

1 - ブロモブタンのマウスを用いた
吸入による2週間毒性試験報告書

試験番号 : 0481

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APPENDIX A 1

IDENTITY OF 1-BROMOBUTANE IN THE 2-WEEK INHALATION STUDY

IDENTITY OF 1-BROMOBUTANE IN THE 2-WEEK INHALATION STUDY

Test Substance : 1-Bromobutane (Wako Pure Chemical Industries, Ltd.)

Lot No. : ASQ0017

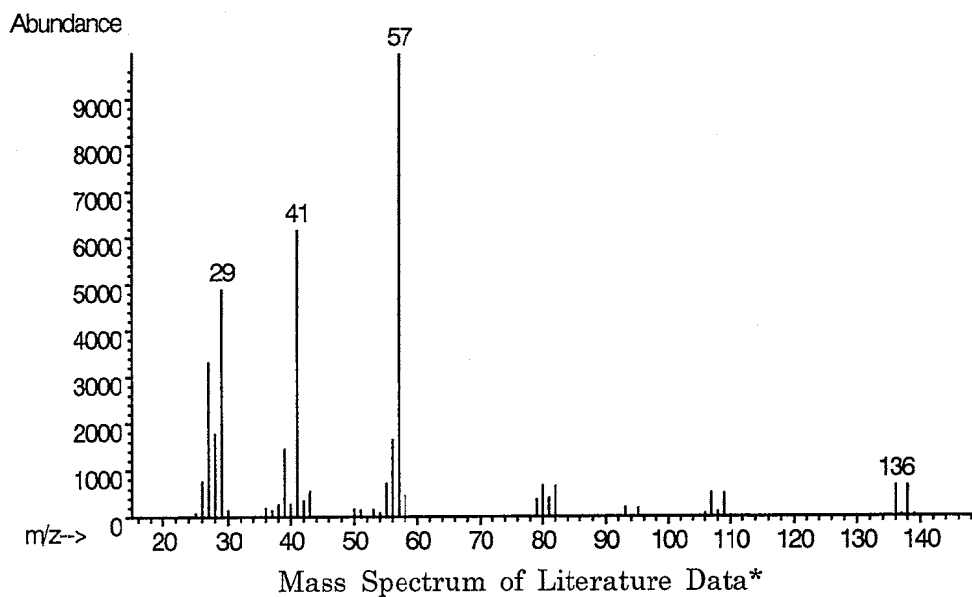
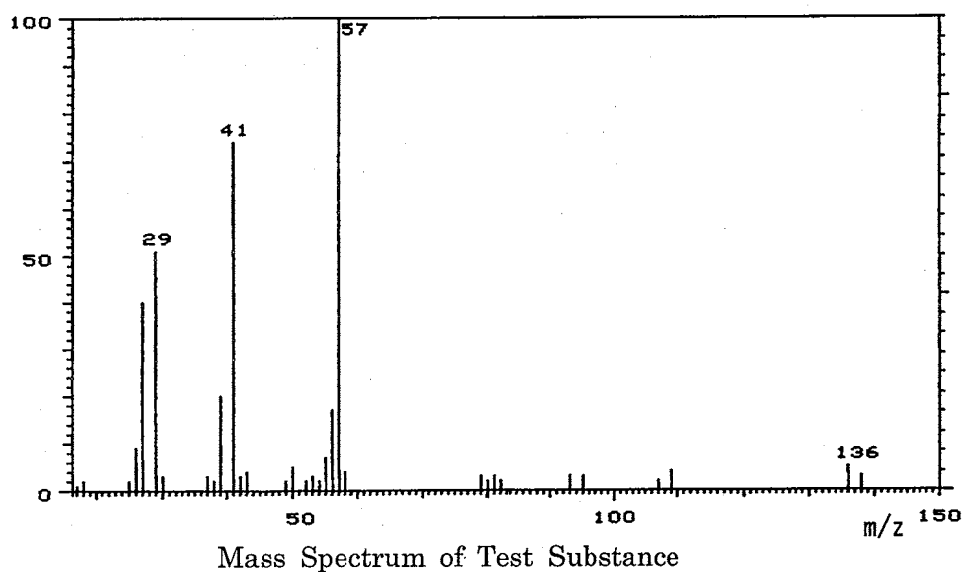
1. Spectral Data

Mass Spectrometry

Instrument : Hitachi M-80B Mass Spectrometer

Ionization : EI (Electron Ionization)

Ionization Voltage : 70eV



Result: The mass spectrum was consistent with literature spectrum.

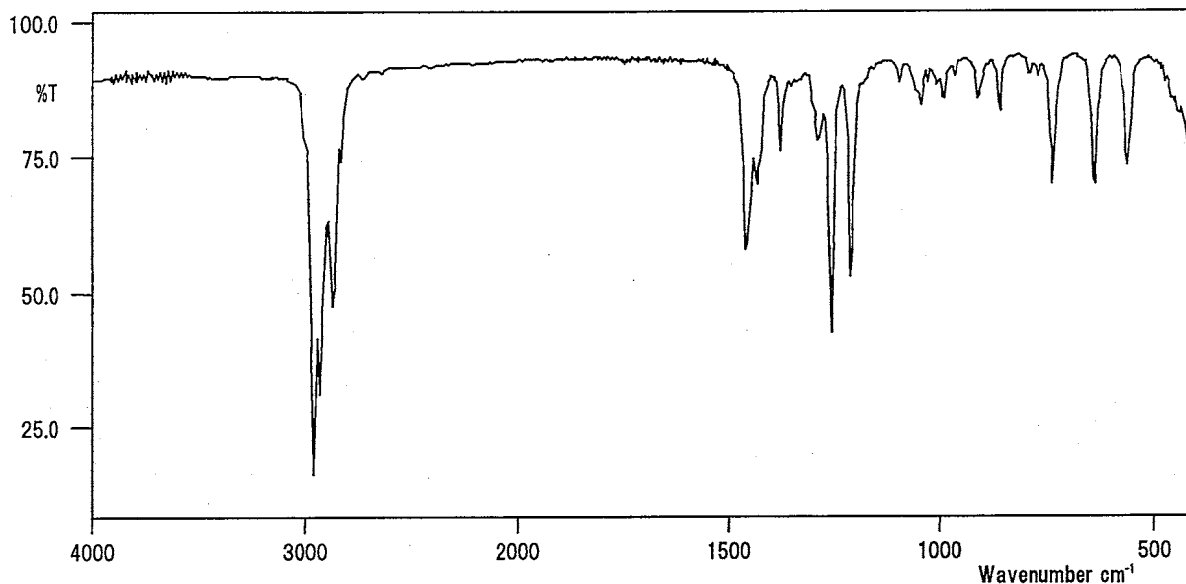
(*McLafferty FW, ed. 1994. Wiley Registry of Mass Spectral Data. 6th ed.
New York, NY:John Wiley and Sons.)

Infrared Spectrometry

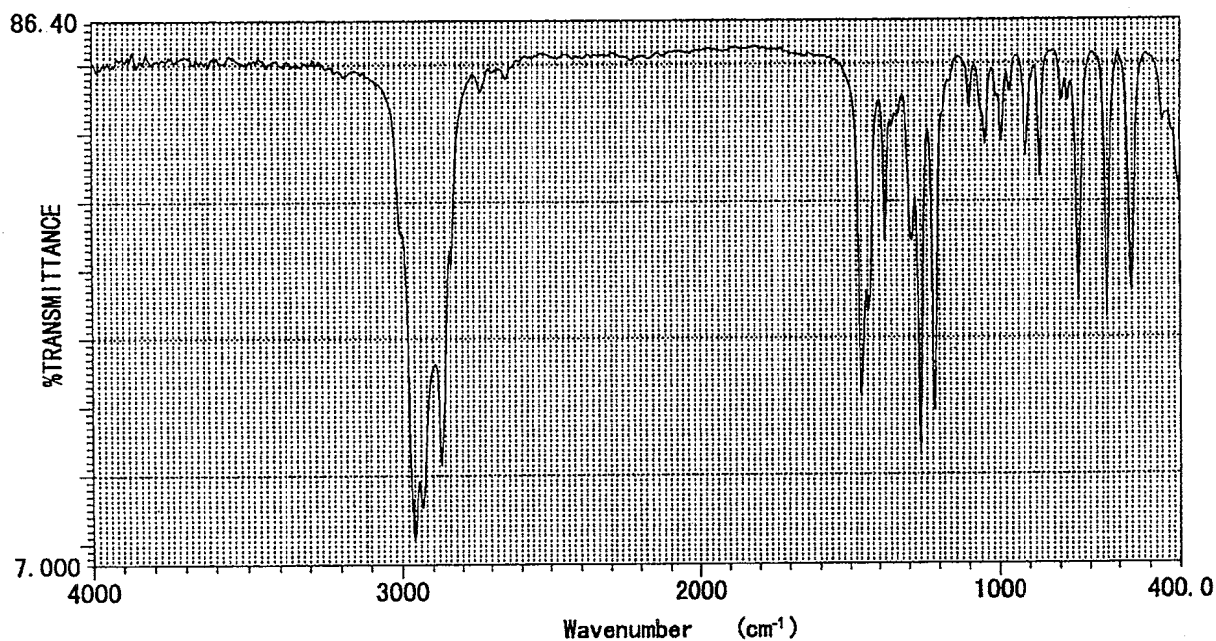
Instrument : Shimadzu FTIR-8200PC Infrared Spectrometer

Cell : KBr Liquid Cell

Resolution : 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 1-bromobutane by mass spectrum and infrared spectrum.

APPENDIX A 2

STABILITY OF 1-BROMOBUTANE IN THE 2-WEEK INHALATION STUDY

STABILITY OF 1-BROMOBUTANE IN THE 2-WEEK INHALATION STUDY

Test Substance : 1-Bromobutane (Wako Pure Chemical Industries, Ltd.)

Lot No. : ASQ0017

1. Sample : This lot was used from 2003.4.9 to 2003.4.22. Test substance was stored in a dark place at room temperature.

2. Gas Chromatography

Instrument : Hewlett Packard 5890A Gas Chromatograph

Column : Methyl Silicone (0.53 mm ϕ \times 60 m)

Column Temperature: 100° C

Flow Rate : 15 mL/min

Detector : FID (Flame Ionization Detector)

Injection Volume : 1 μ L

| Date (date analyzed) | Peak No. | Retention Time (min) | Area (%) |
|-------------------------|----------|-------------------------|-------------|
| 2003.03.19 | 1 | 4.139 | 100 |
| 2003.04.25 | 1 | 4.127 | 100 |

Result: Gas chromatography indicated one major peak (peak No. 1) analyzed on 2003.3.19 and one major peak (peak No. 1) analyzed on 2003.4.25. No new trace impurity peak in the test substance analyzed on 2003.4.25 was detected.

