

1,4-ジオキサンのラット及びマウスを用いた
経口(混水)投与によるがん原性予備試験
(急性・2週間・13週間) 報告書

APPENDIX

(B1-1～B7-4)

2Week STUDY NO. 0018 ; 0019

APPENDIX B 1-1

CHEMICAL INTAKE CHANGES (TWO-WEEK STUDIES:SUMMARY)

RAT:MALE

STUDY NO. : 0018
ANIMAL : RAT F344
UNIT : g/kg/day
REPORT TYPE : A1 2
SEX : MALE

CHEMICAL INTAKE CHANGES (SUMMARY)
ALL ANIMALS

PAGE : 1

Group Name	Administration (weeks)	
	1	2
Control	0.000± 0.000	0.000± 0.000
1110 ppm	0.135± 0.006	0.119± 0.006
3330 ppm	0.397± 0.024	0.339± 0.021
10000 ppm	1.101± 0.052	0.921± 0.056
30000 ppm	2.982± 0.134	2.939± 0.161
90000 ppm	0.927± 0.246	-

(HAN300)

BAIS 2

APPENDIX B 1-2

CHEMICAL INTAKE CHANGES (TWO-WEEK STUDIES:SUMMARY)

RAT:FEMALE

STUDY NO. : 0018
ANIMAL : RAT F344
UNIT : g/kg/day
REPORT TYPE : A1 2
SEX : FEMALE

CHEMICAL INTAKE CHANGES (SUMMARY)
ALL ANIMALS

PAGE : 2

Group Name	Administration (weeks)	
	1	2
Control	0.000± 0.000	0.000± 0.000
1110 ppm	0.158± 0.013	0.148± 0.016
3330 ppm	0.412± 0.026	0.377± 0.020
10000 ppm	1.112± 0.045	0.962± 0.039
30000 ppm	2.848± 0.223	2.648± 0.451
90000 ppm	1.299± 0.825	-

(HAN300)

BAIS 2

APPENDIX B 1-3

CHEMICAL INTAKE CHANGES (TWO-WEEK STUDIES:SUMMARY)

MOUSE:MALE

STUDY NO. : 0019
ANIMAL : MOUSE BDF1
UNIT : g/kg/day
REPORT TYPE : A1 2
SEX : MALE

CHEMICAL INTAKE CHANGES (SUMMARY)
ALL ANIMALS

PAGE : 1

Group Name	Administration (weeks)	
	1	2
Control	0.000± 0.000	0.000± 0.000
1110 ppm	0.199± 0.028	0.212± 0.045
3330 ppm	0.672± 0.089	0.649± 0.064
10000 ppm	1.360± 0.216	1.395± 0.252
30000 ppm	1.614± 1.052	3.477± 0.395
90000 ppm	1.920± 0.351	5.333± 0.000

(HAN300)

BAIS 2

APPENDIX B 1-4

CHEMICAL INTAKE CHANGES (TWO-WEEK STUDIES:SUMMARY)

MOUSE:FEMALE

STUDY NO. : 0019
ANIMAL : MOUSE BDF1
UNIT : g/kg/day
REPORT TYPE : A1 2
SEX : FEMALE

CHEMICAL INTAKE CHANGES (SUMMARY)
ALL ANIMALS

PAGE : 2

Group Name	Administration (weeks)	
	1	2
Control	0.000± 0.000	0.000± 0.000
1110 ppm	0.214± 0.087	0.260± 0.036
3330 ppm	0.766± 0.068	0.728± 0.076
10000 ppm	1.796± 0.318	1.750± 0.224
30000 ppm	3.505± 0.853	2.945± 0.264
90000 ppm	3.055± 1.561	-

(HAN300)

BAIS 2

APPENDIX B 2-1

CLINICAL OBSERVATION (TWO-WEEK STUDIES:SUMMARY)

RAT:MALE

STUDY NO. : 0018
ANIMAL : RAT F344
REPORT TYPE : A1 2

CLINICAL OBSERVATION (SUMMARY)
ALL ANIMALS

SEX : MALE

PAGE : 1

Clinical sign	Group Name	Administration Week-day													
		0-0	1-1	1-2	1-3	1-4	1-5	1-6	1-7	2-1	2-2	2-3	2-4	2-5	2-6
		1	1	1	1	1	1	1	1	1	1	1	1	1	1
DEATH	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1110 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3330 ppm	0	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	0
	30000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	90000 ppm	0	0	0	0	0	0	0	0	1	1	5	7	9	9
MORIBUND SACRIFICE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1110 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3330 ppm	0	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	0
	30000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	90000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	1
LOCOMOTOR MOVEMENT DECR	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1110 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3330 ppm	0	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	0
	30000 ppm	0	0	0	0	0	1	3	1	1	1	0	0	0	0
	90000 ppm	0	0	0	2	4	2	2	8	8	8	9	5	3	1
HUNCHBACK POSITION	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1110 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3330 ppm	0	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	0
	30000 ppm	0	0	0	0	0	0	0	0	0	0	0	1	2	2
	90000 ppm	0	0	0	0	2	3	2	10	10	9	9	5	3	1
ATAXIC GAIT	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1110 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3330 ppm	0	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	0
	30000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	90000 ppm	0	0	0	0	0	0	0	1	1	4	4	2	1	1

