

2-フェノキシエタノールのマウスを用いた経口投与
による 13 週間毒性試験（混水試験）報告書

試験番号： 0460

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APPENDICES

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APPENDIX A 1

CLINICAL OBSERVATION : SUMMARY, MOUSE : MALE

(13-WEEK STUDY)

STUDY NO. : 0460
ANIMAL : MOUSE Crj:BDF1
REPORT TYPE : A1 13

CLINICAL OBSERVATION (SUMMARY)
ALL ANIMALS

SEX : MALE

PAGE : 1

Clinical sign	Group Name	Administration Week-day												
		1-7	2-7	3-7	4-7	5-7	6-7	7-7	8-7	9-7	10-7	11-7	12-7	13-7
NON REMARKABLE	Control	10	10	10	10	10	10	10	10	10	10	10	10	10
	1250 ppm	10	10	10	10	10	10	10	10	10	10	10	10	10
	2500 ppm	10	10	10	10	10	10	10	10	10	10	10	10	10
	5000 ppm	10	10	10	10	10	10	10	10	10	10	10	10	10
	10000 ppm	10	10	10	10	10	10	10	10	10	10	10	10	10
	20000 ppm	10	10	10	10	10	10	10	10	10	10	10	10	10

(HAN190)

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APPENDIX A 2

CLINICAL OBSERVATION : SUMMARY, MOUSE : FEMALE

(13-WEEK STUDY)

STUDY NO. : 0460
ANIMAL : MOUSE Crj:BDF1
REPORT TYPE : A1 13

CLINICAL OBSERVATION (SUMMARY)
ALL ANIMALS

SEX : FEMALE

PAGE : 2

Clinical sign	Group Name	Administration Week-day												
		1-7	2-7	3-7	4-7	5-7	6-7	7-7	8-7	9-7	10-7	11-7	12-7	13-7
OLIGO STOOL	Control	0	0	0	0	0	0	0	0	0	0	0	0	0
	1250 ppm	1	0	0	0	0	0	0	0	0	0	0	0	0
	2500 ppm	0	0	1	0	0	0	0	0	0	0	0	0	0
	5000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0
	10000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0
	20000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0
NON REMARKABLE	Control	10	10	10	10	10	10	10	10	10	10	10	10	10
	1250 ppm	9	10	10	10	10	10	10	10	10	10	10	10	10
	2500 ppm	10	10	9	10	10	10	10	10	10	10	10	10	10
	5000 ppm	10	10	10	10	10	10	10	10	10	10	10	10	10
	10000 ppm	10	10	10	10	10	10	10	10	10	10	10	10	10
	20000 ppm	10	10	10	10	10	10	10	10	10	10	10	10	10

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APPENDIX B 1

BODY WEIGHT CHANGES : SUMMARY, MOUSE : MALE
(13-WEEK STUDY)

STUDY NO. : 0460
 ANIMAL : MOUSE Crj:BDF1
 UNIT : g
 REPORT TYPE : A1 13
 SEX : MALE

BODY WEIGHT CHANGES (SUMMARY)
 ALL ANIMALS

PAGE : 1

Group Name	Administration 0-0	week-day 1-7	2-7	3-7	4-7	5-7	6-7
Control	23.4± 0.5	24.4± 0.7	25.4± 0.7	26.3± 0.9	27.2± 0.7	27.9± 1.0	28.5± 1.1
1250 ppm	23.3± 0.5	24.4± 0.8	25.0± 0.8	26.2± 1.1	26.6± 1.2	27.3± 1.1	27.8± 1.3
2500 ppm	23.3± 0.6	24.4± 0.6	25.3± 0.7	26.8± 0.7	27.0± 0.8	27.8± 1.1	28.6± 1.0
5000 ppm	23.4± 0.6	24.2± 0.9	25.1± 0.9	26.1± 0.9	26.7± 1.3	27.6± 1.2	28.0± 1.5
10000 ppm	23.3± 0.5	24.2± 0.6	25.1± 0.8	26.2± 0.8	26.7± 0.7	27.2± 1.1	27.7± 1.3
20000 ppm	23.3± 0.5	22.7± 0.7**	24.0± 1.3**	24.9± 0.9**	25.3± 1.2**	25.7± 1.1**	26.2± 1.2**
Significant difference : * : $P \leq 0.05$ ** : $P \leq 0.01$ Test of Dunnett							

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STUDY NO. : 0460
 ANIMAL : MOUSE Crj:BDF1
 UNIT : g
 REPORT TYPE : A1 13
 SEX : MALE

BODY WEIGHT CHANGES (SUMMARY)
 ALL ANIMALS

PAGE : 2

Group Name	Administration week-day						
	7-7	8-7	9-7	10-7	11-7	12-7	13-7
Control	28.7± 1.3	29.6± 1.1	30.4± 1.4	31.0± 1.6	31.8± 2.0	32.2± 2.0	32.7± 1.8
1250 ppm	28.4± 1.5	28.8± 1.4	29.5± 1.6	30.2± 1.7	30.2± 1.8	31.1± 1.9	31.6± 2.3
2500 ppm	29.2± 1.2	29.5± 1.3	30.0± 1.4	31.0± 1.6	31.4± 1.8	32.0± 1.9	32.9± 2.0
5000 ppm	28.3± 1.6	29.2± 1.6	29.6± 1.9	30.5± 2.0	30.9± 2.2	31.4± 2.4	31.7± 2.6
10000 ppm	28.0± 0.9	28.7± 1.5	29.6± 1.5	30.4± 1.7	30.6± 1.6	31.3± 1.9	31.6± 1.9
20000 ppm	26.1± 1.2**	27.0± 1.1**	26.6± 1.5**	27.3± 1.5**	27.5± 1.7**	28.0± 1.7**	28.6± 1.7**

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

Test of Dunnett

APPENDIX B 2

BODY WEIGHT CHANGES : SUMMARY, MOUSE : FEMALE

(13-WEEK STUDY)

STUDY NO. : 0460
 ANIMAL : MOUSE Crj:BDF1
 UNIT : g
 REPORT TYPE : A1 13
 SEX : FEMALE

BODY WEIGHT CHANGES (SUMMARY)
 ALL ANIMALS

PAGE : 3

Group Name	Administration week-day						
	0-0	1-7	2-7	3-7	4-7	5-7	6-7
Control	19.2± 0.6	19.9± 0.8	20.4± 0.6	21.4± 0.6	21.6± 0.8	21.6± 0.8	22.4± 0.7
1250 ppm	19.2± 0.6	19.6± 1.7	20.5± 0.5	21.0± 0.5	21.5± 0.9	21.6± 0.6	22.1± 0.6
2500 ppm	19.2± 0.6	20.3± 0.8	20.3± 0.9	20.8± 2.0	21.3± 0.8	21.9± 0.8	22.2± 0.9
5000 ppm	19.2± 0.5	19.6± 0.6	20.7± 0.5	21.0± 0.7	21.3± 0.4	21.8± 0.6	22.1± 0.8
10000 ppm	19.2± 0.6	19.6± 0.9	20.1± 1.0	20.9± 0.9	20.9± 0.9	21.4± 1.2	21.7± 0.9
20000 ppm	19.2± 0.6	19.0± 0.9	19.7± 0.9	20.5± 0.8	20.6± 0.7	21.2± 0.9	21.6± 1.2

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

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STUDY NO. : 0460
 ANIMAL : MOUSE Crj:BDf1
 UNIT : g
 REPORT TYPE : A1 13
 SEX : FEMALE

BODY WEIGHT CHANGES (SUMMARY)
 ALL ANIMALS

PAGE : 4

Group Name	Administration 7-7	week-day 8-7	9-7	10-7	11-7	12-7	13-7
Control	22.8± 0.9	23.1± 0.7	22.8± 0.8	23.6± 1.0	23.7± 0.5	24.0± 0.7	24.2± 0.7
1250 ppm	22.5± 0.8	23.1± 1.1	23.1± 0.8	24.0± 1.6	23.6± 0.9	23.8± 0.9	24.5± 1.1
2500 ppm	22.5± 1.0	23.1± 0.7	23.0± 0.7	23.8± 1.2	23.6± 0.8	24.2± 0.7	24.2± 0.7
5000 ppm	22.5± 0.4	23.1± 0.8	22.9± 0.8	23.9± 0.9	23.8± 0.4	23.6± 0.4	24.0± 1.1
10000 ppm	22.1± 0.9	22.5± 1.0	22.8± 1.3	23.2± 1.1	23.4± 1.1	23.7± 1.3	24.0± 1.6
20000 ppm	21.4± 0.7**	22.2± 1.0	22.1± 1.0	22.8± 1.1	22.9± 1.0	23.1± 1.2	23.1± 1.4

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

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APPENDIX C 1

WATER CONSUMPTION CHANGES : SUMMARY, MOUSE : MALE (13-WEEK STUDY)

STUDY NO. : 0460
 ANIMAL : MOUSE Crj:BDF1
 UNIT : g
 REPORT TYPE : A1 13
 SEX : MALE

WATER CONSUMPTION CHANGES (SUMMARY)
 ALL ANIMALS

PAGE : 1

Group Name	Administration		week-day(effective)		3-7(4)	4-7(4)	5-7(4)	6-7(4)	7-7(4)
	1-7(4)		2-7(4)						
Control	5.7± 1.1		5.2± 0.8		4.8± 0.6	4.8± 0.5	4.4± 0.4	4.3± 0.4	4.0± 0.5
1250 ppm	4.5± 0.6		4.4± 0.6		4.1± 0.6	4.1± 0.8	4.0± 0.7	4.0± 0.8	4.1± 0.8
2500 ppm	5.2± 0.9		5.2± 1.3		5.0± 1.1	4.8± 0.9	4.3± 0.8	4.3± 0.7	4.1± 0.7
5000 ppm	5.0± 1.0		4.8± 0.6		4.8± 1.2	4.2± 0.7	4.1± 0.5	4.2± 1.0	4.1± 1.0
10000 ppm	3.5± 0.5**		3.6± 0.8**		3.5± 0.9**	3.4± 0.6**	3.3± 0.6**	3.4± 0.5**	3.2± 0.5*
20000 ppm	2.9± 0.3**		2.5± 0.5**		2.9± 0.4**	2.8± 0.5**	2.8± 0.3**	3.0± 0.4**	2.8± 0.4**