3. Conclusion: The test substance was stable for about 1 month in a dark place at room temperature.

APPENDIX B 1

CONCENTRATION OF 1-BROMOBUTANE IN THE INHALATION CHAMBER OF THE 2-WEEK INHALATION STUDY

CONCENTRATION OF 1-BROMOBUTANE IN THE INHALATION
CHAMBER OF THE 2-WEEK INHALATION STUDY

| Group Name | Concentration(ppm) Mean \pm S.D. |
|------------|---------------------------------------|
| Control | 0.0 \pm 0.0 |
| 500ppm | 500.3 \pm 2.5 |
| 1000ppm | 1000.5 \pm 3.6 |
| 2000ppm | 2000.6 |
| 4000ppm | 4003.7 |
| 8000ppm | 8034.9 |

APPENDIX B 2

ENVIRONMENTAL CONDITIONS OF INHALATION CHAMBER IN THE 2-WEEK INHALATION STUDY OF 1-BROMOBUTANE

ENVIRONMENTAL CONDITIONS OF INHALATION CHAMBER IN THE 2-WEEK
INHALATION STUDY OF 1-BROMOBUTANE

| Group Name | Temperature (°C) Mean ± S.D. | Humidity (%) Mean ± S.D. | Ventilation Rate (L/min) Mean ± S.D. | Air Change (time/h) Mean |
|------------|------------------------------------|--------------------------------|--|--------------------------------|
| Control | 22.6 ± 0.1 | 59.1 ± 0.6 | 104.6 ± 0.3 | 12.1 |
| 500ppm | 22.3 ± 0.1 | 60.5 ± 0.4 | 104.2 ± 0.4 | 12.0 |
| 1000ppm | 22.2 ± 0.1 | 60.7 ± 0.5 | 104.6 ± 1.5 | 12.1 |
| 2000ppm | 22.2 ± 0.4 | 61.1 ± 0.6 | 104.5 ± 0.8 | 12.1 |
| 4000ppm | 22.3 | 58.6 | 106.0 | 12.2 |
| 8000ppm | 22.5 | 53.8 | 106.5 | 12.3 |

APPENDIX C 1

CLINICAL OBSERVATION : SUMMARY,
MOUSE : MALE

(2-WEEK STUDY)

STUDY NO. : 0481
 ANIMAL : MOUSE Crj:BDF1
 REPORT TYPE : A1 2

CLINICAL OBSERVATION (SUMMARY)
 ALL ANIMALS

SEX : MALE

PAGE : 1

| Clinical sign | Group Name | Administration Week-day | | | | | |
|-------------------------|------------|-------------------------|-----|-----|-----|-----|-----|
| | | 1-1 | 1-2 | 1-4 | 1-7 | 2-3 | 2-7 |
| LOCOMOTOR MOVEMENT DECR | Control | 0 | 0 | 0 | 0 | 0 | 0 |
| | 500ppm | 0 | 0 | 0 | 0 | 0 | 0 |
| | 1000ppm | 5 | 0 | 1 | - | - | - |
| | 2000ppm | 4 | - | - | - | - | - |
| | 4000ppm | - | - | - | - | - | - |
| | 8000ppm | - | - | - | - | - | - |
| HUNCHBACK POSITION | Control | 0 | 0 | 0 | 0 | 0 | 0 |
| | 500ppm | 0 | 0 | 0 | 0 | 0 | 0 |
| | 1000ppm | 0 | 1 | 1 | - | - | - |
| | 2000ppm | 0 | - | - | - | - | - |
| | 4000ppm | - | - | - | - | - | - |
| | 8000ppm | - | - | - | - | - | - |
| PILORECTION | Control | 0 | 0 | 0 | 0 | 0 | 0 |
| | 500ppm | 0 | 0 | 0 | 0 | 0 | 0 |
| | 1000ppm | 5 | 1 | 1 | - | - | - |
| | 2000ppm | 4 | - | - | - | - | - |
| | 4000ppm | - | - | - | - | - | - |
| | 8000ppm | - | - | - | - | - | - |
| SOILED PERI-GENITALIA | Control | 0 | 0 | 0 | 0 | 0 | 0 |
| | 500ppm | 0 | 0 | 0 | 0 | 0 | 0 |
| | 1000ppm | 0 | 0 | 1 | - | - | - |
| | 2000ppm | 0 | - | - | - | - | - |
| | 4000ppm | - | - | - | - | - | - |
| | 8000ppm | - | - | - | - | - | - |
| IRREGULAR BREATHING | Control | 0 | 0 | 0 | 0 | 0 | 0 |
| | 500ppm | 0 | 0 | 0 | 0 | 0 | 0 |
| | 1000ppm | 5 | 0 | 0 | - | - | - |
| | 2000ppm | 4 | - | - | - | - | - |
| | 4000ppm | - | - | - | - | - | - |
| | 8000ppm | - | - | - | - | - | - |
| BRADYPNEA | Control | 0 | 0 | 0 | 0 | 0 | 0 |
| | 500ppm | 0 | 0 | 0 | 0 | 0 | 0 |
| | 1000ppm | 0 | 0 | 1 | - | - | - |
| | 2000ppm | 4 | - | - | - | - | - |
| | 4000ppm | - | - | - | - | - | - |
| | 8000ppm | - | - | - | - | - | - |

STUDY NO. : 0481
ANIMAL : MOUSE 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 | 1-4 | 1-7 | 2-3 | 2-7 |
| SUBNORMAL TEMP | Control | 0 | 0 | 0 | 0 | 0 | 0 |
| | 500ppm | 0 | 0 | 0 | 0 | 0 | 0 |
| | 1000ppm | 0 | 0 | 0 | - | - | - |
| | 2000ppm | 4 | - | - | - | - | - |
| | 4000ppm | - | - | - | - | - | - |
| | 8000ppm | - | - | - | - | - | - |

(HAN190)

BAIS 4

APPENDIX C 2

CLINICAL OBSERVATION : SUMMARY,
MOUSE : FEMALE

(2-WEEK STUDY)

STUDY NO. : 0481
 ANIMAL : MOUSE Crj:BDF1
 REPORT TYPE : A1 2

CLINICAL OBSERVATION (SUMMARY)
 ALL ANIMALS

SEX : FEMALE

PAGE : 3

| Clinical sign | Group Name | Administration Week-day | | | | | |
|-------------------------|------------|-------------------------|-----|-----|-----|-----|-----|
| | | 1-1 | 1-2 | 1-4 | 1-7 | 2-3 | 2-7 |
| LOCOMOTOR MOVEMENT DECR | Control | 0 | 0 | 0 | 0 | 0 | 0 |
| | 500ppm | 0 | 0 | 0 | 0 | 0 | 0 |
| | 1000ppm | 0 | 0 | 0 | 0 | 0 | 0 |
| | 2000ppm | 5 | - | - | - | - | - |
| | 4000ppm | - | - | - | - | - | - |
| | 8000ppm | - | - | - | - | - | - |
| HUNCHBACK POSITION | Control | 0 | 0 | 0 | 0 | 0 | 0 |
| | 500ppm | 0 | 0 | 0 | 0 | 0 | 0 |
| | 1000ppm | 0 | 0 | 0 | 0 | 2 | 2 |
| | 2000ppm | 0 | - | - | - | - | - |
| | 4000ppm | - | - | - | - | - | - |
| | 8000ppm | - | - | - | - | - | - |
| PILOERECTION | Control | 0 | 0 | 0 | 0 | 0 | 0 |
| | 500ppm | 0 | 0 | 0 | 0 | 0 | 0 |
| | 1000ppm | 0 | 0 | 0 | 0 | 1 | 0 |
| | 2000ppm | 5 | - | - | - | - | - |
| | 4000ppm | - | - | - | - | - | - |
| | 8000ppm | - | - | - | - | - | - |
| IRREGULAR BREATHING | Control | 0 | 0 | 0 | 0 | 0 | 0 |
| | 500ppm | 0 | 0 | 0 | 0 | 0 | 0 |
| | 1000ppm | 0 | 0 | 0 | 0 | 0 | 2 |
| | 2000ppm | 5 | - | - | - | - | - |
| | 4000ppm | - | - | - | - | - | - |
| | 8000ppm | - | - | - | - | - | - |
| BRADYPNEA | Control | 0 | 0 | 0 | 0 | 0 | 0 |
| | 500ppm | 0 | 0 | 0 | 0 | 0 | 0 |
| | 1000ppm | 0 | 0 | 0 | 0 | 0 | 0 |
| | 2000ppm | 5 | - | - | - | - | - |
| | 4000ppm | - | - | - | - | - | - |
| | 8000ppm | - | - | - | - | - | - |
| SUBNORMAL TEMP | Control | 0 | 0 | 0 | 0 | 0 | 0 |
| | 500ppm | 0 | 0 | 0 | 0 | 0 | 0 |
| | 1000ppm | 0 | 0 | 0 | 0 | 0 | 0 |
| | 2000ppm | 5 | - | - | - | - | - |
| | 4000ppm | - | - | - | - | - | - |
| | 8000ppm | - | - | - | - | - | - |

APPENDIX D 1

BODY WEIGHT CHANGES : SUMMARY,
MOUSE : MALE

(2-WEEK STUDY)

STUDY NO. : 0481
 ANIMAL : MOUSE Crj:BDF1
 UNIT : g
 REPORT TYPE : A1 2
 SEX : MALE

BODY WEIGHT CHANGES (SUMMARY)
 ALL ANIMALS

PAGE : 1

| Group Name | Administration week-day | | | | | |
|------------|-------------------------|-----------|-----------|-----------|-----------|-----------|
| | 0-0 | 1-2 | 1-4 | 1-7 | 2-3 | 2-7 |
| Control | 23.1± 1.2 | 23.5± 1.0 | 23.8± 1.0 | 24.4± 1.2 | 24.8± 1.3 | 25.3± 1.3 |
| 500ppm | 23.1± 1.3 | 22.6± 1.1 | 23.2± 0.9 | 23.5± 1.2 | 25.0± 1.3 | 24.8± 1.0 |
| 1000ppm ! | 23.1± 1.2 | 19.7 | 17.2 | - | - | - |
| 2000ppm | 23.1± 1.3 | - | - | - | - | - |
| 4000ppm | 23.1± 0.9 | - | - | - | - | - |
| 8000ppm | 23.1± 0.8 | - | - | - | - | - |

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

Test of t

! : Significant test is not applied to this group.

APPENDIX D 2

BODY WEIGHT CHANGES : SUMMARY, MOUSE : FEMALE

(2-WEEK STUDY)

STUDY NO. : 0481
 ANIMAL : MOUSE Crj:BDF1
 UNIT : g
 REPORT TYPE : A1 2
 SEX : FEMALE

BODY WEIGHT CHANGES (SUMMARY)
 ALL ANIMALS

PAGE : 2

| Group Name | Administration week-day | | | | | |
|------------|-------------------------|-----------|-----------|-----------|------------|-------------|
| | 0-0 | 1-2 | 1-4 | 1-7 | 2-3 | 2-7 |
| Control | 19.2± 0.8 | 19.2± 0.8 | 19.4± 0.3 | 19.6± 0.8 | 20.7± 0.8 | 20.8± 0.6 |
| 500ppm | 19.1± 0.9 | 18.5± 1.3 | 19.3± 0.8 | 19.3± 1.2 | 20.4± 0.9 | 19.6± 1.0 |
| 1000ppm | 19.1± 0.9 | 18.2± 0.3 | 19.0± 0.5 | 19.1± 0.3 | 18.6± 1.4* | 17.5± 1.3** |
| 2000ppm | 19.2± 0.8 | - | - | - | - | - |
| 4000ppm | 19.2± 0.9 | - | - | - | - | - |
| 8000ppm | 19.2± 0.8 | - | - | - | - | - |

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

Test of Dunnett

(HAN260)

BAIS 4

APPENDIX E 1

FOOD CONSUMPTION CHANGES : SUMMARY, MOUSE : MALE

(2-WEEK STUDY)

STUDY NO. : 0481
ANIMAL : MOUSE 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± 0.4 | 4.2± 0.4 |
| 500ppm | 4.1± 0.3 | 4.5± 0.2 |
| 1000ppm | - | - |
| 2000ppm | - | - |
| 4000ppm | - | - |
| 8000ppm | - | - |

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

Test of t

(HAN260)

BAIS 4

APPENDIX E 2

FOOD CONSUMPTION CHANGES : SUMMARY,
MOUSE : FEMALE

(2-WEEK STUDY)

STUDY NO. : 0481
ANIMAL : MOUSE 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 | 3.5± 0.3 | 3.7± 0.3 |
| 500ppm | 3.7± 0.2 | 3.9± 0.1 |
| 1000ppm | 3.7± 0.2 | 3.3± 0.5 |
| 2000ppm | - | - |
| 4000ppm | - | - |
| 8000ppm | - | - |

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

Test of Dunnett

(HAN260)

BAIS 4

APPENDIX F 1

HEMATOLOGY : SUMMARY,
MOUSE : MALE

(2-WEEK STUDY)