STUDY NO. : 0018
ANIMAL : RAT F344
REPORT TYPE : A1 2

CLINICAL OBSERVATION (SUMMARY)
ALL ANIMALS

SEX : MALE

PAGE : 2

Clinical sign	Group Name	Administration Week-day
		2-7 1
DEATH	Control	0
	1110 ppm	0
	3330 ppm	0
	10000 ppm	0
	30000 ppm	0
	90000 ppm	-
MORIBUND SACRIFICE	Control	0
	1110 ppm	0
	3330 ppm	0
	10000 ppm	0
	30000 ppm	0
	90000 ppm	-
LOCOMOTOR MOVEMENT DECR	Control	0
	1110 ppm	0
	3330 ppm	0
	10000 ppm	0
	30000 ppm	0
	90000 ppm	-
HUNCHBACK POSITION	Control	0
	1110 ppm	0
	3330 ppm	0
	10000 ppm	0
	30000 ppm	0
	90000 ppm	-
ATAXIC GAIT	Control	0
	1110 ppm	0
	3330 ppm	0
	10000 ppm	0
	30000 ppm	0
	90000 ppm	-

STUDY NO. : 0018
ANIMAL : RAT F344
REPORT TYPE : A1 2

CLINICAL OBSERVATION (SUMMARY)
ALL ANIMALS

SEX : MALE

PAGE : 3

Clinical sign	Group Name	Administration Week-day													
		0-0	1-1	1-2	1-3	1-4	1-5	1-6	1-7	2-1	2-2	2-3	2-4	2-5	2-6
		1	1	1	1	1	1	1	1	1	1	1	1	1	1
WEAKNESS	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1110 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3330 ppm	0	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	0
	30000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	90000 ppm	0	0	0	0	0	0	0	0	0	4	4	2	2	0
WASTING	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1110 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3330 ppm	0	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	0
	30000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	90000 ppm	0	0	0	0	0	0	0	10	10	9	9	5	3	1
SOILED	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1110 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3330 ppm	0	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	0
	30000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	90000 ppm	0	0	0	0	5	4	5	7	7	7	9	5	3	1
PILOERECTION	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1110 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3330 ppm	0	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	0
	30000 ppm	0	0	0	0	0	0	2	5	8	8	9	9	9	9
	90000 ppm	0	0	0	0	9	9	9	10	10	9	9	5	3	1
LACRYMATION	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1110 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3330 ppm	0	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	0
	30000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	90000 ppm	0	0	0	0	0	0	0	0	1	0	1	0	0	0

STUDY NO. : 0018
ANIMAL : RAT F344
REPORT TYPE : A1 2

CLINICAL OBSERVATION (SUMMARY)
ALL ANIMALS

SEX : MALE

PAGE : 4

Clinical sign	Group Name	Administration Week-day
		2-7 1
WEAKNESS	Control	0
	1110 ppm	0
	3330 ppm	0
	10000 ppm	0
	30000 ppm	0
	90000 ppm	-
WASTING	Control	0
	1110 ppm	0
	3330 ppm	0
	10000 ppm	0
	30000 ppm	0
	90000 ppm	-
SOILED	Control	0
	1110 ppm	0
	3330 ppm	0
	10000 ppm	0
	30000 ppm	0
	90000 ppm	-
PILOERECTION	Control	0
	1110 ppm	0
	3330 ppm	0
	10000 ppm	0
	30000 ppm	9
	90000 ppm	-
LACRYMATION	Control	0
	1110 ppm	0
	3330 ppm	0
	10000 ppm	0
	30000 ppm	0
	90000 ppm	-

STUDY NO. : 0018
ANIMAL : RAT F344
REPORT TYPE : A1 2

CLINICAL OBSERVATION (SUMMARY)
ALL ANIMALS

SEX : MALE

PAGE : 5

Clinical sign	Group Name	Administration Week-day													
		0-0	1-1	1-2	1-3	1-4	1-5	1-6	1-7	2-1	2-2	2-3	2-4	2-5	2-6
		1	1	1	1	1	1	1	1	1	1	1	1	1	1
EYE HEMORRHAGIC DISCHA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1110 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3330 ppm	0	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	0
	30000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	90000 ppm	0	0	0	0	2	2	3	2	2	1	1	1	0	0
CLOSED EYELID	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1110 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3330 ppm	0	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	0
	30000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	90000 ppm	0	0	0	0	0	0	0	0	0	4	1	0	0	0
NOSE HEMORRHAGIC DISCHA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1110 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3330 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	10000 ppm	0	0	2	1	0	0	0	0	0	0	0	0	0	0
	30000 ppm	0	0	4	0	1	0	4	0	0	0	0	0	0	1
	90000 ppm	0	0	3	0	9	7	9	7	8	8	9	5	3	1
IRREGULAR BREATHING	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1110 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3330 ppm	0	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	0
	30000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	90000 ppm	0	0	0	0	0	0	0	0	1	1	2	0	0	0
DIARRHEA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1110 ppm	0	1	0	0	0	0	0	0	0	0	0	0	0	0
	3330 ppm	0	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	0
	30000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	90000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

STUDY NO. : 0018
ANIMAL : RAT F344
REPORT TYPE : A1 2

CLINICAL OBSERVATION (SUMMARY)
ALL ANIMALS

SEX : MALE

PAGE : 6

Clinical sign	Group Name	Administration Week-day
		2-7
		1
EYE HEMORRHAGIC DISCHA	Control	0
	1110 ppm	0
	3330 ppm	0
	10000 ppm	0
	30000 ppm	0
	90000 ppm	-
CLOSED EYELID	Control	0
	1110 ppm	0
	3330 ppm	0
	10000 ppm	0
	30000 ppm	0
	90000 ppm	-
NOSE HEMORRHAGIC DISCHA	Control	0
	1110 ppm	0
	3330 ppm	0
	10000 ppm	0
	30000 ppm	0
	90000 ppm	-
IRREGULAR BREATHING	Control	0
	1110 ppm	0
	3330 ppm	0
	10000 ppm	0
	30000 ppm	0
	90000 ppm	-
DIARRHEA	Control	0
	1110 ppm	0
	3330 ppm	0
	10000 ppm	0
	30000 ppm	0
	90000 ppm	-

