

アクリル酸のマウスを用いた
吸入による2週間毒性試験報告書

試験番号：0639

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IN THE 2-WEEK INHALATION STUDY OF ACRYLIC ACID

APPENDIX A 1

IDENTITY OF ACRYLIC ACID
IN THE 2-WEEK INHALATION STUDY

IDENTITY OF ACRYLIC ACID IN THE 2-WEEK INHALATION STUDY

Test Substance : Acrylic acid (Wako Pure Chemical Industries, Ltd.)

Lot No. : EWE0688

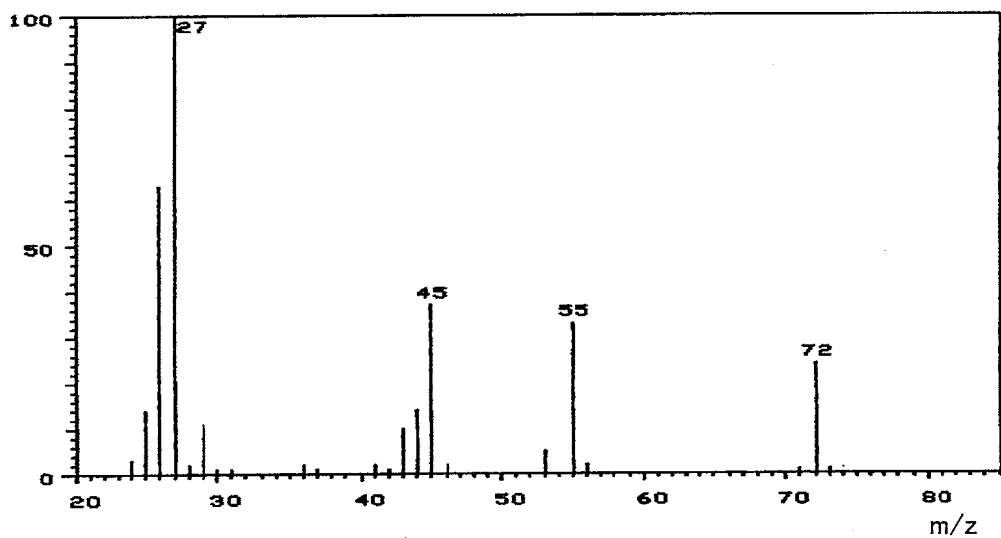
1. Spectral Data

Mass Spectrometry

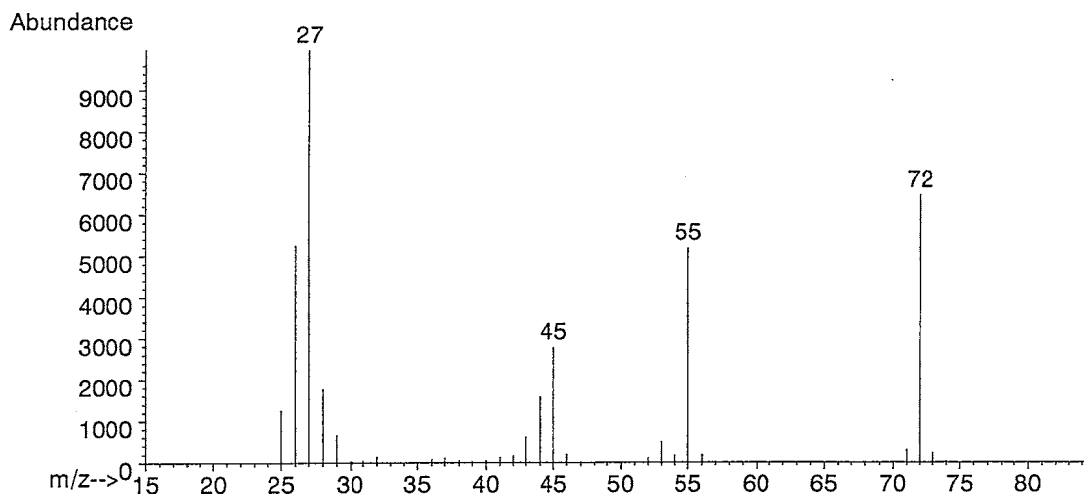
Instrument : Hitachi M-80B Mass Spectrometer

Ionization : EI (Electron Ionization)

Ionization Voltage : 70eV



Mass Spectrum of Test Substance



Mass Spectrum of Literature Data*

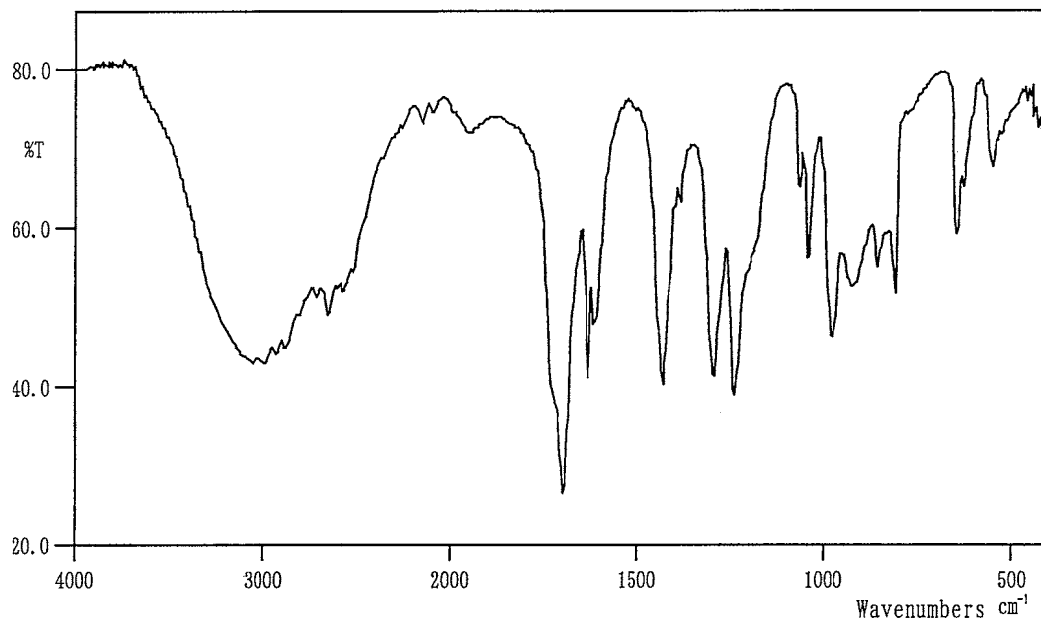
Result: The mass spectrum was consistent with literature spectrum.

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

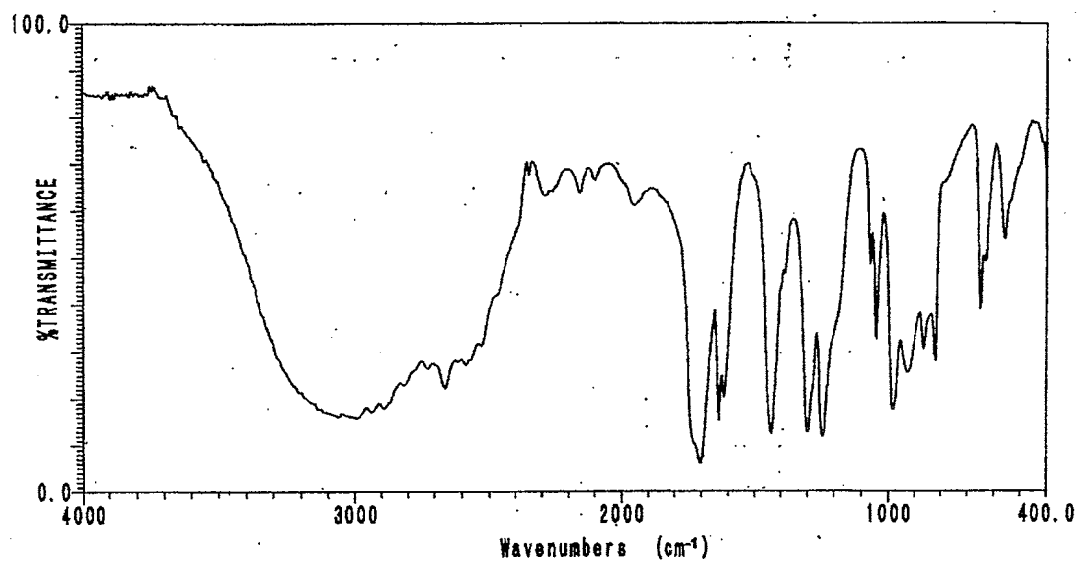
Infrared Spectrometry

Instrument : Shimadzu FTIR-8200PC Infrared Spectrometer

Cell : KBr Liquid Cell

Resolution : 4 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 acrylic acid by mass spectrum and infrared spectrum.