STUDY NO. : 0481
 ANIMAL : MOUSE Crj:BDF1
 MEASURE. TIME : 1
 SEX : MALE

HEMATOLOGY (SUMMARY)
 ALL ANIMALS (3W)

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 | 5 | 11.08± | 0.34 | 16.4± | 0.5 | 51.1± | 2.0 | 46.1± | 0.9 | 14.8± | 0.2 | 32.1± | 0.3 | 1242± | 56 |
| 500ppm | 4 | 10.40± | 0.21** | 15.3± | 0.3** | 48.2± | 0.8* | 46.4± | 0.2 | 14.8± | 0.2 | 31.8± | 0.2 | 1262± | 59 |
| 1000ppm | 0 | - | | - | | - | | - | | - | | - | | - | |
| 2000ppm | 0 | - | | - | | - | | - | | - | | - | | - | |
| 4000ppm | 0 | - | | - | | - | | - | | - | | - | | - | |
| 8000ppm | 0 | - | | - | | - | | - | | - | | - | | - | |

Significant difference ; * : $P \leq 0.05$

** : $P \leq 0.01$

Test of t

(HCL070)

BAIS 4

STUDY NO. : 0481
ANIMAL : MOUSE Crj:BDF1
MEASURE. TIME : 1
SEX : MALE

HEMATOLOGY (SUMMARY)
ALL ANIMALS (3W)

REPORT TYPE : A1

PAGE : 2

| Group Name | NO. of Animals | WBC 10 ³ /μl | | Differential N-BAND | | WBC (%) N-SEG | | EOSINO | | BASO | | MONO | | LYMPHO | | OTHER | |
|------------|-------------------|----------------------------|------|------------------------|---|------------------|----|--------|---|------|---|------|---|--------|----|-------|---|
| Control | 5 | 1.50± | 0.71 | 0± | 1 | 16± | 7 | 2± | 1 | 0± | 0 | 1± | 1 | 80± | 5 | 0± | 0 |
| 500ppm | 4 | 2.74± | 1.03 | 1± | 1 | 7± | 1* | 2± | 1 | 0± | 0 | 1± | 1 | 89± | 1* | 0± | 0 |
| 1000ppm | 0 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 2000ppm | 0 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 4000ppm | 0 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 8000ppm | 0 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |

Significant difference ; * : $P \leq 0.05$

** : $P \leq 0.01$

Test of t

(HCL070)

BAIS 4

APPENDIX F 2

HEMATOLOGY : SUMMARY,
MOUSE : FEMALE

(2-WEEK STUDY)

STUDY NO. : 0481
 ANIMAL : MOUSE Crj:BDF1
 MEASURE TIME : 1
 SEX : FEMALE

HEMATOLOGY (SUMMARY)
 ALL ANIMALS (3W)

REPORT TYPE : A1

PAGE : 3

| Group Name | NO. of Animals | RED BLOOD CELL 10 ⁶ /μl | | HEMOGLOBIN g/dl | | HEMATOCRIT % | | MCV fl | | MCH pg | | MCHC g/dl | | PLATELET 10 ⁹ /μl | |
|------------|-------------------|---------------------------------------|--------|--------------------|-------|-----------------|-------|-----------|-----|-----------|------|--------------|-----|---------------------------------|----|
| Control | 5 | 11.14± | 0.19 | 16.5± | 0.2 | 51.0± | 0.8 | 45.8± | 0.2 | 14.8± | 0.1 | 32.4± | 0.3 | 1115± | 50 |
| 500ppm | 5 | 10.46± | 0.23** | 15.7± | 0.4* | 48.4± | 0.9** | 46.3± | 0.7 | 15.0± | 0.1* | 32.5± | 0.4 | 1112± | 98 |
| 1000ppm | 5 | 10.49± | 0.29** | 15.5± | 0.5** | 47.4± | 1.4** | 45.2± | 0.7 | 14.7± | 0.1 | 32.6± | 0.6 | 1218± | 69 |
| 2000ppm | 0 | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 4000ppm | 0 | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 8000ppm | 0 | - | - | - | - | - | - | - | - | - | - | - | - | - | - |

Significant difference : * : $P \leq 0.05$

** : $P \leq 0.01$

Test of Dunnett

(HCL070)

BAIS4

STUDY NO. : 0481
 ANIMAL : MOUSE Crj:BDF1
 MEASURE. TIME : 1
 SEX : FEMALE

HEMATOLOGY (SUMMARY)
 ALL ANIMALS (3W)

REPORT TYPE : A1

PAGE : 4

| Group Name | NO. of Animals | WBC 1 O ³ /μl | | Differential N-BAND | | WBC (%) N-SEG | | EOSINO | | BASO | | MONO | | LYMPHO | | OTHER | |
|------------|-------------------|-----------------------------|-------|------------------------|---|------------------|---|--------|---|------|---|------|---|--------|---|-------|---|
| Control | 5 | 1.84± | 0.79 | 1± | 1 | 11± | 4 | 1± | 1 | 0± | 0 | 1± | 1 | 87± | 4 | 0± | 0 |
| 500ppm | 5 | 1.33± | 0.23 | 0± | 1 | 13± | 5 | 3± | 2 | 0± | 0 | 1± | 1 | 83± | 6 | 0± | 0 |
| 1000ppm | 5 | 0.78± | 0.45* | 0± | 0 | 15± | 4 | 3± | 3 | 0± | 0 | 2± | 2 | 80± | 4 | 0± | 0 |
| 2000ppm | 0 | - | | - | | - | | - | | - | | - | | - | | - | |
| 4000ppm | 0 | - | | - | | - | | - | | - | | - | | - | | - | |
| 8000ppm | 0 | - | | - | | - | | - | | - | | - | | - | | - | |

Significant difference : * : $P \leq 0.05$

** : $P \leq 0.01$

Test of Dunnett

(HCL070)

BAIS 4

APPENDIX G 1

BIOCHEMISTRY : SUMMARY,
MOUSE : MALE

(2-WEEK STUDY)

STUDY NO. : 0481
 ANIMAL : MOUSE Crj:BDF1
 MEASURE. TIME : 1
 SEX : MALE

BIOCHEMISTRY (SUMMARY)
 ALL ANIMALS (3W)

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 | 5 | 5.2± | 0.3 | 3.0± | 0.0 | 1.4± | 0.1 | 0.16± | 0.04 | 224± | 27 | 75± | 10 | 32± | 16 |
| 500ppm | 5 | 4.9± | 0.1* | 2.9± | 0.2 | 1.4± | 0.2 | 0.16± | 0.02 | 252± | 21 | 100± | 15* | 24± | 7 |
| 1000ppm | 0 | - | | - | | - | | - | | - | | - | | - | |
| 2000ppm | 0 | - | | - | | - | | - | | - | | - | | - | |
| 4000ppm | 0 | - | | - | | - | | - | | - | | - | | - | |
| 8000ppm | 0 | - | | - | | - | | - | | - | | - | | - | |

Significant difference : * : $P \leq 0.05$

** : $P \leq 0.01$

Test of t

STUDY NO. : 0481
 ANIMAL : MOUSE Crj:BDF1
 MEASURE. TIME : 1
 SEX : MALE

BIOCHEMISTRY (SUMMARY)
 ALL ANIMALS (3W)

REPORT TYPE : A1

PAGE : 2

| Group Name | NO. of Animals | PHOSPHOLIPID mg/dl | | GOT I U / ℓ | | GPT I U / ℓ | | LDH I U / ℓ | | ALP I U / ℓ | | G-GTP I U / ℓ | | CPK I U / ℓ | |
|------------|-------------------|-----------------------|----|----------------|---|----------------|---|----------------|-----|----------------|------|------------------|---|----------------|-----|
| Control | 5 | 165± | 21 | 42± | 6 | 20± | 6 | 265± | 146 | 280± | 16 | 1± | 1 | 161± | 127 |
| 500ppm | 5 | 177± | 20 | 37± | 4 | 20± | 6 | 178± | 63 | 249± | 12** | 2± | 1 | 56± | 21 |
| 1000ppm | 0 | - | | - | | - | | - | | - | | - | | - | |
| 2000ppm | 0 | - | | - | | - | | - | | - | | - | | - | |
| 4000ppm | 0 | - | | - | | - | | - | | - | | - | | - | |
| 8000ppm | 0 | - | | - | | - | | - | | - | | - | | - | |

Significant difference ; * : $P \leq 0.05$

** : $P \leq 0.01$

Test of t

(HCL074)

BAIS 4

STUDY NO. : 0481

ANIMAL : MOUSE Crj:BDF1

MEASURE. TIME : 1

SEX : MALE

REPORT TYPE : A1

BIOCHEMISTRY (SUMMARY)

ALL ANIMALS (3W)

PAGE : 3

| Group Name | NO. of Animals | UREA NITROGEN mg/dl | | SODIUM mEq/l | | POTASSIUM mEq/l | | CHLORIDE mEq/l | | CALCIUM mg/dl | | INORGANIC PHOSPHORUS mg/dl | |
|------------|-------------------|------------------------|-------|-----------------|---|--------------------|-----|-------------------|----|------------------|-----|-------------------------------|-----|
| Control | 5 | 28.3± | 3.8 | 149± | 1 | 5.1± | 0.6 | 118± | 2 | 8.7± | 0.1 | 5.9± | 1.2 |
| 500ppm | 5 | 14.7± | 1.4** | 148± | 1 | 4.9± | 0.4 | 121± | 2* | 8.7± | 0.2 | 7.1± | 1.0 |
| 1000ppm | 0 | - | | - | | - | | - | | - | | - | |
| 2000ppm | 0 | - | | - | | - | | - | | - | | - | |
| 4000ppm | 0 | - | | - | | - | | - | | - | | - | |
| 8000ppm | 0 | - | | - | | - | | - | | - | | - | |

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

Test of t

(HCL074)

BAIS 4

APPENDIX G 2

BIOCHEMISTRY : SUMMARY,
MOUSE : FEMALE

(2-WEEK STUDY)

STUDY NO. : 0481
ANIMAL : MOUSE Crj:BDF1
MEASURE. TIME : 1
SEX : FEMALE

BIOCHEMISTRY (SUMMARY)
ALL ANIMALS (3W)

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 | 5 | 5.3± | 0.2 | 3.5± | 0.2 | 2.0± | 0.3 | 0.15± | 0.03 | 172± | 28 | 75± | 9 | 19± | 7 |
| 500ppm | 5 | 5.1± | 0.1 | 3.3± | 0.0 | 1.8± | 0.1 | 0.15± | 0.02 | 223± | 16 | 92± | 10 | 21± | 7 |
| 1000ppm | 5 | 5.4± | 0.2 | 3.6± | 0.2 | 2.0± | 0.3 | 0.18± | 0.02 | 188± | 67 | 109± | 23** | 17± | 12 |
| 2000ppm | 0 | - | | - | | - | | - | | - | | - | | - | |
| 4000ppm | 0 | - | | - | | - | | - | | - | | - | | - | |
| 8000ppm | 0 | - | | - | | - | | - | | - | | - | | - | |

Significant difference : * : $P \leq 0.05$

** : $P \leq 0.01$

Test of Dunnett

(HCL074)

BAIS 4

STUDY NO. : 0481

ANIMAL : MOUSE Crj:BDF1

MEASURE. TIME : 1

SEX : FEMALE

REPORT TYPE : A1

BIOCHEMISTRY (SUMMARY)

ALL ANIMALS (3W)