STUDY NO. : 0018
 ANIMAL : RAT F344
 REPORT TYPE : A1 2

CLINICAL OBSERVATION (SUMMARY)
 ALL ANIMALS

SEX : MALE

PAGE : 7

Clinical sign	Group Name	Administration Week-day													
		0-0	1-1	1-2	1-3	1-4	1-5	1-6	1-7	2-1	2-2	2-3	2-4	2-5	2-6
		1	1	1	1	1	1	1	1	1	1	1	1	1	1
SUBNORMAL TEMP	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1110 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3330 ppm	0	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	0
	30000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	90000 ppm	0	0	0	0	0	0	0	0	0	3	3	2	2	0
SALIVATION	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1110 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3330 ppm	0	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	0
	30000 ppm	0	0	0	0	0	0	1	0	0	0	0	0	0	0
	90000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

(HAN190)

BAIS 2

STUDY NO. : 0018
ANIMAL : RAT F344
REPORT TYPE : A1 2

CLINICAL OBSERVATION (SUMMARY)
ALL ANIMALS

SEX : MALE

PAGE : 8

Clinical sign	Group Name	Administration Week-day
		2-7 1
SUBNORMAL TEMP	Control	0
	1110 ppm	0
	3330 ppm	0
	10000 ppm	0
	30000 ppm	0
	90000 ppm	-
SALIVATION	Control	0
	1110 ppm	0
	3330 ppm	0
	10000 ppm	0
	30000 ppm	0
	90000 ppm	-

(HAN190)

BAIS 2

APPENDIX B 2-2

CLINICAL OBSERVATION (TWO-WEEK STUDIES:SUMMARY)

RAT:FEMALE

STUDY NO. : 0018
ANIMAL : RAT F344
REPORT TYPE : A1 2

CLINICAL OBSERVATION (SUMMARY)
ALL ANIMALS

SEX : FEMALE

PAGE : 9

Clinical sign	Group Name	Administration Week-day													
		0-0	1-1	1-2	1-3	1-4	1-5	1-6	1-7	2-1	2-2	2-3	2-4	2-5	2-6
		1	1	1	1	1	1	1	1	1	1	1	1	1	1
DEATH	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1110 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3330 ppm	0	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	0
	30000 ppm	0	0	0	0	0	0	0	0	0	0	1	1	1	1
	90000 ppm	0	0	0	0	0	0	0	0	1	4	7	10	-	-
MORIBUND SACRIFICE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1110 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3330 ppm	0	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	0
	30000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	1	1
	90000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	-	-
LOCOMOTOR MOVEMENT DECR	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1110 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3330 ppm	0	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	0
	30000 ppm	0	0	0	1	2	0	0	0	2	3	2	1	2	1
	90000 ppm	0	0	0	3	7	3	3	7	7	8	6	3	-	-
HUNCHBACK POSITION	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1110 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3330 ppm	0	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	0
	30000 ppm	0	0	0	0	3	3	4	3	4	4	3	3	4	3
	90000 ppm	0	0	0	1	6	6	6	10	10	9	6	3	-	-
ATAXIC GAIT	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1110 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3330 ppm	0	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	0
	30000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	1	0
	90000 ppm	0	0	0	0	0	0	0	4	4	3	1	0	-	-

STUDY NO. : 0018
ANIMAL : RAT F344
REPORT TYPE : A1 2

CLINICAL OBSERVATION (SUMMARY)
ALL ANIMALS

SEX : FEMALE

PAGE : 10

Clinical sign	Group Name	Administration Week-day
		2-7
		1
<hr/>		
DEATH	Control	0
	1110 ppm	0
	3330 ppm	0
	10000 ppm	0
	30000 ppm	1
	90000 ppm	-
MORIBUND SACRIFICE	Control	0
	1110 ppm	0
	3330 ppm	0
	10000 ppm	0
	30000 ppm	1
	90000 ppm	-
LOCOMOTOR MOVEMENT DECR	Control	0
	1110 ppm	0
	3330 ppm	0
	10000 ppm	0
	30000 ppm	1
	90000 ppm	-
HUNCHBACK POSITION	Control	0
	1110 ppm	0
	3330 ppm	0
	10000 ppm	0
	30000 ppm	2
	90000 ppm	-
ATAXIC GAIT	Control	0
	1110 ppm	0
	3330 ppm	0
	10000 ppm	0
	30000 ppm	0
	90000 ppm	-

STUDY NO. : 0018
ANIMAL : RAT F344
REPORT TYPE : A1 2

CLINICAL OBSERVATION (SUMMARY)
ALL ANIMALS

SEX : FEMALE

PAGE : 11

Clinical sign	Group Name	Administration Week-day													
		0-0	1-1	1-2	1-3	1-4	1-5	1-6	1-7	2-1	2-2	2-3	2-4	2-5	2-6
		1	1	1	1	1	1	1	1	1	1	1	1	1	1
WEAKNESS	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1110 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3330 ppm	0	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	0
	30000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	90000 ppm	0	0	0	0	0	0	0	0	1	3	2	0	-	-
WASTING	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1110 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3330 ppm	0	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	0
	30000 ppm	0	0	0	0	0	0	0	0	1	2	2	1	1	0
	90000 ppm	0	0	0	0	0	0	0	10	10	9	6	3	-	-
SOILED	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1110 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3330 ppm	0	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	0
	30000 ppm	0	0	2	3	5	5	5	5	6	6	6	3	3	3
	90000 ppm	0	3	4	4	6	6	7	9	9	8	6	3	-	-
PILOERECTION	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1110 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3330 ppm	0	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	0
	30000 ppm	0	0	0	0	8	9	5	10	10	10	9	6	6	7
	90000 ppm	0	0	1	3	10	10	9	10	10	9	6	3	-	-
CLOSED EYELID	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1110 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3330 ppm	0	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	0
	30000 ppm	0	0	0	0	0	0	0	0	0	1	1	0	0	0
	90000 ppm	0	0	0	0	0	0	0	0	0	1	1	0	-	-