APPENDIX A 2

STABILITY OF ACRYLIC ACID IN THE 2-WEEK INHALATION STUDY

STABILITY OF ACRYLIC ACID IN THE 2-WEEK INHALATION STUDY

Test Substance : Acrylic acid (Wako Pure Chemical Industries, Ltd.)

Lot No. : EWE0688

1. Gas Chromatography

Instrument : Hewlett Packard 5890A Gas Chromatograph

Column : INNOWAX (0.53 mm ϕ \times 60 m)

Column Temperature: 150° C

Flow Rate : 20 mL/min

Detector : FID (Flame Ionization Detector)

Injection Volume : 1 μ L

Date (date analyzed)	Peak No.	Retention Time (min)	Area (%)
2006.03.13	1	3.399	100
2006.04.03	1	3.388	100

Result: Gas chromatography indicated one major peak (peak No.1) analyzed on 2006.3.13 and one major peak (peak No.1) analyzed on 2006.4.3.
No new trace impurity peak in the test substance analyzed on 2006.4.3 was detected.

2. Conclusion: The test substance was stable for the period that the test substance had been used for the study.

APPENDIX B

ENVIRONMENTAL CONDITIONS OF INHALATION CHAMBER
IN THE 2-WEEK INHALATION STUDY OF
ACRYLIC ACID

ENVIRONMENTAL CONDITIONS OF INHALATION CHAMBER IN THE 2-WEEK
INHALATION STUDY OF ACRYLIC ACID

Group Name	Temperature (°C) Mean ± S.D.	Humidity (%) Mean ± S.D.	Ventilation Rate (L/min) Mean ± S.D.	Air Change (time/h) Mean
Control	21.9 ± 0.2	57.5 ± 0.4	104.7 ± 0.4	12.1
15 ppm	21.9 ± 0.2	55.6 ± 2.3	105.1 ± 0.4	12.1
38 ppm	21.7 ± 0.2	53.9 ± 2.9	105.0 ± 0.4	12.1
96 ppm	22.0 ± 0.2	52.1 ± 3.6	105.0 ± 0.3	12.1
240 ppm	22.1 ± 0.1	50.3 ± 3.7	105.0 ± 0.3	12.1
600 ppm	22.1 ± 0.2	54.1 ± 5.1	104.8 ± 0.3	12.1

APPENDIX C 1

CLINICAL OBSERVATION : MALE

STUDY NO. : 0639
 ANIMAL : MOUSE B6D2F1/Cr1j[Crj:BDF1]
 REPORT TYPE : A1 2

CLINICAL OBSERVATION (SUMMARY)
 ALL ANIMALS

SEX : MALE

PAGE : 1

Clinical sign	Group Name	Administration Week-day										
		1-1 2	1-2 1	1-2 2	1-3 1	1-3 2	1-4 1	1-4 2	1-5 1	1-7 1	2-3 1	2-7 1
DEATH	Control	0	0	0	0	0	0	0	0	0	0	0
	15ppm	0	0	0	0	0	0	0	0	0	0	0
	38ppm	0	0	0	0	0	0	0	0	0	0	0
	96ppm	0	0	0	0	0	0	0	0	0	0	0
	240ppm	0	0	0	0	0	0	0	0	0	0	0
	600ppm	0	0	0	1	2	4	5	5	5	-	-
LOCOMOTOR MOVEMENT DECR	Control	0	0	0	0	0	0	0	0	0	0	0
	15ppm	0	0	0	0	0	0	0	0	0	0	0
	38ppm	0	0	0	0	0	0	0	0	0	0	0
	96ppm	0	0	0	0	0	0	0	0	0	0	0
	240ppm	0	0	0	0	0	0	0	0	0	0	0
	600ppm	0	0	2	1	3	0	0	-	-	-	-
SOUND-RESPONSE. DECREASED	Control	0	0	0	0	0	0	0	0	0	0	0
	15ppm	0	0	0	0	0	0	0	0	0	0	0
	38ppm	0	0	0	0	0	0	0	0	0	0	0
	96ppm	0	0	0	0	0	0	0	0	0	0	0
	240ppm	0	0	0	0	0	0	0	0	0	0	0
	600ppm	0	0	3	1	0	0	0	-	-	-	-
TOUCH-RESPONSE. DISAPPEAR	Control	0	0	0	0	0	0	0	0	0	0	0
	15ppm	0	0	0	0	0	0	0	0	0	0	0
	38ppm	0	0	0	0	0	0	0	0	0	0	0
	96ppm	0	0	0	0	0	0	0	0	0	0	0
	240ppm	0	0	0	0	0	0	0	0	0	0	0
	600ppm	0	0	3	1	1	0	0	-	-	-	-
PILOERECTION	Control	0	0	0	0	0	0	0	0	0	0	0
	15ppm	0	0	0	0	0	0	0	0	0	0	0
	38ppm	0	0	0	0	0	0	0	0	0	0	0
	96ppm	0	0	0	0	0	0	0	0	0	0	0
	240ppm	0	0	0	0	0	0	0	0	0	0	0
	600ppm	0	0	0	1	0	0	0	-	-	-	-
FROG BELLY	Control	0	0	0	0	0	0	0	0	0	0	0
	15ppm	0	0	0	0	0	0	0	0	0	0	0
	38ppm	0	0	0	0	0	0	0	0	0	0	0
	96ppm	0	0	0	0	0	0	0	0	0	0	0
	240ppm	0	0	0	0	0	0	0	0	0	0	0
	600ppm	0	0	3	2	3	1	0	-	-	-	-

