

1-クロロ-2-ニトロベンゼンのラットを用いた
経口投与によるがん原性試験（混餌試験）報告書

試験番号：0461

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APPENDIX A 1

IDENTITY OF 1-CHLORO-2-NITROBENZENE IN THE 2-YEAR FEED STUDY

IDENTITY OF 1-CHLORO-2-NITROBENZENE IN THE 2-YEAR FEED STUDY

Test Substance : 1-Chloro-2-nitrobenzene (Wako Pure Chemical Industries, Ltd.)

Lot No. : LDE9795

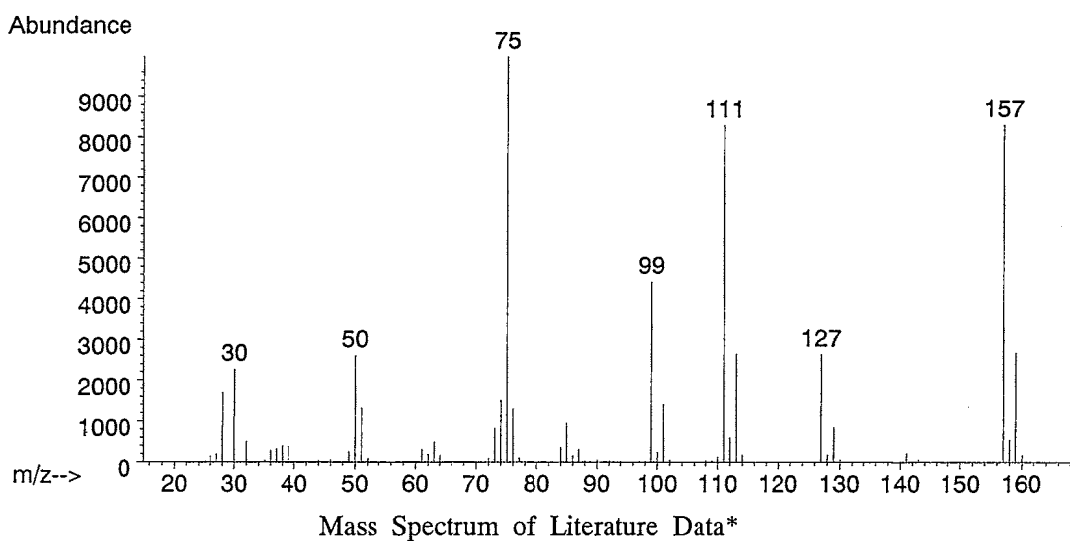
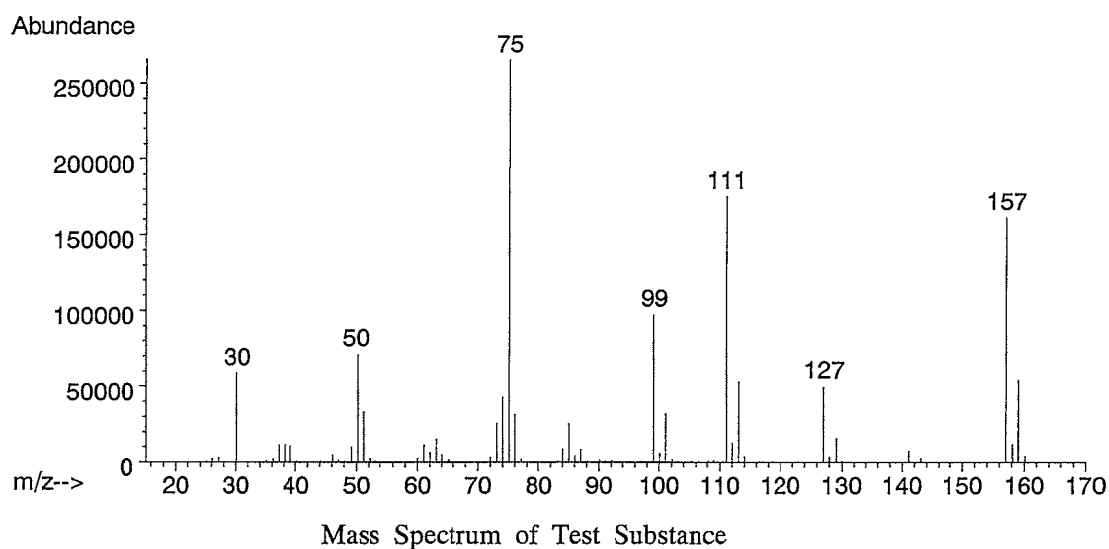
1. Spectral Data

Mass Spectrometry

Instrument : Hewlett Packard 5989B Mass Spectrometer

Ionization : EI (Electron Ionization)

Ionization Voltage : 70eV



Result: The mass spectrum was consistent with literature spectrum.

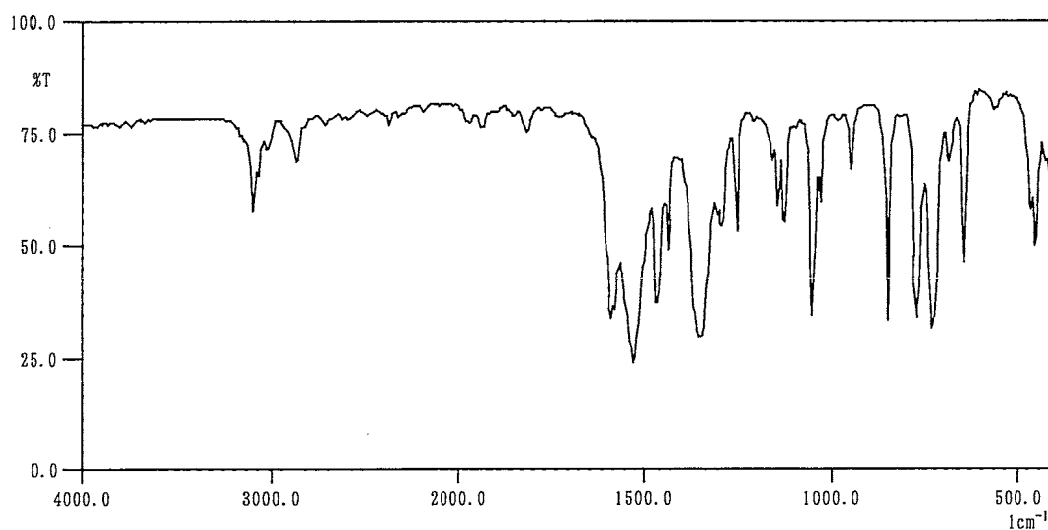
(*McLafferty FW, ed. 1994. Wiley Registry of Mass Spectral Data. 6th ed.
New York, NY : John Wiley and Sons.)

Infrared Spectrometry

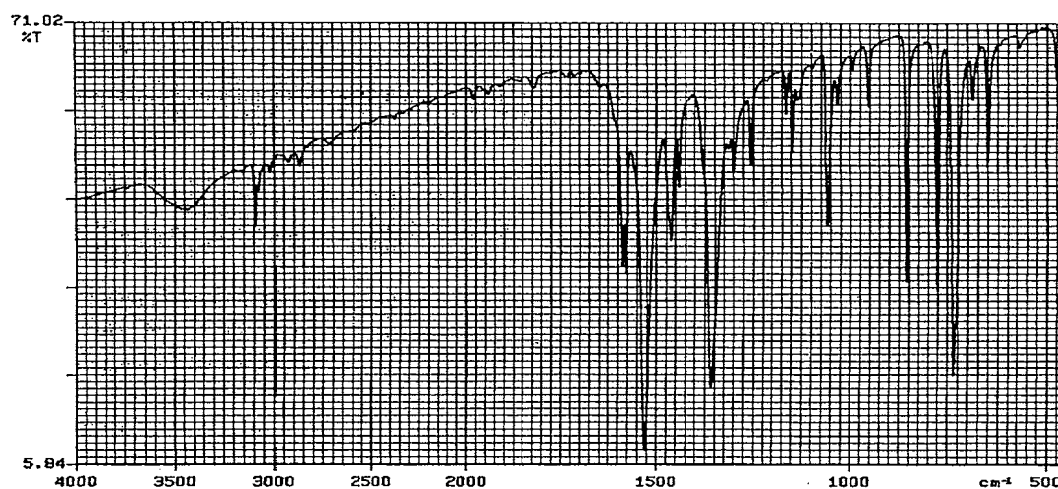
Instrument : Shimadzu FTIR-8200PC Infrared Spectrometer

Cell : KBr

Resolution : 2 cm^{-1}



Infrared Spectrum of Test Substance



Infrared Spectrum of Literature Data*

Result: The infrared spectrum was consistent with literature spectrum.

(*Performed by Wako Pure Chemical Industries, Ltd.)

2. Conclusion: The test substance was identified as 1-chloro-2-nitrobenzene by mass spectrum and infrared spectrum.

APPENDIX A 2

STABILITY OF 1-CHLORO-2-NITROBENZENE IN THE 2-YEAR FEED STUDY

STABILITY OF 1-CHLORO-2-NITROBENZENE IN THE 2-YEAR FEED STUDY

Test Substance : 1-Chloro-2-nitrobenzene (Wako Pure Chemical Industries, Ltd.)
Lot No. : LDE9795
1. Sample : This lot was used from 2002.11.11 to 2004.11.15. The test substance was stored in cold storage in a dark place.

2. High Performance Liquid Chromatography

Instrument : Hewlett Packard 1090 High Performance Liquid Chromatograph
Column : TSK-GEL ODS-80TM (4.6 mm ϕ \times 15 cm)
Column Temperature : Room Temperature
Mobile Phase : Acetonitrile : Distilled Water = 1 : 1
Flow Rate : 1 mL/min
Detector : UV (254 nm)
Injection Volume : 20 μ L

Date (date analyzed)	Peak No.	Retention Time (min)	Area (%)
2002.10.17	1	7.551	100
2004.12.21	1	7.449	100

Result: High performance liquid chromatography indicated one major peak (peak No.1) analyzed on 2002.10.17 and one major peak (peak No.1) analyzed on 2004.12.21. No new trace impurity peak in the test substance analyzed on 2004.12.21 was detected.

3. Conclusion: The test substance was stable for about 26 months in cold storage in a dark place.

APPENDIX A 3

CONCENTRATION OF 1-CHLORO-2-NITROBENZENE IN FORMULATED DIETS IN THE 2-YEAR FEED STUDY

CONCENTRATION OF 1-CHLORO-2-NITROBENZENE IN FORMULATED DIETS IN THE 2-YEAR FEED STUDY

Date Analyzed	Target Concentration		
	80 ^a	400	2000
2002.11.11	76.8 (96.0) ^b	380 (95.0)	2100 (105)
2003.01.27	76.3 (95.4)	393 (98.3)	1920 (96.0)
2003.04.21	79.9 (99.9)	419 (105)	2090 (105)
2003.07.14	81.5 (102)	397 (99.3)	2110 (106)
2003.09.22	79.7 (99.6)	394 (98.5)	1910 (95.5)
2003.12.15	77.5 (96.9)	392 (98.0)	1950 (97.5)
2004.03.08	77.2 (96.5)	398 (99.5)	1980 (99.0)
2004.05.31	77.8 (97.3)	396 (99.0)	1910 (95.5)
2004.08.23	80.8 (101)	395 (98.8)	1960 (98.0)

^a ppm

^b %

Analytical Method : The samples were analyzed by high performance liquid chromatography.

Instrument : Hewlett Packard 1090 High Performance Liquid Chromatograph

Column : TSK-GEL ODS-80TM (4.6 mm ϕ \times 15 cm)

Column Temperature : Room Temperature

Mobile Phase : Acetonitrile : Distilled Water = 1 : 1

Flow Rate : 1 mL/min

Detector : UV (254 nm)

Injection Volume : 20 μ L

APPENDIX A 4

HOMOGENEITY OF 1-CHLORO-2-NITROBENZENE IN FORMULATED DIETS IN THE 2-YEAR FEED STUDY

HOMOGENEITY OF 1-CHLORO-2-NITROBENZENE IN FORMULATED DIETS IN THE 2-YEAR FEED STUDY

	Target Concentration		
	80 ^a	400	2000
Coefficient Variation	0.90 ^b	4.22	1.39

^a ppm

^b % (n=7)

Analytical Method : The samples were analyzed by high performance liquid chromatography.

Instrument : Hewlett Packard 1090 High Performance Liquid Chromatograph

Column : TSK-GEL ODS-80TM (4.6 mm ϕ \times 15 cm)

Column Temperature : Room Temperature

Mobile Phase : Acetonitrile : Distilled Water = 1 : 1

Flow Rate : 1 mL/min

Detector : UV (254 nm)

Injection Volume : 20 μ L

APPENDIX A 5

STABILITY OF 1-CHLORO-2-NITROBENZENE IN FORMULATED DIETS

STABILITY OF 1-CHLORO-2-NITROBENZENE IN FORMULATED DIETS

Date Prepared	Date Analyzed	Target Concentration	
		50 ^a	5000
2001.10.11	2001.10.11	50.3 (100) ^b	4840 (100)
	2001.10.19 ^c	44.7 (88.9)	3890 (80.4)
	2001.11.30 ^d	52.2 (104)	4810 (99.4)

^a ppm

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

^c Animal room samples

^d Cold storage samples

Analytical Method : The samples were analyzed by high performance liquid chromatography.

Instrument : Hewlett Packard 1090 High Performance Liquid Chromatograph

Column : TSK-GEL ODS-80TM (4.6 mm ϕ \times 15 cm)

Column Temperature : Room Temperature

Mobile Phase : Acetonitrile : Distilled Water = 1 : 1

Flow Rate : 1 mL/min

Detector : UV (254 nm)

Injection Volume : 20 μ L

APPENDIX B 1

CLINICAL OBSERVATION : MALE

STUDY NO. : 0461
 ANIMAL : RAT F344/DuCr1j[F344/DuCrj]
 REPORT TYPE : A1 104

CLINICAL OBSERVATION (SUMMARY)
 ALL ANIMALS

SEX : MALE

PAGE : 1

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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ABNORMAL GAIT	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
COLORED	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	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

STUDY NO. : 0461
 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			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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ABNORMAL GAIT	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
COLORED	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	2	2	2	2	2	2	2	2	3	3	3	3	3	3

STUDY NO. : 0461
ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
REPORT TYPE : A1 104

CLINICAL OBSERVATION (SUMMARY)
ALL ANIMALS

SEX : MALE

PAGE : 3

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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ABNORMAL GAIT	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
COLORED	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	4	4	6	5	5	5	7	7	7	7	10	10	10	10

STUDY NO. : 0461
 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													
		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	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	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	1	1	1	1
MORIBUND SACRIFICE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ABNORMAL GAIT	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
COLORED	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	10	10	10	11	9	9	9	9	11	11	11	11	14	14

STUDY NO. : 0461
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
DEATH	Control	0	0	0	1	1	1	1	1	1	1	1	1	1	1
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	2000 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
MORIBUND SACRIFICE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	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
LOCOMOTOR MOVEMENT DECR	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ABNORMAL GAIT	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
COLORED	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	14	14	13	13	14	14	14	14	14	14	14	14	14	14

STUDY NO. : 0461
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
DEATH	Control	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	80 ppm	0	0	0	0	0	1	1	1	1	2	2	2	2	2
	400 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	2000 ppm	1	1	1	3	3	5	7	11	12	13	15	18	20	20
MORIBUND SACRIFICE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	1	1	1	1	1	1	1
	2000 ppm	1	2	2	2	2	2	2	2	2	2	5	7	8	8
LOCOMOTOR MOVEMENT DECR	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	1	0	0	0	0	0	1
PARALYTIC GAIT	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	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	0	0
ABNORMAL GAIT	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	1	2	0	0	0	0	0	1	1	0	0
SOILED	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
COLORED	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	11	10	10	8	8	8	8	6	7	7	6	5	3	3

STUDY NO. : 0461
ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCr1j]
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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	1	1	2	2	4	4	4	5	6	6	6	6	6	7
	80 ppm	2	2	2	2	2	3	3	4	4	4	4	4	4	4
	400 ppm	1	1	2	2	2	3	3	3	3	3	3	3	3	3
	2000 ppm	21	23	23	25	25	25	25	26	27	27	30	31	31	32
MORIBUND SACRIFICE	Control	0	0	0	1	1	1	1	1	1	1	1	1	1	1
	80 ppm	0	0	0	0	0	1	1	1	1	1	2	2	2	2
	400 ppm	1	1	1	1	1	2	2	2	2	2	3	3	3	3
	2000 ppm	9	9	12	14	14	15	15	15	15	16	16	16	16	16
LOCOMOTOR MOVEMENT DECR	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ABNORMAL GAIT	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WASTING	Control	0	0	1	1	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	1	0	2	0	0	0	0	0	1	0	0	0	0	0
SOILED	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
COLORED	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	3	3	2	2	2	1	1	1	0	0	0	0	0	0

STUDY NO. : 0461
 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	7	7	8	9	9	9
	80 ppm	4	5	5	7	7	7
	400 ppm	3	4	5	6	7	7
	2000 ppm	32	32	32	32	32	-
MORIBUND SACRIFICE	Control	1	1	1	1	1	1
	80 ppm	3	3	3	3	3	3
	400 ppm	3	3	3	3	3	4
	2000 ppm	16	17	17	17	18	-
LOCOMOTOR MOVEMENT DECR	Control	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0
	400 ppm	0	0	0	0	1	0
	2000 ppm	0	0	0	0	-	-
PARALYTIC GAIT	Control	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0
	2000 ppm	0	0	0	0	-	-
ABNORMAL GAIT	Control	0	0	0	0	0	0
	80 ppm	1	1	0	0	0	0
	400 ppm	0	0	0	0	0	0
	2000 ppm	0	0	0	0	-	-
WASTING	Control	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0
	2000 ppm	0	0	0	0	-	-
SOILED	Control	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0
	400 ppm	0	0	0	1	0	0
	2000 ppm	0	0	0	0	-	-
COLORED	Control	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0
	2000 ppm	0	0	0	0	-	-

STUDY NO. : 0461
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
PILOERECTION	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ABNORMAL GROWTH OF TEETH	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

STUDY NO. : 0461
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
PILOERECTOR	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	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
SOILED PERI-GENITALIA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	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
EXOPHTHALMOS	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	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
CATARACT	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1
	400 ppm	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
CORNEAL OPACITY	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	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
ANTERIOR CHAMBER OPACITY	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	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
ABNORMAL GROWTH OF TEETH	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	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
EXTERNAL MASS	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0
	400 ppm	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

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 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												
PILORECTION	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	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
SOILED PERI-GENITALIA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	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
EXOPHTHALMOS	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	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
CATARACT	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
	80 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	400 ppm	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	1	1	1	1	1	1	1
CORNEAL OPACITY	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	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
ANTERIOR CHAMBER OPACITY	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	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
ABNORMAL GROWTH OF TEETH	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	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	1	1	1
EXTERNAL MASS	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	1	2	3	3	2	2	2
	400 ppm	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	1	0	0	0	1	1	2

STUDY NO. : 0461
 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												
PILOERECTION	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	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
SOILED PERI-GENITALIA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	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
EXOPHTHALMOS	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	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
CATARACT	Control	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	80 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2
CORNEAL OPACITY	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	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
ANTERIOR CHAMBER OPACITY	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	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
ABNORMAL GROWTH OF TEETH	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	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
EXTERNAL MASS	Control	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1
	80 ppm	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	2	1	1	0	0	0	0	0	0	0	0	0	0	0	2

STUDY NO. : 0461
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
PILOERECTOR	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	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
SOILED PERI-GENITALIA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	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
EXOPHTHALMOS	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	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	1
	80 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	400 ppm	0	1	1	1	1	1	1	1	1	1	1	1	1	1
	2000 ppm	2	2	2	2	2	2	2	3	3	4	3	3	3	3
CORNEAL OPACITY	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ABNORMAL GROWTH OF TEETH	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	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
EXTERNAL MASS	Control	1	3	3	3	2	2	2	2	2	2	2	2	2	2
	80 ppm	2	2	3	3	4	3	3	3	3	5	4	5	5	5
	400 ppm	0	1	1	1	1	1	1	1	1	2	2	2	2	2
	2000 ppm	3	3	3	4	4	4	4	4	4	4	4	6	5	6

STUDY NO. : 0461
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
PILOERECTION	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	1	0	0	0	0	0	0	1	0	1	1	0	0	0
SOILED PERI-GENITALIA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	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	0	0	0	0
EXOPHTHALMOS	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	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	1
	80 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	400 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	2
	2000 ppm	3	2	2	2	2	2	2	2	2	2	1	1	0	1
CORNEAL OPACITY	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	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
ANTERIOR CHAMBER OPACITY	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ABNORMAL GROWTH OF TEETH	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	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
EXTERNAL MASS	Control	2	2	2	2	3	2	2	5	4	4	4	4	4	5
	80 ppm	5	5	5	5	5	7	7	7	7	6	6	6	7	8
	400 ppm	2	4	4	5	5	5	5	7	7	8	8	9	9	9
	2000 ppm	6	7	7	7	8	8	8	8	8	8	8	8	8	8

STUDY NO. : 0461
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													
		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	1	0	1	0	0	0	0	0	0	0	0	1	0
	80 ppm	0	0	0	0	0	0	1	1	1	1	1	1	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	1	0	0	0	0	0	0	0
SOILED PERI-GENITALIA	Control	0	1	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	1	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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	1	1	1
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	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
CATARACT	Control	1	1	1	2	2	2	2	2	2	2	2	3	3	3
	80 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	400 ppm	2	2	2	2	2	2	2	2	2	2	3	3	3	3
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	1	1	1	1	1	1	1	1	0	1	1	1
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ABNORMAL GROWTH OF TEETH	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	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
EXTERNAL MASS	Control	5	5	4	4	5	6	6	6	6	5	5	5	5	5
	80 ppm	8	9	7	7	7	7	6	6	6	8	8	8	9	10
	400 ppm	9	9	9	9	9	10	11	12	11	14	15	16	16	16
	2000 ppm	7	6	5	3	3	2	2	1	1	1	1	0	0	0

STUDY NO. : 0461
 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					
		99-7	100-7	101-7	102-7	103-7	104-7
PILOERECTION	Control	0	1	1	1	1	2
	80 ppm	0	1	1	0	0	0
	400 ppm	0	0	0	1	1	2
	2000 ppm	0	0	0	1	-	-
SOILED PERI-GENITALIA	Control	0	0	0	0	0	1
	80 ppm	0	0	0	0	1	1
	400 ppm	0	0	0	0	1	1
	2000 ppm	0	0	0	0	-	-
EXOPHTHALMOS	Control	1	1	1	1	1	1
	80 ppm	0	0	0	0	0	0
	400 ppm	1	1	1	0	0	0
	2000 ppm	0	0	0	0	-	-
CATARACT	Control	3	3	3	3	3	3
	80 ppm	1	1	1	1	1	1
	400 ppm	3	3	3	2	2	2
	2000 ppm	0	0	0	0	-	-
CORNEAL OPACITY	Control	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0
	2000 ppm	0	0	0	0	-	-
ANTERIOR CHAMBER OPACITY	Control	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0
	400 ppm	1	1	1	1	1	1
	2000 ppm	0	0	0	1	-	-
ABNORMAL GROWTH OF TEETH	Control	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0
	2000 ppm	0	0	0	0	-	-
EXTERNAL MASS	Control	5	6	6	7	7	7
	80 ppm	10	9	8	11	11	12
	400 ppm	16	17	17	17	17	18
	2000 ppm	0	0	0	0	-	-

STUDY NO. : 0461
ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
REPORT TYPE : A1 104

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Clinical sign	Group Name	Administration Week-day				4-7	5-7	6-7	7-7	8-7	9-7	10-7	11-7	12-7	13-7	14-7
		1-7	2-7	3-7												
INTERNAL MASS	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	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
M. NOSE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	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
M. PERI-MOUTH	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	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
M. ORAL CAVITY	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	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
M. EAR	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	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
M. PERI EAR	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	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
M. FORELIMB	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	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
M. BREAST	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	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

STUDY NO. : 0461
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 REPORT TYPE : A1 104

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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											
INTERNAL MASS	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. NOSE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	1	1	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

STUDY NO. : 0461
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
INTERNAL MASS	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. NOSE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. PERT-MOUTH	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	1	1	1	0	0	0
	400 ppm	0	1	1	1	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	1	0	0	0	1	1	2
M. ORAL CAVITY	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

STUDY NO. : 0461
ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCr1j]
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		43-7	44-7	45-7											
INTERNAL MASS	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. NOSE	Control	0	0	0	0	0	0	0	1	1	1	1	1	1	1
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	2	1	1	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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

STUDY NO. : 0461
ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
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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
INTERNAL MASS	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. NOSE	Control	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. PERI-MOUTH	Control	0	1	1	1	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	1	0	0	0	0	1	0	1	0	0
	400 ppm	0	1	1	1	0	0	0	0	0	1	1	1	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	1	1	1	1	1
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	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
M. FORELIMB	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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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		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	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	1	0	0	0	0	0	0	0	0	0	0	0	0	0
M. NOSE	Control	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	80 ppm	0	0	0	0	0	2	1	1	1	1	1	1	1	1
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. PERI-MOUTH	Control	0	0	0	0	1	0	0	1	0	0	0	0	0	1
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	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
M. FORELIMB	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	1	1	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

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ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
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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
INTERNAL MASS	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. NOSE	Control	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	80 ppm	1	1	1	1	1	1	1	1	1	1	1	1	2	2
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. PERI-MOUTH	Control	1	1	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	1	2	0	0	0	1	0	0	0	1	1	0	0	1
	400 ppm	0	0	0	0	0	1	1	1	0	0	0	1	1	0
	2000 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
	80 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	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
M. PERI EAR	Control	0	0	0	0	0	1	1	1	1	1	1	1	1	1
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	1	1	1	1	1
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	1	1	1	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	1	1	1	1	1	1	1	1	1	2	2	2	2	3
	2000 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					
		99-7	100-7	101-7	102-7	103-7	104-7
INTERNAL MASS	Control	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0
	2000 ppm	0	0	0	0	-	-
M. NOSE	Control	1	1	1	1	1	1
	80 ppm	2	2	2	2	2	2
	400 ppm	0	0	0	0	0	0
	2000 ppm	0	0	0	0	-	-
M. PERI-MOUTH	Control	0	0	0	0	0	0
	80 ppm	1	1	0	0	0	0
	400 ppm	0	1	1	1	1	1
	2000 ppm	0	0	0	0	-	-
M. ORAL CAVITY	Control	0	0	0	0	0	0
	80 ppm	1	1	1	1	1	1
	400 ppm	0	0	0	0	0	0
	2000 ppm	0	0	0	0	-	-
M. EAR	Control	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0
	400 ppm	1	1	1	1	1	1
	2000 ppm	0	0	0	0	-	-
M. PERI EAR	Control	1	1	1	1	1	1
	80 ppm	0	0	0	0	0	0
	400 ppm	1	1	1	1	1	2
	2000 ppm	0	0	0	0	-	-
M. FORELIMB	Control	0	0	0	1	1	1
	80 ppm	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0
	2000 ppm	0	0	0	0	-	-
M. BREAST	Control	0	1	1	1	1	1
	80 ppm	0	0	0	0	0	1
	400 ppm	4	4	4	4	4	4
	2000 ppm	0	0	0	0	-	-

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 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
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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
M. ABDOMEN	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. SCROTUM	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JAUNDICE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

STUDY NO. : 0461
ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCr1j]
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. ABDOMEN	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. SCROTUM	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JAUNDICE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

STUDY NO. : 0461
 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											
M. ABDOMEN	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	1	1	2	2	2	2	2
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. SCROTUM	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JAUNDICE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

STUDY NO. : 0461
ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
REPORT TYPE : A1 104

CLINICAL OBSERVATION (SUMMARY)
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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												
M. ABDOMEN	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	400 ppm	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
M. ANTERIOR. DORSUM	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	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	1
M. POSTERIOR DORSUM	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	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	1
M. HINDLIMB	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	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
M. GENITALIA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	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
M. SCROTUM	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	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
ANEMIA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	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	1	0	1	0	0	0	0
JAUNDICE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	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

STUDY NO. : 0461
ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
REPORT TYPE : A1 104

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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											
M. ABDOMEN	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	1	1	1	1	1	1	1	1	1	1	1	1	1
	2000 ppm	1	1	1	2	2	2	2	2	2	2	2	2	1	1
M. POSTERIOR DORSUM	Control	0	1	1	1	1	1	1	1	1	1	1	1	1	1
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	1	1
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	1	1
	2000 ppm	2	2	2	2	2	2	2	2	2	2	2	2	2	3
M. HINDLIMB	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	1	1	1	1	1	1	1	1	1	1	1	1
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	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
M. SCROTUM	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	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	0	0	0	1
JAUNDICE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

STUDY NO. : 0461
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											
M. ABDOMEN	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	2	2	2	2	2	2	3	4	4	3	3	3	3	3
	400 ppm	0	0	0	0	0	1	1	2	2	3	3	3	3	3
	2000 ppm	0	1	1	1	2	2	2	2	2	2	2	2	2	2
M. ANTERIOR. DORSUM	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	1	1	1	1	2	2
	400 ppm	1	2	2	2	2	2	2	2	2	2	2	2	2	2
	2000 ppm	1	1	1	1	1	1	1	0	0	0	0	0	0	0
M. POSTERIOR DORSUM	Control	1	1	1	1	1	1	1	2	2	2	2	2	2	2
	80 ppm	1	1	1	1	1	1	1	0	0	0	0	0	0	0
	400 ppm	1	2	2	2	2	2	2	2	2	2	2	3	3	3
	2000 ppm	3	3	3	3	3	3	3	4	4	4	4	4	4	4
M. HINDLIMB	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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	1	1	1	1	1	1	1
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	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
M. SCROTUM	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	1	1	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	1	0	0	1	1	5	6	2	3	5	5	3	2	2
JAUNDICE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

STUDY NO. : 0461
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
M. ABDOMEN	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	3	3	3	3	3	2	2	2	2	2	2	2	2	2
	400 ppm	3	3	3	3	3	3	3	3	3	3	4	4	4	4
	2000 ppm	2	2	1	0	0	0	0	0	0	0	0	0	0	0
M. ANTERIOR. DORSUM	Control	0	0	0	0	1	1	1	1	1	0	0	0	0	0
	80 ppm	2	2	2	2	2	1	1	1	1	1	2	3	3	3
	400 ppm	2	2	2	2	2	2	2	3	3	4	4	4	4	4
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. POSTERIOR DORSUM	Control	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	3	3	3	3	3	3	4	4	4	4	4	4	4	4
	2000 ppm	4	3	3	2	2	1	1	1	1	1	1	0	0	0
M. HINDLIMB	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. GENITALIA	Control	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	1	1	1	1	1	1	1	0	0	0	0	0	0	0
M. SCROTUM	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	1	1	1	1	1
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ANEMIA	Control	0	0	1	1	0	0	0	0	0	1	1	2	2	1
	80 ppm	0	0	0	1	1	0	0	1	0	1	1	1	1	1
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	1	1	1
	2000 ppm	4	5	2	2	2	2	3	2	1	2	0	2	3	2
JAUNDICE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	1	0	0	0	0	0	0	0	0	0
	400 ppm	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

STUDY NO. : 0461
 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. ABDOMEN	Control	0	0	0	0	0	0
	80 ppm	2	1	1	1	1	1
	400 ppm	4	4	4	4	4	4
	2000 ppm	0	0	0	0	-	-
M. ANTERIOR. DORSUM	Control	0	0	0	0	0	0
	80 ppm	3	2	2	1	1	1
	400 ppm	4	4	4	4	4	4
	2000 ppm	0	0	0	0	-	-
M. POSTERIOR DORSUM	Control	2	2	2	2	2	2
	80 ppm	0	0	0	4	4	4
	400 ppm	4	4	4	4	4	4
	2000 ppm	0	0	0	0	-	-
M. HINDLIMB	Control	0	0	0	0	0	0
	80 ppm	1	1	1	1	1	1
	400 ppm	0	0	0	0	0	0
	2000 ppm	0	0	0	0	-	-
M. GENITALIA	Control	1	1	1	1	1	1
	80 ppm	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0
	2000 ppm	0	0	0	0	-	-
M. SCROTUM	Control	0	0	0	0	0	0
	80 ppm	1	1	1	1	1	1
	400 ppm	0	0	0	0	0	0
	2000 ppm	0	0	0	0	-	-
ANEMIA	Control	1	1	2	2	2	3
	80 ppm	0	0	2	2	2	2
	400 ppm	1	1	1	0	0	0
	2000 ppm	2	1	1	1	-	-
JAUNDICE	Control	0	0	0	0	2	2
	80 ppm	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0
	2000 ppm	0	0	0	0	-	-

STUDY NO. : 0461
ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCr:j]
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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
CRUSTA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HEMORRIAGE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PROLAPSE OF PENIS	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	50	50	50	50	50	50	50	50	50	50	50	50	50	50
SMALL STOOL	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
CRUSTA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PROLAPSE OF PENIS	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	50	50	50	50	50	50	50	50	50	50	50	50	50	50
SMALL STOOL	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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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		29-7	30-7	31-7											
CRUSTA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PROLAPSE OF PENIS	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	50	50	50	50	50	50	50	50	50	50	50	50	50	50
SMALL STOOL	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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													
		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
CRUSTA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PROLAPSE OF PENIS	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	50	50	50	50	50	50	50	50	50	50	49	49	49	49
SMALL STOOL	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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			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											
CRUSTA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PROLAPSE OF PENIS	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	49	49	49	49	49	49	49	49	49	49	48	48	48	48
SMALL STOOL	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	3

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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
CRUSTA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	1	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PROLAPSE OF PENIS	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	1	0	0	0	0	0	0	0	1	0	0	1
IRREGULAR BREATHING	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	1	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	1	0	0	0	0	0	0	0	0	3	2	0	0	1
RESPIRATORY SOUND ABNOR	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	48	47	47	45	45	43	41	37	36	35	30	25	22	22
SMALL STOOL	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	1	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	2	0	0
	2000 ppm	1	0	0	0	0	0	0	1	0	2	2	4	1	2

STUDY NO. : 0461
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													
		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
CRUSTA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HEMORRHAGE	Control	0	0	1	1	0	0	0	0	0	0	1	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TORTICOLLIS	Control	1	1	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PROLAPSE OF PENIS	Control	0	0	1	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	1	0	0	0	0	0	0	0	0	0	0	0
IRREGULAR BREATHING	Control	0	1	1	1	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	1	1	1	2	2	1	1	1	1
	400 ppm	0	0	0	0	0	0	0	0	0	1	0	0	0	0
	2000 ppm	0	1	1	0	0	1	1	1	1	1	0	0	0	0
RESPIRATORY SOUND ABNOR	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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	1	1	1	0
	80 ppm	0	0	0	0	1	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	1	0	0	0	0	0	0	0	0	0
	2000 ppm	20	18	15	11	11	10	10	9	8	7	4	3	3	2
SMALL STOOL	Control	0	1	2	1	0	0	0	0	0	1	1	3	2	1
	80 ppm	0	0	0	0	1	3	1	0	0	3	1	1	0	0
	400 ppm	0	0	0	0	0	1	0	0	0	2	0	0	0	0
	2000 ppm	1	0	0	0	0	3	3	3	2	4	2	1	2	0

STUDY NO. : 0461
 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
CRUSTA	Control	0	0	0	0	0	0
	80 ppm	0	0	0	1	1	1
	400 ppm	0	0	0	0	0	0
	2000 ppm	0	0	0	0	-	-
HEMORRIAGE	Control	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0
	2000 ppm	0	0	0	0	-	-
TORTICOLLIS	Control	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0
	2000 ppm	0	0	0	0	-	-
PROLAPSE OF PENIS	Control	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0
	400 ppm	1	1	1	1	1	1
	2000 ppm	0	0	0	0	-	-
IRREGULAR BREATHING	Control	0	0	0	0	0	2
	80 ppm	1	1	0	0	0	0
	400 ppm	0	1	0	1	1	2
	2000 ppm	0	0	0	0	-	-
RESPIRATORY SOUND ABNOR	Control	0	1	0	0	0	0
	80 ppm	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0
	2000 ppm	0	0	0	0	-	-
YELLOW URINE	Control	0	1	0	0	2	2
	80 ppm	0	0	0	1	1	1
	400 ppm	0	0	0	0	0	0
	2000 ppm	2	1	1	1	-	-
SMALL STOOL	Control	1	4	1	2	1	5
	80 ppm	1	2	1	1	1	2
	400 ppm	0	1	0	3	2	3
	2000 ppm	0	0	0	1	-	-

STUDY NO. : 0461
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
OLIGO-STOOL	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	50	50	50	50	50	50	50	50	50	50	50	50	50	50
	400 ppm	50	50	50	50	50	50	50	50	50	50	50	50	50	50
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