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

Test of Dunnett

STUDY NO. : 0460
 ANIMAL : MOUSE Crj:BDF1
 UNIT : g
 REPORT TYPE : A1 13
 SEX : MALE

WATER CONSUMPTION CHANGES (SUMMARY)
 ALL ANIMALS

PAGE : 2

Group Name	Administration week-day(effective)					
	8-7(4)	9-7(4)	10-7(4)	11-7(4)	12-7(4)	13-7(4)
Control	4.5± 0.3	4.1± 0.3	4.2± 0.4	4.2± 0.4	4.2± 0.3	4.1± 0.2
1250 ppm	4.1± 0.7	3.9± 0.8	4.0± 0.7	3.8± 0.7	3.8± 0.6	4.0± 0.7
2500 ppm	4.4± 0.7	4.2± 0.6	4.1± 0.6	4.1± 0.7	4.0± 0.6	4.0± 0.6
5000 ppm	4.3± 1.0	4.2± 1.1	3.9± 0.9	4.0± 1.2	3.9± 0.9	4.0± 1.0
10000 ppm	3.4± 0.5**	3.2± 0.5**	3.1± 0.5**	3.1± 0.5**	3.0± 0.4**	3.1± 0.4**
20000 ppm	2.9± 0.3**	2.7± 0.3**	2.7± 0.3**	2.7± 0.4**	2.6± 0.3**	2.7± 0.3**

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

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APPENDIX C 2

WATER CONSUMPTION CHANGES : SUMMARY, MOUSE : FEMALE (13-WEEK STUDY)

STUDY NO. : 0460
 ANIMAL : MOUSE Crj:BDF1
 UNIT : g
 REPORT TYPE : A1 13
 SEX : FEMALE

WATER CONSUMPTION CHANGES (SUMMARY)
 ALL ANIMALS

PAGE : 3

Group Name	Administration 1-7(4)	week-day(effective) 2-7(4)	3-7(4)	4-7(4)	5-7(4)	6-7(4)	7-7(4)
Control	4.6± 0.3	4.5± 0.6	4.4± 0.4	4.5± 0.3	4.6± 0.4	4.7± 0.5	4.7± 0.4
1250 ppm	3.8± 1.2	4.2± 0.4	4.1± 0.3	4.3± 0.4	4.2± 0.4	4.3± 0.2	4.4± 0.3
2500 ppm	4.4± 0.3	4.2± 0.3	4.0± 1.2	4.3± 0.3	4.3± 0.3	4.4± 0.2	4.3± 0.3
5000 ppm	4.0± 0.7	4.1± 0.4	4.1± 0.3	4.3± 0.3	4.2± 0.3	4.4± 0.3	4.3± 0.4
10000 ppm	3.1± 0.4**	3.0± 0.6**	3.2± 0.5**	3.4± 0.6**	3.3± 0.5**	3.5± 0.4**	3.4± 0.5**
20000 ppm	2.6± 0.3**	2.2± 0.3**	2.6± 0.3**	2.7± 0.2**	2.6± 0.3**	2.8± 0.3**	2.6± 0.3**

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

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STUDY NO. : 0460
 ANIMAL : MOUSE Crj:BDF1
 UNIT : g
 REPORT TYPE : A1 13
 SEX : FEMALE

WATER CONSUMPTION CHANGES (SUMMARY)
 ALL ANIMALS

PAGE : 4

Group Name	Administration 8-7(4)	week-day(effective) 9-7(4)	10-7(4)	11-7(4)	12-7(4)	13-7(4)
Control	4.8± 0.6	4.7± 0.4	4.7± 0.5	4.4± 0.4	4.7± 0.5	4.7± 0.5
1250 ppm	4.4± 0.4	4.3± 0.2	4.3± 0.4	4.2± 0.3	4.1± 0.7	4.3± 0.2
2500 ppm	4.5± 0.1	4.3± 0.3*	4.3± 0.3*	4.0± 0.3*	4.2± 0.2	4.2± 0.2*
5000 ppm	4.4± 0.3	4.2± 0.3*	4.4± 0.3	4.1± 0.3	4.1± 0.2	4.2± 0.2**
10000 ppm	3.5± 0.5**	3.5± 0.5**	3.5± 0.4**	3.3± 0.4**	3.3± 0.4**	3.4± 0.4**
20000 ppm	2.7± 0.3**	2.7± 0.3**	2.8± 0.2**	2.7± 0.3**	2.7± 0.3**	2.9± 0.3**

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

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BALS 1

APPENDIX D 1

FOOD CONSUMPTION CHANGES : SUMMARY, MOUSE : MALE (13-WEEK STUDY)

FOOD CONSUMPTION CHANGES (SUMMARY)
ALL ANIMALS

Group Name	Administration 1-7(7)	week-day(effective) 2-7(7)		3-7(7)	4-7(7)	5-7(7)	6-7(7)	7-7(7)
Control	4.0± 0.2	4.0± 0.2		4.0± 0.2	4.0± 0.2	3.9± 0.2	3.9± 0.2	3.9± 0.3
1250 ppm	4.1± 0.2	3.8± 0.2		3.9± 0.3	3.9± 0.3	3.7± 0.3	3.9± 0.4	3.9± 0.3
2500 μgm	4.0± 0.2	4.0± 0.2		4.1± 0.2	4.1± 0.2	3.9± 0.2	4.0± 0.2	4.0± 0.3
5000 ppm	4.0± 0.2	3.9± 0.3		3.9± 0.2	4.0± 0.3	3.9± 0.3	3.9± 0.3	4.0± 0.2
10000 ppm	3.7± 0.2*	3.8± 0.2		3.9± 0.3	3.9± 0.2	3.7± 0.3	3.8± 0.3	3.8± 0.3
20000 ppm	3.1± 0.2**	3.6± 0.2**		3.6± 0.2**	3.7± 0.2*	3.5± 0.2*	3.6± 0.2	3.6± 0.2*
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Significant difference ; * : P ≤ 0.05 ** : P ≤ 0.01			Test of Dunnett					

BAIS 4

STUDY NO. : 0460
 ANIMAL : MOUSE Crj:BDF1
 UNIT : g
 REPORT TYPE : A1 13
 SEX : MALE

FOOD CONSUMPTION CHANGES (SUMMARY)
 ALL ANIMALS

PAGE : 2

Group Name	Administration week-day(effective)					
	8-7(7)	9-7(7)	10-7(7)	11-7(7)	12-7(7)	13-7(7)
Control	3.9± 0.3	3.9± 0.3	4.0± 0.3	4.0± 0.2	4.1± 0.2	4.1± 0.2
1250 ppm	3.8± 0.3	3.9± 0.3	4.0± 0.3	3.9± 0.4	4.0± 0.4	4.1± 0.4
2500 ppm	3.9± 0.2	4.0± 0.2	4.1± 0.2	4.1± 0.2	4.1± 0.2	4.2± 0.2
5000 ppm	3.9± 0.3	4.0± 0.3	4.0± 0.3	4.0± 0.3	4.0± 0.3	4.0± 0.2
10000 ppm	3.8± 0.3	3.9± 0.3	3.9± 0.2	3.9± 0.3	4.0± 0.2	4.0± 0.2
20000 ppm	3.5± 0.3**	3.5± 0.3**	3.6± 0.2**	3.7± 0.2	3.7± 0.3*	3.8± 0.3*

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

Test of Dunnett

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BAIS 4

APPENDIX D 2

FOOD CONSUMPTION CHANGES : SUMMARY, MOUSE : FEMALE (13-WEEK STUDY)

STUDY NO. : 0460
 ANIMAL : MOUSE Crj:BDF1
 UNIT : g
 REPORT TYPE : A1 13
 SEX : FEMALE

FOOD CONSUMPTION CHANGES (SUMMARY)
 ALL ANIMALS

PAGE : 3

Group Name	Administration 1-7(7)	week-day(effective) 2-7(7)	3-7(7)	4-7(7)	5-7(7)	6-7(7)	7-7(7)
Control	3.5± 0.3	3.4± 0.2	3.5± 0.2	3.5± 0.2	3.6± 0.2	3.7± 0.2	3.9± 0.2
1250 ppm	3.2± 0.3	3.4± 0.3	3.3± 0.2	3.5± 0.2	3.5± 0.2	3.6± 0.2	3.7± 0.2
2500 ppm	3.5± 0.2	3.3± 0.3	3.4± 0.4	3.6± 0.4	3.6± 0.3	3.7± 0.2	3.8± 0.4
5000 ppm	3.4± 0.2	3.5± 0.2	3.5± 0.2	3.6± 0.2	3.7± 0.2	3.7± 0.1	3.9± 0.1
10000 ppm	3.2± 0.2	3.1± 0.3	3.4± 0.3	3.3± 0.3	3.4± 0.4	3.5± 0.3	3.5± 0.4*
20000 ppm	2.7± 0.3**	3.1± 0.2*	3.2± 0.2*	3.3± 0.1*	3.4± 0.2	3.4± 0.2**	3.5± 0.2**

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

Test of Dunnett

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BAIS 1

STUDY NO. : 0460
 ANIMAL : MOUSE Crj:BDF1
 UNIT : g
 REPORT TYPE : A1 13
 SEX : FEMALE

FOOD CONSUMPTION CHANGES (SUMMARY)
 ALL ANIMALS

PAGE : 4

Group Name	Administration 8-7(7)	week day(effective) 9-7(7)	10-7(7)	11-7(7)	12-7(7)	13-7(7)
Control	3.9± 0.2	3.9± 0.2	4.0± 0.3	4.0± 0.1	4.0± 0.2	4.0± 0.2
1250 ppm	3.7± 0.2	3.7± 0.2	3.8± 0.2	3.7± 0.3	3.6± 0.2*	3.8± 0.2
2500 ppm	3.8± 0.2	3.8± 0.3	3.9± 0.3	3.8± 0.2	3.8± 0.2	3.8± 0.2
5000 ppm	3.9± 0.2	3.9± 0.1	4.0± 0.1	3.9± 0.1	3.8± 0.1	3.9± 0.2
10000 ppm	3.5± 0.3**	3.6± 0.3	3.6± 0.3*	3.7± 0.3*	3.6± 0.4*	3.7± 0.3*
20000 ppm	3.4± 0.2**	3.4± 0.2**	3.5± 0.2**	3.6± 0.2*	3.5± 0.2**	3.5± 0.3**
Significant difference ; * : $P \leq 0.05$ ** : $P \leq 0.01$ Test of Dunnett						