PAGE : 5

| Group Name | NO. of Animals | PHOSPHOLIPID mg/dl | | GOT I U / l | | GPT I U / l | | LDH I U / l | | ALP I U / l | | G-GTP I U / l | | CPK I U / l | |
|------------|-------------------|-----------------------|----|----------------|----|----------------|---|----------------|----|----------------|------|------------------|---|----------------|----|
| Control | 5 | 153± | 10 | 49± | 7 | 22± | 5 | 259± | 82 | 413± | 46 | 1± | 1 | 123± | 72 |
| 500ppm | 5 | 154± | 14 | 41± | 3 | 21± | 4 | 190± | 71 | 328± | 12** | 1± | 1 | 65± | 52 |
| 1000ppm | 5 | 160± | 43 | 56± | 11 | 24± | 6 | 253± | 60 | 340± | 46* | 1± | 1 | 53± | 32 |
| 2000ppm | 0 | - | | - | | - | | - | | - | | - | | - | |
| 4000ppm | 0 | - | | - | | - | | - | | - | | - | | - | |
| 8000ppm | 0 | - | | - | | - | | - | | - | | - | | - | |

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

Test of Dunnett

(HCL074)

BAIS 4

STUDY NO. : 0481
ANIMAL : MOUSE Crj:BDF1
MEASURE. TIME : 1
SEX : FEMALE

BIOCHEMISTRY (SUMMARY)
ALL ANIMALS (3W)

REPORT TYPE : A1

PAGE : 6

| Group Name | NO. of Animals | UREA NITROGEN mg/dl | | SODIUM mEq/l | | POTASSIUM mEq/l | | CHLORIDE mEq/l | | CALCIUM mg/dl | | INORGANIC PHOSPHORUS mg/dl | |
|------------|-------------------|------------------------|-------|-----------------|---|--------------------|-----|-------------------|---|------------------|-----|-------------------------------|-----|
| Control | 5 | 24.7± | 2.8 | 150± | 2 | 4.6± | 0.3 | 119± | 1 | 8.7± | 0.2 | 6.3± | 1.6 |
| 500ppm | 5 | 13.4± | 3.0** | 147± | 1 | 4.4± | 0.4 | 118± | 1 | 8.4± | 0.4 | 6.4± | 1.3 |
| 1000ppm | 5 | 14.3± | 7.1** | 147± | 3 | 4.1± | 0.3 | 119± | 4 | 8.6± | 0.3 | 6.5± | 1.0 |
| 2000ppm | 0 | - | | - | | - | | - | | - | | - | |
| 4000ppm | 0 | - | | - | | - | | - | | - | | - | |
| 8000ppm | 0 | - | | - | | - | | - | | - | | - | |

Significant difference ; * : $P \leq 0.05$

** : $P \leq 0.01$

Test of Dunnett

(HCL074)

BAIS 4

APPENDIX H 1

GROSS FINDINGS : SUMMARY,
MOUSE : MALE :
DEAD AND MORIBUND ANIMALS
(2-WEEK STUDY)

STUDY NO. : 0481
ANIMAL : MOUSE Crj:BDF1
REPORT TYPE : A1
SEX : MALE

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

PAGE : 1

| Organ | Findings | Group Name NO. of Animals | Control | 500ppm | 1000ppm | 2000ppm |
|-------|-----------------------------------|------------------------------|---------|--------|---------|---------|
| | | | 0 (%) | 0 (%) | 5 (%) | 5 (%) |
| lung | red | | - (-) | - (-) | 0 (0) | 1 (20) |
| | red zone | | - (-) | - (-) | 1 (20) | 3 (60) |
| liver | white zone | | - (-) | - (-) | 1 (20) | 0 (0) |
| | red zone | | - (-) | - (-) | 1 (20) | 0 (0) |
| | accentuation of lobular structure | | - (-) | - (-) | 2 (40) | 0 (0) |

(HPT080)

BAIS 4

STUDY NO. : 0481
ANIMAL : MOUSE 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 | 4000ppm | | 8000ppm | |
|-------|-----------------------------------|------------------------------|---------|-------|---------|-------|
| | | | 5 | (%) | 5 | (%) |
| lung | red | | 0 | (0) | 0 | (0) |
| | red zone | | 2 | (40) | 3 | (60) |
| liver | white zone | | 0 | (0) | 0 | (0) |
| | red zone | | 0 | (0) | 0 | (0) |
| | accentuation of lobular structure | | 0 | (0) | 0 | (0) |

(HPT080)

BAIS 4

APPENDIX H 2

GROSS FINDINGS : SUMMARY,
MOUSE : MALE :
SACRIFICED ANIMALS
(2-WEEK STUDY)

STUDY NO. : 0481
ANIMAL : MOUSE Crj:BDF1
REPORT TYPE : A1
SEX : MALE

GROSS FINDINGS (SUMMARY)
SACRIFICED ANIMALS (3W)

PAGE : 1

| Organ | Findings | Group Name NO. of Animals | Control | 500ppm | 1000ppm | 2000ppm |
|-------------|------------|------------------------------|---------|---------|---------|---------|
| | | | 5 (%) | 5 (%) | 0 (%) | 0 (%) |
| spleen | black zone | | 0 (0) | 1 (20) | - (-) | - (-) |
| forestomach | thick | | 0 (0) | 1 (20) | - (-) | - (-) |
| liver | white zone | | 0 (0) | 1 (20) | - (-) | - (-) |

(HPT080)

BAIS 4

STUDY NO. : 0481
ANIMAL : MOUSE Crj:BDF1
REPORT TYPE : A1
SEX : MALE

GROSS FINDINGS (SUMMARY)
SACRIFICED ANIMALS (3W)

PAGE : 2

| Organ | Findings | Group Name | 4000ppm | | 8000ppm | |
|-------------|------------|----------------|---------|------|---------|------|
| | | NO. of Animals | 0 | (%) | 0 | (%) |
| spleen | black zone | | - | (-) | - | (-) |
| forestomach | thick | | - | (-) | - | (-) |
| liver | white zone | | - | (-) | - | (-) |

(HPT080)

BAIS 4

APPENDIX H 3

GROSS FINDINGS : SUMMARY,
MOUSE : FEMALE :
DEAD AND MORIBUND ANIMALS
(2-WEEK STUDY)

STUDY NO. : 0481
ANIMAL : MOUSE Crj:BDF1
REPORT TYPE : A1
SEX : FEMALE

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

PAGE : 3

| Organ | Findings | Group Name NO. of Animals | Control | 500ppm | 1000ppm | 2000ppm |
|-------------|-----------------------------------|------------------------------|---------|--------|---------|---------|
| | | | 0 (%) | 0 (%) | 0 (%) | 5 (%) |
| lung | red | | - (-) | - (-) | - (-) | 1 (20) |
| | red zone | | - (-) | - (-) | - (-) | 3 (60) |
| spleen | black zone | | - (-) | - (-) | - (-) | 1 (20) |
| liver | accentuation of lobular structure | | - (-) | - (-) | - (-) | 5 (100) |
| thoracic ca | pleural fluid | | - (-) | - (-) | - (-) | 3 (60) |

(HPT080)

BAIS 4

STUDY NO. : 0481
ANIMAL : MOUSE Crj:BDF1
REPORT TYPE : A1
SEX : FEMALE

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

PAGE : 4

| Organ | Findings | Group Name NO. of Animals | 4000ppm | | 8000ppm | |
|-------------|-----------------------------------|------------------------------|---------|------|---------|-------|
| | | | 5 | (%) | 5 | (%) |
| lung | red | | 0 | (0) | 0 | (0) |
| | red zone | | 0 | (0) | 3 | (60) |
| spleen | black zone | | 0 | (0) | 0 | (0) |
| liver | accentuation of lobular structure | | 0 | (0) | 0 | (0) |
| thoracic ca | pleural fluid | | 0 | (0) | 0 | (0) |

(HPT080)

BAIS 4

APPENDIX H 4

GROSS FINDINGS : SUMMARY, MOUSE : FEMALE : SACRIFICED ANIMALS (2-WEEK STUDY)

STUDY NO. : 0481
ANIMAL : MOUSE Crj:BDF1
REPORT TYPE : A1
SEX : FEMALE

GROSS FINDINGS (SUMMARY)
SACRIFICED ANIMALS (3W)

PAGE : 3

| Organ | Findings | Group Name NO. of Animals | Control | | 500ppm | | 1000ppm | | 2000ppm | |
|-------------|------------|------------------------------|---------|-------|--------|-------|---------|-------|---------|------|
| | | | 5 | (%) | 5 | (%) | 5 | (%) | 0 | (%) |
| thymus | atrophic | | 0 | (0) | 0 | (0) | 1 | (20) | - | (-) |
| spleen | black zone | | 1 | (20) | 0 | (0) | 0 | (0) | - | (-) |
| forestomach | thick | | 0 | (0) | 1 | (20) | 1 | (20) | - | (-) |
| ovary | cyst | | 1 | (20) | 0 | (0) | 0 | (0) | - | (-) |

(HPT080)

BAIS 4

STUDY NO. : 0481
ANIMAL : MOUSE Crj:BDF1
REPORT TYPE : A1
SEX : FEMALE

GROSS FINDINGS (SUMMARY)
SACRIFICED ANIMALS (3W)

PAGE : 4

| Organ | Findings | Group Name | 4000ppm | | 8000ppm | |
|-------------|------------|----------------|---------|------|---------|------|
| | | NO. of Animals | 0 | (%) | 0 | (%) |
| thymus | atrophic | | - | (-) | - | (-) |
| spleen | black zone | | - | (-) | - | (-) |
| forestomach | thick | | - | (-) | - | (-) |
| ovary | cyst | | - | (-) | - | (-) |

(HPT080)

BAIS 4

APPENDIX I 1

ORGAN WEIGHT, ABSOLUTE : SUMMARY,
MOUSE : MALE

(2-WEEK STUDY)

STUDY NO. : 0481
ANIMAL : MOUSE Crj:BDF1
REPORT TYPE : A1
SEX : MALE
UNIT: g

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

PAGE : 1

| Group Name | NO. of Animals | Body Weight | THYMUS | ADRENALS | TESTES | HEART | LUNGS |
|------------|-------------------|-------------|----------------|--------------|--------------|--------------|--------------|
| Control | 5 | 21.4± 0.9 | 0.049± 0.006 | 0.011± 0.002 | 0.186± 0.021 | 0.126± 0.024 | 0.141± 0.017 |
| 500ppm | 5 | 21.6± 1.0 | 0.028± 0.005** | 0.010± 0.003 | 0.177± 0.020 | 0.123± 0.013 | 0.150± 0.010 |
| 1000ppm | 0 | - | - | - | - | - | - |
| 2000ppm | 0 | - | - | - | - | - | - |
| 4000ppm | 0 | - | - | - | - | - | - |
| 8000ppm | 0 | - | - | - | - | - | - |

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

Test of t

STUDY NO. : 0481
ANIMAL : MOUSE Crj:BDF1
REPORT TYPE : A1
SEX : MALE
UNIT: g

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

PAGE : 2

| Group Name | NO. of Animals | KIDNEYS | | SPLEEN | | LIVER | | BRAIN | |
|------------|-------------------|---------|-------|--------|-------|--------|--------|--------|-------|
| Control | 5 | 0.330± | 0.027 | 0.037± | 0.007 | 0.962± | 0.032 | 0.431± | 0.035 |
| 500ppm | 5 | 0.351± | 0.039 | 0.032± | 0.004 | 1.077± | 0.084* | 0.420± | 0.016 |
| 1000ppm | 0 | - | | - | | - | | - | |
| 2000ppm | 0 | - | | - | | - | | - | |
| 4000ppm | 0 | - | | - | | - | | - | |
| 8000ppm | 0 | - | | - | | - | | - | |

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

Test of t

A

PPENDIX I 2

ORGAN WEIGHT, ABSOLUTE : SUMMARY,
MOUSE : FEMALE

(2-WEEK STUDY)