STUDY NO. : 0639
 ANIMAL : MOUSE B6D2F1/Cr1j[Crj:BDF1]
 REPORT TYPE : A1 2

CLINICAL OBSERVATION (SUMMARY)
 ALL ANIMALS

SEX : MALE

PAGE : 2

Clinical sign	Group Name	Administration Week-day										
		1-1	1-2	1-2	1-3	1-3	1-4	1-4	1-5	1-7	2-3	2-7
		2	1	2	1	2	1	2	1	1	1	1
CLOSED EYELID	Control	0	0	0	0	0	0	0	0	0	0	0
	15ppm	0	0	0	0	0	0	0	0	0	0	0
	38ppm	0	0	0	0	0	0	0	0	0	0	0
	96ppm	0	0	0	0	0	0	0	0	0	0	0
	240ppm	0	0	0	0	0	0	0	0	0	0	0
	600ppm	0	0	4	2	3	1	0	-	-	-	-
NOSE FOAMY DISCHARGE	Control	0	0	0	0	0	0	0	0	0	0	0
	15ppm	0	0	0	0	0	0	0	0	0	0	0
	38ppm	0	0	0	0	0	0	0	0	0	0	0
	96ppm	0	0	0	0	0	0	0	0	0	0	0
	240ppm	0	0	0	0	0	0	0	0	0	0	0
	600ppm	0	0	0	0	1	0	0	-	-	-	-
INTERNAL MASS	Control	0	0	0	0	0	0	0	0	0	0	0
	15ppm	0	0	0	0	0	0	0	0	0	0	0
	38ppm	0	0	0	0	0	0	0	0	0	0	1
	96ppm	0	0	0	0	0	0	0	0	0	0	0
	240ppm	0	0	0	0	0	0	0	0	0	0	0
	600ppm	0	0	0	0	0	0	0	-	-	-	-
IRREGULAR BREATHING	Control	0	0	0	0	0	0	0	0	0	0	0
	15ppm	0	0	0	0	0	0	0	0	0	0	0
	38ppm	0	0	0	0	0	0	0	0	0	0	0
	96ppm	0	0	0	0	0	0	0	0	0	0	0
	240ppm	0	0	0	0	0	0	0	0	0	0	0
	600ppm	5	0	5	4	2	1	0	-	-	-	-
RESPIRATORY SOUND ABNOR	Control	0	0	0	0	0	0	0	0	0	0	0
	15ppm	0	0	0	0	0	0	0	0	0	0	0
	38ppm	0	0	0	0	0	0	0	0	0	0	0
	96ppm	0	0	0	0	0	0	0	0	0	0	0
	240ppm	0	0	0	0	0	0	0	0	0	0	0
	600ppm	2	0	4	4	3	1	0	-	-	-	-
BRADYPNEA	Control	0	0	0	0	0	0	0	0	0	0	0
	15ppm	0	0	0	0	0	0	0	0	0	0	0
	38ppm	0	0	0	0	0	0	0	0	0	0	0
	96ppm	0	0	0	0	0	0	0	0	0	0	0
	240ppm	0	0	0	0	0	0	0	0	0	0	0
	600ppm	0	0	0	0	1	0	0	-	-	-	-

STUDY NO. : 0639
 ANIMAL : MOUSE B6D2F1/Cr1j[Crj:BDF1]
 REPORT TYPE : A1 2

CLINICAL OBSERVATION (SUMMARY)
 ALL ANIMALS

SEX : MALE

PAGE : 3

Clinical sign	Group Name	Administration Week-day										
		1-1 2	1-2 1	1-2 2	1-3 1	1-3 2	1-4 1	1-4 2	1-5 1	1-7 1	2-3 1	2-7 1
DEEP BREATHING	Control	0	0	0	0	0	0	0	0	0	0	0
	15ppm	0	0	0	0	0	0	0	0	0	0	0
	38ppm	0	0	0	0	0	0	0	0	0	0	0
	96ppm	0	0	0	0	0	0	0	0	0	0	0
	240ppm	0	0	0	0	0	0	0	0	0	0	0
	600ppm	0	0	0	0	1	0	0	-	-	-	-
SUBNORMAL TEMP	Control	0	0	0	0	0	0	0	0	0	0	0
	15ppm	0	0	0	0	0	0	0	0	0	0	0
	38ppm	0	0	0	0	0	0	0	0	0	0	0
	96ppm	0	0	0	0	0	0	0	0	0	0	0
	240ppm	0	0	0	0	0	0	0	0	0	0	0
	600ppm	0	0	0	0	1	0	0	-	-	-	-

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APPENDIX C 2

CLINICAL OBSERVATION : FEMALE

STUDY NO. : 0639
 ANIMAL : MOUSE B6D2F1/Cr1j[Crj:BDF1]
 REPORT TYPE : A1 2

CLINICAL OBSERVATION (SUMMARY)
 ALL ANIMALS

SEX : FEMALE

PAGE : 4

Clinical sign	Group Name	Administration Week-day										
		1-1 2	1-2 1	1-2 2	1-3 1	1-3 2	1-4 1	1-4 2	1-5 1	1-7 1	2-3 1	2-7 1
DEATH	Control	0	0	0	0	0	0	0	0	0	0	0
	15ppm	0	0	0	0	0	0	0	0	0	0	0
	38ppm	0	0	0	0	0	0	0	0	0	0	0
	96ppm	0	0	0	0	0	0	0	0	0	0	0
	240ppm	0	0	0	0	0	0	0	0	0	0	0
	600ppm	0	0	0	0	1	3	5	5	5	-	-
LOCOMOTOR MOVEMENT DECR	Control	0	0	0	0	0	0	0	0	0	0	0
	15ppm	0	0	0	0	0	0	0	0	0	0	0
	38ppm	0	0	0	0	0	0	0	0	0	0	0
	96ppm	0	0	0	0	0	0	0	0	0	0	0
	240ppm	0	0	0	0	0	0	0	0	0	0	0
	600ppm	0	0	1	0	4	2	0	-	-	-	-
SOUND-RESPONSE. DECREASED	Control	0	0	0	0	0	0	0	0	0	0	0
	15ppm	0	0	0	0	0	0	0	0	0	0	0
	38ppm	0	0	0	0	0	0	0	0	0	0	0
	96ppm	0	0	0	0	0	0	0	0	0	0	0
	240ppm	0	0	0	0	0	0	0	0	0	0	0
	600ppm	0	0	1	0	0	0	0	-	-	-	-
TOUCH-RESPONSE. DISAPPEAR	Control	0	0	0	0	0	0	0	0	0	0	0
	15ppm	0	0	0	0	0	0	0	0	0	0	0
	38ppm	0	0	0	0	0	0	0	0	0	0	0
	96ppm	0	0	0	0	0	0	0	0	0	0	0
	240ppm	0	0	0	0	0	0	0	0	0	0	0
	600ppm	0	0	1	0	2	1	0	-	-	-	-
FROG BELLY	Control	0	0	0	0	0	0	0	0	0	0	0
	15ppm	0	0	0	0	0	0	0	0	0	0	0
	38ppm	0	0	0	0	0	0	0	0	0	0	0
	96ppm	0	0	0	0	0	0	0	0	0	0	0
	240ppm	0	0	0	0	0	0	1	0	0	0	0
	600ppm	0	0	2	2	4	2	0	-	-	-	-
CLOSED EYELID	Control	0	0	0	0	0	0	0	0	0	0	0
	15ppm	0	0	0	0	0	0	0	0	0	0	0
	38ppm	0	0	0	0	0	0	0	0	0	0	0
	96ppm	0	0	0	0	0	0	0	0	0	0	0
	240ppm	0	0	0	0	0	0	0	0	0	0	0
	600ppm	0	0	1	0	3	2	0	-	-	-	-

STUDY NO. : 0639
 ANIMAL : MOUSE B6D2F1/Cr1j[Crj:BDF1]
 REPORT TYPE : A1 2

CLINICAL OBSERVATION (SUMMARY)
 ALL ANIMALS

SEX : FEMALE

PAGE : 5

Clinical sign	Group Name	Administration Week-day										
		1-1 2	1-2 1	1-2 2	1-3 1	1-3 2	1-4 1	1-4 2	1-5 1	1-7 1	2-3 1	2-7 1
IRREGULAR BREATHING	Control	0	0	0	0	0	0	0	0	0	0	0
	15ppm	0	0	0	0	0	0	0	0	0	0	0
	38ppm	0	0	0	0	0	0	0	0	0	0	0
	96ppm	0	0	0	0	0	0	0	0	0	0	0
	240ppm	0	0	0	0	0	0	1	0	0	0	0
	600ppm	5	0	5	5	4	2	0	-	-	-	-
RESPIRATORY SOUND ABNOR	Control	0	0	0	0	0	0	0	0	0	0	0
	15ppm	0	0	0	0	0	0	0	0	0	0	0
	38ppm	0	0	0	0	0	0	0	0	0	0	0
	96ppm	0	0	0	0	0	0	0	0	0	0	0
	240ppm	0	0	0	0	0	0	1	0	0	0	0
	600ppm	3	0	5	5	4	2	0	-	-	-	-
SUBNORMAL TEMP	Control	0	0	0	0	0	0	0	0	0	0	0
	15ppm	0	0	0	0	0	0	0	0	0	0	0
	38ppm	0	0	0	0	0	0	0	0	0	0	0
	96ppm	0	0	0	0	0	0	0	0	0	0	0
	240ppm	0	0	0	0	0	0	0	0	0	0	0
	600ppm	0	0	0	0	0	2	0	-	-	-	-