(HAN250)

BAIS 4

APPENDIX E 1

CHEMICAL INTAKE CHANGES : SUMMARY, MOUSE : MALE

(13-WEEK STUDY)

STUDY NO. : 0460
 ANIMAL : MOUSE Crj:BDF1
 UNIT : g/kg/d a y
 REPORT TYPE : A1 13
 SEX : MALE

CHEMICAL INTAKE CHANGES (SUMMARY)
 ALL ANIMALS

PAGE : 1

Group Name	Administration (weeks)									
	1	2	3	4	5	6	7			
Control	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000		
1250 ppm	0.233± 0.031	0.222± 0.028	0.197± 0.023	0.193± 0.031	0.184± 0.028	0.180± 0.033	0.179± 0.033			
2500 ppm	0.528± 0.093	0.512± 0.124	0.464± 0.104	0.439± 0.077	0.386± 0.073	0.378± 0.065	0.354± 0.064			
5000 ppm	1.027± 0.214	0.964± 0.127	0.919± 0.220	0.780± 0.113	0.739± 0.085	0.755± 0.182	0.720± 0.186			
10000 ppm	1.456± 0.222	1.420± 0.327	1.327± 0.310	1.276± 0.228	1.226± 0.187	1.211± 0.183	1.144± 0.183			
20000 ppm	2.519± 0.307	2.113± 0.324	2.346± 0.275	2.245± 0.361	2.192± 0.204	2.277± 0.268	2.123± 0.345			

STUDY NO. : 0460
 ANIMAL : MOUSE Crj:BDF1
 UNIT : g/kg/d a y
 REPORT TYPE : A1 13
 SEX : MALE

CHEMICAL INTAKE CHANGES (SUMMARY)
 ALL ANIMALS

PAGE : 2

Group Name	Administration (weeks)									
	8	9	10	11	12	13				
Control	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000			
1250 ppm	0.179± 0.029	0.167± 0.032	0.165± 0.028	0.157± 0.026	0.151± 0.022	0.157± 0.027				
2500 ppm	0.373± 0.059	0.349± 0.058	0.335± 0.055	0.327± 0.061	0.315± 0.054	0.308± 0.056				
5000 ppm	0.746± 0.180	0.719± 0.203	0.652± 0.173	0.660± 0.211	0.625± 0.173	0.632± 0.185				
10000 ppm	1.190± 0.191	1.080± 0.166	1.022± 0.165	1.015± 0.167	0.974± 0.142	0.977± 0.131				
20000 ppm	2.132± 0.275	2.064± 0.218	2.007± 0.301	1.964± 0.291	1.854± 0.225	1.914± 0.265				

APPENDIX E 2

CHEMICAL INTAKE CHANGES : SUMMARY, MOUSE : FEMALE

(13-WEEK STUDY)

STUDY NO. : 0460
 ANIMAL : MOUSE Crj:BDF1
 UNIT : g/kg/day
 REPORT TYPE : A1 13
 SEX : FEMALE

CHEMICAL INTAKE CHANGES (SUMMARY)
 ALL ANIMALS

PAGE : 3

Group Name	Administration (weeks)									
	1	2	3	4	5	6	7			
Control	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000		
1250 ppm	0.236± 0.069	0.254± 0.021	0.243± 0.017	0.250± 0.020	0.243± 0.022	0.246± 0.008	0.243± 0.014			
2500 ppm	0.547± 0.030	0.520± 0.046	0.474± 0.129	0.508± 0.037	0.493± 0.046	0.493± 0.045	0.480± 0.044			
5000 ppm	1.013± 0.161	0.986± 0.100	0.986± 0.098	1.015± 0.065	0.972± 0.078	0.990± 0.093	0.957± 0.099			
10000 ppm	1.563± 0.192	1.511± 0.268	1.525± 0.211	1.603± 0.286	1.528± 0.223	1.589± 0.175	1.543± 0.174			
20000 ppm	2.760± 0.285	2.232± 0.248	2.522± 0.253	2.574± 0.253	2.440± 0.303	2.602± 0.300	2.450± 0.232			

STUDY NO. : 0460
 ANIMAL : MOUSE Crj:BDF1
 UNIT : g/kg/day
 REPORT TYPE : A1 13
 SEX : FEMALE

CHEMICAL INTAKE CHANGES (SUMMARY)
 ALL ANIMALS

PAGE : 4

Group Name	Administration (weeks)					
	8	9	10	11	12	13
Control	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000
1250 ppm	0.240± 0.017	0.231± 0.011	0.225± 0.011	0.220± 0.015	0.215± 0.038	0.220± 0.011
2500 ppm	0.483± 0.023	0.464± 0.039	0.452± 0.041	0.426± 0.034	0.433± 0.024	0.438± 0.029
5000 ppm	0.955± 0.085	0.926± 0.086	0.925± 0.099	0.852± 0.075	0.871± 0.048	0.870± 0.044
10000 ppm	1.534± 0.195	1.529± 0.193	1.516± 0.171	1.394± 0.157	1.409± 0.133	1.438± 0.171
20000 ppm	2.457± 0.258	2.487± 0.286	2.466± 0.197	2.391± 0.239	2.379± 0.260	2.520± 0.251

APPENDIX F 1

HEMATOLOGY : SUMMARY, MOUSE : MALE

(13-WEEK STUDY)

STUDY NO. : 0460
 ANIMAL : MOUSE Crj:BDF1
 MEASURE TIME : 1
 SEX : MALE

HEMATOLOGY (SUMMARY)
 ALL ANIMALS (14W)

REPORT TYPE : A1

PAGE : 1

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 ³ /μℓ	
Control	10	10.60±	1.15	15.1±	0.5	48.6±	4.3	46.0±	1.4	14.4±	2.0	31.3±	3.1	1591±	89
1250 ppm	10	10.81±	0.30	14.9±	0.5	48.9±	1.2	45.2±	0.4	13.8±	0.2	30.5±	0.5	1544±	134
2500 ppm	10	10.69±	0.35	14.8±	0.5	48.5±	1.6	45.4±	0.4	13.9±	0.3	30.5±	0.8	1532±	81
5000 ppm	10	10.61±	0.31	14.8±	0.3	48.3±	1.1	45.5±	0.5	13.9±	0.3	30.6±	0.3	1551±	144
10000 ppm	10	10.71±	0.28	14.9±	0.2	48.8±	1.2	45.5±	0.4	13.9±	0.2	30.5±	0.3	1472±	117
20000 ppm	10	10.70±	0.31	14.8±	0.4	49.0±	1.4	45.8±	0.6	13.8±	0.2	30.2±	0.3	1535±	69

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

Test of Dunnett

STUDY NO. : 0460
ANIMAL : MOUSE Crj:BDF1
MEASURE. TIME : 1
SEX : MALE

HEMATOLOGY (SUMMARY)
ALL ANIMALS (14W)

REPORT TYPE : A1

PAGE : 2

Group Name	NO. of Animals	RETICULOCYTE %	
Control	10	2.2±	0.2
1250 ppm	10	2.3±	0.2
2500 ppm	10	2.2±	0.2
5000 ppm	10	2.2±	0.2
10000 ppm	10	2.3±	0.2
20000 ppm	10	2.5±	0.2**

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

Test of Dunnett

STUDY NO. : 0460
 ANIMAL : MOUSE Crj:BDF1
 MEASURE. TIME : 1
 SEX : MALE

HEMATOLOGY (SUMMARY)
 ALL ANIMALS (14W)

REPORT TYPE : A1

PAGE : 3

Group Name	NO. of Animals	WBC 1 O ³ /μl		Differential N-BAND		WBC (%) N-SEG		EOSINO		BASO		MONO		LYMPHO		OTHER	
Control	10	1.07±	0.50	1±	1	10±	3	2±	2	0±	0	1±	1	86±	4	0±	0
1250 ppm	10	0.94±	0.37	1±	1	13±	6	1±	1	0±	0	2±	1	84±	7	0±	0
2500 ppm	10	0.80±	0.41	0±	0	11±	3	2±	2	0±	0	2±	2	85±	5	0±	0
5000 ppm	10	0.96±	0.39	0±	1	11±	3	1±	1	0±	0	2±	1	85±	4	0±	0
10000 ppm	10	0.81±	0.36	0±	1	11±	3	1±	1	0±	0	2±	1	86±	4	0±	0
20000 ppm	10	0.82±	0.41	2±	4	9±	4	1±	1	0±	0	2±	1	87±	3	0±	0

Significant difference ; * : $P \leq 0.05$

** : $P \leq 0.01$

Test of Dunnett

(HCL070)

BAIS 4

APPENDIX F 2

HEMATOLOGY : SUMMARY, MOUSE : FEMALE

(13-WEEK STUDY)

STUDY NO. : 0460
 ANIMAL : MOUSE Crj:BDF1
 MEASURE. TIME : 1
 SEX : FEMALE

HEMATOLOGY (SUMMARY)
 ALL ANIMALS (14W)

REPORT TYPE : A1

PAGE : 4

Group Name	NO. of Animals	RED BLOOD CELL 10 ⁶ /μl		HEMOGLOBIN g/dl		HEMATOCRIT %		MCV fl		MCH pg		MCHC g/dl		PLATELET 10 ³ /μl	
Control	9	10.71±	0.31	15.2±	0.4	48.6±	1.3	45.4±	0.5	14.2±	0.2	31.3±	0.4	1374±	46
1250 ppm	10	10.59±	0.35	14.9±	0.5	47.9±	1.5	45.3±	0.3	14.1±	0.2	31.1±	0.5	1383±	86
2500 ppm	10	10.48±	0.36	14.9±	0.6	47.5±	1.2	45.3±	0.4	14.2±	0.2	31.3±	0.4	1425±	96
5000 ppm	10	10.53±	0.29	15.0±	0.3	48.3±	1.0	45.9±	0.7	14.2±	0.2	31.0±	0.5	1400±	108
10000 ppm	10	10.48±	0.28	14.9±	0.3	48.2±	1.1	46.0±	0.4	14.2±	0.2	30.9±	0.4	1330±	74
20000 ppm	10	10.30±	0.31	14.5±	0.4**	47.7±	1.4	46.3±	0.7**	14.1±	0.3	30.5±	0.8**	1307±	84