(HAN190)

BATS 4

STUDY NO. : 0461
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
OLIGO-STOOL	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	50	50	50	50	50	50	50	50	50	49	49	49	49	49
	400 ppm	50	50	50	50	50	50	50	50	50	50	50	50	50	50
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

(HAN190)

BATS 4

STUDY NO. : 0461
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													
		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
OLIGO-STOOL	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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	49	49
	80 ppm	49	49	49	49	49	49	49	48	47	46	46	47	47	47
	400 ppm	50	49	49	49	50	50	50	50	50	50	50	50	50	50
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

(HAN190)

BAIS 4

STUDY NO. : 0461
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													
		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
OLIGO-STOOL	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	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	1	0	0	0	0
NON REMARKABLE	Control	49	49	49	49	49	49	49	48	48	48	48	48	48	48
	80 ppm	47	47	47	47	47	47	47	47	47	47	47	47	47	47
	400 ppm	49	49	49	49	49	49	49	49	49	49	49	49	49	49
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

(HAN190)

BAIS 4

STUDY NO. : 0461
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													
		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
OLIGO-STOOL	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NON REMARKABLE	Control	48	46	46	45	46	46	46	46	46	46	46	46	46	46
	80 ppm	47	47	46	46	45	46	46	46	46	44	45	44	44	44
	400 ppm	49	47	47	47	47	47	47	47	47	46	46	46	46	45
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

(HAN190)

BAIS 4

STUDY NO. : 0461
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													
		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
OLIGO-STOOL	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	1	1	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	1	0	0	0	0	0	0	0
	2000 ppm	1	0	0	0	1	0	2	1	2	2	1	2	1	3
NON REMARKABLE	Control	46	46	46	46	45	46	46	43	44	44	44	44	44	43
	80 ppm	44	44	44	43	43	41	41	41	41	41	41	40	40	39
	400 ppm	45	44	44	43	43	43	42	40	40	39	39	36	38	37
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

(HAN190)

BAIS 4

STUDY NO. : 0461
ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
REPORT TYPE : AI 104

CLINICAL OBSERVATION (SUMMARY)
ALL ANIMALS

SEX : MALE

PAGE : 47

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
OLIGO-STOOL	Control	2	2	2	2	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	1	0	1	1	0	1	1	0	0	1
	400 ppm	0	0	0	0	1	0	0	0	1	1	0	1	0	0
	2000 ppm	2	1	0	0	0	0	0	1	1	1	0	0	0	1
NON REMARKABLE	Control	41	41	41	39	38	37	37	36	35	36	35	33	34	34
	80 ppm	39	38	40	40	39	36	38	38	37	34	35	35	34	32
	400 ppm	37	37	35	35	34	31	31	31	31	28	27	25	26	26
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

(HAN190)

BATS 4

STUDY NO. : 0461
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
OLIGO-STOOL	Control	0	3	2	2	2	3
	80 ppm	1	1	2	1	1	0
	400 ppm	0	1	2	3	2	1
	2000 ppm	1	0	0	1	-	-
NON REMARKABLE	Control	34	29	29	27	27	25
	80 ppm	31	30	31	28	28	26
	400 ppm	26	23	21	20	20	18
	2000 ppm	0	0	0	0	-	-

(HAN190)

BAIS 4

APPENDIX B 2

CLINICAL OBSERVATION : FEMALE

STUDY NO. : 0461
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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
COLORED	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	1	2	2	2	3
	2000 ppm	0	9	14	14	18	21	21	21	22	26	26	26	27	29
PILOBRECTION	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

STUDY NO. : 0461
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													
		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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
COLORED	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	3	3	3	3	3	5	5	6	6	6	7	7	7	7
	2000 ppm	29	29	29	31	31	31	31	31	31	33	33	34	35	35
PILOBRECTION	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

STUDY NO. : 0461
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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
COLORED	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	7	7	7	6	6	6	6	6	6	6	6	6	6	7
	2000 ppm	35	35	35	35	35	36	36	36	36	36	36	37	37	40
PILOERECTOR	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

STUDY NO. : 0461
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCr1j]
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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	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
COLORED	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	7	7	7	7	7	7	7	7	7	7	7	7	7	8
	2000 ppm	40	40	40	40	40	40	40	39	39	39	39	39	39	40
PILOERECTIO	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

STUDY NO. : 0461
ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
REPORT TYPE : A1 104

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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	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	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	2
MORIBUND SACRIFICE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
COLORED	Control	0	0	0	0	0	0	0	0	0	0	1	1	1	3
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	4
	400 ppm	8	8	8	9	10	12	12	12	12	11	11	11	11	12
	2000 ppm	40	41	41	42	42	41	41	39	39	39	39	39	39	38
PILOERECTION	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

STUDY NO. : 0461
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											
DEATH	Control	0	0	0	0	0	1	1	1	1	1	1	1	2	2
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	1	1	1	1	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
MORIBUND SACRIFICE	Control	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
COLORED	Control	3	3	3	1	1	1	2	2	2	2	2	2	2	2
	80 ppm	5	7	7	1	1	1	2	2	3	3	3	3	3	3
	400 ppm	12	12	12	9	9	9	9	9	9	9	9	12	12	12
	2000 ppm	38	40	40	40	40	40	39	39	39	39	39	39	39	39
PILOBRECTION	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	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

STUDY NO. : 0461
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
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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	2	2	2	3	3	4	5	5	5	5	5	6	6	6
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	400 ppm	1	1	1	1	1	1	1	1	1	1	1	3	3	3
	2000 ppm	2	2	2	2	2	2	3	3	3	3	3	3	5	6
MORIBUND SACRIFICE	Control	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	1	1	1
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HUNCI BACK POSITION	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	2	2	2	2	2	2	1	1	1	1	2
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
COLORED	Control	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	80 ppm	4	3	3	3	3	3	3	3	3	3	3	2	2	2
	400 ppm	11	11	11	11	11	11	11	11	11	11	11	11	11	11
	2000 ppm	39	39	39	39	39	39	38	38	38	38	38	37	35	34
PILOERECTION	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

STUDY NO. : 0461
 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
DEATH	Control	7	7	8	8	8	8
	80 ppm	2	4	5	5	7	7
	400 ppm	4	4	4	4	4	4
	2000 ppm	6	7	8	8	8	8
MORBUND SACRIFICE	Control	1	1	1	1	1	1
	80 ppm	1	1	1	1	1	1
	400 ppm	0	0	0	0	0	1
	2000 ppm	0	1	2	2	2	3
LOCOMOTOR MOVEMENT DECR	Control	0	0	0	0	0	0
	80 ppm	0	1	0	0	0	0
	400 ppm	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0
HUNCHBACK POSITION	Control	0	0	0	0	0	0
	80 ppm	0	0	0	1	0	0
	400 ppm	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0
PARALYTIC GAIT	Control	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	1
	2000 ppm	0	0	0	0	0	0
WASTING	Control	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0
	400 ppm	1	2	2	2	2	2
	2000 ppm	0	0	0	0	0	0
COLORED	Control	2	2	2	1	1	1
	80 ppm	2	1	1	1	1	0
	400 ppm	10	10	10	8	8	8
	2000 ppm	33	32	30	29	29	27
PILOERECTION	Control	0	0	0	0	0	0
	80 ppm	0	0	3	3	1	1
	400 ppm	0	0	0	0	0	0
	2000 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
LOSS OF HAIR	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FROG BELLY	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

STUDY NO. : 0461
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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
LOSS OF HAIR	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FROG BELLY	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	2	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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	1	1	1	1	1	1	1	1	2	2	2	2
CORNEAL OPACITY	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	1	1	0	0	0	0	0	0
INTERNAL MASS	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

STUDY NO. : 0461
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
LOSS OF HAIR	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FROG BELLY	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	2	2	2	2	2	2	2	3	4	4	4	4	4	4
CORNEAL OPACITY	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	1	1
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

STUDY NO. : 0461
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
LOSS OF HAIR	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FROG BELLY	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CATARACT	Control	0	1	1	1	1	1	1	1	1	1	1	1	1	1
	80 ppm	0	0	0	0	0	0	0	0	0	0	1	1	1	1
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	4	4	4	4	4	4	4	4	4	4	4	4	4	4
CORNEAL OPACITY	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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	1	1
	80 ppm	1	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	1	0	0	0	0	0
	2000 ppm	0	0	2	2	2	2	2	2	2	2	2	2	2	2
INTERNAL MASS	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

STUDY NO. : 0461
ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
REPORT TYPE : A1 104

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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											
LOSS OF HAIR	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FROG BELLY	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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	1	1	0
	80 ppm	0	1	1	0	0	0	0	0	0	1	1	1	1	1
	400 ppm	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
CATARACT	Control	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	80 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	4	4	4	4	4	4	4	4	4	4	4	4	4	4
CORNEAL OPACITY	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EXTERNAL MASS	Control	3	1	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	1	1
	400 ppm	0	0	0	0	0	0	0	0	0	2	2	3	5	4
	2000 ppm	2	2	2	2	2	2	2	2	3	3	3	3	3	2
INTERNAL MASS	Control	0	0	0	0	0	0	0	0	0	0	0	0	1	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

STUDY NO. : 0461
ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCr.f]
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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
LOSS OF HAIR	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FROG BELLY	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SOILED PERI-GENITALIA	Control	0	0	0	1	2	1	1	1	1	1	1	1	1	1
	80 ppm	1	1	1	3	4	4	3	3	3	3	3	3	3	3
	400 ppm	1	0	0	3	3	3	3	3	3	3	3	0	0	0
	2000 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
	80 ppm	1	1	1	1	1	1	1	1	2	2	2	2	2	2
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	4	4	4	4	4	4	4	4	4	4	4	4	4	4
CORNEAL OPACITY	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EXTERNAL MASS	Control	0	0	1	0	2	3	2	2	2	2	2	3	3	4
	80 ppm	2	1	1	1	1	1	3	3	3	3	4	4	4	5
	400 ppm	3	1	2	2	2	2	2	2	2	2	2	2	2	2
	2000 ppm	2	2	2	3	3	2	2	2	2	2	2	2	2	2
INTERNAL MASS	Control	0	0	0	1	1	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	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	1	1

STUDY NO. : 0461
ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
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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											
LOSS OF HAIR	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FROG BELLY	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	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
SOILED PERI-GENITALIA	Control	1	1	1	1	2	1	1	1	1	1	1	1	1	1
	80 ppm	1	1	1	1	1	1	1	1	1	0	0	0	0	0
	400 ppm	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
CATARACT	Control	2	2	3	3	3	2	2	2	2	2	2	2	2	2
	80 ppm	2	2	2	2	2	2	2	2	3	3	4	4	4	4
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	1	1
	2000 ppm	4	4	4	4	4	4	4	4	4	4	4	4	3	3
CORNEAL OPACITY	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EXTERNAL MASS	Control	4	4	6	5	6	6	6	6	7	7	8	7	8	7
	80 ppm	5	5	6	6	7	7	6	6	6	6	7	7	8	8
	400 ppm	2	2	2	2	2	2	2	2	2	2	2	2	3	3
	2000 ppm	2	2	2	2	2	2	2	2	3	4	4	4	4	3
INTERNAL MASS	Control	0	0	0	0	1	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	1	0
	400 ppm	0	0	0	0	0	0	0	1	2	2	2	0	0	0
	2000 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1

STUDY NO. : 0461
 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
LOSS OF HAIR	Control	0	0	0	0	0	0
	80 ppm	1	1	1	1	1	1
	400 ppm	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0
FROG BELLY	Control	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0
SOILED PERI-GENITALIA	Control	1	1	1	1	1	1
	80 ppm	0	1	0	0	0	1
	400 ppm	0	0	0	0	1	0
	2000 ppm	0	0	0	0	0	0
CATARACT	Control	2	2	3	3	4	4
	80 ppm	4	4	4	4	4	4
	400 ppm	1	1	1	1	1	0
	2000 ppm	3	3	3	3	3	3
CORNEAL OPACITY	Control	0	0	0	0	0	0
	80 ppm	0	0	0	0	1	1
	400 ppm	0	0	0	0	1	1
	2000 ppm	0	0	0	0	0	0
ANTERIOR CHAMBER OPACITY	Control	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0
	400 ppm	0	0	0	0	1	0
	2000 ppm	0	0	0	0	0	0
EXTERNAL MASS	Control	6	6	6	6	7	7
	80 ppm	7	6	6	6	6	6
	400 ppm	3	3	3	3	4	4
	2000 ppm	4	4	4	4	5	5
INTERNAL MASS	Control	0	0	0	0	0	0
	80 ppm	0	0	0	1	1	1
	400 ppm	0	0	0	0	0	0
	2000 ppm	2	0	0	0	0	0

STUDY NO. : 0461
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. NOSE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. HEAD	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

STUDY NO. : 0461
 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
M. NOSE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	1	1	0	0	0	0	0	0
M. ORAL CAVITY	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. HEAD	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

STUDY NO. : 0461
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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	1	1
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. HEAD	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

STUDY NO. : 0461
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											
M. NOSE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	1	0	0	0	0	0
	2000 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	1	1
	80 ppm	1	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. HEAD	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

STUDY NO. : 0461
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 REPORT TYPE : A1 104

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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. NOSE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. PERI-MOUTH	Control	3	1	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	1	1
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	1	2	2
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. HEAD	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	1	1	1	1	1
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

STUDY NO. : 0461
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
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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. NOSE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. PERI-MOUTH	Control	0	0	1	0	0	1	0	0	0	0	0	0	0	0
	80 ppm	1	0	0	0	0	0	1	1	0	0	0	0	0	0
	400 ppm	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
M. ORAL CAVITY	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	1	1	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. HEAD	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	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
M. NECK	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

STUDY NO. : 0461
ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCr1j]
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		85-7	86-7	87-7											
M. NOSE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	1	0	1	1	0	0	1	0	1	1	1	1
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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	1	1
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	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	1	1	0
M. HEAD	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. NECK	Control	1	1	1	1	1	1	1	1	1	1	1	0	0	0
	80 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

STUDY NO. : 0461
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					
		99-7	100-7	101-7	102-7	103-7	104-7
M. NOSE	Control	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	1
	400 ppm	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0
M. EYE	Control	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0
M. PERI-MOUTH	Control	0	0	0	0	0	0
	80 ppm	1	1	1	1	1	1
	400 ppm	0	0	0	0	1	0
	2000 ppm	0	0	0	0	0	0
M. ORAL CAVITY	Control	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0
M. EAR	Control	1	1	1	1	1	1
	80 ppm	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0
M. PERI EAR	Control	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0
M. HEAD	Control	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0
M. NECK	Control	0	0	0	0	0	0
	80 ppm	1	1	1	1	1	1
	400 ppm	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0

STUDY NO. : 0461
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 REPORT TYPE : A1 104

CLINICAL OBSERVATION (SUMMARY)
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SEX : FEMALE

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Clinical sign	Group Name	Administration Week-day				4-7	5-7	6-7	7-7	8-7	9-7	10-7	11-7	12-7	13-7	14-7
		1-7	2-7	3-7												
M. BREAST	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	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
M. ABDOMEN	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	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
M. ANTERIOR. DORSUM	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	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
M. GENITALIA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	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
M. TAIL	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	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
ANEMIA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	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
ULCER	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	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
EROSION	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	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

STUDY NO. : 0461
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											
M. BREAST	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EROSION	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

STUDY NO. : 0461
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				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												
M. BREAST	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	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
M. ABDOMEN	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	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
M. ANTERIOR. DORSUM	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	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
M. GENITALIA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	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
M. TAIL	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	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
ANEMIA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	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
ULCER	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	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	0
EROSION	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	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

STUDY NO. : 0461
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				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												
M. BREAST	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	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
M. ABDOMEN	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	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
M. ANTERIOR. DORSUM	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	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
M. GENITALIA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1
M. TAIL	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1
ANEMIA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	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	1
ULCER	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	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
EROSION	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	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

STUDY NO. : 0461
 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											
M. BREAST	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	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
M. ABDOMEN	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	1	1
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	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	0
M. TAIL	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	1	1	1	1	0
	2000 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
ANEMIA	Control	0	0	0	0	0	0	0	0	0	0	0	1	1	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	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	0
ULCER	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	1	1	0	0	0	0	0	0	0	1	1	1	1	1
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EROSION	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

STUDY NO. : 0461
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			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. BREAST	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	1	1	1	1	1	1
	400 ppm	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
M. ABDOMEN	Control	0	0	0	0	1	1	1	1	1	1	1	1	1	1
	80 ppm	1	1	1	1	1	1	2	2	2	2	3	3	3	3
	400 ppm	0	0	0	0	1	1	1	1	1	1	1	1	1	1
	2000 ppm	0	0	0	1	1	1	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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	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
M. GENITALIA	Control	0	0	0	0	1	1	1	1	1	1	1	2	2	2
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	1	1	1	1	1	0	0	0	0	0	0	0	0	0
ANEMIA	Control	0	0	0	1	1	0	0	0	0	0	0	0	1	1
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	1	1
	400 ppm	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	1	1
ULCER	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	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
EROSION	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

STUDY NO. : 0461
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. BREAST	Control	0	0	0	0	1	1	1	1	1	1	2	2	2	1
	80 ppm	1	1	1	2	2	2	2	2	2	2	2	2	3	3
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	1	1
	2000 ppm	1	1	1	1	1	1	1	1	2	2	2	2	2	2
M. ABDOMEN	Control	1	1	2	2	2	2	2	2	3	3	3	3	3	3
	80 ppm	3	3	3	3	3	3	3	3	3	3	3	3	3	3
	400 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	2000 ppm	1	1	1	1	1	1	0	0	0	1	1	1	1	1
M. ANTERIOR. DORSUM	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	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
M. GENITALIA	Control	2	2	3	2	2	2	2	2	2	2	2	2	2	2
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ANEMIA	Control	1	1	1	0	1	0	0	0	0	0	0	0	1	1
	80 ppm	1	1	1	0	0	0	0	0	0	0	0	0	1	1
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	1	1	1	1	1	1	0	0	0	0	0	0	0	1
ULCER	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	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
EROSION	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	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

STUDY NO. : 0461
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 REPORT TYPE : A1 104

CLINICAL OBSERVATION (SUMMARY)
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SEX : FEMALE

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Clinical sign	Group Name	Administration Week-day					
		99-7	100-7	101-7	102-7	103-7	104-7
M. BREAST	Control	1	1	1	1	2	2
	80 ppm	3	2	2	2	2	2
	400 ppm	1	1	1	1	2	2
	2000 ppm	3	3	3	3	3	3
M. ABDOMEN	Control	3	3	3	3	3	3
	80 ppm	2	2	2	2	2	2
	400 ppm	1	1	1	1	1	1
	2000 ppm	1	1	1	1	1	1
M. ANTERIOR. DORSUM	Control	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0
	400 ppm	1	1	1	1	1	1
	2000 ppm	0	0	0	0	0	0
M. GENITALIA	Control	1	1	1	1	1	1
	80 ppm	0	0	0	0	0	0
	400 ppm	0	0	0	0	1	1
	2000 ppm	0	0	0	0	1	1
M. TAIL	Control	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0
ANEMIA	Control	2	2	2	2	2	1
	80 ppm	2	3	2	3	4	4
	400 ppm	0	0	0	0	0	0
	2000 ppm	1	2	1	1	1	1
ULCER	Control	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0
	2000 ppm	1	1	1	1	1	1
EROSION	Control	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0

STUDY NO. : 0461
ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
REPORT TYPE : A1 104

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Clinical sign	Group Name	Administration Week-day			4-7	5-7	6-7	7-7	8-7	9-7	10-7	11-7	12-7	13-7	14-7
		1-7	2-7	3-7											
CRUSTA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	50	50	50	50	50	50	50	50	50	50	50	50	50	50
BROWN URINE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

STUDY NO. : 0461
ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
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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											
CRUSTA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HEMORRIAGE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	50	50	50	50	50	50	50	50	50	50	50	50	50	50
BROWN URINE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

STUDY NO. : 0461
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											
CRUSTA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	50	50	50	50	50	50	50	50	50	50	50	50	50	50
BROWN URINE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

STUDY NO. : 0461
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
CRUSTA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	50	50	50	50	50	50	50	50	50	50	50	50	50	50
BROWN URINE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

STUDY NO. : 0461
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
		57-7	58-7	59-7														
CRUSTA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0
	2000 ppm	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2
HEMORRHAGE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	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	1	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	1	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	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	0
RESPIRATORY SOUND ABNOR	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	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	0
DEEP BREATHING	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	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	0
YELLOW URINE	Control	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	50	50	50	50	50	49	49	49	49	49	49	49	49	49	49	49	48
BROWN URINE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	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	0
SMALL STOOL	Control	0	0	0	0	0	1	0	0	0	0	0	1	1	1	1	1	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	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	0

STUDY NO. : 0461
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			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											
CRUSTA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	1	1	1	1	1	1	1	1	1	1	1	1
	400 ppm	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
HEMORRHAGE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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	1
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	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
YELLOW URINE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	48	48	48	48	48	48	48	48	48	48	48	48	48	48
BROWN URINE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SMALL STOOL	Control	0	0	0	0	1	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	1	1	1	0	0	0	0
	400 ppm	1	0	0	1	1	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

STUDY NO. : 0461
ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
REPORT TYPE : A1 104

CLINICAL OBSERVATION (SUMMARY)
ALL ANIMALS

SEX : FEMALE

PAGE : 87

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											
CRUSTA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	400 ppm	0	0	0	0	0	0	0	0	0	0	2	2	2	2
	2000 ppm	2	2	2	2	2	2	2	2	2	2	2	2	2	2
HEMORRIAGE	Control	0	0	1	1	0	0	0	2	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	1	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
IRREGULAR BREATHING	Control	0	0	0	1	1	1	1	1	1	1	1	0	1	1
	80 ppm	0	0	0	0	0	0	0	0	0	0	1	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	1	1	0	0	0	0	0	0	1	0
RESPIRATORY SOUND ABNOR	Control	1	0	0	0	0	1	1	1	1	1	1	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	48	48	48	48	48	48	47	47	47	47	47	47	45	44
BROWN URINE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	1	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SMALL STOOL	Control	0	0	0	1	2	1	1	1	1	1	1	1	1	1
	80 ppm	0	0	0	0	0	0	0	0	0	1	1	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	3	3	2	2	2
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

STUDY NO. : 0461
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					
		99-7	100-7	101-7	102-7	103-7	104-7
CRUSTA	Control	0	0	0	0	0	0
	80 ppm	1	1	1	1	1	1
	400 ppm	2	2	2	2	2	2
	2000 ppm	2	2	2	2	2	2
HEMORRHAGE	Control	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0
IRREGULAR BREATHING	Control	0	0	1	1	1	0
	80 ppm	1	0	2	2	1	1
	400 ppm	0	0	0	0	1	0
	2000 ppm	0	0	0	0	2	1
RESPIRATORY SOUND ABNOR	Control	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0
DEEP BREATHING	Control	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0
YELLOW URINE	Control	0	0	0	0	0	0
	80 ppm	0	0	0	2	1	1
	400 ppm	0	0	0	0	0	0
	2000 ppm	43	42	40	40	40	39
BROWN URINE	Control	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0
SMALL STOOL	Control	0	0	2	1	1	1
	80 ppm	1	1	3	3	1	1
	400 ppm	0	0	0	1	2	2
	2000 ppm	2	0	0	1	1	0

STUDY NO. : 0461
 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			4-7	5-7	6-7	7-7	8-7	9-7	10-7	11-7	12-7	13-7	14-7
		1-7	2-7	3-7											
OLIGO-STOOL	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SUBNORMAL TEMP	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	50	50	50	50	50	50	50	50	50	50	50	50	50	50
	400 ppm	50	50	50	50	50	50	50	50	50	49	48	48	48	47
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

(HAN190)

BAIS 4

STUDY NO. : 0461
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													
		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
OLIGO-STOOL	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	1	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SUBNORMAL TEMP	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	50	50	50	50	50	50	50	50	50	50	50	49	50	50
	400 ppm	47	47	47	47	47	45	45	44	44	44	43	43	43	43
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

(HAN190)

BAIS 4

STUDY NO. : 0461
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				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												
OLIGO-STOOL	Control	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
SUBNORMAL TEMP	Control	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	2000 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
	80 ppm	50	50	50		50	50	50	50	50	50	50	50	50	49	49
	400 ppm	43	43	43		44	44	43	44	44	44	44	44	44	44	43
	2000 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0

(HAN190)

BAIS 4

STUDY NO. : 0461
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCr1j]
 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
OLIGO-STOOL	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SUBNORMAL TEMP	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NON REMARKABLE	Control	50	49	49	49	49	49	49	49	49	49	49	49	48	48
	80 ppm	49	50	50	50	50	50	50	50	50	50	49	49	49	49
	400 ppm	43	43	43	43	43	43	43	42	42	42	42	42	42	41
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

(HAN190)

BAIS 4

STUDY NO. : 0461
 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													
		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
OLIGO-STOOL	Control	0	0	0	0	0	0	0	0	0	0	1	1	1	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SUBNORMAL TEMP	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NON REMARKABLE	Control	46	48	49	49	49	48	49	49	49	48	48	47	47	45
	80 ppm	49	48	48	49	49	49	49	49	49	48	48	48	47	42
	400 ppm	41	41	41	40	39	37	37	37	37	37	37	37	35	35
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

(HAN190)

BAIS 4

STUDY NO. : 0461
 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
OLIGO-STOOL	Control	0	0	0	0	1	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SUBNORMAL TEMP	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NON REMARKABLE	Control	44	44	43	44	42	41	41	41	41	41	41	40	39	38
	80 ppm	40	39	38	42	41	41	39	38	36	36	36	36	36	35
	400 ppm	36	36	35	35	35	35	35	35	35	35	35	35	35	35
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

(HAN190)

BAIS 4

CLINICAL OBSERVATION (SUMMARY)
ALL ANIMALS

PAGE : 95

[illegible]

BAIS 4

STUDY NO. : 0461
ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
REPORT TYPE : A1 104

CLINICAL OBSERVATION (SUMMARY)
ALL ANIMALS

SEX : FEMALE

PAGE : 96

Clinical sign	Group Name	Administration Week-day					
		99-7	100-7	101-7	102-7	103-7	104-7
OLIGO-STOOL	Control	1	1	2	2	1	2
	80 ppm	0	1	2	3	2	1
	400 ppm	0	0	0	1	1	1
	2000 ppm	2	0	0	1	2	0
SUBNORMAL TEMP	Control	0	0	0	0	0	0
	80 ppm	0	0	0	1	1	0
	400 ppm	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0
NON REMARKABLE	Control	30	30	29	30	28	26
	80 ppm	32	31	28	29	28	28
	400 ppm	31	31	31	33	32	31
	2000 ppm	0	0	0	0	0	0

(HAN190)

BAIS 4

APPENDIX C 1

BODY WEIGHT CHANGES : MALE

STUDY NO. : 0461
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 UNIT : g
 REPORT TYPE : AI 104
 SEX : MALE

BODY WEIGHT CHANGES (SUMMARY)
 ALL ANIMALS

PAGE : 1

Group Name	Administration week		1		2		3		4		5		6	
	0													
Control	126±	4	153±	6	186±	8	206±	9	228±	9	243±	11	255±	13
80 ppm	126±	4	154±	7	186±	9	207±	9	231±	9	244±	10	257±	11
400 ppm	126±	5	152±	7	183±	8	203±	9	226±	11	240±	12	253±	12
2000 ppm	126±	4	141±	6**	167±	10**	184±	12**	204±	15**	218±	16**	231±	16**

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

Test of Dunnett

(HAN260)

BAIS 4

STUDY NO. : 0461
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	268± 14	278± 15	289± 16	298± 17	308± 18	313± 19	319± 19					
80 ppm	271± 11	281± 12	290± 12	299± 13	308± 13	313± 13	320± 13					
400 ppm	266± 14	277± 14	286± 15	295± 16	303± 17	307± 18	314± 17					
2000 ppm	244± 17**	254± 18**	264± 18**	270± 19**	277± 20**	282± 21**	288± 21**					

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

Test of Dunnett

(HAN260)

BAIS 4

STUDY NO. : 0461
 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	324±	19	343±	20	356±	21	367±	21	382±	22	392±	22	397±	23		
80 ppm	325±	14	345±	15	360±	15	370±	15	387±	16	395±	17	401±	17		
400 ppm	319±	17	340±	19	356±	19	367±	18	382±	19	391±	21	396±	21		
2000 ppm	294±	20**	312±	18**	324±	17**	333±	17**	342±	17**	349±	18**	352±	17**		

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

Test of Dunnett

(HAN260)

BAIS 4

STUDY NO. : 0461
 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	406± 23	411± 23	415± 24	419± 24	422± 24	429± 24	431± 24
80 ppm	409± 18	415± 18	420± 18	424± 19	426± 20	431± 20	433± 20
400 ppm	404± 22	410± 21	412± 21	416± 22	417± 21	421± 21	421± 21
2000 ppm	356± 18**	359± 18**	357± 17**	359± 16**	358± 16**	354± 16**	348± 23**

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

Test of Dunnett

(HAN260)

BAIS 4

STUDY NO. : 0461
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		74		78		82		86		90		94	
	70													
Control	432±	25	436±	25	438±	26	435±	27	428±	36	429±	29	421±	28
80 ppm	433±	21	435±	24	437±	25	432±	24	427±	29	421±	35	414±	37
400 ppm	419±	21**	420±	23**	419±	20**	410±	20**	403±	20**	395±	20**	381±	30**
2000 ppm	339±	20**	331±	19**	318±	27**	306±	34**	297±	36**	301±	27**	274±	43**

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

Test of Dunnett

(HAN260)

BAIS 4

STUDY NO. : 0461
 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	415± 30		408± 35		395± 47	
80 ppm	408± 29		400± 22		394± 26	
400 ppm	375± 20**		360± 32**		355± 27**	
2000 ppm	281± 6 ?		213 ?		-	

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

? : Significant test is not applied, because No. of data in this group is less than 3.

APPENDIX C 2

BODY WEIGHT CHANGES : FEMALE

STUDY NO. : 0461
 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	99±	3	111±	4	124±	5	130±	6	140±	7	146±	8	150±	9
80 ppm	99±	3	110±	4	123±	5	129±	5	138±	6	144±	7	148±	8
400 ppm	99±	3	110±	4	123±	5	129±	6	139±	7	145±	8	149±	9
2000 ppm	99±	3	104±	3**	119±	5**	125±	5**	134±	6**	141±	7**	144±	7**

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

Test of Dunnett

(HAN260)

BATS 4

STUDY NO. : 0461
 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		13	
Control	154±	10	157±	11	160±	11	164±	12	167±	12	168±	12	170±	13		
80 ppm	152±	9	154±	9	157±	10	160±	10	164±	11	165±	11	166±	10		
400 ppm	151±	10	155±	10	158±	11	161±	12	164±	11	165±	12	167±	12		
2000 ppm	147±	7**	150±	8**	152±	8**	155±	8**	160±	9**	161±	9**	163±	9**		

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

Test of Dunnett

(HAN260)

BAIS 4

STUDY NO. : 0461
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 UNIT : g
 REPORT TYPE : AI 104
 SEX : FEMALE

BODY WEIGHT CHANGES (SUMMARY)
 ALL ANIMALS

PAGE : 9

Group Name	Administration week		18		22		26		30		34		38	
	14													
Control	171±	13	178±	14	182±	15	188±	15	192±	17	196±	18	199±	19
80 ppm	167±	10	174±	12	178±	12	183±	14	188±	14	191±	15	194±	16
400 ppm	168±	12	175±	12	179±	14	184±	14	189±	15	192±	17	196±	18
2000 ppm	163±	9**	169±	9**	172±	9**	176±	10**	180±	10**	183±	10**	185±	11**

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

Test of Dunnett

(HAN260)

BAIS 4

STUDY NO. : 0461
 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	
Control	203±	19	208±	21	211±	23	215±	25	221±	25	227±	28
80 ppm	199±	17	202±	19	206±	20	210±	22	214±	22	221±	24
400 ppm	200±	18	204±	19	207±	20	211±	22	216±	23	221±	26
2000 ppm	189±	11**	190±	11**	193±	11**	196±	11**	199±	12**	203±	13**

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

Test of Dunnett

(HAN260)

BAIS 4

STUDY NO. : 0461
 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	232±	30	244±	31	250±	31	253±	30	257±	30	262±	31	262±	33
80 ppm	230±	27	240±	29	250±	30	254±	28	259±	27	264±	28	266±	30
400 ppm	230±	30	239±	30	248±	32	249±	31	255±	30	257±	29	258±	28
2000 ppm	210±	15**	215±	15**	220±	14**	217±	14**	221±	15**	221±	15**	222±	17**

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

Test of Dunnett

(HAN260)

BAIS 4

STUDY NO. : 0461
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	264±	32	265±	29	265±	30
80 ppm	269±	33	263±	34	266±	32
400 ppm	258±	31	259±	28	256±	29
2000 ppm	220±	18**	217±	20**	216±	21**

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. : 0461
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 UNIT : g
 REPORT TYPE : AI 104
 SEX : MALE

FOOD CONSUMPTION CHANGES (SUMMARY)
 ALL ANIMALS

PAGE : 1

Group Name	Administration week						
	1	2	3	4	5	6	7
Control	12.5± 0.7	13.6± 0.8	14.3± 0.8	14.6± 0.7	14.6± 0.8	14.0± 0.9	14.4± 0.9
80 ppm	12.5± 0.7	13.8± 0.9	14.5± 0.8	14.8± 0.9	14.9± 0.9	14.4± 0.9	14.7± 1.0
400 ppm	12.3± 0.6	13.4± 0.7	14.1± 0.7	14.6± 0.8	14.8± 0.8	14.1± 0.9	14.4± 0.9
2000 ppm	10.5± 0.6**	12.4± 1.0**	13.0± 1.1**	13.5± 1.3**	13.7± 1.2**	13.4± 1.1**	13.7± 1.2**

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

Test of Dunnett

(HAN260)

BAIS 4

STUDY NO. : 0461
 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	14.2± 0.9	14.3± 1.0	14.5± 1.1	14.7± 1.0	14.6± 1.1	14.6± 1.1	14.4± 1.0
80 ppm	14.6± 1.1	14.7± 1.2	14.7± 1.3	14.9± 1.2	14.7± 1.3	14.8± 1.3	14.6± 1.3
400 ppm	14.5± 0.8	14.4± 0.9	14.6± 0.9	14.7± 0.9	14.4± 0.9	14.7± 0.9	14.5± 0.9
2000 ppm	13.9± 1.2	13.8± 1.1	13.8± 1.3**	13.9± 1.3**	14.0± 1.2*	14.0± 1.2*	13.9± 1.2*

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

Test of Dunnett

(HAN260)

BAIS 4

STUDY NO. : 0461
 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	22	26	30	34	38	42
Control	14.5± 0.9	14.5± 1.0	14.8± 1.3	15.0± 1.1	15.3± 1.1	15.1± 1.3	15.2± 1.1
80 ppm	14.8± 1.2	14.9± 1.4	15.2± 1.3	15.3± 1.3	15.5± 1.4	15.6± 1.3	15.5± 1.4
400 ppm	14.7± 0.9	15.2± 1.1*	15.3± 1.2	15.4± 1.4	15.6± 1.4	15.6± 1.4	15.5± 1.6
2000 ppm	14.3± 1.1	14.6± 1.4	15.0± 1.6	15.0± 1.5	15.6± 2.0	15.4± 1.7	15.3± 1.8

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

Test of Dunnett

(HAN260)

BAIS 4

STUDY NO. : 0461
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCr1j]
 UNIT : g
 REPORT TYPE : A1 104
 SEX : MALE

FOOD CONSUMPTION CHANGES (SUMMARY)
 ALL ANIMALS

PAGE : 4

Group Name	Administration week						
	46	50	54	58	62	66	70
Control	15.4± 1.1	15.5± 1.4	15.5± 1.5	15.7± 1.3	15.9± 1.4	15.5± 1.6	15.7± 1.6
80 ppm	15.6± 1.5	15.9± 1.7	15.9± 1.6	15.7± 1.6	16.0± 1.6	15.6± 1.4	15.8± 1.8
400 ppm	15.9± 1.4	15.8± 1.4	15.9± 1.3	16.0± 1.2	16.3± 1.4	16.0± 1.6	16.3± 1.9
2000 ppm	15.6± 1.9	15.6± 1.7	15.7± 1.7	15.6± 1.6	15.6± 1.8	15.1± 2.2	15.2± 2.2

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

Test of Dunnett

(HAN260)

BAIS 4

STUDY NO. : 0461
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCr1j]
 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	98
Control	15.9± 1.6	16.3± 1.8	15.7± 1.3	15.4± 3.2	15.9± 1.5	15.2± 1.2	15.4± 1.5
80 ppm	16.0± 1.8	16.1± 1.4	15.6± 1.6	15.5± 1.6	16.1± 1.5	15.5± 1.6	15.2± 1.7
400 ppm	16.4± 1.6	16.5± 1.8	15.7± 1.3	16.0± 1.8	15.8± 1.8	15.4± 3.1	15.4± 1.8
2000 ppm	14.5± 2.2**	14.5± 2.8**	13.3± 2.7**	14.1± 4.3*	13.4± 1.8**	11.7± 3.8*	13.0± 0.8 ?