STUDY NO. : 0481
ANIMAL : MOUSE Crj:BDF1
REPORT TYPE : A1
SEX : FEMALE
UNIT: g

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

PAGE : 3

| Group Name | NO. of Animals | Body Weight | THYMUS | ADRENALS | OVARIES | HEART | LUNGS |
|------------|-------------------|-------------|----------------|--------------|---------------|--------------|---------------|
| Control | 5 | 17.2± 0.8 | 0.061± 0.006 | 0.009± 0.002 | 0.022± 0.005 | 0.102± 0.013 | 0.124± 0.005 |
| 500ppm | 5 | 16.9± 1.0 | 0.032± 0.002** | 0.010± 0.001 | 0.016± 0.004 | 0.096± 0.005 | 0.136± 0.012 |
| 1000ppm | 5 | 15.3± 1.1* | 0.022± 0.009** | 0.011± 0.002 | 0.014± 0.002* | 0.097± 0.015 | 0.137± 0.005* |
| 2000ppm | 0 | - | - | - | - | - | - |
| 4000ppm | 0 | - | - | - | - | - | - |
| 8000ppm | 0 | - | - | - | - | - | - |

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

Test of Dunnett

(HCL040)

BAIS 4

STUDY NO. : 0481
ANIMAL : MOUSE 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 | 0.231± | 0.009 | 0.036± | 0.005 | 0.753± | 0.047 | 0.428± | 0.013 |
| 500ppm | 5 | 0.248± | 0.016 | 0.029± | 0.002 | 0.814± | 0.045 | 0.422± | 0.010 |
| 1000ppm | 5 | 0.236± | 0.010 | 0.026± | 0.006** | 0.806± | 0.060 | 0.414± | 0.008 |
| 2000ppm | 0 | - | | - | | - | | - | |
| 4000ppm | 0 | - | | - | | - | | - | |
| 8000ppm | 0 | - | | - | | - | | - | |

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

Test of Dunnett

APPENDIX J 1

ORGAN WEIGHT, RELATIVE : SUMMARY,
MOUSE : MALE

(2-WEEK STUDY)

STUDY NO. : 0481
ANIMAL : MOUSE Crj:BDF1
REPORT TYPE : A1
SEX : MALE
UNIT: %

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

PAGE : 1

| Group Name | NO. of Animals | Body Weight (g) | THYMUS | ADRENALS | TESTES | HEART | LUNGS |
|------------|-------------------|--------------------|----------------|--------------|--------------|--------------|--------------|
| Control | 5 | 21.4± 0.9 | 0.227± 0.027 | 0.050± 0.008 | 0.866± 0.077 | 0.585± 0.099 | 0.655± 0.068 |
| 500ppm | 5 | 21.6± 1.0 | 0.130± 0.023** | 0.045± 0.013 | 0.820± 0.084 | 0.566± 0.047 | 0.694± 0.019 |
| 1000ppm | 0 | - | - | - | - | - | - |
| 2000ppm | 0 | - | - | - | - | - | - |
| 4000ppm | 0 | - | - | - | - | - | - |
| 8000ppm | 0 | - | - | - | - | - | - |

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

Test of t

(HCL042)

BAIS 4

STUDY NO. : 0481
ANIMAL : MOUSE Crj:BDF1
REPORT TYPE : A1
SEX : MALE
UNIT: %

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

PAGE : 2

| Group Name | NO. of Animals | KIDNEYS | SPLEEN | LIVER | BRAIN |
|------------|-------------------|--------------|--------------|----------------|--------------|
| Control | 5 | 1.538± 0.105 | 0.170± 0.025 | 4.490± 0.215 | 2.009± 0.110 |
| 500ppm | 5 | 1.619± 0.133 | 0.147± 0.012 | 4.974± 0.224** | 1.944± 0.080 |
| 1000ppm | 0 | - | - | - | - |
| 2000ppm | 0 | - | - | - | - |
| 4000ppm | 0 | - | - | - | - |
| 8000ppm | 0 | - | - | - | - |

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

Test of t

(HCL042)

BAIS 4

APPENDIX J 2

ORGAN WEIGHT, RELATIVE : SUMMARY,
MOUSE : FEMALE

(2-WEEK STUDY)

STUDY NO. : 0481
 ANIMAL : MOUSE Crj:BDF1
 REPORT TYPE : A1
 SEX : FEMALE
 UNIT: %

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

PAGE : 3

| Group Name | NO. of Animals | Body Weight (g) | THYMUS | ADRENALS | OVARIES | HEART | LUNGS |
|------------|-------------------|--------------------|----------------|---------------|---------------|--------------|----------------|
| Control | 5 | 17.2± 0.8 | 0.356± 0.043 | 0.050± 0.011 | 0.129± 0.027 | 0.594± 0.050 | 0.719± 0.025 |
| 500ppm | 5 | 16.9± 1.0 | 0.192± 0.018** | 0.057± 0.007 | 0.095± 0.025 | 0.570± 0.037 | 0.802± 0.037 |
| 1000ppm | 5 | 15.3± 1.1* | 0.141± 0.054** | 0.071± 0.011* | 0.092± 0.008* | 0.629± 0.054 | 0.899± 0.085** |
| 2000ppm | 0 | - | - | - | - | - | - |
| 4000ppm | 0 | - | - | - | - | - | - |
| 8000ppm | 0 | - | - | - | - | - | - |

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

Test of Dunnett

STUDY NO. : 0481
ANIMAL : MOUSE 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 | 1.346± 0.012 | 0.208± 0.020 | 4.380± 0.171 | 2.495± 0.170 |
| 500ppm | 5 | 1.470± 0.096* | 0.172± 0.007* | 4.825± 0.104* | 2.504± 0.105 |
| 1000ppm | 5 | 1.546± 0.105** | 0.166± 0.027* | 5.267± 0.310** | 2.710± 0.161 |
| 2000ppm | 0 | - | - | - | - |
| 4000ppm | 0 | - | - | - | - |
| 8000ppm | 0 | - | - | - | - |

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

Test of Dunnett

(HCL042)

BAIS 4

APPENDIX K 1

HISTOPATHOLOGICAL FINDINGS :
NON-NEOPLASTIC LESIONS : SUMMARY,
MOUSE : MALE :
DEAD AND MORIBUND ANIMALS
(2-WEEK STUDY)

STUDY NO. : 0481
 ANIMAL : MOUSE Crj:BDF1
 REPORT TYPE : A1
 SEX : MALE

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

PAGE : 1

| | | Group Name | Control | | | | 500ppm | | | | 1000ppm | | | | 2000ppm | | | |
|------------------------|-------------------------------|-------------------------|---------|-------|-------|-------|--------|-------|-------|-------|---------|--------|--------|-------|---------|--------|--------|-------|
| | | No. of Animals on Study | 0 | | | | 0 | | | | 5 | | | | 5 | | | |
| Organ | Findings | Grade | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 |
| | | | (%) | (%) | (%) | (%) | (%) | (%) | (%) | (%) | (%) | (%) | (%) | (%) | (%) | (%) | (%) | (%) |
| {Respiratory system} | | | | | | | | | | | | | | | | | | |
| nasal cavit | | | < 0> | | | | < 0> | | | | < 5> | | | | < 5> | | | |
| | necrosis:olfactory epithelium | | - | - | - | - | - | - | - | - | 3 | 2 | 0 | 0 | 0 | 2 | 0 | 0 |
| | | | (-) | (-) | (-) | (-) | (-) | (-) | (-) | (-) | (60) | (40) | (0) | (0) | (0) | (40) | (0) | (0) |
| lung | | | < 0> | | | | < 0> | | | | < 5> | | | | < 5> | | | |
| | congestion | | - | - | - | - | - | - | - | - | 1 | 0 | 0 | 0 | 0 | 4 | 1 | 0 |
| | | | (-) | (-) | (-) | (-) | (-) | (-) | (-) | (-) | (20) | (0) | (0) | (0) | (0) | (80) | (20) | (0) |
| | hemorrhage | | - | - | - | - | - | - | - | - | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |
| | | | (-) | (-) | (-) | (-) | (-) | (-) | (-) | (-) | (0) | (0) | (0) | (0) | (0) | (20) | (0) | (0) |
| | edema | | - | - | - | - | - | - | - | - | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |
| | | (-) | (-) | (-) | (-) | (-) | (-) | (-) | (-) | (0) | (0) | (0) | (0) | (0) | (20) | (0) | (0) | |
| | edema:perivascular | | - | - | - | - | - | - | - | 3 | 2 | 0 | 0 | 4 | 1 | 0 | 0 | |
| | | | (-) | (-) | (-) | (-) | (-) | (-) | (-) | (-) | (60) | (40) | (0) | (0) | (80) | (20) | (0) | (0) |
| {Hematopoietic system} | | | | | | | | | | | | | | | | | | |
| thymus | | | < 0> | | | | < 0> | | | | < 5> | | | | < 5> | | | |
| | atrophy | | - | - | - | - | - | - | - | - | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 |
| | | | (-) | (-) | (-) | (-) | (-) | (-) | (-) | (-) | (0) | (0) | (20) | (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. : 0481
 ANIMAL : MOUSE Crj:BDF1
 REPORT TYPE : A1
 SEX : MALE

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

PAGE : 2

| | | Group Name | 4000ppm | | | | 8000ppm | | | |
|------------------------|-------------------------------|-------------------------|---------|-------|------|------|---------|------|------|------|
| | | No. of Animals on Study | 5 | | | | 5 | | | |
| Organ | Findings | Grade | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 |
| | | | (%) | (%) | (%) | (%) | (%) | (%) | (%) | (%) |
| {Respiratory system} | | | | | | | | | | |
| nasal cavit | | | < 5> | | | | < 5> | | | |
| | necrosis:olfactory epithelium | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | (0) | (0) | (0) | (0) | (0) | (0) | (0) | (0) |
| lung | | | < 5> | | | | < 5> | | | |
| | congestion | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | (0) | (0) | (0) | (0) | (0) | (0) | (0) | (0) |
| | hemorrhage | | 0 | 2 | 0 | 0 | 3 | 0 | 0 | 0 |
| | | | (0) | (40) | (0) | (0) | (60) | (0) | (0) | (0) |
| | edema | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | (0) | (0) | (0) | (0) | (0) | (0) | (0) | (0) |
| | edema:perivascular | | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | (80) | (0) | (0) | (0) | (0) | (0) | (0) | (0) | |
| {Hematopoietic system} | | | | | | | | | | |
| thymus | | | < 5> | | | | < 5> | | | |
| | atrophy | | 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. : 0481
 ANIMAL : MOUSE Crj:BDF1
 REPORT TYPE : A1
 SEX : MALE

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

PAGE : 3

| | | Group Name | Control | | | | 500ppm | | | | 1000ppm | | | | 2000ppm | | | |
|------------------------|-------------------------|-------------------------|---------|-------|-------|-------|--------|-------|-------|-------|---------|--------|--------|-------|---------|--------|-------|-------|
| | | No. of Animals on Study | 0 | | | | 0 | | | | 5 | | | | 5 | | | |
| | | Grade | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 |
| Organ | Findings | | (%) | (%) | (%) | (%) | (%) | (%) | (%) | (%) | (%) | (%) | (%) | (%) | (%) | (%) | (%) | (%) |
| | | | | | | | | | | | | | | | | | | |
| {Hematopoietic system} | | | | | | | | | | | | | | | | | | |
| spleen | | | < 0> | | | | < 0> | | | | < 5> | | | | < 5> | | | |
| | atrophy | | - | - | - | - | - | - | - | - | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | (-) | (-) | (-) | (-) | (-) | (-) | (-) | (-) | (20) | (0) | (0) | (0) | (0) | (0) | (0) | (0) |
| | | | | | | | | | | | | | | | | | | |
| {Circulatory system} | | | | | | | | | | | | | | | | | | |
| heart | | | < 0> | | | | < 0> | | | | < 5> | | | | < 5> | | | |
| | hemorrhage | | - | - | - | - | - | - | - | - | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 |
| | | | (-) | (-) | (-) | (-) | (-) | (-) | (-) | (-) | (0) | (0) | (0) | (0) | (60) | (0) | (0) | (0) |
| | ground glass appearance | | - | - | - | - | - | - | - | - | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | (-) | (-) | (-) | (-) | (-) | (-) | (-) | (-) | (0) | (80) | (0) | (0) | (0) | (0) | (0) | (0) |
| | | | | | | | | | | | | | | | | | | |
| {Digestive system} | | | | | | | | | | | | | | | | | | |
| liver | | | < 0> | | | | < 0> | | | | < 5> | | | | < 5> | | | |
| | necrosis:central | | - | - | - | - | - | - | - | - | 0 | 0 | 1 | 0 | 5 | 0 | 0 | 0 |
| | | | (-) | (-) | (-) | (-) | (-) | (-) | (-) | (-) | (0) | (0) | (20) | (0) | (100) | (0) | (0) | (0) |
| | vacuolic change | | - | - | - | - | - | - | - | - | 5 | 0 | 0 | 0 | 4 | 1 | 0 | 0 |
| | | | (-) | (-) | (-) | (-) | (-) | (-) | (-) | (-) | (100) | (0) | (0) | (0) | (80) | (20) | (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. : 0481
 ANIMAL : MOUSE Crj:BDF1
 REPORT TYPE : A1
 SEX : MALE

