				<40>				<39>			
		12	0	0	0	7	0	0	0	9	0	0	0	12	0	0	0
		(32)	(0)	(0)	(0)	(17)	(0)	(0)	(0)	(23)	(0)	(0)	(0)	(31)	(0)	(0)	(0)
prostate	degeneration	<38>				<41>				<40>				<39>			
		1	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)
	inflammation	3	0	0	0	4	0	0	0	0	0	0	0	1	0	0	0
		(8)	(0)	(0)	(0)	(10)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(3)	(0)	(0)	(0)
	granulation	1	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0
		(3)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(5)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	hyperplasia	9	0	0	0	9	2	0	0	8	1	0	0	5	0	0	0
		(24)	(0)	(0)	(0)	(22)	(5)	(0)	(0)	(20)	(3)	(0)	(0)	(13)	(0)	(0)	(0)
mammary gl	galactoceles	<38>				<41>				<40>				<39>			
		2	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
		(5)	(0)	(0)	(0)	(2)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
{Special sense organs/appendage}																	
eye	cataract	<38>				<41>				<40>				<39>			
		0	2	0	0	2	5	0	0	1	5	0	0	0	3	0	0
		(0)	(5)	(0)	(0)	(5)	(12)	(0)	(0)	(3)	(13)	(0)	(0)	(0)	(8)	(0)	(0)

Grade 1 : Slight 2 : Moderate 3 : Marked 4 : Severe
 < a > a : Number of animals examined at the site
 b : Number of animals with lesion
 (c) c : b / a * 100
 Significant difference ; * : P ≤ 0.05 ** : P ≤ 0.01 Test of Chi Square

STUDY NO. : 0448
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HISTOPATHOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)
 SACRIFICED ANIMALS (105W)

PAGE : 13

Organ	Findings	Group Name No. of Animals on Study Grade	Control 38				2000 ppm 41				6325 ppm 40				20000 ppm 39			
			1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Special sense organs/appendage}																		
eye			<38>				<41>				<40>				<39>			
	retinal atrophy		14	21	3	0	20	12	9	0 *	22	7	7	0 **	25	8	5	0 *
			(37)	(55)	(8)	(0)	(49)	(29)	(22)	(0)	(55)	(18)	(18)	(0)	(64)	(21)	(13)	(0)
	keratitis		0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(3)	(0)	(0)	(0)
Harder gl			<38>				<41>				<40>				<39>			
	degeneration		2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			(5)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	lymphocytic infiltration		4	0	0	0	3	0	0	0	3	0	0	0	3	0	0	0
			(11)	(0)	(0)	(0)	(7)	(0)	(0)	(0)	(8)	(0)	(0)	(0)	(8)	(0)	(0)	(0)
{Musculoskeletal system}																		
bone			<38>				<41>				<40>				<39>			
	osteosclerosis		1	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)
{Body cavities}																		
adipose			<38>				<41>				<40>				<39>			
	granulation		1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
			(3)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(3)	(0)	(0)	(0)

Grade 1 : Slight 2 : Moderate 3 : Marked 4 : Severe
 < a > a : Number of animals examined at the site
 b : Number of animals with lesion
 (c) c : b / a * 100
 Significant difference ; * : P ≤ 0.05 ** : P ≤ 0.01 Test of Chi Square

APPENDIX M 4

HISTOPATHOLOGICAL FINDINGS :
NON-NEOPLASTIC LESIONS : FEMALE
ALL ANIMALS

STUDY NO. : 0448
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 REPORT TYPE : A1
 SEX : FEMALE

HISTOPATHOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)
 ALL ANIMALS (0-105W)

PAGE : 19

Organ	Findings	Group Name	Control				2000 ppm				6325 ppm				20000 ppm			
		No. of Animals on Study	50				50				50				50			
		Grade	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
(Integumentary system/appandage)																		
skin/app			<50>				<50>				<50>				<50>			
	inflammation		0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(2)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	epidermal cyst		0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(2)	(0)	(0)
subcutis			<50>				<50>				<50>				<50>			
	inflammation		0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(2)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
(Respiratory system)																		
nasal cavit			<50>				<50>				<50>				<50>			
	thrombus		1	0	2	0	0	1	1	0	0	1	1	0	1	1	2	0
			(2)	(0)	(4)	(0)	(0)	(2)	(2)	(0)	(0)	(2)	(2)	(0)	(2)	(2)	(4)	(0)
	mineralization		17	0	0	0	17	0	0	0	17	0	0	0	7	0	0	0 *
			(34)	(0)	(0)	(0)	(34)	(0)	(0)	(0)	(34)	(0)	(0)	(0)	(14)	(0)	(0)	(0)
	eosinophilic change:olfactory epithelium		7	27	15	0	4	27	18	0	2	27	20	0	5	24	18	0
			(14)	(54)	(30)	(0)	(8)	(54)	(36)	(0)	(4)	(54)	(40)	(0)	(10)	(48)	(36)	(0)

Grade 1 : Slight 2 : Moderate 3 : Marked 4 : Severe
 < a > a : Number of animals examined at the site
 b : Number of animals with lesion
 (c) c : b / a * 100
 Significant difference : * : P ≤ 0.05 ** : P ≤ 0.01 Test of Chi Square

STUDY NO. : 0448
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 REPORT TYPE : A1
 SEX : FEMALE

HISTOPATHOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)
 ALL ANIMALS (0-105W)

PAGE : 20

Organ	Findings	Group Name No. of Animals on Study Grade	Control 50				2000 ppm 50				6325 ppm 50				20000 ppm 50			
			1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Respiratory system}																		
nasal cavit			<50>				<50>				<50>				<50>			
	eosinophilic change:respiratory epithelium		24	0	0	0	23	1	0	0	24	1	0	0	15	0	0	0
			(48)	(0)	(0)	(0)	(46)	(2)	(0)	(0)	(48)	(2)	(0)	(0)	(30)	(0)	(0)	(0)
	inflammation:foreign body		2	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0
			(4)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(2)	(0)	(0)	(0)	(2)	(0)	(0)	(0)
	inflammation:respiratory epithelium		5	1	0	0	6	1	0	0	2	0	0	0	3	1	0	0
			(10)	(2)	(0)	(0)	(12)	(2)	(0)	(0)	(4)	(0)	(0)	(0)	(6)	(2)	(0)	(0)
	respiratory metaplasia:gland		23	0	0	0	25	0	0	0	26	0	0	0	17	0	0	0
			(46)	(0)	(0)	(0)	(50)	(0)	(0)	(0)	(52)	(0)	(0)	(0)	(34)	(0)	(0)	(0)
	necrosis:respiratory epithelium		0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(2)	(0)	(0)	(0)	(0)	(0)	(0)
larynx			<50>				<50>				<50>				<50>			
	inflammation		3	2	0	0	5	0	0	0	5	2	0	0	6	0	0	0
			(6)	(4)	(0)	(0)	(10)	(0)	(0)	(0)	(10)	(4)	(0)	(0)	(12)	(0)	(0)	(0)
lung			<50>				<50>				<50>				<50>			
	congestion		4	3	0	0	1	0	0	0	0	4	0	0	6	5	0	0
			(8)	(6)	(0)	(0)	(2)	(0)	(0)	(0)	(0)	(8)	(0)	(0)	(12)	(10)	(0)	(0)

Grade 1 : Slight 2 : Moderate 3 : Marked 4 : Severe
 < a > a : Number of animals examined at the site
 b : Number of animals with lesion
 (c) c : b / a * 100
 Significant difference ; * : P ≤ 0.05 ** : P ≤ 0.01 Test of Chi Square

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HISTOPATHOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)
 ALL ANIMALS (0-105W)

PAGE : 21

Organ	Findings	Control				2000 ppm				6325 ppm				20000 ppm			
		No. of Animals on Study				50				50				50			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Respiratory system}																	
lung		<50>				<50>				<50>				<50>			
	hemorrhage	1 (2)	1 (2)	0 (0)	0 (0)	0 (0)	1 (2)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
	edema	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1 (2)	1 (2)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1 (2)	0 (0)	0 (0)
	cyst	0 (0)	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 (2)	0 (0)	0 (0)
	foreign body granuloma	0 (0)	1 (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)
	accumulation of foamy cells	8 (16)	0 (0)	0 (0)	0 (0)	5 (10)	0 (0)	0 (0)	0 (0)	7 (14)	1 (2)	0 (0)	0 (0)	3 (6)	0 (0)	0 (0)	0 (0)
	interstitial pneumonia	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1 (2)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
	bronchiolar-alveolar cell hyperplasia	1 (2)	0 (0)	0 (0)	0 (0)	2 (4)	0 (0)	0 (0)	0 (0)	1 (2)	0 (0)	0 (0)	0 (0)	2 (4)	0 (0)	0 (0)	0 (0)
{Hematopoietic system}																	
bone marrow		<50>				<50>				<50>				<50>			
	granulation	11 (22)	0 (0)	0 (0)	0 (0)	9 (18)	2 (4)	0 (0)	0 (0)	11 (22)	1 (2)	0 (0)	0 (0)	10 (20)	2 (4)	0 (0)	0 (0)

Grade 1 : Slight 2 : Moderate 3 : Marked 4 : Severe
 < a > a : Number of animals examined at the site
 b : Number of animals with lesion
 (c) c : b / a * 100
 Significant difference ; * : P ≤ 0.05 ** : P ≤ 0.01 Test of Chi Square

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HISTOPATHOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)
 ALL ANIMALS (0-105W)

PAGE : 22

Organ	Findings	Group Name No. of Animals on Study Grade	Control				2000 ppm				6325 ppm				20000 ppm			
			50				50				50				50			
			1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	
(Hematopoietic system)																		
bone marrow			<50>				<50>				<50>				<50>			
	increased hematopoiesis		6	0	0	0	5	0	0	0	7	0	0	0	7	0	0	0
			(12)	(0)	(0)	(0)	(10)	(0)	(0)	(0)	(14)	(0)	(0)	(0)	(14)	(0)	(0)	(0)
	myelofibrosis		0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0
			(0)	(0)	(0)	(0)	(2)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(2)	(0)	(0)
	erythropoiesis: increased		1	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)
thymus			<50>				<50>				<50>				<50>			
	cyst		1	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)
spleen			<50>				<50>				<50>				<50>			
	atrophy		0	0	0	0	0	1	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)
	deposit of hemosiderin		8	0	0	0	7	0	1	0	11	0	0	0	8	0	0	0
			(16)	(0)	(0)	(0)	(14)	(0)	(2)	(0)	(22)	(0)	(0)	(0)	(16)	(0)	(0)	(0)
	extramedullary hematopoiesis		2	2	0	0	0	3	1	0	5	1	0	0	1	2	2	0
			(4)	(4)	(0)	(0)	(0)	(6)	(2)	(0)	(10)	(2)	(0)	(0)	(2)	(4)	(4)	(0)
Grade	1 : Slight	2 : Moderate	3 : Marked	4 : Severe														
< a >	a : Number of animals examined at the site																	
b	b : Number of animals with lesion																	
(c)	c : b / a * 100																	
Significant difference ; * : P ≤ 0.05 ** : P ≤ 0.01 Test of Chi Square																		

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HISTOPATHOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)
 ALL ANIMALS (0-105W)

PAGE : 23

Organ	Findings	Group Name No. of Animals on Study Grade	Control				2000 ppm				6325 ppm				20000 ppm			
			50				50				50				50			
			1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)

{Circulatory system}

heart			<50>				<50>				<50>				<50>			
	thrombus		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)
	necrosis:focal		0	0	0	0	0	1	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)
	mineralization		0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(2)	(0)	(0)	(0)
	inflammatory cell nest		1	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0
			(2)	(0)	(0)	(0)	(2)	(0)	(0)	(0)	(2)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	myocardial fibrosis		39	6	0	0	39	5	0	0	41	6	1	0	38	6	1	0
			(78)	(12)	(0)	(0)	(78)	(10)	(0)	(0)	(82)	(12)	(2)	(0)	(76)	(12)	(2)	(0)
	subendocardial fibrosis		3	0	0	0	1	0	0	0	3	0	0	0	1	0	0	0
			(6)	(0)	(0)	(0)	(2)	(0)	(0)	(0)	(6)	(0)	(0)	(0)	(2)	(0)	(0)	(0)

{Digestive system}

tooth			<50>				<50>				<50>				<50>			
	inflammation		0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(2)	(0)	(0)	(0)	(0)	(0)	(0)	(0)

Grade 1 : Slight 2 : Moderate 3 : Marked 4 : Severe
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HISTOPATHOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)
 ALL ANIMALS (0-105W)

PAGE : 24

Organ	Findings	Group Name No. of Animals on Study Grade	Control				2000 ppm				6325 ppm				20000 ppm			
			50				50				50				50			
			1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Digestive system}																		
tongue	inflammatory infiltration		<50>				<50>				<50>				<50>			
			0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(2)	(0)	(0)	(0)
	arteritis		1	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0
			(2)	(0)	(0)	(0)	(0)	(0)	(2)	(0)	(0)	(2)	(0)	(0)	(0)	(0)	(0)	(0)
esophagus	dilatation		<50>				<50>				<50>				<50>			
			0	1	0	0	0	0	0	0	0	1	0	0	0	6	0	0
			(0)	(2)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(2)	(0)	(0)	(0)	(12)	(0)	(0)
stomach	erosion:forestomach		<50>				<50>				<50>				<50>			
			0	0	0	0	1	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)
	ulcer:forestomach		0	3	0	0	0	2	0	0	0	0	0	0	0	1	1	0
			(0)	(6)	(0)	(0)	(0)	(4)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(2)	(2)	(0)
	hyperplasia:forestomach		0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0
			(0)	(0)	(0)	(0)	(0)	(2)	(0)	(0)	(2)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	erosion:glandular stomach		3	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0
			(6)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(2)	(0)	(0)	(0)	(0)	(2)	(0)	(0)

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HISTOPATHOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)
 ALL ANIMALS (0-105W)

PAGE : 25

Organ	Findings	Group Name No. of Animals on Study Grade	Control				2000 ppm				6325 ppm				20000 ppm			
			50				50				50				50			
			1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Digestive system}																		
liver																		
	herniation		11	0	0	0	8	0	0	0	11	0	0	0	8	0	0	0
			(22)	(0)	(0)	(0)	(16)	(0)	(0)	(0)	(22)	(0)	(0)	(0)	(16)	(0)	(0)	(0)
	angiectasis		2	0	0	0	2	0	0	0	0	0	0	0	1	0	0	0
			(4)	(0)	(0)	(0)	(4)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(2)	(0)	(0)	(0)
	necrosis:central		0	0	0	0	2	0	0	0	1	0	0	0	1	2	0	0
			(0)	(0)	(0)	(0)	(4)	(0)	(0)	(0)	(2)	(0)	(0)	(0)	(2)	(4)	(0)	(0)
	necrosis:focal		1	1	0	0	1	0	0	0	0	0	0	0	1	0	0	0
			(2)	(2)	(0)	(0)	(2)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(2)	(0)	(0)	(0)
	fatty change:central		0	0	0	0	0	1	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)
	fatty change:peripheral		0	0	0	0	1	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)
	deposit of hemosiderin		0	0	0	0	2	0	0	0	0	0	0	0	2	0	0	0
			(0)	(0)	(0)	(0)	(4)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(4)	(0)	(0)	(0)
	lymphocytic infiltration		6	1	0	0	9	0	0	0	5	0	0	0	4	1	0	0
			(12)	(2)	(0)	(0)	(18)	(0)	(0)	(0)	(10)	(0)	(0)	(0)	(8)	(2)	(0)	(0)

Grade 1 : Slight 2 : Moderate 3 : Marked 4 : Severe
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HISTOPATHOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)
 ALL ANIMALS (0-105W)

PAGE : 26

Organ_____	Findings_____	Group Name	Control				2000 ppm				6325 ppm				20000 ppm				
		No. of Animals on Study	50				50				50				50				
		Grade	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	
(Digestive system)																			
liver	granulation		31 (62)	4 (8)	0 (0)	0 (0)	21 (42)	5 (10)	0 (0)	0 (0)	17 (34)	1 (2)	0 (0)	0 (0)	0 ** (0)	19 (38)	2 (4)	0 (0)	0 * (0)
	extramedullary hematopoiesis		1 (2)	0 (0)	0 (0)	0 (0)	1 (2)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	
	clear cell focus		0 (0)	0 (0)	0 (0)	0 (0)	2 (4)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1 (2)	0 (0)	0 (0)	0 (0)
	acidophilic cell focus		0 (0)	1 (2)	0 (0)	0 (0)	1 (2)	0 (0)	0 (0)	0 (0)	1 (2)	2 (4)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1 (2)	0 (0)
	basophilic cell focus		15 (30)	9 (18)	0 (0)	0 (0)	21 (42)	7 (14)	0 (0)	0 (0)	15 (30)	13 (26)	0 (0)	0 (0)	0 (0)	19 (38)	7 (14)	0 (0)	0 (0)
	bile duct hyperplasia		10 (20)	0 (0)	0 (0)	0 (0)	17 (34)	0 (0)	0 (0)	0 (0)	12 (24)	1 (2)	0 (0)	0 (0)	0 (0)	3 (6)	1 (2)	0 (0)	0 (0)
	cholangiofibrosis		0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1 (2)	0 (0)	0 (0)	0 (0)	1 (2)	1 (2)	0 (0)	0 (0)
	focal fatty change		0 (0)	0 (0)	0 (0)	0 (0)	1 (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)

Grade 1 : Slight 2 : Moderate 3 : Marked 4 : Severe
 < a > a : Number of animals examined at the site
 b : Number of animals with lesion
 (c) c : b / a * 100
 Significant difference ; * : P ≤ 0.05 ** : P ≤ 0.01 Test of Chi Square

STUDY NO. : 0448
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 REPORT TYPE : A1
 SEX : FEMALE

HISTOPATHOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)
 ALL ANIMALS (0-105W)

PAGE : 27

Organ	Findings	Group Name No. of Animals on Study Grade	Control 50				2000 ppm 50				6325 ppm 50				20000 ppm 50			
			1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Digestive system}																		
pancreas			<50>				<50>				<50>				<50>			
	atrophy		4	1	0	0	1	1	0	0	1	0	0	0	4	0	0	0
			(8)	(2)	(0)	(0)	(2)	(2)	(0)	(0)	(2)	(0)	(0)	(0)	(8)	(0)	(0)	(0)
{Urinary system}																		
kidney			<50>				<50>				<50>				<50>			
	cyst		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)
	basophilic change		0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(2)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	deposit of hemosiderin		0	0	0	0	0	0	0	0	1	0	0	0	3	0	0	0
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(2)	(0)	(0)	(0)	(6)	(0)	(0)	(0)
	inflammatory infiltration		0	0	0	0	1	1	0	0	1	0	0	0	0	0	0	0
			(0)	(0)	(0)	(0)	(2)	(2)	(0)	(0)	(2)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	scar		1	0	0	0	0	0	0	0	1	1	0	0	4	0	0	0
			(2)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(2)	(2)	(0)	(0)	(8)	(0)	(0)	(0)
	chronic nephropathy		11	2	0	0	16	1	0	0	10	0	1	0	9	1	0	0
			(22)	(4)	(0)	(0)	(32)	(2)	(0)	(0)	(20)	(0)	(2)	(0)	(18)	(2)	(0)	(0)
Grade 1 : Slight 2 : Moderate 3 : Marked 4 : Severe																		
< a > a : Number of animals examined at the site																		
b b : Number of animals with lesion																		
(c) c : b / a * 100																		
Significant difference ; * : P ≤ 0.05 ** : P ≤ 0.01 Test of Chi Square																		

STUDY NO. : 0448
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 REPORT TYPE : A1
 SEX : FEMALE

HISTOPATHOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)
 ALL ANIMALS (0-105W)

PAGE : 28

Organ	Findings	Group Name No. of Animals on Study Grade	Control				2000 ppm				6325 ppm				20000 ppm			
			50				50				50				50			
			1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Urinary system}																		
kidney	hydronephrosis		<50>				<50>				<50>				<50>			
			1	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)
	papillary necrosis		0	0	0	0	19	1	0	0 **	18	11	0	0 **	21	19	0	0 **
			(0)	(0)	(0)	(0)	(38)	(2)	(0)	(0)	(36)	(22)	(0)	(0)	(42)	(38)	(0)	(0)
	mineralization:cortico-medullary junction		6	0	0	0	1	0	0	0	0	0	0	0 *	3	0	0	0
			(12)	(0)	(0)	(0)	(2)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(6)	(0)	(0)	(0)
urin bladd	mineralization:papilla		0	0	0	0	0	0	0	0	3	8	0	0 **	4	15	0	0 **
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(6)	(16)	(0)	(0)	(8)	(30)	(0)	(0)
	mineralization:pelvis		1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
			(2)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(2)	(0)	(0)	(0)
	mineralization:cortex		1	0	0	0	0	0	0	0	3	0	0	0	2	0	0	0
			(2)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(6)	(0)	(0)	(0)	(4)	(0)	(0)	(0)
	urothelial hyperplasia:pelvis		0	0	0	0	0	0	0	0	2	2	1	0	5	3	0	0 *
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(4)	(4)	(2)	(0)	(10)	(6)	(0)	(0)
urin bladd	transitional cell hyperplasia		<50>				<50>				<50>				<50>			
			0	0	0	0	1	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)

Grade 1 : Slight 2 : Moderate 3 : Marked 4 : Severe
 < a > a : Number of animals examined at the site
 b : Number of animals with lesion
 (c) c : b / a * 100
 Significant difference : * : P ≤ 0.05 ** : P ≤ 0.01 Test of Chi Square

STUDY NO. : 0448
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 REPORT TYPE : A1
 SEX : FEMALE

HISTOPATHOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)
 ALL ANIMALS (0-105W)

PAGE : 29

Organ_____	Findings_____	Group Name	Control				2000 ppm				6325 ppm				20000 ppm					
		No. of Animals on Study	50				50				50				50					
		Grade	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4		
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
<hr/>																				
{Endocrine system}																				
pituitary			<50>				<50>				<50>				<50>					
	angiectasis		2	1	0	0	1	3	0	0	1	1	0	0	2	1	0	0		
			(4)	(2)	(0)	(0)	(2)	(6)	(0)	(0)	(2)	(2)	(0)	(0)	(4)	(2)	(0)	(0)		
	cyst		8	11	0	0	18	9	0	0	17	10	1	0	8	5	0	0		
			(16)	(22)	(0)	(0)	(36)	(18)	(0)	(0)	(34)	(20)	(2)	(0)	(16)	(10)	(0)	(0)		
	hyperplasia		8	5	0	0	4	5	3	0	8	6	2	0	4	2	1	0		
			(16)	(10)	(0)	(0)	(8)	(10)	(6)	(0)	(16)	(12)	(4)	(0)	(8)	(4)	(2)	(0)		
	Rathke pouch		1	0	0	0	2	0	0	0	2	0	0	0	0	0	0	0		
			(2)	(0)	(0)	(0)	(4)	(0)	(0)	(0)	(4)	(0)	(0)	(0)	(0)	(0)	(0)	(0)		
	focal hypertrophy		1	0	0	0	2	0	0	0	0	0	0	0	1	0	0	0		
			(2)	(0)	(0)	(0)	(4)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(2)	(0)	(0)	(0)		
thyroid			<50>				<50>				<50>				<50>					
	ultimibranchial body remanet		0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0		
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(2)	(0)	(0)	(0)	(2)	(0)	(0)	(0)		
	C-cell hyperplasia		12	1	0	0	8	0	0	0	13	0	0	0	4	0	0	0		
			(24)	(2)	(0)	(0)	(16)	(0)	(0)	(0)	(26)	(0)	(0)	(0)	(8)	(0)	(0)	(0)		
	focal follicular cell hyperplasia		0	0	0	0	1	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)		

Grade 1 : Slight 2 : Moderate 3 : Marked 4 : Severe
 < a > a : Number of animals examined at the site
 b : Number of animals with lesion
 (c) c : b / a * 100
 Significant difference ; * : P ≤ 0.05 ** : P ≤ 0.01 Test of Chi Square

STUDY NO. : 0448
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 REPORT TYPE : A1
 SEX : FEMALE

HISTOPATHOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)
 ALL ANIMALS (0-105W)

PAGE : 30

Organ_____	Findings_____	Group Name	Control				2000 ppm				6325 ppm				20000 ppm			
		No. of Animals on Study	50				50				50				50			
		Grade	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Endocrine system}																		
adrenal			<50>				<50>				<50>				<50>			
	peliosis-like lesion	33 (66)	3 (6)	0 (0)	0 (0)	36 (72)	5 (10)	0 (0)	0 (0)	32 (64)	5 (10)	0 (0)	0 (0)	23 (46)	1 (2)	0 (0)	0 (0)	0 *
	cyst	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 (2)	0 (0)	0 (0)	0 (0)	
	hyperplasia:cortical cell	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1 (2)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	
	hyperplasia:medulla	0 (0)	0 (0)	0 (0)	0 (0)	1 (2)	0 (0)	0 (0)	0 (0)	1 (2)	0 (0)	0 (0)	0 (0)	2 (4)	0 (0)	0 (0)	0 (0)	
	focal fatty change:cortex	4 (8)	2 (4)	0 (0)	0 (0)	7 (14)	2 (4)	0 (0)	0 (0)	6 (12)	1 (2)	0 (0)	0 (0)	6 (12)	0 (0)	0 (0)	0 (0)	
{Reproductive system}																		
ovary			<50>				<50>				<50>				<50>			
	cyst	0 (0)	1 (2)	0 (0)	0 (0)	1 (2)	3 (6)	1 (2)	0 (0)	1 (2)	2 (4)	0 (0)	0 (0)	2 (4)	1 (2)	0 (0)	0 (0)	
uterus			<50>				<50>				<50>				<50>			
	stromal hyperplasia	0 (0)	1 (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)	

Grade 1 : Slight 2 : Moderate 3 : Marked 4 : Severe
 < a > a : Number of animals examined at the site
 b : Number of animals with lesion
 (c) c : b / a * 100
 Significant difference : * : P ≤ 0.05 ** : P ≤ 0.01 Test of Chi Square

STUDY NO. : 0448
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 REPORT TYPE : A1
 SEX : FEMALE

HISTOPATHOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)
 ALL ANIMALS (0-105W)

PAGE : 31

Organ	Findings	Group Name No. of Animals on Study Grade	Control				2000 ppm				6325 ppm				20000 ppm			
			50				50				50				50			
			1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Reproductive system}																		
uterus			<50>				<50>				<50>				<50>			
	cystic endometrial hyperplasia		2	0	0	0	5	0	0	0	6	0	1	0	2	0	0	0
			(4)	(0)	(0)	(0)	(10)	(0)	(0)	(0)	(12)	(0)	(2)	(0)	(4)	(0)	(0)	(0)
mammary gl			<50>				<50>				<50>				<50>			
	hyperplasia		1	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)
{Nervous system}																		
brain			<50>				<50>				<50>				<50>			
	hemorrhage		0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0
			(0)	(0)	(0)	(0)	(2)	(0)	(0)	(0)	(2)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
spinal cord			<50>				<50>				<50>				<50>			
	hemorrhage		1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			(2)	(2)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
{Special sense organs/appendage}																		
eye			<50>				<50>				<50>				<50>			
	hemorrhage		0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(2)	(0)	(0)	(0)	(0)	(0)	(0)	(0)

Grade 1 : Slight 2 : Moderate 3 : Marked 4 : Severe
 < a > a : Number of animals examined at the site
 b : Number of animals with lesion
 (c) c : b / a * 100
 Significant difference ; * : P ≤ 0.05 ** : P ≤ 0.01 Test of Chi Square

STUDY NO. : 0448
ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
REPORT TYPE : A1
SEX : FEMALE

HISTOPATHOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)
ALL ANIMALS (0-105W)

PAGE : 32

Organ	Findings	Group Name No. of Animals on Study				Control				2000 ppm				6325 ppm				20000 ppm			
		Grade				50				50				50				50			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Special sense organs/appendage}																					
eye		<50>				<50>				<50>				<50>				<50>			
	cataract	1 (2)	2 (4)	0 (0)	0 (0)	0 (0)	2 (4)	0 (0)	0 (0)	0 (0)	1 (2)	0 (0)	0 (0)	0 (0)	1 (2)	0 (0)	0 (0)	2 (4)	4 (8)	0 (0)	0 (0)
	retinal atrophy	11 (22)	35 (70)	3 (6)	0 (0)	20 (40)	28 (56)	2 (4)	0 (0)	37 (74)	10 (20)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	32 (64)	11 (22)	6 (12)	0 (0)
Harder gl		<50>				<50>				<50>				<50>				<50>			
	atrophy	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	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 (2)	0 (0)	0 (0)
	degeneration	0 (0)	0 (0)	0 (0)	0 (0)	1 (2)	0 (0)	0 (0)	0 (0)	2 (4)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
	lymphocytic infiltration	7 (14)	0 (0)	0 (0)	0 (0)	4 (8)	0 (0)	0 (0)	0 (0)	2 (4)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1 (2)	0 (0)	0 (0)	0 (0)
nasolacr d		<50>				<50>				<50>				<50>				<50>			
	inflammation	7 (14)	2 (4)	0 (0)	0 (0)	2 (4)	1 (2)	0 (0)	0 (0)	3 (6)	1 (2)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1 (2)	0 (0)	0 (0)	0 (0)
{Musculoskeletal system}																					
muscle		<50>				<50>				<50>				<50>				<50>			
	mineralization	1 (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)

Grade 1 : Slight 2 : Moderate 3 : Marked 4 : Severe
< a > a : Number of animals examined at the site
b : Number of animals with lesion
(c) c : b / a * 100
Significant difference ; * : P ≤ 0.05 ** : P ≤ 0.01 Test of Chi Square

STUDY NO. : 0448
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 REPORT TYPE : A1
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HISTOPATHOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)
 ALL ANIMALS (0-105W)

PAGE : 33

Organ	Findings	Group Name				Control				2000 ppm				6325 ppm				20000 ppm			
		No. of Animals on Study				50				50				50				50			
		Grade				1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
						(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Musculoskeletal system}																					
bone																					
	osteosclerosis					5	0	0	0	5	2	0	0	4	1	0	0	6	1	0	0
		(10)	(0)	(0)	(0)	(10)	(4)	(0)	(0)	(8)	(2)	(0)	(0)	(12)	(2)	(0)	(0)				

Grade 1 : Slight 2 : Moderate 3 : Marked 4 : Severe
 < a > a : Number of animals examined at the site
 b : Number of animals with lesion
 (c) c : b / a * 100
 Significant difference : * : $P \leq 0.05$ ** : $P \leq 0.01$ Test of Chi Square

(HPT150)

BAIS4

APPENDIX M 5

HISTOPATHOLOGICAL FINDINGS :
NON-NEOPLASTIC LESIONS : FEMALE
DEAD AND MORIBUND ANIMALS

STUDY NO. : 0448
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 REPORT TYPE : A1
 SEX : FEMALE

HISTOPATHOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)
 DEAD AND MORIBUND ANIMALS (0-105W)

PAGE : 15

Organ	Findings	Group Name No. of Animals on Study Grade	Control 12				2000 ppm 7				6325 ppm 10				20000 ppm 25			
			1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Respiratory system}																		
nasal cavit			<12>				< 7>				<10>				<25>			
	thrombus		0	0	2	0	0	1	1	0	0	1	1	0	1	0	2	0
			(0)	(0)	(17)	(0)	(0)	(14)	(14)	(0)	(0)	(10)	(10)	(0)	(4)	(0)	(8)	(0)
	mineralization		4	0	0	0	1	0	0	0	2	0	0	0	2	0	0	0
			(33)	(0)	(0)	(0)	(14)	(0)	(0)	(0)	(20)	(0)	(0)	(0)	(8)	(0)	(0)	(0)
	eosinophilic change:olfactory epithelium		7	4	0	0	0	6	0	0 *	2	8	0	0	4	14	4	0
			(58)	(33)	(0)	(0)	(0)	(86)	(0)	(0)	(20)	(80)	(0)	(0)	(16)	(56)	(16)	(0)
	eosinophilic change:respiratory epithelium		1	0	0	0	1	0	0	0	2	0	0	0	2	0	0	0
			(8)	(0)	(0)	(0)	(14)	(0)	(0)	(0)	(20)	(0)	(0)	(0)	(8)	(0)	(0)	(0)
	inflammation:foreign body		1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
			(8)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(4)	(0)	(0)	(0)
	inflammation:respiratory epithelium		1	1	0	0	1	1	0	0	1	0	0	0	0	0	0	0
			(8)	(8)	(0)	(0)	(14)	(14)	(0)	(0)	(10)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	respiratory metaplasia:gland		1	0	0	0	1	0	0	0	2	0	0	0	3	0	0	0
			(8)	(0)	(0)	(0)	(14)	(0)	(0)	(0)	(20)	(0)	(0)	(0)	(12)	(0)	(0)	(0)
	necrosis:respiratory epithelium		0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(10)	(0)	(0)	(0)	(0)	(0)	(0)

Grade 1 : Slight 2 : Moderate 3 : Marked 4 : Severe
 < a > a : Number of animals examined at the site
 b b : Number of animals with lesion
 (c) c : b / a * 100
 Significant difference : * : P ≤ 0.05 ** : P ≤ 0.01 Test of Chi Square

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 DEAD AND MORIBUND ANIMALS (0-105W)

PAGE : 16

		Group Name	Control				2000 ppm				6325 ppm				20000 ppm			
		No. of Animals on Study	12				7				10				25			
Organ	Findings	Grade	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Respiratory system}																		
larynx	inflammation		<12>				< 7>				<10>				<25>			
		0	1	0	0	1	0	0	0	1	0	0	0	3	0	0	0	
		(0)	(8)	(0)	(0)	(14)	(0)	(0)	(0)	(10)	(0)	(0)	(0)	(12)	(0)	(0)	(0)	
lung	congestion		<12>				< 7>				<10>				<25>			
		4	3	0	0	1	0	0	0	0	4	0	0	6	5	0	0	
		(33)	(25)	(0)	(0)	(14)	(0)	(0)	(0)	(0)	(40)	(0)	(0)	(24)	(20)	(0)	(0)	
	hemorrhage		1	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0
		(8)	(8)	(0)	(0)	(0)	(14)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	
	edema		0	0	0	0	0	1	1	0	0	0	0	0	0	1	0	0
		(0)	(0)	(0)	(0)	(0)	(14)	(14)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(4)	(0)	(0)
	foreign body granuloma		0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		(0)	(8)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	
	bronchiolar-alveolar cell hyperplasia		0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
		(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(4)	(0)	(0)	(0)
{Hematopoietic system}																		
bone marrow	granulation		<12>				< 7>				<10>				<25>			
		0	0	0	0	0	0	0	0	1	0	0	0	4	1	0	0	
		(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(10)	(0)	(0)	(0)	(16)	(4)	(0)	(0)	

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 b : Number of animals with lesion
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 DEAD AND MORIBUND ANIMALS (0-105W)