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

? : Significant test is not applied, because No. of data in this group is less than 3.

STUDY NO. : 0461
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	
	102	104
Control	15.1± 2.7	14.8± 3.5
80 ppm	14.7± 2.5	15.4± 1.9
400 ppm	15.4± 3.1	16.3± 2.0
2000 ppm	7.6 ?	-

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

? : Significant test is not applied, because No. of data in this group is less than 3.

APPENDIX D 2

FOOD CONSUMPTION CHANGES : FEMALE

STUDY NO. : 0461
 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	9.5± 0.5	9.4± 0.6	9.6± 0.6	9.6± 0.6	9.8± 0.8	9.2± 0.9	9.4± 1.0
80 ppm	9.3± 0.4*	9.3± 0.5	9.4± 0.6	9.4± 0.6	9.4± 0.6*	8.9± 0.7	8.9± 0.7**
400 ppm	9.2± 0.5**	9.5± 1.1	9.6± 0.7	9.7± 0.7	9.9± 0.9	9.1± 0.8	9.0± 0.8*
2000 ppm	7.5± 0.4**	9.3± 0.5	9.4± 0.7	9.4± 0.5	9.7± 0.6	9.1± 0.6	9.1± 0.7*

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

Test of Dunnett

(HAN260)

BAIS 4

STUDY NO. : 0461
 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	9.3± 1.1	9.4± 1.1	9.4± 1.0	9.7± 0.9	9.5± 1.0	9.5± 1.1	9.3± 1.1
80 ppm	8.8± 0.7*	8.8± 0.9*	8.8± 0.7*	9.1± 0.6**	9.0± 0.7*	8.9± 0.7*	8.8± 0.8*
400 ppm	9.0± 0.9	9.0± 0.9	8.9± 0.9*	9.1± 1.0**	8.9± 1.0**	9.1± 1.0	9.1± 1.0
2000 ppm	9.0± 0.7	9.0± 0.7	8.8± 0.6**	9.1± 0.7**	8.9± 0.7**	9.1± 0.7	9.0± 0.8

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

Test of Dunnett

(HAN260)

BAIS 4

STUDY NO. : 0461
 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	22	26	30	34	38	42
Control	9.5± 1.2	9.8± 1.4	10.1± 1.4	9.8± 1.4	10.4± 1.6	10.3± 1.7	10.5± 1.7
80 ppm	9.1± 0.9	9.2± 0.9	9.4± 1.0**	9.5± 1.0	9.7± 1.0	9.7± 1.0	9.9± 1.2
400 ppm	9.1± 1.0	9.5± 1.1	9.6± 1.0	9.7± 1.1	10.1± 1.4	10.4± 1.7	10.2± 1.5
2000 ppm	9.1± 0.7	9.4± 0.9	9.5± 1.0*	9.5± 0.9	9.8± 1.0	9.9± 1.2	10.0± 1.2

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

Test of Dunnett

(HAN260)

BAIS 4

STUDY NO. : 0461
 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						
	46	50	54	58	62	66	70
Control	10.7± 1.7	11.0± 1.9	11.2± 1.8	11.6± 1.8	11.9± 2.0	11.7± 2.1	11.7± 1.9
80 ppm	10.4± 1.3	10.7± 1.4	10.9± 1.5	11.2± 1.8	11.6± 1.8	11.5± 1.6	11.9± 1.9
400 ppm	10.5± 1.5	10.8± 1.6	11.1± 1.5	11.4± 1.7	11.8± 1.8	11.9± 1.8	11.9± 1.8
2000 ppm	10.2± 1.1	10.4± 1.2	10.7± 1.3	10.9± 1.6	11.4± 1.7	11.5± 1.8	11.6± 1.6

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

Test of Dunnett

(HAN260)

BAIS 4

STUDY NO. : 0461
 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	98
Control	12.9± 2.1	12.9± 2.0	12.4± 1.9	12.8± 1.8	13.2± 2.1	12.5± 2.0	12.5± 2.6
80 ppm	12.9± 2.1	13.2± 2.1	12.8± 1.9	12.9± 2.1	13.3± 2.1	12.5± 2.3	12.6± 2.4
400 ppm	12.5± 1.8	13.0± 1.9	12.4± 1.7	13.0± 1.8	13.1± 1.8	12.4± 2.1	12.7± 2.2
2000 ppm	12.1± 1.6	12.7± 1.8	12.3± 1.7	12.8± 1.6	13.0± 1.8	12.8± 1.7	12.8± 2.3

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

Test of Dunnett

(HAN260)

BAIS 4

STUDY NO. : 0461
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	
	102	104
Control	12.6± 2.3	12.8± 2.7
80 ppm	12.1± 3.5	13.0± 2.6
400 ppm	12.9± 2.1	12.9± 2.3
2000 ppm	13.0± 2.2	13.3± 2.1

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

Test of Dunnett

(HAN260)

BAIS 4

APPENDIX E 1

CHEMICAL INTAKE CHANGES : MALE

STUDY NO. : 0461
ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
UNIT : g/kg/day
REPORT TYPE : A1 104
SEX : MALE

CHEMICAL INTAKE CHANGES (SUMMARY)
ALL ANIMALS

PAGE : 1

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
80 ppm	0.007± 0.001	0.006± 0.000	0.006± 0.000	0.005± 0.000	0.005± 0.000	0.004± 0.000	0.004± 0.000
400 ppm	0.032± 0.001	0.029± 0.001	0.028± 0.001	0.026± 0.001	0.025± 0.001	0.022± 0.001	0.022± 0.001
2000 ppm	0.148± 0.005	0.149± 0.006	0.141± 0.005	0.132± 0.005	0.126± 0.004	0.116± 0.004	0.112± 0.005

(HAN300)

BAIS 4

STUDY NO. : 0461
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 UNIT : g/kg/day
 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
80 ppm	0.004± 0.000		0.004± 0.000	0.004± 0.000	0.004± 0.000	0.004± 0.000	0.004± 0.000	0.004± 0.001
400 ppm	0.021± 0.001		0.020± 0.001	0.020± 0.001	0.019± 0.001	0.019± 0.001	0.019± 0.001	0.018± 0.001
2000 ppm	0.110± 0.004		0.105± 0.005	0.102± 0.004	0.100± 0.004	0.099± 0.004	0.097± 0.004	0.094± 0.005

(HAN300)

BAIS 4

STUDY NO. : 0461
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCr-j]
 UNIT : g/kg/day
 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
80 ppm	0.003± 0.000	0.003± 0.000	0.003± 0.000	0.003± 0.000	0.003± 0.000	0.003± 0.000	0.003± 0.000
400 ppm	0.017± 0.001	0.017± 0.001	0.017± 0.001	0.016± 0.001	0.016± 0.001	0.016± 0.001	0.015± 0.001
2000 ppm	0.092± 0.004	0.090± 0.008	0.090± 0.009	0.087± 0.008	0.089± 0.011	0.087± 0.009	0.086± 0.010

(HAN300)

BAIS 4

STUDY NO. : 0461
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 UNIT : g/kg/day
 REPORT TYPE : A1 104
 SEX : MALE

CHEMICAL INTAKE CHANGES (SUMMARY)
 ALL ANIMALS

PAGE : 4

Group Name	Administration (weeks)		54	58	62	66	70
	46	50					
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
80 ppm	0.003± 0.000	0.003± 0.000	0.003± 0.000	0.003± 0.000	0.003± 0.000	0.003± 0.000	0.003± 0.000
400 ppm	0.016± 0.001	0.015± 0.001	0.015± 0.001	0.015± 0.001	0.016± 0.001	0.015± 0.002	0.016± 0.002
2000 ppm	0.087± 0.010	0.088± 0.010	0.088± 0.009	0.087± 0.008	0.088± 0.010	0.087± 0.010	0.089± 0.011

(HAN300)

BAIS 4

STUDY NO. : 0461
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 UNIT : g/kg/day
 REPORT TYPE : A1 104
 SEX : MALE

CHEMICAL INTAKE CHANGES (SUMMARY)
 ALL ANIMALS

PAGE : 5

Group Name	Administration (weeks)									
	74	78	82	86	90	94	98			
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		
80 ppm	0.003± 0.000	0.003± 0.000	0.003± 0.000	0.003± 0.000	0.003± 0.000	0.003± 0.000	0.003± 0.000	0.003± 0.000		
400 ppm	0.016± 0.002	0.016± 0.002	0.015± 0.002	0.016± 0.002	0.016± 0.002	0.016± 0.002	0.016± 0.004	0.017± 0.002		
2000 ppm	0.087± 0.011	0.090± 0.014	0.088± 0.012	0.094± 0.025	0.088± 0.006	0.084± 0.018	0.093± 0.008			

(HAN300)

BAIS 4

STUDY NO. : 0461
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
80 ppm	0.003± 0.000	0.003± 0.000
400 ppm	0.017± 0.004	0.018± 0.003
2000 ppm	0.071	-

(HAN300)

BAIS 4

APPENDIX E 2

CHEMICAL INTAKE CHANGES : FEMALE

STUDY NO. : 0461
ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
UNIT : g/kg/day
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
80 ppm	0.007± 0.000	0.006± 0.000	0.006± 0.000	0.005± 0.000	0.005± 0.000	0.005± 0.000	0.005± 0.000
400 ppm	0.033± 0.001	0.031± 0.003	0.030± 0.002	0.028± 0.001	0.027± 0.002	0.024± 0.001	0.024± 0.001
2000 ppm	0.145± 0.006	0.156± 0.005	0.149± 0.009	0.140± 0.004	0.138± 0.005	0.126± 0.005	0.123± 0.006

(HAN300)

BAIS 4

STUDY NO. : 0461
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 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		
80 ppm	0.005± 0.000	0.004± 0.001	0.004± 0.000	0.004± 0.000	0.004± 0.000	0.004± 0.000	0.004± 0.000	0.004± 0.000		
400 ppm	0.023± 0.002	0.023± 0.001	0.022± 0.001	0.022± 0.002	0.022± 0.002	0.022± 0.002	0.022± 0.002	0.022± 0.002		
2000 ppm	0.120± 0.007	0.118± 0.007	0.113± 0.006	0.114± 0.006	0.111± 0.006	0.111± 0.006	0.111± 0.006	0.110± 0.006		

(HAN300)

BAIS 4

STUDY NO. : 0461
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		
80 ppm	0.004± 0.000	0.004± 0.000	0.004± 0.000	0.004± 0.000	0.004± 0.000	0.004± 0.000	0.004± 0.000	0.004± 0.000		
400 ppm	0.021± 0.002	0.021± 0.002	0.021± 0.001	0.021± 0.002	0.021± 0.002	0.021± 0.002	0.021± 0.003	0.020± 0.002		
2000 ppm	0.108± 0.006	0.109± 0.009	0.108± 0.009	0.105± 0.007	0.107± 0.009	0.107± 0.010	0.106± 0.010			

(HAN300)

BAIS 4

STUDY NO. : 0461
 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)									
	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		
80 ppm	0.004± 0.000	0.004± 0.001	0.004± 0.000	0.004± 0.001	0.004± 0.000	0.004± 0.000	0.004± 0.000	0.004± 0.001		
400 ppm	0.021± 0.002	0.021± 0.003	0.021± 0.002	0.021± 0.002	0.021± 0.003	0.021± 0.003	0.021± 0.003	0.021± 0.003		
2000 ppm	0.108± 0.009	0.108± 0.009	0.109± 0.010	0.110± 0.013	0.113± 0.013	0.111± 0.014	0.111± 0.012			

(HAN300)

BAIS 4

STUDY NO. : 0461
ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
UNIT : g/kg/day
REPORT TYPE : A1 104
SEX : FEMALE

CHEMICAL INTAKE CHANGES (SUMMARY)
ALL ANIMALS

PAGE : 11

Group Name	Administration (weeks)									
	74		78		82		86		90	
Control	0.000± 0.000		0.000± 0.000		0.000± 0.000		0.000± 0.000		0.000± 0.000	
80 ppm	0.004± 0.001		0.004± 0.001		0.004± 0.001		0.004± 0.001		0.004± 0.001	
400 ppm	0.021± 0.003		0.021± 0.003		0.020± 0.003		0.021± 0.003		0.020± 0.003	
2000 ppm	0.113± 0.012		0.116± 0.014		0.113± 0.014		0.116± 0.012		0.118± 0.014	

(HAN300)

BAIS 4

STUDY NO. : 0461
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
80 ppm	0.004±	0.001	0.004±	0.001
400 ppm	0.020±	0.003	0.020±	0.003
2000 ppm	0.120±	0.017	0.123±	0.018

(HAN300)

BAIS 4

APPENDIX F 1

HEMATOLOGY : MALE

STUDY NO. : 0461
 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	39	7.44±	1.94	12.9±	3.5	37.1±	8.6	51.8±	10.0	17.6±	2.8	34.3±	2.8	786±	274
80 ppm	40	8.30±	1.24*	14.0±	2.1	40.4±	4.8	49.2±	5.5*	16.9±	1.4*	34.5±	1.9	833±	277
400 ppm	39	7.42±	1.18	12.3±	1.8**	35.5±	4.8**	48.1±	2.5**	16.6±	1.0**	34.5±	1.0	949±	154**
2000 ppm	0	-		-		-		-		-		-		-	

Significant difference ; * : P ≤ 0.05 ** : P ≤ 0.01

Test of Dunnett

(HCL070)

BAIS 4

STUDY NO. : 0461
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	RETICULOCYTE %		METHEMOGLOBIN %	
Control	39	5.7±	6.8	0.3±	0.1
80 ppm	40	3.6±	2.8	0.3±	0.1
400 ppm	39	3.4±	1.6	0.4±	0.2**
2000 ppm	0	-		-	

Significant difference ; * : $P \leq 0.05$

** : $P \leq 0.01$

Test of Dunnett

(HCL070)

BAIS 4

STUDY NO. : 0461
ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
MEASURE. TIME : 1
SEX : MALE

HEMATOLOGY (SUMMARY)
ALL ANIMALS (105W)

REPORT TYPE : A1

PAGE : 3

Group Name	NO. of Animals	WBC 1 O ³ /μl		Differential N-BAND		WBC (%) N-SEG		EOSINO		BASO		MONO		LYMPHO		OTHER	
Control	39	12.03±	27.28	1±	3	43±	13	2±	1	0±	0	4±	2	40±	13	10±	22
80 ppm	40	8.72±	19.18	0±	1	47±	11	1±	1	0±	0	4±	2	41±	11	5±	15
400 ppm	39	7.21±	8.09	0±	1	48±	11	1±	1	0±	0	5±	2	40±	10	6±	15
2000 ppm	0	-		-		-		-		-		-		-		-	

Significant difference ; * : $P \leq 0.05$

** : $P \leq 0.01$

Test of Dunnett

(HCL070)

BAIS 4

APPENDIX F 2

HEMATOLOGY : FEMALE

STUDY NO. : 0461
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCr1j]
 MEASURE. TIME : 1
 SEX : FEMALE REPORT TYPE : A1

HEMATOLOGY (SUMMARY)
 ALL ANIMALS (105W)

PAGE : 4

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	41	7.82±	0.86	14.7±	1.6	40.7±	3.6	52.3±	2.9	18.9±	1.0	36.1±	1.4	612±	142
80 ppm	42	7.61±	1.48	14.2±	2.8	39.7±	6.1	53.8±	9.4	18.8±	1.3	35.4±	3.2	644±	154
400 ppm	45	7.80±	0.55	14.1±	1.2**	39.8±	2.9	51.0±	1.7**	18.1±	1.0**	35.4±	1.1**	725±	123**
2000 ppm	38	6.71±	0.57**	12.2±	0.9**	35.4±	2.4**	52.9±	2.3	18.2±	0.7**	34.4±	0.6**	730±	115**

Significant difference ; * : P ≤ 0.05

** : P ≤ 0.01

Test of Dunnett

(HCL070)

BAIS 4

STUDY NO. : 0461
ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
MEASURE. TIME : 1
SEX : FEMALE

HEMATOLOGY (SUMMARY)
ALL ANIMALS (105W)

REPORT TYPE : A1

PAGE : 5

Group Name	NO. of Animals	RETICULOCYTE %		METHEMOGLOBIN %	
Control	41	3.3±	2.9	0.3±	0.1
80 ppm	42	4.6±	8.1	0.3±	0.1
400 ppm	45	3.1±	1.4	0.4±	0.2**
2000 ppm	38	5.7±	1.4**	1.3±	0.4**

Significant difference ; * : $P \leq 0.05$

** : $P \leq 0.01$

Test of Dunnett

(HCL070)

BAIS 4

STUDY NO. : 0461
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 MEASURE. TIME : 1
 SEX : FEMALE

HEMATOLOGY (SUMMARY)
 ALL ANIMALS (105W)

REPORT TYPE : A1

PAGE : 6

Group Name	NO. of Animals	WBC 10 ³ /μl		Differential N-BAND		WBC (%) N-SEG		EOSINO		BASO		MONO		LYMPHO		OTHER	
Control	41	3.63±	2.09	0±	1	40±	10	2±	1	0±	0	4±	2	50±	11	4±	9
80 ppm	42	7.90±	22.29	0±	0	38±	10	2±	1	0±	0	4±	2	50±	15	6±	17
400 ppm	45	3.30±	1.33	0±	1	42±	9	2±	1	0±	0	4±	2	49±	9	3±	5
2000 ppm	38	6.15±	15.18*	0±	1	46±	11*	1±	2	0±	0	3±	2	44±	12	5±	15

Significant difference ; * : $P \leq 0.05$

** : $P \leq 0.01$

Test of Dunnett

(HCL070)

BAIS 4

APPENDIX G 1

BIOCHEMISTRY : MALE

STUDY NO. : 0461
 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	39	6.5±	0.4	2.9±	0.2	0.8±	0.1	0.23±	0.28	154±	32	159±	43	89±	63
80 ppm	40	6.7±	0.4	2.9±	0.2	0.8±	0.1	0.19±	0.09	161±	19	191±	42**	93±	51
400 ppm	39	6.6±	0.5	2.7±	0.3**	0.7±	0.1**	0.18±	0.15	154±	32	277±	52**	207±	88**
2000 ppm	0	-		-		-		-		-		-		-	

Significant difference : * : $P \leq 0.05$

** : $P \leq 0.01$

Test of Dunnett

(HCL074)

BAIS 4

STUDY NO. : 0461

ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]

MEASURE. TIME : 1

SEX : MALE

REPORT TYPE : A1

BIOCHEMISTRY (SUMMARY)

ALL ANIMALS (105W)

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	39	235±	68	135±	147	51±	37	254±	296	305±	365	6±	3	127±	42
80 ppm	40	261±	57	121±	114	52±	46	176±	96	235±	122	13±	6**	132±	48
400 ppm	39	377±	76**	128±	105	69±	42	166±	90*	230±	91	35±	23**	149±	110
2000 ppm	0	-		-		-		-		-		-		-	

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

Test of Dunnett

(HCL074)

BAIS 4

STUDY NO. : 0461
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 MEASURE. TIME : 1
 SEX : MALE

BIOCHEMISTRY (SUMMARY)
 ALL ANIMALS (105W)

REPORT TYPE : A1

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	39	18.0±	4.1	0.6±	0.1	142±	1	3.6±	0.4	105±	2	10.4±	0.4	4.2±	0.7
80 ppm	40	19.4±	3.2	0.6±	0.1	141±	1	3.7±	0.3	104±	2	10.5±	0.3	4.3±	0.5
400 ppm	39	43.9±	31.7**	0.9±	0.3**	141±	2	3.8±	0.4	103±	2**	11.2±	0.6**	5.7±	2.2**
2000 ppm	0	-		-		-		-		-		-		-	

Significant difference ; * : $P \leq 0.05$

** : $P \leq 0.01$

Test of Dunnett

(HCL074)

BAIS 4

APPENDIX G 2

BIOCHEMISTRY : FEMALE

STUDY NO. : 0461
 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	41	6.9±	0.5	3.6±	0.4	1.1±	0.1	0.15±	0.05	148±	20	126±	28	66±	65
80 ppm	42	7.0±	0.6	3.6±	0.4	1.1±	0.1	0.29±	0.96	155±	25	146±	40	70±	54
400 ppm	45	7.1±	0.4	3.6±	0.3	1.0±	0.1	0.14±	0.02	160±	18*	188±	48**	77±	44
2000 ppm	38	6.9±	0.6	3.2±	0.3**	0.9±	0.1**	0.21±	0.03**	158±	14	267±	61**	211±	107**

Significant difference : * : $P \leq 0.05$

** : $P \leq 0.01$

Test of Dunnett

(HCL074)

BAIS 4

STUDY NO. : 0461
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 MEASURE. TIME : 1
 SEX : FEMALE

BIOCHEMISTRY (SUMMARY)
 ALL ANIMALS (105W)

REPORT TYPE : A1

PAGE : 5

Group Name	NO. of Animals	PHOSPHOLIPID mg/dl		AST IU/l		ALT IU/l		LDH IU/l		ALP IU/l		G-GTP IU/l		CK IU/l	
Control	41	223±	49	169±	177	67±	70	268±	93	139±	78	2±	2	115±	44
80 ppm	42	256±	101	162±	209	73±	89	285±	229	167±	346	3±	3	132±	168
400 ppm	45	292±	70**	126±	61	67±	28	200±	70**	110±	64**	6±	3**	103±	31
2000 ppm	38	414±	93**	214±	261	134±	117**	189±	73**	161±	35**	77±	25**	104±	24

Significant difference ; * : $P \leq 0.05$

** : $P \leq 0.01$

Test of Dunnett

(HCL074)

BAIS 4

STUDY NO. : 0461
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCr-j]
 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	41	16.1±	2.7	0.5±	0.1	141±	2	3.5±	0.4	103±	2	10.7±	0.9	4.1±	0.7
80 ppm	42	17.7±	4.8	0.5±	0.1	140±	2	3.5±	0.4	103±	2	10.5±	0.3	4.0±	0.7
400 ppm	45	18.0±	4.2*	0.5±	0.1	140±	2	3.5±	0.3	103±	2	10.8±	0.4	4.0±	0.6
2000 ppm	38	28.8±	12.7**	0.6±	0.2*	139±	2*	3.6±	0.3	102±	2**	11.2±	0.4**	5.0±	1.3**

Significant difference ; * : $P \leq 0.05$

** : $P \leq 0.01$

Test of Dunnett

(HCL074)

BAIS 4

APPENDIX H 1

URINALYSIS : MALE

STUDY NO. : 0461
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	40	0	3	0	7	21	9	0		0	0	1	4	24	11		40	0	0	0	0	0	0		35	4	1	0	0	0		37	1	1	1	
80 ppm	40	0	0	2	5	21	12	0		0	0	0	1	24	15		40	0	0	0	0	0	0		37	3	0	0	0	0		39	1	0	0	
400 ppm	39	0	1	7	10	19	2	0	*	0	0	0	0	25	14		39	0	0	0	0	0	0		39	0	0	0	0	0		38	1	0	0	
2000 ppm	0	-	-	-	-	-	-	-		-	-	-	-	-	-		-	-	-	-	-	-		-	-	-	-	-	-		-	-	-	-		

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

Test of CHI SQUARE

(HCL101)

BAIS 4

STUDY NO. : 0461
ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
MEASURE. TIME : 1
SEX : MALE

URINALYSIS

REPORT TYPE : A1

PAGE : 2

Group Name	NO. of Animals	Occult blood					Urobilinogen						
		-	±	+	2+	3+	CHI	±	+	2+	3+	4+	CHI
Control	40	39	0	0	0	0	1	38	0	1	1	1	0
80 ppm	40	39	0	0	0	1	0	40	0	0	0	0	0
400 ppm	39	39	0	0	0	0	0	39	0	0	0	0	0
2000 ppm	0	-	-	-	-	-	-	-	-	-	-	-	-

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

Test of CHI SQUARE

(HCL101)

BATS 4

APPENDIX H 2

URINALYSIS : FEMALE

STUDY NO. : 0461

URINALYSIS

ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]

MEASURE. TIME : 1

SEX : FEMALE

REPORT TYPE : A1

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+		3+				
Control	41	0	1	4	9	7	17	3		0	5	12	14	7	3		41	0	0	0	0	0		12	29	0	0	0	0		41	0	0	0				
80 ppm	42	0	3	4	11	5	18	1		0	1	12	14	11	4		42	0	0	0	0	0		8	34	0	0	0	0		42	0	0	0				
400 ppm	46	0	1	3	7	15	19	1		0	0	2	9	24	11	**	46	0	0	0	0	0		14	29	2	0	0	1		41	5	0	0	*			
2000 ppm	40	0	1	9	16	9	5	0	*	0	0	0	1	23	16	**	35	3	2	0	0	0		36	4	0	0	0	0	**	21	19	0	0	**			

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

Test of CHI SQUARE

(HCL101)

BAIS 4

STUDY NO. : 0461

URINALYSIS

ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]

MEASURE. TIME : 1

SEX : FEMALE

REPORT TYPE : A1

PAGE : 4

Group Name	NO. of Animals	Occult blood					CHI	Urobilinogen					CHI
		-	±	+	2+	3+		±	+	2+	3+	4+	
Control	41	40	0	0	0	0	1	41	0	0	0	0	0
80 ppm	42	40	0	1	1	0	0	42	0	0	0	0	0
400 ppm	46	42	2	0	1	1	0	46	0	0	0	0	0
2000 ppm	40	39	0	0	1	0	0	40	0	0	0	0	0

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

Test of CHI SQUARE

(HCL101)

BAIS 4

APPENDIX I 1

GROSS FINDINGS : MALE

ALL ANIMALS

STUDY NO. : 0461
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		80 ppm		400 ppm		2000 ppm	
			50	(%)	50	(%)	50	(%)	50	(%)
skin/app	nodule		3	(6)	8	(16)	9	(18)	4	(8)
	scab		0	(0)	1	(2)	0	(0)	0	(0)
	forelimb:nodule		1	(2)	0	(0)	0	(0)	0	(0)
subcutis	jaundice		3	(6)	0	(0)	1	(2)	0	(0)
	mass		3	(6)	11	(22)	10	(20)	4	(8)
lung	white zone		0	(0)	0	(0)	1	(2)	2	(4)
	red zone		1	(2)	1	(2)	0	(0)	2	(4)
	edema		0	(0)	0	(0)	1	(2)	1	(2)
	nodule		1	(2)	1	(2)	1	(2)	0	(0)
	voluminus		0	(0)	0	(0)	0	(0)	1	(2)
lymph node	enlarged		4	(8)	2	(4)	0	(0)	2	(4)
	brown		0	(0)	0	(0)	0	(0)	1	(2)
	nodule		1	(2)	0	(0)	0	(0)	0	(0)
thymus	enlarged		0	(0)	0	(0)	1	(2)	0	(0)
spleen	enlarged		18	(36)	6	(12)	2	(4)	1	(2)
	black		0	(0)	0	(0)	0	(0)	1	(2)
	white zone		1	(2)	1	(2)	2	(4)	0	(0)
	nodule		1	(2)	0	(0)	0	(0)	2	(4)
	deformed		0	(0)	0	(0)	1	(2)	0	(0)
	granular		0	(0)	0	(0)	0	(0)	25	(50)
heart	nodule		0	(0)	0	(0)	1	(2)	0	(0)
	fluid:red		0	(0)	0	(0)	1	(2)	0	(0)

STUDY NO. : 0461
 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		80 ppm		400 ppm		2000 ppm	
			50	(%)	50	(%)	50	(%)	50	(%)
heart	fluid:brown		0	(0)	0	(0)	1	(2)	0	(0)
artery/aort	induration		0	(0)	0	(0)	0	(0)	12	(24)
oral cavity	mass		0	(0)	1	(2)	0	(0)	0	(0)
tongue	nodule		0	(0)	0	(0)	1	(2)	0	(0)
forestomach	nodule		0	(0)	1	(2)	0	(0)	1	(2)
	ulcer		0	(0)	1	(2)	2	(4)	0	(0)
gl stomach	red zone		0	(0)	0	(0)	1	(2)	0	(0)
stomach	nodule		0	(0)	0	(0)	1	(2)	0	(0)
	ulcer		1	(2)	0	(0)	0	(0)	0	(0)
small intes	nodule		1	(2)	0	(0)	0	(0)	0	(0)
liver	enlarged		1	(2)	0	(0)	1	(2)	0	(0)
	brown		0	(0)	0	(0)	1	(2)	48	(96)
	white zone		0	(0)	1	(2)	4	(8)	1	(2)
	red zone		0	(0)	0	(0)	5	(10)	0	(0)
	brown zone		0	(0)	0	(0)	0	(0)	1	(2)
	black zone		0	(0)	0	(0)	1	(2)	0	(0)
	nodule		2	(4)	4	(8)	16	(32)	3	(6)
	rough		5	(10)	2	(4)	0	(0)	0	(0)
	nodular		0	(0)	1	(2)	0	(0)	0	(0)
	herniation		5	(10)	1	(2)	5	(10)	1	(2)
pancreas	nodule		0	(0)	0	(0)	0	(0)	2	(4)
kidney	black		0	(0)	0	(0)	0	(0)	1	(2)

STUDY NO. : 0461
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		80 ppm		400 ppm		2000 ppm	
			50	(%)	50	(%)	50	(%)	50	(%)
kidney	white zone		0	(0)	1	(2)	0	(0)	0	(0)
	nodule		1	(2)	0	(0)	2	(4)	3	(6)
	cyst		0	(0)	1	(2)	5	(10)	8	(16)
	granular		4	(8)	9	(18)	41	(82)	49	(98)
urin bladd	urine:marked retention		0	(0)	1	(2)	0	(0)	1	(2)
pituitary	enlarged		6	(12)	5	(10)	4	(8)	0	(0)
	red zone		2	(4)	2	(4)	2	(4)	1	(2)
	nodule		6	(12)	1	(2)	3	(6)	0	(0)
	cyst		0	(0)	0	(0)	1	(2)	0	(0)
thyroid	enlarged		5	(10)	1	(2)	2	(4)	0	(0)
	nodule		0	(0)	2	(4)	0	(0)	0	(0)
testis	nodule		34	(68)	39	(78)	44	(88)	25	(50)
epididymis	adhesion		0	(0)	0	(0)	0	(0)	1	(2)
brain	red zone		2	(4)	0	(0)	1	(2)	0	(0)
periph nerv	hypertrophy		0	(0)	1	(2)	0	(0)	0	(0)
eye	turbid		0	(0)	0	(0)	1	(2)	2	(4)
	white		3	(6)	2	(4)	3	(6)	5	(10)
Zymbal gl	nodule		1	(2)	0	(0)	0	(0)	1	(2)
muscle	nodule		1	(2)	1	(2)	0	(0)	1	(2)
bone	nodule		1	(2)	0	(0)	0	(0)	0	(0)
pleura	nodule		0	(0)	1	(2)	0	(0)	0	(0)
peritoneum	nodule		1	(2)	2	(4)	3	(6)	1	(2)

STUDY NO. : 0461
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		80 ppm		400 ppm		2000 ppm	
			50	(%)	50	(%)	50	(%)	50	(%)
abdominal c	ascites		1	(2)	0	(0)	2	(4)	0	(0)
thoracic ca	hemorrhage		0	(0)	0	(0)	1	(2)	0	(0)
	mass		0	(0)	0	(0)	1	(2)	0	(0)
	pleural fluid		0	(0)	1	(2)	0	(0)	8	(16)
other	scab		0	(0)	1	(2)	0	(0)	0	(0)
	hindlimb:nodule		0	(0)	0	(0)	0	(0)	1	(2)

(HPT080)

BAIS 4

APPENDIX I 2

GROSS FINDINGS : MALE DEAD AND MORIBUND ANIMALS

STUDY NO. : 0461
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 REPORT TYPE : A1
 SEX : MALE

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

PAGE : 1

Organ	Findings	Group Name NO. of Animals	Control		80 ppm		400 ppm		2000 ppm	
			10	(%)	10	(%)	11	(%)	50	(%)
skin/app	nodule		0	(0)	2	(20)	0	(0)	4	(8)
subcutis	jaundice		2	(20)	0	(0)	1	(9)	0	(0)
	mass		1	(10)	3	(30)	0	(0)	4	(8)
lung	white zone		0	(0)	0	(0)	0	(0)	2	(4)
	red zone		1	(10)	0	(0)	0	(0)	2	(4)
	edema		0	(0)	0	(0)	1	(9)	1	(2)
	nodule		1	(10)	1	(10)	1	(9)	0	(0)
	voluminus		0	(0)	0	(0)	0	(0)	1	(2)
lymph node	enlarged		1	(10)	1	(10)	0	(0)	2	(4)
	brown		0	(0)	0	(0)	0	(0)	1	(2)
	nodule		1	(10)	0	(0)	0	(0)	0	(0)
thymus	enlarged		0	(0)	0	(0)	1	(9)	0	(0)
spleen	enlarged		6	(60)	2	(20)	1	(9)	1	(2)
	black		0	(0)	0	(0)	0	(0)	1	(2)
	white zone		1	(10)	0	(0)	1	(9)	0	(0)
	nodule		0	(0)	0	(0)	0	(0)	2	(4)
	granular		0	(0)	0	(0)	0	(0)	25	(50)
heart	fluid:red		0	(0)	0	(0)	1	(9)	0	(0)
artery/aort	induration		0	(0)	0	(0)	0	(0)	12	(24)
tongue	nodule		0	(0)	0	(0)	1	(9)	0	(0)
forestomach	nodule		0	(0)	0	(0)	0	(0)	1	(2)
	ulcer		0	(0)	1	(10)	2	(18)	0	(0)

STUDY NO. : 0461
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		80 ppm		400 ppm		2000 ppm	
			10	(%)	10	(%)	11	(%)	50	(%)
gl stomach	red zone		0	(0)	0	(0)	1	(9)	0	(0)
small intes	nodule		1	(10)	0	(0)	0	(0)	0	(0)
liver	enlarged		1	(10)	0	(0)	0	(0)	0	(0)
	brown		0	(0)	0	(0)	0	(0)	48	(96)
	white zone		0	(0)	1	(10)	0	(0)	1	(2)
	red zone		0	(0)	0	(0)	2	(18)	0	(0)
	brown zone		0	(0)	0	(0)	0	(0)	1	(2)
	nodule		0	(0)	1	(10)	0	(0)	3	(6)
	rough		1	(10)	0	(0)	0	(0)	0	(0)
	herniation		2	(20)	0	(0)	1	(9)	1	(2)
pancreas	nodule		0	(0)	0	(0)	0	(0)	2	(4)
kidney	black		0	(0)	0	(0)	0	(0)	1	(2)
	white zone		0	(0)	1	(10)	0	(0)	0	(0)
	nodule		1	(10)	0	(0)	2	(18)	3	(6)
	cyst		0	(0)	0	(0)	0	(0)	8	(16)
	granular		0	(0)	2	(20)	5	(45)	49	(98)
urin bladd	urine:marked retention		0	(0)	1	(10)	0	(0)	1	(2)
pituitary	enlarged		3	(30)	4	(40)	3	(27)	0	(0)
	red zone		0	(0)	0	(0)	1	(9)	1	(2)
	nodule		1	(10)	0	(0)	0	(0)	0	(0)
thyroid	enlarged		1	(10)	0	(0)	0	(0)	0	(0)
	nodule		0	(0)	1	(10)	0	(0)	0	(0)

STUDY NO. : 0461
 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 NO. of Animals	Control		80 ppm		400 ppm		2000 ppm	
			10	(%)	10	(%)	11	(%)	50	(%)
testis	nodule		2	(20)	4	(40)	7	(64)	25	(50)
epididymis	adhesion		0	(0)	0	(0)	0	(0)	1	(2)
brain	red zone		2	(20)	0	(0)	1	(9)	0	(0)
periph nerv	hypertrophy		0	(0)	1	(10)	0	(0)	0	(0)
eye	turbid		0	(0)	0	(0)	1	(9)	2	(4)
	white		0	(0)	1	(10)	1	(9)	5	(10)
Zymbal gl	nodule		0	(0)	0	(0)	0	(0)	1	(2)
muscle	nodule		1	(10)	1	(10)	0	(0)	1	(2)
bone	nodule		1	(10)	0	(0)	0	(0)	0	(0)
pleura	nodule		0	(0)	1	(10)	0	(0)	0	(0)
peritoneum	nodule		0	(0)	1	(10)	1	(9)	1	(2)
abdominal c	ascites		0	(0)	0	(0)	1	(9)	0	(0)
thoracic ca	hemorrhage		0	(0)	0	(0)	1	(9)	0	(0)
	mass		0	(0)	0	(0)	1	(9)	0	(0)
	pleural fluid		0	(0)	1	(10)	0	(0)	8	(16)
other	hindlimb nodule		0	(0)	0	(0)	0	(0)	1	(2)