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

Test of Dunnett

(HCL070)

BAIS 4

STUDY NO. : 0460
ANIMAL : MOUSE Crj:BDF1
MEASURE TIME : 1
SEX : FEMALE

HEMATOLOGY (SUMMARY)
ALL ANIMALS (14W)

REPORT TYPE : A1

PAGE : 5

Group Name	NO. of Animals	RETICULOCYTE %	
Control	9	2.3±	0.4
1250 ppm	10	2.4±	0.3
2500 ppm	10	2.4±	0.4
5000 ppm	10	2.4±	0.5
10000 ppm	10	2.6±	0.5
20000 ppm	10	2.6±	0.5

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

Test of Dunnett

(HCL070)

BAIS 4

STUDY NO. : 0460
 ANIMAL : MOUSE Crj:BDF1
 MEASURE. TIME : 1
 SEX : FEMALE

HEMATOLOGY (SUMMARY)
 ALL ANIMALS (14W)

REPORT TYPE : A1

PAGE : 6

Group Name	NO. of Animals	WBC 1 O ³ /μl		Differential N-BAND		WBC (%) N-SEG		EOSINO		BASO		MONO		LYMPHO		OTHER	
Control	9	0.94±	0.77	1±	1	17±	5	1±	1	0±	0	1±	1	81±	4	0±	0
1250 ppm	10	0.82±	0.28	1±	1	12±	6	1±	1	0±	0	1±	1	85±	5	0±	0
2500 ppm	10	0.93±	0.57	0±	0	16±	15	1±	1	0±	0	1±	1	82±	15	0±	0
5000 ppm	10	0.83±	0.54	1±	1	15±	6	1±	1	0±	0	1±	1	84±	7	0±	0
10000 ppm	10	0.87±	0.62	0±	1	12±	3	1±	1	0±	0	1±	1	86±	4	0±	0
20000 ppm	10	0.76±	0.59	1±	1	11±	6	0±	1	0±	0	0±	1	88±	6	0±	0

Significant difference ; * : $P \leq 0.05$

** : $P \leq 0.01$

Test of Dunnett

(HCL070)

BAIS 4

APPENDIX G 1

BIOCHEMISTRY : SUMMARY, MOUSE : MALE

(13-WEEK STUDY)

STUDY NO. : 0460
 ANIMAL : MOUSE Crj:BDF1
 MEASURE. TIME : 1
 SEX : MALE

REPORT TYPE : A1

BIOCHEMISTRY (SUMMARY)
 ALL ANIMALS (14W)

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	10	5.3±	0.2	3.2±	0.1	1.5±	0.2	0.14±	0.02	233±	22	87±	6	27±	9
1250 ppm	10	5.1±	0.1*	3.1±	0.2	1.5±	0.2	0.14±	0.02	218±	41	81±	8	23±	10
2500 ppm	10	5.1±	0.1	3.1±	0.1	1.5±	0.1	0.13±	0.01	206±	40	81±	4	25±	11
5000 ppm	10	5.1±	0.2*	3.1±	0.2	1.5±	0.2	0.14±	0.02	203±	32	78±	7*	25±	12
10000 ppm	10	5.2±	0.2	3.1±	0.2	1.5±	0.1	0.16±	0.08	201±	32	80±	8	26±	13
20000 ppm	10	5.1±	0.1*	3.1±	0.2	1.6±	0.2	0.14±	0.03	203±	30	75±	7**	16±	7

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

Test of Dunnett

STUDY NO. : 0460
 ANIMAL : MOUSE Crj:BDF1
 MEASURE TIME : 1
 SEX : MALE

BIOCHEMISTRY (SUMMARY)
 ALL ANIMALS (14W)

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	10	187±	14	40±	3	18±	3	211±	35	153±	8	1±	1	74±	26
1250 ppm	10	172±	17	47±	14	18±	2	237±	79	158±	10	1±	1	114±	98
2500 ppm	10	171±	9	42±	7	18±	2	215±	42	154±	11	1±	1	83±	50
5000 ppm	10	168±	18*	44±	3	19±	4	215±	34	149±	9	1±	1	75±	17
10000 ppm	10	168±	14*	46±	8	18±	4	308±	270	148±	10	1±	1	80±	23
20000 ppm	10	154±	17**	42±	7	17±	3	212±	55	176±	16**	1±	0	79±	24

Significant difference ; * : $P \leq 0.05$

** : $P \leq 0.01$

Test of Dunnett

(HCL074)

BAIS 4

STUDY NO. : 0460
 ANIMAL : MOUSE Crj:BDF1
 MEASURE. TIME : 1
 SEX : MALE

BIOCHEMISTRY (SUMMARY)
 ALL ANIMALS (14W)

REPORT TYPE : A1

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	10	27.5±	3.9	151±	1	4.8±	0.5	122±	2	8.9±	0.3	9.0±	1.4
1250 ppm	10	26.2±	2.8	151±	2	4.6±	0.3	122±	3	8.7±	0.2	7.8±	1.0
2500 ppm	10	24.8±	3.0	151±	2	4.5±	0.4	123±	3	8.7±	0.1	8.4±	1.1
5000 ppm	10	25.4±	3.2	151±	1	4.4±	0.3	123±	2	8.6±	0.2**	7.5±	1.0*
10000 ppm	10	23.6±	4.1	151±	1	4.7±	0.4	123±	2	8.7±	0.2	8.0±	1.5
20000 ppm	10	23.1±	3.3	151±	1	4.4±	0.5	123±	2	8.5±	0.2**	7.3±	0.9**

Significant difference ; * : $P \leq 0.05$

** : $P \leq 0.01$

Test of Dunnett

APPENDIX G 2

BIOCHEMISTRY : SUMMARY, MOUSE : FEMALE

(13-WEEK STUDY)

STUDY NO. : 0460
 ANIMAL : MOUSE Crj:BDF1
 MEASURE. TIME : 1
 SEX : FEMALE

BIOCHEMISTRY (SUMMARY)
 ALL ANIMALS (14W)

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	10	5.3±	0.2	3.5±	0.1	1.9±	0.3	0.16±	0.04	177±	19	74±	11	11±	4
1250 ppm	9	5.2±	0.1	3.5±	0.2	2.1±	0.3	0.15±	0.03	175±	13	77±	5	15±	9
2500 ppm	10	5.2±	0.2	3.4±	0.2	1.9±	0.3	0.14±	0.03	189±	31	77±	10	13±	2
5000 ppm	10	5.2±	0.1	3.5±	0.1	2.1±	0.3	0.14±	0.03	182±	31	74±	10	10±	3
10000 ppm	10	5.2±	0.2	3.5±	0.2	2.0±	0.3	0.14±	0.03	176±	31	73±	12	12±	5
20000 ppm	10	5.0±	0.3	3.3±	0.1	2.0±	0.3	0.13±	0.03	173±	25	72±	15	9±	3

Significant difference ; * : $P \leq 0.05$

** : $P \leq 0.01$

Test of Dunnett

(HCL074)

BAIS 4

STUDY NO. : 0460
 ANIMAL : MOUSE Crj:BDF1
 MEASURE. TIME : 1
 SEX : FEMALE

BIOCHEMISTRY (SUMMARY)
 ALL ANIMALS (14W)

REPORT TYPE : A1

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	10	153±	24	56±	7	21±	3	245±	27	244±	19	1±	1	92±	50
1250 ppm	9	158±	15	51±	7	19±	2	211±	40	243±	23	1±	1	70±	29
2500 ppm	10	156±	19	54±	13	21±	4	268±	108	238±	16	2±	1	133±	139
5000 ppm	10	145±	20	63±	27	22±	4	291±	144	249±	25	1±	1	145±	163
10000 ppm	10	146±	24	60±	14	24±	7	274±	88	236±	25	1±	1	126±	64
20000 ppm	10	138±	28	56±	16	20±	4	263±	123	245±	26	1±	1	125±	92

Significant difference ; * : $P \leq 0.05$

** : $P \leq 0.01$

Test of Dunnett

(HCL074)

BAIS 4

STUDY NO. : 0460
 ANIMAL : MOUSE Crj:BDF1
 MEASURE. TIME : 1
 SEX : FEMALE

BIOCHEMISTRY (SUMMARY)
 ALL ANIMALS (14W)

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	10	21.8±	1.8	151±	1	4.5±	0.6	122±	1	8.6±	0.2	6.9±	0.7
1250 ppm	9	21.5±	2.9	151±	1	4.4±	0.3	122±	2	8.6±	0.3	6.5±	0.9
2500 ppm	10	22.4±	2.8	151±	1	4.4±	0.5	122±	1	8.6±	0.2	6.9±	0.7
5000 ppm	10	24.4±	3.1	152±	1	4.3±	0.5	124±	2	8.6±	0.3	6.7±	0.7
10000 ppm	10	23.2±	4.8	153±	2	4.4±	0.6	124±	2	8.7±	0.3	7.1±	1.2
20000 ppm	10	22.2±	3.4	152±	1	4.3±	0.6	123±	2	8.5±	0.3	7.3±	1.3

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

Test of Dunnett

(ICL074)

BAIS 4

APPENDIX H 1

URINALYSIS : SUMMARY, MOUSE : MALE

(13-WEEK STUDY)