PAGE : 17

Organ_____	Findings_____	Group Name	Control				2000 ppm				6325 ppm				20000 ppm			
		No. of Animals on Study	12				7				10				25			
		Grade	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Hematopoietic system}																		
bone marrow			<12>				< 7>				<10>				<25>			
	increased hematopoiesis		4 (33)	0 (0)	0 (0)	0 (0)	3 (43)	0 (0)	0 (0)	0 (0)	4 (40)	0 (0)	0 (0)	0 (0)	6 (24)	0 (0)	0 (0)	0 (0)
	erythropoiesis:increased		1 (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 (0)	0 (0)	0 (0)
spleen			<12>				< 7>				<10>				<25>			
	atrophy		0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1 (14)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
	deposit of hemosiderin		3 (25)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1 (14)	0 (0)	1 (10)	0 (0)	0 (0)	0 (0)	5 (20)	0 (0)	0 (0)	0 (0)
	extramedullary hematopoiesis		2 (17)	1 (8)	0 (0)	0 (0)	0 (0)	3 (43)	0 (0)	0 (0)	1 (10)	1 (10)	0 (0)	0 (0)	1 (4)	2 (8)	2 (8)	0 (0)
{Circulatory system}																		
heart			<12>				< 7>				<10>				<25>			
	thrombus		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 (4)	0 (0)	0 (0)	0 (0)

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 DEAD AND MORIBUND ANIMALS (0-105W)

PAGE : 18

		Group Name No. of Animals on Study	Control 12				2000 ppm 7				6325 ppm 10				20000 ppm 25			
Organ	Findings	Grade	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Circulatory system}																		
heart			<12>				< 7>				<10>				<25>			
	necrosis:focal		0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
			(0)	(0)	(0)	(0)	(0)	(14)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	mineralization		0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(4)	(0)	(0)	(0)
	myocardial fibrosis		7	2	0	0	5	1	0	0	6	2	0	0	16	4	0	0
			(58)	(17)	(0)	(0)	(71)	(14)	(0)	(0)	(60)	(20)	(0)	(0)	(64)	(16)	(0)	(0)
{Digestive system}																		
esophagus			<12>				< 7>				<10>				<25>			
	dilatation		0	1	0	0	0	0	0	0	0	1	0	0	0	5	0	0
			(0)	(8)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(10)	(0)	(0)	(0)	(20)	(0)	(0)
stomach			<12>				< 7>				<10>				<25>			
	ulcer:forestomach		0	3	0	0	0	2	0	0	0	0	0	0	0	1	1	0
			(0)	(25)	(0)	(0)	(0)	(29)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(4)	(4)	(0)
	hyperplasia:forestomach		0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
			(0)	(0)	(0)	(0)	(0)	(14)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)

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PAGE : 19

		Group Name No. of Animals on Study				Control				2000 ppm				6325 ppm				20000 ppm			
		Grade				12				7				10				25			
Organ	Findings	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4				
		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)				
{Digestive system}																					
stomach		<12>				< 7>				<10>				<25>							
	erosion:glandular stomach	2	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0				
		(17)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(10)	(0)	(0)	(0)	(0)	(0)	(4)	(0)				
liver		<12>				< 7>				<10>				<25>							
	herniation	1	0	0	0	1	0	0	0	2	0	0	0	3	0	0	0				
		(8)	(0)	(0)	(0)	(14)	(0)	(0)	(0)	(20)	(0)	(0)	(0)	(12)	(0)	(0)	(0)				
	necrosis:central	0	0	0	0	2	0	0	0	1	0	0	0	1	2	0	0				
		(0)	(0)	(0)	(0)	(29)	(0)	(0)	(0)	(10)	(0)	(0)	(0)	(4)	(8)	(0)	(0)				
	necrosis:focal	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0				
		(8)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(4)	(0)	(0)	(0)				
	fatty change:central	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0				
		(0)	(0)	(0)	(0)	(0)	(14)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)				
	fatty change:peripheral	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0				
	(0)	(0)	(0)	(0)	(14)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)					
deposit of hemosiderin	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0					
		(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(4)	(0)	(0)	(0)				
lymphocytic infiltration	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0					
		(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(4)	(0)	(0)	(0)				

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 DEAD AND MORIBUND ANIMALS (0-105W)

PAGE : 20

		Group Name No. of Animals on Study	Control 12				2000 ppm 7				6325 ppm 10				20000 ppm 25			
Organ	Findings	Grade	1 (%)	2 (%)	3 (%)	4 (%)	1 (%)	2 (%)	3 (%)	4 (%)	1 (%)	2 (%)	3 (%)	4 (%)	1 (%)	2 (%)	3 (%)	4 (%)
{Digestive system}																		
liver			<12>				< 7>				<10>				<25>			
	granulation		1 (8)	0 (0)	0 (0)	0 (0)	0 (0)	1 (14)	0 (0)	0 (0)	1 (10)	0 (0)	0 (0)	0 (0)	4 (16)	0 (0)	0 (0)	0 (0)
	basophilic cell focus		1 (8)	0 (0)	0 (0)	0 (0)	1 (14)	0 (0)	0 (0)	0 (0)	1 (10)	0 (0)	0 (0)	0 (0)	4 (16)	1 (4)	0 (0)	0 (0)
	bile duct hyperplasia		1 (8)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1 (10)	0 (0)	0 (0)	0 (0)	0 (0)	1 (4)	0 (0)	0 (0)
	cholangiofibrosis		0 (0)	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 (4)	0 (0)	0 (0)
pancreas			<12>				< 7>				<10>				<25>			
	atrophy		1 (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 (0)	0 (0)	0 (0)
{Urinary system}																		
kidney			<12>				< 7>				<10>				<25>			
	cyst		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 (4)	0 (0)	0 (0)	0 (0)

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BAIS4

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DEAD AND MORIBUND ANIMALS (0-105W)

PAGE : 21

Organ	Findings	Control				2000 ppm				6325 ppm				20000 ppm			
		No. of Animals on Study				7				10				25			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Urinary system}																	
kidney		<12>				< 7>				<10>				<25>			
	deposit of hemosiderin	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0
		(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(10)	(0)	(0)	(0)	(4)	(0)	(0)	(0)
	inflammatory infiltration	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
		(0)	(0)	(0)	(0)	(0)	(14)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	chronic nephropathy	1	0	0	0	1	0	0	0	0	0	0	0	2	0	0	0
		(8)	(0)	(0)	(0)	(14)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(8)	(0)	(0)	(0)
	hydronephrosis	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		(8)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	papillary necrosis	0	0	0	0	3	1	0	0 *	4	1	0	0 *	16	3	0	0 **
		(0)	(0)	(0)	(0)	(43)	(14)	(0)	(0)	(40)	(10)	(0)	(0)	(64)	(12)	(0)	(0)
	mineralization:cortico-medullary junction	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		(17)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	mineralization:papilla	0	0	0	0	0	0	0	0	2	1	0	0	2	1	0	0
		(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(20)	(10)	(0)	(0)	(8)	(4)	(0)	(0)
	mineralization:pelvis	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		(8)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)

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 DEAD AND MORIBUND ANIMALS (0-105W)

PAGE : 22

		Group Name No. of Animals on Study Grade	Control 12				2000 ppm 7				6325 ppm 10				20000 ppm 25			
Organ	Findings		1 (%)	2 (%)	3 (%)	4 (%)	1 (%)	2 (%)	3 (%)	4 (%)	1 (%)	2 (%)	3 (%)	4 (%)	1 (%)	2 (%)	3 (%)	4 (%)
(Urinary system)																		
kidney			<12>				< 7>				<10>				<25>			
	mineralization:cortex		1 (8)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1 (10)	0 (0)	0 (0)	0 (0)	1 (4)	0 (0)	0 (0)	0 (0)
	urothelial hyperplasia:pelvis		0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1 (10)	0 (0)	0 (0)	0 (0)	2 (8)	1 (4)	0 (0)	0 (0)
(Endocrine system)																		
pituitary			<12>				< 7>				<10>				<25>			
	angiectasis		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 (4)	0 (0)	0 (0)	0 (0)
	cyst		1 (8)	3 (25)	0 (0)	0 (0)	3 (43)	0 (0)	0 (0)	0 (0)	0 (0)	4 (40)	1 (10)	0 (0)	4 (16)	2 (8)	0 (0)	0 (0)
	hyperplasia		1 (8)	0 (0)	0 (0)	0 (0)	2 (29)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	2 (8)	0 (0)	1 (4)	0 (0)
	Rathke pouch		0 (0)	0 (0)	0 (0)	0 (0)	1 (14)	0 (0)	0 (0)	0 (0)	1 (10)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
thyroid			<12>				< 7>				<10>				<25>			
	C-cell hyperplasia		1 (8)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1 (10)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)

Grade 1 : Slight 2 : Moderate 3 : Marked 4 : Severe
 < a > a : Number of animals examined at the site
 b : Number of animals with lesion
 (c) c : b / a * 100
 Significant difference : * : P ≤ 0.05 ** : P ≤ 0.01 Test of Chi Square

STUDY NO. : 0448
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 REPORT TYPE : A1
 SEX : FEMALE

HISTOPATHOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)
 DEAD AND MORIBUND ANIMALS (0-105W)

PAGE : 23

Organ	Findings	Group Name No. of Animals on Study Grade	Control 12				2000 ppm 7				6325 ppm 10				20000 ppm 25			
			1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Endocrine system}																		
adrenal			<12>				< 7>				<10>				<25>			
	peliosis-like lesion		0	1	0	0	3	0	0	0 *	2	0	0	0	6	0	0	0
			(0)	(8)	(0)	(0)	(43)	(0)	(0)	(0)	(20)	(0)	(0)	(0)	(24)	(0)	(0)	(0)
	hyperplasia:cortical cell		0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
			(0)	(0)	(0)	(0)	(0)	(14)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	hyperplasia:medulla		0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(10)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	focal fatty change:cortex		1	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0
			(8)	(0)	(0)	(0)	(14)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(4)	(0)	(0)	(0)
{Reproductive system}																		
ovary			<12>				< 7>				<10>				<25>			
	cyst		0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(10)	(0)	(0)	(0)	(4)	(0)	(0)
uterus			<12>				< 7>				<10>				<25>			
	cystic endometrial hyperplasia		0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(4)	(0)	(0)	(0)

Grade 1 : Slight 2 : Moderate 3 : Marked 4 : Severe
 < a > a : Number of animals examined at the site
 b : Number of animals with lesion
 (c) c : b / a * 100
 Significant difference : * : P ≤ 0.05 ** : P ≤ 0.01 Test of Chi Square

STUDY NO. : 0448
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 REPORT TYPE : A1
 SEX : FEMALE

HISTOPATHOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)
 DEAD AND MORIBUND ANIMALS (0-105W)

PAGE : 24

		Group Name No. of Animals on Study Grade	Control 12				2000 ppm 7				6325 ppm 10				20000 ppm 25			
Organ_____	Findings_____		<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
<hr/>																		
(Nervous system)																		
brain	hemorrhage		<12>				< 7>				<10>				<25>			
		0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
	(0)	(0)	(0)	(0)	(14)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
spinal cord	hemorrhage		<12>				< 7>				<10>				<25>			
		1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		(8)	(8)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
 (Special sense organs/appendage)																		
eye	hemorrhage		<12>				< 7>				<10>				<25>			
		0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(10)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	
	cataract		0	1	0	0	0	1	0	0	0	0	0	0	0	3	0	0
		(0)	(8)	(0)	(0)	(0)	(14)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(12)	(0)	(0)	
	retinal atrophy		7	4	0	0	4	3	0	0	6	2	0	0	20	1	3	0
		(58)	(33)	(0)	(0)	(57)	(43)	(0)	(0)	(60)	(20)	(0)	(0)	(80)	(4)	(12)	(0)	
Harder gl	atrophy		<12>				< 7>				<10>				<25>			
		0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	
		(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(4)	(0)	(0)	

Grade 1 : Slight 2 : Moderate 3 : Marked 4 : Severe
 < a > a : Number of animals examined at the site
 b : Number of animals with lesion
 (c) c : b / a * 100
 Significant difference : * : P ≤ 0.05 ** : P ≤ 0.01 Test of Chi Square

STUDY NO. : 0448
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 REPORT TYPE : A1
 SEX : FEMALE

HISTOPATHOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)
 DEAD AND MORIBUND ANIMALS (0-105W)

PAGE : 25

Organ	Findings	Group Name No. of Animals on Study				Control				2000 ppm				6325 ppm				20000 ppm			
		Grade				12				7				10				25			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Special sense organs/appendage}																					
Harder gl	lymphocytic infiltration	<12>				<7>				<10>				<25>							
		0	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)	(0)	(10)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
nasolacr d	inflammation	<12>				<7>				<10>				<25>							
		1	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
		(8)	(0)	(0)	(0)	(14)	(0)	(0)	(0)	(0)	(10)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
{Musculoskeletal system}																					
muscle	mineralization	<12>				<7>				<10>				<25>							
		1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		(8)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
bone	osteosclerosis	<12>				<7>				<10>				<25>							
		0	0	0	0	1	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0
		(0)	(0)	(0)	(0)	(14)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(8)	(0)	(0)	(0)	(0)	(0)	(0)	(0)

Grade 1 : Slight 2 : Moderate 3 : Marked 4 : Severe
 < a > a : Number of animals examined at the site
 b b : Number of animals with lesion
 (c) c : b / a * 100
 Significant difference : * : P ≤ 0.05 ** : P ≤ 0.01 Test of Chi Square

APPENDIX M 6

HISTOPATHOLOGICAL FINDINGS :
NON-NEOPLASTIC LESIONS : FEMALE
SACRIFICED ANIMALS

STUDY NO. : 0448
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 REPORT TYPE : A1
 SEX : FEMALE

HISTOPATHOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)
 SACRIFICED ANIMALS (105W)

PAGE : 14

		Group Name	Control				2000 ppm				6325 ppm				20000 ppm			
		No. of Animals on Study	38				43				40				25			
Organ	Findings	Grade	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
(Integumentary system/appandage)																		
skin/app			<38>				<43>				<40>				<25>			
	inflammation		0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1 (3)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
	epidermal cyst		0 (0)	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 (4)	0 (0)	0 (0)
subcutis			<38>				<43>				<40>				<25>			
	inflammation		0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1 (3)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
(Respiratory system)																		
nasal cavit			<38>				<43>				<40>				<25>			
	thrombus		1 (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)	1 (4)	0 (0)	0 (0)
	mineralization		13 (34)	0 (0)	0 (0)	0 (0)	16 (37)	0 (0)	0 (0)	0 (0)	15 (38)	0 (0)	0 (0)	0 (0)	5 (20)	0 (0)	0 (0)	0 (0)
	eosinophilic change:olfactory epithelium		0 (0)	23 (61)	15 (39)	0 (0)	4 (9)	21 (49)	18 (42)	0 (0)	0 (0)	19 (48)	20 (50)	0 (0)	1 (4)	10 (40)	14 (56)	0 (0)

Grade 1 : Slight 2 : Moderate 3 : Marked 4 : Severe
 < a > a : Number of animals examined at the site
 b : Number of animals with lesion
 (c) c : b / a * 100
 Significant difference ; * : P ≤ 0.05 ** : P ≤ 0.01 Test of Chi Square

STUDY NO. : 0448
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 REPORT TYPE : A1
 SEX : FEMALE

HISTOPATHOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)
 SACRIFICED ANIMALS (105W)

PAGE : 15

		Group Name	Control				2000 ppm				6325 ppm				20000 ppm			
		No. of Animals on Study	38				43				40				25			
		Grade	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Organ_____	Findings_____		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
(Respiratory system)																		
nasal cavit			<38>				<43>				<40>				<25>			
	eosinophilic change:respiratory epithelium	23	0	0	0	0	22	1	0	0	22	1	0	0	13	0	0	0
		(61)	(0)	(0)	(0)	(0)	(51)	(2)	(0)	(0)	(55)	(3)	(0)	(0)	(52)	(0)	(0)	(0)
	inflammation:foreign body	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
		(3)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(3)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	inflammation:respiratory epithelium	4	0	0	0	0	5	0	0	0	1	0	0	0	3	1	0	0
		(11)	(0)	(0)	(0)	(0)	(12)	(0)	(0)	(0)	(3)	(0)	(0)	(0)	(12)	(4)	(0)	(0)
	respiratory metaplasia:gland	22	0	0	0	0	24	0	0	0	24	0	0	0	14	0	0	0
		(58)	(0)	(0)	(0)	(0)	(56)	(0)	(0)	(0)	(60)	(0)	(0)	(0)	(56)	(0)	(0)	(0)
larynx			<38>				<43>				<40>				<25>			
	inflammation	3	1	0	0	0	4	0	0	0	4	2	0	0	3	0	0	0
		(8)	(3)	(0)	(0)	(0)	(9)	(0)	(0)	(0)	(10)	(5)	(0)	(0)	(12)	(0)	(0)	(0)
lung			<38>				<43>				<40>				<25>			
	cyst	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
		(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(4)	(0)	(0)
	accumulation of foamy cells	8	0	0	0	0	5	0	0	0	7	1	0	0	3	0	0	0
		(21)	(0)	(0)	(0)	(0)	(12)	(0)	(0)	(0)	(18)	(3)	(0)	(0)	(12)	(0)	(0)	(0)

Grade 1 : Slight 2 : Moderate 3 : Marked 4 : Severe
 < a > a : Number of animals examined at the site
 b : Number of animals with lesion
 (c) c : b / a * 100
 Significant difference : * : P ≤ 0.05 ** : P ≤ 0.01 Test of Chi Square

STUDY NO. : 0448
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 REPORT TYPE : A1
 SEX : FEMALE

HISTOPATHOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)
 SACRIFICED ANIMALS (105W)