APPENDIX I 3

GROSS FINDINGS : MALE SACRIFICED ANIMALS

STUDY NO. : 0461
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		80 ppm		400 ppm		2000 ppm	
			40	(%)	40	(%)	39	(%)	0	(%)
skin/app	nodule		3	(8)	6	(15)	9	(23)	-	(-)
	scab		0	(0)	1	(3)	0	(0)	-	(-)
	forelimb:nodule		1	(3)	0	(0)	0	(0)	-	(-)
subcutis	jaundice		1	(3)	0	(0)	0	(0)	-	(-)
	mass		2	(5)	8	(20)	10	(26)	-	(-)
lung	white zone		0	(0)	0	(0)	1	(3)	-	(-)
	red zone		0	(0)	1	(3)	0	(0)	-	(-)
lymph node	enlarged		3	(8)	1	(3)	0	(0)	-	(-)
spleen	enlarged		12	(30)	4	(10)	1	(3)	-	(-)
	white zone		0	(0)	1	(3)	1	(3)	-	(-)
	nodule		1	(3)	0	(0)	0	(0)	-	(-)
	deformed		0	(0)	0	(0)	1	(3)	-	(-)
heart	nodule		0	(0)	0	(0)	1	(3)	-	(-)
	fluid:brown		0	(0)	0	(0)	1	(3)	-	(-)
oral cavity	mass		0	(0)	1	(3)	0	(0)	-	(-)
forestomach	nodule		0	(0)	1	(3)	0	(0)		()
stomach	nodule		0	(0)	0	(0)	1	(3)	-	(-)
	ulcer		1	(3)	0	(0)	0	(0)	-	(-)
liver	enlarged		0	(0)	0	(0)	1	(3)	-	(-)
	brown		0	(0)	0	(0)	1	(3)	-	(-)
	white zone		0	(0)	0	(0)	4	(10)	-	(-)
	red zone		0	(0)	0	(0)	3	(8)	-	(-)

STUDY NO. : 0461
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 REPORT TYPE : A1
 SEX : MALE

GROSS FINDINGS (SUMMARY)
 SACRIFICED ANIMALS (105W)

PAGE : 2

Organ	Findings	Group Name NO. of Animals	Control		80 ppm		400 ppm		2000 ppm	
			40	(%)	40	(%)	39	(%)	0	(%)
liver	black zone		0	(0)	0	(0)	1	(3)	-	(-)
	nodule		2	(5)	3	(8)	16	(41)	-	(-)
	rough		4	(10)	2	(5)	0	(0)	-	(-)
	nodular		0	(0)	1	(3)	0	(0)	-	(-)
	herniation		3	(8)	1	(3)	4	(10)	-	(-)
kidney	cyst		0	(0)	1	(3)	5	(13)	-	(-)
	granular		4	(10)	7	(18)	36	(92)	-	(-)
pituitary	enlarged		3	(8)	1	(3)	1	(3)	-	(-)
	red zone		2	(5)	2	(5)	1	(3)	-	(-)
	nodule		5	(13)	1	(3)	3	(8)	-	(-)
	cyst		0	(0)	0	(0)	1	(3)	-	(-)
thyroid	enlarged		4	(10)	1	(3)	2	(5)	-	(-)
	nodule		0	(0)	1	(3)	0	(0)	-	(-)
testis	nodule		32	(80)	35	(88)	37	(95)	-	(-)
eye	white		3	(8)	1	(3)	2	(5)	-	(-)
Zymbal gl	nodule		1	(3)	0	(0)	0	(0)		()
peritoneum	nodule		1	(3)	1	(3)	2	(5)	-	(-)
abdominal c	ascites		1	(3)	0	(0)	1	(3)	-	(-)
other	scab		0	(0)	1	(3)	0	(0)	-	(-)

APPENDIX I 4

GROSS FINDINGS : FEMALE

ALL ANIMALS

STUDY NO. : 0461
ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCr1j]
REPORT TYPE : A1
SEX : FEMALE

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

PAGE : 5

Organ	Findings	Group Name NO. of Animals	Control		80 ppm		400 ppm		2000 ppm	
			50	(%)	50	(%)	50	(%)	50	(%)
skin/app	nodule		2	(4)	1	(2)	1	(2)	0	(0)
	ulcer		0	(0)	0	(0)	0	(0)	1	(2)
	scab		0	(0)	2	(4)	2	(4)	0	(0)
	ear:nodule		1	(2)	0	(0)	0	(0)	0	(0)
	nose:nodule		0	(0)	0	(0)	0	(0)	1	(2)
subcutis	jaundice		2	(4)	1	(2)	0	(0)	0	(0)
	mass		8	(16)	7	(14)	3	(6)	8	(16)
lung	red		0	(0)	0	(0)	0	(0)	1	(2)
	white zone		0	(0)	2	(4)	0	(0)	3	(6)
	nodule		3	(6)	1	(2)	0	(0)	1	(2)
lymph node	enlarged		1	(2)	2	(4)	1	(2)	0	(0)
thymus	enlarged		1	(2)	0	(0)	0	(0)	0	(0)
spleen	enlarged		6	(12)	5	(10)	2	(4)	4	(8)
	dark		0	(0)	0	(0)	0	(0)	1	(2)
	white zone		0	(0)	0	(0)	0	(0)	1	(2)
	nodule		0	(0)	1	(2)	0	(0)	0	(0)
	granular		0	(0)	0	(0)	0	(0)	38	(76)
heart	fluid:red		0	(0)	0	(0)	1	(2)	0	(0)
oral cavity	nodule		0	(0)	1	(2)	0	(0)	0	(0)
gl stomach	white zone		0	(0)	0	(0)	0	(0)	1	(2)
stomach	nodule		0	(0)	0	(0)	0	(0)	1	(2)
liver	brown		0	(0)	0	(0)	0	(0)	44	(88)

STUDY NO. : 0461
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		80 ppm		400 ppm		2000 ppm	
			50	(%)	50	(%)	50	(%)	50	(%)
liver	white zone		2	(4)	0	(0)	0	(0)	1	(2)
	red zone		1	(2)	0	(0)	2	(4)	16	(32)
	nodule		1	(2)	0	(0)	2	(4)	35	(70)
	rough		2	(4)	2	(4)	0	(0)	1	(2)
	herniation		11	(22)	4	(8)	7	(14)	11	(22)
	accentuation of lobular structure		0	(0)	0	(0)	0	(0)	17	(34)
pancreas	nodule		0	(0)	0	(0)	0	(0)	1	(2)
kidney	nodule		0	(0)	1	(2)	0	(0)	0	(0)
	cyst		0	(0)	0	(0)	0	(0)	2	(4)
	granular		0	(0)	1	(2)	4	(8)	37	(74)
urin bladd	nodule		0	(0)	0	(0)	0	(0)	1	(2)
	urine:marked retention		0	(0)	1	(2)	1	(2)	1	(2)
	fluid:red		0	(0)	0	(0)	1	(2)	0	(0)
pituitary	enlarged		9	(18)	9	(18)	5	(10)	4	(8)
	red		0	(0)	1	(2)	0	(0)	0	(0)
	red zone		11	(22)	5	(10)	7	(14)	4	(8)
	nodule		4	(8)	4	(8)	2	(4)	2	(4)
thyroid	enlarged		2	(4)	0	(0)	1	(2)	1	(2)
	nodule		3	(6)	0	(0)	0	(0)	0	(0)
adrenal	enlarged		0	(0)	0	(0)	1	(2)	0	(0)
ovary	enlarged		0	(0)	1	(2)	0	(0)	1	(2)
	nodule		0	(0)	0	(0)	0	(0)	2	(4)

STUDY NO. : 0461
 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		80 ppm		400 ppm		2000 ppm	
			50	(%)	50	(%)	50	(%)	50	(%)
ovary	cyst		3	(6)	7	(14)	0	(0)	7	(14)
uterus	nodule		11	(22)	7	(14)	10	(20)	5	(10)
	cyst		0	(0)	1	(2)	1	(2)	1	(2)
	invagination		0	(0)	1	(2)	0	(0)	0	(0)
vagina	nodule		1	(2)	0	(0)	0	(0)	0	(0)
mammary gl	nodule		0	(0)	1	(2)	0	(0)	0	(0)
prep/cli gl	nodule		0	(0)	0	(0)	0	(0)	1	(2)
brain	white zone		0	(0)	0	(0)	0	(0)	1	(2)
	red zone		0	(0)	1	(2)	0	(0)	0	(0)
eye	turbid		0	(0)	1	(2)	2	(4)	0	(0)
	white		4	(8)	4	(8)	1	(2)	4	(8)
	fluid:red		0	(0)	0	(0)	1	(2)	0	(0)
Zymbal gl	nodule		0	(0)	0	(0)	0	(0)	1	(2)
peritoneum	nodule		1	(2)	1	(2)	0	(0)	1	(2)
	mass		0	(0)	1	(2)	0	(0)	0	(0)
retroperit	mass		0	(0)	0	(0)	0	(0)	1	(2)
abdominal c	hemorrhage		0	(0)	0	(0)	0	(0)	1	(2)
	ascites		1	(2)	0	(0)	1	(2)	1	(2)
thoracic ca	pleural fluid		0	(0)	0	(0)	1	(2)	2	(4)
other	lower jaw:nodule		0	(0)	0	(0)	1	(2)	0	(0)
	tail:scab		0	(0)	0	(0)	0	(0)	1	(2)

APPENDIX I 5

GROSS FINDINGS : FEMALE DEAD AND MORIBUND ANIMALS

STUDY NO. : 0461
 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	80 ppm	400 ppm	2000 ppm
			9 (%)	8 (%)	5 (%)	11 (%)
skin/app	nose:nodule		0 (0)	0 (0)	0 (0)	1 (9)
subcutis	jaundice		2 (22)	0 (0)	0 (0)	0 (0)
	mass		2 (22)	2 (25)	0 (0)	2 (18)
lung	red		0 (0)	0 (0)	0 (0)	1 (9)
	white zone		0 (0)	2 (25)	0 (0)	1 (9)
	nodule		2 (22)	1 (13)	0 (0)	0 (0)
lymph node	enlarged		1 (11)	1 (13)	1 (20)	0 (0)
thymus	enlarged		1 (11)	0 (0)	0 (0)	0 (0)
spleen	enlarged		4 (44)	1 (13)	2 (40)	3 (27)
	white zone		0 (0)	0 (0)	0 (0)	1 (9)
	nodule		0 (0)	1 (13)	0 (0)	0 (0)
	granular		0 (0)	0 (0)	0 (0)	3 (27)
heart	fluid:red		0 (0)	0 (0)	1 (20)	0 (0)
liver	brown		0 (0)	0 (0)	0 (0)	6 (55)
	white zone		0 (0)	0 (0)	0 (0)	1 (9)
	red zone		0 (0)	0 (0)	0 (0)	1 (9)
	nodule		1 (11)	0 (0)	0 (0)	1 (9)
	rough		2 (22)	0 (0)	0 (0)	0 (0)
	herniation		3 (33)	0 (0)	0 (0)	3 (27)
pancreas	nodule		0 (0)	0 (0)	0 (0)	1 (9)
kidney	nodule		0 (0)	1 (13)	0 (0)	0 (0)
	granular		0 (0)	0 (0)	0 (0)	4 (36)

STUDY NO. : 0461
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		80 ppm		400 ppm		2000 ppm	
			9	(%)	8	(%)	5	(%)	11	(%)
urin bladd	nodule		0	(0)	0	(0)	0	(0)	1	(9)
	urine:marked retention		0	(0)	1	(13)	1	(20)	1	(9)
	fluid:red		0	(0)	0	(0)	1	(20)	0	(0)
pituitary	enlarged		2	(22)	2	(25)	2	(40)	1	(9)
	red zone		2	(22)	0	(0)	0	(0)	0	(0)
thyroid	nodule		1	(11)	0	(0)	0	(0)	0	(0)
ovary	enlarged		0	(0)	0	(0)	0	(0)	1	(9)
	nodule		0	(0)	0	(0)	0	(0)	2	(18)
	cyst		0	(0)	0	(0)	0	(0)	2	(18)
uterus	nodule		3	(33)	3	(38)	2	(40)	3	(27)
vagina	nodule		1	(11)	0	(0)	0	(0)	0	(0)
mammary gl	nodule		0	(0)	1	(13)	0	(0)	0	(0)
prep/cli gl	nodule		0	(0)	0	(0)	0	(0)	1	(9)
brain	white zone		0	(0)	0	(0)	0	(0)	1	(9)
	red zone		0	(0)	1	(13)	0	(0)	0	(0)
eye	turbid		0	(0)	0	(0)	1	(20)	0	(0)
	white		1	(11)	0	(0)	1	(20)	1	(9)
	fluid:red		0	(0)	0	(0)	1	(20)	0	(0)
Zymbal gl	nodule		0	(0)	0	(0)	0	(0)	1	(9)
peritoneum	nodule		1	(11)	1	(13)	0	(0)	1	(9)
	mass		0	(0)	1	(13)	0	(0)	0	(0)
retroperit	mass		0	(0)	0	(0)	0	(0)	1	(9)

STUDY NO. : 0461
ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCr1j]
REPORT TYPE : A1
SEX : FEMALE

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

PAGE : 6

Organ	Findings	Group Name NO. of Animals	Control		80 ppm		400 ppm		2000 ppm	
			9	(%)	8	(%)	5	(%)	11	(%)
abdominal c	hemorrhage		0	(0)	0	(0)	0	(0)	1	(9)
	ascites		1	(11)	0	(0)	1	(20)	1	(9)
thoracic ca	pleural fluid		0	(0)	0	(0)	0	(0)	1	(9)
other	lower jaw:nodule		0	(0)	0	(0)	1	(20)	0	(0)

(IPT080)

BATS 4

APPENDIX I 6

GROSS FINDINGS : FEMALE SACRIFICED ANIMALS

STUDY NO. : 0461
ANIMAL : RAT F344/DuCr1Cr1,j[F344/DuCr1,j]
REPORT TYPE : A1
SEX : FEMALE

GROSS FINDINGS (SUMMARY)
SACRIFICED ANIMALS (105W)

PAGE : 3

Organ	Findings	Group Name NO. of Animals	Control		80 ppm		400 ppm		2000 ppm	
			41	(%)	42	(%)	45	(%)	39	(%)
skin/app	nodule		2	(5)	1	(2)	1	(2)	0	(0)
	ulcer		0	(0)	0	(0)	0	(0)	1	(3)
	scab		0	(0)	2	(5)	2	(4)	0	(0)
	ear:nodule		1	(2)	0	(0)	0	(0)	0	(0)
subcutis	jaundice		0	(0)	1	(2)	0	(0)	0	(0)
	mass		6	(15)	5	(12)	3	(7)	6	(15)
lung	white zone		0	(0)	0	(0)	0	(0)	2	(5)
	nodule		1	(2)	0	(0)	0	(0)	1	(3)
lymph node	enlarged		0	(0)	1	(2)	0	(0)	0	(0)
spleen	enlarged		2	(5)	4	(10)	0	(0)	1	(3)
	dark		0	(0)	0	(0)	0	(0)	1	(3)
	granular		0	(0)	0	(0)	0	(0)	35	(90)
oral cavity	nodule		0	(0)	1	(2)	0	(0)	0	(0)
gl stomach	white zone		0	(0)	0	(0)	0	(0)	1	(3)
stomach	nodule		0	(0)	0	(0)	0	(0)	1	(3)
liver	brown		0	(0)	0	(0)	0	(0)	38	(97)
	white zone		2	(5)	0	(0)	0	(0)	0	(0)
	red zone		1	(2)	0	(0)	2	(4)	15	(38)
	nodule		0	(0)	0	(0)	2	(4)	34	(87)
	rough		0	(0)	2	(5)	0	(0)	1	(3)
	herniation		8	(20)	4	(10)	7	(16)	8	(21)
	accentuation of lobular structure		0	(0)	0	(0)	0	(0)	17	(44)

STUDY NO. : 0461
 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	80 ppm	400 ppm	2000 ppm
			41 (%)	42 (%)	45 (%)	39 (%)
kidney	cyst		0 (0)	0 (0)	0 (0)	2 (5)
	granular		0 (0)	1 (2)	4 (9)	33 (85)
pituitary	enlarged		7 (17)	7 (17)	3 (7)	3 (8)
	red		0 (0)	1 (2)	0 (0)	0 (0)
	red zone		9 (22)	5 (12)	7 (16)	4 (10)
	nodule		4 (10)	4 (10)	2 (4)	2 (5)
thyroid	enlarged		2 (5)	0 (0)	1 (2)	1 (3)
	nodule		2 (5)	0 (0)	0 (0)	0 (0)
adrenal	enlarged		0 (0)	0 (0)	1 (2)	0 (0)
ovary	enlarged		0 (0)	1 (2)	0 (0)	0 (0)
	cyst		3 (7)	7 (17)	0 (0)	5 (13)
uterus	nodule		8 (20)	4 (10)	8 (18)	2 (5)
	cyst		0 (0)	1 (2)	1 (2)	1 (3)
	invagination		0 (0)	1 (2)	0 (0)	0 (0)
eye	turbid		0 (0)	1 (2)	1 (2)	0 (0)
	white		3 (7)	4 (10)	0 (0)	3 (8)
thoracic ca	pleural fluid		0 (0)	0 (0)	1 (2)	1 (3)
other	tail:scab		0 (0)	0 (0)	0 (0)	1 (3)

APPENDIX J 1

ORGAN WEIGHT, ABSOLUTE : MALE

STUDY NO. : 0461
 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	40	376±	47	0.068±	0.013	2.987±	1.529	1.256±	0.133	1.480±	0.330	2.846±	0.488
80 ppm	40	375±	26	0.069±	0.035	3.333±	1.649	1.239±	0.164	1.430±	0.215	2.867±	0.273
400 ppm	39	334±	27**	0.066±	0.009	2.795±	1.107	1.186±	0.090	1.345±	0.118*	3.175±	0.380**
2000 ppm	0	-		-		-		-		-		-	

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

Test of Dunnett

(HCL040)

BAIS 4

STUDY NO. : 0461
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	40	1.875±	1.944	10.985±	1.234	2.111±	0.053
80 ppm	40	1.484±	2.403	11.916±	1.482**	2.124±	0.043
400 ppm	39	1.023±	0.288	14.722±	1.500**	2.129±	0.057
2000 ppm	0	-		-		-	

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

(HCL040)

BATS 4

APPENDIX J 2

ORGAN WEIGHT, ABSOLUTE : FEMALE

STUDY NO. : 0461
 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	41	251±	30	0.069±	0.009	0.143±	0.063	0.868±	0.082	0.993±	0.196	1.753±	0.151
80 ppm	42	252±	33	0.068±	0.008	0.274±	0.482	0.895±	0.094	0.985±	0.116	1.776±	0.153
400 ppm	45	242±	29	0.070±	0.034	0.126±	0.017	0.875±	0.076	0.959±	0.133	1.889±	0.216*
2000 ppm	39	201±	21**	0.058±	0.010**	0.193±	0.321	0.866±	0.065	0.937±	0.081	2.503±	0.292**

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

Test of Dunnett

(HCL040)

BAIS 4

STUDY NO. : 0461
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	41	0.820±	0.962	6.621±	1.325	1.910±	0.052
80 ppm	42	0.993±	1.613	7.355±	1.056*	1.911±	0.053
400 ppm	45	0.614±	0.183	8.662±	1.468**	1.918±	0.041
2000 ppm	39	1.040±	0.308**	14.596±	1.258**	1.909±	0.050

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

(HCL040)

BAIS 4

APPENDIX K 1

ORGAN WEIGHT, RELATIVE : MALE

STUDY NO. : 0461
 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	40	376± 47	0.019± 0.007	0.801± 0.401	0.342± 0.081	0.409± 0.160	0.782± 0.273
80 ppm	40	375± 26	0.019± 0.010	0.895± 0.460	0.332± 0.052	0.383± 0.066	0.769± 0.102
400 ppm	39	334± 27**	0.020± 0.004**	0.834± 0.327	0.357± 0.040**	0.404± 0.041**	0.961± 0.180**
2000 ppm	0	-	-	-	-	-	-

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

Test of Dunnett

(HCL042)

BAIS 4

STUDY NO. : 0461
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	40	0.551± 0.684	2.990± 0.672	0.573± 0.095
80 ppm	40	0.393± 0.605	3.184± 0.408*	0.569± 0.042
400 ppm	39	0.306± 0.085	4.424± 0.471**	0.642± 0.056**
2000 ppm	0	-	-	-

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

(HCL042)

BATS 4

APPENDIX K 2

ORGAN WEIGHT, RELATIVE : FEMALE

STUDY NO. : 0461
 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	41	251± 30	0.028± 0.005	0.057± 0.024	0.349± 0.035	0.400± 0.087	0.705± 0.071
80 ppm	42	252± 33	0.028± 0.005	0.106± 0.167	0.362± 0.070	0.400± 0.091	0.717± 0.116
400 ppm	45	242± 29	0.029± 0.012	0.053± 0.011	0.366± 0.053	0.401± 0.077	0.785± 0.088**
2000 ppm	39	201± 21**	0.029± 0.005	0.097± 0.160**	0.435± 0.051**	0.471± 0.064**	1.257± 0.187**

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

Test of Dunnett

(HCL042)

BAIS 4

STUDY NO. : 0461
ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
REPORT TYPE : A1
SEX : FEMALE
UNIT: %

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

PAGE : 4

Group Name	NO. of Animals	SPLEEN	LIVER	BRAIN
Control	41	0.324± 0.350	2.641± 0.416	0.772± 0.089
80 ppm	42	0.445± 0.925	2.972± 0.664	0.773± 0.111
400 ppm	45	0.255± 0.079	3.571± 0.376**	0.804± 0.113
2000 ppm	39	0.522± 0.159**	7.314± 0.845**	0.959± 0.095**

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

(HCL042)

BAIS 4

APPENDIX L 1

HISTOPATHOLOGICAL FINDINGS :
NON-NEOPLASTIC LESIONS : MALE
ALL ANIMALS

STUDY NO. : 0461
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 REPORT TYPE : A1
 SEX : MALE

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

PAGE : 1

		Control				80 ppm				400 ppm				2000 ppm			
		No. of Animals on Study				50				50				50			
		Grade				1 2 3 4				1 2 3 4				1 2 3 4			
Organ	Findings	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Integumentary system/appandage}																	
skin/app		<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)
	squamous cell hyperplasia	0	0	0	0	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)
	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	0	2	0	0	0	3	0	0	0	5	0	0
		(0)	(0)	(0)	(0)	(0)	(4)	(0)	(0)	(0)	(6)	(0)	(0)	(0)	(10)	(0)	(0)
subcutis		<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)
{Respiratory system}																	
nasal cavit		<50>				<50>				<50>				<50>			
	eosinophilic change:olfactory epithelium	13	17	4	0	18	15	2	0	14	11	0	0	0	0	0	0
		(26)	(34)	(8)	(0)	(36)	(30)	(4)	(0)	(28)	(22)	(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
 ! : Significant test is not applied to this group.

STUDY NO. : 0461
 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				80 ppm				400 ppm				2000 ppm !			
		No. of Animals on Study	Grade	50				50				50				50			
				1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)

{Respiratory system}

nasal cavit

eosinophilic change:respiratory epithelium

inflammation:foreign body

inflammation:respiratory epithelium

respiratory metaplasia:olfactory epithelium

respiratory metaplasia:gland

lung

congestion

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				
! : Significant test is not applied to this group.				

STUDY NO. : 0461
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 REPORT TYPE : A1
 SEX : MALE

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

PAGE : 3

Organ	Findings	Group Name No. of Animals on Study				Control 50				80 ppm 50				400 ppm 50				2000 ppm ! 50			
		Grade																			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Respiratory system}																					
lung		<50>				<50>				<50>				<50>				<50>			
	edema	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)
	necrosis:focal	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)	(0)	(0)	(0)
	inflammatory infiltration	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
		(0)	(0)	(0)	(0)	(4)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(2)	(0)	(0)	(0)
	accumulation of foamy cells	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)	(0)	(0)	(0)	(0)
	bronchiolar-alveolar cell hyperplasia	3	1	0	0	0	1	0	0	1	0	0	0	1	0	0	0	3	0	0	0
		(6)	(2)	(0)	(0)	(0)	(2)	(0)	(0)	(2)	(0)	(0)	(0)	(2)	(0)	(0)	(0)	(6)	(0)	(0)	(0)
	uremic pneumonitis	0	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)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(26)	(0)	(0)	(0)
{Hematopoietic system}																					
bone marrow		<50>				<50>				<50>				<50>				<50>			
	granulation	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 b : Number of animals with lesion

(c) c : b / a * 100

Significant difference : * : P ≤ 0.05 ** : P ≤ 0.01 Test of Chi Square

! : Significant test is not applied to this group.

STUDY NO. : 0461
 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				80 ppm				400 ppm				2000 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>				<50>				<50>				<50>						
	increased hematopoiesis		2	0	0	0	6	0	0	0	3	0	0	0	7	0	0	0			
			(4)	(0)	(0)	(0)	(12)	(0)	(0)	(0)	(6)	(0)	(0)	(0)	(14)	(0)	(0)	(0)	(0)		
	granulopoiesis:increased		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)	(0)		
	xanthogranuloma		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)	(0)		
lymph node			<50>				<50>				<50>				<50>						
	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)	(2)	(0)	(0)	(0)	(0)		
	lymphadenitis		0	1	0	0	0	0	0	0	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)		
spleen			<50>				<50>				<50>				<50>						
	congestion		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)	(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 : * : $P \leq 0.05$ ** : $P \leq 0.01$ Test of Chi Square

! : Significant test is not applied to this group.

STUDY NO. : 0461
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	Control				80 ppm				400 ppm				2000 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)																		
spleen			<50>				<50>				<50>				<50>			
	angiectasis		0	0	0	0	0	0	0	0	0	0	0	0	9	7	0	0
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(18)	(14)	(0)	(0)	
	deposit of hemosiderin		23	1	0	0	27	2	0	0	32	7	0	0 **	15	28	0	0
			(46)	(2)	(0)	(0)	(54)	(4)	(0)	(0)	(64)	(14)	(0)	(0)	(30)	(56)	(0)	(0)
	fibrosis		0	0	0	0	2	1	0	0	0	3	0	0	0	4	0	0
			(0)	(0)	(0)	(0)	(4)	(2)	(0)	(0)	(0)	(6)	(0)	(0)	(0)	(8)	(0)	(0)
	mastcell hyperplasia		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)
	increased extramedullary hematopoiesis		0	1	1	0	2	6	0	0	2	0	0	0	1	1	0	0
			(0)	(2)	(2)	(0)	(4)	(12)	(0)	(0)	(4)	(0)	(0)	(0)	(2)	(2)	(0)	(0)
	engorgement of erythrocyte		0	0	0	0	3	0	0	0	11	0	0	0 **	2	1	0	0
			(0)	(0)	(0)	(0)	(6)	(0)	(0)	(0)	(22)	(0)	(0)	(0)	(4)	(2)	(0)	(0)
	capsule hyperplasia		0	0	0	0	0	0	0	0	0	0	0	0	49	0	0	0
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(98)	(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
! : Significant test is not applied to this group.

STUDY NO. : 0461
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 REPORT TYPE : A1
 SEX : MALE

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

PAGE : 6

Organ_____	Findings_____	Group Name	Control				80 ppm				400 ppm				2000 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
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
(Circulatory system)																		
heart	thrombus		<50>				<50>				<50>				<50>			
		1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		(2)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	deposit of hemosiderin	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)	(0)	(0)	(0)	(0)
	myocardial fibrosis	32	4	0	0	34	1	0	0	32	5	0	0	12	35	0	0	0
		(64)	(8)	(0)	(0)	(68)	(2)	(0)	(0)	(64)	(10)	(0)	(0)	(24)	(70)	(0)	(0)	(0)
	subendocardial fibrosis	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)	(0)	(0)	(0)	(0)	(0)
	arteritis	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
		(0)	(0)	(0)	(0)	(2)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	
artery/aort	mineralization		<50>				<50>				<50>				<50>			
		0	0	0	0	0	0	0	0	1	0	0	0	32	0	0	0	0
		(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(2)	(0)	(0)	(0)	(64)	(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 ; * : $P \leq 0.05$ ** : $P \leq 0.01$ Test of Chi Square

! : Significant test is not applied to this group.

STUDY NO. : 0461
 ANIMAL : RAT F344/DuCr1j[F344/DuCrj]
 REPORT TYPE : A1
 SEX : MALE

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

PAGE : 7

Organ_____	Findings_____	Group Name	Control				80 ppm				400 ppm				2000 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		
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
(Circulatory system)																				
artery/aort			<50>				<50>				<50>				<50>					
	arteritis		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)	(2)	(0)	(0)	(0)	
(Digestive system)																				
stomach			<50>				<50>				<50>				<50>					
	malformation		0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	
			(0)	(0)	(0)	(0)	(2)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	
	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)	(0)	(2)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	
	erosion:forestomach		1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
			(2)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	
	ulcer:forestomach		1	0	0	0	1	0	0	0	2	2	0	0	0	0	0	0	0	
			(2)	(0)	(0)	(0)	(2)	(0)	(0)	(0)	(4)	(4)	(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 ; * : $P \leq 0.05$ ** : $P \leq 0.01$ Test of Chi Square

! : Significant test is not applied to this group.

STUDY NO. : 0461
 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	Control				80 ppm				400 ppm				2000 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)																				
stomach			<50>				<50>				<50>				<50>					
	hyperplasia:forestomach	1	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0
		(2)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(6)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	erosion:glandular stomach	1	0	0	0	0	1	0	0	0	3	0	0	0	1	0	0	0	0	0
		(2)	(0)	(0)	(0)	(0)	(2)	(0)	(0)	(0)	(6)	(0)	(0)	(0)	(2)	(0)	(0)	(0)	(0)	(0)
	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)	(2)	(0)	(0)	(0)	(2)	(0)	(0)	(0)	(0)	(0)
	mineralization:glandular stomach	0	0	0	0	0	0	0	0	3	0	0	0	27	0	0	0	0	0	0
		(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(6)	(0)	(0)	(0)	(54)	(0)	(0)	(0)	(0)	(0)	(0)
liver			<50>				<50>				<50>				<50>					
	herniation	5	0	0	0	0	1	0	0	0	5	0	0	0	1	0	0	0	0	0
		(10)	(0)	(0)	(0)	(0)	(2)	(0)	(0)	(0)	(10)	(0)	(0)	(0)	(2)	(0)	(0)	(0)	(0)	(0)
	necrosis:central	0	0	0	0	0	0	1	0	1	0	0	0	1	0	0	0	0	0	0
		(0)	(0)	(0)	(0)	(0)	(0)	(2)	(0)	(2)	(0)	(0)	(0)	(2)	(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 ; * : $P \leq 0.05$ ** : $P \leq 0.01$ Test of Chi Square

! : Significant test is not applied to this group.

STUDY NO. : 0461
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 REPORT TYPE : A1
 SEX : MALE

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

PAGE : 9

Organ	Findings	Group Name No. of Animals on Study Grade	Control				80 ppm				400 ppm				2000 ppm			
			50				50				50				50			
			1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
(Digestive system)																		
liver																		
	necrosis:focal		<50>				<50>				<50>				<50>			
			0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(2)	(2)	(0)	(0)
	necrosis:single cell		0	0	0	0	0	0	0	0	0	0	0	0	17	1	0	0
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(34)	(2)	(0)	(0)
	fatty change		0	0	0	0	0	1	0	0	0	0	0	0	16	0	0	0
			(0)	(0)	(0)	(0)	(0)	(2)	(0)	(0)	(0)	(0)	(0)	(0)	(32)	(0)	(0)	(0)
	fatty change:central		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)
	hydropic change:central		0	0	0	0	0	0	0	0	0	0	0	0	45	3	0	0
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(90)	(6)	(0)	(0)
	granulation		3	2	0	0	3	1	0	0	6	0	0	0	5	0	0	0
			(6)	(4)	(0)	(0)	(6)	(2)	(0)	(0)	(12)	(0)	(0)	(0)	(10)	(0)	(0)	(0)
	inflammatory cell nest		1	1	0	0	0	2	0	0	0	0	0	0	5	1	0	0
			(2)	(2)	(0)	(0)	(0)	(4)	(0)	(0)	(0)	(0)	(0)	(0)	(10)	(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
 ! : Significant test is not applied to this group.

STUDY NO. : 0461
ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
REPORT TYPE : A1
SEX : MALE

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

PAGE : 10

		Group Name	Control				80 ppm				400 ppm				2000 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
Organ_____	Findings_____		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Digestive system}																		
liver			<50>				<50>				<50>				<50>			
	clear cell focus		4	5	0	0	2	5	0	0	2	4	0	0	0	4	0	0
			(8)	(10)	(0)	(0)	(4)	(10)	(0)	(0)	(4)	(8)	(0)	(0)	(0)	(8)	(0)	(0)
	acidophilic cell focus		0	2	0	0	1	2	0	0	4	18	2	0 **	3	4	0	0
			(0)	(4)	(0)	(0)	(2)	(4)	(0)	(0)	(8)	(36)	(4)	(0)	(6)	(8)	(0)	(0)
	basophilic cell focus		5	1	0	0	3	4	0	0	1	16	3	0 **	1	0	0	0
			(10)	(2)	(0)	(0)	(6)	(8)	(0)	(0)	(2)	(32)	(6)	(0)	(2)	(0)	(0)	(0)
	spongiosis hepatitis		3	1	0	0	7	1	0	0	6	27	2	0 **	0	0	0	0
			(6)	(2)	(0)	(0)	(14)	(2)	(0)	(0)	(12)	(54)	(4)	(0)	(0)	(0)	(0)	(0)
	bile duct hyperplasia		0	49	0	0	0	47	0	0	19	24	0	0 **	0	0	0	0
			(0)	(98)	(0)	(0)	(0)	(94)	(0)	(0)	(38)	(48)	(0)	(0)	(0)	(0)	(0)	(0)
	arthritis		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)
	focal fatty change		1	0	0	0	0	0	0	0	3	1	0	0	0	0	0	0
			(2)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(6)	(2)	(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
! : Significant test is not applied to this group.

STUDY NO. : 0461
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 REPORT TYPE : A1
 SEX : MALE

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

PAGE : 11

		Group Name	Control				80 ppm				400 ppm				2000 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
Organ	Findings		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Digestive system}																		
liver			<50>				<50>				<50>				<50>			
	deposit of brown pigment		0	0	0	0	0	0	0	0	0	0	0	0	50	0	0	0
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(100)	(0)	(0)	(0)	(0)
pancreas			<50>				<50>				<50>				<50>			
	atrophy		9	4	2	0	9	6	2	0	9	2	0	0	0	1	0	0
			(18)	(8)	(4)	(0)	(18)	(12)	(4)	(0)	(18)	(4)	(0)	(0)	(0)	(2)	(0)	(0)
	arteritis		0	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)
	islet cell hyperplasia		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)
{Urinary system}																		
kidney			<50>				<50>				<50>				<50>			
	infarct		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 : * : $P \leq 0.05$ ** : $P \leq 0.01$ Test of Chi Square
 ! : Significant test is not applied to this group.

STUDY NO. : 0461
 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	Control				80 ppm				400 ppm				2000 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
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
(Urinary system)																		
kidney			<50>				<50>				<50>				<50>			
	cyst		1	0	0	0	0	1	0	0	4	4	0	0 *	1	19	0	0
			(2)	(0)	(0)	(0)	(0)	(2)	(0)	(0)	(8)	(8)	(0)	(0)	(2)	(38)	(0)	(0)
	deposit of hemosiderin		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)
	chronic nephropathy		20	20	3	0	6	37	4	1 **	0	6	28	15 **	0	1	0	49
			(40)	(40)	(6)	(0)	(12)	(74)	(8)	(2)	(0)	(12)	(56)	(30)	(0)	(2)	(0)	(98)
tubular necrosis		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:cortex		0	0	0	0	0	0	0	0	0	2	0	0	2	42	0	0	
		(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(4)	(0)	(0)	(4)	(84)	(0)	(0)	
transitional cell hyperplasia		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)	
urothelial hyperplasia:pelvis		0	0	0	0	1	0	0	0	7	25	0	0 **	5	43	0	0	
		(0)	(0)	(0)	(0)	(2)	(0)	(0)	(0)	(14)	(50)	(0)	(0)	(10)	(86)	(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
 ! : Significant test is not applied to this group.