STUDY NO. : 0460
 ANIMAL : MOUSE Crj:BDF1
 MEASURE. TIME : 1
 SEX : MALE

URINALYSIS

REPORT TYPE : A1

PAGE : 1

Group Name	NO. of Animals	pH_____								CHI	Protein_____								CHI	Glucose_____								CHI	Ketone body								CHI	Occult blood					CHI
		5.0	6.0	6.5	7.0	7.5	8.0	8.5	-		±	+	2+	3+	4+	-	±	+		2+	3+	4+	-	±	+	2+	3+		4+	-	±	+	2+	3+	4+								
Control	10	0	0	0	0	0	5	5		0	3	6	0	1	0		10	0	0	0	0	0		6	2	2	0	0	0		10	0	0	0	0								
1250 ppm	10	0	0	1	0	2	6	1		0	2	8	0	0	0		10	0	0	0	0	0		6	4	0	0	0	0		10	0	0	0	0								
2500 ppm	10	0	0	0	0	4	4	2		0	1	9	0	0	0		10	0	0	0	0	0		6	4	0	0	0	0		10	0	0	0	0								
5000 ppm	10	0	0	1	1	3	3	2		0	0	10	0	0	0		10	0	0	0	0	0		6	2	2	0	0	0		10	0	0	0	0								
10000 ppm	10	0	0	0	4	4	2	0	**	0	0	7	3	0	0		10	0	0	0	0	0		0	5	5	0	0	0	*	10	0	0	0	0								
20000 ppm	10	0	1	6	1	2	0	0	**	0	0	8	2	0	0		10	0	0	0	0	0		2	4	4	0	0	0		10	0	0	0	0								

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

Test of CHI SQUARE

(HCL101)

BAIS 4

STUDY NO. : 0460
ANIMAL : MOUSE Crj:BDF1
MEASURE. TIME : 1
SEX : MALE

URINALYSIS

REPORT TYPE : A1

PAGE : 2

Group Name	NO. of Animals	Urobilinogen \pm + 2+ 3+ 4+ CHH
Control	10	10 0 0 0 0
1250 ppm	10	10 0 0 0 0
2500 ppm	10	10 0 0 0 0
5000 ppm	10	10 0 0 0 0
10000 ppm	10	10 0 0 0 0
20000 ppm	10	10 0 0 0 0

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

Test of CHI SQUARE

(HCL101)

BAIS 4

APPENDIX H 2

URINALYSIS : SUMMARY, MOUSE : FEMALE

(13-WEEK STUDY)

STUDY NO. : 0460
ANIMAL : MOUSE Crj:BDF1
MEASURE. TIME : 1
SEX : FEMALE

URINALYSIS

REPORT TYPE : A1

PAGE : 3

Group Name	NO. of Animals	pH_____								CHI	Protein_____						CHI	Glucose_____						CHI	Ketone body						CHI	Occult blood						CHI
		5.0	6.0	6.5	7.0	7.5	8.0	8.5	—		±	+	2+	3+	4+	—		±	+	2+	3+	4+	—		±	+	2+	3+	4+	—		±	+	2+	3+	4+		
Control	10	0	0	2	0	3	5	0		0	0	7	3	0	0		10	0	0	0	0	0		0	6	4	0	0	0		10	0	0	0	0	0		
1250 ppm	10	0	1	1	1	4	3	0		0	1	7	2	0	0		10	0	0	0	0	0		0	8	2	0	0	0		10	0	0	0	0	0		
2500 ppm	10	0	0	0	4	3	3	0		0	0	10	0	0	0		10	0	0	0	0	0		0	9	1	0	0	0		10	0	0	0	0	0		
5000 ppm	10	0	0	1	4	2	3	0		0	0	7	3	0	0		10	0	0	0	0	0		0	3	3	4	0	0		10	0	0	0	0	0		
10000 ppm	10	0	0	3	4	2	1	0		0	0	4	6	0	0		10	0	0	0	0	0		0	0	9	1	0	0	*		10	0	0	0	0	0	
20000 ppm	10	0	0	10	0	0	0	0	**	0	0	9	1	0	0		10	0	0	0	0	0		0	3	7	0	0	0		10	0	0	0	0	0		

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

Test of CHI SQUARE

(HCL101)

BAIS 4

STUDY NO. : 0460
ANIMAL : MOUSE Crj:BDF1
MEASURE. TIME : 1
SEX : FEMALE

URINALYSIS

REPORT TYPE : A1

PAGE : 4

Group Name	NO. of Animals	Urobilinogen ± + 2+ 3+ 4+	CHI
------------	-------------------	------------------------------	-----

Control	10	10 0 0 0 0	
1250 ppm	10	10 0 0 0 0	
2500 ppm	10	10 0 0 0 0	
5000 ppm	10	10 0 0 0 0	
10000 ppm	10	10 0 0 0 0	
20000 ppm	10	10 0 0 0 0	

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

Test of CHI SQUARE

(HCL101)

BAIS 4

APPENDIX I 1

GROSS FINDINGS : SUMMARY, MOUSE : MALE : ALL ANIMALS

(13-WEEK STUDY)

STUDY NO. : 0460
ANIMAL : MOUSE Crj:BDF1
REPORT TYPE : A1
SEX : MALE

GROSS FINDINGS (SUMMARY)
ALL ANIMALS (0- 14W)

PAGE : 1

Organ	Findings	Group Name	Control	1250 ppm	2500 ppm	5000 ppm
		NO. of Animals	10 (%)	10 (%)	10 (%)	10 (%)
spleen	black zone		0 (0)	0 (0)	2 (20)	0 (0)
(HPT080)			BAIS 4			

STUDY NO. : 0460
ANIMAL : MOUSE Crj:BDF1
REPORT TYPE : A1
SEX : MALE

GROSS FINDINGS (SUMMARY)
ALL ANIMALS (0- 14W)

PAGE : 2

Organ_____	Findings_____	Group Name	10000 ppm	20000 ppm
		NO. of Animals	10 (%)	10 (%)
spleen	black zone		2 (20)	0 (0)

(HPT080)

BAIS 4

APPENDIX I 2

GROSS FINDINGS : SUMMARY, MOUSE : FEMALE : ALL ANIMALS

(13-WEEK STUDY)

STUDY NO. : 0460
ANIMAL : MOUSE Crj:BDF1
REPORT TYPE : A1
SEX : FEMALE

GROSS FINDINGS (SUMMARY)
ALL ANIMALS (0- 14W)

PAGE : 3

Organ	Findings	Group Name	Control	1250 ppm	2500 ppm	5000 ppm
		NO. of Animals	10 (%)	10 (%)	10 (%)	10 (%)
spleen	black zone		0 (0)	3 (30)	0 (0)	0 (0)

(HPT080)

BAIS 4

STUDY NO. : 0460
ANIMAL : MOUSE Crj:BDF1
REPORT TYPE : A1
SEX : FEMALE

GROSS FINDINGS (SUMMARY)
ALL ANIMALS (0- 14W)

PAGE : 4

Organ	Findings	Group Name	10000 ppm	20000 ppm
		NO. of Animals	10 (%)	10 (%)
spleen	black zone		1 (10)	2 (20)

(HPT080)

BAIS 4

APPENDIX J 1

ORGAN WEIGHT, ABSOLUTE : SUMMARY, MOUSE : MALE

(13-WEEK STUDY)

STUDY NO. : 0460
 ANIMAL : MOUSE Crj:BDF1
 REPORT TYPE : A1
 SEX : MALE
 UNIT: g

ORGAN WEIGHT:ABSOLUTE (SUMMARY)
 SURVIVAL ANIMALS (14W)

PAGE : 1

Group Name	NO. of Animals	Body Weight	THYMUS	ADRENALS	TESTES	HEART	LUNGS
Control	10	29.3± 1.7	0.044± 0.004	0.012± 0.002	0.221± 0.020	0.147± 0.009	0.162± 0.012
1250 ppm	10	28.5± 2.1	0.038± 0.003*	0.013± 0.003	0.223± 0.018	0.150± 0.011	0.162± 0.016
2500 ppm	10	29.4± 2.0	0.046± 0.012	0.011± 0.002	0.220± 0.033	0.150± 0.008	0.165± 0.009
5000 ppm	10	28.8± 2.5	0.045± 0.009	0.011± 0.003	0.218± 0.031	0.149± 0.010	0.165± 0.004
10000 ppm	10	28.7± 1.6	0.039± 0.005	0.013± 0.003	0.226± 0.016	0.147± 0.005	0.172± 0.010
20000 ppm	10	25.9± 1.6**	0.037± 0.002*	0.012± 0.002	0.220± 0.027	0.143± 0.013	0.158± 0.009

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

Test of Dunnett

(HCL040)

BAIS 4

STUDY NO. : 0460
 ANIMAL : MOUSE Crj:BDF1
 REPORT TYPE : A1
 SEX : MALE
 UNIT: g

ORGAN WEIGHT:ABSOLUTE (SUMMARY)
 SURVIVAL ANIMALS (14W)

PAGE : 2

Group Name	NO. of Animals	KIDNEYS		SPLEEN		LIVER		BRAIN		THYROID	
Control	10	0.422±	0.026	0.046±	0.005	1.134±	0.056	0.439±	0.015	0.007±	0.001
1250 ppm	10	0.413±	0.028	0.045±	0.002	1.117±	0.081	0.444±	0.006	0.006±	0.001
2500 ppm	10	0.435±	0.021	0.047±	0.004	1.162±	0.029	0.443±	0.012	0.006±	0.001
5000 ppm	10	0.434±	0.024	0.049±	0.005	1.149±	0.055	0.445±	0.010	0.007±	0.002
10000 ppm	10	0.448±	0.021	0.046±	0.004	1.140±	0.047	0.444±	0.006	0.007±	0.002
20000 ppm	10	0.432±	0.030	0.044±	0.008	1.082±	0.062	0.447±	0.009	0.006±	0.001

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

Test of Dunnett

(HCL040)

BAIS 4

APPENDIX J 2

ORGAN WEIGHT, ABSOLUTE : SUMMARY, MOUSE : FEMALE

(13-WEEK STUDY)

STUDY NO. : 0460
ANIMAL : MOUSE Crj:BDF1
REPORT TYPE : A1
SEX : FEMALE
UNIT: g

ORGAN WEIGHT:ABSOLUTE (SUMMARY)
SURVIVAL ANIMALS (14W)