APPENDIX D 1

BODY WEIGHT CHANGES : MALE

STUDY NO. : 0639
 ANIMAL : MOUSE B6D2F1/Cr1j[Crj:BDF1]
 UNIT : g
 REPORT TYPE : A1 2
 SEX : MALE

BODY WEIGHT CHANGES (SUMMARY)
 ALL ANIMALS

Group Name	Administration week-day					
	0-0	1-2	1-4	1-7	2-3	2-7
Control	23.9± 0.8	23.7± 0.7	24.1± 0.9	24.7± 0.9	25.4± 1.0	25.7± 0.8
15ppm	23.9± 0.6	23.5± 0.6	23.8± 0.7	24.7± 0.6	25.0± 0.8	25.5± 0.8
38ppm	23.8± 0.8	23.6± 0.3	23.7± 0.4	24.7± 1.1	24.8± 1.7	24.3± 3.3
96ppm	23.8± 0.9	23.8± 1.1	24.2± 1.1	24.6± 0.8	25.0± 1.0	25.0± 1.2
240ppm	23.8± 0.8	22.8± 0.8	21.9± 0.8**	22.0± 0.5**	21.6± 0.7**	22.5± 0.6
600ppm	23.8± 0.7	21.1± 0.6**	-	-	-	-

Significant difference ; * : $P \leq 0.05$

** : $P \leq 0.01$

Test of Dunnett

APPENDIX D 2

BODY WEIGHT CHANGES : FEMALE

STUDY NO. : 0639
 ANIMAL : MOUSE B6D2F1/Cr1j[Crj:BDF1]
 UNIT : g
 REPORT TYPE : A1 2
 SEX : FEMALE

BODY WEIGHT CHANGES (SUMMARY)
 ALL ANIMALS

Group Name	Administration week-day					
	0-0	1-2	1-4	1-7	2-3	2-7
Control	20.0± 0.8	19.5± 0.8	19.9± 1.2	20.9± 0.5	21.1± 0.9	21.4± 1.0
15ppm	20.0± 0.6	19.4± 0.6	20.2± 0.7	21.0± 1.0	21.2± 0.5	21.7± 0.8
38ppm	20.0± 0.8	19.2± 0.6	19.8± 1.0	20.1± 0.8	21.1± 1.2	21.3± 1.4
96ppm	20.0± 0.6	19.6± 0.8	19.6± 0.5	20.1± 1.0	21.0± 0.5	21.1± 1.0
240ppm	20.0± 0.8	19.3± 0.6	18.7± 0.7	18.7± 0.9**	18.5± 1.0**	19.8± 1.3
600ppm	20.0± 0.6	17.9± 0.7**	-	-	-	-

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

APPENDIX E 1

FOOD CONSUMPTION CHANGES : MALE

STUDY NO. : 0639
ANIMAL : MOUSE B6D2F1/Cr1j[Crj:BDF1]
UNIT : g
REPORT TYPE : A1 2
SEX : MALE

FOOD CONSUMPTION CHANGES (SUMMARY)
ALL ANIMALS

PAGE : 1

Group Name	Administration week-day(effective)	
	1-7(6)	2-7(7)
Control	4.4± 0.2	4.4± 0.1
15ppm	4.5± 0.2	4.4± 0.1
38ppm	4.5± 0.6	4.2± 1.0
96ppm	4.6± 0.2	4.4± 0.2
240ppm	3.3± 0.2**	3.6± 0.2*
600ppm	-	-

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

Test of Dunnett

APPENDIX E 2

FOOD CONSUMPTION CHANGES : FEMALE

STUDY NO. : 0639
ANIMAL : MOUSE B6D2F1/Cr1j[Crj:BDF1]
UNIT : g
REPORT TYPE : A1 2
SEX : FEMALE

FOOD CONSUMPTION CHANGES (SUMMARY)
ALL ANIMALS

PAGE : 2

Group Name	Administration week-day(effective)	
	1-7(6)	2-7(7)
Control	3.8± 0.2	3.8± 0.4
15ppm	4.1± 0.2	3.9± 0.3
38ppm	3.6± 0.4	4.1± 0.4
96ppm	3.8± 0.4	4.0± 0.2
240ppm	2.9± 0.4**	3.4± 0.2
600ppm	-	-

Significant difference ; * : $P \leq 0.05$

** : $P \leq 0.01$

Test of Dunnett

APPENDIX F 1

HEMATOLOGY : MALE

STUDY NO. : 0639

ANIMAL : MOUSE B6D2F1/Cr1j[Crj:BDF1]

MEASUR. TIME : 1

SEX : MALE

REPORT TYPE : A1

HEMATOLOGY (SUMMARY)

ALL ANIMALS (3W)

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	5	11.14±	0.48	16.8±	0.7	51.0±	2.2	45.8±	0.3	15.1±	0.3	32.9±	0.8	1252±	60
15ppm	5	11.48±	0.33	17.4±	0.4	52.4±	1.4	45.7±	0.5	15.2±	0.2	33.3±	0.5	1212±	68
38ppm	5	11.39±	0.44	17.2±	0.8	51.5±	2.7	45.2±	0.6	15.1±	0.2	33.4±	0.4	1176±	170
96ppm	5	11.37±	0.28	17.1±	0.2	51.6±	1.1	45.4±	0.3	15.0±	0.3	33.1±	0.4	1223±	69
240ppm	5	11.53±	0.36	17.2±	0.5	52.0±	1.8	45.1±	0.6	14.9±	0.2	33.2±	0.2	1136±	44
600ppm	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Significant difference ; * : P ≤ 0.05

** : P ≤ 0.01

Test of Dunnett

(HCL070)

BAIS 4

STUDY NO. : 0639
ANIMAL : MOUSE B6D2F1/Cr1j[Crj:BDF1]
MEASURE. TIME : 1
SEX : MALE

HEMATOLOGY (SUMMARY)
ALL ANIMALS (3W)

REPORT TYPE : A1

PAGE : 2

Group Name	NO. of Animals	RETICULOCYTE %	
Control	5	2.0±	0.1
15ppm	5	2.0±	0.2
38ppm	5	2.1±	0.2
96ppm	5	2.0±	0.1
240ppm	5	2.4±	0.2**
600ppm	0	-	

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

Test of Dunnett

STUDY NO. : 0639

ANIMAL : MOUSE B6D2F1/Cr1j[Crj:BDF1]

MEASURE. TIME : 1

SEX : MALE

REPORT TYPE : A1

HEMATOLOGY (SUMMARY)

ALL ANIMALS (3W)

PAGE : 3

Group Name	NO. of Animals	WBC 10 ³ /μℓ	Differential WBC (%)
Control	5	2.54± 1.12	
15ppm	5	3.55± 1.64	
38ppm	5	2.62± 1.43	
96ppm	5	2.99± 1.92	
240ppm	5	3.48± 2.16	
600ppm	0	-	

Significant difference ; * : $P \leq 0.05$

** : $P \leq 0.01$

Test of Dunnett

(HCL070)