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

PAGE : 4

| | | Group Name | 4000ppm | | | | 8000ppm | | | |
|------------------------|-------------------------|-------------------------|---------|-------|------|------|---------|-------|------|------|
| | | No. of Animals on Study | 5 | | | | 5 | | | |
| Organ | Findings | Grade | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 |
| | | | (%) | (%) | (%) | (%) | (%) | (%) | (%) | (%) |
| <hr/> | | | | | | | | | | |
| {Hematopoietic system} | | | | | | | | | | |
| spleen | | | < 5> | | | | < 5> | | | |
| | atrophy | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | (0) | (0) | (0) | (0) | (0) | (0) | (0) | (0) |
| {Circulatory system} | | | | | | | | | | |
| heart | | | < 5> | | | | < 5> | | | |
| | hemorrhage | | 3 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | (60) | (40) | (0) | (0) | (0) | (0) | (0) | (0) |
| | ground glass appearance | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | (0) | (0) | (0) | (0) | (0) | (0) | (0) | (0) |
| {Digestive system} | | | | | | | | | | |
| liver | | | < 5> | | | | < 5> | | | |
| | necrosis:central | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | (0) | (0) | (0) | (0) | (0) | (0) | (0) | (0) |
| | vacuolic change | | 5 | 0 | 0 | 0 | 1 | 4 | 0 | 0 |
| | | | (100) | (0) | (0) | (0) | (20) | (80) | (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. : 0481
ANIMAL : MOUSE Crj:BDF1
REPORT TYPE : A1
SEX : MALE

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

PAGE : 5

| | | Group Name | Control | | | | 500ppm | | | | 1000ppm | | | | 2000ppm | | | |
|-----------------------|-----------------------------------|-------------------------|---------|-------|-------|-------|--------|-------|-------|-------|---------|--------|---------|-------|---------|--------|-------|-------|
| | | No. of Animals on Study | 0 | | | | 0 | | | | 5 | | | | 5 | | | |
| Organ | Findings | Grade | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 |
| | | | (%) | (%) | (%) | (%) | (%) | (%) | (%) | (%) | (%) | (%) | (%) | (%) | (%) | (%) | (%) | (%) |
| {Digestive system} | | | | | | | | | | | | | | | | | | |
| liver | | | < 0> | | | | < 0> | | | | < 5> | | | | < 5> | | | |
| | hydropic change | | - | - | - | - | - | - | - | - | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | (-) | (-) | (-) | (-) | (-) | (-) | (-) | (-) | (20) | (0) | (0) | (0) | (0) | (0) | (0) | (0) |
| | | | | | | | | | | | | | | | | | | |
| | hemorrhage:central | | - | - | - | - | - | - | - | - | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 |
| | | | (-) | (-) | (-) | (-) | (-) | (-) | (-) | (-) | (0) | (0) | (100) | (0) | (0) | (0) | (0) | (0) |
| | hemorrhage:portal | | - | - | - | - | - | - | - | - | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |
| | | | (-) | (-) | (-) | (-) | (-) | (-) | (-) | (-) | (0) | (0) | (0) | (0) | (0) | (20) | (0) | (0) |
| {Urinary system} | | | | | | | | | | | | | | | | | | |
| kidney | | | < 0> | | | | < 0> | | | | < 5> | | | | < 5> | | | |
| | tubular necrosis:proximale tubule | | - | - | - | - | - | - | - | - | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 |
| | | | (-) | (-) | (-) | (-) | (-) | (-) | (-) | (-) | (0) | (0) | (20) | (0) | (0) | (0) | (0) | (0) |
| {Reproductive system} | | | | | | | | | | | | | | | | | | |
| testis | | | < 0> | | | | < 0> | | | | < 5> | | | | < 5> | | | |
| | germ cell necrosis | | - | - | - | - | - | - | - | - | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 |
| | | | (-) | (-) | (-) | (-) | (-) | (-) | (-) | (-) | (0) | (20) | (0) | (0) | (20) | (0) | (0) | (0) |

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

STUDY NO. : 0481
ANIMAL : MOUSE Crj:BDF1
REPORT TYPE : A1
SEX : MALE

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

PAGE : 6

| Organ_____ | Findings_____ | Group Name | | 4000ppm | | | | 8000ppm | | | |
|-----------------------|----------------------------------|-------------------------|--|---------|-------|-------|------|---------|------|------|------|
| | | No. of Animals on Study | | 5 | | | | 5 | | | |
| | | Grade | | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 |
| | | | | (%) | (%) | (%) | (%) | (%) | (%) | (%) | (%) |
| {Digestive system} | | | | | | | | | | | |
| liver | | | | | | | | | | | |
| | hydropic change | | | < 5> | | | | < 5> | | | |
| | | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | (0) | (0) | (0) | (0) | (0) | (0) | (0) | (0) |
| | hemorrhage:central | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | (0) | (0) | (0) | (0) | (0) | (0) | (0) | (0) |
| | hemorrhage:portal | | | 0 | 2 | 3 | 0 | 0 | 0 | 0 | 0 |
| | | | | (0) | (40) | (60) | (0) | (0) | (0) | (0) | (0) |
| {Urinary system} | | | | | | | | | | | |
| kidney | | | | | | | | | | | |
| | tubular necrosis:proximal tubule | | | < 5> | | | | < 5> | | | |
| | | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | (0) | (0) | (0) | (0) | (0) | (0) | (0) | (0) |
| {Reproductive system} | | | | | | | | | | | |
| testis | | | | | | | | | | | |
| | germ cell necrosis | | | < 5> | | | | < 5> | | | |
| | | | | 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

APPENDIX K 2

HISTOPATHOLOGICAL FINDINGS :
NON-NEOPLASTIC LESIONS : SUMMARY,
MOUSE : MALE :
SACRIFICED ANIMALS
(2-WEEK STUDY)

STUDY NO. : 0481
 ANIMAL : MOUSE Crj:BDF1
 REPORT TYPE : A1
 SEX : MALE

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

PAGE : 1

| Organ | Findings | Group Name No. of Animals on Study Grade | Control 5 | | | | 500ppm 5 | | | | 1000ppm 0 | | | | 2000ppm 0 | | | |
|------------------------|------------------------------|--|--------------|------|------|------|-------------|------|------|------|--------------|------|------|------|--------------|------|------|------|
| | | | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 |
| | | | (%) | (%) | (%) | (%) | (%) | (%) | (%) | (%) | (%) | (%) | (%) | (%) | (%) | (%) | (%) | (%) |
| {Respiratory system} | | | | | | | | | | | | | | | | | | |
| nasal cavit | atrophy:olfactory epithelium | | < 5> | | | | < 5> | | | | < 0> | | | | < 0> | | | |
| | | | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 0 | - | - | - | - | - | - | - | - |
| | | | (0) | (0) | (0) | (0) | (100) | (0) | (0) | (0) | (-) | (-) | (-) | (-) | (-) | (-) | (-) | (-) |
| lung | basophilic change:bronchiole | | < 5> | | | | < 5> | | | | < 0> | | | | < 0> | | | |
| | | | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 0 | - | - | - | - | - | - | - | - |
| | | | (0) | (0) | (0) | (0) | (100) | (0) | (0) | (0) | (-) | (-) | (-) | (-) | (-) | (-) | (-) | (-) |
| {Hematopoietic system} | | | | | | | | | | | | | | | | | | |
| thymus | atrophy | | < 5> | | | | < 5> | | | | < 0> | | | | < 0> | | | |
| | | | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | - | - | - | - | - | - | - | - |
| | | | (0) | (0) | (0) | (0) | (40) | (0) | (0) | (0) | (-) | (-) | (-) | (-) | (-) | (-) | (-) | (-) |
| spleen | deposit of melanin | | < 5> | | | | < 5> | | | | < 0> | | | | < 0> | | | |
| | | | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | - | - | - | - | - | - | - | - |
| | | | (0) | (0) | (0) | (0) | (20) | (0) | (0) | (0) | (-) | (-) | (-) | (-) | (-) | (-) | (-) | (-) |
| {Digestive system} | | | | | | | | | | | | | | | | | | |
| stomach | erosion:forestomach | | < 5> | | | | < 5> | | | | < 0> | | | | < 0> | | | |
| | | | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | - | - | - | - | - | - | - | - |
| | | | (0) | (0) | (0) | (0) | (20) | (0) | (0) | (0) | (-) | (-) | (-) | (-) | (-) | (-) | (-) | (-) |

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

STUDY NO. : 0481
 ANIMAL : MOUSE Crj:BDF1
 REPORT TYPE : A1
 SEX : MALE

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

PAGE : 2

| Organ | Findings | 4000ppm | | | | 8000ppm | | | |
|------------------------|------------------------------|---------|-------|-------|-------|---------|-------|-------|-------|
| | | 0 | | | | 0 | | | |
| | | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 |
| | | (%) | (%) | (%) | (%) | (%) | (%) | (%) | (%) |
| {Respiratory system} | | | | | | | | | |
| nasal cavit | | < 0> | | | | < 0> | | | |
| | atrophy:olfactory epithelium | - | - | - | - | - | - | - | - |
| | | (-) | (-) | (-) | (-) | (-) | (-) | (-) | (-) |
| lung | | < 0> | | | | < 0> | | | |
| | basophilic change:bronchiole | - | - | - | - | - | - | - | - |
| | | (-) | (-) | (-) | (-) | (-) | (-) | (-) | (-) |
| {Hematopoietic system} | | | | | | | | | |
| thymus | | < 0> | | | | < 0> | | | |
| | atrophy | - | - | - | - | - | - | - | - |
| | | (-) | (-) | (-) | (-) | (-) | (-) | (-) | (-) |
| spleen | | < 0> | | | | < 0> | | | |
| | deposit of melanin | - | - | - | - | - | - | - | - |
| | | (-) | (-) | (-) | (-) | (-) | (-) | (-) | (-) |
| {Digestive system} | | | | | | | | | |
| stomach | | < 0> | | | | < 0> | | | |
| | erosion:forestomach | - | - | - | - | - | - | - | - |
| | | (-) | (-) | (-) | (-) | (-) | (-) | (-) | (-) |

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. : 0481
 ANIMAL : MOUSE Crj:BDF1
 REPORT TYPE : A1
 SEX : MALE