PAGE : 3

Group Name	NO. of Animals	Body Weight	THYMUS	ADRENALS	OVARIES	HEART	LUNGS
Control	10	20.7± 0.5	0.048± 0.008	0.015± 0.002	0.031± 0.004	0.125± 0.011	0.165± 0.015
1250 ppm	10	20.9± 1.0	0.048± 0.006	0.016± 0.003	0.033± 0.007	0.121± 0.010	0.152± 0.007
2500 ppm	10	20.9± 0.7	0.044± 0.006	0.014± 0.002	0.029± 0.004	0.122± 0.010	0.153± 0.009
5000 ppm	10	20.8± 0.8	0.043± 0.006	0.015± 0.003	0.026± 0.003	0.121± 0.004	0.164± 0.017
10000 ppm	10	20.8± 1.2	0.045± 0.006	0.015± 0.003	0.028± 0.005	0.123± 0.016	0.157± 0.015
20000 ppm	10	20.6± 1.0	0.042± 0.008	0.014± 0.003	0.026± 0.007	0.117± 0.009	0.153± 0.010

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

Test of Dunnett

(HCL040)

BAIS-4

STUDY NO. : 0460
ANIMAL : MOUSE Crj:BDF1
REPORT TYPE : A1
SEX : FEMALE
UNIT: g

ORGAN WEIGHT:ABSOLUTE (SUMMARY)
SURVIVAL ANIMALS (14W)

PAGE : 4

Group Name	NO. of Animals	KIDNEYS		SPLEEN		LIVER		BRAIN		THYROID	
Control	10	0.286±	0.020	0.051±	0.004	0.900±	0.047	0.453±	0.009	0.005±	0.001
1250 ppm	10	0.285±	0.013	0.049±	0.006	0.887±	0.044	0.456±	0.013	0.006±	0.002
2500 ppm	10	0.296±	0.012	0.053±	0.007	0.876±	0.059	0.457±	0.014	0.006±	0.002
5000 ppm	10	0.298±	0.012	0.051±	0.008	0.887±	0.069	0.463±	0.015	0.006±	0.002
10000 ppm	10	0.311±	0.021**	0.052±	0.009	0.899±	0.085	0.461±	0.013	0.006±	0.001
20000 ppm	10	0.319±	0.017**	0.049±	0.011	0.882±	0.071	0.454±	0.011	0.006±	0.002

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

Test of Dunnett

(HCL040)

BAIS 4

APPENDIX K 1

ORGAN WEIGHT, RELATIVE : SUMMARY, MOUSE : MALE

(13-WEEK STUDY)

STUDY NO. : 0460
ANIMAL : MOUSE Crj:BDF1
REPORT TYPE : A1
SEX : MALE
UNIT: %

ORGAN WEIGHT:RELATIVE (SUMMARY)
SURVIVAL ANIMALS (14W)

PAGE : 1

Group Name	NO. of Animals	Body Weight (g)	THYMUS	ADRENALS	TESTES	HEART	LUNGS
Control	10	29.3± 1.7	0.151± 0.018	0.041± 0.009	0.753± 0.062	0.500± 0.027	0.554± 0.046
1250 ppm	10	28.5± 2.1	0.132± 0.009*	0.045± 0.010	0.786± 0.073	0.526± 0.030	0.571± 0.060
2500 ppm	10	29.4± 2.0	0.156± 0.038	0.039± 0.008	0.749± 0.117	0.511± 0.030	0.565± 0.051
5000 ppm	10	28.8± 2.5	0.155± 0.026	0.038± 0.009	0.759± 0.109	0.520± 0.045	0.579± 0.060
10000 ppm	10	28.7± 1.6	0.136± 0.014	0.043± 0.010	0.790± 0.078	0.511± 0.026	0.599± 0.033
20000 ppm	10	25.9± 1.6**	0.143± 0.009	0.044± 0.008	0.851± 0.113	0.552± 0.034**	0.610± 0.043

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

Test of Dunnett

(HCL042)

BAIS 4

STUDY NO. : 0460
 ANIMAL : MOUSE Crj:BDF1
 REPORT TYPE : A1
 SEX : MALE
 UNIT: %

ORGAN WEIGHT:RELATIVE (SUMMARY)
 SURVIVAL ANIMALS (14W)

PAGE : 2

Group Name	NO. of Animals	KIDNEYS	SPLEEN	LIVER	BRAIN	THYROID
Control	10	1.438± 0.047	0.157± 0.014	3.868± 0.066	1.498± 0.068	0.023± 0.006
1250 ppm	10	1.453± 0.100	0.158± 0.014	3.926± 0.157	1.566± 0.132	0.020± 0.005
2500 ppm	10	1.484± 0.105	0.160± 0.012	3.963± 0.212	1.512± 0.094	0.020± 0.003
5000 ppm	10	1.516± 0.133	0.171± 0.015	4.009± 0.226	1.558± 0.129	0.023± 0.008
10000 ppm	10	1.564± 0.100*	0.161± 0.010	3.974± 0.151	1.551± 0.087	0.024± 0.007
20000 ppm	10	1.669± 0.097**	0.168± 0.022	4.175± 0.108**	1.729± 0.105**	0.022± 0.005

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

Test of Dunnett

(HCL042)

BAIS 4

APPENDIX K 2

ORGAN WEIGHT, RELATIVE : SUMMARY, MOUSE : FEMALE
(13-WEEK STUDY)

STUDY NO. : 0460
ANIMAL : MOUSE Crj:BDf1
REPORT TYPE : A1
SEX : FEMALE
UNIT: %

ORGAN WEIGHT:RELATIVE (SUMMARY)
SURVIVAL ANIMALS (14W)

PAGE : 3

Group Name	NO. of Animals	Body Weight (g)	THYMUS	ADRENALS	OVARIES	HEART	LUNGS
Control	10	20.7± 0.5	0.230± 0.036	0.071± 0.009	0.150± 0.016	0.602± 0.054	0.794± 0.070
1250 ppm	10	20.9± 1.0	0.230± 0.025	0.078± 0.016	0.155± 0.032	0.577± 0.057	0.728± 0.050*
2500 ppm	10	20.9± 0.7	0.212± 0.030	0.069± 0.009	0.137± 0.016	0.584± 0.048	0.733± 0.036
5000 ppm	10	20.8± 0.8	0.205± 0.027	0.072± 0.014	0.123± 0.015	0.580± 0.014	0.786± 0.062
10000 ppm	10	20.8± 1.2	0.217± 0.028	0.071± 0.014	0.134± 0.021	0.588± 0.053	0.754± 0.044
20000 ppm	10	20.6± 1.0	0.206± 0.038	0.067± 0.017	0.127± 0.032	0.568± 0.041	0.748± 0.060

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

Test of Dunnett

(HCL042)

BAIS 4

STUDY NO. : 0460
 ANIMAL : MOUSE Crj:BDP1
 REPORT TYPE : A1
 SEX : FEMALE
 UNIT: %

ORGAN WEIGHT:RELATIVE (SUMMARY)
 SURVIVAL ANIMALS (14W)

PAGE : 4

Group Name	NO. of Animals	KIDNEYS	SPLEEN	LIVER	BRAIN	THYROID
Control	10	1.381± 0.098	0.246± 0.018	4.338± 0.176	2.185± 0.067	0.024± 0.003
1250 ppm	10	1.362± 0.066	0.236± 0.023	4.236± 0.079	2.183± 0.154	0.030± 0.012
2500 ppm	10	1.416± 0.066	0.252± 0.036	4.192± 0.198	2.190± 0.096	0.030± 0.009
5000 ppm	10	1.433± 0.044	0.243± 0.027	4.253± 0.187	2.225± 0.117	0.030± 0.008
10000 ppm	10	1.495± 0.078**	0.247± 0.031	4.309± 0.241	2.219± 0.134	0.026± 0.006
20000 ppm	10	1.554± 0.090**	0.238± 0.042	4.287± 0.180	2.213± 0.131	0.030± 0.011

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

Test of Dunnett

(HCL042)

BAIS 4

APPENDIX L 1

HISTOLOGICAL FINDINGS : NON-NEOPLASTIC LESIONS : SUMMARY

MOUSE : MALE : ALL ANIMALS

(13-WEEK STUDY)

STUDY NO. : 0460
ANIMAL : MOUSE Crj:BDF1
REPORT TYPE : A1
SEX : MALE

HISTOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)
ALL ANIMALS (0- 14W)

PAGE : 1

Organ_____	Findings_____	Group Name No. of Animals on Study				Control 10				1250 ppm 10				2500 ppm 10				5000 ppm 10					
		Grade				1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4		
		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	
<hr/>																							
{Respiratory system}																							
nasal cavit		<10>				0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	
	respiratory metaplasia:olfactory epithelium	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(10)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	
lung		<10>				0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	
	hemorrhage	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(10)	(0)	(0)	(0)	(0)	
 {Hematopoietic system}																							
spleen		<10>				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	deposit of melanin	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	
 {Digestive system}																							
liver		<10>				0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	
	granulation	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(20)	(0)	(0)	(0)	(0)	

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

(HPT150)

BAIS4

STUDY NO. : 0460
 ANIMAL : MOUSE Crj:BDF1
 REPORT TYPE : A1
 SEX : MALE

HISTOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)
 ALL ANIMALS (0- 14W)

PAGE : 2

		Group Name	10000 ppm				20000 ppm			
		No. of Animals on Study	10				10			
Organ	Findings	Grade	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Respiratory system}										
nasal cavit			<10>				<10>			
	respiratory metaplasia:olfactory epithelium		0	0	0	0	0	0	0	0
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
lung			<10>				<10>			
	hemorrhage		0	0	0	0	0	0	0	0
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
{Hematopoietic system}										
spleen			<10>				<10>			
	deposit of melanin		2	0	0	0	0	0	0	0
			(20)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
{Digestive system}										
liver			<10>				<10>			
	granulation		1	0	0	0	0	0	0	0
			(10)	(0)	(0)	(0)	(0)	(0)	(0)	(0)

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

(IPT150)

BAIS4

APPENDIX L 2

HISTOLOGICAL FINDINGS : NON-NEOPLASTIC LESIONS : SUMMARY

MOUSE : FEMALE : ALL ANIMALS

(13-WEEK STUDY)

STUDY NO. : 0460
 ANIMAL : MOUSE Crj:BDF1
 REPORT TYPE : A1
 SEX : FEMALE

HISTOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)
 ALL ANIMALS (0- 14W)