STUDY NO. : 0018
ANIMAL : RAT F344
REPORT TYPE : A1 2

CLINICAL OBSERVATION (SUMMARY)
ALL ANIMALS

SEX : FEMALE

PAGE : 12

Clinical sign	Group Name	Administration Week-day
		2-7 1
WEAKNESS	Control	0
	1110 ppm	0
	3330 ppm	0
	10000 ppm	0
	30000 ppm	0
	90000 ppm	-
WASTING	Control	0
	1110 ppm	0
	3330 ppm	0
	10000 ppm	0
	30000 ppm	0
	90000 ppm	-
SOILED	Control	0
	1110 ppm	0
	3330 ppm	0
	10000 ppm	1
	30000 ppm	4
	90000 ppm	-
PILOERECTION	Control	0
	1110 ppm	0
	3330 ppm	0
	10000 ppm	0
	30000 ppm	6
	90000 ppm	-
CLOSED EYELID	Control	0
	1110 ppm	0
	3330 ppm	0
	10000 ppm	0
	30000 ppm	0
	90000 ppm	-

STUDY NO. : 0018
 ANIMAL : RAT F344
 REPORT TYPE : A1 2

CLINICAL OBSERVATION (SUMMARY)
 ALL ANIMALS

SEX : FEMALE

PAGE : 13

Clinical sign	Group Name	Administration Week-day													
		0-0	1-1	1-2	1-3	1-4	1-5	1-6	1-7	2-1	2-2	2-3	2-4	2-5	2-6
		1	1	1	1	1	1	1	1	1	1	1	1	1	1
NOSE HEMORRHAGIC DISCHA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1110 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3330 ppm	0	0	0	0	1	0	0	0	0	0	0	0	0	0
	10000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	30000 ppm	0	0	3	1	6	5	7	5	4	2	2	0	0	0
	90000 ppm	0	0	1	1	5	6	8	8	8	9	6	3	-	-
RESPIRATORY INHIBITION	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1110 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3330 ppm	0	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	0
	30000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	1	0
	90000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	-	-
IRREGULAR BREATHING	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1110 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3330 ppm	0	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	0
	30000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	90000 ppm	0	0	0	0	0	0	0	1	1	0	2	2	-	-
SUBNORMAL TEMP	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1110 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3330 ppm	0	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	0
	30000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	90000 ppm	0	0	0	0	0	0	0	0	0	3	3	1	-	-

(HAN190)

BAIS 2

STUDY NO. : 0018
ANIMAL : RAT F344
REPORT TYPE : A1 2

CLINICAL OBSERVATION (SUMMARY)
ALL ANIMALS

SEX : FEMALE

PAGE : 14

Clinical sign	Group Name	Administration Week-day
		2-7 1
NOSE HEMORRHAGIC DISCHA	Control	0
	1110 ppm	0
	3330 ppm	0
	10000 ppm	0
	30000 ppm	0
	90000 ppm	-
RESPIRATORY INHIBITION	Control	0
	1110 ppm	0
	3330 ppm	0
	10000 ppm	0
	30000 ppm	0
	90000 ppm	-
IRREGULAR BREATHING	Control	0
	1110 ppm	0
	3330 ppm	0
	10000 ppm	0
	30000 ppm	0
	90000 ppm	-
SUBNORMAL TEMP	Control	0
	1110 ppm	0
	3330 ppm	0
	10000 ppm	0
	30000 ppm	0
	90000 ppm	-

APPENDIX B 2-3

CLINICAL OBSERVATION (TWO-WEEK STUDIES:SUMMARY)

MOUSE:MALE

STUDY NO. : 0019
ANIMAL : MOUSE BDF1
REPORT TYPE : A1 2

CLINICAL OBSERVATION (SUMMARY)
ALL ANIMALS

SEX : MALE

PAGE : 1

Clinical sign	Group Name	Administration Week-day													
		0-0	1-1	1-2	1-3	1-4	1-5	1-6	1-7	2-1	2-2	2-3	2-4	2-5	2-6
		1	1	1	1	1	1	1	1	1	1	1	1	1	1
DEATH	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1110 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3330 ppm	0	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	0
	30000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	90000 ppm	0	0	0	0	0	0	0	0	2	4	6	7	8	8
MORIBUND SACRIFICE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1110 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3330 ppm	0	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	0
	30000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	90000 ppm	0	0	0	0	0	0	0	0	0	0	0	1	1	1
LOCOMOTOR MOVEMENT DECR	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1110 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3330 ppm	0	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	0
	30000 ppm	0	0	0	0	4	4	1	1	0	0	0	0	0	0
	90000 ppm	0	0	0	0	2	0	1	7	7	8	6	4	2	1
HUNCHBACK POSITION	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1110 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3330 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	10000 ppm	0	0	0	0	0	0	0	0	1	0	0	0	0	0
	30000 ppm	0	0	0	2	6	7	7	6	8	7	6	6	6	7
	90000 ppm	0	0	0	3	6	9	10	10	10	8	6	4	2	1
ATAXIC GAIT	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1110 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3330 ppm	0	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	0
	30000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	90000 ppm	0	0	0	0	0	0	0	1	1	2	3	3	1	0