STUDY NO. : 0461
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 REPORT TYPE : A1
 SEX : MALE

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

PAGE : 13

		Group Name	Control				80 ppm				400 ppm				2000 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
Organ	Findings		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
(Urinary system)																		
kidney			<50>				<50>				<50>				<50>			
	atypical tubule hyperplasia		0	0	0	0	1	0	0	0	1	0	0	0	2	4	0	0
			(0)	(0)	(0)	(0)	(2)	(0)	(0)	(0)	(2)	(0)	(0)	(0)	(4)	(8)	(0)	(0)
	basophilic change:atypia		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 brown pigment:proximal tubule		0	0	0	0	0	0	0	0	41	1	0	0 **	0	44	5	0
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(82)	(2)	(0)	(0)	(0)	(88)	(10)	(0)
(Endocrine system)																		
pituitary			<50>				<50>				<50>				<50>			
	cyst		1	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0
			(2)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(2)	(0)	(0)	(0)	(2)	(0)	(0)	(0)
	hyperplasia		4	3	0	0	9	1	0	0	10	0	0	0	2	0	0	0
			(8)	(6)	(0)	(0)	(18)	(2)	(0)	(0)	(20)	(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 b : Number of animals with lesion																		
(c) c : b / a * 100																		
Significant difference ; * : P ≤ 0.05 ** : P ≤ 0.01 Test of Chi Square																		
! : Significant test is not applied to this group.																		

STUDY NO. : 0461
 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	Control				80 ppm				400 ppm				2000 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}																		
pituitary			<50>				<50>				<50>				<50>			
	Rathke pouch		1	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0
		(2)	(0)	(0)	(0)	(2)	(0)	(0)	(0)	(0)	(2)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
thyroid			<50>				<50>				<50>				<50>			
	follicular 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)
	C-cell hyperplasia		2	1	0	0	7	5	0	0 *	5	1	0	0	0	0	0	0
			(4)	(2)	(0)	(0)	(14)	(10)	(0)	(0)	(10)	(2)	(0)	(0)	(0)	(0)	(0)	(0)
parathyroid			<50>				<50>				<50>				<50>			
	hyperplasia		0	0	0	0	0	0	0	0	3	0	0	0	27	0	0	0
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(6)	(0)	(0)	(0)	(54)	(0)	(0)	(0)
adrenal			<50>				<50>				<50>				<50>			
	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)
	hyperplasia:medulla		0	1	0	0	3	0	0	0	4	0	0	0	0	0	0	0
			(0)	(2)	(0)	(0)	(6)	(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 : Number of animals with lesion
 (c) c : b / a * 100
 Significant difference ; * : $P \leq 0.05$ ** : $P \leq 0.01$ Test of Chi Square
 ! : Significant test is not applied to this group.

STUDY NO. : 0461
 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	Control				80 ppm				400 ppm				2000 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>			
	focal fatty change:cortex		2	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
			(4)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(2)	(0)	(0)	(0)
{Reproductive system}																		
testis			<50>				<50>				<50>				<50>			
	mineralization		0	0	0	0	0	2	0	0	0	1	0	0	2	0	0	0
			(0)	(0)	(0)	(0)	(0)	(4)	(0)	(0)	(0)	(2)	(0)	(0)	(4)	(0)	(0)	(0)
	hyperplasia		16	0	0	0	21	0	0	0	27	0	0	0 *	24	0	0	0
			(32)	(0)	(0)	(0)	(42)	(0)	(0)	(0)	(54)	(0)	(0)	(0)	(48)	(0)	(0)	(0)
	arteritis		2	2	0	0	1	1	0	0	3	2	0	0	0	0	0	0
			(4)	(4)	(0)	(0)	(2)	(2)	(0)	(0)	(6)	(4)	(0)	(0)	(0)	(0)	(0)	(0)
epididymis			<50>				<50>				<50>				<50>			
	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)	(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 ; * : $P \leq 0.05$ ** : $P \leq 0.01$ Test of Chi Square

! : Significant test is not applied to this group.

STUDY NO. : 0461
 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				80 ppm				400 ppm				2000 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
Organ	Findings		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Reproductive system}																		
epididymis			<50>				<50>				<50>				<50>			
	arteritis		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)
prostate			<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)
	hyperplasia		3	4	0	0	5	4	0	0	2	2	0	0	0	0	0	0
			(6)	(8)	(0)	(0)	(10)	(8)	(0)	(0)	(4)	(4)	(0)	(0)	(0)	(0)	(0)	(0)
mammary gl			<50>				<50>				<50>				<50>			
	galactoceles		0	1	0	0	0	0	0	0	1	1	0	0	0	0	0	0
			(0)	(2)	(0)	(0)	(0)	(0)	(0)	(0)	(2)	(2)	(0)	(0)	(0)	(0)	(0)	(0)
prep/cli gl			<50>				<50>				<50>				<50>			
	duct ectasia		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)
{Nervous system}																		
brain			<50>				<50>				<50>				<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
 ! : Significant test is not applied to this group.

STUDY NO. : 0461
 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				Control 50				80 ppm 50				400 ppm 50				2000 ppm ! 50			
		Grade																			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
(Nervous system)																					
brain	gliosis	<50>				<50>				<50>				<50>				<50>			
		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)
{Special sense organs/appendage}																					
eye	cataract	<50>				<50>				<50>				<50>				<50>			
		5	0	0	0	3	0	0	0	3	0	0	0	4	0	0	0	4	0	0	0
		(10)	(0)	(0)	(0)	(6)	(0)	(0)	(0)	(6)	(0)	(0)	(0)	(8)	(0)	(0)	(0)	(8)	(0)	(0)	(0)
	retinal atrophy	19	16	1	0	14	26	3	0	17	23	2	0	8	8	1	0	8	8	1	0
		(38)	(32)	(2)	(0)	(28)	(52)	(6)	(0)	(34)	(46)	(4)	(0)	(16)	(16)	(2)	(0)	(16)	(16)	(2)	(0)
	keratitis	0	0	0	0	0	0	0	0	1	0	0	0	12	16	5	0	12	16	5	0
		(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(2)	(0)	(0)	(0)	(24)	(32)	(10)	(0)	(24)	(32)	(10)	(0)
	squamous cell metaplasia:cornea	0	0	0	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)	(0)	(0)	(0)	(0)	(2)	(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
 ! : Significant test is not applied to this group.

STUDY NO. : 0461
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 REPORT TYPE : A1
 SEX : MALE

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

PAGE : 18

		Group Name	Control				80 ppm				400 ppm				2000 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
Organ	Findings		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Special sense organs/appendage}																		
nasolacr d			<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)
{Musculoskeletal system}																		
muscle			<50>				<50>				<50>				<50>			
	hemorrhage		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)
{Body cavities}																		
mediastinum			<50>				<50>				<50>				<50>			
	arteritis		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)
peritoneum			<50>				<50>				<50>				<50>			
	arteritis		0	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)

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
 ! : Significant test is not applied to this group.

APPENDIX L 2

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

STUDY NO. : 0461
 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

Organ	Findings	Group Name	Control				80 ppm				400 ppm				2000 ppm			
		No. of Animals on Study	10				10				11				50			
		Grade	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Integumentary system/appandage}																		
skin/app			<10>				<10>				<11>				<50>			
	epidermal cyst		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)	(10)	(0)	(0)
{Respiratory system}																		
nasal cavit			<10>				<10>				<11>				<50>			
	eosinophilic change:olfactory epithelium		3	1	0	0	4	2	0	0	1	1	0	0	0	0	0	0 **
			(30)	(10)	(0)	(0)	(40)	(20)	(0)	(0)	(9)	(9)	(0)	(0)	(0)	(0)	(0)	(0)
	eosinophilic change:respiratory epithelium		0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0
			(0)	(0)	(0)	(0)	(10)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(2)	(0)	(0)	(0)
	inflammation:foreign body		3	0	0	0	3	2	0	0	3	0	0	0	6	1	0	0
			(30)	(0)	(0)	(0)	(30)	(20)	(0)	(0)	(27)	(0)	(0)	(0)	(12)	(2)	(0)	(0)
	inflammation:respiratory epithelium		0	0	0	0	0	0	0	0	0	2	0	0	16	22	2	0 **
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(18)	(0)	(0)	(32)	(44)	(4)	(0)
	respiratory metaplasia:olfactory epithelium		2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 *
			(20)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	respiratory metaplasia:gland		7	0	0	0	6	0	0	0	6	0	0	0	31	3	0	0
			(70)	(0)	(0)	(0)	(60)	(0)	(0)	(0)	(55)	(0)	(0)	(0)	(62)	(6)	(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. : 0461
 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	Control				80 ppm				400 ppm				2000 ppm			
		No. of Animals on Study				No. of Animals on Study				No. of Animals on Study				No. of Animals on Study			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Respiratory system}																	
lung		<10>				<10>				<11>				<50>			
	congestion	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)	(0)	(0)
	edema	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)	(0)	(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)	(10)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	inflammatory infiltration	0	0	0	0	2	0	0	0	0	0	0	0	0	1	0	0
		(0)	(0)	(0)	(0)	(20)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(2)	(0)	(0)
	accumulation of foamy cells	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)	(0)	(0)	(0)
	bronchiolar-alveolar cell hyperplasia	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)	(6)	(0)	(0)	(0)
	uremic pneumonitis	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)	(0)	(0)	(0)	(26)	(0)	(0)	(0)
{Hematopoietic system}																	
bone marrow		<10>				<10>				<11>				<50>			
	increased hematopoiesis	0	0	0	0	3	0	0	0	1	0	0	0	7	0	0	0
		(0)	(0)	(0)	(0)	(30)	(0)	(0)	(0)	(9)	(0)	(0)	(0)	(14)	(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. : 0461
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	Control				80 ppm				400 ppm				2000 ppm			
		10				10				11				50			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
(Hematopoietic system)																	
bone marrow		<10>				<10>				<11>				<50>			
	granulopoiesis:increased	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)	(0)	(0)	(0)
lymph node		<10>				<10>				<11>				<50>			
	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)	(2)	(0)	(0)	(0)
	lymphadenitis	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)
spleen		<10>				<10>				<11>				<50>			
	angiectasis	0	0	0	0	0	0	0	0	0	0	0	0	9	7	0	0
		(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(18)	(14)	(0)	(0)
	deposit of hemosiderin	2	1	0	0	2	1	0	0	5	4	0	0	15	28	0	0 **
		(20)	(10)	(0)	(0)	(20)	(10)	(0)	(0)	(45)	(36)	(0)	(0)	(30)	(56)	(0)	(0)
	fibrosis	0	0	0	0	0	0	0	0	0	1	0	0	0	4	0	0
		(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(9)	(0)	(0)	(0)	(8)	(0)	(0)
	increased extramedullary hematopoiesis	0	0	0	0	1	4	0	0 *	2	0	0	0	1	1	0	0
		(0)	(0)	(0)	(0)	(10)	(40)	(0)	(0)	(18)	(0)	(0)	(0)	(2)	(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																	

STUDY NO. : 0461
 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

		Group Name	Control				80 ppm				400 ppm				2000 ppm			
		No. of Animals on Study	10				10				11				50			
		Grade	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Organ_____	Findings_____		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
<hr/>																		
{Hematopoietic system}																		
spleen			<10>				<10>				<11>				<50>			
	engorgement of erythrocyte		0	0	0	0	1	0	0	0	2	0	0	0	2	1	0	0
			(0)	(0)	(0)	(0)	(10)	(0)	(0)	(0)	(18)	(0)	(0)	(0)	(4)	(2)	(0)	(0)
	capsule hyperplasia		0	0	0	0	0	0	0	0	0	0	0	0	49	0	0	0 **
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(98)	(0)	(0)	(0)	
<hr/>																		
{Circulatory system}																		
heart			<10>				<10>				<11>				<50>			
	thrombus		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)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	myocardial fibrosis		5	1	0	0	7	0	0	0	6	3	0	0	12	35	0	0 **
			(50)	(10)	(0)	(0)	(70)	(0)	(0)	(0)	(55)	(27)	(0)	(0)	(24)	(70)	(0)	(0)
artery/aort			<10>				<10>				<11>				<50>			
	mineralization		0	0	0	0	0	0	0	0	0	0	0	0	32	0	0	0 **
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(64)	(0)	(0)	(0)
	arteritis		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)	(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. : 0461
 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				80 ppm				400 ppm				2000 ppm			
			10				10				11				50			
			1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	
(Digestive system)																		
stomach	hemorrhage	<10>				<10>				<11>				<50>				
		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)	(0)		
	erosion:forestomach	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)	(0)	(0)	(0)		
	ulcer:forestomach	0	0	0	0	1	0	0	0	1	2	0	0	0	0	0	0	
		(0)		(0)	(0)	(0)	(10)		(0)	(0)	(9)		(18)	(0)	(0)	(0)		
	hyperplasia:forestomach	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	
(10)		(0)	(0)	(0)	(0)		(0)	(0)	(9)		(0)	(0)	(0)	(0)				
	erosion:glandular stomach	1	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	
		(10)		(0)	(0)	(0)	(10)		(0)	(0)	(0)		(0)	(0)	(0)	(0)		
	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)		
	mineralization:glandular stomach	0	0	0	0	0	0	0	0	3	0	0	0	27	0	0	0 **	
		(0)		(0)	(0)	(0)	(0)		(0)	(0)	(27)		(0)	(0)	(0)	(54)		
	liver	herniation	<10>				<10>				<11>				<50>			
			2	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0
		(20)		(0)	(0)	(0)		(0)	(0)	(9)		(0)	(0)	(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. : 0461
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 REPORT TYPE : A1
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HISTOPATHOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)
 DEAD AND MORIBUND ANIMALS (0-105W)

PAGE : 6

Organ_____	Findings_____	Group Name	Control				80 ppm				400 ppm				2000 ppm			
		No. of Animals on Study	10				10				11				50			
		Grade	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
<hr/>																		
{Digestive system}																		
liver																		
	necrosis:central		<10>				<10>				<11>				<50>			
			0	0	0	0	0	1	0	0	1	0	0	0	1	0	0	0
			(0)	(0)	(0)	(0)	(0)	(10)	(0)	(0)	(9)	(0)	(0)	(0)	(2)	(0)	(0)	(0)
	necrosis:focal		0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(2)	(2)	(0)	(0)
	necrosis:single cell		0	0	0	0	0	0	0	0	0	0	0	0	17	1	0	0
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(34)	(2)	(0)	(0)
	fatty change		0	0	0	0	0	1	0	0	0	0	0	0	16	0	0	0
			(0)	(0)	(0)	(0)	(0)	(10)	(0)	(0)	(0)	(0)	(0)	(0)	(32)	(0)	(0)	(0)
	fatty change:central		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)	(0)	(0)	(0)	(0)	(0)	(0)
	hydropic change:central		0	0	0	0	0	0	0	0	0	0	0	0	45	3	0	0 **
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(90)	(6)	(0)	(0)
	granulation		0	0	0	0	0	1	0	0	1	0	0	0	5	0	0	0
			(0)	(0)	(0)	(0)	(0)	(10)	(0)	(0)	(9)	(0)	(0)	(0)	(10)	(0)	(0)	(0)
	inflammatory cell nest		0	0	0	0	0	2	0	0	0	0	0	0	5	1	0	0
			(0)	(0)	(0)	(0)	(0)	(20)	(0)	(0)	(0)	(0)	(0)	(0)	(10)	(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. : 0461
 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

		Group Name	Control				80 ppm				400 ppm				2000 ppm			
		No. of Animals on Study	10				10				11				50			
		Grade	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Organ	Findings		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
<hr/>																		
{Digestive system}																		
liver			<10>				<10>				<11>				<50>			
	clear cell focus		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)	(8)	(0)	(0)
	acidophilic cell focus		0	0	0	0	0	0	0	0	0	1	0	0	3	4	0	0
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(9)	(0)	(0)	(6)	(8)	(0)	(0)
	basophilic cell focus		0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(9)	(0)	(0)	(2)	(0)	(0)	(0)
	spongiosis hepatis		0	0	0	0	1	1	0	0	2	5	1	0 **	0	0	0	0
			(0)	(0)	(0)	(0)	(10)	(10)	(0)	(0)	(18)	(45)	(9)	(0)	(0)	(0)	(0)	(0)
	bile duct hyperplasia		0	10	0	0	0	8	0	0	2	7	0	0	0	0	0	0 **
			(0)	(100)	(0)	(0)	(0)	(80)	(0)	(0)	(18)	(64)	(0)	(0)	(0)	(0)	(0)	(0)
	arthritis		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)
	deposit of brown pigment		0	0	0	0	0	0	0	0	0	0	0	0	50	0	0	0 **
		(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(100)	(0)	(0)	(0)	
pancreas			<10>				<10>				<11>				<50>			
	atrophy		0	1	1	0	0	0	0	0	2	0	0	0	0	1	0	0 *
			(0)	(10)	(10)	(0)	(0)	(0)	(0)	(0)	(18)	(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. : 0461
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 REPORT TYPE : A1
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HISTOPATHOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)
 DEAD AND MORIBUND ANIMALS (0-105W)

PAGE : 8

Organ	Findings	Group Name No. of Animals on Study Grade	Control 10				80 ppm 10				400 ppm 11				2000 ppm 50			
			1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Digestive system}																		
pancreas			<10>				<10>				<11>				<50>			
	arteritis		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)
{Urinary system}																		
kidney			<10>				<10>				<11>				<50>			
	infarct		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)	(0)	(0)
	cyst		0	0	0	0	0	0	0	0	0	0	0	0	1	19	0	0 *
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(2)	(38)	(0)	(0)
	chronic nephropathy		6	0	0	0	1	5	1	1 *	0	3	3	4 **	0	1	0	49 **
			(60)	(0)	(0)	(0)	(10)	(50)	(10)	(10)	(0)	(27)	(27)	(36)	(0)	(2)	(0)	(98)
	mineralization:cortex		0	0	0	0	0	0	0	0	0	2	0	0	2	42	0	0 **
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(18)	(0)	(0)	(4)	(84)	(0)	(0)
	urothelial hyperplasia:pelvis		0	0	0	0	0	0	0	0	1	4	0	0	5	43	0	0 **
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(9)	(36)	(0)	(0)	(10)	(86)	(0)	(0)
	atypical tubule hyperplasia		0	0	0	0	0	0	0	0	0	0	0	0	2	4	0	0
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(4)	(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. : 0461
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 REPORT TYPE : A1
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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 10				80 ppm 10				400 ppm 11				2000 ppm 50			
			1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Urinary system}																		
kidney			<10>				<10>				<11>				<50>			
	deposit of brown pigment:proximal tubule		0	0	0	0	0	0	0	0	7	0	0	0 **	0	44	5	0 **
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(64)	(0)	(0)	(0)	(0)	(88)	(10)	(0)
{Endocrine system}																		
pituitary			<10>				<10>				<11>				<50>			
	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)	(2)	(0)	(0)	(0)
			<10>				<10>				<11>				<50>			
	hyperplasia		0	0	0	0	0	0	0	0	1	0	0	0	2	0	0	0
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(9)	(0)	(0)	(0)	(4)	(0)	(0)	(0)
thyroid			<10>				<10>				<11>				<50>			
	C-cell hyperplasia		0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0
			(0)	(0)	(0)	(0)	(0)	(10)	(0)	(0)	(9)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
parathyroid			<10>				<10>				<11>				<50>			
	hyperplasia		0	0	0	0	0	0	0	0	2	0	0	0	27	0	0	0 **
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(18)	(0)	(0)	(0)	(54)	(0)	(0)	(0)
adrenal			<10>				<10>				<11>				<50>			
	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)	(9)	(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

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

PAGE : 10

		Group Name	Control				80 ppm				400 ppm				2000 ppm			
		No. of Animals on Study	10				10				11				50			
		Grade	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Organ_____	Findings_____		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
<hr/>																		
(Endocrine system)																		
adrenal			<10>				<10>				<11>				<50>			
	focal fatty change:cortex		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)
 (Reproductive system)																		
testis			<10>				<10>				<11>				<50>			
	mineralization		0	0	0	0	0	1	0	0	0	0	0	0	2	0	0	0
			(0)	(0)	(0)	(0)	(0)	(10)	(0)	(0)	(0)	(0)	(0)	(0)	(4)	(0)	(0)	(0)
	hyperplasia		3	0	0	0	2	0	0	0	5	0	0	0	24	0	0	0
			(30)	(0)	(0)	(0)	(20)	(0)	(0)	(0)	(45)	(0)	(0)	(0)	(48)	(0)	(0)	(0)
	arteritis		0	1	0	0	1	0	0	0	2	0	0	0	0	0	0	0
			(0)	(10)	(0)	(0)	(10)	(0)	(0)	(0)	(18)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
epididymis			<10>				<10>				<11>				<50>			
	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)	(2)	(0)	(0)	(0)
prostate			<10>				<10>				<11>				<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)	(9)	(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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HISTOPATHOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)
 DEAD AND MORIBUND ANIMALS (0-105W)

PAGE : 11

		Group Name	Control				80 ppm				400 ppm				2000 ppm			
		No. of Animals on Study	10				10				11				50			
		Grade	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Organ_____	Findings_____		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Reproductive system}																		
mammary gl			<10>				<10>				<11>				<50>			
	galactoceles		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)	(0)	(0)	(0)	(0)	(0)	(0)
prep/cli gl			<10>				<10>				<11>				<50>			
	duct ectasia		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)
{Nervous system}																		
brain			<10>				<10>				<11>				<50>			
	hemorrhage		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)	(0)	(0)	(0)
{Special sense organs/appendage}																		
eye			<10>				<10>				<11>				<50>			
	cataract		0	0	0	0	1	0	0	0	1	0	0	0	4	0	0	0
			(0)	(0)	(0)	(0)	(10)	(0)	(0)	(0)	(9)	(0)	(0)	(0)	(8)	(0)	(0)	(0)
			<10>				<10>				<11>				<50>			
	retinal atrophy		0	0	0	0	3	0	1	0	2	1	0	0	8	8	1	0
			(0)	(0)	(0)	(0)	(30)	(0)	(10)	(0)	(18)	(9)	(0)	(0)	(16)	(16)	(2)	(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. : 0461
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 REPORT TYPE : A1
 SEX : MALE

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

PAGE : 12

		Group Name	Control				80 ppm				400 ppm				2000 ppm			
		No. of Animals on Study	10				10				11				50			
		Grade	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Organ_____	Findings_____		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Special sense organs/appendage}																		
eye			<10>				<10>				<11>				<50>			
	keratitis		0	0	0	0	0	0	0	0	1	0	0	0	12	16	5	0 **
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(9)	(0)	(0)	(0)	(24)	(32)	(10)	(0)
	squamous cell metaplasia:cornea		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)
{Musculoskeletal system}																		
muscle			<10>				<10>				<11>				<50>			
	hemorrhage		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)
{Body cavities}																		
peritoneum			<10>				<10>				<11>				<50>			
	arteritis		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 ; * : $P \leq 0.05$ ** : $P \leq 0.01$ Test of Chi Square

APPENDIX L 3

HISTOPATHOLOGICAL FINDINGS :
NON-NEOPLASTIC LESIONS : MALE
SACRIFICED ANIMALS

STUDY NO. : 0461
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				80 ppm				400 ppm				2000 ppm			
		No. of Animals on Study	40				40				39				0			
Organ	Findings	Grade	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
(Integumentary system/appandage)																		
skin/app			<40>				<40>				<39>				< 0>			
	inflanmation		0	0	0	0	0	0	0	0	0	1	0	0	-	-	-	-
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(3)	(0)	(0)	(-)	(-)	(-)	(-)
	squamous cell hyperplasia		0	0	0	0	1	0	0	0	0	1	0	0	-	-	-	-
			(0)	(0)	(0)	(0)	(3)	(0)	(0)	(0)	(0)	(3)	(0)	(0)	(-)	(-)	(-)	(-)
subcutis	scab		0	0	0	0	1	0	0	0	0	0	0	0	-	-	-	-
			(0)	(0)	(0)	(0)	(3)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(-)	(-)	(-)	(-)
	epidermal cyst		0	0	0	0	0	2	0	0	0	3	0	0	-	-	-	-
			(0)	(0)	(0)	(0)	(0)	(5)	(0)	(0)	(0)	(8)	(0)	(0)	(-)	(-)	(-)	(-)
subcutis	inflammation		<40>				<40>				<39>				< 0>			
			0	0	0	0	0	0	0	0	0	1	0	0	-	-	-	-
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(3)	(0)	(0)	(-)	(-)	(-)	(-)
(Respiratory system)																		
nasal cavit			<40>				<40>				<39>				< 0>			
	eosinophilic change:olfactory epithelium		10	16	4	0	14	13	2	0	13	10	0	0	-	-	-	-
			(25)	(40)	(10)	(0)	(35)	(33)	(5)	(0)	(33)	(26)	(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. : 0461
ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
REPORT TYPE : A1
SEX : MALE

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

PAGE : 2

Organ	Findings	Group Name No. of Animals on Study Grade	Control 40				80 ppm 40				400 ppm 39				2000 ppm 0			
			1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Respiratory system}																		
nasal cavit	eosinophilic change:respiratory epithelium		<40>				<40>				<39>				< 0>			
			7	0	0	0	6	0	0	0	7	0	0	0	-	-	-	-
			(18)	(0)	(0)	(0)	(15)	(0)	(0)	(0)	(18)	(0)	(0)	(0)	(-)	(-)	(-)	(-)
	inflammation:foreign body		11	6	0	0	10	8	0	0	10	5	0	0	-	-	-	-
			(28)	(15)	(0)	(0)	(25)	(20)	(0)	(0)	(26)	(13)	(0)	(0)	(-)	(-)	(-)	(-)
	inflammation:respiratory epithelium		0	0	0	0	0	0	0	0	1	0	0	0	-	-	-	-
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(3)	(0)	(0)	(0)	(-)	(-)	(-)	(-)
	respiratory metaplasia:olfactory epithelium		1	0	0	0	1	0	0	0	2	0	0	0	-	-	-	-
			(3)	(0)	(0)	(0)	(3)	(0)	(0)	(0)	(5)	(0)	(0)	(0)	(-)	(-)	(-)	(-)
	respiratory metaplasia:gland		23	7	0	0	29	1	0	0	24	0	0	0 *	-	-	-	-
			(58)	(18)	(0)	(0)	(73)	(3)	(0)	(0)	(62)	(0)	(0)	(0)	(-)	(-)	(-)	(-)
lung	bronchiolar-alveolar cell hyperplasia		<40>				<40>				<39>				< 0>			
			3	1	0	0	0	1	0	0	1	0	0	0	-	-	-	-
			(8)	(3)	(0)	(0)	(0)	(3)	(0)	(0)	(3)	(0)	(0)	(0)	(-)	(-)	(-)	(-)
{Hematopoietic system}																		
bone marrow	granulation		<40>				<40>				<39>				< 0>			
			0	2	0	0	0	0	0	0	0	0	0	0	-	-	-	-
			(0)	(5)	(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. : 0461
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 REPORT TYPE : A1
 SEX : MALE

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

PAGE : 3

Organ	Findings	Control No. of Animals on Study Grade				80 ppm 40				400 ppm 39				2000 ppm 0			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
(Hematopoietic system)																	
bone marrow		<40>				<40>				<39>				<0>			
	increased hematopoiesis	2 (5)	0 (0)	0 (0)	0 (0)	3 (8)	0 (0)	0 (0)	0 (0)	2 (5)	0 (0)	0 (0)	0 (0)	- (-)	- (-)	- (-)	- (-)
	xanthogranuloma	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1 (3)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	- (-)	- (-)	- (-)	- (-)
lymph node		<40>				<40>				<39>				<0>			
	lymphadenitis	0 (0)	1 (3)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	- (-)	- (-)	- (-)	- (-)
spleen		<40>				<40>				<39>				<0>			
	congestion	0 (0)	1 (3)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	- (-)	- (-)	- (-)	- (-)
	deposit of hemosiderin	21 (53)	0 (0)	0 (0)	0 (0)	25 (63)	1 (3)	0 (0)	0 (0)	27 (69)	3 (8)	0 (0)	0 (0) *	- (-)	- (-)	- (-)	- (-)
	fibrosis	0 (0)	0 (0)	0 (0)	0 (0)	2 (5)	1 (3)	0 (0)	0 (0)	0 (0)	2 (5)	0 (0)	0 (0)	- (-)	- (-)	- (-)	- (-)
	mastcell hyperplasia	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1 (3)	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. : 0461
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 REPORT TYPE : A1
 SEX : MALE

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

PAGE : 4

Organ	Findings	Control No. of Animals on Study Grade				80 ppm 40				400 ppm 39				2000 ppm 0			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Hematopoietic system}																	
spleen		<40>				<40>				<39>				< 0>			
	increased extramedullary hematopoiesis	0	1	1	0	1	2	0	0	0	0	0	0	-	-	-	-
		(0)	(3)	(3)	(0)	(3)	(5)	(0)	(0)	(0)	(0)	(0)	(0)	(-)	(-)	(-)	(-)
	engorgement of erythrocyte	0	0	0	0	2	0	0	0	9	0	0	0 **	-	-	-	-
		(0)	(0)	(0)	(0)	(5)	(0)	(0)	(0)	(23)	(0)	(0)	(0)	(-)	(-)	(-)	(-)
{Circulatory system}																	
heart		<40>				<40>				<39>				< 0>			
	deposit of hemosiderin	0	0	0	0	0	0	0	0	0	1	0	0	-	-	-	-
		(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(3)	(0)	(0)	(-)	(-)	(-)	(-)
	myocardial fibrosis	27	3	0	0	27	1	0	0	26	2	0	0	-	-	-	-
		(68)	(8)	(0)	(0)	(68)	(3)	(0)	(0)	(67)	(5)	(0)	(0)	(-)	(-)	(-)	(-)
	subendocardial fibrosis	0	0	0	0	1	0	0	0	1	0	0	0	-	-	-	-
		(0)	(0)	(0)	(0)	(3)	(0)	(0)	(0)	(3)	(0)	(0)	(0)	(-)	(-)	(-)	(-)
	arteritis	0	0	0	0	1	0	0	0	0	0	0	0	-	-	-	-
		(0)	(0)	(0)	(0)	(3)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(-)	(-)	(-)	(-)
artery/aort		<40>				<40>				<39>				< 0>			
	mineralization	0	0	0	0	0	0	0	0	1	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. : 0461
 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				80 ppm				400 ppm				2000 ppm				
		No. of Animals on Study	40				40				39				0				
		Grade	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	
Organ	Findings		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	
(Digestive system)																			
stomach			<40>				<40>				<39>				< 0>				
	malformation		0	0	0	0	1	0	0	0	0	0	0	0	-	-	-	-	
			(0)	(0)	(0)	(0)	(3)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(-)	(-)	(-)	(-)	
	ulcer:forestomach		1	0	0	0	0	0	0	0	0	1	0	0	0	-	-	-	-
			(3)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(3)	(0)	(0)	(0)	(-)	(-)	(-)	(-)
	hyperplasia:forestomach		0	0	0	0	0	0	0	0	2	0	0	0	-	-	-	-	
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(5)	(0)	(0)	(0)	(-)	(-)	(-)	(-)	
	erosion:glandular stomach		0	0	0	0	0	0	0	0	3	0	0	0	-	-	-	-	
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(8)	(0)	(0)	(0)	(-)	(-)	(-)	(-)	
	hyperplasia:glandular stomach		0	0	0	0	0	0	0	0	1	0	0	0	-	-	-	-	
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(3)	(0)	(0)	(0)	(-)	(-)	(-)	(-)	
liver			<40>				<40>				<39>				< 0>				
	herniation		3	0	0	0	1	0	0	0	4	0	0	0	-	-	-	-	
			(8)	(0)	(0)	(0)	(3)	(0)	(0)	(0)	(10)	(0)	(0)	(0)	(-)	(-)	(-)	(-)	
	granulation		3	2	0	0	3	0	0	0	5	0	0	0	-	-	-	-	
			(8)	(5)	(0)	(0)	(8)	(0)	(0)	(0)	(13)	(0)	(0)	(0)	(-)	(-)	(-)	(-)	
	inflammatory cell nest		1	1	0	0	0	0	0	0	0	0	0	0	-	-	-	-	
			(3)	(3)	(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. : 0461
ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
REPORT TYPE : A1
SEX : MALE

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

PAGE : 6

		Group Name	Control				80 ppm				400 ppm				2000 ppm			
		No. of Animals on Study	40				40				39				0			
Organ	Findings	Grade	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
(Digestive system)																		
liver			<40>				<40>				<39>				<0>			
	clear cell focus		4	5	0	0	2	5	0	0	2	4	0	0	-	-	-	-
			(10)	(13)	(0)	(0)	(5)	(13)	(0)	(0)	(5)	(10)	(0)	(0)	(-)	(-)	(-)	(-)
	acidophilic cell focus		0	2	0	0	1	2	0	0	4	17	2	0 **	-	-	-	-
			(0)	(5)	(0)	(0)	(3)	(5)	(0)	(0)	(10)	(44)	(5)	(0)	(-)	(-)	(-)	(-)
	basophilic cell focus		5	1	0	0	3	4	0	0	1	15	3	0 **	-	-	-	-
		(13)	(3)	(0)	(0)	(8)	(10)	(0)	(0)	(3)	(38)	(8)	(0)	(-)	(-)	(-)	(-)	
	spongiosis hepatitis		3	1	0	0	6	0	0	0	4	22	1	0 **	-	-	-	-
			(8)	(3)	(0)	(0)	(15)	(0)	(0)	(0)	(10)	(56)	(3)	(0)	(-)	(-)	(-)	(-)
	bile duct hyperplasia		0	39	0	0	0	39	0	0	17	17	0	0 **	-	-	-	-
			(0)	(98)	(0)	(0)	(0)	(98)	(0)	(0)	(44)	(44)	(0)	(0)	(-)	(-)	(-)	(-)
	focal fatty change		1	0	0	0	0	0	0	0	3	1	0	0	-	-	-	-
			(3)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(8)	(3)	(0)	(0)	(-)	(-)	(-)	(-)
pancreas			<40>				<40>				<39>				<0>			
	atrophy		9	3	1	0	9	6	2	0	7	2	0	0	-	-	-	-
			(23)	(8)	(3)	(0)	(23)	(15)	(5)	(0)	(18)	(5)	(0)	(0)	()	()	()	()
	arteritis		0	0	0	0	0	1	0	0	0	0	0	0	-	-	-	-
			(0)	(0)	(0)	(0)	(0)	(3)	(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. : 0461
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 REPORT TYPE : A1
 SEX : MALE

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

PAGE : 7

		Group Name	Control				80 ppm				400 ppm				2000 ppm			
		No. of Animals on Study	40				40				39				0			
Organ	Findings	Grade	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
<hr/>																		
{Digestive system}																		
pancreas			<40>				<40>				<39>				< 0>			
	islet cell hyperplasia		0	0	0	0	0	1	0	0	0	0	0	0	-	-	-	-
			(0)	(0)	(0)	(0)	(0)	(3)	(0)	(0)	(0)	(0)	(0)	(0)	(-)	(-)	(-)	(-)
 {Urinary system}																		
kidney			<40>				<40>				<39>				< 0>			
	cyst		1	0	0	0	0	1	0	0	4	4	0	0 *	-	-	-	-
			(3)	(0)	(0)	(0)	(0)	(3)	(0)	(0)	(10)	(10)	(0)	(0)	(-)	(-)	(-)	(-)
	deposit of hemosiderin		0	1	0	0	0	0	0	0	0	0	0	0	-	-	-	-
			(0)	(3)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(-)	(-)	(-)	(-)
	chronic nephropathy		14	20	3	0	5	32	3	0 *	0	3	25	11 **	-	-	-	-
			(35)	(50)	(8)	(0)	(13)	(80)	(8)	(0)	(0)	(8)	(64)	(28)	(-)	(-)	(-)	(-)
	tubular necrosis		0	0	0	0	0	1	0	0	0	0	0	0	-	-	-	-
			(0)	(0)	(0)	(0)	(0)	(3)	(0)	(0)	(0)	(0)	(0)	(0)	(-)	(-)	(-)	(-)
	transitional cell hyperplasia		0	0	0	0	0	1	0	0	0	0	0	0	-	-	-	-
			(0)	(0)	(0)	(0)	(0)	(3)	(0)	(0)	(0)	(0)	(0)	(0)	(-)	(-)	(-)	(-)
	urothelial hyperplasia:pelvis		0	0	0	0	1	0	0	0	6	21	0	0 **	-	-	-	-
			(0)	(0)	(0)	(0)	(3)	(0)	(0)	(0)	(15)	(54)	(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. : 0461
 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 40				80 ppm 40				400 ppm 39				2000 ppm 0			
			1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Urinary system}																		
kidney			<40>				<40>				<39>				< 0>			
	atypical tubule hyperplasia		0	0	0	0	1	0	0	0	1	0	0	0	-	-	-	-
			(0)	(0)	(0)	(0)	(3)	(0)	(0)	(0)	(3)	(0)	(0)	(0)	(-)	(-)	(-)	(-)
	basophilic change:atypia		0	0	0	0	0	1	0	0	0	0	0	0	-	-	-	-
			(0)	(0)	(0)	(0)	(0)	(3)	(0)	(0)	(0)	(0)	(0)	(0)	(-)	(-)	(-)	(-)
	deposit of brown pigment:proximal tubule		0	0	0	0	0	0	0	0	34	1	0	0 **	-	-	-	-
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(87)	(3)	(0)	(0)	(-)	(-)	(-)	(-)
{Endocrine system}																		
pituitary			<40>				<40>				<39>				< 0>			
	cyst		1	0	0	0	0	0	0	0	1	0	0	0	-	-	-	-
			(3)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(3)	(0)	(0)	(0)	(-)	(-)	(-)	(-)
	hyperplasia		4	3	0	0	9	1	0	0	9	0	0	0	-	-	-	-
			(10)	(8)	(0)	(0)	(23)	(3)	(0)	(0)	(23)	(0)	(0)	(0)	(-)	(-)	(-)	(-)
	Rathke pouch		1	0	0	0	1	0	0	0	0	1	0	0	-	-	-	-
			(3)	(0)	(0)	(0)	(3)	(0)	(0)	(0)	(0)	(3)	(0)	(0)	(-)	(-)	(-)	(-)
thyroid			<40>				<40>				<39>				< 0>			
	follicular hyperplasia		0	0	0	0	1	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 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. : 0461
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 REPORT TYPE : A1
 SEX : MALE