PAGE : 16

		Group Name	Control				2000 ppm				6325 ppm				20000 ppm			
		No. of Animals on Study	38				43				40				25			
		Grade	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Organ	Findings		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
(Respiratory system)																		
lung			<38>				<43>				<40>				<25>			
	interstitial pneumonia		0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(3)	(0)	(0)	(0)	(0)	(0)	(0)
	bronchiolar-alveolar cell hyperplasia		1	0	0	0	2	0	0	0	1	0	0	0	1	0	0	0
			(3)	(0)	(0)	(0)	(5)	(0)	(0)	(0)	(3)	(0)	(0)	(0)	(4)	(0)	(0)	(0)
(Hematopoietic system)																		
bone marrow			<38>				<43>				<40>				<25>			
	granulation		11	0	0	0	9	2	0	0	10	1	0	0	6	1	0	0
			(29)	(0)	(0)	(0)	(21)	(5)	(0)	(0)	(25)	(3)	(0)	(0)	(24)	(4)	(0)	(0)
	increased hematopoiesis		2	0	0	0	2	0	0	0	3	0	0	0	1	0	0	0
			(5)	(0)	(0)	(0)	(5)	(0)	(0)	(0)	(8)	(0)	(0)	(0)	(4)	(0)	(0)	(0)
	myelofibrosis		0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0
			(0)	(0)	(0)	(0)	(2)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(4)	(0)	(0)
thymus			<38>				<43>				<40>				<25>			
	cyst		1	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)

Grade 1 : Slight 2 : Moderate 3 : Marked 4 : Severe
 < a > a : Number of animals examined at the site
 b : Number of animals with lesion
 (c) c : b / a * 100
 Significant difference ; * : P ≤ 0.05 ** : P ≤ 0.01 Test of Chi Square

STUDY NO. : 0448
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 REPORT TYPE : A1
 SEX : FEMALE

HISTOPATHOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)
 SACRIFICED ANIMALS (105W)

PAGE : 17

Organ	Findings	Group Name No. of Animals on Study Grade				Control 38				2000 ppm 43				6325 ppm 40				20000 ppm 25			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Hematopoietic system}																					
spleen		<38>				<43>				<40>				<25>							
	deposit of hemosiderin	5	0	0	0	7	0	0	0	10	0	0	0	3	0	0	0				
		(13)	(0)	(0)	(0)	(16)	(0)	(0)	(0)	(25)	(0)	(0)	(0)	(12)	(0)	(0)	(0)				
	extramedullary hematopoiesis	0	1	0	0	0	0	1	0	4	0	0	0	0	0	0	0				
		(0)	(3)	(0)	(0)	(0)	(0)	(2)	(0)	(10)	(0)	(0)	(0)	(0)	(0)	(0)	(0)				
{Circulatory system}																					
heart		<38>				<43>				<40>				<25>							
	thrombus	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0				
		(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(4)	(0)	(0)	(0)				
	inflammatory cell nest	1	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0				
		(3)	(0)	(0)	(0)	(2)	(0)	(0)	(0)	(3)	(0)	(0)	(0)	(0)	(0)	(0)	(0)				
	myocardial fibrosis	32	4	0	0	34	4	0	0	35	4	1	0	22	2	1	0				
		(84)	(11)	(0)	(0)	(79)	(9)	(0)	(0)	(88)	(10)	(3)	(0)	(88)	(8)	(4)	(0)				
	subendocardial fibrosis	3	0	0	0	1	0	0	0	3	0	0	0	1	0	0	0				
		(8)	(0)	(0)	(0)	(2)	(0)	(0)	(0)	(8)	(0)	(0)	(0)	(4)	(0)	(0)	(0)				
{Digestive system}																					
tooth		<38>				<43>				<40>				<25>							
	inflammation	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0				
		(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(3)	(0)	(0)	(0)	(0)	(0)	(0)	(0)				

Grade 1 : Slight 2 : Moderate 3 : Marked 4 : Severe
 < a > a : Number of animals examined at the site
 b : Number of animals with lesion
 (c) c : b / a * 100
 Significant difference ; * : P ≤ 0.05 ** : P ≤ 0.01 Test of Chi Square

STUDY NO. : 0448
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 REPORT TYPE : A1
 SEX : FEMALE

HISTOPATHOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)
 SACRIFICED ANIMALS (105W)

PAGE : 18

Organ	Findings	Group Name No. of Animals on Study Grade	Control 38				2000 ppm 43				6325 ppm 40				20000 ppm 25			
			1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Digestive system}																		
tongue	inflammatory infiltration		<38>				<43>				<40>				<25>			
			0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(4)	(0)	(0)	(0)
	arteritis		1	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0
			(3)	(0)	(0)	(0)	(0)	(0)	(2)	(0)	(0)	(3)	(0)	(0)	(0)	(0)	(0)	(0)
esophagus	dilatation		<38>				<43>				<40>				<25>			
			0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(4)	(0)	(0)
stomach	erosion:forestomach		<38>				<43>				<40>				<25>			
			0	0	0	0	1	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)
	hyperplasia:forestomach		0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(3)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	erosion:glandular stomach		1	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)
liver	herniation		<38>				<43>				<40>				<25>			
			10	0	0	0	7	0	0	0	9	0	0	0	5	0	0	0
			(26)	(0)	(0)	(0)	(16)	(0)	(0)	(0)	(23)	(0)	(0)	(0)	(20)	(0)	(0)	(0)

Grade 1 : Slight 2 : Moderate 3 : Marked 4 : Severe
 < a > a : Number of animals examined at the site
 b : Number of animals with lesion
 (c) c : b / a * 100
 Significant difference ; * : P ≤ 0.05 ** : P ≤ 0.01 Test of Chi Square

STUDY NO. : 0448
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 REPORT TYPE : A1
 SEX : FEMALE

HISTOPATHOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)
 SACRIFICED ANIMALS (105W)

PAGE : 19

		Group Name	Control				2000 ppm				6325 ppm				20000 ppm			
		No. of Animals on Study	38				43				40				25			
		Grade	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Organ_____	Findings_____		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
<hr/>																		
{Digestive system}																		
liver																		
			<38>				<43>				<40>				<25>			
angiectasis			2	0	0	0	2	0	0	0	0	0	0	0	1	0	0	0
			(5)	(0)	(0)	(0)	(5)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(4)	(0)	(0)	(0)
necrosis:focal			0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0
			(0)	(3)	(0)	(0)	(2)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
deposit of hemosiderin			0	0	0	0	2	0	0	0	0	0	0	0	1	0	0	0
			(0)	(0)	(0)	(0)	(5)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(4)	(0)	(0)	(0)
lymphocytic infiltration			6	1	0	0	9	0	0	0	5	0	0	0	3	1	0	0
			(16)	(3)	(0)	(0)	(21)	(0)	(0)	(0)	(13)	(0)	(0)	(0)	(12)	(4)	(0)	(0)
granulation			30	4	0	0	21	4	0	0 **	16	1	0	0 **	15	2	0	0
			(79)	(11)	(0)	(0)	(49)	(9)	(0)	(0)	(40)	(3)	(0)	(0)	(60)	(8)	(0)	(0)
extramedullary hematopoiesis			1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
			(3)	(0)	(0)	(0)	(2)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
clear cell focus			0	0	0	0	2	0	0	0	0	0	0	0	1	0	0	0
			(0)	(0)	(0)	(0)	(5)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(4)	(0)	(0)	(0)
acidophilic cell focus			0	1	0	0	1	0	0	0	1	2	0	0	0	0	1	0
			(0)	(3)	(0)	(0)	(2)	(0)	(0)	(0)	(3)	(5)	(0)	(0)	(0)	(0)	(4)	(0)

Grade 1 : Slight 2 : Moderate 3 : Marked 4 : Severe
 < a > a : Number of animals examined at the site
 b : Number of animals with lesion
 (c) c : b / a * 100
 Significant difference ; * : P ≤ 0.05 ** : P ≤ 0.01 Test of Chi Square

STUDY NO. : 0448
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 REPORT TYPE : A1
 SEX : FEMALE

HISTOPATHOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)
 SACRIFICED ANIMALS (105W)

PAGE : 20

		Group Name	Control				2000 ppm				6325 ppm				20000 ppm			
		No. of Animals on Study	38				43				40				25			
Organ	Findings	Grade	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
(Digestive system)																		
liver			<38>				<43>				<40>				<25>			
	basophilic cell focus		14	9	0	0	20	7	0	0	14	13	0	0	15	6	0	0
			(37)	(24)	(0)	(0)	(47)	(16)	(0)	(0)	(35)	(33)	(0)	(0)	(60)	(24)	(0)	(0)
	bile duct hyperplasia		9	0	0	0	17	0	0	0	11	1	0	0	3	0	0	0
			(24)	(0)	(0)	(0)	(40)	(0)	(0)	(0)	(28)	(3)	(0)	(0)	(12)	(0)	(0)	(0)
	cholangiofibrosis		0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(3)	(0)	(0)	(4)	(0)	(0)	(0)	
	focal fatty change		0	0	0	0	1	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)	
pancreas			<38>				<43>				<40>				<25>			
	atrophy		3	1	0	0	1	1	0	0	1	0	0	0	4	0	0	0
			(8)	(3)	(0)	(0)	(2)	(2)	(0)	(0)	(3)	(0)	(0)	(0)	(16)	(0)	(0)	(0)
(Urinary system)																		
kidney			<38>				<43>				<40>				<25>			
	cyst		0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
		(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(4)	(0)	(0)	(0)	

Grade 1 : Slight 2 : Moderate 3 : Marked 4 : Severe
 < a > a : Number of animals examined at the site
 b : Number of animals with lesion
 (c) c : b / a * 100
 Significant difference ; * : P ≤ 0.05 ** : P ≤ 0.01 Test of Chi Square

STUDY NO. : 0448
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 REPORT TYPE : A1
 SEX : FEMALE

HISTOPATHOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)
 SACRIFICED ANIMALS (105W)

PAGE : 21

Organ	Findings	Control				2000 ppm				6325 ppm				20000 ppm			
		No. of Animals on Study				43				40				25			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Urinary system}																	
kidney		<38>				<43>				<40>				<25>			
	basophilic change	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
		(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(3)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	deposit of hemosiderin	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)	(8)	(0)	(0)	(0)
	inflammatory infiltration	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0
		(0)	(0)	(0)	(0)	(2)	(0)	(0)	(0)	(3)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	scar	1	0	0	0	0	0	0	0	1	1	0	0	4	0	0	0
		(3)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(3)	(3)	(0)	(0)	(16)	(0)	(0)	(0)
	chronic nephropathy	10	2	0	0	15	1	0	0	10	0	1	0	7	1	0	0
		(26)	(5)	(0)	(0)	(35)	(2)	(0)	(0)	(25)	(0)	(3)	(0)	(28)	(4)	(0)	(0)
	papillary necrosis	0	0	0	0	16	0	0	0 **	14	10	0	0 **	5	16	0	0 **
		(0)	(0)	(0)	(0)	(37)	(0)	(0)	(0)	(35)	(25)	(0)	(0)	(20)	(64)	(0)	(0)
	mineralization:cortico-medullary junction	4	0	0	0	1	0	0	0	0	0	0	0	3	0	0	0
		(11)	(0)	(0)	(0)	(2)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(12)	(0)	(0)	(0)
	mineralization:papilla	0	0	0	0	0	0	0	0	1	7	0	0 *	2	14	0	0 **
		(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(3)	(18)	(0)	(0)	(8)	(56)	(0)	(0)

Grade 1 : Slight 2 : Moderate 3 : Marked 4 : Severe
 < a > a : Number of animals examined at the site
 b : Number of animals with lesion
 (c) c : b / a * 100
 Significant difference ; * : P ≤ 0.05 ** : P ≤ 0.01 Test of Chi Square

STUDY NO. : 0448
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 REPORT TYPE : A1
 SEX : FEMALE

HISTOPATHOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)
 SACRIFICED ANIMALS (105W)

PAGE : 22

Organ	Findings	Group Name	Control				2000 ppm				6325 ppm				20000 ppm			
		No. of Animals on Study	38				43				40				25			
		Grade	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
(Urinary system)																		
kidney			<38>				<43>				<40>				<25>			
	mineralization:pelvis		0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(4)	(0)	(0)	(0)
	mineralization:cortex		0	0	0	0	0	0	0	0	2	0	0	0	1	0	0	0
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(5)	(0)	(0)	(0)	(4)	(0)	(0)	(0)
	urothelial hyperplasia:pelvis		0	0	0	0	0	0	0	0	1	2	1	0	3	2	0	0 *
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(3)	(5)	(3)	(0)	(12)	(8)	(0)	(0)
urin bladd			<38>				<43>				<40>				<25>			
	transitional cell hyperplasia		0	0	0	0	1	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)
(Endocrine system)																		
pituitary			<38>				<43>				<40>				<25>			
	angiectasis		2	1	0	0	1	3	0	0	1	1	0	0	1	1	0	0
			(5)	(3)	(0)	(0)	(2)	(7)	(0)	(0)	(3)	(3)	(0)	(0)	(4)	(4)	(0)	(0)
	cyst		7	8	0	0	15	9	0	0	17	6	0	0	4	3	0	0
			(18)	(21)	(0)	(0)	(35)	(21)	(0)	(0)	(43)	(15)	(0)	(0)	(16)	(12)	(0)	(0)
Grade	1 : Slight 2 : Moderate 3 : Marked 4 : Severe																	
< a >	a : Number of animals examined at the site																	
b	b : Number of animals with lesion																	
(c)	c : b / a * 100																	
Significant difference : * : P ≤ 0.05 ** : P ≤ 0.01 Test of Chi Square																		
(HPT150)																		

BAIS4

STUDY NO. : 0448
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 REPORT TYPE : A1
 SEX : FEMALE

HISTOPATHOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)
 SACRIFICED ANIMALS (105W)

PAGE : 23

Organ_____	Findings_____	Group Name	Control				2000 ppm				6325 ppm				20000 ppm			
		No. of Animals on Study	38				43				40				25			
		Grade	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
<hr/>																		
{Endocrine system}																		
pituitary		<38>	<43>				<40>				<25>							
	hyperplasia	7	5	0	0	2	5	3	0	8	6	2	0	2	2	0	0	
		(18)	(13)	(0)	(0)	(5)	(12)	(7)	(0)	(20)	(15)	(5)	(0)	(8)	(8)	(0)	(0)	
	Rathke pouch	1	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	
		(3)	(0)	(0)	(0)	(2)	(0)	(0)	(0)	(3)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	
	focal hypertrophy	1	0	0	0	2	0	0	0	0	0	0	0	1	0	0	0	
		(3)	(0)	(0)	(0)	(5)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(4)	(0)	(0)	(0)	
thyroid		<38>	<43>				<40>				<25>							
	ultimibranchial body remanet	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	
		(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(3)	(0)	(0)	(0)	(4)	(0)	(0)	(0)	
	C-cell hyperplasia	11	1	0	0	8	0	0	0	12	0	0	0	4	0	0	0	
		(29)	(3)	(0)	(0)	(19)	(0)	(0)	(0)	(30)	(0)	(0)	(0)	(16)	(0)	(0)	(0)	
	focal follicular cell hyperplasia	0	0	0	0	1	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)	
adrenal		<38>	<43>				<40>				<25>							
	peliosis like lesion	33	2	0	0	33	5	0	0	30	5	0	0	17	1	0	0	
		(87)	(5)	(0)	(0)	(77)	(12)	(0)	(0)	(75)	(13)	(0)	(0)	(68)	(4)	(0)	(0)	

Grade 1 : Slight 2 : Moderate 3 : Marked 4 : Severe
 < a > a : Number of animals examined at the site
 b : Number of animals with lesion
 (c) c : b / a * 100
 Significant difference ; * : P ≤ 0.05 ** : P ≤ 0.01 Test of Chi Square

STUDY NO. : 0448
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 REPORT TYPE : A1
 SEX : FEMALE

HISTOPATHOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)
 SACRIFICED ANIMALS (105W)

PAGE : 24

Organ	Findings	Group Name No. of Animals on Study Grade	Control 38				2000 ppm 43				6325 ppm 40				20000 ppm 25			
			1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Endocrine system}																		
adrenal			<38>				<43>				<40>				<25>			
	cyst		0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(4)	(0)	(0)	(0)
	hyperplasia:medulla		0	0	0	0	1	0	0	0	0	0	0	0	2	0	0	0
			(0)	(0)	(0)	(0)	(2)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(8)	(0)	(0)	(0)
	focal fatty change:cortex		3	2	0	0	6	2	0	0	6	1	0	0	5	0	0	0
			(8)	(5)	(0)	(0)	(14)	(5)	(0)	(0)	(15)	(3)	(0)	(0)	(20)	(0)	(0)	(0)
{Reproductive system}																		
ovary			<38>				<43>				<40>				<25>			
	cyst		0	1	0	0	1	3	1	0	1	1	0	0	2	0	0	0
			(0)	(3)	(0)	(0)	(2)	(7)	(2)	(0)	(3)	(3)	(0)	(0)	(8)	(0)	(0)	(0)
uterus			<38>				<43>				<40>				<25>			
	stromal hyperplasia		0	1	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)
	cystic endometrial hyperplasia		2	0	0	0	5	0	0	0	6	0	1	0	1	0	0	0
			(5)	(0)	(0)	(0)	(12)	(0)	(0)	(0)	(15)	(0)	(3)	(0)	(4)	(0)	(0)	(0)
Grade 1 : Slight 2 : Moderate 3 : Marked 4 : Severe																		
< a > a : Number of animals examined at the site																		
b : Number of animals with lesion																		
(c) c : b / a * 100																		
Significant difference : * : P ≤ 0.05 ** : P ≤ 0.01 Test of Chi Square																		
(HPT150)																		

STUDY NO. : 0448
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 REPORT TYPE : A1
 SEX : FEMALE

HISTOPATHOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)
 SACRIFICED ANIMALS (105W)