STUDY NO. : 0019
ANIMAL : MOUSE BDF1
REPORT TYPE : A1 2

CLINICAL OBSERVATION (SUMMARY)
ALL ANIMALS

SEX : MALE

PAGE : 2

Clinical sign	Group Name	Administration Week-day
		2-7
		1
DEATH	Control	0
	1110 ppm	0
	3330 ppm	0
	10000 ppm	0
	30000 ppm	0
	90000 ppm	8
MORIBUND SACRIFICE	Control	0
	1110 ppm	0
	3330 ppm	0
	10000 ppm	0
	30000 ppm	0
	90000 ppm	1
LOCOMOTOR MOVEMENT DECR	Control	0
	1110 ppm	0
	3330 ppm	0
	10000 ppm	0
	30000 ppm	0
	90000 ppm	1
HUNCHBACK POSITION	Control	0
	1110 ppm	0
	3330 ppm	0
	10000 ppm	0
	30000 ppm	5
	90000 ppm	1
ATAXIC GAIT	Control	0
	1110 ppm	0
	3330 ppm	0
	10000 ppm	0
	30000 ppm	0
	90000 ppm	0

STUDY NO. : 0019
 ANIMAL : MOUSE BDF1
 REPORT TYPE : A1 2

CLINICAL OBSERVATION (SUMMARY)
 ALL ANIMALS

SEX : MALE

PAGE : 3

Clinical sign	Group Name	Administration Week-day													
		0-0	1-1	1-2	1-3	1-4	1-5	1-6	1-7	2-1	2-2	2-3	2-4	2-5	2-6
		1	1	1	1	1	1	1	1	1	1	1	1	1	1
TREMOR	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1110 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3330 ppm	0	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	0
	30000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	90000 ppm	0	0	0	0	0	0	0	0	0	0	0	1	0	0
WASTING	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1110 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3330 ppm	0	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	0
	30000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	90000 ppm	0	0	0	0	0	0	0	0	0	3	4	3	1	0
SOILED	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1110 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3330 ppm	0	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	0
	30000 ppm	0	0	0	0	0	0	0	4	4	1	0	0	0	0
	90000 ppm	0	0	0	0	0	0	0	10	10	8	5	3	1	0
PILOERECTION	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1110 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3330 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	10000 ppm	0	0	0	1	4	5	4	5	3	3	8	8	8	4
	30000 ppm	0	0	0	0	10	10	10	10	10	10	10	10	10	10
	90000 ppm	0	0	0	8	10	10	10	10	10	8	6	4	2	1
CLOSED EYELID	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1110 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3330 ppm	0	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	0
	30000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	90000 ppm	0	0	0	0	0	0	0	0	0	3	3	1	0	0

STUDY NO. : 0019
ANIMAL : MOUSE BDF1
REPORT TYPE : A1 2

CLINICAL OBSERVATION (SUMMARY)
ALL ANIMALS

SEX : MALE

PAGE : 4

Clinical sign	Group Name	Administration Week-day
		2-7
		1
TREMOR	Control	0
	1110 ppm	0
	3330 ppm	0
	10000 ppm	0
	30000 ppm	0
	90000 ppm	0
WASTING	Control	0
	1110 ppm	0
	3330 ppm	0
	10000 ppm	0
	30000 ppm	0
	90000 ppm	1
SOILED	Control	0
	1110 ppm	0
	3330 ppm	0
	10000 ppm	0
	30000 ppm	0
	90000 ppm	1
PILOERECTION	Control	0
	1110 ppm	0
	3330 ppm	0
	10000 ppm	3
	30000 ppm	8
	90000 ppm	1
CLOSED EYELID	Control	0
	1110 ppm	0
	3330 ppm	0
	10000 ppm	0
	30000 ppm	0
	90000 ppm	0

STUDY NO. : 0019
ANIMAL : MOUSE BDF1
REPORT TYPE : A1 2

CLINICAL OBSERVATION (SUMMARY)
ALL ANIMALS

SEX : MALE

PAGE : 5

Clinical sign	Group Name	Administration Week-day													
		0-0	1-1	1-2	1-3	1-4	1-5	1-6	1-7	2-1	2-2	2-3	2-4	2-5	2-6
		1	1	1	1	1	1	1	1	1	1	1	1	1	1
SUBNORMAL TEMP	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1110 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3330 ppm	0	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	0
	30000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	90000 ppm	0	0	0	0	0	0	0	0	0	0	0	1	0	0

(HAN190)

BAIS 2

STUDY NO. : 0019
ANIMAL : MOUSE BDF1
REPORT TYPE : A1 2

CLINICAL OBSERVATION (SUMMARY)
ALL ANIMALS

SEX : MALE

PAGE : 6

Clinical sign	Group Name	Administration Week-day
		2-7
		1
SUBNORMAL TEMP	Control	0
	1110 ppm	0
	3330 ppm	0
	10000 ppm	0
	30000 ppm	0
	90000 ppm	0

(HAN190)

BAIS 2

APPENDIX B 2-4

CLINICAL OBSERVATION (TWO-WEEK STUDIES:SUMMARY)

MOUSE:FEMALE

STUDY NO. : 0019
ANIMAL : MOUSE BDF1
REPORT TYPE : A1 2

CLINICAL OBSERVATION (SUMMARY)
ALL ANIMALS

SEX : FEMALE

PAGE : 7

Clinical sign	Group Name	Administration Week-day													
		0-0	1-1	1-2	1-3	1-4	1-5	1-6	1-7	2-1	2-2	2-3	2-4	2-5	2-6
		1	1	1	1	1	1	1	1	1	1	1	1	1	1
DEATH	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1110 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3330 ppm	0	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	0
	30000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	90000 ppm	0	0	0	0	0	0	0	1	6	7	10	-	-	-
LOCOMOTOR MOVEMENT DECR	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1110 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3330 ppm	0	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	0
	30000 ppm	0	0	0	0	1	0	1	2	2	0	0	0	0	0
	90000 ppm	0	0	0	0	3	3	2	10	6	4	3	-	-	-
HUNCHBACK POSITION	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1110 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3330 ppm	0	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	0
	30000 ppm	0	0	0	6	7	3	2	4	7	6	5	5	5	4
	90000 ppm	0	0	0	9	10	10	9	10	9	4	3	-	-	-
ATAXIC GAIT	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1110 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3330 ppm	0	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	0
	30000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	90000 ppm	0	0	0	0	0	0	0	2	2	3	3	-	-	-
WASTING	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1110 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3330 ppm	0	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	0
	30000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	90000 ppm	0	0	0	0	0	0	0	6	5	4	3	-	-	-