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

PAGE : 3

| Organ | Findings | Group Name | Control | | | | 500ppm | | | | 1000ppm | | | | 2000ppm | | | |
|-------|----------|-------------------------|---------|-----|-----|-----|--------|-----|-----|-----|---------|-----|-----|-----|---------|-----|-----|-----|
| | | No. of Animals on Study | 5 | | | | 5 | | | | 0 | | | | 0 | | | |
| | | Grade | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 |
| | | | (%) | (%) | (%) | (%) | (%) | (%) | (%) | (%) | (%) | (%) | (%) | (%) | (%) | (%) | (%) | (%) |

| | | | | | | | | | | | | | | | | | | | | | |
|--------------------|-------------------------|-------|-------|-------|-------|-------|-------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--|--|
| {Digestive system} | | | | | | | | | | | | | | | | | | | | | |
| stomach | | | < 5> | | | | | < 5> | | | | | < 0> | | | | | < 0> | | | |
| | hyperplasia:forestomach | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | - | - | - | - | - | - | - | - | | |
| | | (0) | (0) | (0) | (0) | (0) | (0) | (40) | (0) | (0) | (0) | (-) | (-) | (-) | (-) | (-) | (-) | (-) | (-) | | |
| liver | | | < 5> | | | | | < 5> | | | | | < 0> | | | | | < 0> | | | |
| | necrosis:focal | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | - | - | - | - | - | - | - | - | | |
| | | (0) | (0) | (0) | (0) | (0) | (0) | (20) | (0) | (0) | (0) | (-) | (-) | (-) | (-) | (-) | (-) | (-) | (-) | | |

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

(HPT150)

BAIS4

STUDY NO. : 0481
 ANIMAL : MOUSE Crj:BDF1
 REPORT TYPE : A1
 SEX : MALE

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

PAGE : 4

| | | Group Name | 4000ppm | | | | 8000ppm | | | |
|--------------------|-------------------------|-------------------------|----------|----------|----------|----------|----------|----------|----------|----------|
| | | No. of Animals on Study | 0 | | | | 0 | | | |
| Organ_____ | Findings_____ | Grade | <u>1</u> | <u>2</u> | <u>3</u> | <u>4</u> | <u>1</u> | <u>2</u> | <u>3</u> | <u>4</u> |
| | | | (%) | (%) | (%) | (%) | (%) | (%) | (%) | (%) |
| <hr/> | | | | | | | | | | |
| {Digestive system) | | | | | | | | | | |
| stomach | | | < 0> | | | | < 0> | | | |
| | hyperplasia:forestomach | | - | - | - | - | - | - | - | - |
| | | | (-) | (-) | (-) | (-) | (-) | (-) | (-) | (-) |
| liver | | | < 0> | | | | < 0> | | | |
| | necrosis:focal | | - | - | - | - | - | - | - | - |
| | | | (-) | (-) | (-) | (-) | (-) | (-) | (-) | (-) |

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

(HPT150)

BAIS4

APPENDIX K 3

HISTOPATHOLOGICAL FINDINGS :
NON-NEOPLASTIC LESIONS : SUMMARY,
MOUSE : FEMALE :
DEAD AND MORIBUND ANIMALS
(2-WEEK STUDY)

STUDY NO. : 0481
 ANIMAL : MOUSE Crj:BDF1
 REPORT TYPE : A1
 SEX : FEMALE

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

PAGE : 7

| Organ | Findings | Group Name | Control | | | | 500ppm | | | | 1000ppm | | | | 2000ppm | | | |
|------------------------|-------------------------------|-------------------------|---------|-----|-----|-----|--------|-----|-----|-----|---------|-----|------|------|---------|-----|-----|-----|
| | | No. of Animals on Study | 0 | | | | 0 | | | | 0 | | | | 5 | | | |
| | | Grade | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 |
| | | | (%) | (%) | (%) | (%) | (%) | (%) | (%) | (%) | (%) | (%) | (%) | (%) | (%) | (%) | (%) | (%) |
| {Respiratory system} | | | | | | | | | | | | | | | | | | |
| nasal cavit | necrosis:olfactory epithelium | | < 0> | | | | < 0> | | | | < 0> | | | | < 5> | | | |
| | | - | - | - | - | - | - | - | - | - | - | - | - | 4 | 0 | 0 | 0 | |
| | (-) | (-) | (-) | (-) | (-) | (-) | (-) | (-) | (-) | (-) | (-) | (-) | (80) | (0) | (0) | (0) | | |
| lung | congestion | | < 0> | | | | < 0> | | | | < 0> | | | | < 5> | | | |
| | | - | - | - | - | - | - | - | - | - | - | - | - | 1 | 1 | 0 | 0 | |
| | | (-) | (-) | (-) | (-) | (-) | (-) | (-) | (-) | (-) | (-) | (-) | (-) | (20) | (20) | (0) | (0) | |
| | hemorrhage | | - | - | - | - | - | - | - | - | - | - | - | - | 0 | 0 | 0 | 0 |
| | | (-) | (-) | (-) | (-) | (-) | (-) | (-) | (-) | (-) | (-) | (-) | (-) | (0) | (0) | (0) | (0) | |
| | edema:perivascular | | - | - | - | - | - | - | - | - | - | - | - | 4 | 1 | 0 | 0 | |
| | | (-) | (-) | (-) | (-) | (-) | (-) | (-) | (-) | (-) | (-) | (-) | (-) | (80) | (20) | (0) | (0) | |
| {Hematopoietic system} | | | | | | | | | | | | | | | | | | |
| spleen | deposit of melanin | | < 0> | | | | < 0> | | | | < 0> | | | | < 5> | | | |
| | | - | - | - | - | - | - | - | - | - | - | - | - | 1 | 0 | 0 | 0 | |
| | (-) | (-) | (-) | (-) | (-) | (-) | (-) | (-) | (-) | (-) | (-) | (-) | (20) | (0) | (0) | (0) | | |
| {Circulatory system} | | | | | | | | | | | | | | | | | | |
| heart | hemorrhage | | < 0> | | | | < 0> | | | | < 0> | | | | < 5> | | | |
| | | - | - | - | - | - | - | - | - | - | - | - | - | 2 | 0 | 0 | 0 | |
| | (-) | (-) | (-) | (-) | (-) | (-) | (-) | (-) | (-) | (-) | (-) | (-) | (40) | (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. : 0481
 ANIMAL : MOUSE Crj:BDF1
 REPORT TYPE : A1
 SEX : FEMALE

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

PAGE : 8

| | | 4000ppm | | | | 8000ppm | | | |
|------------------------|-------------------------------|-------------------------|------|------|------|-------------------------|------|------|------|
| | | No. of Animals on Study | | | | No. of Animals on Study | | | |
| | | Grade | | | | Grade | | | |
| Organ | Findings | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 |
| | | (%) | (%) | (%) | (%) | (%) | (%) | (%) | (%) |
| {Respiratory system} | | | | | | | | | |
| nasal cavit | | < 5> | | | | < 5> | | | |
| | necrosis:olfactory epithelium | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | (0) | (0) | (0) | (0) | (0) | (0) | (0) | (0) |
| lung | | < 5> | | | | < 5> | | | |
| | congestion | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | (0) | (0) | (0) | (0) | (0) | (0) | (0) | (0) |
| | hemorrhage | 1 | 0 | 0 | 0 | 3 | 0 | 0 | 0 |
| | | (20) | (0) | (0) | (0) | (60) | (0) | (0) | (0) |
| | edema:perivascular | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | (20) | (0) | (0) | (0) | (0) | (0) | (0) | (0) |
| {Hematopoietic system} | | | | | | | | | |
| spleen | | < 5> | | | | < 5> | | | |
| | deposit of melanin | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | (0) | (0) | (0) | (0) | (0) | (0) | (0) | (0) |
| {Circulatory system} | | | | | | | | | |
| heart | | < 5> | | | | < 5> | | | |
| | hemorrhage | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | (20) | (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. : 0481
 ANIMAL : MOUSE Crj:BDF1
 REPORT TYPE : A1
 SEX : FEMALE

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

PAGE : 9

| | | Group Name | Control | | | | 500ppm | | | | 1000ppm | | | | 2000ppm | | | |
|----------------------|-------------------------|-------------------------|---------|-------|-------|-------|--------|-------|-------|-------|---------|-------|-------|-------|---------|--------|---------|-------|
| | | No. of Animals on Study | 0 | | | | 0 | | | | 0 | | | | 5 | | | |
| Organ | Findings | Grade | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 |
| | | | (%) | (%) | (%) | (%) | (%) | (%) | (%) | (%) | (%) | (%) | (%) | (%) | (%) | (%) | (%) | (%) |
| {Circulatory system} | | | | | | | | | | | | | | | | | | |
| heart | | | < 0> | | | | < 0> | | | | < 0> | | | | < 5> | | | |
| | ground glass appearance | | - | - | - | - | - | - | - | - | - | - | - | - | 0 | 3 | 2 | 0 |
| | | | (-) | (-) | (-) | (-) | (-) | (-) | (-) | (-) | (-) | (-) | (-) | (-) | (0) | (60) | (40) | (0) |
| {Digestive system} | | | | | | | | | | | | | | | | | | |
| liver | | | < 0> | | | | < 0> | | | | < 0> | | | | < 5> | | | |
| | vacuolic change | | - | - | - | - | - | - | - | - | - | - | - | - | 4 | 0 | 0 | 0 |
| | | | (-) | (-) | (-) | (-) | (-) | (-) | (-) | (-) | (-) | (-) | (-) | (-) | (80) | (0) | (0) | (0) |
| | hemorrhage:central | | - | - | - | - | - | - | - | - | - | - | - | - | 0 | 0 | 5 | 0 |
| | | | (-) | (-) | (-) | (-) | (-) | (-) | (-) | (-) | (-) | (-) | (-) | (-) | (0) | (0) | (100) | (0) |
| | hemorrhage:portal | | - | - | - | - | - | - | - | - | - | - | - | - | 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

(HPT150)

BAIS4

STUDY NO. : 0481
 ANIMAL : MOUSE Crj:BDF1
 REPORT TYPE : A1
 SEX : FEMALE

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

PAGE : 10

| | | Group Name | 4000ppm | | | | 8000ppm | | | |
|----------------------|-------------------------|-------------------------|----------|----------|----------|----------|----------|----------|----------|----------|
| | | No. of Animals on Study | 5 | | | | 5 | | | |
| Organ | Findings | Grade | <u>1</u> | <u>2</u> | <u>3</u> | <u>4</u> | <u>1</u> | <u>2</u> | <u>3</u> | <u>4</u> |
| | | | (%) | (%) | (%) | (%) | (%) | (%) | (%) | (%) |
| {Circulatory system} | | | | | | | | | | |
| heart | | | < 5> | | | | < 5> | | | |
| | ground glass appearance | | 0 | 3 | 1 | 0 | 0 | 0 | 0 | 0 |
| | | | (0) | (60) | (20) | (0) | (0) | (0) | (0) | (0) |
| {Digestive system} | | | | | | | | | | |
| liver | | | < 5> | | | | < 5> | | | |
| | vacuolic change | | 0 | 5 | 0 | 0 | 0 | 5 | 0 | 0 |
| | | | (0) | (100) | (0) | (0) | (0) | (100) | (0) | (0) |
| | hemorrhage:central | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | (0) | (0) | (0) | (0) | (0) | (0) | (0) | (0) |
| | hemorrhage:portal | | 0 | 3 | 1 | 0 | 0 | 0 | 0 | 0 |
| | | | (0) | (60) | (20) | (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

(HPT150)

BAIS4

APPENDIX K 4

HISTOPATHOLOGICAL FINDINGS :
NON-NEOPLASTIC LESIONS : SUMMARY,
MOUSE : FEMALE :
SACRIFICED ANIMALS
(2-WEEK STUDY)