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

PAGE : 9

Organ	Findings	Control 40				80 ppm 40				400 ppm 39				2000 ppm 0			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Endocrine system}																	
thyroid	C-cell hyperplasia	<40>				<40>				<39>				<0>			
		2	1	0	0	7	4	0	0	4	1	0	0	-	-	-	-
		(5)	(3)	(0)	(0)	(18)	(10)	(0)	(0)	(10)	(3)	(0)	(0)	(-)	(-)	(-)	(-)
parathyroid	hyperplasia	<40>				<40>				<39>				<0>			
		0	0	0	0	0	0	0	0	1	0	0	0	-	-	-	-
		(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(3)	(0)	(0)	(0)	(-)	(-)	(-)	(-)
adrenal	thrombus	<40>				<40>				<39>				<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)	(-)	(-)	(-)	(-)
	hyperplasia:medulla	0	1	0	0	3	0	0	0	3	0	0	0	-	-	-	-
		(0)	(3)	(0)	(0)	(8)	(0)	(0)	(0)	(8)	(0)	(0)	(0)	(-)	(-)	(-)	(-)
	focal fatty change:cortex	2	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-
		(5)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(-)	(-)	(-)	(-)
{Reproductive system}																	
testis	mineralization	<40>				<40>				<39>				<0>			
		0	0	0	0	0	1	0	0	0	1	0	0	-	-	-	-
		(0)	(0)	(0)	(0)	(0)	(3)	(0)	(0)	(0)	(3)	(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. : 0461
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 REPORT TYPE : A1
 SEX : MALE

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

PAGE : 10

Organ	Findings	Group Name No. of Animals on Study Grade	Control 40				80 ppm 40				400 ppm 39				2000 ppm 0			
			1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Reproductive system}																		
testis			<40>				<40>				<39>				< 0>			
	hyperplasia		13 (33)	0 (0)	0 (0)	0 (0)	19 (48)	0 (0)	0 (0)	0 (0)	22 (56)	0 (0)	0 (0)	0 (0)	- (-)	- (-)	- (-)	- (-)
	arteritis		2 (5)	1 (3)	0 (0)	0 (0)	0 (0)	1 (3)	0 (0)	0 (0)	1 (3)	2 (5)	0 (0)	0 (0)	- (-)	- (-)	- (-)	- (-)
epididymis			<40>				<40>				<39>				< 0>			
	arteritis		0 (0)	0 (0)	0 (0)	0 (0)	1 (3)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	- (-)	- (-)	- (-)	- (-)
prostate			<40>				<40>				<39>				< 0>			
	hyperplasia		3 (8)	4 (10)	0 (0)	0 (0)	5 (13)	4 (10)	0 (0)	0 (0)	2 (5)	2 (5)	0 (0)	0 (0)	- (-)	- (-)	- (-)	- (-)
mammary gl			<40>				<40>				<39>				< 0>			
	galactoceles		0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1 (3)	1 (3)	0 (0)	0 (0)	- (-)	- (-)	- (-)	- (-)
{Nervous system}																		
brain			<40>				<40>				<39>				< 0>			
	gliosis		0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1 (3)	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. : 0461
 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 40				80 ppm 40				400 ppm 39				2000 ppm 0			
			1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Special sense organs/appendage}																		
eye	cataract		<40>				<40>				<39>				< 0>			
		5	0	0	0	2	0	0	0	2	0	0	0	-	-	-	-	
		(13)	(0)	(0)	(0)	(5)	(0)	(0)	(0)	(5)	(0)	(0)	(0)	(-)	(-)	(-)	(-)	
retinal atrophy		19	16	1	0	11	26	2	0	15	22	2	0	-	-	-	-	
		(48)	(40)	(3)	(0)	(28)	(65)	(5)	(0)	(38)	(56)	(5)	(0)	(-)	(-)	(-)	(-)	
nasolacr d	inflammation		<40>				<40>				<39>				< 0>			
		0	0	0	0	0	0	0	0	1	0	0	0	-	-	-	-	
		(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(3)	(0)	(0)	(0)	(-)	(-)	(-)	(-)	
{Body cavities}																		
mediastinum	arteritis		<40>				<40>				<39>				< 0>			
		0	0	0	0	0	1	0	0	0	0	0	0	-	-	-	-	
		(0)	(0)	(0)	(0)	(0)	(0)	(3)	(0)	(0)	(0)	(0)	(0)	(-)	(-)	(-)	(-)	
peritoneum	arteritis		<40>				<40>				<39>				< 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)	(-)	(-)	(-)	(-)	
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 L 4

HISTOPATHOLOGICAL FINDINGS :
NON-NEOPLASTIC LESIONS : FEMALE
ALL ANIMALS

STUDY NO. : 0461
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				80 ppm				400 ppm				2000 ppm			
		No. of Animals on Study	Grade	50				50				50				50			
				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>			
	angiectasis	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)
	inflammation	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)	(0)	(0)	(0)	(0)
	squamous cell hyperplasia	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)
	scab	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)

{Respiratory system}

nasal cavit		<50>				<50>				<50>				<50>			
	eosinophilic change:olfactory epithelium	1	31	18	0	3	25	21	0	6	33	10	0	6	0	0	0 **
		(2)	(62)	(36)	(0)	(6)	(50)	(42)	(0)	(12)	(66)	(20)	(0)	(12)	(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 ; * : $P \leq 0.05$ ** : $P \leq 0.01$ Test of Chi Square

! : Significant test is not applied to this group.

STUDY NO. : 0461
ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
REPORT TYPE : A1
SEX : FEMALE

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

PAGE : 20

		Control				80 ppm				400 ppm				2000 ppm			
		No. of Animals on Study				50				50				50			
		Grade				50				50				50			
Organ_____	Findings_____	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	25	0	0	0	32	0	0	0	27	0	0	0	3	0	0	0
		(50)	(0)	(0)	(0)	(64)	(0)	(0)	(0)	(54)	(0)	(0)	(0)	(6)	(0)	(0)	(0)
	inflammation:foreign body	1	0	0	0	2	0	0	0	1	0	0	0	0	0	0	0
		(2)	(0)	(0)	(0)	(4)	(0)	(0)	(0)	(2)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	respiratory metaplasia:olfactory epithelium	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0
		(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(4)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	respiratory metaplasia:gland	37	0	0	0	34	1	0	0	33	0	0	0	33	2	0	0
		(74)	(0)	(0)	(0)	(68)	(2)	(0)	(0)	(66)	(0)	(0)	(0)	(66)	(4)	(0)	(0)
lung		<50>				<50>				<50>				<50>			
	congestion	0	0	0	0	1	0	0	0	0	0	0	0	3	0	0	0
		(0)	(0)	(0)	(0)	(2)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(6)	(0)	(0)	(0)
	edema	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)

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
! : Significant test is not applied to this group.

STUDY NO. : 0461
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 REPORT TYPE : A1
 SEX : FEMALE

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

PAGE : 21

		Group Name	Control				80 ppm				400 ppm				2000 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
Organ_____	Findings_____		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Respiratory system}																		
lung			<50>				<50>				<50>				<50>			
	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)	(2)	(0)	(0)	(0)	(2)	(0)	(0)	(0)
	inflammatory infiltration		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)
	accumulation of foamy cells		0	0	0	0	2	0	0	0	1	0	0	0	0	1	0	0
			(0)	(0)	(0)	(0)	(4)	(0)	(0)	(0)	(2)	(0)	(0)	(0)	(0)	(2)	(0)	(0)
	bronchiolar-alveolar cell hyperplasia		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)	(4)	(0)	(0)	(0)
{Hematopoietic system}																		
bone marrow			<50>				<50>				<50>				<50>			
	granulation		5	2	0	0	3	1	0	0	0	1	0	0	1	1	0	0
			(10)	(4)	(0)	(0)	(6)	(2)	(0)	(0)	(0)	(2)	(0)	(0)	(2)	(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
 ! : Significant test is not applied to this group.

STUDY NO. : 0461
ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
REPORT TYPE : A1
SEX : FEMALE

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

PAGE : 22

Organ_____	Findings_____	Group Name	Control				80 ppm				400 ppm				2000 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>				<50>				<50>				<50>			
	increased hematopoiesis		3	0	0	0	2	0	0	0	3	0	0	0	3	0	0	0
			(6)	(0)	(0)	(0)	(4)	(0)	(0)	(0)	(6)	(0)	(0)	(0)	(6)	(0)	(0)	(0)
spleen			<50>				<50>				<50>				<50>			
	angiectasis		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)	(10)	(0)	(0)	(0)
	deposit of hemosiderin		24	9	0	0	27	14	0	0	23	23	0	0 **	33	12	0	0 *
			(48)	(18)	(0)	(0)	(54)	(28)	(0)	(0)	(46)	(46)	(0)	(0)	(66)	(24)	(0)	(0)
	fibrosis		0	1	0	0	0	0	0	0	0	0	0	0	2	1	0	0
			(0)	(2)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(4)	(2)	(0)	(0)
	increased extramedullary hematopoiesis		10	5	0	0	6	3	0	0	14	2	0	0	22	6	0	0 *
			(20)	(10)	(0)	(0)	(12)	(6)	(0)	(0)	(28)	(4)	(0)	(0)	(44)	(12)	(0)	(0)
	engorgement of erythrocyte		0	0	0	0	1	0	0	0	5	0	0	0	26	1	0	0 **
			(0)	(0)	(0)	(0)	(2)	(0)	(0)	(0)	(10)	(0)	(0)	(0)	(52)	(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

! : Significant test is not applied to this group.

STUDY NO. : 0461
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 REPORT TYPE : A1
 SEX : FEMALE

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

PAGE : 23

Organ	Findings	Control				80 ppm				400 ppm				2000 ppm			
		50				50				50				50			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Hematopoietic system}																	
spleen		<50>				<50>				<50>				<50>			
	capsule hyperplasia	0	0	0	0	0	0	0	0	0	0	0	0	46	0	0	0 **
		(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(92)	(0)	(0)	(0)
{Circulatory system}																	
heart		<50>				<50>				<50>				<50>			
	inflammatory cell nest	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)
	myocardial fibrosis	15	0	0	0	13	1	0	0	14	1	0	0	13	0	0	0
		(30)	(0)	(0)	(0)	(26)	(2)	(0)	(0)	(28)	(2)	(0)	(0)	(26)	(0)	(0)	(0)
	subendocardial fibrosis	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)	(4)	(0)	(0)	(0)
{Digestive system}																	
tongue		<50>				<50>				<50>				<50>			
	arteritis	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)

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
 ! : Significant test is not applied to this group.

STUDY NO. : 0461
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 REPORT TYPE : A1
 SEX : FEMALE

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

PAGE : 24

Organ_____	Findings_____	Group Name	Control				80 ppm				400 ppm				2000 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/>																		
{Digestive system}																		
stomach			<50>				<50>				<50>				<50>			
	ulcer:forestomach	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)	(0)	(0)	(0)	(0)
	hyperplasia:forestomach	1	0	0	0	2	0	0	0	2	1	0	0	1	0	0	0	0
		(2)	(0)	(0)	(0)	(4)	(0)	(0)	(0)	(4)	(2)	(0)	(0)	(2)	(0)	(0)	(0)	(0)
	erosion:glandular stomach	0	0	0	0	1	0	0	0	0	0	0	0	3	0	0	0	
		(0)	(0)	(0)	(0)	(2)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(6)	(0)	(0)	(0)	
	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)	(2)	(0)	(0)	(0)	
liver	herniation	11	0	0	0	4	0	0	0	7	0	0	0	9	0	0	0	
		(22)	(0)	(0)	(0)	(8)	(0)	(0)	(0)	(14)	(0)	(0)	(0)	(18)	(0)	(0)	(0)	
	angiectasis	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)	

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
 ! : Significant test is not applied to this group.

STUDY NO. : 0461
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 REPORT TYPE : A1
 SEX : FEMALE

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

PAGE : 25

Organ	Findings	Group Name No. of Animals on Study				Control				80 ppm				400 ppm				2000 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
		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
(Digestive system)																					
liver		<50>				<50>				<50>				<50>				<50>			
	necrosis:central	0	1	0	0	0	0	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)	(0)	(0)	(0)	(0)	(2)	(0)	(0)
	necrosis:focal	0	3	0	0	2	1	0	0	2	0	0	0	2	0	0	0	3	2	0	0
		(0)	(6)	(0)	(0)	(4)	(2)	(0)	(0)	(4)	(0)	(0)	(0)	(4)	(0)	(0)	(0)	(6)	(4)	(0)	(0)
	necrosis:single cell	0	0	0	0	0	0	0	0	1	0	0	0	2	0	0	0	5	1	0	0 *
		(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(2)	(0)	(0)	(0)	(2)	(0)	(0)	(0)	(10)	(2)	(0)	(0)
	hydropic change	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)
	hydropic change:central	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	38	3	0	0 **
		(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(76)	(6)	(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)	(0)	(0)	(0)	(0)	(2)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	granulation	12	5	4	0	16	4	2	0	7	3	0	0	4	1	0	0	4	1	0	0 **
		(24)	(10)	(8)	(0)	(32)	(8)	(4)	(0)	(14)	(6)	(0)	(0)	(8)	(2)	(0)	(0)	(8)	(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

! : Significant test is not applied to this group.

STUDY NO. : 0461
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 REPORT TYPE : A1
 SEX : FEMALE

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

PAGE : 26

Organ_____	Findings_____	Group Name	Control				80 ppm				400 ppm				2000 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

inflammatory cell nest	<div><50></div> <div>0000</div> <div>(0) (0) (0) (0)</div>	<div><50></div> <div>1000</div> <div>(2) (0) (0) (0)</div>	<div><50></div> <div>0000</div> <div>(0) (0) (0) (0)</div>	<div><50></div> <div>0200</div> <div>(0) (4) (0) (0)</div>
fibrosis	<div></div> <div>0100</div> <div>(0) (2) (0) (0)</div>	<div></div> <div>0000</div> <div>(0) (0) (0) (0)</div>	<div></div> <div>0000</div> <div>(0) (0) (0) (0)</div>	<div></div> <div>0000</div> <div>(0) (0) (0) (0)</div>
clear cell focus	<div></div> <div>1100</div> <div>(2) (2) (0) (0)</div>	<div></div> <div>1000</div> <div>(2) (0) (0) (0)</div>	<div></div> <div>2000</div> <div>(4) (0) (0) (0)</div>	<div></div> <div>1730 *</div> <div>(2) (14) (6) (0)</div>
acidophilic cell focus	<div></div> <div>0000</div> <div>(0) (0) (0) (0)</div>	<div></div> <div>0000</div> <div>(0) (0) (0) (0)</div>	<div></div> <div>4400 *</div> <div>(8) (8) (0) (0)</div>	<div></div> <div>1296 0 **</div> <div>(2) (58) (12) (0)</div>
basophilic cell focus	<div></div> <div>24500</div> <div>(48) (10) (0) (0)</div>	<div></div> <div>22000 *</div> <div>(44) (0) (0) (0)</div>	<div></div> <div>9000 **</div> <div>(18) (0) (0) (0)</div>	<div></div> <div>5000 **</div> <div>(10) (0) (0) (0)</div>
spongiosis hepatis	<div></div> <div>0000</div> <div>(0) (0) (0) (0)</div>	<div></div> <div>0000</div> <div>(0) (0) (0) (0)</div>	<div></div> <div>0000</div> <div>(0) (0) (0) (0)</div>	<div></div> <div>1000</div> <div>(2) (0) (0) (0)</div>
bile duct hyperplasia	<div></div> <div>18900</div> <div>(36) (18) (0) (0)</div>	<div></div> <div>19800</div> <div>(38) (16) (0) (0)</div>	<div></div> <div>36400 **</div> <div>(72) (8) (0) (0)</div>	<div></div> <div>1000 **</div> <div>(2) (0) (0) (0)</div>

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
 ! : Significant test is not applied to this group.

STUDY NO. : 0461
 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	Control				80 ppm				400 ppm				2000 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			<50>				<50>				<50>				<50>			
	deposit of brown pigment		0	0	0	0	0	0	0	0	0	0	0	0	43	1	0	0 **
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(86)	(2)	(0)	(0)	
pancreas			<50>				<50>				<50>				<50>			
	atrophy		2	3	0	0	0	1	0	0	4	5	0	0	2	0	0	0
			(4)	(6)	(0)	(0)	(0)	(2)	(0)	(0)	(8)	(10)	(0)	(0)	(4)	(0)	(0)	(0)
	inflammatory infiltration		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)
{Urinary system}																		
kidney			<50>				<50>				<50>				<50>			
	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)
	inflammatory cell nest		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 ; * : $P \leq 0.05$ ** : $P \leq 0.01$ Test of Chi Square
 ! : Significant test is not applied to this group.

STUDY NO. : 0461
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 REPORT TYPE : A1
 SEX : FEMALE

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

PAGE : 28

Organ	Findings	Group Name No. of Animals on Study				Control 50				80 ppm 50				400 ppm 50				2000 ppm 50			
		Grade																			
		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>			
	chronic nephropathy	15 (30)	5 (10)	0 (0)	0 (0)	22 (44)	11 (22)	0 (0)	0 * (0)	27 (54)	16 (32)	2 (4)	0 ** (0)	2 (4)	14 (28)	31 (62)	2 ** (4)				
	hydronephrosis	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)	0 (0)	0 (0)	0 (0)
	tubular necrosis	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)	0 (0)	0 (0)	0 (0)	0 (0)
	mineralization:pelvis	1 (2)	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)	0 (0)	0 (0)	0 (0)	0 (0)
	transitional cell hyperplasia	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)	0 (0)	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)	0 (0)	0 (0)	0 (0)	0 (0)	3 (6)	4 (8)	0 (0)	0 * (0)				
	atypical tubule hyperplasia	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	4 (8)	1 (2)	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 ; * : $P \leq 0.05$ ** : $P \leq 0.01$ Test of Chi Square
 ! : Significant test is not applied to this group.

STUDY NO. : 0461
 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	Control				80 ppm				400 ppm				2000 ppm			
		50				50				50				50			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Urinary system}																	
kidney		<50>				<50>				<50>				<50>			
	deposit of brown pigment:proximal tubule	0	0	0	0	0	0	0	0	48	0	0	0 **	3	46	0	0 **
		(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(96)	(0)	(0)	(0)	(6)	(92)	(0)	(0)
urin bladd		<50>				<50>				<50>				<50>			
	nodular hyperplasia:transitional 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)
	papillary hyperplasia:transitional 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)
{Endocrine system}																	
pituitary		<50>				<50>				<50>				<50>			
	angiectasis	3	0	0	0	2	0	0	0	2	0	0	0	0	0	0	0
		(6)	(0)	(0)	(0)	(4)	(0)	(0)	(0)	(4)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	cyst	7	0	0	0	1	0	0	0	4	0	0	0	5	0	0	0
		(14)	(0)	(0)	(0)	(2)	(0)	(0)	(0)	(8)	(0)	(0)	(0)	(10)	(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
 † : Significant test is not applied to this group.

STUDY NO. : 0461
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 REPORT TYPE : A1
 SEX : FEMALE

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

PAGE : 30

Organ	Findings	Group Name No. of Animals on Study Grade	Control 50				80 ppm 50				400 ppm 50				2000 ppm 50			
			1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Endocrine system}																		
pituitary			<50>				<50>				<50>				<50>			
	hyperplasia		5 (10)	1 (2)	0 (0)	0 (0)	8 (16)	1 (2)	0 (0)	0 (0)	6 (12)	0 (0)	0 (0)	0 (0)	6 (12)	0 (0)	0 (0)	0 (0)
	Rathke pouch		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)	0 (0)	0 (0)	0 (0)
thyroid			<50>				<50>				<50>				<50>			
	follicular 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)
	C-cell hyperplasia		6 (12)	2 (4)	0 (0)	0 (0)	4 (8)	1 (2)	0 (0)	0 (0)	7 (14)	1 (2)	0 (0)	0 (0)	1 (2)	0 (0)	0 (0)	0 * (0)
adrenal			<50>				<50>				<50>				<50>			
	peliosis-like lesion		1 (2)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1 (2)	0 (0)	0 (0)	0 (0)	1 (2)	0 (0)	0 (0)	0 (0)
	hyperplasia:medulla		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)
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																		
! : Significant test is not applied to this group.																		

STUDY NO. : 0461
 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	Control				80 ppm				400 ppm				2000 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>			
	focal fatty change:cortex		6	0	0	0	3	1	0	0	6	0	0	0	0	0	0	0 *
			(12)	(0)	(0)	(0)	(6)	(2)	(0)	(0)	(12)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
{Reproductive system}																		
ovary			<50>				<50>				<50>				<50>			
	cyst		3	0	0	0	7	0	0	0	0	0	0	0	6	0	0	0
			(6)	(0)	(0)	(0)	(14)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(12)	(0)	(0)	(0)
uterus			<50>				<50>				<50>				<50>			
	dilatation		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)
	decidual change		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)
	cystic endometrial hyperplasia		1	2	0	0	1	1	0	0	2	2	0	0	4	0	0	0
			(2)	(4)	(0)	(0)	(2)	(2)	(0)	(0)	(4)	(4)	(0)	(0)	(8)	(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
 ! : Significant test is not applied to this group.

STUDY NO. : 0461
 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	Control				80 ppm				400 ppm				2000 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
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Reproductive system}																		
mammary gl			<50>				<50>				<50>				<50>			
	hyperplasia		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)	(0)
	galactoceles		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)
{Nervous system}																		
brain			<50>				<50>				<50>				<50>			
	dilatation:cerebral ventricle		0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0
		(0)	(0)	(0)	(0)	(4)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(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)	(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
 ! : Significant test is not applied to this group.

STUDY NO. : 0461
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 REPORT TYPE : A1
 SEX : FEMALE

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

PAGE : 33

Organ	Findings	Group Name No. of Animals on Study				Control				80 ppm				400 ppm				2000 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	2	0	0	0	4	0	0	0	1	0	0	0	4	0	0	0	4	0	0	0
		(4)	(0)	(0)	(0)	(8)	(0)	(0)	(0)	(2)	(0)	(0)	(0)	(8)	(0)	(0)	(0)	(8)	(0)	(0)	(0)
	retinal atrophy	2	40	1	0	1	42	3	0	3	44	1	0	5	36	2	0	10	72	4	0
		(4)	(80)	(2)	(0)	(2)	(84)	(6)	(0)	(6)	(88)	(2)	(0)	(10)	(72)	(4)	(0)				
	keratitis	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)
nasolacr d		<50>				<50>				<50>				<50>				<50>			
	inflammation	1	4	0	0	0	3	0	0	1	1	0	0	1	0	0	0	2	0	0	0
		(2)	(8)	(0)	(0)	(0)	(6)	(0)	(0)	(2)	(2)	(0)	(0)	(2)	(0)	(0)	(0)	(2)	(0)	(0)	(0)
{Musculoskeletal system}																					
bone		<50>				<50>				<50>				<50>				<50>			
	osteosclerosis	5	6	0	0	1	2	0	0	2	1	0	0	3	2	0	0	6	4	0	0
		(10)	(12)	(0)	(0)	(2)	(4)	(0)	(0)	(4)	(2)	(0)	(0)	(6)	(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
 ! : Significant test is not applied to this group.

APPENDIX L 5

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

STUDY NO. : 0461
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 REPORT TYPE : A1
 SEX : FEMALE

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

PAGE : 13

		Group Name	Control				80 ppm				400 ppm				2000 ppm			
		No. of Animals on Study	9				8				5				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			< 9>				< 8>				< 5>				<11>			
	angiectasis		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)
{Respiratory system}																		
nasal cavit			< 9>				< 8>				< 5>				<11>			
	eosinophilic change:olfactory epithelium		1	8	0	0	2	4	1	0	2	2	1	0	2	0	0	0 **
			(11)	(89)	(0)	(0)	(25)	(50)	(13)	(0)	(40)	(40)	(20)	(0)	(18)	(0)	(0)	(0)
	eosinophilic change:respiratory epithelium		2	0	0	0	3	0	0	0	2	0	0	0	0	0	0	0
			(22)	(0)	(0)	(0)	(38)	(0)	(0)	(0)	(40)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	respiratory metaplasia:gland		4	0	0	0	5	0	0	0	3	0	0	0	2	1	0	0
			(44)	(0)	(0)	(0)	(63)	(0)	(0)	(0)	(60)	(0)	(0)	(0)	(18)	(9)	(0)	(0)
lung			< 9>				< 8>				< 5>				<11>			
	congestion		0	0	0	0	1	0	0	0	0	0	0	0	3	0	0	0
			(0)	(0)	(0)	(0)	(13)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(27)	(0)	(0)	(0)
	edema		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)	(18)	(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. : 0461
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 REPORT TYPE : A1
 SEX : FEMALE

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

PAGE : 14

		Group Name	Control				80 ppm				400 ppm				2000 ppm			
		No. of Animals on Study	9				8				5				11			
		Grade	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Organ	Findings		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Respiratory system}																		
lung			< 9>				< 8>				< 5>				<11>			
	inflammatory infiltration		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)	(18)	(0)	(0)	(0)
	accumulation of foamy cells		0	0	0	0	2	0	0	0	1	0	0	0	0	0	0	0
			(0)	(0)	(0)	(0)	(25)	(0)	(0)	(0)	(20)	(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)	(9)	(0)	(0)	(0)
{Hematopoietic system}																		
bone marrow			< 9>				< 8>				< 5>				<11>			
	increased hematopoiesis		1	0	0	0	2	0	0	0	2	0	0	0	3	0	0	0
			(11)	(0)	(0)	(0)	(25)	(0)	(0)	(0)	(40)	(0)	(0)	(0)	(27)	(0)	(0)	(0)
spleen			< 9>				< 8>				< 5>				<11>			
	angiectasis		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)	(18)	(0)	(0)	(0)
	deposit of hemosiderin		1	1	0	0	3	3	0	0	2	1	0	0	5	3	0	0
			(11)	(11)	(0)	(0)	(38)	(38)	(0)	(0)	(40)	(20)	(0)	(0)	(45)	(27)	(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. : 0461
 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	Control				80 ppm				400 ppm				2000 ppm			
		No. of Animals on Study				8				5				11			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
(Hematopoietic system)																	
spleen		< 9>				< 8>				< 5>				<11>			
	fibrosis	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0
		(0)	(11)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(9)	(0)	(0)
	increased extramedullary hematopoiesis	0	4	0	0	0	2	0	0	1	1	0	0	1	4	0	0
		(0)	(44)	(0)	(0)	(0)	(25)	(0)	(0)	(20)	(20)	(0)	(0)	(9)	(36)	(0)	(0)
	engorgement of erythrocyte	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)
	capsule hyperplasia	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)	(73)	(0)	(0)	(0)
(Circulatory system)																	
heart		< 9>				< 8>				< 5>				<11>			
	inflammatory cell nest	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)
	myocardial fibrosis	3	0	0	0	2	0	0	0	1	0	0	0	1	0	0	0
		(33)	(0)	(0)	(0)	(25)	(0)	(0)	(0)	(20)	(0)	(0)	(0)	(9)	(0)	(0)	(0)
	subendocardial fibrosis	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)

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. : 0461
ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
REPORT TYPE : A1
SEX : FEMALE

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

PAGE : 16

Organ	Findings	Control 9				80 ppm 8				400 ppm 5				2000 ppm 11			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
(Digestive system)																	
stomach		< 9>				< 8>				< 5>				<11>			
	ulcer: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)	(20)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	hyperplasia:forestomach	0	0	0	0	1	0	0	0	1	1	0	0	1	0	0	0
		(0)	(0)	(0)	(0)	(13)	(0)	(0)	(0)	(20)	(20)	(0)	(0)	(9)	(0)	(0)	(0)
	erosion:glandular stomach	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0
		(0)	(0)	(0)	(0)	(13)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(9)	(0)	(0)	(0)
liver		< 9>				< 8>				< 5>				<11>			
	herniation	3	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0
		(33)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(27)	(0)	(0)	(0)
	necrosis:central	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0
		(0)	(11)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(9)	(0)	(0)
	necrosis:focal	0	2	0	0	1	1	0	0	0	0	0	0	1	1	0	0
		(0)	(22)	(0)	(0)	(13)	(13)	(0)	(0)	(0)	(0)	(0)	(0)	(9)	(9)	(0)	(0)
	necrosis:single cell	0	0	0	0	0	0	0	0	0	0	0	0	2	1	0	0
		(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(18)	(9)	(0)	(0)
	hydropic change	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)

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

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

PAGE : 17

Organ	Findings	Control No. of Animals on Study Grade				80 ppm 8				400 ppm 5				2000 ppm 11			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Digestive system}																	
liver		< 9>				< 8>				< 5>				<11>			
	hydropic change:central	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	4 (36)	0 (0)	0 (0)	0 (0)
	inflammatory infiltration	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1 (13)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
	granulation	0 (0)	0 (0)	0 (0)	0 (0)	1 (13)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	2 (18)	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)	0 (0)	2 (18)	0 (0)	0 (0)
	fibrosis	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)	0 (0)	0 (0)	0 (0)
	clear cell focus	0 (0)	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)
	acidophilic cell focus	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	2 (18)	0 (0)	0 (0)
	basophilic cell focus	1 (11)	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)

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. : 0461
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 REPORT TYPE : A1
 SEX : FEMALE

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

PAGE : 18

		Group Name	Control				80 ppm				400 ppm				2000 ppm			
		No. of Animals on Study	9				8				5				11			
Organ	Findings	Grade	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Digestive system}																		
liver			< 9>				< 8>				< 5>				<11>			
	spongiosis hepatitis		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)
			< 9>				< 8>				< 5>				<11>			
	bile duct hyperplasia		4	1	0	0	5	0	0	0	2	0	0	0	0	0	0	0 *
			(44)	(11)	(0)	(0)	(63)	(0)	(0)	(0)	(40)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
			< 9>				< 8>				< 5>				<11>			
	deposit of brown pigment		0	0	0	0	0	0	0	0	0	0	0	0	6	0	0	0 *
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(55)	(0)	(0)	(0)
pancreas			< 9>				< 8>				< 5>				<11>			
	atrophy		0	1	0	0	0	0	0	0	0	1	0	0	1	0	0	0
			(0)	(11)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(20)	(0)	(0)	(9)	(0)	(0)	(0)
			< 9>				< 8>				< 5>				<11>			
	inflammatory infiltration		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)	(0)	(0)	(0)
{Urinary system}																		
kidney			< 9>				< 8>				< 5>				<11>			
	inflammatory cell nest		0	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)

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. : 0461
ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
REPORT TYPE : A1
SEX : FEMALE

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

PAGE : 19

		Group Name No. of Animals on Study Grade	Control 9				80 ppm 8				400 ppm 5				2000 ppm 11			
Organ	Findings		1 (%)	2 (%)	3 (%)	4 (%)	1 (%)	2 (%)	3 (%)	4 (%)	1 (%)	2 (%)	3 (%)	4 (%)	1 (%)	2 (%)	3 (%)	4 (%)
{Urinary system}																		
kidney			< 9>				< 8>				< 5>				<11>			
	chronic nephropathy		1 (11)	0 (0)	0 (0)	0 (0)	1 (13)	2 (25)	0 (0)	0 (0)	3 (60)	1 (20)	0 (0)	0 * (0)	2 (18)	5 (45)	3 (27)	0 ** (0)
	hydronephrosis		0 (0)	0 (0)	0 (0)	0 (0)	1 (13)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
	deposit of brown pigment:proximal tubule		0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	4 (80)	0 (0)	0 (0)	0 * (0)	3 (27)	7 (64)	0 (0)	0 ** (0)
{Endocrine system}																		
pituitary			< 9>				< 8>				< 5>				<11>			
	cyst		1 (11)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1 (20)	0 (0)	0 (0)	0 (0)	1 (9)	0 (0)	0 (0)	0 (0)
adrenal			< 9>				< 8>				< 5>				<11>			
	focal fatty change:cortex		1 (11)	0 (0)	0 (0)	0 (0)	1 (13)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
{Reproductive system}																		
ovary			< 9>				< 8>				< 5>				<11>			
	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 (9)	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. : 0461
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 REPORT TYPE : A1
 SEX : FEMALE

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

PAGE : 20

Organ	Findings	Group Name No. of Animals on Study Grade	Control 9				80 ppm 8				400 ppm 5				2000 ppm 11			
			1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Reproductive system}																		
uterus	dilatation		< 9>				< 8>				< 5>				<11>			
			0	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)
mammary gl	galactoceles		< 9>				< 8>				< 5>				<11>			
			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)
{Nervous system}																		
brain	dilatation: cerebral ventricle		< 9>				< 8>				< 5>				<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)
{Special sense organs/appendage}																		
eye	hemorrhage		< 9>				< 8>				< 5>				<11>			
			0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(20)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	cataract		< 9>				< 8>				< 5>				<11>			
			1	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0
			(11)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(20)	(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. : 0461
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 REPORT TYPE : A1
 SEX : FEMALE

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

PAGE : 21

		Control				80 ppm				400 ppm				2000 ppm			
		9				8				5				11			
		No. of Animals on Study															
		Grade															
Organ	Findings	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
(Special sense organs/appendage)																	
eye		< 9>				< 8>				< 5>				<11>			
	retinal atrophy	1	1	0	0	1	3	0	0	1	1	1	0	1	3	0	0
		(11)	(11)	(0)	(0)	(13)	(38)	(0)	(0)	(20)	(20)	(20)	(0)	(9)	(27)	(0)	(0)
nasolacr d		< 9>				< 8>				< 5>				<11>			
	inflammation	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		(11)	(11)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
(Musculoskeletal system)																	
bone		< 9>				< 8>				< 5>				<11>			
	osteosclerosis	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		(22)	(11)	(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

(HPT150)

BAIS4

APPENDIX L 6

HISTOPATHOLOGICAL FINDINGS :
NON-NEOPLASTIC LESIONS : FEMALE
SACRIFICED ANIMALS

STUDY NO. : 0461
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 REPORT TYPE : A1
 SEX : FEMALE

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

PAGE : 12

Organ_____	Findings_____	Group Name	Control				80 ppm				400 ppm				2000 ppm			
		No. of Animals on Study	41				42				45				39			
		Grade	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Integumentary system/appandage}																		
skin/app			<41>				<42>				<45>				<39>			
	inflammation		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)	(0)	(0)	(0)	(0)
	squamous cell hyperplasia		0	0	0	0	2	0	0	0	0	0	0	0	2	0	0	0
			(0)	(0)	(0)	(0)	(5)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(5)	(0)	(0)	(0)
	scab		1	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0
			(2)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(4)	(0)	(0)	(0)	(0)	(0)	(0)
{Respiratory system}																		
nasal cavit			<41>				<42>				<45>				<39>			
	eosinophilic change:olfactory epithelium		0	23	18	0	1	21	20	0	4	31	9	0 *	4	0	0	0 **
			(0)	(56)	(44)	(0)	(2)	(50)	(48)	(0)	(9)	(69)	(20)	(0)	(10)	(0)	(0)	(0)
	eosinophilic change:respiratory epithelium		23	0	0	0	29	0	0	0	25	0	0	0	3	0	0	0 **
			(56)	(0)	(0)	(0)	(69)	(0)	(0)	(0)	(56)	(0)	(0)	(0)	(8)	(0)	(0)	(0)
	inflammation:foreign body		1	0	0	0	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)
	respiratory metaplasia:olfactory epithelium		0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(4)	(0)	(0)	(0)	(0)	(0)	(0)	(0)