PAGE : 25

		Group Name No. of Animals on Study Grade	Control 38				2000 ppm 43				6325 ppm 40				20000 ppm 25			
Organ	Findings		1 (%)	2 (%)	3 (%)	4 (%)	1 (%)	2 (%)	3 (%)	4 (%)	1 (%)	2 (%)	3 (%)	4 (%)	1 (%)	2 (%)	3 (%)	4 (%)
{Reproductive system}																		
mammary gl			<38>				<43>				<40>				<25>			
	hyperplasia		1 (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)
{Nervous system}																		
brain			<38>				<43>				<40>				<25>			
	hemorrhage		0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1 (3)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
{Special sense organs/appendage}																		
eye			<38>				<43>				<40>				<25>			
	cataract		1 (3)	1 (3)	0 (0)	0 (0)	0 (0)	1 (2)	0 (0)	0 (0)	0 (0)	1 (3)	0 (0)	0 (0)	2 (8)	1 (4)	0 (0)	0 (0)
	retinal atrophy		4 (11)	31 (82)	3 (8)	0 (0)	16 (37)	25 (58)	2 (5)	0 * (0)	31 (78)	8 (20)	0 (0)	0 ** (0)	12 (48)	10 (40)	3 (12)	0 ** (0)
Harder gl			<38>				<43>				<40>				<25>			
	degeneration		0 (0)	0 (0)	0 (0)	0 (0)	1 (2)	0 (0)	0 (0)	0 (0)	2 (5)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)

Grade 1 : Slight 2 : Moderate 3 : Marked 4 : Severe
 < a > a : Number of animals examined at the site
 b : Number of animals with lesion
 (c) c : b / a * 100
 Significant difference ; * : P ≤ 0.05 ** : P ≤ 0.01 Test of Chi Square

STUDY NO. : 0448
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 REPORT TYPE : A1
 SEX : FEMALE

HISTOPATHOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)
 SACRIFICED ANIMALS (105W)

PAGE : 26

		Control				2000 ppm				6325 ppm				20000 ppm			
		No. of Animals on Study				43				40				25			
		Grade															
Organ	Findings	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)

{Special sense organs/appendage}

Harder gl		<38>				<43>				<40>				<25>			
	lymphocytic infiltration	7	0	0	0	4	0	0	0	1	0	0	0	1	0	0	0
		(18)	(0)	(0)	(0)	(9)	(0)	(0)	(0)	(3)	(0)	(0)	(0)	(4)	(0)	(0)	(0)

nasolacr d		<38>				<43>				<40>				<25>			
	inflammation	6	2	0	0	1	1	0	0	3	0	0	0	1	0	0	0
		(16)	(5)	(0)	(0)	(2)	(2)	(0)	(0)	(8)	(0)	(0)	(0)	(4)	(0)	(0)	(0)

{Musculoskeletal system}

bone		<38>				<43>				<40>				<25>			
	osteosclerosis	5	0	0	0	4	2	0	0	4	1	0	0	4	1	0	0
		(13)	(0)	(0)	(0)	(9)	(5)	(0)	(0)	(10)	(3)	(0)	(0)	(16)	(4)	(0)	(0)

Grade 1 : Slight 2 : Moderate 3 : Marked 4 : Severe
 < a > a : Number of animals examined at the site
 b : Number of animals with lesion
 (c) c : b / a * 100
 Significant difference : * : $P \leq 0.05$ ** : $P \leq 0.01$ Test of Chi Square

(HPT150)

BAIS4

APPENDIX N 1

NUMBER OF ANIMALS WITH TUMORS
AND NUMBER OF TUMORS-TIME RELATED : MALE

STUDY NO. : 0448
ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
REPORT TYPE : A1
SEX : MALE

NUMBER OF ANIMALS WITH TUMORS AND NUMBER OF TUMORS - TIME RELATED

PAGE : 1

Time-related Weeks	Items	Group Name	Control	2000 ppm	6325 ppm	20000 ppm
0 - 52	NO. OF EXAMINED ANIMALS		0	1	1	4
	NO. OF ANIMALS WITH TUMORS		0	0	0	1
	NO. OF ANIMALS WITH SINGLE TUMORS		0	0	0	1
	NO. OF ANIMALS WITH MULTIPLE TUMORS		0	0	0	0
	NO. OF BENIGN TUMORS		0	0	0	0
	NO. OF MALIGNANT TUMORS		0	0	0	1
	NO. OF TOTAL TUMORS		0	0	0	1
53 - 78	NO. OF EXAMINED ANIMALS		4	3	0	2
	NO. OF ANIMALS WITH TUMORS		3	1	0	0
	NO. OF ANIMALS WITH SINGLE TUMORS		2	1	0	0
	NO. OF ANIMALS WITH MULTIPLE TUMORS		1	0	0	0
	NO. OF BENIGN TUMORS		3	0	0	0
	NO. OF MALIGNANT TUMORS		2	1	0	0
	NO. OF TOTAL TUMORS		5	1	0	0
79 - 104	NO. OF EXAMINED ANIMALS		8	5	9	5
	NO. OF ANIMALS WITH TUMORS		8	5	9	5
	NO. OF ANIMALS WITH SINGLE TUMORS		3	1	0	1
	NO. OF ANIMALS WITH MULTIPLE TUMORS		5	4	9	4
	NO. OF BENIGN TUMORS		13	11	19	8
	NO. OF MALIGNANT TUMORS		4	4	6	4
	NO. OF TOTAL TUMORS		17	15	25	12
105 - 105	NO. OF EXAMINED ANIMALS		38	41	40	39
	NO. OF ANIMALS WITH TUMORS		35	40	38	37
	NO. OF ANIMALS WITH SINGLE TUMORS		12	13	16	13
	NO. OF ANIMALS WITH MULTIPLE TUMORS		23	27	22	24
	NO. OF BENIGN TUMORS		71	73	67	64
	NO. OF MALIGNANT TUMORS		7	7	5	5
	NO. OF TOTAL TUMORS		78	80	72	69

STUDY NO. : 0448
ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
REPORT TYPE : A1
SEX : MALE

NUMBER OF ANIMALS WITH TUMORS AND NUMBER OF TUMORS - TIME RELATED

PAGE : 2

Time-related Weeks	Items_____	Group Name	Control	2000 ppm	6325 ppm	20000 ppm
0 - 105	NO. OF EXAMINED ANIMALS		50	50	50	50
	NO. OF ANIMALS WITH TUMORS		46	46	47	43
	NO. OF ANIMALS WITH SINGLE TUMORS		17	15	16	15
	NO. OF ANIMALS WITH MULTIPLE TUMORS		29	31	31	28
	NO. OF BENIGN TUMORS		87	84	86	72
	NO. OF MALIGNANT TUMORS		13	12	11	10
	NO. OF TOTAL TUMORS		100	96	97	82

(HPT070)

BAIS4

APPENDIX N 2

NUMBER OF ANIMALS WITH TUMORS
AND NUMBER OF TUMORS-TIME RELATED : FEMALE

STUDY NO. : 0448
ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
REPORT TYPE : A1
SEX : FEMALE

NUMBER OF ANIMALS WITH TUMORS AND NUMBER OF TUMORS - TIME RELATED

PAGE : 3

Time-related Weeks	Items	Group Name	Control	2000 ppm	6325 ppm	20000 ppm
0 - 52	NO. OF EXAMINED ANIMALS		1	0	0	6
	NO. OF ANIMALS WITH TUMORS		1	0	0	2
	NO. OF ANIMALS WITH SINGLE TUMORS		1	0	0	2
	NO. OF ANIMALS WITH MULTIPLE TUMORS		0	0	0	0
	NO. OF BENIGN TUMORS		0	0	0	0
	NO. OF MALIGNANT TUMORS		1	0	0	2
	NO. OF TOTAL TUMORS		1	0	0	2
53 - 78	NO. OF EXAMINED ANIMALS		1	0	2	4
	NO. OF ANIMALS WITH TUMORS		1	0	1	2
	NO. OF ANIMALS WITH SINGLE TUMORS		1	0	1	2
	NO. OF ANIMALS WITH MULTIPLE TUMORS		0	0	0	0
	NO. OF BENIGN TUMORS		0	0	0	1
	NO. OF MALIGNANT TUMORS		1	0	1	1
	NO. OF TOTAL TUMORS		1	0	1	2
79 - 104	NO. OF EXAMINED ANIMALS		10	7	8	15
	NO. OF ANIMALS WITH TUMORS		10	7	8	11
	NO. OF ANIMALS WITH SINGLE TUMORS		6	5	7	5
	NO. OF ANIMALS WITH MULTIPLE TUMORS		4	2	1	6
	NO. OF BENIGN TUMORS		7	6	3	13
	NO. OF MALIGNANT TUMORS		8	4	6	6
	NO. OF TOTAL TUMORS		15	10	9	19
105 - 105	NO. OF EXAMINED ANIMALS		38	43	40	25
	NO. OF ANIMALS WITH TUMORS		26	30	24	20
	NO. OF ANIMALS WITH SINGLE TUMORS		8	16	13	8
	NO. OF ANIMALS WITH MULTIPLE TUMORS		18	14	11	12
	NO. OF BENIGN TUMORS		47	44	34	28
	NO. OF MALIGNANT TUMORS		1	10	7	4
	NO. OF TOTAL TUMORS		48	54	41	32

STUDY NO. : 0448
ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
REPORT TYPE : A1
SEX : FEMALE

NUMBER OF ANIMALS WITH TUMORS AND NUMBER OF TUMORS - TIME RELATED

PAGE : 4

Time-related Weeks	Items	Group Name	Control	2000 ppm	6325 ppm	20000 ppm
0 - 105	NO. OF EXAMINED ANIMALS		50	50	50	50
	NO. OF ANIMALS WITH TUMORS		38	37	33	35
	NO. OF ANIMALS WITH SINGLE TUMORS		16	21	21	17
	NO. OF ANIMALS WITH MULTIPLE TUMORS		22	16	12	18
	NO. OF BENIGN TUMORS		54	50	37	42
	NO. OF MALIGNANT TUMORS		11	14	14	13
	NO. OF TOTAL TUMORS		65	64	51	55

(HPT070)

BAIS4

APPENDIX O 1

HISTOPATHOLOGICAL FINDINGS :

NEOPLASTIC LESIONS : MALE

STUDY NO. : 0448
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 REPORT TYPE : A1
 SEX : MALE

HISTOPATHOLOGICAL FINDINGS : NEOPLASTIC LESIONS (SUMMARY)
 ALL ANIMALS (0-105W)

PAGE : 1

Organ	Findings	Group Name No. of animals on Study	Control 50	2000 ppm 50	6325 ppm 50	20000 ppm 50
{Integumentary system/appandage}						
skin/app			<50>	<50>	<50>	<50>
	squamous cell papilloma		0 (0%)	0 (0%)	0 (0%)	1 (2%)
	schwannoma		0 (0%)	0 (0%)	1 (2%)	1 (2%)
	trichoepithelioma		1 (2%)	0 (0%)	0 (0%)	1 (2%)
	basal cell epithelioma		0 (0%)	0 (0%)	1 (2%)	0 (0%)
	keratoacanthoma		0 (0%)	1 (2%)	0 (0%)	0 (0%)
	sebaceous adenoma		0 (0%)	0 (0%)	1 (2%)	0 (0%)
	squamous cell carcinoma		1 (2%)	0 (0%)	0 (0%)	0 (0%)
subcutis			<50>	<50>	<50>	<50>
	fibroma		3 (6%)	4 (8%)	3 (6%)	5 (10%)
	lipoma		2 (4%)	2 (4%)	0 (0%)	0 (0%)
	hemangioma		0 (0%)	0 (0%)	0 (0%)	1 (2%)
	fibrosarcoma		1 (2%)	0 (0%)	0 (0%)	0 (0%)
	malignant fibrous histiocyoma		0 (0%)	0 (0%)	1 (2%)	0 (0%)
	sarcoma:NOS		0 (0%)	0 (0%)	0 (0%)	1 (2%)

< a > a : Number of animals examined at the site
 b (c) b : Number of animals with neoplasm c : b / a * 100

(HPT085)

BAIS4

STUDY NO. : 0448
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 REPORT TYPE : A1
 SEX : MALE

HISTOPATHOLOGICAL FINDINGS : NEOPLASTIC LESIONS (SUMMARY)
 ALL ANIMALS (0-105W)

PAGE : 2

Organ	Findings	Group Name No. of animals on Study	Control 50	2000 ppm 50	6325 ppm 50	20000 ppm 50
{Respiratory system}						
nasal cavit	chondroma		<50> 0 (0%)	<49> 1 (2%)	<50> 0 (0%)	<50> 0 (0%)
lung	bronchiolar-alveolar adenoma		<50> 3 (6%)	<50> 4 (8%)	<50> 0 (0%)	<50> 2 (4%)
	bronchiolar-alveolar carcinoma		<50> 0 (0%)	<50> 1 (2%)	<50> 0 (0%)	<50> 0 (0%)
{Hematopoietic system}						
bone marrow	histiocytic sarcoma		<50> 1 (2%)	<49> 0 (0%)	<50> 0 (0%)	<50> 0 (0%)
spleen	hemangioma		<50> 0 (0%)	<50> 0 (0%)	<50> 1 (2%)	<50> 0 (0%)
	mononuclear cell leukemia		<50> 1 (2%)	<50> 4 (8%)	<50> 5 (10%)	<50> 2 (4%)
{Digestive system}						
tooth	ameloblastoma:malignant		<50> 0 (0%)	<50> 1 (2%)	<50> 0 (0%)	<50> 0 (0%)
liver	hepatocellular adenoma		<50> 1 (2%)	<50> 0 (0%)	<50> 1 (2%)	<50> 0 (0%)
	histiocytic sarcoma		<50> 0 (0%)	<50> 0 (0%)	<50> 0 (0%)	<50> 1 (2%)
pancreas	islet cell adenoma		<50> 6 (12%)	<50> 6 (12%)	<50> 4 (8%)	<50> 8 (16%)
	acinar cell adenoma		<50> 1 (2%)	<50> 0 (0%)	<50> 0 (0%)	<50> 0 (0%)
< a > a : Number of animals examined at the site b (c) b : Number of animals with neoplasm c : b / a * 100						
(HPT085)						

BAIS4

STUDY NO. : 0448
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 REPORT TYPE : A1
 SEX : MALE

HISTOPATHOLOGICAL FINDINGS : NEOPLASTIC LESIONS (SUMMARY)
 ALL ANIMALS (0-105W)

PAGE : 3

Organ	Findings	Group Name No. of animals on Study	Control 50	2000 ppm 50	6325 ppm 50	20000 ppm 50
{Urinary system}						
urin bladd	transitional cell papilloma		<50> 1 (2%)	<50> 0 (0%)	<49> 0 (0%)	<50> 0 (0%)
	rhabdomyosarcoma		0 (0%)	0 (0%)	0 (0%)	1 (2%)
{Endocrine system}						
pituitary	adenoma		<50> 16 (32%)	<50> 12 (24%)	<50> 10 (20%)	<50> 8 (16%)
	adenocarcinoma		0 (0%)	1 (2%)	0 (0%)	0 (0%)
thyroid	C-cell adenoma		<50> 12 (24%)	<50> 6 (12%)	<50> 14 (28%)	<50> 4 (8%)
	follicular adenoma		0 (0%)	0 (0%)	2 (4%)	1 (2%)
	C-cell carcinoma		2 (4%)	1 (2%)	0 (0%)	1 (2%)
	follicular adenocarcinoma		1 (2%)	0 (0%)	0 (0%)	0 (0%)
adrenal	pheochromocytoma		<50> 4 (8%)	<50> 5 (10%)	<50> 7 (14%)	<50> 3 (6%)
	pheochromocytoma:malignant		0 (0%)	1 (2%)	0 (0%)	0 (0%)
	cortical adenocarcinoma		0 (0%)	1 (2%)	0 (0%)	0 (0%)
{Reproductive system}						
testis	interstitial cell tumor		<50> 34 (68%)	<50> 41 (82%)	<50> 39 (78%)	<50> 36 (72%)
< a > a : Number of animals examined at the site b (c) b : Number of animals with neoplasm c : b / a * 100						

(HPT085)

BAIS4

STUDY NO. : 0448
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 REPORT TYPE : A1
 SEX : MALE

HISTOPATHOLOGICAL FINDINGS : NEOPLASTIC LESIONS (SUMMARY)
 ALL ANIMALS (0-105W)

PAGE : 4

Organ	Findings	Group Name No. of animals on Study	Control 50	2000 ppm 50	6325 ppm 50	20000 ppm 50
{Reproductive system}						
prostate	adenoma		<50> 1 (2%)	<50> 0 (0%)	<49> 1 (2%)	<50> 0 (0%)
mammary gl	adenoma		<50> 0 (0%)	<50> 0 (0%)	<50> 0 (0%)	<50> 1 (2%)
prep/cli gl	adenoma		<50> 2 (4%)	<50> 0 (0%)	<50> 1 (2%)	<50> 0 (0%)
{Nervous system}						
brain	malignant reticulosis		<50> 1 (2%)	<50> 0 (0%)	<50> 0 (0%)	<50> 1 (2%)
	glioma		2 (4%)	0 (0%)	0 (0%)	1 (2%)
	meningioma:malignant		0 (0%)	0 (0%)	0 (0%)	1 (2%)
	carcinoma:choroid plexus		0 (0%)	0 (0%)	1 (2%)	0 (0%)
spinal cord	schwannoma:malignant		<50> 1 (2%)	<50> 0 (0%)	<50> 0 (0%)	<49> 0 (0%)
{Special sense organs/appendage}						
Zymbal gl	adenoma		<50> 0 (0%)	<50> 1 (2%)	<50> 0 (0%)	<50> 0 (0%)
{Musculoskeletal system}						
muscle	sarcoma:NOS		<50> 0 (0%)	<50> 0 (0%)	<50> 1 (2%)	<50> 0 (0%)

< a > a : Number of animals examined at the site
 b (c) b : Number of animals with neoplasm c : b / a * 100

(HPT085)

BAIS4

STUDY NO. : 0448
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 REPORT TYPE : A1
 SEX : MALE

HISTOPATHOLOGICAL FINDINGS : NEOPLASTIC LESIONS (SUMMARY)
 ALL ANIMALS (0-105W)