BAIS 4

APPENDIX F 2

HEMATOLOGY : FEMALE

STUDY NO. : 0639

ANIMAL : MOUSE B6D2F1/Cr1j[Crj:BDF1]

MEASURE. TIME : 1

SEX : FEMALE

REPORT TYPE : A1

HEMATOLOGY (SUMMARY)

ALL ANIMALS (3W)

PAGE : 4

Group Name	NO. of Animals	RED BLOOD CELL 1 O ⁶ /μℓ		HEMOGLOBIN g/dℓ		HEMATOCRIT %		MCV f ℓ		MCH p g		MCHC g/dℓ		PLATELET 1 O ⁹ /μℓ	
Control	5	11.31±	0.32	17.0±	0.5	51.0±	1.4	45.1±	0.4	15.1±	0.2	33.4±	0.3	1137±	64
15ppm	5	11.33±	0.28	17.1±	0.3	51.3±	1.0	45.3±	0.3	15.1±	0.2	33.3±	0.3	1121±	58
38ppm	5	11.29±	0.15	17.2±	0.2	51.0±	0.7	45.2±	0.8	15.2±	0.1	33.7±	0.6	1112±	60
96ppm	5	11.31±	0.39	17.1±	0.5	51.1±	1.7	45.2±	0.5	15.1±	0.2	33.5±	0.6	1147±	83
240ppm	5	11.18±	0.27	17.0±	0.5	50.8±	1.4	45.5±	1.5	15.2±	0.5	33.4±	0.3	1102±	139
600ppm	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Significant difference ; * : P ≤ 0.05

** : P ≤ 0.01

Test of Dunnett

STUDY NO. : 0639

ANIMAL : MOUSE B6D2F1/Cr1j[Crj:BDF1]

MEASURE. TIME : 1

SEX : FEMALE

REPORT TYPE : A1

HEMATOLOGY (SUMMARY)

ALL ANIMALS (3W)

PAGE : 5

Group Name	NO. of Animals	RETICULOCYTE %
Control	5	2.1± 0.5
15ppm	5	2.2± 0.5
38ppm	5	2.0± 0.7
96ppm	5	2.2± 0.5
240ppm	5	2.9± 0.6
600ppm	0	-

Significant difference ; * : $P \leq 0.05$

** : $P \leq 0.01$

Test of Dunnett

(HCL070)

BAIS 4

STUDY NO. : 0639

ANIMAL : MOUSE B6D2F1/Cr1j[Crj:BDF1]

MEASURE. TIME : 1

SEX : FEMALE

REPORT TYPE : A1

HEMATOLOGY (SUMMARY)

ALL ANIMALS (3W)

PAGE : 6

Group Name	NO. of Animals	WBC 10 ³ /μl	Differential WBC (%)
Control	5	3.76 ± 2.38	
15ppm	5	3.20 ± 2.08	
38ppm	5	2.82 ± 1.69	
96ppm	5	3.21 ± 1.97	
240ppm	5	2.70 ± 1.49	
600ppm	0	-	

Significant difference ; * : $P \leq 0.05$

** : $P \leq 0.01$

Test of Dunnett

(HCL070)

BAIS 4

APPENDIX G 1

GROSS FINDINGS : MALE
DEAD AND MORIBUND ANIMALS

STUDY NO. : 0639
 ANIMAL : MOUSE B6D2F1/Cr1j[Crj:BDF1]
 REPORT TYPE : A1
 SEX : MALE

GROSS FINDINGS (SUMMARY)
 DEAD AND MORIBUND ANIMALS (0- 3W)

Organ	Findings	Group Name NO. of Animals	Control	15ppm	38ppm	96ppm
			0 (%)	0 (%)	0 (%)	0 (%)
thymus	atrophic		- (-)	- (-)	- (-)	- (-)
forestomach	red zone		- (-)	- (-)	- (-)	- (-)
	rupture		- (-)	- (-)	- (-)	- (-)
gl stomach	rupture		- (-)	- (-)	- (-)	- (-)
stomach	gas		- (-)	- (-)	- (-)	- (-)
small intes	gas		- (-)	- (-)	- (-)	- (-)
large intes	gas		- (-)	- (-)	- (-)	- (-)

STUDY NO. : 0639
ANIMAL : MOUSE B6D2F1/Cr1j[Crj:BDF1]
REPORT TYPE : A1
SEX : MALE

GROSS FINDINGS (SUMMARY)
DEAD AND MORIBUND ANIMALS (0- 3W)

PAGE : 2

Organ	Findings	Group Name NO. of Animals	240ppm		600ppm	
			0	(%)	5	(%)
thymus	atrophic		-	(-)	3	(60)
forestomach	red zone		-	(-)	1	(20)
	rupture		-	(-)	1	(20)
gl stomach	rupture		-	(-)	1	(20)
stomach	gas		-	(-)	3	(60)
small intes	gas		-	(-)	5	(100)
large intes	gas		-	(-)	5	(100)

(HPT080)

BAIS 4

APPENDIX G 2

GROSS FINDINGS : MALE

SACRIFICED ANIMALS

STUDY NO. : 0639
ANIMAL : MOUSE B6D2F1/Cr1j[Crj:BDF1]
REPORT TYPE : A1
SEX : MALE

GROSS FINDINGS (SUMMARY)
SACRIFICED ANIMALS (3W)

Organ	Findings	Group Name NO. of Animals	Control		15ppm		38ppm		96ppm	
			5	(%)	5	(%)	5	(%)	5	(%)
thymus	atrophic		0	(0)	0	(0)	1	(20)	0	(0)
spleen	black zone		0	(0)	0	(0)	0	(0)	0	(0)
kidney	hydronephrosis		0	(0)	0	(0)	1	(20)	0	(0)

STUDY NO. : 0639
ANIMAL : MOUSE B6D2F1/Cr1j[Crj:BDF1]
REPORT TYPE : A1
SEX : MALE

GROSS FINDINGS (SUMMARY)
SACRIFICED ANIMALS (3W)

PAGE : 2

Organ	Findings	Group Name NO. of Animals	240ppm		600ppm	
			5	(%)	0	(%)
thymus	atrophic		0	(0)	-	(-)
spleen	black zone		1	(20)	-	(-)
kidney	hydronephrosis		0	(0)	-	(-)

(HPT080)

BAIS 4

APPENDIX G 3

GROSS FINDINGS : FEMALE
DEAD AND MORIBUND ANIMALS

STUDY NO. : 0639
 ANIMAL : MOUSE B6D2F1/Cr1j[Crj:BDF1]
 REPORT TYPE : A1
 SEX : FEMALE

GROSS FINDINGS (SUMMARY)
 DEAD AND MORIBUND ANIMALS (0- 3W)

Organ	Findings	Group Name NO. of Animals	Control	15ppm	38ppm	96ppm
			0 (%)	0 (%)	0 (%)	0 (%)
thymus	atrophic		- (-)	- (-)	- (-)	- (-)
forestomach	rupture		- (-)	- (-)	- (-)	- (-)
stomach	red zone		- (-)	- (-)	- (-)	- (-)
	rupture		- (-)	- (-)	- (-)	- (-)
	gas		- (-)	- (-)	- (-)	- (-)
small intes	gas		- (-)	- (-)	- (-)	- (-)
large intes	gas		- (-)	- (-)	- (-)	- (-)

STUDY NO. : 0639
ANIMAL : MOUSE B6D2F1/Cr1j[Crj:BDF1]
REPORT TYPE : A1
SEX : FEMALE

GROSS FINDINGS (SUMMARY)
DEAD AND MORIBUND ANIMALS (0- 3W)

PAGE : 4

Organ	Findings	Group Name NO. of Animals	240ppm		600ppm	
			0	(%)	5	(%)
thymus	atrophic		-	(-)	4	(80)
forestomach	rupture		-	(-)	1	(20)
stomach	red zone		-	(-)	1	(20)
	rupture		-	(-)	2	(40)
	gas		-	(-)	1	(20)
small intes	gas		-	(-)	5	(100)
large intes	gas		-	(-)	5	(100)