PAGE : 3

Organ_____	Findings_____	Group Name	Control				1250 ppm				2500 ppm				5000 ppm			
		No. of Animals on Study	10				10				10				10			
		Grade	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Respiratory system}																		
lung	hemorrhage		<10>				<10>				<10>				<10>			
			2	0	0	0	0	0	0	0	0	0	0	1	0	0	0	
			(20)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(10)	(0)	(0)	(0)	(0)
{Hematopoietic system}																		
lymph node	deposit of hemosiderin		<10>				<10>				< 8>				< 8>			
			0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(13)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
spleen	deposit of melanin		<10>				<10>				<10>				<10>			
			0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	
			(0)	(0)	(0)	(0)	(30)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
{Digestive system}																		
liver	necrosis:focal		<10>				<10>				<10>				<10>			
			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	granulation		1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	
			(10)	(0)	(0)	(0)	(10)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)

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

STUDY NO. : 0460
 ANIMAL : MOUSE Crj:BDF1
 REPORT TYPE : A1
 SEX : FEMALE

HISTOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)
 ALL ANIMALS (0- 14W)

PAGE : 4

		Group Name				10000 ppm				20000 ppm			
		No. of Animals on Study				10				10			
		Grade				1 2 3 4				1 2 3 4			
Organ	Findings												
		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Respiratory system}													
lung		<10>				<10>							
	hemorrhage	1	0	0	0	1	0	0	0	1	0	0	0
		(10)	(0)	(0)	(0)	(10)	(0)	(0)	(0)	(10)	(0)	(0)	(0)
{Hematopoietic system}													
lymph node		<10>				< 9>							
	deposit of hemosiderin	0	0	0	0	0	0	0	0	0	0	0	0
		(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
spleen		<10>				<10>							
	deposit of melanin	1	0	0	0	2	0	0	0	1	0	0	0
		(10)	(0)	(0)	(0)	(20)	(0)	(0)	(0)	(10)	(0)	(0)	(0)
{Digestive system}													
liver		<10>				<10>							
	necrosis:focal	1	0	0	0	0	0	0	0	0	0	0	0
		(10)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	granulation	1	0	0	0	0	0	0	0	0	0	0	0
		(10)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)

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

STUDY NO. : 0460
 ANIMAL : MOUSE Crj:BDF1
 REPORT TYPE : A1
 SEX : FEMALE

HISTOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)
 ALL ANIMALS (0- 14W)

PAGE : 5

Organ_____	Findings_____	Group Name	Control				1250 ppm				2500 ppm				5000 ppm			
		No. of Animals on Study	10				10				10				10			
		Grade	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
<hr/>																		
{Urinary system}																		
kidney	basophilic change		<10>				<10>				<10>				<10>			
		0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	
		(0)	(0)	(0)	(0)	(10)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	
{Endocrine system}																		
pituitary	Rathke pouch		< 9>				<10>				<10>				<10>			
		1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
		(11)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	

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

(HPT150)

BAIS4

STUDY NO. : 0460
 ANIMAL : MOUSE Crj:BDF1
 REPORT TYPE : A1
 SEX : FEMALE

HISTOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)
 ALL ANIMALS (0- 14W)

PAGE : 6

		Group Name				10000 ppm				20000 ppm			
		No. of Animals on Study				10				10			
		Grade				1	2	3	4	1	2	3	4
Organ_____	Findings_____					(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)

{Urinary system}

kidney	basophilic change	<10>				<10>			
		0	0	0	0	0	0	0	0
		(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)

{Endocrine system}

pituitary	Rathke pouch	<10>				<10>			
		1	0	0	0	1	0	0	0
		(10)	(0)	(0)	(0)	(10)	(0)	(0)	(0)

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

(HPT150)

BAIS4

APPENDIX M 1

IDENTITY OF 2-PHENOXYETHANOL IN THE 13-WEEK DRINKING WATER STUDY

IDENTITY OF 2-PHENOXYETHANOL IN THE 13-WEEK DRINKING WATER STUDY

Test Substance : 2-Phenoxyethanol (Wako Pure Chemical Industries, Ltd.)

Lot No. : WAL4150

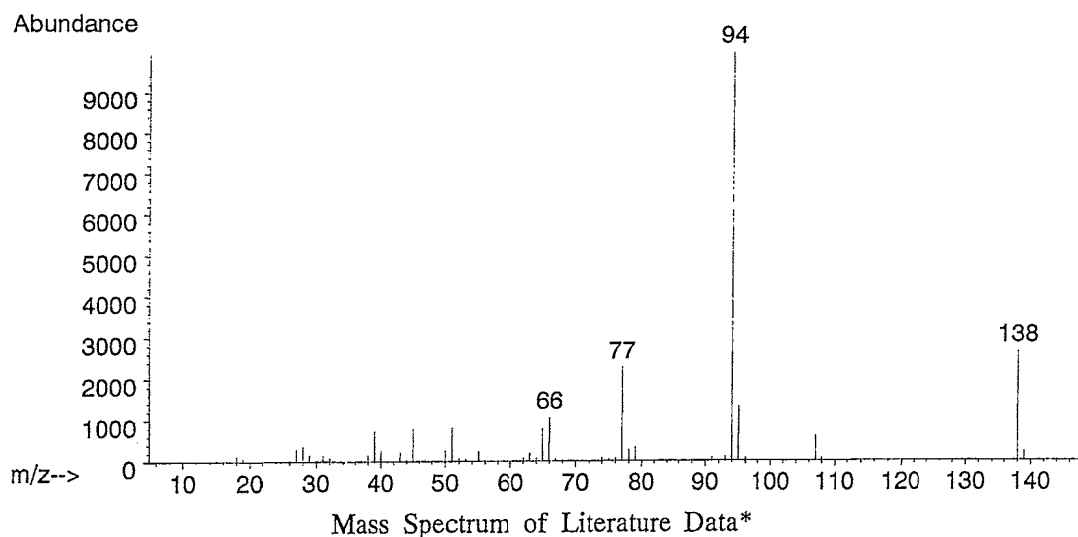
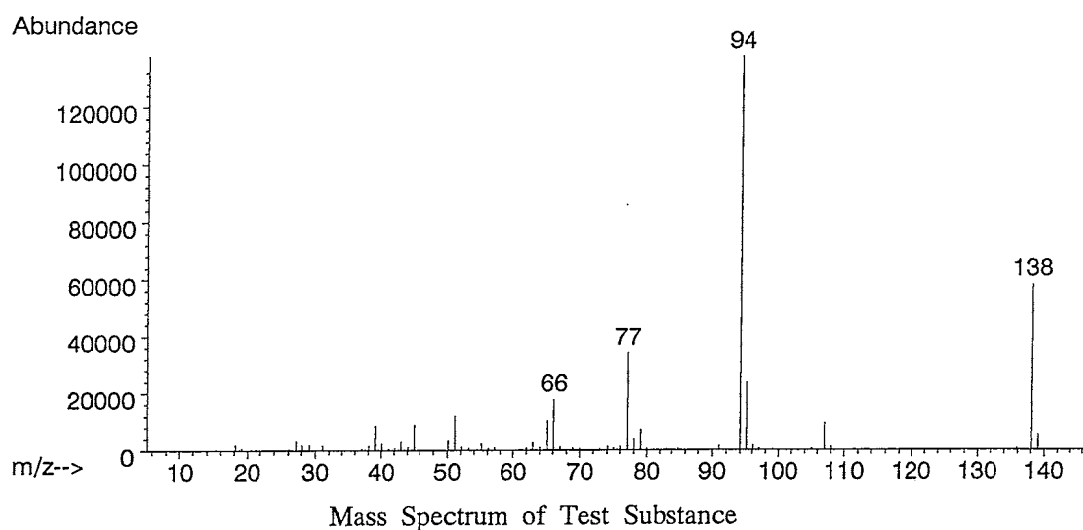
1. Spectral Data

Mass Spectrometry

Instrument : Hewlett Packard 5989B Mass Spectrometer

Ionization : EI (Electron Ionization)

Ionization Voltage : 70eV



Result: The mass spectrum was consistent with literature spectrum.

(*McLafferty, F.W. (1994)

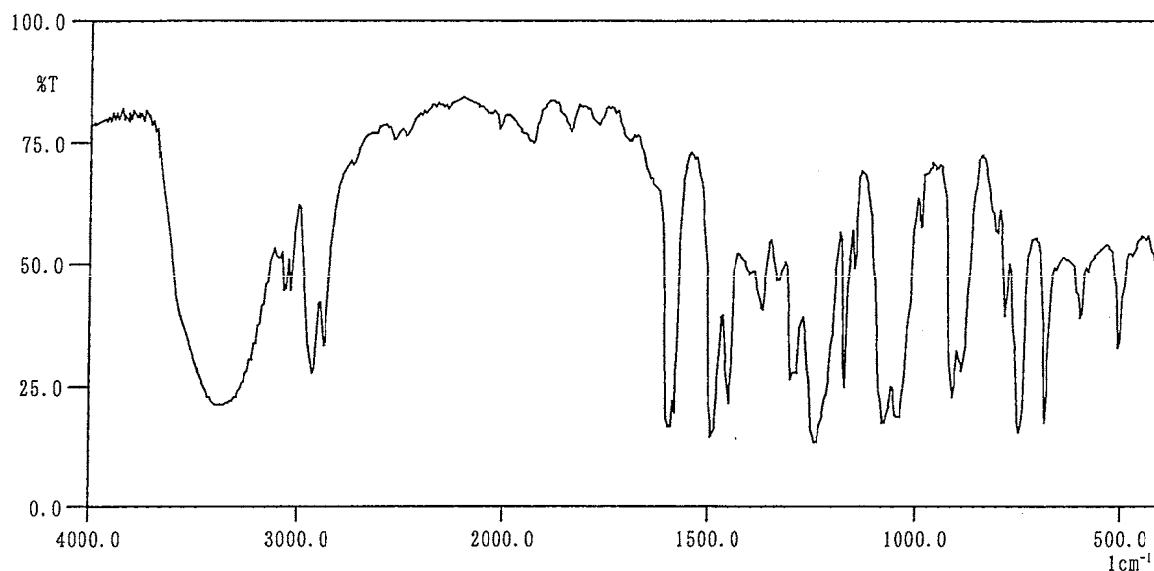
Wiley Registry of Mass Spectral Data, (6th edition), Entry Number 25888
John Wiley and Sons, New York, NY)