PAGE : 5

Organ	Findings	Group Name No. of animals on Study	Control 50	2000 ppm 50	6325 ppm 50	20000 ppm 50
{Musculoskeletal system}						
bone			<50>	<49>	<50>	<50>
	osteosarcoma		1 (2%)	0 (0%)	1 (2%)	0 (0%)
vertebra			<50>	<50>	<50>	<50>
	chordoma:malignant		0 (0%)	0 (0%)	0 (0%)	1 (2%)
{Body cavities}						
peritoneum			<50>	<50>	<50>	<50>
	mesothelioma		1 (2%)	0 (0%)	2 (4%)	0 (0%)
retroperit			<50>	<50>	<50>	<50>
	rhabdomyosarcoma		0 (0%)	1 (2%)	0 (0%)	0 (0%)
	schwannoma:malignant		0 (0%)	1 (2%)	0 (0%)	0 (0%)
adipose			<50>	<50>	<50>	<50>
	lipoma		0 (0%)	1 (2%)	0 (0%)	0 (0%)

< a > a : Number of animals examined at the site
 b (c) b : Number of animals with neoplasm c : b / a * 100

(HPT085)

BAIS4

APPENDIX O 2

HISTOPATHOLOGICAL FINDINGS :

NEOPLASTIC LESIONS : FEMALE

STUDY NO. : 0448
ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
REPORT TYPE : A1
SEX : FEMALE

HISTOPATHOLOGICAL FINDINGS : NEOPLASTIC LESIONS (SUMMARY)
ALL ANIMALS (0-105W)

PAGE : 6

Organ	Findings	Group Name No. of animals on Study	Control 50	2000 ppm 50	6325 ppm 50	20000 ppm 50
{Integumentary system/appandage}						
skin/app			<50>	<50>	<50>	<50>
	schwannoma		0 (0%)	0 (0%)	1 (2%)	0 (0%)
	keratoacanthoma		1 (2%)	0 (0%)	0 (0%)	1 (2%)
	trichoepithelioma:malignant		0 (0%)	1 (2%)	0 (0%)	0 (0%)
subcutis			<50>	<50>	<50>	<50>
	fibroma		0 (0%)	1 (2%)	1 (2%)	1 (2%)
	lipoma		1 (2%)	1 (2%)	0 (0%)	0 (0%)
{Respiratory system}						
nasal cavit			<50>	<50>	<50>	<50>
	chondroma		0 (0%)	1 (2%)	0 (0%)	0 (0%)
	hemangioma		0 (0%)	1 (2%)	0 (0%)	0 (0%)
lung			<50>	<50>	<50>	<50>
	bronchiolar-alveolar adenoma		1 (2%)	1 (2%)	1 (2%)	0 (0%)
{Hematopoietic system}						
thymus			<50>	<50>	<50>	<50>
	malignant lymphoma		0 (0%)	1 (2%)	0 (0%)	0 (0%)
spleen			<50>	<50>	<50>	<50>
	mononuclear cell leukemia		3 (6%)	5 (10%)	7 (14%)	6 (12%)
{Digestive system}						
oral cavity			<50>	<50>	<50>	<50>
	squamous cell papilloma		0 (0%)	0 (0%)	1 (2%)	0 (0%)

< a > a : Number of animals examined at the site
b (c) b : Number of animals with neoplasm c : b / a * 100

STUDY NO. : 0448
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 REPORT TYPE : A1
 SEX : FEMALE

HISTOPATHOLOGICAL FINDINGS : NEOPLASTIC LESIONS (SUMMARY)
 ALL ANIMALS (0-105W)

PAGE : 7

Organ	Findings	Group Name No. of animals on Study	Control 50	2000 ppm 50	6325 ppm 50	20000 ppm 50
{Digestive system}						
oral cavity			<50>	<50>	<50>	<50>
	squamous cell carcinoma		1 (2%)	0 (0%)	1 (2%)	0 (0%)
tooth			<50>	<50>	<50>	<50>
	ameloblastoma:malignant		0 (0%)	0 (0%)	1 (2%)	0 (0%)
stomach			<50>	<50>	<50>	<50>
	squamous cell papilloma		0 (0%)	1 (2%)	0 (0%)	0 (0%)
small intes			<50>	<50>	<50>	<50>
	fibroma		0 (0%)	0 (0%)	0 (0%)	1 (2%)
large intes			<50>	<50>	<50>	<50>
	adenocarcinoma		0 (0%)	0 (0%)	0 (0%)	1 (2%)
	fibrosarcoma		0 (0%)	1 (2%)	0 (0%)	0 (0%)
liver			<50>	<50>	<50>	<50>
	hepatocellular carcinoma		0 (0%)	0 (0%)	0 (0%)	1 (2%)
pancreas			<50>	<50>	<50>	<50>
	islet cell adenoma		0 (0%)	0 (0%)	0 (0%)	1 (2%)
{Urinary system}						
kidney			<50>	<50>	<50>	<50>
	transitional cell papilloma		0 (0%)	0 (0%)	1 (2%)	2 (4%)
	lipoma		0 (0%)	0 (0%)	1 (2%)	0 (0%)
{Endocrine system}						
pituitary			<50>	<50>	<50>	<50>
	adenoma		14 (28%)	19 (38%)	11 (22%)	12 (24%)

< a > a : Number of animals examined at the site
 b (c) b : Number of animals with neoplasm c : b / a * 100

STUDY NO. : 0448
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 REPORT TYPE : A1
 SEX : FEMALE

HISTOPATHOLOGICAL FINDINGS : NEOPLASTIC LESIONS (SUMMARY)
 ALL ANIMALS (0-105W)

PAGE : 8

Organ	Findings	Group Name No. of animals on Study	Control 50	2000 ppm 50	6325 ppm 50	20000 ppm 50
{Endocrine system}						
pituitary			<50>	<50>	<50>	<50>
	adenocarcinoma		1 (2%)	0 (0%)	2 (4%)	0 (0%)
thyroid			<50>	<50>	<50>	<50>
	C-cell adenoma		10 (20%)	9 (18%)	7 (14%)	5 (10%)
	follicular adenoma		1 (2%)	0 (0%)	0 (0%)	0 (0%)
	follicular adenocarcinoma		0 (0%)	1 (2%)	1 (2%)	0 (0%)
parathyroid			<50>	<49>	<50>	<50>
	adenoma		0 (0%)	0 (0%)	0 (0%)	1 (2%)
adrenal			<50>	<50>	<50>	<50>
	pheochromocytoma		2 (4%)	0 (0%)	2 (4%)	1 (2%)
	cortical adenoma		1 (2%)	1 (2%)	2 (4%)	0 (0%)
	pheochromocytoma:malignant		0 (0%)	1 (2%)	0 (0%)	1 (2%)
	cortical adenocarcinoma		0 (0%)	1 (2%)	0 (0%)	0 (0%)
{Reproductive system}						
ovary			<50>	<50>	<50>	<50>
	sertoli cell tumor		0 (0%)	0 (0%)	0 (0%)	1 (2%)
	granulosa cell tumor:benign		0 (0%)	0 (0%)	1 (2%)	0 (0%)
uterus			<50>	<50>	<50>	<50>
	mastcytoma:benign		1 (2%)	0 (0%)	0 (0%)	0 (0%)

< a > a : Number of animals examined at the site
 b (c) b : Number of animals with neoplasm c : b / a * 100

(HPT085)

BAIS4

STUDY NO. : 0448
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 REPORT TYPE : A1
 SEX : FEMALE

HISTOPATHOLOGICAL FINDINGS : NEOPLASTIC LESIONS (SUMMARY)
 ALL ANIMALS (0-105W)

PAGE : 9

Organ	Findings	Group Name No. of animals on Study	Control 50	2000 ppm 50	6325 ppm 50	20000 ppm 50
{Reproductive system}						
uterus	endometrial stromal polyp		<50> 10 (20%)	<50> 7 (14%)	<50> 5 (10%)	<50> 12 (24%)
	adenocarcinoma		0 (0%)	1 (2%)	0 (0%)	1 (2%)
	histiocytic sarcoma		1 (2%)	0 (0%)	0 (0%)	0 (0%)
	endometrial stromal sarcoma		1 (2%)	1 (2%)	1 (2%)	1 (2%)
mammary gl	adenoma		<50> 2 (4%)	<50> 1 (2%)	<50> 1 (2%)	<50> 0 (0%)
	fibroadenoma		9 (18%)	7 (14%)	1 (2%)	3 (6%)
	adenocarcinoma		1 (2%)	1 (2%)	0 (0%)	1 (2%)
	carcinosarcoma		0 (0%)	0 (0%)	0 (0%)	1 (2%)
prep/cli gl	adenoma		<50> 1 (2%)	<50> 0 (0%)	<50> 1 (2%)	<50> 1 (2%)
{Nervous system}						
brain	glioma		<50> 0 (0%)	<50> 0 (0%)	<50> 1 (2%)	<50> 0 (0%)
{Musculoskeletal system}						
bone	osteosarcoma		<50> 2 (4%)	<50> 0 (0%)	<50> 0 (0%)	<50> 0 (0%)

< a > a : Number of animals examined at the site
 b (c) b : Number of animals with neoplasm c : b / a * 100

(HPT085)

BAIS4

STUDY NO. : 0448
ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCr1j]
REPORT TYPE : A1
SEX : FEMALE

HISTOPATHOLOGICAL FINDINGS : NEOPLASTIC LESIONS (SUMMARY)
ALL ANIMALS (0-105W)

PAGE : 10

Organ	Findings	Group Name No. of animals on Study	Control 50	2000 ppm 50	6325 ppm 50	20000 ppm 50
{Body cavities}						
mediastinum	sarcoma:NOS		<50> 1 (2%)	<50> 0 (0%)	<50> 0 (0%)	<50> 0 (0%)

< a > a : Number of animals examined at the site
b (c) b : Number of animals with neoplasm c : b / a * 100

(HPT085)

BAIS4

APPENDIX P 1

NEOPLASTIC LESIONS-INCIDENCE AND STATISTICAL ANALYSIS : MALE

STUDY No. : 0448
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCr.j]
 SEX : MALE

NEOPLASTIC LESIONS-INCIDENCE AND STATISTICAL ANALYSIS

PAGE : 1

Group Name	Control	2000 ppm	6325 ppm	20000 ppm
SITE : subcutis TUMOR : fibroma				
Tumor rate				
Overall rates(a)	3/50(6.0)	4/50(8.0)	3/50(6.0)	5/50(10.0)
Adjusted rates(b)	7.14	6.82	6.98	12.82
Terminal rates(c)	2/38(5.3)	2/41(4.9)	2/40(5.0)	5/39(12.8)
Statistical analysis				
Peto test				
Standard method(d)	P = 0.5187			
Prevalence method(d)	P = 0.1685			
Combined analysis(d)	P = 0.2237			
Cochran-Armitage test(e)	P = 0.4750			
Fisher Exact test(e)		P = 0.5000	P = 0.6611	P = 0.3575
SITE : subcutis TUMOR : fibroma, fibrosarcoma				
Tumor rate				
Overall rates(a)	4/50(8.0)	4/50(8.0)	3/50(6.0)	5/50(10.0)
Adjusted rates(b)	7.32	6.82	6.98	12.82
Terminal rates(c)	2/38(5.3)	2/41(4.9)	2/40(5.0)	5/39(12.8)
Statistical analysis				
Peto test				
Standard method(d)	P = 0.8723			
Prevalence method(d)	P = 0.1734			
Combined analysis(d)	P = 0.3107			
Cochran-Armitage test(e)	P = 0.6477			
Fisher Exact test(e)		P = 0.6425	P = 0.5000	P = 0.5000
SITE : lung TUMOR : bronchiolar-alveolar adenoma				
Tumor rate				
Overall rates(a)	3/50(6.0)	4/50(8.0)	0/50(0.0)	2/50(4.0)
Adjusted rates(b)	7.89	8.70	0.0	5.13
Terminal rates(c)	3/38(7.9)	3/41(7.3)	0/40(0.0)	2/39(5.1)
Statistical analysis				
Peto test				
Standard method(d)	P = -----			
Prevalence method(d)	P = 0.7154			
Combined analysis(d)	P = -----			
Cochran-Armitage test(e)	P = 0.4916			
Fisher Exact test(e)		P = 0.5000	P = 0.1212	P = 0.5000

STUDY No. : 0448
ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
SEX : MALE

NEOPLASTIC LESIONS-INCIDENCE AND STATISTICAL ANALYSIS

PAGE : 2

Group Name	Control	2000 ppm	6325 ppm	20000 ppm
SITE : lung TUMOR : bronchiolar-alveolar adenoma, bronchiolar-alveolar carcinoma				
Tumor rate				
Overall rates(a)	3/50(6.0)	5/50(10.0)	0/50(0.0)	2/50(4.0)
Adjusted rates(b)	7.89	10.87	0.0	5.13
Terminal rates(c)	3/38(7.9)	4/41(9.8)	0/40(0.0)	2/39(5.1)
Statistical analysis				
Peto test				
Standard method(d)	P = -----			
Prevalence method(d)	P = 0.7789			
Combined analysis(d)	P = -----			
Cochran-Armitage test(e)	P = 0.3867			
Fisher Exact test(e)		P = 0.3575	P = 0.1212	P = 0.5000
SITE : spleen TUMOR : mononuclear cell leukemia				
Tumor rate				
Overall rates(a)	1/50(2.0)	4/50(8.0)	5/50(10.0)	2/50(4.0)
Adjusted rates(b)	0.0	4.88	5.00	2.56
Terminal rates(c)	0/38(0.0)	2/41(4.9)	2/40(5.0)	1/39(2.6)
Statistical analysis				
Peto test				
Standard method(d)	P = 0.5926			
Prevalence method(d)	P = 0.4405			
Combined analysis(d)	P = 0.5533			
Cochran-Armitage test(e)	P = 0.8382			
Fisher Exact test(e)		P = 0.1811	P = 0.1022	P = 0.5000
SITE : pancreas TUMOR : islet cell adenoma				
Tumor rate				
Overall rates(a)	6/50(12.0)	6/50(12.0)	4/50(8.0)	8/50(16.0)
Adjusted rates(b)	15.00	14.63	8.16	18.18
Terminal rates(c)	5/38(13.2)	6/41(14.6)	2/40(5.0)	5/39(12.8)
Statistical analysis				
Peto test				
Standard method(d)	P = -----			
Prevalence method(d)	P = 0.1955			
Combined analysis(d)	P = -----			
Cochran-Armitage test(e)	P = 0.4455			
Fisher Exact test(e)		P = 0.6202	P = 0.3703	P = 0.3871

STUDY No. : 0448
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 SEX : MALE

NEOPLASTIC LESIONS-INCIDENCE AND STATISTICAL ANALYSIS

PAGE : 3

Group Name	Control	2000 ppm	6325 ppm	20000 ppm
SITE : pituitary gland TUMOR : adenoma				
Tumor rate				
Overall rates(a)	16/50(32.0)	12/50(24.0)	10/50(20.0)	8/50(16.0)
Adjusted rates(b)	34.21	27.91	20.93	15.38
Terminal rates(c)	13/38(34.2)	11/41(26.8)	7/40(17.5)	6/39(15.4)
Statistical analysis				
Peto test				
Standard method(d)	P = 0.3944			
Prevalence method(d)	P = 0.9708			
Combined analysis(d)	P = 0.9484			
Cochran-Armitage test(e)	P = 0.0909			
Fisher Exact test(e)		P = 0.2522	P = 0.1271	P = 0.0500
SITE : pituitary gland TUMOR : adenoma, adenocarcinoma				
Tumor rate				
Overall rates(a)	16/50(32.0)	13/50(26.0)	10/50(20.0)	8/50(16.0)
Adjusted rates(b)	34.21	30.23	20.93	15.38
Terminal rates(c)	13/38(34.2)	12/41(29.3)	7/40(17.5)	6/39(15.4)
Statistical analysis				
Peto test				
Standard method(d)	P = 0.3944			
Prevalence method(d)	P = 0.9772			
Combined analysis(d)	P = 0.9582			
Cochran-Armitage test(e)	P = 0.0740			
Fisher Exact test(e)		P = 0.3299	P = 0.1271	P = 0.0500
SITE : thyroid TUMOR : C-cell adenoma				
Tumor rate				
Overall rates(a)	12/50(24.0)	6/50(12.0)	14/50(28.0)	4/50(8.0)
Adjusted rates(b)	30.77	14.63	29.17	10.26
Terminal rates(c)	11/38(28.9)	6/41(14.6)	10/40(25.0)	4/39(10.3)
Statistical analysis				
Peto test				
Standard method(d)	P = -----			
Prevalence method(d)	P = 0.9625			
Combined analysis(d)	P = -----			
Cochran-Armitage test(e)	P = 0.0793			
Fisher Exact test(e)		P = 0.0961	P = 0.4100	P = 0.0269*

STUDY No. : 0448
ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCr.j]
SEX : MALE