(HPT080)

BAIS 4

APPENDIX G 4

GROSS FINDINGS : FEMALE

SACRIFICED ANIMALS

STUDY NO. : 0639
ANIMAL : MOUSE B6D2F1/Cr1j[Crj:BDF1]
REPORT TYPE : A1
SEX : FEMALE

GROSS FINDINGS (SUMMARY)
SACRIFICED ANIMALS (3W)

PAGE : 3

Organ	Findings	Group Name NO. of Animals	Control 5 (%)	15ppm 5 (%)	38ppm 5 (%)	96ppm 5 (%)
spleen	black zone		0 (0)	0 (0)	0 (0)	0 (0)

(HPT080)

BAIS 4

STUDY NO. : 0639
ANIMAL : MOUSE B6D2F1/Cr1j[Crj:BDF1]
REPORT TYPE : A1
SEX : FEMALE

GROSS FINDINGS (SUMMARY)
SACRIFICED ANIMALS (3W)

PAGE : 4

Organ	Findings	Group Name NO. of Animals	240ppm 5 (%)	600ppm 0 (%)
spleen	black zone		1 (20)	- (-)

(HPT080)

BAIS 4

APPENDIX H 1

ORGAN WEIGHT, ABSOLUTE : MALE

STUDY NO. : 0639
 ANIMAL : MOUSE B6D2F1/Cr1j[Crj:BDF1]
 REPORT TYPE : A1
 SEX : MALE
 UNIT: g

ORGAN WEIGHT:ABSOLUTE (SUMMARY)
 SURVIVAL ANIMALS (3W)

Group Name	NO. of Animals	Body Weight	THYMUS	ADRENALS	TESTES	HEART	LUNGS
Control	5	22.1± 0.7	0.045± 0.006	0.009± 0.001	0.191± 0.021	0.138± 0.005	0.135± 0.004
15ppm	5	21.6± 0.8	0.042± 0.007	0.010± 0.000	0.184± 0.022	0.143± 0.012	0.142± 0.005
38ppm	5	21.0± 2.6	0.033± 0.014	0.009± 0.001	0.183± 0.019	0.136± 0.005	0.133± 0.005
96ppm	5	21.6± 1.3	0.046± 0.012	0.011± 0.002	0.183± 0.024	0.146± 0.016	0.146± 0.015
240ppm	5	18.9± 0.7	0.032± 0.005	0.010± 0.001	0.176± 0.024	0.126± 0.006	0.134± 0.011
600ppm	0	-	-	-	-	-	-

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

STUDY NO. : 0639
 ANIMAL : MOUSE B6D2F1/Cr1j[Crj:BDF1]
 REPORT TYPE : A1
 SEX : MALE
 UNIT: g

ORGAN WEIGHT:ABSOLUTE (SUMMARY)
 SURVIVAL ANIMALS (3W)

Group Name	NO. of Animals	KIDNEYS		SPLEEN		LIVER		BRAIN	
Control	5	0.365±	0.015	0.048±	0.004	0.970±	0.025	0.440±	0.006
15ppm	5	0.373±	0.007	0.044±	0.002	0.955±	0.028	0.444±	0.009
38ppm	5	0.467±	0.228	0.043±	0.005	0.917±	0.168	0.428±	0.017
96ppm	5	0.402±	0.072	0.046±	0.006	0.947±	0.045	0.436±	0.005
240ppm	5	0.332±	0.017*	0.038±	0.004*	0.827±	0.040	0.432±	0.010
600ppm	0	-		-		-		-	

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

Test of Dunnett

APPENDIX H 2

ORGAN WEIGHT, ABSOLUTE : FEMALE

STUDY NO. : 0639
 ANIMAL : MOUSE B6D2F1/Cr1j[Crj:BDF1]
 REPORT TYPE : A1
 SEX : FEMALE
 UNIT: g

ORGAN WEIGHT:ABSOLUTE (SUMMARY)
 SURVIVAL ANIMALS (3W)

Group Name	NO. of Animals	Body Weight	THYMUS		ADRENALS		OVARIES		HEART		LUNGS	
Control	5	17.9± 1.1	0.064±	0.008	0.012±	0.001	0.032±	0.006	0.114±	0.005	0.128±	0.007
15ppm	5	17.8± 0.8	0.065±	0.010	0.013±	0.001	0.033±	0.007	0.122±	0.009	0.141±	0.005
38ppm	5	17.7± 1.2	0.060±	0.009	0.013±	0.001	0.029±	0.004	0.114±	0.011	0.129±	0.015
96ppm	5	17.6± 0.9	0.064±	0.007	0.013±	0.001	0.033±	0.008	0.121±	0.004	0.138±	0.010
240ppm	5	16.1± 0.9*	0.041±	0.011**	0.012±	0.001	0.026±	0.004	0.114±	0.008	0.126±	0.004
600ppm	0	-	-	-	-	-	-	-	-	-	-	-

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

Test of Dunnett

STUDY NO. : 0639
 ANIMAL : MOUSE B6D2F1/Cr1j[Crj:BDF1]
 REPORT TYPE : A1
 SEX : FEMALE
 UNIT: g

ORGAN WEIGHT:ABSOLUTE (SUMMARY)
 SURVIVAL ANIMALS (3W)

PAGE : 4

Group Name	NO. of Animals	KIDNEYS		SPLEEN		LIVER		BRAIN	
Control	5	0.255±	0.004	0.049±	0.003	0.764±	0.042	0.449±	0.018
15ppm	5	0.270±	0.011	0.053±	0.005	0.800±	0.043	0.453±	0.012
38ppm	5	0.262±	0.019	0.050±	0.006	0.804±	0.079	0.446±	0.014
96ppm	5	0.265±	0.014	0.049±	0.003	0.801±	0.047	0.448±	0.019
240ppm	5	0.259±	0.009	0.041±	0.005*	0.710±	0.060	0.430±	0.012
600ppm	0	-	-	-	-	-	-	-	-

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

Test of Dunnett

(HCL040)

BAIS 4

APPENDIX I 1

ORGAN WEIGHT, RELATIVE : MALE

STUDY NO. : 0639
 ANIMAL : MOUSE B6D2F1/Cr1j[Crj:BDF1]
 REPORT TYPE : A1
 SEX : MALE
 UNIT: %

ORGAN WEIGHT:RELATIVE (SUMMARY)
 SURVIVAL ANIMALS (3W)

Group Name	NO. of Animals	Body Weight (g)	THYMUS	ADRENALS	TESTES	HEART	LUNGS
Control	5	22.1± 0.7	0.203± 0.027	0.042± 0.006	0.862± 0.083	0.622± 0.033	0.608± 0.026
15ppm	5	21.6± 0.8	0.192± 0.030	0.046± 0.002	0.847± 0.073	0.663± 0.051	0.659± 0.030
38ppm	5	21.0± 2.6	0.152± 0.058	0.046± 0.012	0.885± 0.184	0.653± 0.074	0.641± 0.079
96ppm	5	21.6± 1.3	0.214± 0.047	0.051± 0.008	0.849± 0.096	0.675± 0.058	0.676± 0.056
240ppm	5	18.9± 0.7	0.170± 0.027	0.054± 0.008	0.931± 0.139	0.668± 0.036	0.712± 0.061
600ppm	0	-	-	-	-	-	-

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

Test of Dunnett

STUDY NO. : 0639
ANIMAL : MOUSE B6D2F1/Cr1j[Crj:BDF1]
REPORT TYPE : A1
SEX : MALE
UNIT: %

ORGAN WEIGHT:RELATIVE (SUMMARY)
SURVIVAL ANIMALS (3W)