STUDY NO. : 0481
ANIMAL : MOUSE Crj:BDF1
REPORT TYPE : A1
SEX : FEMALE

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

PAGE : 5

| | | Group Name | Control | | | | 500ppm | | | | 1000ppm | | | | 2000ppm | | | |
|------------------------|------------------------------|-------------------------|---------|------|------|-------|--------|------|------|-------|---------|------|------|------|---------|------|------|------|
| | | No. of Animals on Study | 5 | | | | 5 | | | | 5 | | | | 0 | | | |
| Organ | Findings | Grade | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 |
| | | | | | | | | | | | | | | | | | | |
| {Respiratory system} | | | | | | | | | | | | | | | | | | |
| nasal cavit | atrophy:olfactory epithelium | | < 5> | | | | < 5> | | | | < 5> | | | | < 0> | | | |
| | | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 0 | 5 | 0 | 0 | 0 | - | - | - | - | |
| | | (0) | (0) | (0) | (0) | (100) | (0) | (0) | (0) | (100) | (0) | (0) | (0) | (0) | (-) | (-) | (-) | (-) |
| lung | basophilic change:bronchiole | | < 5> | | | | < 5> | | | | < 5> | | | | < 0> | | | |
| | | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 0 | 5 | 0 | 0 | 0 | - | - | - | - | |
| | | (0) | (0) | (0) | (0) | (100) | (0) | (0) | (0) | (100) | (0) | (0) | (0) | (0) | (-) | (-) | (-) | (-) |
| {Hematopoietic system} | | | | | | | | | | | | | | | | | | |
| thymus | atrophy | | < 5> | | | | < 5> | | | | < 5> | | | | < 0> | | | |
| | | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 5 | 0 | 0 | 0 | - | - | - | - | |
| | | (0) | (0) | (0) | (0) | (80) | (0) | (0) | (0) | (100) | (0) | (0) | (0) | (-) | (-) | (-) | (-) | |
| spleen | deposit of melanin | | < 5> | | | | < 5> | | | | < 5> | | | | < 0> | | | |
| | | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | - | - | - | - | |
| | | (20) | (0) | (0) | (0) | (0) | (0) | (0) | (0) | (0) | (0) | (0) | (0) | (0) | (-) | (-) | (-) | (-) |
| {Digestive system} | | | | | | | | | | | | | | | | | | |
| stomach | erosion:forestomach | | < 5> | | | | < 5> | | | | < 5> | | | | < 0> | | | |
| | | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | - | - | - | - | |
| | | (0) | (0) | (0) | (0) | (20) | (0) | (0) | (0) | (0) | (20) | (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. : 0481
 ANIMAL : MOUSE Crj:BDF1
 REPORT TYPE : A1
 SEX : FEMALE

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

PAGE : 6

| | | Group Name | | | | 4000ppm | | | | 8000ppm | | | |
|------------------------|------------------------------|-------------------------|-------|-------|-------|---------|-------|-------|-------|---------|-------|-------|-------|
| | | No. of Animals on Study | | | | 0 | | | | 0 | | | |
| Organ | Findings | Grade | | | | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 |
| | | | | | | (%) | (%) | (%) | (%) | (%) | (%) | (%) | (%) |
| {Respiratory system} | | | | | | | | | | | | | |
| nasal cavit | | < 0> | | | | < 0> | | | | | | | |
| | atrophy:olfactory epithelium | - | - | - | - | - | - | - | - | - | - | - | - |
| | | (-) | (-) | (-) | (-) | (-) | (-) | (-) | (-) | (-) | (-) | (-) | (-) |
| lung | | < 0> | | | | < 0> | | | | | | | |
| | basophilic change:bronchiole | - | - | - | - | - | - | - | - | - | - | - | - |
| | | (-) | (-) | (-) | (-) | (-) | (-) | (-) | (-) | (-) | (-) | (-) | (-) |
| {Hematopoietic system} | | | | | | | | | | | | | |
| thymus | | < 0> | | | | < 0> | | | | | | | |
| | atrophy | - | - | - | - | - | - | - | - | - | - | - | - |
| | | (-) | (-) | (-) | (-) | (-) | (-) | (-) | (-) | (-) | (-) | (-) | (-) |
| spleen | | < 0> | | | | < 0> | | | | | | | |
| | deposit of melanin | - | - | - | - | - | - | - | - | - | - | - | - |
| | | (-) | (-) | (-) | (-) | (-) | (-) | (-) | (-) | (-) | (-) | (-) | (-) |
| {Digestive system} | | | | | | | | | | | | | |
| stomach | | < 0> | | | | < 0> | | | | | | | |
| | erosion:forestomach | - | - | - | - | - | - | - | - | - | - | - | - |
| | | (-) | (-) | (-) | (-) | (-) | (-) | (-) | (-) | (-) | (-) | (-) | (-) |

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. : 0481
 ANIMAL : MOUSE Crj:BDF1
 REPORT TYPE : A1
 SEX : FEMALE

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

PAGE : 7

| Organ | Findings | Group Name No. of Animals on Study | | | | Control | | | | 500ppm | | | | 1000ppm | | | | 2000ppm | | | |
|-----------------------|-------------------------|---------------------------------------|------|------|------|---------|------|------|------|--------|------|-------|------|---------|-------|-------|-------|---------|-------|------|------|
| | | Grade | | | | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 |
| | | (%) | (%) | (%) | (%) | (%) | (%) | (%) | (%) | (%) | (%) | (%) | (%) | (%) | (%) | (%) | (%) | (%) | (%) | (%) | (%) |
| {Digestive system} | | | | | | | | | | | | | | | | | | | | | |
| stomach | | < 5> | | | | | | | | < 5> | | | | < 5> | | | | < 0> | | | |
| | ulcer:forestomach | 0 | 0 | 0 | 0 | (0) | (0) | (0) | (0) | 1 | 0 | 0 | 0 | (20) | (0) | (0) | (0) | 0 | 0 | 0 | 0 |
| | | (0) | (0) | (0) | (0) | | | | | (0) | (0) | (0) | (0) | (0) | (0) | (0) | (0) | (0) | (0) | (0) | (0) |
| | hyperplasia:forestomach | 0 | 0 | 0 | 0 | (0) | (0) | (0) | (0) | 0 | 3 | 0 | 0 | (0) | (60) | (0) | (0) | 1 | 0 | 1 | 0 |
| | | (0) | (0) | (0) | (0) | | | | | (0) | (0) | (60) | (0) | (0) | (0) | (0) | (20) | (0) | (20) | (0) | (0) |
| {Endocrine system} | | | | | | | | | | | | | | | | | | | | | |
| parathyroid | | < 4> | | | | | | | | < 5> | | | | < 5> | | | | < 0> | | | |
| | cyst | 1 | 0 | 0 | 0 | (25) | (0) | (0) | (0) | 0 | 0 | 0 | 0 | (0) | (0) | (0) | (0) | 0 | 0 | 0 | 0 |
| | | (25) | (0) | (0) | (0) | | | | | (0) | (0) | (0) | (0) | (0) | (0) | (0) | (0) | (0) | (0) | (0) | (0) |
| adrenal | | < 5> | | | | | | | | < 5> | | | | < 5> | | | | < 0> | | | |
| | necrosis:cortex | 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) | (40) | (0) | (0) | (0) | (0) | (0) |
| {Reproductive system} | | | | | | | | | | | | | | | | | | | | | |
| ovary | | < 5> | | | | | | | | < 5> | | | | < 5> | | | | < 0> | | | |
| | cyst | 1 | 0 | 0 | 0 | (20) | (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) |

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. : 0481
 ANIMAL : MOUSE Crj:BDF1
 REPORT TYPE : A1
 SEX : FEMALE

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

PAGE : 8

| | | Group Name | 4000ppm | | | | 8000ppm | | | |
|-----------------------|-------------------------|-------------------------|---------|------|------|------|---------|------|------|------|
| | | No. of Animals on Study | 0 | | | | 0 | | | |
| Organ | Findings | Grade | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 |
| | | | (%) | (%) | (%) | (%) | (%) | (%) | (%) | (%) |
| {Digestive system} | | | | | | | | | | |
| stomach | | | < 0> | | | | < 0> | | | |
| | ulcer:forestomach | | - | - | - | - | - | - | - | - |
| | | | (-) | (-) | (-) | (-) | (-) | (-) | (-) | (-) |
| | hyperplasia:forestomach | | - | - | - | - | - | - | - | - |
| | | | (-) | (-) | (-) | (-) | (-) | (-) | (-) | (-) |
| {Endocrine system} | | | | | | | | | | |
| parathyroid | | | < 0> | | | | < 0> | | | |
| | cyst | | - | - | - | - | - | - | - | - |
| | | | (-) | (-) | (-) | (-) | (-) | (-) | (-) | (-) |
| adrenal | | | < 0> | | | | < 0> | | | |
| | necrosis:cortex | | - | - | - | - | - | - | - | - |
| | | | (-) | (-) | (-) | (-) | (-) | (-) | (-) | (-) |
| {Reproductive system} | | | | | | | | | | |
| ovary | | | < 0> | | | | < 0> | | | |
| | cyst | | - | - | - | - | - | - | - | - |
| | | | (-) | (-) | (-) | (-) | (-) | (-) | (-) | (-) |

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 L

METHODS, UNITS AND DECIMAL PLACE FOR HEMATOLOGY AND BIOCHEMISTRY IN THE 2-WEEK INHALATION STUDY OF 1-BROMOBUTANE

METHODS, UNITS AND DECIMAL PLACE FOR HEMATOLOGY AND BIOCHEMISTRY
IN THE 2-WEEK INHALATION STUDY OF 1-BROMOBUTANE

| Item | Method | Unit | Decimal place |
|--|---|-----------------------------|---------------|
| Hematology | | | |
| Red blood cell (RBC) | Light scattering method ¹⁾ | $\times 10^6 / \mu\text{L}$ | 2 |
| Hemoglobin (Hgb) | Cyanmethemoglobin method ¹⁾ | g/dL | 1 |
| Hematocrit (Hct) | Calculated as $\text{RBC} \times \text{MCV} / 10$ ¹⁾ | % | 1 |
| Mean corpuscular volume (MCV) | Light scattering method ¹⁾ | fL | 1 |
| Mean corpuscular hemoglobin (MCH) | Calculated as $\text{Hgb} / \text{RBC} \times 10$ ¹⁾ | pg | 1 |
| Mean corpuscular hemoglobin concentration (MCHC) | Calculated as $\text{Hgb} / \text{Hct} \times 100$ ¹⁾ | g/dL | 1 |
| Platelet | Light scattering method ¹⁾ | $\times 10^3 / \mu\text{L}$ | 0 |
| White blood cell (WBC) | Light scattering method ¹⁾ | $\times 10^3 / \mu\text{L}$ | 2 |
| Differential WBC | Pattern recognition method ²⁾ (Wright staining) | % | 0 |
| Biochemistry | | | |
| Total protein (TP) | Biuret method ³⁾ | g/dL | 1 |
| Albumin (Alb) | BCG method ³⁾ | g/dL | 1 |
| A/G ratio | Calculated as $\text{Alb} / (\text{TP} - \text{Alb})$ ³⁾ | — | 1 |
| T-bilirubin | Alkaline azobilirubin method ³⁾ | mg/dL | 2 |
| Glucose | GlcK·G-6-PDH method ³⁾ | mg/dL | 0 |
| T-cholesterol | CE·COD·POD method ³⁾ | mg/dL | 0 |
| Triglyceride | LPL·GK·GPO·POD method ³⁾ | mg/dL | 0 |
| Phospholipid | PLD·ChOD·POD method ³⁾ | mg/dL | 0 |
| Glutamic oxaloacetic transaminase (GOT) | JSCC method ³⁾ | IU/L | 0 |
| Glutamic pyruvic transaminase (GPT) | 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 phosphokinase (CPK) | JSCC method ³⁾ | IU/L | 0 |
| Urea nitrogen | Urease·GLDH method ³⁾ | mg/dL | 1 |
| Sodium | Ion selective electrode method ³⁾ | mEq/L | 0 |
| Potassium | Ion selective electrode method ³⁾ | mEq/L | 1 |
| Chloride | Ion selective electrode method ³⁾ | mEq/L | 0 |
| Calcium | OCPC method ³⁾ | mg/dL | 1 |
| Inorganic phosphorus | PNP·XOD·POD method ³⁾ | mg/dL | 1 |

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

2) Automatic blood cell differential analyzer (MICROX HEG-120NA : OMRON Corporation)

3) Automatic analyzer (Hitachi 7070 : Hitachi, Ltd.)