NEOPLASTIC LESIONS-INCIDENCE AND STATISTICAL ANALYSIS

PAGE : 4

Group Name	Control	2000 ppm	6325 ppm	20000 ppm
SITE : thyroid TUMOR : C-cell adenoma, C-cell carcinoma				
Tumor rate				
Overall rates(a)	14/50(28.0)	7/50(14.0)	14/50(28.0)	5/50(10.0)
Adjusted rates(b)	33.33	17.07	29.17	12.82
Terminal rates(c)	12/38(31.6)	7/41(17.1)	10/40(25.0)	5/39(12.8)
Statistical analysis				
Peto test				
Standard method(d)	P = 1.0000 ?			
Prevalence method(d)	P = 0.9564			
Combined analysis(d)	P = 0.9681			
Cochran-Armitage test(e)	P = 0.0674			
Fisher Exact test(e)		P = 0.0698	P = 0.5880	P = 0.0198*
SITE : adrenal gland TUMOR : pheochromocytoma				
Tumor rate				
Overall rates(a)	4/50(8.0)	5/50(10.0)	7/50(14.0)	3/50(6.0)
Adjusted rates(b)	9.76	11.63	13.64	7.69
Terminal rates(c)	3/38(7.9)	4/41(9.8)	5/40(12.5)	3/39(7.7)
Statistical analysis				
Peto test				
Standard method(d)	P = 0.3607			
Prevalence method(d)	P = 0.7207			
Combined analysis(d)	P = 0.7217			
Cochran-Armitage test(e)	P = 0.5309			
Fisher Exact test(e)		P = 0.5000	P = 0.2623	P = 0.5000
SITE : adrenal gland TUMOR : pheochromocytoma, pheochromocytoma:malignant				
Tumor rate				
Overall rates(a)	4/50(8.0)	6/50(12.0)	7/50(14.0)	3/50(6.0)
Adjusted rates(b)	9.76	13.95	13.64	7.69
Terminal rates(c)	3/38(7.9)	5/41(12.2)	5/40(12.5)	3/39(7.7)
Statistical analysis				
Peto test				
Standard method(d)	P = 0.3607			
Prevalence method(d)	P = 0.7690			
Combined analysis(d)	P = 0.7687			
Cochran-Armitage test(e)	P = 0.4437			
Fisher Exact test(e)		P = 0.3703	P = 0.2623	P = 0.5000

STUDY No. : 0448
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 SEX : MALE

NEOPLASTIC LESIONS-INCIDENCE AND STATISTICAL ANALYSIS

PAGE : 5

Group Name	Control	2000 ppm	6325 ppm	20000 ppm
SITE : testis				
TUMOR : interstitial cell tumor				
Tumor rate				
Overall rates(a)	34/50(68.0)	41/50(82.0)	39/50(78.0)	36/50(72.0)
Adjusted rates(b)	76.92	90.24	85.37	84.62
Terminal rates(c)	29/38(76.3)	37/41(90.2)	34/40(85.0)	33/39(84.6)
Statistical analysis				
Peto test				
Standard method(d)	P = -----			
Prevalence method(d)	P = 0.4449			
Combined analysis(d)	P = -----			
Cochran-Armitage test(e)	P = 0.7773			
Fisher Exact test(e)		P = 0.0826	P = 0.1839	P = 0.4138

(HPT360A)

BAIS4

- (a): Number of tumor-bearing animals/number of animals examined at the site.
 (b): Kaplan-Meier estimated tumor incidence at the end of the study after adjusting for intercurrent mortality.
 (c): Observed tumor incidence at terminal kill.
 (d): Beneath the control incidence are the P-values associated with the trend test.
 Standard method : Death analysis
 Prevalence method : Incidental tumor test
 Combined analysis : Death analysis + Incidental tumor test
 (e): The Cochran-Armitage and Fisher exact test compare directly the overall incidence rates.
 ? : The conditional probabilities of the largest and smallest possible outcomes can not be estimated or this P-value is beyond the estimated P-value.
 ----- : There is no data which should be statistical analysis.
 Significant difference ; * : $P \leq 0.05$ ** : $P \leq 0.01$
 N.C. : Statistical value cannot be calculated and was not significant.

APPENDIX P 2

NEOPLASTIC LESIONS-INCIDENCE AND STATISTICAL ANALYSIS : FEMALE

STUDY No. : 0448
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 SEX : FEMALE

NEOPLASTIC LESIONS-INCIDENCE AND STATISTICAL ANALYSIS

PAGE : 6

Group Name	Control	2000 ppm	6325 ppm	20000 ppm
SITE : spleen TUMOR : mononuclear cell leukemia				
Tumor rate				
Overall rates(a)	3/50(6.0)	5/50(10.0)	7/50(14.0)	6/50(12.0)
Adjusted rates(b)	2.63	11.63	7.50	4.00
Terminal rates(c)	1/38(2.6)	5/43(11.6)	3/40(7.5)	1/25(4.0)
Statistical analysis				
Peto test				
Standard method(d)	P = 0.0139*			
Prevalence method(d)	P = 0.6305			
Combined analysis(d)	P = 0.0701			
Cochran-Armitage test(e)	P = 0.4496			
Fisher Exact test(e)		P = 0.3575	P = 0.1589	P = 0.2435
SITE : pituitary gland TUMOR : adenoma				
Tumor rate				
Overall rates(a)	14/50(28.0)	19/50(38.0)	11/50(22.0)	12/50(24.0)
Adjusted rates(b)	28.21	41.86	23.81	32.00
Terminal rates(c)	10/38(26.3)	18/43(41.9)	9/40(22.5)	8/25(32.0)
Statistical analysis				
Peto test				
Standard method(d)	P = 0.2456			
Prevalence method(d)	P = 0.4840			
Combined analysis(d)	P = 0.3851			
Cochran-Armitage test(e)	P = 0.3228			
Fisher Exact test(e)		P = 0.1976	P = 0.3224	P = 0.4100
SITE : pituitary gland TUMOR : adenoma, adenocarcinoma				
Tumor rate				
Overall rates(a)	15/50(30.0)	19/50(38.0)	13/50(26.0)	12/50(24.0)
Adjusted rates(b)	28.21	41.86	28.57	32.00
Terminal rates(c)	10/38(26.3)	18/43(41.9)	11/40(27.5)	8/25(32.0)
Statistical analysis				
Peto test				
Standard method(d)	P = 0.3578			
Prevalence method(d)	P = 0.4835			
Combined analysis(d)	P = 0.4356			
Cochran-Armitage test(e)	P = 0.2525			
Fisher Exact test(e)		P = 0.2634	P = 0.4120	P = 0.3264

STUDY No. : 0448
ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
SEX : FEMALE

NEOPLASTIC LESIONS—INCIDENCE AND STATISTICAL ANALYSIS

PAGE : 7

Group Name	Control	2000 ppm	6325 ppm	20000 ppm
SITE : thyroid TUMOR : C-cell adenoma				
Tumor rate				
Overall rates(a)	10/50(20.0)	9/50(18.0)	7/50(14.0)	5/50(10.0)
Adjusted rates(b)	26.32	18.37	17.50	17.86
Terminal rates(c)	10/38(26.3)	7/43(16.3)	7/40(17.5)	4/25(16.0)
Statistical analysis				
Peto test				
Standard method(d)	P = -----			
Prevalence method(d)	P = 0.7418			
Combined analysis(d)	P = -----			
Cochran-Armitage test(e)	P = 0.1517			
Fisher Exact test(e)		P = 0.5000	P = 0.2977	P = 0.1312
SITE : thyroid TUMOR : C-cell adenoma, C-cell carcinoma				
Tumor rate				
Overall rates(a)	10/50(20.0)	9/50(18.0)	7/50(14.0)	5/50(10.0)
Adjusted rates(b)	26.32	18.37	17.50	17.86
Terminal rates(c)	10/38(26.3)	7/43(16.3)	7/40(17.5)	4/25(16.0)
Statistical analysis				
Peto test				
Standard method(d)	P = -----			
Prevalence method(d)	P = 0.7418			
Combined analysis(d)	P = -----			
Cochran-Armitage test(e)	P = 0.1517			
Fisher Exact test(e)		P = 0.5000	P = 0.2977	P = 0.1312
SITE : uterus TUMOR : endometrial stromal polyp				
Tumor rate				
Overall rates(a)	10/50(20.0)	7/50(14.0)	5/50(10.0)	12/50(24.0)
Adjusted rates(b)	25.64	16.28	11.11	39.29
Terminal rates(c)	9/38(23.7)	7/43(16.3)	4/40(10.0)	8/25(32.0)
Statistical analysis				
Peto test				
Standard method(d)	P = -----			
Prevalence method(d)	P = 0.0180*			
Combined analysis(d)	P = -----			
Cochran-Armitage test(e)	P = 0.2790			
Fisher Exact test(e)		P = 0.2977	P = 0.1312	P = 0.4048

STUDY No. : 0448
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 SEX : FEMALE

NEOPLASTIC LESIONS-INCIDENCE AND STATISTICAL ANALYSIS

PAGE : 8

Group Name	Control	2000 ppm	6325 ppm	20000 ppm
SITE : mammary gland TUMOR : fibroadenoma				
Tumor rate				
Overall rates(a)	9/50(18.0)	7/50(14.0)	1/50(2.0)	3/50(6.0)
Adjusted rates(b)	23.68	13.95	2.50	12.00
Terminal rates(c)	9/38(23.7)	6/43(14.0)	1/40(2.5)	3/25(12.0)
Statistical analysis				
Peto test				
Standard method(d)	P = 0.4802			
Prevalence method(d)	P = 0.8641			
Combined analysis(d)	P = 0.8862			
Cochran-Armitage test(e)	P = 0.0640			
Fisher Exact test(e)		P = 0.3929	P = 0.0078**	P = 0.0606
SITE : mammary gland TUMOR : adenoma, fibroadenoma				
Tumor rate				
Overall rates(a)	10/50(20.0)	8/50(16.0)	2/50(4.0)	3/50(6.0)
Adjusted rates(b)	26.32	13.95	5.00	12.00
Terminal rates(c)	10/38(26.3)	6/43(14.0)	2/40(5.0)	3/25(12.0)
Statistical analysis				
Peto test				
Standard method(d)	P = 0.7322			
Prevalence method(d)	P = 0.8932			
Combined analysis(d)	P = 0.9264			
Cochran-Armitage test(e)	P = 0.0350*			
Fisher Exact test(e)		P = 0.3976	P = 0.0139*	P = 0.0357*

(HPT360A)

BAIS4

STUDY No. : 0448
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 SEX : FEMALE

NEOPLASTIC LESIONS-INCIDENCE AND STATISTICAL ANALYSIS

PAGE : 9

Group Name	Control	2000 ppm	6325 ppm	20000 ppm
SITE : mammary gland				
TUMOR : adenoma, fibroadenoma, adenocarcinoma, carcinosarcoma				
Tumor rate				
Overall rates(a)	11/50(22.0)	9/50(18.0)	2/50(4.0)	5/50(10.0)
Adjusted rates(b)	26.32	15.91	5.00	12.00
Terminal rates(c)	10/38(26.3)	6/43(14.0)	2/40(5.0)	3/25(12.0)
Statistical analysis				
Peto test				
Standard method(d)	P = 0.2068			
Prevalence method(d)	P = 0.9097			
Combined analysis(d)	P = 0.7727			
Cochran-Armitage test(e)	P = 0.1083			
Fisher Exact test(e)		P = 0.4016	P = 0.0073**	P = 0.0857

(HPT360A)

BAIS4

- (a): Number of tumor-bearing animals/number of animals examined at the site.
 (b): Kaplan-Meier estimated tumor incidence at the end of the study after adjusting for intercurrent mortality.
 (c): Observed tumor incidence at terminal kill.
 (d): Beneath the control incidence are the P-values associated with the trend test.
 Standard method : Death analysis
 Prevalence method : Incidental tumor test
 Combined analysis : Death analysis + Incidental tumor test
 (e): The Cochran-Armitage and Fisher exact test compare directly the overall incidence rates.
 ? : The conditional probabilities of the largest and smallest possible outcomes can not be estimated or this P-value is beyond the estimated P-value.
 ----- : There is no data which should be statistical analysis.
 Significant difference ; * : $P \leq 0.05$ ** : $P \leq 0.01$
 N.C. : Statistical value cannot be calculated and was not significant.

APPENDIX Q 1

HISTOPATHOLOGICAL FINDINGS: METASTASIS OF TUMOR:

MALE : ALL ANIMALS

STUDY NO. : 0448
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 REPORT TYPE : A1
 SEX : MALE

HISTOPATHOLOGICAL FINDINGS : METASTASIS OF TUMOR (SUMMARY)
 ALL ANIMALS (0-105W)

PAGE : 1

Organ	Findings	Group Name No. of Animals on Study	Control 50	2000 ppm 50	6325 ppm 50	20000 ppm 50
{Respiratory system}						
nasal cavit	metastasis:brain tumor		<50> 0	<49> 0	<50> 1	<50> 0
lung	leukemic cell infiltration		<50> 1	<50> 4	<50> 4	<50> 2
	metastasis:liver tumor		0	0	0	1
	metastasis:adrenal tumor		0	1	0	0
	metastasis:thyroid tumor		2	0	0	1
	metastasis:muscle tumor		0	0	1	0
	metastasis:vertebra tumor		0	0	0	1
{Hematopoietic system}						
bone marrow	leukemic cell infiltration		<50> 1	<50> 2	<50> 3	<50> 1
	metastasis:liver tumor		0	0	0	1
lymph node	leukemic cell infiltration		<50> 0	<50> 0	<50> 1	<50> 0
{Circulatory system}						
heart	leukemic cell infiltration		<50> 0	<50> 2	<50> 1	<50> 0
{Digestive system}						
salivary gl	metastasis:thyroid tumor		<50> 1	<50> 0	<50> 0	<50> 0

< a > a : Number of animals examined at the site
 b b : Number of animals with lesion

STUDY NO. : 0448
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 REPORT TYPE : A1
 SEX : MALE

HISTOPATHOLOGICAL FINDINGS : METASTASIS OF TUMOR (SUMMARY)
 ALL ANIMALS (0-105W)

PAGE : 2

Organ	Findings	Group Name No. of Animals on Study	Control 50	2000 ppm 50	6325 ppm 50	20000 ppm 50
{Digestive system}						
liver	leukemic cell infiltration		<50> 1	<50> 4	<50> 4	<50> 2
	metastasis:adrenal tumor		0	1	0	0
pancreas	leukemic cell infiltration		<50> 0	<50> 1	<50> 1	<50> 0
{Urinary system}						
kidney	leukemic cell infiltration		<50> 1	<50> 2	<50> 2	<50> 1
{Endocrine system}						
pituitary	leukemic cell infiltration		<50> 0	<50> 1	<50> 1	<50> 0
	leukemic cell infiltration		<50> 0	<50> 0	<50> 1	<50> 0
adrenal	leukemic cell infiltration		<50> 0	<50> 1	<50> 0	<50> 0
	metastasis:muscle tumor		0	0	1	0
{Nervous system}						
brain	leukemic cell infiltration		<50> 1	<50> 0	<50> 2	<50> 1
{Body cavities}						
mediastinum	metastasis:lung tumor		<50> 0	<50> 1	<50> 0	<50> 0
< a >	a : Number of animals examined at the site					
b	b : Number of animals with lesion					

STUDY NO. : 0448
ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
REPORT TYPE : A1
SEX : MALE

HISTOPATHOLOGICAL FINDINGS : METASTASIS OF TUMOR (SUMMARY)
ALL ANIMALS (0-105W)

PAGE : 3

		Group Name	Control	2000 ppm	6325 ppm	20000 ppm
		No. of Animals on Study	50	50	50	50
Organ_____	Findings_____					
{Body cavities}						
peritoneum		<50>	<50>	<50>	<50>	
	metastasis:muscle tumor	0	0	1	0	
< a >	a : Number of animals examined at the site					
b	b : Number of animals with lesion					
(JPT150)						

APPENDIX Q 2

HISTOPATHOLOGICAL FINDINGS: METASTASIS OF TUMOR:

MALE : DEAD AND MORIBUND ANIMALS

STUDY NO. : 0448
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCr1j]
 REPORT TYPE : A1
 SEX : MALE

HISTOPATHOLOGICAL FINDINGS : METASTASIS OF TUMOR (SUMMARY)
 DEAD AND MORIBUND ANIMALS (0-105W)

PAGE : 1

Organ	Findings	Group Name No. of Animals on Study	Control 12	2000 ppm 9	6325 ppm 10	20000 ppm 11
{Respiratory system}						
lung			<12>	< 9>	<10>	<11>
	leukemic cell infiltration		1	2	3	1
	metastasis:liver tumor		0	0	0	1
	metastasis:adrenal tumor		0	1	0	0
	metastasis:thyroid tumor		1	0	0	0
	metastasis:muscle tumor		0	0	1	0
	metastasis:vertebra tumor		0	0	0	1
{Hematopoietic system}						
bone marrow			<12>	< 9>	<10>	<11>
	leukemic cell infiltration		1	1	3	0
	metastasis:liver tumor		0	0	0	1
lymph node			<12>	< 9>	<10>	<11>
	leukemic cell infiltration		0	0	1	0
{Circulatory system}						
heart			<12>	< 9>	<10>	<11>
	leukemic cell infiltration		0	1	1	0
{Digestive system}						
salivary gl			<12>	< 9>	<10>	<11>
	metastasis:thyroid tumor		1	0	0	0

< a > a : Number of animals examined at the site
 b b : Number of animals with lesion

STUDY NO. : 0448
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 REPORT TYPE : A1
 SEX : MALE

HISTOPATHOLOGICAL FINDINGS : METASTASIS OF TUMOR (SUMMARY)
 DEAD AND MORIBUND ANIMALS (0-105W)

PAGE : 2

Organ	Findings	Group Name No. of Animals on Study	Control 12	2000 ppm 9	6325 ppm 10	20000 ppm 11
{Digestive system}						
liver	leukemic cell infiltration		<12> 1	< 9> 2	<10> 3	<11> 1
	metastasis:adrenal tumor		0	1	0	0
pancreas	leukemic cell infiltration		<12> 0	< 9> 0	<10> 1	<11> 0
{Urinary system}						
kidney	leukemic cell infiltration		<12> 1	< 9> 1	<10> 2	<11> 1
{Endocrine system}						
pituitary	leukemic cell infiltration		<12> 0	< 9> 0	<10> 1	<11> 0
	metastasis:muscle tumor		<12> 0	< 9> 0	<10> 1	<11> 0
{Nervous system}						
brain	leukemic cell infiltration		<12> 1	< 9> 0	<10> 2	<11> 1
{Body cavities}						
peritoneum	metastasis:muscle tumor		<12> 0	< 9> 0	<10> 1	<11> 0