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. : 0461
ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
REPORT TYPE : A1
SEX : FEMALE

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

PAGE : 13

		Group Name	Control				80 ppm				400 ppm				2000 ppm			
		No. of Animals on Study	41				42				45				39			
		Grade	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Organ	Findings		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Respiratory system}																		
nasal cavit			<41>				<42>				<45>				<39>			
	respiratory metaplasia:gland		33 (80)	0 (0)	0 (0)	0 (0)	29 (69)	1 (2)	0 (0)	0 (0)	30 (67)	0 (0)	0 (0)	0 (0)	31 (79)	1 (3)	0 (0)	0 (0)
lung			<41>				<42>				<45>				<39>			
	inflammation		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 (3)	0 (0)	0 (0)	0 (0)
	accumulation of foamy cells		0 (0)	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)
	bronchiolar-alveolar cell hyperplasia		1 (2)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1 (2)	0 (0)	0 (0)	0 (0)	1 (3)	0 (0)	0 (0)	0 (0)
{Hematopoietic system}																		
bone marrow			<41>				<42>				<45>				<39>			
	granulation		5 (12)	2 (5)	0 (0)	0 (0)	3 (7)	1 (2)	0 (0)	0 (0)	0 (0)	1 (2)	0 (0)	0 (0)	0 (0)	1 (3)	1 (3)	0 (0)
	increased hematopoiesis		2 (5)	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)

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. : 0461
 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				80 ppm				400 ppm				2000 ppm			
		No. of Animals on Study	41				42				45				39			
Organ_____	Findings_____	Grade	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
<hr/>																		
{Hematopoietic system}																		
spleen																		
			<41>				<42>				<45>				<39>			
	angiectasis		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)
	deposit of hemosiderin		23	8	0	0	24	11	0	0	21	22	0	0 **	28	9	0	0
			(56)	(20)	(0)	(0)	(57)	(26)	(0)	(0)	(47)	(49)	(0)	(0)	(72)	(23)	(0)	(0)
	fibrosis		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)	(0)
	increased extramedullary hematopoiesis		10	1	0	0	6	1	0	0	13	1	0	0	21	2	0	0 *
			(24)	(2)	(0)	(0)	(14)	(2)	(0)	(0)	(29)	(2)	(0)	(0)	(54)	(5)	(0)	(0)
	engorgement of erythrocyte		0	0	0	0	1	0	0	0	5	0	0	0	26	0	0	0 **
			(0)	(0)	(0)	(0)	(2)	(0)	(0)	(0)	(11)	(0)	(0)	(0)	(67)	(0)	(0)	(0)
	capsule hyperplasia		0	0	0	0	0	0	0	0	0	0	0	0	38	0	0	0 **
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(97)	(0)	(0)	(0)

{Circulatory system}

heart			<41>				<42>				<45>				<39>			
	myocardial fibrosis		12	0	0	0	11	1	0	0	13	1	0	0	12	0	0	0
			(29)	(0)	(0)	(0)	(26)	(2)	(0)	(0)	(29)	(2)	(0)	(0)	(31)	(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. : 0461
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 REPORT TYPE : A1
 SEX : FEMALE

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

PAGE : 15

Organ	Findings	Group Name No. of Animals on Study				Control				80 ppm				400 ppm				2000 ppm			
		Grade				41				42				45				39			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Circulatory system}																					
heart		<41>				<42>				<45>				<39>							
	subendocardial fibrosis	0	0	0	0	0	0	0	0	1	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)	(3)	(0)	(0)	(0)
{Digestive system}																					
tongue		<41>				<42>				<45>				<39>							
	arteritis	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	5	0	0	0
		(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(5)	(0)	(0)	(0)	(5)	(0)	(0)	(0)
stomach		<41>				<42>				<45>				<39>							
	hyperplasia:forestomach	1	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)	(2)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	erosion:glandular stomach	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	5	0	0	0
		(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(5)	(0)	(0)	(0)	(5)	(0)	(0)	(0)
	hyperplasia:glandular stomach	0	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)	(0)	(0)	(0)	(0)	(3)	(0)	(0)	(0)	(3)	(0)	(0)	(0)
liver		<41>				<42>				<45>				<39>							
	herniation	8	0	0	0	4	0	0	0	7	0	0	0	6	0	0	0	15	0	0	0
		(20)	(0)	(0)	(0)	(10)	(0)	(0)	(0)	(16)	(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 ≤ 0.05 ** : P ≤ 0.01 Test of Chi Square

STUDY NO. : 0461
ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
REPORT TYPE : A1
SEX : FEMALE

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

PAGE : 16

Organ	Findings	Control				80 ppm				400 ppm				2000 ppm			
		No. of Animals on Study				No. of Animals on Study				No. of Animals on Study				No. of Animals on Study			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Digestive system}																	
liver		<41>				<42>				<45>				<39>			
	angiectasis	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)
	necrosis:focal	0	1	0	0	1	0	0	0	2	0	0	0	2	1	0	0
		(0)	(2)	(0)	(0)	(2)	(0)	(0)	(0)	(4)	(0)	(0)	(0)	(5)	(3)	(0)	(0)
	necrosis:single cell	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)	(8)	(0)	(0)	(0)
	hydropic change:central	0	0	0	0	0	0	0	0	0	0	0	0	34	3	0	0 **
		(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(87)	(8)	(0)	(0)
	granulation	12	5	4	0	15	4	2	0	7	3	0	0 *	2	1	0	0 **
		(29)	(12)	(10)	(0)	(36)	(10)	(5)	(0)	(16)	(7)	(0)	(0)	(5)	(3)	(0)	(0)
	inflammatory cell nest	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)
	clear cell focus	1	1	0	0	1	0	0	0	2	0	0	0	1	6	3	0 *
		(2)	(2)	(0)	(0)	(2)	(0)	(0)	(0)	(4)	(0)	(0)	(0)	(3)	(15)	(8)	(0)
	acidophilic cell focus	0	0	0	0	0	0	0	0	4	4	0	0 *	1	27	6	0 **
		(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(9)	(9)	(0)	(0)	(3)	(69)	(15)	(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. : 0461
 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	Control				80 ppm				400 ppm				2000 ppm			
		No. of Animals on Study	41				42				45				39			
		Grade	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Digestive system}																		
liver			<41>				<42>				<45>				<39>			
	basophilic cell focus		23	5	0	0	22	0	0	0 *	9	0	0	0 **	4	0	0	0 **
			(56)	(12)	(0)	(0)	(52)	(0)	(0)	(0)	(20)	(0)	(0)	(0)	(10)	(0)	(0)	(0)
	bile duct hyperplasia		14	8	0	0	14	8	0	0	34	4	0	0 **	1	0	0	0 **
			(34)	(20)	(0)	(0)	(33)	(19)	(0)	(0)	(76)	(9)	(0)	(0)	(3)	(0)	(0)	(0)
	deposit of brown pigment		0	0	0	0	0	0	0	0	0	0	0	0	37	1	0	0 **
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(95)	(3)	(0)	(0)
pancreas			<41>				<42>				<45>				<39>			
	atrophy		2	2	0	0	0	1	0	0	4	4	0	0	1	0	0	0
			(5)	(5)	(0)	(0)	(0)	(2)	(0)	(0)	(9)	(9)	(0)	(0)	(3)	(0)	(0)	(0)
{Urinary system}																		
kidney			<41>				<42>				<45>				<39>			
	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)	(3)	(0)	(0)
	chronic nephropathy		14	5	0	0	21	9	0	0	24	15	2	0 **	0	9	28	2 **
			(34)	(12)	(0)	(0)	(50)	(21)	(0)	(0)	(53)	(33)	(4)	(0)	(0)	(23)	(72)	(5)

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. : 0461
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 REPORT TYPE : A1
 SEX : FEMALE

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

PAGE : 18

		Group Name	Control				80 ppm				400 ppm				2000 ppm			
		No. of Animals on Study	41				42				45				39			
		Grade	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Organ_____	Findings_____		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
<hr/>																		
{Urinary system}																		
kidney			<41>				<42>				<45>				<39>			
	tubular necrosis		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)
	mineralization:pelvis		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)
	transitional cell hyperplasia		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)
	urothelial hyperplasia:pelvis		0	0	0	0	0	0	0	0	0	0	0	0	3	4	0	0 *
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(8)	(10)	(0)	(0)
	atypical tubule hyperplasia		0	0	0	0	0	0	0	0	0	0	0	0	4	1	0	0
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(10)	(3)	(0)	(0)
	deposit of brown pigment:proximal tubule		0	0	0	0	0	0	0	0	44	0	0	0 **	0	39	0	0 **
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(98)	(0)	(0)	(0)	(0)	(100)	(0)	(0)
urin bladd			<41>				<42>				<45>				<39>			
	nodular hyperplasia:transitional 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)
	papillary hyperplasia:transitional epithelium		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 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. : 0461
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				80 ppm				400 ppm				2000 ppm			
		No. of Animals on Study	41				42				45				39			
Organ	Findings	Grade	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
(Endocrine system)																		
pituitary			<41>				<42>				<45>				<39>			
	angiectasis		3	0	0	0	2	0	0	0	2	0	0	0	0	0	0	0
			(7)	(0)	(0)	(0)	(5)	(0)	(0)	(0)	(4)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	cyst		6	0	0	0	1	0	0	0	3	0	0	0	4	0	0	0
			(15)	(0)	(0)	(0)	(2)	(0)	(0)	(0)	(7)	(0)	(0)	(0)	(10)	(0)	(0)	(0)
	hyperplasia		5	1	0	0	8	1	0	0	6	0	0	0	6	0	0	0
			(12)	(2)	(0)	(0)	(19)	(2)	(0)	(0)	(13)	(0)	(0)	(0)	(15)	(0)	(0)	(0)
	Rathke pouch		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)	(3)	(0)	(0)	(0)
thyroid			<41>				<42>				<45>				<39>			
	follicular 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)
	C-cell hyperplasia		6	2	0	0	4	1	0	0	7	1	0	0	1	0	0	0
			(15)	(5)	(0)	(0)	(10)	(2)	(0)	(0)	(16)	(2)	(0)	(0)	(3)	(0)	(0)	(0)
adrenal			<41>				<42>				<45>				<39>			
	peliosis like lesion		1	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0
			(2)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(2)	(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. : 0461
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				80 ppm				400 ppm				2000 ppm			
		No. of Animals on Study	41				42				45				39			
		Grade	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Organ_____	Findings_____		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
<hr/>																		
{Endocrine system}																		
adrenal			<41>				<42>				<45>				<39>			
	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)	(2)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	focal fatty change:cortex		5	0	0	0	2	1	0	0	6	0	0	0	0	0	0	0
			(12)	(0)	(0)	(0)	(5)	(2)	(0)	(0)	(13)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
<hr/>																		
{Reproductive system}																		
ovary			<41>				<42>				<45>				<39>			
	cyst		3	0	0	0	7	0	0	0	0	0	0	0	5	0	0	0
		(7)	(0)	(0)	(0)	(17)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(13)	(0)	(0)	(0)	
uterus			<41>				<42>				<45>				<39>			
	decidual change		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)
	cystic endometrial hyperplasia		1	2	0	0	1	1	0	0	2	2	0	0	4	0	0	0
		(2)	(5)	(0)	(0)	(2)	(2)	(0)	(0)	(4)	(4)	(0)	(0)	(10)	(0)	(0)	(0)	
mammary gl			<41>				<42>				<45>				<39>			
	hyperplasia		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. : 0461
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 REPORT TYPE : A1
 SEX : FEMALE

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

PAGE : 21

		Group Name No. of Animals on Study	Control 41				80 ppm 42				400 ppm 45				2000 ppm 39				
Organ	Findings	Grade	1 (%)	2 (%)	3 (%)	4 (%)	1 (%)	2 (%)	3 (%)	4 (%)	1 (%)	2 (%)	3 (%)	4 (%)	1 (%)	2 (%)	3 (%)	4 (%)	
{Nervous system}																			
brain			<41>				<42>				<45>				<39>				
	dilatation:cerebral ventricles		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)
{Special sense organs/appendage}																			
eye			<41>				<42>				<45>				<39>				
	cataract		1 (2)	0 (0)	0 (0)	0 (0)	4 (10)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	3 (8)	0 (0)	0 (0)	0 (0)
	retinal atrophy		1 (2)	39 (95)	1 (2)	0 (0)	0 (0)	39 (93)	3 (7)	0 (0)	2 (4)	43 (96)	0 (0)	0 (0)	0 (0)	4 (10)	33 (85)	2 (5)	0 (0)
	keratitis		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)	0 (0)
nasolacr d			<41>				<42>				<45>				<39>				
	inflammation		0 (0)	3 (7)	0 (0)	0 (0)	0 (0)	3 (7)	0 (0)	0 (0)	1 (2)	1 (2)	0 (0)	0 (0)	1 (3)	0 (0)	0 (0)	0 (0)	
{Musculoskeletal system}																			
bone			<41>				<42>				<45>				<39>				
	osteosclerosis		3 (7)	5 (12)	0 (0)	0 (0)	1 (2)	2 (5)	0 (0)	0 (0)	2 (4)	1 (2)	0 (0)	0 (0)	3 (8)	2 (5)	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

APPENDIX M 1

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

STUDY NO. : 0461
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	80 ppm	400 ppm	2000 ppm
0 - 52	NO. OF EXAMINED ANIMALS		0	0	1	0
	NO. OF ANIMALS WITH TUMORS		0	0	1	0
	NO. OF ANIMALS WITH SINGLE TUMORS		0	0	1	0
	NO. OF ANIMALS WITH MULTIPLE TUMORS		0	0	0	0
	NO. OF BENIGN TUMORS		0	0	0	0
	NO. OF MALIGNANT TUMORS		0	0	1	0
	NO. OF TOTAL TUMORS		0	0	1	0
53 - 78	NO. OF EXAMINED ANIMALS		1	1	1	13
	NO. OF ANIMALS WITH TUMORS		1	1	0	7
	NO. OF ANIMALS WITH SINGLE TUMORS		1	1	0	7
	NO. OF ANIMALS WITH MULTIPLE TUMORS		0	0	0	0
	NO. OF BENIGN TUMORS		1	0	0	6
	NO. OF MALIGNANT TUMORS		0	1	0	1
	NO. OF TOTAL TUMORS		1	1	0	7
79 - 104	NO. OF EXAMINED ANIMALS		9	9	9	37
	NO. OF ANIMALS WITH TUMORS		9	9	9	31
	NO. OF ANIMALS WITH SINGLE TUMORS		3	2	5	22
	NO. OF ANIMALS WITH MULTIPLE TUMORS		6	7	4	9
	NO. OF BENIGN TUMORS		8	18	13	37
	NO. OF MALIGNANT TUMORS		8	4	2	7
	NO. OF TOTAL TUMORS		16	22	15	44
105 - 105	NO. OF EXAMINED ANIMALS		40	40	39	0
	NO. OF ANIMALS WITH TUMORS		40	40	39	0
	NO. OF ANIMALS WITH SINGLE TUMORS		10	15	12	0
	NO. OF ANIMALS WITH MULTIPLE TUMORS		30	25	27	0
	NO. OF BENIGN TUMORS		71	72	69	0
	NO. OF MALIGNANT TUMORS		9	4	8	0
	NO. OF TOTAL TUMORS		80	76	77	0

STUDY NO. : 0461
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	80 ppm	400 ppm	2000 ppm
0 - 105	NO. OF EXAMINED ANIMALS		50	50	50	50
	NO. OF ANIMALS WITH TUMORS		50	50	49	38
	NO. OF ANIMALS WITH SINGLE TUMORS		14	18	18	29
	NO. OF ANIMALS WITH MULTIPLE TUMORS		36	32	31	9
	NO. OF BENIGN TUMORS		80	90	82	43
	NO. OF MALIGNANT TUMORS		17	9	11	8
	NO. OF TOTAL TUMORS		97	99	93	51

(HPT070)

BAIS4

APPENDIX M 2

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

STUDY NO. : 0461
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	80 ppm	400 ppm	2000 ppm
0 - 52	NO. OF EXAMINED ANIMALS		0	0	0	0
	NO. OF ANIMALS WITH TUMORS		0	0	0	0
	NO. OF ANIMALS WITH SINGLE TUMORS		0	0	0	0
	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	0
	NO. OF TOTAL TUMORS		0	0	0	0
53 - 78	NO. OF EXAMINED ANIMALS		2	0	1	2
	NO. OF ANIMALS WITH TUMORS		2	0	1	2
	NO. OF ANIMALS WITH SINGLE TUMORS		2	0	1	2
	NO. OF ANIMALS WITH MULTIPLE TUMORS		0	0	0	0
	NO. OF BENIGN TUMORS		1	0	0	1
	NO. OF MALIGNANT TUMORS		1	0	1	1
	NO. OF TOTAL TUMORS		2	0	1	2
79 - 104	NO. OF EXAMINED ANIMALS		7	8	4	9
	NO. OF ANIMALS WITH TUMORS		7	8	4	9
	NO. OF ANIMALS WITH SINGLE TUMORS		5	5	3	7
	NO. OF ANIMALS WITH MULTIPLE TUMORS		2	3	1	2
	NO. OF BENIGN TUMORS		4	8	2	5
	NO. OF MALIGNANT TUMORS		5	5	3	9
	NO. OF TOTAL TUMORS		9	13	5	14
105 - 105	NO. OF EXAMINED ANIMALS		41	42	45	39
	NO. OF ANIMALS WITH TUMORS		24	25	26	29
	NO. OF ANIMALS WITH SINGLE TUMORS		13	19	17	11
	NO. OF ANIMALS WITH MULTIPLE TUMORS		11	6	9	18
	NO. OF BENIGN TUMORS		33	28	35	46
	NO. OF MALIGNANT TUMORS		6	5	3	6
	NO. OF TOTAL TUMORS		39	33	38	52

STUDY NO. : 0461
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	80 ppm	400 ppm	2000 ppm
0 - 105	NO. OF EXAMINED ANIMALS		50	50	50	50
	NO. OF ANIMALS WITH TUMORS		33	33	31	40
	NO. OF ANIMALS WITH SINGLE TUMORS		20	24	21	20
	NO. OF ANIMALS WITH MULTIPLE TUMORS		13	9	10	20
	NO. OF BENIGN TUMORS		38	36	37	52
	NO. OF MALIGNANT TUMORS		12	10	7	16
	NO. OF TOTAL TUMORS		50	46	44	68

(HPT070)

BATS4

APPENDIX N 1

HISTOPATHOLOGICAL FINDINGS :

NEOPLASTIC LESIONS : MALE

STUDY NO. : 0461
 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	80 ppm 50	400 ppm 50	2000 ppm 50
{Integumentary system/appandage}						
skin/app			<50>	<50>	<50>	<50>
	squamous cell papilloma		2 (4%)	3 (6%)	1 (2%)	0 (0%)
	trichoepithelioma		0 (0%)	0 (0%)	1 (2%)	0 (0%)
	keratoacanthoma		0 (0%)	2 (4%)	1 (2%)	1 (2%)
	sebaceous adenoma		0 (0%)	1 (2%)	0 (0%)	0 (0%)
	squamous cell carcinoma		0 (0%)	0 (0%)	1 (2%)	0 (0%)
subcutis			<50>	<50>	<50>	<50>
	fibroma		2 (4%)	5 (10%)	3 (6%)	0 (0%)
	lipoma		0 (0%)	1 (2%)	2 (4%)	0 (0%)
	fibrosarcoma		1 (2%)	0 (0%)	1 (2%)	0 (0%)
{Respiratory system}						
lung			<50>	<50>	<50>	<50>
	bronchiolar-alveolar adenoma		0 (0%)	2 (4%)	1 (2%)	0 (0%)
{Hematopoietic system}						
bone marrow			<50>	<50>	<50>	<50>
	histiocytic sarcoma		0 (0%)	1 (2%)	0 (0%)	0 (0%)
lymph node			<50>	<50>	<50>	<50>
	malignant lymphoma		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. : 0461
 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	80 ppm 50	400 ppm 50	2000 ppm 50
{Hematopoietic system}						
thymus	thymoma:malignant		<50> 0 (0%)	<50> 0 (0%)	<50> 1 (2%)	<50> 0 (0%)
spleen	osteosarcoma		<50> 1 (2%)	<50> 0 (0%)	<50> 0 (0%)	<50> 0 (0%)
	histiocytic sarcoma		1 (2%)	0 (0%)	0 (0%)	0 (0%)
	mononuclear cell leukemia		10 (20%)	4 (8%)	2 (4%)	0 (0%)
{Digestive system}						
oral cavity	squamous cell papilloma		<50> 0 (0%)	<50> 1 (2%)	<50> 0 (0%)	<50> 0 (0%)
tongue	squamous cell papilloma		<50> 0 (0%)	<50> 0 (0%)	<50> 1 (2%)	<50> 0 (0%)
stomach	squamous cell papilloma		<50> 0 (0%)	<50> 0 (0%)	<50> 1 (2%)	<50> 0 (0%)
small intes	fibroma		<50> 1 (2%)	<50> 0 (0%)	<50> 0 (0%)	<50> 0 (0%)
liver	hepatocellular adenoma		<50> 2 (4%)	<50> 3 (6%)	<50> 7 (14%)	<50> 1 (2%)
	hepatocellular carcinoma		0 (0%)	0 (0%)	3 (6%)	1 (2%)
pancreas	islet cell adenoma		<50> 3 (6%)	<50> 2 (4%)	<50> 0 (0%)	<50> 1 (2%)
	ductal adenocarcinoma		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. : 0461
ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
REPORT TYPE : A1
SEX : MALE

HISTOPATHOLOGICAL FINDINGS : NEOPLASTIC LESIONS (SUMMARY)
ALL ANIMALS (0-106W)

PAGE : 3

Organ	Findings	Group Name No. of animals on Study	Control 50	80 ppm 50	400 ppm 50	2000 ppm 50
{Urinary system}						
kidney	transitional cell papilloma		<50> 0 (0%)	<50> 1 (2%)	<50> 0 (0%)	<50> 0 (0%)
	renal cell adenoma		0 (0%)	1 (2%)	0 (0%)	1 (2%)
	renal cell carcinoma		0 (0%)	0 (0%)	0 (0%)	4 (8%)
	nephroblastoma		1 (2%)	0 (0%)	0 (0%)	0 (0%)
urin bladd	transitional cell papilloma		<50> 0 (0%)	<50> 1 (2%)	<50> 1 (2%)	<50> 0 (0%)
{Endocrine system}						
pituitary	adenoma		<50> 18 (36%)	<50> 9 (18%)	<50> 11 (22%)	<50> 1 (2%)
	adenocarcinoma		0 (0%)	1 (2%)	0 (0%)	0 (0%)
thyroid	C-cell adenoma		<50> 7 (14%)	<50> 4 (8%)	<50> 1 (2%)	<50> 1 (2%)
	follicular adenoma		2 (4%)	0 (0%)	1 (2%)	1 (2%)
	follicular adenocarcinoma		1 (2%)	1 (2%)	0 (0%)	0 (0%)
adrenal	pheochromocytoma		<50> 2 (4%)	<50> 5 (10%)	<50> 0 (0%)	<50> 1 (2%)
{Reproductive system}						
testis	interstitial cell tumor		<50> 38 (76%)	<50> 42 (84%)	<50> 45 (90%)	<50> 33 (66%)
< a > a : Number of animals examined at the site b (c) b : Number of animals with neoplasm c : b / a * 100						

STUDY NO. : 0461
 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	80 ppm 50	400 ppm 50	2000 ppm 50
{Reproductive system}						
prostate			<50>	<50>	<50>	<50>
	adenoma		1 (2%)	2 (4%)	2 (4%)	0 (0%)
mammary gl			<50>	<50>	<50>	<50>
	fibroadenoma		1 (2%)	1 (2%)	0 (0%)	0 (0%)
prep/cli gl			<50>	<50>	<50>	<50>
	adenoma		1 (2%)	4 (8%)	1 (2%)	1 (2%)
{Nervous system}						
brain			<50>	<50>	<50>	<50>
	glioma		0 (0%)	0 (0%)	0 (0%)	1 (2%)
periph nerv			<50>	<50>	<50>	<50>
	schwannoma:malignant		0 (0%)	1 (2%)	0 (0%)	0 (0%)
{Special sense organs/appendage}						
Zymbal gl			<50>	<50>	<50>	<50>
	Zmbal gland tumor:benign		0 (0%)	0 (0%)	2 (4%)	1 (2%)
{Musculoskeletal system}						
bone			<50>	<50>	<50>	<50>
	osteosarcoma		0 (0%)	0 (0%)	0 (0%)	1 (2%)
{Body cavities}						
peritoneum			<50>	<50>	<50>	<50>
	fibrosarcoma		0 (0%)	0 (0%)	0 (0%)	1 (2%)
	mesothelioma		1 (2%)	1 (2%)	2 (4%)	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 N 2

HISTOPATHOLOGICAL FINDINGS :

NEOPLASTIC LESIONS : FEMALE

STUDY NO. : 0461
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 REPORT TYPE : A1
 SEX : FEMALE

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

PAGE : 5

Organ	Findings	Group Name No. of animals on Study	Control 50	80 ppm 50	400 ppm 50	2000 ppm 50
{Integumentary system/appandage}						
skin/app			<50>	<50>	<50>	<50>
	trichoepithelioma		0 (0%)	2 (4%)	0 (0%)	0 (0%)
	basal cell carcinoma		0 (0%)	0 (0%)	1 (2%)	0 (0%)
subcutis			<50>	<50>	<50>	<50>
	histiocytic sarcoma		0 (0%)	0 (0%)	1 (2%)	0 (0%)
	mastcytoma:malignant		1 (2%)	0 (0%)	0 (0%)	0 (0%)
{Respiratory system}						
lung			<50>	<50>	<50>	<50>
	bronchiolar-alveolar adenoma		0 (0%)	1 (2%)	0 (0%)	1 (2%)
{Hematopoietic system}						
spleen			<50>	<50>	<50>	<50>
	mononuclear cell leukemia		5 (10%)	5 (10%)	2 (4%)	2 (4%)
{Digestive system}						
oral cavity			<50>	<50>	<50>	<50>
	squamous cell papilloma		0 (0%)	1 (2%)	0 (0%)	0 (0%)
	squamous cell carcinoma		0 (0%)	0 (0%)	0 (0%)	1 (2%)
liver			<50>	<50>	<50>	<50>
	hepatocellular adenoma		0 (0%)	0 (0%)	2 (4%)	20 (40%)
	hepatocellular carcinoma		0 (0%)	0 (0%)	0 (0%)	4 (8%)

< 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. : 0461
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	80 ppm 50	400 ppm 50	2000 ppm 50
(Digestive system)						
pancreas			<50>	<50>	<50>	<50>
	islet cell adenoma		0 (0%)	0 (0%)	1 (2%)	0 (0%)
(Urinary system)						
kidney			<50>	<50>	<50>	<50>
	renal cell adenoma		0 (0%)	0 (0%)	0 (0%)	2 (4%)
	mesenchymoma:malignant		0 (0%)	1 (2%)	0 (0%)	0 (0%)
urin bladd			<50>	<50>	<50>	<50>
	transitional cell carcinoma		0 (0%)	0 (0%)	0 (0%)	1 (2%)
(Endocrine system)						
pituitary			<50>	<50>	<50>	<50>
	adenoma		17 (34%)	13 (26%)	10 (20%)	14 (28%)
	adenocarcinoma		0 (0%)	1 (2%)	0 (0%)	0 (0%)
thyroid			<50>	<50>	<50>	<50>
	C-cell adenoma		3 (6%)	1 (2%)	6 (12%)	2 (4%)
	follicular adenoma		0 (0%)	0 (0%)	1 (2%)	0 (0%)
	C-cell carcinoma		1 (2%)	0 (0%)	0 (0%)	1 (2%)
adrenal			<50>	<50>	<50>	<50>
	pheochromocytoma		0 (0%)	0 (0%)	0 (0%)	1 (2%)
	pheochromocytoma:malignant		0 (0%)	0 (0%)	1 (2%)	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. : 04G1
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	80 ppm 50	400 ppm 50	2000 ppm 50
{Reproductive system}						
ovary			<50>	<50>	<50>	<50>
	granulosa-theca cell tumor		0 (0%)	1 (2%)	0 (0%)	0 (0%)
	yolk sack tumor:malignant		0 (0%)	0 (0%)	0 (0%)	1 (2%)
uterus			<50>	<50>	<50>	<50>
	endometrial stromal polyp		11 (22%)	10 (20%)	12 (24%)	4 (8%)
	adenocarcinoma		1 (2%)	1 (2%)	0 (0%)	0 (0%)
	endometrial stromal sarcoma		3 (6%)	1 (2%)	2 (4%)	2 (4%)
vagina			<50>	<50>	<50>	<50>
	squamous cell papilloma		0 (0%)	1 (2%)	0 (0%)	0 (0%)
	squamous cell carcinoma		0 (0%)	1 (2%)	0 (0%)	0 (0%)
mammary gl			<50>	<50>	<50>	<50>
	adenoma		0 (0%)	1 (2%)	0 (0%)	0 (0%)
	fibroadenoma		5 (10%)	4 (8%)	4 (8%)	5 (10%)
	adenocarcinoma		1 (2%)	0 (0%)	0 (0%)	0 (0%)
prep/cli gl			<50>	<50>	<50>	<50>
	adenoma		2 (4%)	1 (2%)	1 (2%)	3 (6%)
{Nervous system}						
brain			<50>	<50>	<50>	<50>
	glioma		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. : 0461
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	80 ppm 50	400 ppm 50	2000 ppm 50
{Special sense organs/appendage}						
Zymbal gl			<50>	<50>	<50>	<50>
	Zymbal gland tumor:malignant		0 (0%)	0 (0%)	0 (0%)	1 (2%)
{Body cavities}						
peritoneum			<50>	<50>	<50>	<50>
	mesothelioma		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

(IPT085)

BAIS4

APPENDIX O 1

NEOPLASTIC LESIONS-INCIDENCE AND STATISTICAL ANALYSIS : MALE

STUDY No. : 0461
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCr1j]
 SEX : MALE

NEOPLASTIC LESIONS-INCIDENCE AND STATISTICAL ANALYSIS

PAGE : 1

Group Name	Control	80 ppm	400 ppm
SITE : skin/appendage TUMOR : squamous cell papilloma			
Tumor rate			
Overall rates(a)	2/50(4.0)	3/50(6.0)	1/50(2.0)
Adjusted rates(b)	5.00	6.98	2.56
Terminal rates(c)	2/40(5.0)	2/40(5.0)	1/39(2.6)
Statistical analysis			
Peto test			
Standard method(d)	P = -----		
Prevalence method(d)	P = 0.7798		
Combined analysis(d)	P = -----		
Cochran-Armitage test(e)	P = 0.4404		
Fisher Exact test(e)		P = 0.5000	P = 0.5000
SITE : skin/appendage TUMOR : squamous cell papilloma, squamous cell carcinoma			
Tumor rate			
Overall rates(a)	2/50(4.0)	3/50(6.0)	2/50(4.0)
Adjusted rates(b)	5.00	6.98	5.13
Terminal rates(c)	2/40(5.0)	2/40(5.0)	2/39(5.1)
Statistical analysis			
Peto test			
Standard method(d)	P = -----		
Prevalence method(d)	P = 0.5730		
Combined analysis(d)	P = -----		
Cochran-Armitage test(e)	P = 0.8578		
Fisher Exact test(e)		P = 0.5000	P = 0.6913
SITE : subcutis TUMOR : fibroma			
Tumor rate			
Overall rates(a)	2/50(4.0)	5/50(10.0)	3/50(6.0)
Adjusted rates(b)	5.00	12.50	7.69
Terminal rates(c)	2/40(5.0)	5/40(12.5)	3/39(7.7)
Statistical analysis			
Peto test			
Standard method(d)	P = -----		
Prevalence method(d)	P = 0.4727		
Combined analysis(d)	P = -----		
Cochran-Armitage test(e)	P = 1.0000		
Fisher Exact test(e)		P = 0.2180	P = 0.5000

STUDY No. : 0461
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 SEX : MALE

NEOPLASTIC LESIONS-INCIDENCE AND STATISTICAL ANALYSIS

PAGE : 2

Group Name	Control	80 ppm	400 ppm
SITE : subcutis TUMOR : fibroma, fibrosarcoma			
Tumor rate			
Overall rates(a)	3/50(6.0)	5/50(10.0)	4/50(8.0)
Adjusted rates(b)	5.00	12.50	10.26
Terminal rates(c)	2/40(5.0)	5/40(12.5)	4/39(10.3)
Statistical analysis			
Peto test			
Standard method(d)	P = 1.0000 ?		
Prevalence method(d)	P = 0.3111		
Combined analysis(d)	P = 0.4197		
Cochran-Armitage test(e)	P = 0.8892		
Fisher Exact test(e)		P = 0.3575	P = 0.5000
SITE : spleen TUMOR : mononuclear cell leukemia			
Tumor rate			
Overall rates(a)	10/50(20.0)	4/50(8.0)	2/50(4.0)
Adjusted rates(b)	12.50	7.50	2.56
Terminal rates(c)	5/40(12.5)	3/40(7.5)	1/39(2.6)
Statistical analysis			
Peto test			
Standard method(d)	P = 0.9263		
Prevalence method(d)	P = 0.9476		
Combined analysis(d)	P = 0.9872		
Cochran-Armitage test(e)	P = 0.0275*		
Fisher Exact test(e)		P = 0.0739	P = 0.0139*
SITE : liver TUMOR : hepatocellular adenoma			
Tumor rate			
Overall rates(a)	2/50(4.0)	3/50(6.0)	7/50(14.0)
Adjusted rates(b)	5.00	7.50	17.95
Terminal rates(c)	2/40(5.0)	3/40(7.5)	7/39(17.9)
Statistical analysis			
Peto test			
Standard method(d)	P = -----		
Prevalence method(d)	P = 0.0255*		
Combined analysis(d)	P = -----		
Cochran-Armitage test(e)	P = 0.0511		
Fisher Exact test(e)		P = 0.5000	P = 0.0798

STUDY No. : 0461
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 SEX : MALE

NEOPLASTIC LESIONS-INCIDENCE AND STATISTICAL ANALYSIS

PAGE : 3

Group Name	Control	80 ppm	400 ppm
SITE : liver TUMOR : hepatocellular carcinoma			
Tumor rate			
Overall rates(a)	0/50(0.0)	0/50(0.0)	3/50(6.0)
Adjusted rates(b)	0.0	0.0	7.69
Terminal rates(c)	0/40(0.0)	0/40(0.0)	3/39(7.7)
Statistical analysis			
Peto test			
Standard method(d)	P = -----		
Prevalence method(d)	P = 0.0081**?		
Combined analysis(d)	P = -----		
Cochran-Armitage test(e)	P = 0.0151*		
Fisher Exact test(e)		P = N.C.	P = 0.1212
SITE : liver TUMOR : hepatocellular adenoma, hepatocellular carcinoma			
Tumor rate			
Overall rates(a)	2/50(4.0)	3/50(6.0)	10/50(20.0)
Adjusted rates(b)	5.00	7.50	25.64
Terminal rates(c)	2/40(5.0)	3/40(7.5)	10/39(25.6)
Statistical analysis			
Peto test			
Standard method(d)	P = -----		
Prevalence method(d)	P = 0.0018**		
Combined analysis(d)	P = -----		
Cochran-Armitage test(e)	P = 0.0038**		
Fisher Exact test(e)		P = 0.5000	P = 0.0139*
SITE : pancreas TUMOR : islet cell adenoma			
Tumor rate			
Overall rates(a)	3/50(6.0)	2/50(4.0)	0/50(0.0)
Adjusted rates(b)	6.98	5.00	0.0
Terminal rates(c)	2/40(5.0)	2/40(5.0)	0/39(0.0)
Statistical analysis			
Peto test			
Standard method(d)	P = -----		
Prevalence method(d)	P = 0.9669		
Combined analysis(d)	P = -----		
Cochran-Armitage test(e)	P = 0.0921		
Fisher Exact test(e)		P = 0.5000	P = 0.1212

STUDY No. : 0461
ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
SEX : MALE