STUDY NO. : 0019
ANIMAL : MOUSE BDF1
REPORT TYPE : A1 2

CLINICAL OBSERVATION (SUMMARY)
ALL ANIMALS

SEX : FEMALE

PAGE : 8

Clinical sign	Group Name	Administration Week-day
		2-7 1
DEATH	Control	0
	1110 ppm	0
	3330 ppm	0
	10000 ppm	0
	30000 ppm	0
	90000 ppm	-
LOCOMOTOR MOVEMENT DECR	Control	0
	1110 ppm	0
	3330 ppm	0
	10000 ppm	0
	30000 ppm	0
	90000 ppm	-
HUNCHBACK POSITION	Control	0
	1110 ppm	0
	3330 ppm	0
	10000 ppm	0
	30000 ppm	1
	90000 ppm	-
ATAXIC GAIT	Control	0
	1110 ppm	0
	3330 ppm	0
	10000 ppm	0
	30000 ppm	0
	90000 ppm	-
WASTING	Control	0
	1110 ppm	0
	3330 ppm	0
	10000 ppm	0
	30000 ppm	0
	90000 ppm	-

STUDY NO. : 0019
ANIMAL : MOUSE BDF1
REPORT TYPE : A1 2

CLINICAL OBSERVATION (SUMMARY)
ALL ANIMALS

SEX : FEMALE

PAGE : 9

Clinical sign	Group Name	Administration Week-day													
		0-0	1-1	1-2	1-3	1-4	1-5	1-6	1-7	2-1	2-2	2-3	2-4	2-5	2-6
		1	1	1	1	1	1	1	1	1	1	1	1	1	1
SOILED	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1110 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3330 ppm	0	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	0
	30000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	90000 ppm	0	0	0	0	0	0	0	10	9	4	3	-	-	-
PILOERECTION	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1110 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3330 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	10000 ppm	0	0	0	0	0	0	0	3	4	0	0	0	0	0
	30000 ppm	0	0	0	0	9	5	8	9	9	7	7	6	6	6
	90000 ppm	0	0	0	8	10	10	10	10	9	4	3	-	-	-
CLOSED EYELID	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1110 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3330 ppm	0	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	0
	30000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	90000 ppm	0	0	0	0	0	0	0	0	0	1	1	-	-	-

(HAN190)

BAIS 2

STUDY NO. : 0019
ANIMAL : MOUSE BDF1
REPORT TYPE : A1 2

CLINICAL OBSERVATION (SUMMARY)
ALL ANIMALS

SEX : FEMALE

PAGE : 10

Clinical sign	Group Name	Administration Week-day
		2-7
		1
<hr/>		
SOILED	Control	0
	1110 ppm	0
	3330 ppm	0
	10000 ppm	0
	30000 ppm	0
	90000 ppm	-
PILOERECTION	Control	0
	1110 ppm	0
	3330 ppm	0
	10000 ppm	0
	30000 ppm	6
	90000 ppm	-
CLOSED EYELID	Control	0
	1110 ppm	0
	3330 ppm	0
	10000 ppm	0
	30000 ppm	0
	90000 ppm	-

(HAN190)

BAIS 2

APPENDIX B 3-1

GROSS FINDINGS (TWO-WEEK STUDIES; SUMMARY)

RAT:MALE:DEAD AND MORIBUND ANIMALS

STUDY NO. : 0018
ANIMAL : RAT F344
REPORT TYPE : A1
SEX : MALE

GROSS FINDINGS (SUMMARY)
DEAD AND MORIBUND ANIMALS (0- 2W)

PAGE : 1

Organ	Findings	Group Name NO. of Animals	Control 0 (%)	1110 ppm 0 (%)	3330 ppm 0 (%)	10000 ppm 0 (%)
thymus	atrophic		- (-)	- (-)	- (-)	- (-)
gl stomach	red patch/zone		- (-)	- (-)	- (-)	- (-)
stomach	fluid:black		- (-)	- (-)	- (-)	- (-)
whole body	wasting		- (-)	- (-)	- (-)	- (-)

(HPT080)

BAIS2

STUDY NO. : 0018
ANIMAL : RAT F344
REPORT TYPE : A1
SEX : MALE

GROSS FINDINGS (SUMMARY)
DEAD AND MORIBUND ANIMALS (0- 2W)

PAGE : 2

Organ_____	Findings_____	Group Name	30000 ppm	90000 ppm
		NO. of Animals	0 (%)	10 (%)

thymus	atrophic		- (-)	10 (100)
sl stomach	red patch/zone		- (-)	6 (60)
stomach	fluid:black		- (-)	2 (20)
whole body	wasting		- (-)	10 (100)

(HPT080)

BAIS2

APPENDIX B 3-2

GROSS FINDINGS (TWO-WEEK STUDIES; SUMMARY)

RAT:FEMALE:DEAD AND MORIBUND ANIMALS

STUDY NO. : 0018
ANIMAL : RAT F344
REPORT TYPE : A1
SEX : FEMALE

GROSS FINDINGS (SUMMARY)
DEAD AND MORIBUND ANIMALS (0- 2W)