Infrared Spectrometry

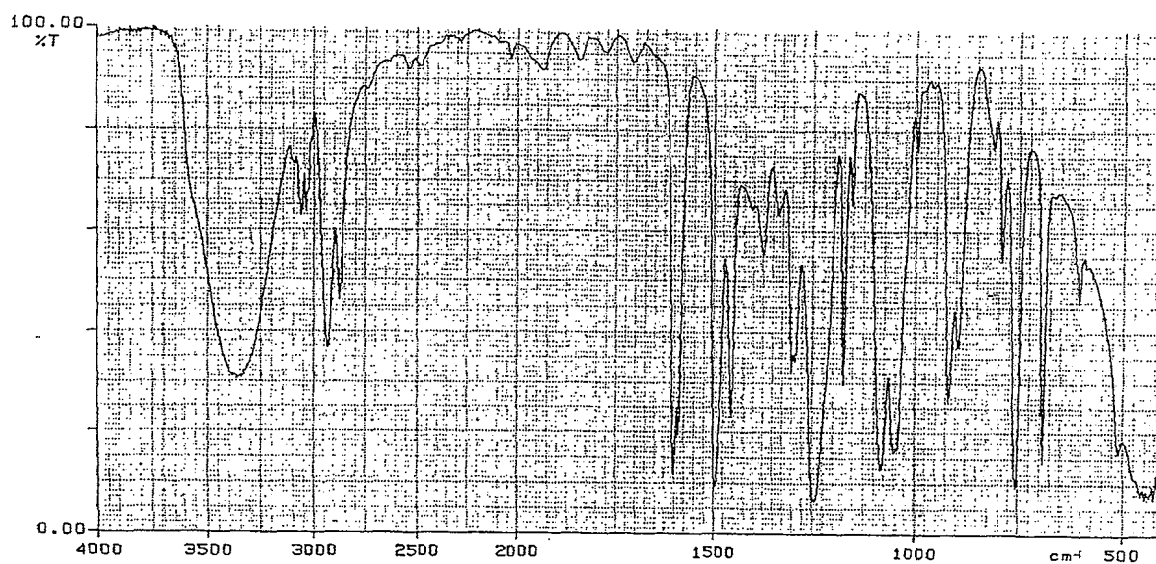
Instrument : Shimadzu FTIR-8200PC Infrared Spectrometer

Cell : KBr Liquid Cell

Resolution : 2 cm^{-1}



Infrared Spectrum of Test Substance



Infrared Spectrum of Literature Data*

Result: The infrared spectrum was consistent with literature spectrum.

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

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

APPENDIX M 2

STABILITY OF 2-PHENOXYETHANOL IN THE 13-WEEK DRINKING WATER STUDY

STABILITY OF 2-PHENOXYETHANOL IN THE 13-WEEK DRINKING WATER STUDY

Test Substance : 2-Phenoxyethanol (Wako Pure Chemical Industries, Ltd.)
Lot No. : WAL4150
1. Sample : This lot was used from 2002.9.10 to 2002.12.12. Test substance was stored in a dark place at room temperature.

2. High Performance Liquid Chromatography

Instrument : Shimadzu LC-10 High Performance Liquid Chromatograph
Column : TSK GEL ODS-80TM (4.6 mm ϕ \times 15 cm)
Column Temperature : 40 °C
Flow Rate : 1 mL/min
Mobile Phase : Acetonitrile : Distilled Water = 4 : 6
Detector : UV (271 nm)
Injection Volume : 10 μ L

Date (date analyzed)	Peak No.	Retention Time (min)	Area (%)
2002.09.02	1	3.657	100
2002.12.16	1	3.480	100

Result: High performance liquid chromatography indicated one major peak (peak No.1) analyzed on 2002.9.2 and one major peak (peak No.1) analyzed on 2002.12.16. No new trace impurity peak in the test substance analyzed on 2002.12.16 was detected.

3. Conclusion: The test substance was stable for about 15 weeks in a dark place at room temperature.

APPENDIX M 3

CONCENTRATION OF 2-PHENOXYETHANOL IN FORMULATED WATER
IN THE 13-WEEK DRINKING WATER STUDY

CONCENTRATION OF 2-PHENOXYETHANOL IN FORMULATED WATER IN THE 13-WEEK DRINKING WATER STUDY

Date Analyzed	Target Concentration				
	1250 ^a	2500	5000	10000	20000
2002.09.10	1260 (101) ^b	2560 (102)	5060 (101)	10100 (101)	20300 (102)

^a ppm

^b %

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

Instrument : Shimadzu LC-10 High Performance Liquid Chromatograph

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

Column Temperature : 40 °C

Flow Rate : 1 mL/min

Mobile Phase : Acetonitrile : Distilled Water = 4 : 6

Detector : UV (271 nm)

Injection Volume : 10 μ L

APPENDIX M 4

STABILITY OF 2-PHENOXYETHANOL IN FORMULATED WATER

STABILITY OF 2-PHENOXYETHANOL IN FORMULATED WATER

Date Prepared	Date Analyzed	Target Concentration	
		100 ^a	25000
2002.05.15	2002.05.15	97.3 (100) ^b	24600 (100)
	2002.05.20 ^c	93.2 (95.8)	25500 (104)

^a ppm

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

^c Animal room samples

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

Instrument : Shimadzu LC-10 High Performance Liquid Chromatograph
 Column : TSK GEL ODS-80TM (4.6 mm ϕ \times 15 cm)
 Column Temperature : 40 °C
 Flow Rate : 1 mL/min
 Mobile Phase : Acetonitrile : Distilled Water = 4 : 6
 Detector : UV (271 nm)
 Injection Volume : 10 μ L

APPENDIX N 1

METHODS FOR HEMATOLOGY, BIOCHEMISTRY AND URINALYSIS
IN THE 13-WEEK DRINKING WATER STUDY OF 2-PHENOXYETHANOL

METHODS FOR HEMATOLOGY, BIOCHEMISTRY AND URINALYSIS
IN THE 13-WEEK DRINKING WATER STUDY OF 2-PHENOXYETHANOL

Item	Method
Hematology	
Red blood cell (RBC)	Light scattering method ¹⁾
Hemoglobin (Hgb)	Cyanmethemoglobin method ¹⁾
Hematocrit (Hct)	Calculated as $RBC \times MCV / 10$ ¹⁾
Mean corpuscular volume (MCV)	Light scattering method ¹⁾
Mean corpuscular hemoglobin (MCH)	Calculated as $Hgb / RBC \times 10$ ¹⁾
Mean corpuscular hemoglobin concentration (MCHC)	Calculated as $Hgb / Hct \times 100$ ¹⁾
Platelet	Light scattering method ¹⁾
Reticulocyte	Light scattering method ¹⁾
White blood cell (WBC)	Light scattering method ¹⁾
Differential WBC	Pattern recognition method ²⁾ (Wright staining)
Biochemistry	
Total protein (TP)	Biuret method ³⁾
Albumin (Alb)	BCG method ³⁾
A/G ratio	Calculated as $Alb / (TP - Alb)$ ³⁾
T-bilirubin	Alkaline azobilirubin method ³⁾
Glucose	GlcK · G-6-PDH method ³⁾
T-cholesterol	CE · COD · POD method ³⁾
Triglyceride	LPL · GK · GPO · POD method ³⁾
Phospholipid	PLD · ChOD · POD method ³⁾
Glutamic oxaloacetic transaminase (GOT)	JSCC method ³⁾
Glutamic pyruvic transaminase (GPT)	JSCC method ³⁾
Lactate dehydrogenase (LDH)	SFBC method ³⁾
Alkaline phosphatase (ALP)	GSCC method ³⁾
γ -Glutamyl transpeptidase (γ -GTP)	L- γ -Glutamyl-p-nitroanilide method ³⁾
Creatine phosphokinase (CPK)	JSCC method ³⁾
Urea nitrogen	Urease · GLDH method ³⁾
Sodium	Ion selective electrode method ³⁾
Potassium	Ion selective electrode method ³⁾
Chloride	Ion selective electrode method ³⁾
Calcium	OCPC method ³⁾
Inorganic phosphorus	PNP · XOD · POD method ³⁾
Urinalysis	
pH, Protein, Glucose, Ketone body, Occult Blood, Urobilinogen	Urinalysis reagent paper method ⁴⁾

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.)

4) Ames reagent strips for urinalysis (Uro-Labstix : Bayer Corporation)

APPENDIX O 1

UNITS AND DECIMAL PLACE FOR HEMATOLOGY AND BIOCHEMISTRY
IN THE 13-WEEK DRINKING WATER STUDY OF 2-PHENOXYETHANOL

UNITS AND DECIMAL PLACE FOR HEMATOLOGY AND BIOCHEMISTRY
IN THE 13-WEEK DRINKING WATER STUDY OF 2-PHENOXYETHANOL

Item	Unit	Decimal place
Hematology		
Red blood cell (RBC)	$\times 10^6 / \mu\text{L}$	2
Hemoglobin	g/dL	1
Hematocrit	%	1
Mean corpuscular volume (MCV)	fL	1
Mean corpuscular hemoglobin (MCH)	pg	1
Mean corpuscular hemoglobin concentration (MCHC)	g/dL	1
Platelet	$\times 10^3 / \mu\text{L}$	0
Reticulocyte	%	1
White blood cell (WBC)	$\times 10^3 / \mu\text{L}$	2
Differential WBC	%	0
Biochemistry		
Total protein	g/dL	1
Albumin	g/dL	1
A/G ratio	—	1
T-bilirubin	mg/dL	2
Glucose	mg/dL	0
T-cholesterol	mg/dL	0
Triglyceride	mg/dL	0
Phospholipid	mg/dL	0
Glutamic oxaloacetic transaminase (GOT)	IU/L	0
Glutamic pyruvic transaminase (GPT)	IU/L	0
Lactate dehydrogenase (LDH)	IU/L	0
Alkaline phosphatase (ALP)	IU/L	0
γ -Glutamyl transpeptidase (γ -GTP)	IU/L	0
Creatine phosphokinase (CPK)	IU/L	0
Urea nitrogen	mg/dL	1
Sodium	mEq/L	0
Potassium	mEq/L	1
Chloride	mEq/L	0
Calcium	mg/dL	1
Inorganic phosphorus	mg/dL	1