< a > a : Number of animals examined at the site
 b b : Number of animals with lesion

APPENDIX Q 3

HISTOPATHOLOGICAL FINDINGS: METASTASIS OF TUMOR:

MALE : SACRIFICED ANIMALS

STUDY NO. : 0448
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 REPORT TYPE : A1
 SEX : MALE

HISTOPATHOLOGICAL FINDINGS : METASTASIS OF TUMOR (SUMMARY)
 SACRIFICED ANIMALS (105W)

PAGE : 1

Organ	Findings	Group Name No. of Animals on Study	Control 38	2000 ppm 41	6325 ppm 40	20000 ppm 39
{Respiratory system}						
nasal cavit	metastasis:brain tumor		<38> 0	<41> 0	<40> 1	<39> 0
lung	leukemic cell infiltration		<38> 0	<41> 2	<40> 1	<39> 1
	metastasis:thyroid tumor		1	0	0	1
{Hematopoietic system}						
bone marrow	leukemic cell infiltration		<38> 0	<41> 1	<40> 0	<39> 1
{Circulatory system}						
heart	leukemic cell infiltration		<38> 0	<41> 1	<40> 0	<39> 0
{Digestive system}						
liver	leukemic cell infiltration		<38> 0	<41> 2	<40> 1	<39> 1
pancreas	leukemic cell infiltration		<38> 0	<41> 1	<40> 0	<39> 0
{Urinary system}						
kidney	leukemic cell infiltration		<38> 0	<41> 1	<40> 0	<39> 0
{Endocrine system}						
pituitary	leukemic cell infiltration		<38> 0	<41> 1	<40> 0	<39> 0
< a >	a : Number of animals examined at the site					
b	b : Number of animals with lesion					

STUDY NO. : 0448
ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
REPORT TYPE : A1
SEX : MALE

HISTOPATHOLOGICAL FINDINGS : METASTASIS OF TUMOR (SUMMARY)
SACRIFICED ANIMALS (105W)

PAGE : 2

Organ_____ Findings_____		Group Name No. of Animals on Study	Control 38	2000 ppm 41	6325 ppm 40	20000 ppm 39
{Endocrine system}						
thyroid			<38>	<41>	<40>	<39>
	leukemic cell infiltration		0	0	1	0
adrenal			<38>	<41>	<40>	<39>
	leukemic cell infiltration		0	1	0	0
{Body cavities} .						
mediastinum			<38>	<41>	<40>	<39>
	metastasis:lung tumor		0	1	0	0
<hr/>						
< a >	a : Number of animals examined at the site					
b	b : Number of animals with lesion					

(JPT150)

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APPENDIX Q 4

HISTOPATHOLOGICAL FINDINGS: METASTASIS OF TUMOR:

FEMALE : ALL ANIMALS

STUDY NO. : 0448
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 REPORT TYPE : A1
 SEX : FEMALE

HISTOPATHOLOGICAL FINDINGS : METASTASIS OF TUMOR (SUMMARY)
 ALL ANIMALS (0-105W)

PAGE : 4

Organ	Findings	Group Name No. of Animals on Study	Control 50	2000 ppm 50	6325 ppm 50	20000 ppm 50
{Respiratory system}						
lung			<50>	<50>	<50>	<50>
	leukemic cell infiltration		2	3	6	5
	metastasis:uterus tumor		0	0	0	1
	metastasis:adrenal tumor		0	1	0	0
	metastasis:bone tumor		1	0	0	0
	metastasis:mammary gland tumor		0	0	0	1
	metastasis:large intestine tumor		0	0	0	1
{Hematopoietic system}						
bone marrow			<50>	<50>	<50>	<50>
	leukemic cell infiltration		1	1	2	2
lymph node			<50>	<50>	<50>	<50>
	leukemic cell infiltration		1	1	1	3
	metastasis:uterus tumor		1	0	0	0
	metastasis:bone tumor		1	0	0	0
	metastasis:mammary gland tumor		0	0	0	1
	metastasis:large intestine tumor		0	0	0	1
thymus			<50>	<50>	<50>	<50>
	metastasis:uterus tumor		1	0	0	0
spleen			<50>	<50>	<50>	<50>
	metastasis:large intestine tumor		0	1	0	0
< a >	a : Number of animals examined at the site					
b	b : Number of animals with lesion					

STUDY NO. : 0448
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 REPORT TYPE : A1
 SEX : FEMALE

HISTOPATHOLOGICAL FINDINGS : METASTASIS OF TUMOR (SUMMARY)
 ALL ANIMALS (0-105W)

PAGE : 5

Organ	Findings	Group Name No. of Animals on Study	Control 50	2000 ppm 50	6325 ppm 50	20000 ppm 50
{Circulatory system}						
heart	leukemic cell infiltration		<50> 0	<50> 1	<50> 0	<50> 1
{Digestive system}						
liver	leukemic cell infiltration		<50> 3	<50> 5	<50> 7	<50> 4
	metastasis:uterus tumor		1	0	0	0
	metastasis:adrenal tumor		0	1	0	0
	metastasis:large intestine tumor		0	0	0	1
pancreas	leukemic cell infiltration		<50> 0	<50> 1	<50> 0	<50> 0
	metastasis:uterus tumor		1	0	0	0
	metastasis:large intestine tumor		0	1	0	1
{Urinary system}						
kidney	leukemic cell infiltration		<50> 0	<50> 0	<50> 0	<50> 2
	metastasis:uterus tumor		1	0	0	0
	metastasis:bone tumor		1	0	0	0
	metastasis:large intestine tumor		0	0	0	1
urin bladd	leukemic cell infiltration		<50> 0	<50> 1	<50> 0	<50> 0

< a > a : Number of animals examined at the site
 b b : Number of animals with lesion

STUDY NO. : 0448
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 REPORT TYPE : A1
 SEX : FEMALE

HISTOPATHOLOGICAL FINDINGS : METASTASIS OF TUMOR (SUMMARY)
 ALL ANIMALS (0-105W)

PAGE : 6

Organ	Findings	Group Name No. of Animals on Study	Control 50	2000 ppm 50	6325 ppm 50	20000 ppm 50
{Endocrine system}						
adrenal			<50>	<50>	<50>	<50>
	leukemic cell infiltration		0	0	0	1
	metastasis:uterus tumor		1	0	0	0
	metastasis:bone tumor		1	0	0	0
{Reproductive system}						
ovary			<50>	<50>	<50>	<50>
	metastasis:bone tumor		1	0	0	0
uterus			<50>	<50>	<50>	<50>
	leukemic cell infiltration		0	1	0	1
{Nervous system}						
brain			<50>	<50>	<50>	<50>
	leukemic cell infiltration		1	1	0	3
	metastasis:pituitary tumor		1	0	1	0
spinal cord			<50>	<50>	<50>	<50>
	leukemic cell infiltration		1	0	0	2
{Body cavities}						
pleura			<50>	<50>	<50>	<50>
	metastasis:bone tumor		1	0	0	0
peritoneum			<50>	<50>	<50>	<50>
	metastasis:uterus tumor		0	1	0	0
< a >	a : Number of animals examined at the site					
b	b : Number of animals with lesion					

STUDY NO. : 0448
ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
REPORT TYPE : A1
SEX : FEMALE

HISTOPATHOLOGICAL FINDINGS : METASTASIS OF TUMOR (SUMMARY)
ALL ANIMALS (0-105W)

PAGE : 7

Group Name		Control	2000 ppm	6325 ppm	20000 ppm
No. of Animals on Study		50	50	50	50
Organ	Findings				
{Body cavities}					
peritoneum	metastasis:large intestine tumor	<50> 0	<50> 0	<50> 0	<50> 1
< a >	a : Number of animals examined at the site				
b	b : Number of animals with lesion				

(JPT150)

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APPENDIX Q 5

HISTOPATHOLOGICAL FINDINGS: METASTASIS OF TUMOR:
FEMALE : DEAD AND MORIBUND ANIMALS

STUDY NO. : 0448
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 REPORT TYPE : A1
 SEX : FEMALE

HISTOPATHOLOGICAL FINDINGS : METASTASIS OF TUMOR (SUMMARY)
 DEAD AND MORIBUND ANIMALS (0-105W)

PAGE : 3

Organ	Findings	Group Name No. of Animals on Study	Control 12	2000 ppm 7	6325 ppm 10	20000 ppm 25
{Respiratory system}						
lung			<12>	< 7>	<10>	<25>
	leukemic cell infiltration		2	1	4	4
	metastasis:uterus tumor		0	0	0	1
	metastasis:adrenal tumor		0	1	0	0
	metastasis:bone tumor		1	0	0	0
	metastasis:mammary gland tumor		0	0	0	1
	metastasis:large intestine tumor		0	0	0	1
{Hematopoietic system}						
bone marrow			<12>	< 7>	<10>	<25>
	leukemic cell infiltration		1	0	1	2
lymph node			<12>	< 7>	<10>	<25>
	leukemic cell infiltration		1	1	0	3
	metastasis:uterus tumor		1	0	0	0
	metastasis:bone tumor		1	0	0	0
	metastasis:mammary gland tumor		0	0	0	1
	metastasis:large intestine tumor		0	0	0	1
thymus			<12>	< 7>	<10>	<25>
	metastasis:uterus tumor		1	0	0	0
spleen			<12>	< 7>	<10>	<25>
	metastasis:large intestine tumor		0	1	0	0
< a >	a : Number of animals examined at the site					
b	b : Number of animals with lesion					

STUDY NO. : 0448
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 REPORT TYPE : A1
 SEX : FEMALE

HISTOPATHOLOGICAL FINDINGS : METASTASIS OF TUMOR (SUMMARY)
 DEAD AND MORIBUND ANIMALS (0-105W)

PAGE : 4

Organ	Findings	Group Name No. of Animals on Study	Control 12	2000 ppm 7	6325 ppm 10	20000 ppm 25
{Circulatory system}						
heart	leukemic cell infiltration		<12> 0	< 7> 0	<10> 0	<25> 1
{Digestive system}						
liver	leukemic cell infiltration		<12> 2	< 7> 1	<10> 4	<25> 4
	metastasis:uterus tumor		1	0	0	0
	metastasis:adrenal tumor		0	1	0	0
	metastasis:large intestine tumor		0	0	0	1
pancreas	leukemic cell infiltration		<12> 0	< 7> 1	<10> 0	<25> 0
	metastasis:uterus tumor		1	0	0	0
	metastasis:large intestine tumor		0	1	0	1
{Urinary system}						
kidney	leukemic cell infiltration		<12> 0	< 7> 0	<10> 0	<25> 2
	metastasis:uterus tumor		1	0	0	0
	metastasis:bone tumor		1	0	0	0
	metastasis:large intestine tumor		0	0	0	1
urin bladd	leukemic cell infiltration		<12> 0	< 7> 1	<10> 0	<25> 0
< a > a : Number of animals examined at the site b b : Number of animals with lesion						

STUDY NO. : 0448
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 REPORT TYPE : A1
 SEX : FEMALE

HISTOPATHOLOGICAL FINDINGS : METASTASIS OF TUMOR (SUMMARY)
 DEAD AND MORIBUND ANIMALS (0-105W)

PAGE : 5

Organ	Findings	Group Name No. of Animals on Study	Control 12	2000 ppm 7	6325 ppm 10	20000 ppm 25
{Endocrine system}						
adrenal			<12>	< 7>	<10>	<25>
	leukemic cell infiltration		0	0	0	1
	metastasis:uterus tumor		1	0	0	0
	metastasis:bone tumor		1	0	0	0
{Reproductive system}						
ovary			<12>	< 7>	<10>	<25>
	metastasis:bone tumor		1	0	0	0
uterus			<12>	< 7>	<10>	<25>
	leukemic cell infiltration		0	1	0	0
{Nervous system}						
brain			<12>	< 7>	<10>	<25>
	leukemic cell infiltration		1	1	0	3
	metastasis:pituitary tumor		1	0	0	0
spinal cord			<12>	< 7>	<10>	<25>
	leukemic cell infiltration		1	0	0	2
{Body cavities}						
pleura			<12>	< 7>	<10>	<25>
	metastasis:bone tumor		1	0	0	0
peritoneum			<12>	< 7>	<10>	<25>
	metastasis:large intestine tumor		0	0	0	1
< a >	a : Number of animals examined at the site					
b	b : Number of animals with lesion					

APPENDIX Q 6

HISTOPATHOLOGICAL FINDINGS: METASTASIS OF TUMOR:
FEMALE : SACRIFICED ANIMALS

STUDY NO. : 0448
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 REPORT TYPE : A1
 SEX : FEMALE

HISTOPATHOLOGICAL FINDINGS : METASTASIS OF TUMOR (SUMMARY)
 SACRIFICED ANIMALS (105W)

PAGE : 3

Organ	Findings	Group Name No. of Animals on Study	Control 38	2000 ppm 43	6325 ppm 40	20000 ppm 25
{Respiratory system}						
lung	leukemic cell infiltration		<38> 0	<43> 2	<40> 2	<25> 1
{Hematopoietic system}						
bone marrow	leukemic cell infiltration		<38> 0	<43> 1	<40> 1	<25> 0
lymph node	leukemic cell infiltration		<38> 0	<43> 0	<40> 1	<25> 0
{Circulatory system}						
heart	leukemic cell infiltration		<38> 0	<43> 1	<40> 0	<25> 0
{Digestive system}						
liver	leukemic cell infiltration		<38> 1	<43> 4	<40> 3	<25> 0
{Reproductive system}						
uterus	leukemic cell infiltration		<38> 0	<43> 0	<40> 0	<25> 1
{Nervous system}						
brain	metastasis:pituitary tumor		<38> 0	<43> 0	<40> 1	<25> 0
< a >	a : Number of animals examined at the site					
b	b : Number of animals with lesion					

STUDY NO. : 0448
ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
REPORT TYPE : A1
SEX : FEMALE

HISTOPATHOLOGICAL FINDINGS : METASTASIS OF TUMOR (SUMMARY)
SACRIFICED ANIMALS (105W)

PAGE : 4

Organ	Findings	Group Name No. of Animals on Study	Control 38	2000 ppm 43	6325 ppm 40	20000 ppm 25
-------	----------	---------------------------------------	---------------	----------------	----------------	-----------------

{Body cavities}

peritoneum	metastasis:uterus tumor	<38> 0	<43> 1	<40> 0	<25> 0
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< a > a : Number of animals examined at the site
b b : Number of animals with lesion

(JPT150)

BATS4

APPENDIX R

METHODS, UNITS AND DECIMAL PLACE FOR
HEMATOLOGY AND BIOCHEMISTRY IN THE 2-YEAR
DRINKING WATER STUDY OF METHYL ACETOACETATE

METHODS, UNITS AND DECIMAL PLACE FOR HEMATOLOGY AND BIOCHEMISTRY IN THE 2-YEAR DRINKING WATER STUDY OF METHYL ACETOACETATE

Item	Method	Unit	Decimal place
Hematology			
Red blood cell (RBC)	Light scattering method ¹⁾	$\times 10^6/\mu\text{L}$	2
Hemoglobin(Hgb)	Cyanmethemoglobin method ¹⁾	g/dL	1
Hematocrit(Hct)	Calculated as $\text{RBC} \times \text{MCV} / 10$ ¹⁾	%	1
Mean corpuscular volume(MCV)	Light scattering method ¹⁾	fL	1
Mean corpuscular hemoglobin(MCH)	Calculated as $\text{Hgb} / \text{RBC} \times 10$ ¹⁾	pg	1
Mean corpuscular hemoglobin concentration (MCHC)	Calculated as $\text{Hgb} / \text{Hct} \times 100$ ¹⁾	g/dL	1
Platelet	Light scattering method ¹⁾	$\times 10^3/\mu\text{L}$	0
White blood cell(WBC)	Light scattering method ¹⁾	$\times 10^3/\mu\text{L}$	2
Differential WBC	Pattern recognition method ²⁾ (Wright staining)	%	0
Biochemistry			
Total protein(TP)	Biuret method ³⁾	g/dL	1
Albumin (Alb)	BCG method ³⁾	g/dL	1
A/G ratio	Calculated as $\text{Alb} / (\text{TP} - \text{Alb})$ ³⁾	—	1
T-bilirubin	Alkaline azobilirubin method ³⁾	mg/dL	2
Glucose	GlcK·G-6-PDH method ³⁾	mg/dL	0
T-cholesterol	CE·COD·POD method ³⁾	mg/dL	0
Triglyceride	LPL·GK·GPO·POD method ³⁾	mg/dL	0
Phospholipid	PLD·ChOD·POD method ³⁾	mg/dL	0
Aspartate aminotransferase (AST)	JSCC method ³⁾	IU/L	0
Alanine aminotransferase (ALT)	JSCC method ³⁾	IU/L	0
Lactate dehydrogenase (LDH)	SFBC method ³⁾	IU/L	0
Alkaline phosphatase (ALP)	GSCC method ³⁾	IU/L	0
γ -Glutamyl transpeptidase (γ -GTP)	JSCC method ³⁾	IU/L	0
Creatine kinase (CK)	JSCC method ³⁾	IU/L	0
Urea nitrogen	Urease·GLDH method ³⁾	mg/dL	1
Creatinine	Jaffe method ³⁾	mg/dL	1
Sodium	Ion selective electrode method ³⁾	mEq/L	0
Potassium	Ion selective electrode method ³⁾	mEq/L	1
Chloride	Ion selective electrode method ³⁾	mEq/L	0
Calcium	OCPC method ³⁾	mg/dL	1
Inorganic phosphorus	PNP·XOD·POD method ³⁾	mg/dL	1

1) Automatic blood cell analyzer (ADVIA120 : Bayer Corporation)

2) Automatic blood cell differential analyzer (MICROX HEG-120NA : OMRON Corporation)

3) Automatic analyzer (Hitachi 7070 : Hitachi, Ltd.)