PAGE : 3

Organ	Findings	Group Name NO. of Animals	Control 0 (%)	1110 ppm 0 (%)	3330 ppm 0 (%)	10000 ppm 0 (%)
thymus	atrophic		- (-)	- (-)	- (-)	- (-)
	red		- (-)	- (-)	- (-)	- (-)
gl stomach	red patch/zone		- (-)	- (-)	- (-)	- (-)
liver	turbid		- (-)	- (-)	- (-)	- (-)
	red		- (-)	- (-)	- (-)	- (-)
kidney	enlarged		- (-)	- (-)	- (-)	- (-)
	anemic		- (-)	- (-)	- (-)	- (-)
	rough		- (-)	- (-)	- (-)	- (-)
whole body	wasting		- (-)	- (-)	- (-)	- (-)

(HPT080)

BAIS 2

STUDY NO. : 0018
ANIMAL : RAT F344
REPORT TYPE : A1
SEX : FEMALE

GROSS FINDINGS (SUMMARY)
DEAD AND MORIBUND ANIMALS (0- 2W)

PAGE : 4

Organ	Findings	Group Name	30000 ppm	90000 ppm
		NO. of Animals	2 (%)	10 (%)
thymus	atrophic		2 (100)	10 (100)
	red		1 (50)	0 (0)
gl stomach	red patch/zone		1 (50)	8 (80)
liver	turbid		1 (50)	0 (0)
	red		0 (0)	2 (20)
kidney	enlarged		1 (50)	0 (0)
	anemic		1 (50)	0 (0)
	rough		1 (50)	0 (0)
whole body	wasting		1 (50)	8 (80)

(HPT080)

BAIS 2

APPENDIX B 3-3

GROSS FINDINGS (TWO-WEEK STUDIES; SUMMARY)

RAT:MALE:SACRIFICED ANIMALS

STUDY NO. : 0018
ANIMAL : RAT F344
REPORT TYPE : A1
SEX : MALE

GROSS FINDINGS (SUMMARY)
SACRIFICED ANIMALS (2W)

PAGE : 1

Organ	Findings	Group Name NO. of Animals	Control 10 (%)	1110 ppm 10 (%)	3330 ppm 10 (%)	10000 ppm 10 (%)
thymus	edema		0 (0)	0 (0)	0 (0)	0 (0)
liver	yellow		0 (0)	0 (0)	0 (0)	0 (0)
	anemic		0 (0)	7 (70)	8 (80)	8 (80)
	accentuation of lobular structure		0 (0)	0 (0)	0 (0)	0 (0)
kidney	enlarged		0 (0)	1 (10)	1 (10)	0 (0)
	anemic		0 (0)	6 (60)	7 (70)	10 (100)

(HPT080)

BAIS2

STUDY NO. : 0018
ANIMAL : RAT F344
REPORT TYPE : A1
SEX : MALE

GROSS FINDINGS (SUMMARY)
SACRIFICED ANIMALS (2W)

PAGE : 2

Organ	Findings	Group Name	30000 ppm	90000 ppm
		NO. of Animals	10 (%)	0 (%)
thymus	edema		1 (10)	- (-)
liver	yellow		8 (80)	- (-)
	anemic		6 (60)	- (-)
	accentuation of lobular structure		9 (90)	- (-)
kidney	enlarged		1 (10)	- (-)
	anemic		9 (90)	- (-)

(HPT080)

BAIS 2

APPENDIX B 3-4

GROSS FINDINGS (TWO-WEEK STUDIES; SUMMARY)

RAT:FEMALE:SACRIFICED ANIMALS

STUDY NO. : 0018
ANIMAL : RAT F344
REPORT TYPE : A1
SEX : FEMALE

GROSS FINDINGS (SUMMARY)
SACRIFICED ANIMALS (2W)

PAGE : 3

Organ	Findings	Group Name	Control	1110 ppm	3330 ppm	10000 ppm
		NO. of Animals	10 (%)	10 (%)	10 (%)	10 (%)
thymus	atrophic		0 (0)	0 (0)	0 (0)	0 (0)
spleen	atrophic		0 (0)	0 (0)	0 (0)	0 (0)
liver	yellow		0 (0)	0 (0)	0 (0)	1 (10)
	anemic		7 (70)	5 (50)	8 (80)	7 (70)
kidney	yellow		0 (0)	0 (0)	0 (0)	0 (0)
	anemic		1 (10)	0 (0)	6 (60)	4 (40)
	rough		0 (0)	0 (0)	0 (0)	0 (0)
uterus	dilated lumen		5 (50)	2 (20)	5 (50)	4 (40)

(HPT080)

BAIS 2

STUDY NO. : 0018
ANIMAL : RAT F344
REPORT TYPE : A1
SEX : FEMALE

GROSS FINDINGS (SUMMARY)
SACRIFICED ANIMALS (2W)

PAGE : 4

Organ	Findings	Group Name	30000 ppm	90000 ppm
		NO. of Animals	8 (%)	0 (%)
thymus	atrophic		6 (75)	- (-)
spleen	atrophic		3 (38)	- (-)
liver	yellow		0 (0)	- (-)
	anemic		2 (25)	- (-)
kidney	yellow		1 (13)	- (-)
	anemic		3 (38)	- (-)
	rough		1 (13)	- (-)
uterus	dilated lumen		1 (13)	- (-)

(HPT080)

BAIS 2

APPENDIX B 3-5

GROSS FINDINGS (TWO-WEEK STUDIES; SUMMARY)

MOUSE:MALE:DEAD AND MORIBUND ANIMALS

STUDY NO. : 0019
ANIMAL : MOUSE BDF1
REPORT TYPE : A1
SEX : MALE

GROSS FINDINGS (SUMMARY)
DEAD AND MORIBUND ANIMALS (0- 2W)