Group Name	NO. of Animals	KIDNEYS	SPLEEN	LIVER	BRAIN
Control	5	1.649 ± 0.069	0.215 ± 0.018	4.384 ± 0.057	1.990 ± 0.080
15ppm	5	1.726 ± 0.091	0.202 ± 0.005	4.417 ± 0.111	2.052 ± 0.068
38ppm	5	2.378 ± 1.633	0.207 ± 0.024	4.339 ± 0.387	2.060 ± 0.271
96ppm	5	1.866 ± 0.312	0.211 ± 0.023	4.394 ± 0.126	2.029 ± 0.136
240ppm	5	1.755 ± 0.066	0.203 ± 0.020	4.378 ± 0.156	2.287 ± 0.075*
600ppm	0	-	-	-	-

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

Test of Dunnett

APPENDIX I 2

ORGAN WEIGHT, RELATIVE : FEMALE

STUDY NO. : 0639
 ANIMAL : MOUSE B6D2F1/Cr1j[Crj:BDF1]
 REPORT TYPE : A1
 SEX : FEMALE
 UNIT: %

ORGAN WEIGHT:RELATIVE (SUMMARY)
 SURVIVAL ANIMALS (3#)

Group Name	NO. of Animals	Body Weight (g)	THYMUS	ADRENALS	OVARIES	HEART	LUNGS
Control	5	17.9± 1.1	0.358± 0.028	0.067± 0.007	0.178± 0.026	0.637± 0.062	0.716± 0.047
15ppm	5	17.8± 0.8	0.361± 0.043	0.072± 0.005	0.183± 0.033	0.686± 0.061	0.791± 0.038
38ppm	5	17.7± 1.2	0.337± 0.034	0.071± 0.008	0.166± 0.013	0.647± 0.031	0.732± 0.057
96ppm	5	17.6± 0.9	0.363± 0.032	0.076± 0.008	0.185± 0.037	0.686± 0.059	0.783± 0.048
240ppm	5	16.1± 0.9*	0.251± 0.059**	0.077± 0.005	0.162± 0.024	0.709± 0.034	0.789± 0.047
600ppm	0	-	-	-	-	-	-

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

Test of Dunnett

STUDY NO. : 0639
ANIMAL : MOUSE B6D2F1/Cr1j[Crj:BDF1]
REPORT TYPE : A1
SEX : FEMALE
UNIT: %

ORGAN WEIGHT:RELATIVE (SUMMARY)
SURVIVAL ANIMALS (3W)

PAGE : 4

Group Name	NO. of Animals	KIDNEYS	SPLEEN	LIVER	BRAIN
Control	5	1.427 ± 0.080	0.272 ± 0.019	4.267 ± 0.188	2.512 ± 0.171
15ppm	5	1.514 ± 0.060	0.299 ± 0.024	4.494 ± 0.273	2.545 ± 0.152
38ppm	5	1.482 ± 0.063	0.281 ± 0.020	4.551 ± 0.335	2.534 ± 0.166
96ppm	5	1.502 ± 0.044	0.279 ± 0.013	4.542 ± 0.066	2.542 ± 0.066
240ppm	5	1.614 ± 0.060**	0.252 ± 0.020	4.417 ± 0.155	2.682 ± 0.123
600ppm	0	-	-	-	-

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

Test of Dunnett

(HCL042)

BAIS 4

APPENDIX J 1

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

STUDY NO. : 0639
 ANIMAL : MOUSE B6D2F1/Cr1j[Crj:BDF1]
 REPORT TYPE : A1
 SEX : MALE

HISTOPATHOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)
 DEAD AND MORIBUND ANIMALS (0- 3W)

Organ	Findings	Control				15ppm				38ppm				96ppm			
		No. of Animals on Study				0				0				0			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Respiratory system}																	
nasal cavit		< 0 >				< 0 >				< 0 >				< 0 >			
	inflammation:respiratory epithelium	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)
	ulcer:respiratory epithelium	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)
	necrosis:olfactory epithelium	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)
	necrosis:respiratory epithelium	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)

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

STUDY NO. : 0639
 ANIMAL : MOUSE B6D2F1/Cr1j[Crj:BDF1]
 REPORT TYPE : A1
 SEX : MALE

HISTOPATHOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)
 DEAD AND MORIBUND ANIMALS (0- 3W)

Organ	Findings	240ppm				600ppm				
		0				5				
		1	2	3	4	1	2	3	4	
		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	
{Respiratory system}										
nasal cavit		< 0 >				< 5 >				
	inflammation:respiratory epithelium	-	-	-	-	5	0	0	0	
		(-)	(-)	(-)	(-)	(100)	(0)	(0)	(0)	
	ulcer:respiratory epithelium	-	-	-	-	0	1	4	0	
		(-)	(-)	(-)	(-)	(0)	(20)	(80)	(0)	
	necrosis:olfactory epithelium	-	-	-	-	0	5	0	0	
		(-)	(-)	(-)	(-)	(0)	(100)	(0)	(0)	
	necrosis:respiratory epithelium	-	-	-	-	0	0	5	0	
		(-)	(-)	(-)	(-)	(0)	(0)	(100)	(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

APPENDIX J 2

HISTOPATHOLOGICAL FINDINGS :
NON-NEOPLASTIC LESIONS : MALE
SACRIFICED ANIMALS

STUDY NO. : 0639
 ANIMAL : MOUSE B6D2F1/Cr1j[Crj:BDF1]
 REPORT TYPE : A1
 SEX : MALE

HISTOPATHOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)
 SACRIFICED ANIMALS (3W)

Organ	Findings	Group Name No. of Animals on Study				Control				15ppm				38ppm				96ppm			
		Grade				5				5				5				5			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
(Respiratory system)																					
nasal cavit																					
	inflammation:respiratory epithelium	< 5>				< 5>				< 5>				< 5>							
		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	disarrangement:olfactory epithelium	0	0	0	0	4	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0
		(0)	(0)	(0)	(0)	(80)	(0)	(0)	(0)	(60)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	ulcer:respiratory epithelium	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	atrophy:olfactory epithelium	0	0	0	0	2	0	0	0	2	2	0	0	1	4	0	0	1	4	0	0
		(0)	(0)	(0)	(0)	(40)	(0)	(0)	(0)	(40)	(40)	(0)	(0)	(20)	(80)	(0)	(0)	(20)	(80)	(0)	(0)
	atrophy:respiratory epithelium	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	necrosis:olfactory epithelium	0	0	0	0	0	0	0	0	2	0	0	0	3	0	0	0	3	0	0	0
		(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(40)	(0)	(0)	(0)	(60)	(0)	(0)	(0)	(60)	(0)	(0)	(0)
	necrosis:respiratory epithelium	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)

Grade 1 : Slight 2 : Moderate 3 : Marked 4 : Severe
 < a > a : Number of animals examined at the site
 b : Number of animals with lesion
 (c) c : b / a * 100

STUDY NO. : 0639
 ANIMAL : MOUSE B6D2F1/Cr1j[Crj:BDF1]
 REPORT TYPE : A1
 SEX : MALE

HISTOPATHOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)
 SACRIFICED ANIMALS (3W)