NEOPLASTIC LESIONS-INCIDENCE AND STATISTICAL ANALYSIS

PAGE : 4

Group Name	Control	80 ppm	400 ppm
SITE : pituitary gland TUMOR : adenoma			
Tumor rate			
Overall rates(a)	18/50(36.0)	9/50(18.0)	11/50(22.0)
Adjusted rates(b)	39.02	15.00	20.51
Terminal rates(c)	15/40(37.5)	6/40(15.0)	8/39(20.5)
Statistical analysis			
Peto test			
Standard method(d)	P = 0.2977		
Prevalence method(d)	P = 0.9207		
Combined analysis(d)	P = 0.8364		
Cochran-Armitage test(e)	P = 0.2970		
Fisher Exact test(e)		P = 0.0352*	P = 0.0928
SITE : pituitary gland TUMOR : adenoma,adenocarcinoma			
Tumor rate			
Overall rates(a)	18/50(36.0)	10/50(20.0)	11/50(22.0)
Adjusted rates(b)	39.02	15.22	20.51
Terminal rates(c)	15/40(37.5)	6/40(15.0)	8/39(20.5)
Statistical analysis			
Peto test			
Standard method(d)	P = 0.3652		
Prevalence method(d)	P = 0.9209		
Combined analysis(d)	P = 0.8533		
Cochran-Armitage test(e)	P = 0.2626		
Fisher Exact test(e)		P = 0.0591	P = 0.0928
SITE : thyroid TUMOR : C-cell adenoma			
Tumor rate			
Overall rates(a)	7/50(14.0)	4/50(8.0)	1/50(2.0)
Adjusted rates(b)	17.50	9.30	2.56
Terminal rates(c)	7/40(17.5)	2/40(5.0)	1/39(2.6)
Statistical analysis			
Peto test			
Standard method(d)	P = ———		
Prevalence method(d)	P = 0.9890		
Combined analysis(d)	P = ———		
Cochran-Armitage test(e)	P = 0.0366*		
Fisher Exact test(e)		P = 0.2623	P = 0.0297*

STUDY No. : 0461
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 SEX : MALE

NEOPLASTIC LESIONS-INCIDENCE AND STATISTICAL ANALYSIS

PAGE : 5

Group Name	Control	80 ppm	400 ppm
SITE : thyroid TUMOR : follicular adenoma, follicular adenocarcinoma			
Tumor rate			
Overall rates(a)	3/50(6.0)	1/50(2.0)	1/50(2.0)
Adjusted rates(b)	7.50	2.50	2.56
Terminal rates(c)	3/40(7.5)	1/40(2.5)	1/39(2.6)
Statistical analysis			
Peto test			
Standard method(d)	P = -----		
Prevalence method(d)	P = 0.7787		
Combined analysis(d)	P = -----		
Cochran-Armitage test(e)	P = 0.3997		
Fisher Exact test(e)		P = 0.3087	P = 0.3087
SITE : adrenal gland TUMOR : pheochromocytoma			
Tumor rate			
Overall rates(a)	2/50(4.0)	5/50(10.0)	0/50(0.0)
Adjusted rates(b)	5.00	11.36	0.0
Terminal rates(c)	2/40(5.0)	3/40(7.5)	0/39(0.0)
Statistical analysis			
Peto test			
Standard method(d)	P = -----		
Prevalence method(d)	P = 0.9582		
Combined analysis(d)	P = -----		
Cochran-Armitage test(e)	P = 0.1068		
Fisher Exact test(e)		P = 0.2180	P = 0.2475
SITE : testis TUMOR : interstitial cell tumor			
Tumor rate			
Overall rates(a)	38/50(76.0)	42/50(84.0)	45/50(90.0)
Adjusted rates(b)	85.00	92.50	97.78
Terminal rates(c)	34/40(85.0)	37/40(92.5)	38/39(97.4)
Statistical analysis			
Peto test			
Standard method(d)	P = -----		
Prevalence method(d)	P = 0.0098**		
Combined analysis(d)	P = -----		
Cochran-Armitage test(e)	P = 0.0847		
Fisher Exact test(e)		P = 0.2270	P = 0.0542

STUDY No. : 0461
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 SEX : MALE

NEOPLASTIC LESIONS-INCIDENCE AND STATISTICAL ANALYSIS

PAGE : 6

Group Name	Control	80 ppm	400 ppm
SITE : preputial/clitoral gland			
TUMOR : adenoma			
Tumor rate			
Overall rates(a)	1/50(2.0)	4/50(8.0)	1/50(2.0)
Adjusted rates(b)	2.50	2.50	2.56
Terminal rates(c)	1/40(2.5)	1/40(2.5)	1/39(2.6)
Statistical analysis			
Peto test			
Standard method(d)	P = 0.7622		
Prevalence method(d)	P = 0.4624		
Combined analysis(d)	P = 0.6929		
Cochran-Armitage test(e)	P = 0.5628		
Fisher Exact test(e)		P = 0.1811	P = 0.7525

(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 O 2

NEOPLASTIC LESIONS-INCIDENCE AND STATISTICAL ANALYSIS : FEMALE

STUDY No. : 0461
ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCr1j]
SEX : FEMALE

NEOPLASTIC LESIONS-INCIDENCE AND STATISTICAL ANALYSIS

PAGE : 7

Group Name	Control	80 ppm	400 ppm	2000 ppm
SITE : spleen TUMOR : mononuclear cell leukemia				
Tumor rate				
Overall rates(a)	5/50(10.0)	5/50(10.0)	2/50(4.0)	2/50(4.0)
Adjusted rates(b)	7.32	9.52	2.22	2.56
Terminal rates(c)	3/41(7.3)	4/42(9.5)	1/45(2.2)	1/39(2.6)
Statistical analysis				
Peto test				
Standard method(d)	P = 0.5757			
Prevalence method(d)	P = 0.8746			
Combined analysis(d)	P = 0.8616			
Cochran-Armitage test(e)	P = 0.2342			
Fisher Exact test(e)		P = 0.6297	P = 0.2180	P = 0.2180
SITE : liver TUMOR : hepatocellular adenoma				
Tumor rate				
Overall rates(a)	0/50(0.0)	0/50(0.0)	2/50(4.0)	20/50(40.0)
Adjusted rates(b)	0.0	0.0	4.44	51.28
Terminal rates(c)	0/41(0.0)	0/42(0.0)	2/45(4.4)	20/39(51.3)
Statistical analysis				
Peto test				
Standard method(d)	P = -----			
Prevalence method(d)	P < 0.0001**?			
Combined analysis(d)	P = -----			
Cochran-Armitage test(e)	P < 0.0001**			
Fisher Exact test(e)		P = N.C.	P = 0.2475	P < 0.0001**
SITE : liver TUMOR : hepatocellular carcinoma				
Tumor rate				
Overall rates(a)	0/50(0.0)	0/50(0.0)	0/50(0.0)	4/50(8.0)
Adjusted rates(b)	0.0	0.0	0.0	10.26
Terminal rates(c)	0/41(0.0)	0/42(0.0)	0/45(0.0)	4/39(10.3)
Statistical analysis				
Peto test				
Standard method(d)	P = -----			
Prevalence method(d)	P = 0.0002**?			
Combined analysis(d)	P = -----			
Cochran-Armitage test(e)	P = 0.0006**			
Fisher Exact test(e)		P = N.C.	P = N.C.	P = 0.0587

STUDY No. : 0461
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 SEX : FEMALE

NEOPLASTIC LESIONS--INCIDENCE AND STATISTICAL ANALYSIS

PAGE : 8

Group Name	Control	80 ppm	400 ppm	2000 ppm
SITE : liver TUMOR : hepatocellular adenoma, hepatocellular carcinoma				
Tumor rate				
Overall rates(a)	0/50(0.0)	0/50(0.0)	2/50(4.0)	23/50(46.0)
Adjusted rates(b)	0.0	0.0	4.44	58.97
Terminal rates(c)	0/41(0.0)	0/42(0.0)	2/45(4.4)	23/39(59.0)
Statistical analysis				
Peto test				
Standard method(d)	P = -----			
Prevalence method(d)	P < 0.0001**?			
Combined analysis(d)	P = -----			
Cochran-Armitage test(e)	P < 0.0001**			
Fisher Exact test(e)		P = N.C.	P = 0.2475	P < 0.0001**
SITE : pituitary gland TUMOR : adenoma				
Tumor rate				
Overall rates(a)	17/50(34.0)	13/50(26.0)	10/50(20.0)	14/50(28.0)
Adjusted rates(b)	34.15	28.57	20.00	35.00
Terminal rates(c)	14/41(34.1)	12/42(28.6)	9/45(20.0)	13/39(33.3)
Statistical analysis				
Peto test				
Standard method(d)	P = 0.9029			
Prevalence method(d)	P = 0.3123			
Combined analysis(d)	P = 0.4685			
Cochran-Armitage test(e)	P = 0.9311			
Fisher Exact test(e)		P = 0.2565	P = 0.0880	P = 0.3329
SITE : pituitary gland TUMOR : adenoma, adenocarcinoma				
Tumor rate				
Overall rates(a)	17/50(34.0)	14/50(28.0)	10/50(20.0)	14/50(28.0)
Adjusted rates(b)	34.15	28.57	20.00	35.00
Terminal rates(c)	14/41(34.1)	12/42(28.6)	9/45(20.0)	13/39(33.3)
Statistical analysis				
Peto test				
Standard method(d)	P = 0.9377			
Prevalence method(d)	P = 0.3146			
Combined analysis(d)	P = 0.5130			
Cochran-Armitage test(e)	P = 0.8482			
Fisher Exact test(e)		P = 0.3329	P = 0.0880	P = 0.3329

STUDY No. : 0461
ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
SEX : FEMALE

NEOPLASTIC LESIONS--INCIDENCE AND STATISTICAL ANALYSIS

PAGE : 9

Group Name	Control	80 ppm	400 ppm	2000 ppm
SITE : thyroid TUMOR : C-cell adenoma				
Tumor rate				
Overall rates(a)	3/50(6.0)	1/50(2.0)	6/50(12.0)	2/50(4.0)
Adjusted rates(b)	7.32	2.17	12.24	5.00
Terminal rates(c)	3/41(7.3)	0/42(0.0)	5/45(11.1)	1/39(2.6)
Statistical analysis				
Peto test				
Standard method(d)	P = -----			
Prevalence method(d)	P = 0.6219			
Combined analysis(d)	P = -----			
Cochran-Armitage test(e)	P = 0.7244			
Fisher Exact test(e)		P = 0.3087	P = 0.2435	P = 0.5000
SITE : thyroid TUMOR : C-cell adenoma, C-cell carcinoma				
Tumor rate				
Overall rates(a)	4/50(8.0)	1/50(2.0)	6/50(12.0)	3/50(6.0)
Adjusted rates(b)	9.76	2.17	12.24	7.50
Terminal rates(c)	4/41(9.8)	0/42(0.0)	5/45(11.1)	2/39(5.1)
Statistical analysis				
Peto test				
Standard method(d)	P = -----			
Prevalence method(d)	P = 0.5126			
Combined analysis(d)	P = -----			
Cochran-Armitage test(e)	P = 0.9455			
Fisher Exact test(e)		P = 0.1811	P = 0.3703	P = 0.5000
SITE : uterus TUMOR : endometrial stromal polyp				
Tumor rate				
Overall rates(a)	11/50(22.0)	10/50(20.0)	12/50(24.0)	4/50(8.0)
Adjusted rates(b)	24.44	20.00	26.67	8.51
Terminal rates(c)	10/41(24.4)	8/42(19.0)	12/45(26.7)	3/39(7.7)
Statistical analysis				
Peto test				
Standard method(d)	P = -----			
Prevalence method(d)	P = 0.9856			
Combined analysis(d)	P = -----			
Cochran-Armitage test(e)	P = 0.0359*			
Fisher Exact test(e)		P = 0.5000	P = 0.5000	P = 0.0453*

STUDY No. : 0461
ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
SEX : FEMALE

NEOPLASTIC LESIONS-INCIDENCE AND STATISTICAL ANALYSIS

PAGE : 10

Group Name	Control	80 ppm	400 ppm	2000 ppm
SITE : uterus TUMOR : endometrial stromal sarcoma				
Tumor rate				
Overall rates(a)	3/50(6.0)	1/50(2.0)	2/50(4.0)	2/50(4.0)
Adjusted rates(b)	2.44	0.0	0.0	0.0
Terminal rates(c)	1/41(2.4)	0/42(0.0)	0/45(0.0)	0/39(0.0)
Statistical analysis				
Peto test				
Standard method(d)	P = 0.3737			
Prevalence method(d)	P = 1.0000 ?			
Combined analysis(d)	P = 0.4776			
Cochran-Armitage test(e)	P = 0.9716			
Fisher Exact test(e)		P = 0.3087	P = 0.5000	P = 0.5000
SITE : mammary gland TUMOR : fibroadenoma				
Tumor rate				
Overall rates(a)	5/50(10.0)	4/50(8.0)	4/50(8.0)	5/50(10.0)
Adjusted rates(b)	12.20	4.76	8.89	12.82
Terminal rates(c)	5/41(12.2)	2/42(4.8)	4/45(8.9)	5/39(12.8)
Statistical analysis				
Peto test				
Standard method(d)	P = 0.8058			
Prevalence method(d)	P = 0.2260			
Combined analysis(d)	P = 0.3470			
Cochran-Armitage test(e)	P = 0.8168			
Fisher Exact test(e)		P = 0.5000	P = 0.5000	P = 0.6297

(HPT360A)

BAIS4

STUDY No. : 0461
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 SEX : FEMALE

NEOPLASTIC LESIONS-INCIDENCE AND STATISTICAL ANALYSIS

PAGE : 11

Group Name	Control	80 ppm	400 ppm	2000 ppm
SITE : preputial/clitoral gland				
TUMOR : adenoma				
Tumor rate				
Overall rates(a)	2/50(4.0)	1/50(2.0)	1/50(2.0)	3/50(6.0)
Adjusted rates(b)	4.65	2.38	2.22	2.56
Terminal rates(c)	1/41(2.4)	1/42(2.4)	1/45(2.2)	1/39(2.6)
Statistical analysis				
Peto test				
Standard method(d)	P = 0.0153* ?			
Prevalence method(d)	P = 0.5846			
Combined analysis(d)	P = 0.1562			
Cochran-Armitage test(e)	P = 0.3098			
Fisher Exact test(e)		P = 0.5000	P = 0.5000	P = 0.5000

(HPT360A)

BATS4

- (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 1

HISTOPATHOLOGICAL FINDINGS: METASTASIS OF TUMOR:

MALE : ALL ANIMALS

STUDY NO. : 0461
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 REPORT TYPE : A1
 SEX : MALE

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

PAGE : 1

Group Name		Control	80 ppm	400 ppm	2000 ppm
No. of Animals on Study		50	50	50	50
Organ	Findings				
{Respiratory system}					
nasal cavit		<50>	<50>	<50>	<50>
	leukemic cell infiltration	2	0	0	0
trachea		<50>	<50>	<50>	<50>
	leukemic cell infiltration	0	0	1	0
lung		<50>	<50>	<50>	<50>
	leukemic cell infiltration	9	3	2	0
	metastasis:pancreas tumor	0	0	1	0
	metastasis:subcutis tumor	1	0	0	0
	metastasis:thymus tumor	0	0	1	0
{Hematopoietic system}					
bone marrow		<50>	<50>	<50>	<50>
	leukemic cell infiltration	6	1	0	0
	metastasis:spleen tumor	1	0	0	0
lymph node		<50>	<50>	<50>	<50>
	leukemic cell infiltration	1	0	0	0
	metastasis:peritoneum tumor	0	0	0	1
	metastasis:subcutis tumor	1	0	0	0
	metastasis:spleen tumor	1	0	0	0
	metastasis:bone marrow tumor	0	1	0	0
thymus		<50>	<50>	<50>	<50>
	leukemic cell infiltration	0	0	1	0

< a > a : Number of animals examined at the site
 b b : Number of animals with lesion

STUDY NO. : 0461
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCr1j]
 REPORT TYPE : A1
 SEX : MALE

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

PAGE : 2

Group Name No. of Animals on Study		Control 50	80 ppm 50	400 ppm 50	2000 ppm 50
Organ	Findings				
(Hematopoietic system)					
spleen		<50>	<50>	<50>	<50>
	leukemic cell infiltration	1	0	0	0
	metastasis:peritoneum tumor	0	0	0	1
	metastasis:bone marrow tumor	0	1	0	0
(Circulatory system)					
heart		<50>	<50>	<50>	<50>
	metastasis:thymus tumor	0	0	1	0
(Digestive system)					
stomach		<50>	<50>	<50>	<50>
	metastasis:peritoneum tumor	0	0	0	1
liver		<50>	<50>	<50>	<50>
	leukemic cell infiltration	10	4	2	0
	metastasis:pancreas tumor	0	0	1	0
	metastasis:spleen tumor	1	0	0	0
	metastasis:bone marrow tumor	0	1	0	0
pancreas		<50>	<50>	<50>	<50>
	leukemic cell infiltration	3	0	0	0
	metastasis:peritoneum tumor	0	0	0	1
(Urinary system)					
kidney		<50>	<50>	<50>	<50>
	leukemic cell infiltration	7	0	0	0

< a > a : Number of animals examined at the site
 b b : Number of animals with lesion

STUDY NO. : 0461
 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 No. of Animals on Study		Control 50	80 ppm 50	400 ppm 50	2000 ppm 50
Organ	Findings				
{Urinary system}					
kidney	metastasis:pancreas tumor	<50> 0	<50> 0	<50> 1	<50> 0
	metastasis:thymus tumor	0	0	1	0
{Endocrine system}					
pituitary	metastasis:peripheral nerve tumor	<50> 0	<50> 1	<50> 0	<50> 0
	metastasis:bone marrow tumor	0	1	0	0
thyroid	leukemic cell infiltration	<50> 1	<50> 0	<50> 0	<50> 0
	adrenal	<50> 0	<50> 0	<50> 1	<50> 0
{Reproductive system}					
testis	metastasis:peritoneum tumor	<50> 0	<50> 1	<50> 0	<50> 0
{Nervous system}					
brain	leukemic cell infiltration	<50> 3	<50> 0	<50> 1	<50> 0
	spinal cord	<50> 1	<50> 0	<50> 0	<50> 0
periph nerv	metastasis:bone marrow 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. : 0461
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 REPORT TYPE : A1
 SEX : MALE

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

PAGE : 4

Group Name		Control	80 ppm	400 ppm	2000 ppm
No. of Animals on Study		50	50	50	50
Organ	Findings				
(Musculoskeletal system)					
muscle	metastasis:subcutis tumor	<50> 1	<50> 0	<50> 0	<50> 0
	metastasis:bone marrow tumor	0	1	0	0
bone	metastasis:subcutis tumor	<50> 1	<50> 0	<50> 0	<50> 0
(Body cavities)					
pleura	metastasis:bone marrow tumor	<50> 0	<50> 1	<50> 0	<50> 0
	metastasis:thymus tumor	0	0	1	0
peritoneum	metastasis:pancreas tumor	<50> 0	<50> 0	<50> 1	<50> 0
< a > a : Number of animals examined at the site b b : Number of animals with lesion					
(JPT150)					

BAIS4

APPENDIX P 2

HISTOPATHOLOGICAL FINDINGS: METASTASIS OF TUMOR:
MALE : DEAD AND MORIBUND ANIMALS

STUDY NO. : 0461
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 REPORT TYPE : A1
 SEX : MALE

HISTOPATHOLOGICAL FINDINGS : METASTASIS OF TUMOR (SUMMARY)
 DEAD AND MORIBUND ANIMALS (0-105W)

PAGE : 1

Group Name		Control	80 ppm	400 ppm	2000 ppm
No. of Animals on Study		10	10	11	50
Organ	Findings				
{Respiratory system}					
nasal cavit		<10>	<10>	<11>	<50>
	leukemic cell infiltration	2	0	0	0
trachea		<10>	<10>	<11>	<50>
	leukemic cell infiltration	0	0	1	0
lung		<10>	<10>	<11>	<50>
	leukemic cell infiltration	5	1	1	0
	metastasis:pancreas tumor	0	0	1	0
	metastasis:subcutis tumor	1	0	0	0
	metastasis:thymus tumor	0	0	1	0
{Hematopoietic system}					
bone marrow		<10>	<10>	<11>	<50>
	leukemic cell infiltration	4	0	0	0
lymph node		<10>	<10>	<11>	<50>
	metastasis:peritoneum tumor	0	0	0	1
	metastasis:subcutis tumor	1	0	0	0
	metastasis:bone marrow tumor	0	1	0	0
thymus		<10>	<10>	<11>	<50>
	leukemic cell infiltration	0	0	1	0
spleen		<10>	<10>	<11>	<50>
	leukemic cell infiltration	1	0	0	0
	metastasis:peritoneum tumor	0	0	0	1
< a > a : Number of animals examined at the site b b : Number of animals with lesion					

STUDY NO. : 0461
 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

		Group Name	Control	80 ppm	400 ppm	2000 ppm
		No. of Animals on Study	10	10	11	50
Organ	Findings					
(Hematopoietic system)						
spleen	metastasis:bone marrow tumor		<10> 0	<10> 1	<11> 0	<50> 0
(Circulatory system)						
heart	metastasis:thymus tumor		<10> 0	<10> 0	<11> 1	<50> 0
(Digestive system)						
stomach	metastasis:peritoneum tumor		<10> 0	<10> 0	<11> 0	<50> 1
liver	leukemic cell infiltration		<10> 5	<10> 1	<11> 1	<50> 0
	metastasis:pancreas tumor		0	0	1	0
	metastasis:bone marrow tumor		0	1	0	0
pancreas	leukemic cell infiltration		<10> 2	<10> 0	<11> 0	<50> 0
	metastasis:peritoneum tumor		0	0	0	1
(Urinary system)						
kidney	leukemic cell infiltration		<10> 5	<10> 0	<11> 0	<50> 0
	metastasis:pancreas tumor		0	0	1	0
	metastasis:thymus tumor		0	0	1	0
< a >	a : Number of animals examined at the site					
b	b : Number of animals with lesion					

STUDY NO. : 0461
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 REPORT TYPE : A1
 SEX : MALE

HISTOPATHOLOGICAL FINDINGS : METASTASIS OF TUMOR (SUMMARY)
 DEAD AND MORIBUND ANIMALS (0-105W)

PAGE : 3

Group Name		Control	80 ppm	400 ppm	2000 ppm
No. of Animals on Study		10	10	11	50
Organ	Findings				
{Endocrine system}					
pituitary		<10>	<10>	<11>	<50>
	metastasis:peripheral nerve tumor	0	1	0	0
	metastasis:bone marrow tumor	0	1	0	0
thyroid		<10>	<10>	<11>	<50>
	leukemic cell infiltration	1	0	0	0
adrenal		<10>	<10>	<11>	<50>
	leukemic cell infiltration	0	0	1	0
{Reproductive system}					
testis		<10>	<10>	<11>	<50>
	metastasis:peritoneum tumor	0	1	0	0
{Nervous system}					
brain		<10>	<10>	<11>	<50>
	leukemic cell infiltration	3	0	1	0
spinal cord		<10>	<10>	<11>	<50>
	leukemic cell infiltration	1	0	0	0
periph nerv		<10>	<10>	<11>	<50>
	metastasis:bone marrow tumor	0	1	0	0
{Musculoskeletal system}					
muscle		<10>	<10>	<11>	<50>
	metastasis:subcutis tumor	1	0	0	0
	metastasis:bone marrow tumor	0	1	0	0
< a >	a : Number of animals examined at the site				
b	b : Number of animals with lesion				

STUDY NO. : 0461
ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
REPORT TYPE : A1
SEX : MALE

HISTOPATHOLOGICAL FINDINGS : METASTASIS OF TUMOR (SUMMARY)
DEAD AND MORIBUND ANIMALS (0-105W)

PAGE : 4

Group Name		Control	80 ppm	400 ppm	2000 ppm
No. of Animals on Study		10	10	11	50
Organ	Findings				
(Musculoskeletal system)					
bone		<10>	<10>	<11>	<50>
	metastasis:subcutis tumor	1	0	0	0
{Body cavities}					
pleura		<10>	<10>	<11>	<50>
	metastasis:bone marrow tumor	0	1	0	0
	metastasis:thymus tumor	0	0	1	0
peritoneum		<10>	<10>	<11>	<50>
	metastasis:pancreas tumor	0	0	1	0
< a >	a : Number of animals examined at the site				
b	b : Number of animals with lesion				

(JPT150)

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APPENDIX P 3

HISTOPATHOLOGICAL FINDINGS: METASTASIS OF TUMOR:
MALE : SACRIFICED ANIMALS

STUDY NO. : 0461
 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 40	80 ppm 40	400 ppm 39	2000 ppm 0
(Respiratory system)						
lung	leukemic cell infiltration		<40> 4	<40> 2	<39> 1	< 0> -
(Hematopoietic system)						
bone marrow	leukemic cell infiltration		<40> 2	<40> 1	<39> 0	< 0> -
	metastasis:spleen tumor		1	0	0	-
lymph node	leukemic cell infiltration		<40> 1	<40> 0	<39> 0	< 0> -
	metastasis:spleen tumor		1	0	0	-
(Digestive system)						
liver	leukemic cell infiltration		<40> 5	<40> 3	<39> 1	< 0> -
	metastasis:spleen tumor		1	0	0	-
pancreas	leukemic cell infiltration		<40> 1	<40> 0	<39> 0	< 0> -
(Urinary system)						
kidney	leukemic cell infiltration		<40> 2	<40> 0	<39> 0	< 0> -
< a >	a : Number of animals examined at the site					
b	b : Number of animals with lesion					

APPENDIX P 4

HISTOPATHOLOGICAL FINDINGS: METASTASIS OF TUMOR:

FEMALE : ALL ANIMALS

STUDY NO. : 0461
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 REPORT TYPE : A1
 SEX : FEMALE

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

PAGE : 5

Group Name No. of Animals on Study		Control 50	80 ppm 50	400 ppm 50	2000 ppm 50
Organ	Findings				
{Respiratory system}					
nasal cavit	leukemic cell infiltration	<50> 0	<50> 1	<50> 0	<50> 0
	metastasis:subcutis tumor	0	0	1	0
lung	leukemic cell infiltration	<50> 3	<50> 4	<50> 2	<50> 1
	metastasis:liver tumor	0	0	0	1
	metastasis:uterus tumor	2	1	0	0
	metastasis:thyroid tumor	1	0	0	0
	metastasis:subcutis tumor	1	0	0	0
{Hematopoietic system}					
bone marrow	leukemic cell infiltration	<50> 0	<50> 0	<50> 0	<50> 2
	metastasis:subcutis tumor	1	0	1	0
lymph node	leukemic cell infiltration	<50> 0	<50> 2	<50> 0	<50> 0
	metastasis:subcutis tumor	1	0	1	0
thymus	leukemic cell infiltration	<50> 1	<50> 0	<50> 0	<50> 0
	metastasis:subcutis tumor	1	0	0	0
spleen	leukemic cell infiltration	<50> 1	<50> 0	<50> 0	<50> 0
	metastasis:subcutis tumor	1	0	0	0
{Circulatory system}					
heart	leukemic cell infiltration	<50> 0	<50> 0	<50> 1	<50> 0
	metastasis:subcutis tumor	1	0	0	0

< a > a : Number of animals examined at the site
 b b : Number of animals with lesion

STUDY NO. : 0461
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 REPORT TYPE : A1
 SEX : FEMALE

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

PAGE : 6

Group Name		Control	80 ppm	400 ppm	2000 ppm
No. of Animals on Study		50	50	50	50
Organ	Findings				
(Digestive system)					
stomach		<50>	<50>	<50>	<50>
	leukemic cell infiltration	0	0	1	0
liver		<50>	<50>	<50>	<50>
	leukemic cell infiltration	4	3	1	2
	metastasis:uterus tumor	1	0	0	0
	metastasis:ovary tumor	0	0	0	1
pancreas		<50>	<50>	<50>	<50>
	leukemic cell infiltration	0	1	1	0
	metastasis:uterus tumor	1	1	0	0
	metastasis:ovary tumor	0	0	0	1
(Urinary system)					
kidney		<50>	<50>	<50>	<50>
	leukemic cell infiltration	2	0	0	1
(Endocrine system)					
pituitary		<50>	<50>	<50>	<50>
	leukemic cell infiltration	1	0	0	0
thyroid		<50>	<50>	<50>	<50>
	metastasis:subcutis tumor	1	0	0	0
adrenal		<50>	<50>	<50>	<50>
	leukemic cell infiltration	1	0	0	0
(Reproductive system)					
ovary		<50>	<50>	<50>	<50>
	leukemic cell infiltration	0	1	0	0

< a > a : Number of animals examined at the site
 b b : Number of animals with lesion

STUDY NO. : 04G1
 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	80 ppm	400 ppm	2000 ppm
No. of Animals on Study		50	50	50	50
Organ	Findings				
{Reproductive system}					
ovary		<50>	<50>	<50>	<50>
	metastasis:peritoneum tumor	0	0	0	1
uterus		<50>	<50>	<50>	<50>
	leukemic cell infiltration	0	1	1	0
vagina		<50>	<50>	<50>	<50>
	metastasis:uterus tumor	1	0	0	0
{Nervous system}					
brain		<50>	<50>	<50>	<50>
	leukemic cell infiltration	1	1	0	0
	metastasis:pituitary tumor	0	1	0	0
spinal cord		<50>	<50>	<50>	<50>
	leukemic cell infiltration	2	0	0	0
{Body cavities}					
mediastinum		<50>	<50>	<50>	<50>
	leukemic cell infiltration	0	0	1	0
peritoneum		<50>	<50>	<50>	<50>
	leukemic cell infiltration	0	1	0	0
	metastasis:uterus tumor	1	1	0	0
	metastasis:ovary tumor	0	0	0	1
< a >	a : Number of animals examined at the site				
b	b : Number of animals with lesion				

APPENDIX P 5

HISTOPATHOLOGICAL FINDINGS: METASTASIS OF TUMOR:
FEMALE : DEAD AND MORIBUND ANIMALS

STUDY NO. : 0461
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCr1j]
 REPORT TYPE : A1
 SEX : FEMALE

HISTOPATHOLOGICAL FINDINGS : METASTASIS OF TUMOR (SUMMARY)
 DEAD AND MORIBUND ANIMALS (0-105W)

PAGE : 5

Group Name No. of Animals on Study		Control 9	80 ppm 8	400 ppm 5	2000 ppm 11
Organ	Findings				
{Respiratory system}					
nasal cavit	leukemic cell infiltration	< 9> 0	< 8> 1	< 5> 0	<11> 0
	metastasis:subcutis tumor	0	0	1	0
lung	leukemic cell infiltration	< 9> 2	< 8> 1	< 5> 1	<11> 0
	metastasis:uterus tumor	2	1	0	0
	metastasis:subcutis tumor	1	0	0	0
{Hematopoietic system}					
bone marrow	leukemic cell infiltration	< 9> 0	< 8> 0	< 5> 0	<11> 1
	metastasis:uterus tumor	1	0	0	0
lymph node	leukemic cell infiltration	< 9> 0	< 8> 1	< 5> 0	<11> 0
	metastasis:subcutis tumor	1	0	1	0
thymus	leukemic cell infiltration	< 9> 1	< 8> 0	< 5> 0	<11> 0
	metastasis:subcutis tumor	1	0	0	0
spleen	leukemic cell infiltration	< 9> 1	< 8> 0	< 5> 0	<11> 0
	metastasis:uterus tumor	1	0	0	0
{Circulatory system}					
heart	leukemic cell infiltration	< 9> 0	< 8> 0	< 5> 1	<11> 0
	metastasis:subcutis tumor	1	0	0	0
< a >	a : Number of animals examined at the site				
b	b : Number of animals with lesion				

STUDY NO. : 0461
ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
REPORT TYPE : A1
SEX : FEMALE

HISTOPATHOLOGICAL FINDINGS : METASTASIS OF TUMOR (SUMMARY)
DEAD AND MORIBUND ANIMALS (0-105W)

PAGE : 6

Organ	Findings	Group Name No. of Animals on Study	Control 9	80 ppm 8	400 ppm 5	2000 ppm 11
(Digestive system)						
stomach			< 9>	< 8>	< 5>	<11>
	leukemic cell infiltration		0	0	1	0
liver			< 9>	< 8>	< 5>	<11>
	leukemic cell infiltration		2	0	1	1
	metastasis:uterus tumor		1	0	0	0
	metastasis:ovary tumor		0	0	0	1
pancreas			< 9>	< 8>	< 5>	<11>
	leukemic cell infiltration		0	0	1	0
	metastasis:uterus tumor		1	1	0	0
	metastasis:ovary tumor		0	0	0	1
(Urinary system)						
kidney			< 9>	< 8>	< 5>	<11>
	leukemic cell infiltration		2	0	0	0
(Endocrine system)						
pituitary			< 9>	< 8>	< 5>	<11>
	leukemic cell infiltration		1	0	0	0
thyroid			< 9>	< 8>	< 5>	<11>
	metastasis:subcutis tumor		1	0	0	0
adrenal			< 9>	< 8>	< 5>	<11>
	leukemic cell infiltration		1	0	0	0
(Reproductive system)						
ovary			< 9>	< 8>	< 5>	<11>
	leukemic cell infiltration		0	1	0	0

< a > a : Number of animals examined at the site
b b : Number of animals with lesion

STUDY NO. : 0461
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 REPORT TYPE : A1
 SEX : FEMALE

HISTOPATHOLOGICAL FINDINGS : METASTASIS OF TUMOR (SUMMARY)
 DEAD AND MORIBUND ANIMALS (0-105W)

PAGE : 7

Organ	Findings	Group Name No. of Animals on Study	Control 9	80 ppm 8	400 ppm 5	2000 ppm 11
{Reproductive system}						
ovary			< 9>	< 8>	< 5>	<11>
	metastasis:peritoneum tumor		0	0	0	1
uterus			< 9>	< 8>	< 5>	<11>
	leukemic cell infiltration		0	0	1	0
vagina			< 9>	< 8>	< 5>	<11>
	metastasis:uterus tumor		1	0	0	0
{Nervous system}						
brain			< 9>	< 8>	< 5>	<11>
	leukemic cell infiltration		1	1	0	0
	metastasis:pituitary tumor		0	1	0	0
spinal cord			< 9>	< 8>	< 5>	<11>
	leukemic cell infiltration		2	0	0	0
{Body cavities}						
mediastinum			< 9>	< 8>	< 5>	<11>
	leukemic cell infiltration		0	0	1	0
peritoneum			< 9>	< 8>	< 5>	<11>
	leukemic cell infiltration		0	1	0	0
	metastasis:uterus tumor		1	1	0	0
	metastasis:ovary tumor		0	0	0	1
< a >	a : Number of animals examined at the site					
b	b : Number of animals with lesion					

APPENDIX P 6

HISTOPATHOLOGICAL FINDINGS: METASTASIS OF TUMOR:
FEMALE : SACRIFICED ANIMALS

STUDY NO. : 0461
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]
 REPORT TYPE : A1
 SEX : FEMALE

HISTOPATHOLOGICAL FINDINGS : METASTASIS OF TUMOR (SUMMARY)
 SACRIFICED ANIMALS (105W)

PAGE : 2

Group Name		Control	80 ppm	400 ppm	2000 ppm
No. of Animals on Study		41	42	45	39
Organ	Findings				
{Respiratory system}					
lung		<41>	<42>	<45>	<39>
	leukemic cell infiltration	1	3	1	1
	metastasis:liver tumor	0	0	0	1
	metastasis:thyroid tumor	1	0	0	0
{Hematopoietic system}					
bone marrow		<41>	<42>	<45>	<39>
	leukemic cell infiltration	0	0	0	1
lymph node		<41>	<42>	<45>	<39>
	leukemic cell infiltration	0	1	0	0
{Digestive system}					
liver		<41>	<42>	<45>	<39>
	leukemic cell infiltration	2	3	0	1
pancreas		<41>	<42>	<45>	<39>
	leukemic cell infiltration	0	1	0	0
{Urinary system}					
kidney		<41>	<42>	<45>	<39>
	leukemic cell infiltration	0	0	0	1
{Reproductive system}					
uterus		<41>	<42>	<45>	<39>
	leukemic cell infiltration	0	1	0	0

< a > a : Number of animals examined at the site
 b b : Number of animals with lesion

APPENDIX Q

METHODS, UNITS AND DECIMAL PLACE FOR
HEMATOLOGY AND BIOCHEMISTRY IN THE 2-YEAR
FEED STUDY OF 1-CHLORO-2-NITROBENZENE

METHODS, UNITS AND DECIMAL PLACE FOR HEMATOLOGY AND BIOCHEMISTRY
IN THE 2-YEAR FEED STUDY OF 1-CHLORO-2-NITROBENZENE

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
Methemoglobin	Multiple-wavelength Spectrophotometric method ⁴⁾	%	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
Reticulocyte	Light scattering method ¹⁾	%	1
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 7080 : Hitachi, Ltd.)

4) CO-oximeter (CIBA·CORNING 270 : Bayer Corporation)