Organ	Findings	240ppm				600ppm			
		Grade				Grade			
		No. of Animals on Study				No. of Animals on Study			
		1	2	3	4	1	2	3	4
		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Respiratory system}									
nasal cavit									
	inflammation:respiratory epithelium	3	0	0	0	-	-	-	-
		(60)	(0)	(0)	(0)	(-)	(-)	(-)	(-)
	disarrangement:olfactory epithelium	0	0	0	0	-	-	-	-
		(0)	(0)	(0)	(0)	(-)	(-)	(-)	(-)
	ulcer:respiratory epithelium	3	0	0	0	-	-	-	-
		(60)	(0)	(0)	(0)	(-)	(-)	(-)	(-)
	atrophy:olfactory epithelium	0	5	0	0	-	-	-	-
		(0)	(100)	(0)	(0)	(-)	(-)	(-)	(-)
	atrophy:respiratory epithelium	0	5	0	0	-	-	-	-
		(0)	(100)	(0)	(0)	(-)	(-)	(-)	(-)
	necrosis:olfactory epithelium	4	0	0	0	-	-	-	-
		(80)	(0)	(0)	(0)	(-)	(-)	(-)	(-)
	necrosis:respiratory epithelium	3	2	0	0	-	-	-	-
		(60)	(40)	(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

APPENDIX J 3

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

STUDY NO. : 0639
 ANIMAL : MOUSE B6D2F1/Cr1j[Crj:BDF1]
 REPORT TYPE : A1
 SEX : FEMALE

HISTOPATHOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)
 DEAD AND MORIBUND ANIMALS (0- 3W)

Organ	Findings	Control				15ppm				38ppm				96ppm			
		No. of Animals on Study				No. of Animals on Study				No. of Animals on Study				No. of Animals on Study			
Grade		0				0				0				0			
Grade		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Grade		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Respiratory system}																	
nasal cavit		< 0 >				< 0 >				< 0 >				< 0 >			
	inflammation:respiratory epithelium	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)
	ulcer:respiratory epithelium	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)
	necrosis:olfactory epithelium	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)
	necrosis:respiratory epithelium	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)
{Digestive system}																	
stomach		< 0 >				< 0 >				< 0 >				< 0 >			
	hemorrhage	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)
	ulcer:forestomach	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)

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

STUDY NO. : 0639
 ANIMAL : MOUSE B6D2F1/Cr1j[Crj:BDF1]
 REPORT TYPE : A1
 SEX : FEMALE

HISTOPATHOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)
 DEAD AND MORIBUND ANIMALS (0- 3W)

Organ	Findings	240ppm				600ppm			
		0				5			
		1	2	3	4	1	2	3	4
		Grade				Grade			
		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Respiratory system}									
nasal cavit		< 0>				< 5>			
	inflammation:respiratory epithelium	-	-	-	-	5	0	0	0
		(-)	(-)	(-)	(-)	(100)	(0)	(0)	(0)
	ulcer:respiratory epithelium	-	-	-	-	0	0	5	0
		(-)	(-)	(-)	(-)	(0)	(0)	(100)	(0)
	necrosis:olfactory epithelium	-	-	-	-	0	5	0	0
		(-)	(-)	(-)	(-)	(0)	(100)	(0)	(0)
	necrosis:respiratory epithelium	-	-	-	-	0	0	5	0
		(-)	(-)	(-)	(-)	(0)	(0)	(100)	(0)
{Digestive system}									
stomach		< 0>				< 3>			
	hemorrhage	-	-	-	-	0	0	1	0
		(-)	(-)	(-)	(-)	(0)	(0)	(33)	(0)
	ulcer:forestomach	-	-	-	-	1	0	0	0
		(-)	(-)	(-)	(-)	(33)	(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

APPENDIX J 4

HISTOPATHOLOGICAL FINDINGS :
NON-NEOPLASTIC LESIONS : FEMALE
SACRIFICED ANIMALS

STUDY NO. : 0639
 ANIMAL : MOUSE B6D2F1/Crj[Crlj:BDF1]
 REPORT TYPE : A1
 SEX : FEMALE

HISTOPATHOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)
 SACRIFICED ANIMALS (3W)

Organ	Findings	Control				15ppm				38ppm				96ppm			
		No. of Animals on Study				No. of Animals on Study				No. of Animals on Study				No. of Animals on Study			
		Grade				Grade				Grade				Grade			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
(Respiratory system)																	
nasal cavit		< 5>				< 5>				< 5>				< 5>			
	inflammation:respiratory epithelium	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	disarrangement:olfactory epithelium	0	0	0	0	4	0	0	0	3	0	0	0	0	0	0	0
		(0)	(0)	(0)	(0)	(80)	(0)	(0)	(0)	(60)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	ulcer:respiratory epithelium	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	atrophy:olfactory epithelium	0	0	0	0	4	0	0	0	4	1	0	0	2	3	0	0
		(0)	(0)	(0)	(0)	(80)	(0)	(0)	(0)	(80)	(20)	(0)	(0)	(40)	(60)	(0)	(0)
	atrophy:respiratory epithelium	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	necrosis:olfactory epithelium	0	0	0	0	0	0	0	0	1	0	0	0	5	0	0	0
		(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(20)	(0)	(0)	(0)	(100)	(0)	(0)	(0)
	necrosis:respiratory epithelium	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)

Grade 1 : Slight 2 : Moderate 3 : Marked 4 : Severe
 < a > a : Number of animals examined at the site
 b b : Number of animals with lesion
 (c) c : b / a * 100

STUDY NO. : 0639
 ANIMAL : MOUSE B6D2F1/Cr1j[Crj:BDF1]
 REPORT TYPE : A1
 SEX : FEMALE

HISTOPATHOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)
 SACRIFICED ANIMALS (3W)

Organ	Findings	240ppm				600ppm				
		No. of Animals on Study				0				
		Grade	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Respiratory system}										
nasal cavit			< 5 >				< 0 >			
	inflammation:respiratory epithelium		1	0	0	0	-	-	-	-
			(20)	(0)	(0)	(0)	(-)	(-)	(-)	(-)
	disarrangement:olfactory epithelium		0	0	0	0	-	-	-	-
			(0)	(0)	(0)	(0)	(-)	(-)	(-)	(-)
	ulcer:respiratory epithelium		1	0	0	0	-	-	-	-
			(20)	(0)	(0)	(0)	(-)	(-)	(-)	(-)
	atrophy:olfactory epithelium		0	5	0	0	-	-	-	-
			(0)	(100)	(0)	(0)	(-)	(-)	(-)	(-)
	atrophy:respiratory epithelium		0	5	0	0	-	-	-	-
			(0)	(100)	(0)	(0)	(-)	(-)	(-)	(-)
	necrosis:olfactory epithelium		5	0	0	0	-	-	-	-
			(100)	(0)	(0)	(0)	(-)	(-)	(-)	(-)
	necrosis:respiratory epithelium		5	0	0	0	-	-	-	-
			(100)	(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

APPENDIX K

METHODS, UNITS AND DECIMAL PLACE FOR
HEMATOLOGY IN THE 2-WEEK
INHALATION STUDY OF ACRYLIC ACID

METHODS, UNITS AND DECIMAL PLACE FOR HEMATOLOGY
IN THE 2-WEEK INHALATION STUDY OF ACRYLIC ACID

Item	Method ¹⁾	Unit	Decimal place
Hematology			
Red blood cell (RBC)	Light scattering method	$\times 10^6/\mu\text{L}$	2
Hemoglobin(Hgb)	Cyanmethemoglobin method	g/dL	1
Hematocrit(Hct)	Calculated as $\text{RBC} \times \text{MCV}/10$	%	1
Mean corpuscular volume(MCV)	Light scattering method	fL	1
Mean corpuscular hemoglobin(MCH)	Calculated as $\text{Hgb}/\text{RBC} \times 10$	pg	1
Mean corpuscular hemoglobin concentration (MCHC)	Calculated as $\text{Hgb}/\text{Hct} \times 100$	g/dL	1
Platelet	Light scattering method	$\times 10^3/\mu\text{L}$	0
Reticulocyte	Light scattering method	%	1
White blood cell(WBC)	Light scattering method	$\times 10^3/\mu\text{L}$	2

1) Automatic blood cell analyzer (ADVIA120 : Bayer Corporation)