PAGE : 1

Organ	Findings	Group Name NO. of Animals	Control 0 (%)	1110 ppm 0 (%)	3330 ppm 0 (%)	10000 ppm 0 (%)
lung/branch	red patch/zone		- (-)	- (-)	- (-)	- (-)
thymus	atrophic		- (-)	- (-)	- (-)	- (-)
gl stomach	red patch/zone		- (-)	- (-)	- (-)	- (-)
small intes	fluid:brown		- (-)	- (-)	- (-)	- (-)
whole body	wasting		- (-)	- (-)	- (-)	- (-)

(HPT080)

BAIS 2

STUDY NO. : 0019
ANIMAL : MOUSE BDF1
REPORT TYPE : A1
SEX : MALE

GROSS FINDINGS (SUMMARY)
DEAD AND MORIBUND ANIMALS (0- 2w)

PAGE : 2

Organ	Findings	Group Name NO. of Animals	30000 ppm 0 (%)	90000 ppm 9 (%)
<hr/>				
lung/branch	red patch/zone		- (-)	2 (22)
thymus	atrophic		- (-)	9 (100)
gl stomach	red patch/zone		- (-)	8 (89)
small intes	fluid:brown		- (-)	2 (22)
whole body	wasting		- (-)	3 (33)

(HPT080)

BAIS 2

APPENDIX B 3-6

GROSS FINDINGS (TWO-WEEK STUDIES: SUMMARY)

MOUSE:FEMALE:DEAD AND MORIBUND ANIMALS

STUDY NO. : 0019
ANIMAL : MOUSE BDF1
REPORT TYPE : A1
SEX : FEMALE

GROSS FINDINGS (SUMMARY)
DEAD AND MORIBUND ANIMALS (0- 2w)

PAGE : 3

Organ	Findings	Group Name NO. of Animals	Control 0 (%)	1110 ppm 0 (%)	3330 ppm 0 (%)	10000 ppm 0 (%)
lung/branch	red patch/zone		- (-)	- (-)	- (-)	- (-)
thymus	atrophic		- (-)	- (-)	- (-)	- (-)
gl stomach	red patch/zone		- (-)	- (-)	- (-)	- (-)
small intes	fluid:brown		- (-)	- (-)	- (-)	- (-)
liver	red patch/zone		- (-)	- (-)	- (-)	- (-)
whole body	wasting		- (-)	- (-)	- (-)	- (-)

(HPT080)

BAIS 2

STUDY NO. : 0019
ANIMAL : MOUSE BDF1
REPORT TYPE : A1
SEX : FEMALE

GROSS FINDINGS (SUMMARY)
DEAD AND MORIBUND ANIMALS (0- 2W)

PAGE : 4

Organ	Findings	Group Name	30000 ppm	90000 ppm
		NO. of Animals	0 (%)	10 (%)
lung/branch	red patch/zone		- (-)	3 (30)
thymus	atrophic		- (-)	8 (80)
gl stomach	red patch/zone		- (-)	10 (100)
small intes	fluid:brown		- (-)	4 (40)
liver	red patch/zone		- (-)	1 (10)
whole body	wasting		- (-)	4 (40)

(HPT080)

BATS 2

APPENDIX B 3-7

GROSS FINDINGS (TWO-WEEK STUDIES: SUMMARY)

MOUSE: MALE: SACRIFICED ANIMALS

STUDY NO. : 0019
ANIMAL : MOUSE BDF1
REPORT TYPE : A1
SEX : MALE

GROSS FINDINGS (SUMMARY)
SACRIFICED ANIMALS (2W)

PAGE : 1

Organ	Findings	Group Name	Control	1110 ppm	3330 ppm	10000 ppm
		NO. of Animals	10 (%)	10 (%)	10 (%)	10 (%)
thymus	atrophic		0 (0)	0 (0)	0 (0)	0 (0)
spleen	black patch/zone		1 (10)	0 (0)	0 (0)	1 (10)
gl stomach	red patch/zone		0 (0)	0 (0)	0 (0)	0 (0)
small intes	fluid:brown		0 (0)	0 (0)	0 (0)	0 (0)
liver	anemic		0 (0)	0 (0)	0 (0)	4 (40)
	accentuation of lobular structure		0 (0)	0 (0)	0 (0)	0 (0)
kidney	anemic		0 (0)	0 (0)	0 (0)	2 (20)
semin ves	atrophic		0 (0)	0 (0)	0 (0)	0 (0)

STUDY NO. : 0019
ANIMAL : MOUSE BDF1
REPORT TYPE : A1
SEX : MALE

GROSS FINDINGS (SUMMARY)
SACRIFICED ANIMALS (2W)

PAGE : 2

Organ	Findings	Group Name	30000 ppm	90000 ppm
		NO. of Animals	10 (%)	1 (%)
thymus	atrophic		6 (60)	1 (100)
spleen	black patch/zone		0 (0)	0 (0)
gl stomach	red patch/zone		0 (0)	1 (100)
small intes	fluid:brown		0 (0)	1 (100)
liver	anemic		8 (80)	0 (0)
	accentuation of lobular structure		7 (70)	0 (0)
kidney	anemic		0 (0)	0 (0)
semin ves	atrophic		0 (0)	1 (100)

(HPT080)

BAIS 2

APPENDIX B 3-8

GROSS FINDINGS (TWO-WEEK STUDIES: SUMMARY)

MOUSE:FEMALE:SACRIFICED ANIMALS

STUDY NO. : 0019
ANIMAL : MOUSE BDF1
REPORT TYPE : A1
SEX : FEMALE

GROSS FINDINGS (SUMMARY)
SACRIFICED ANIMALS (2W)

PAGE : 3

Organ	Findings	Group Name	Control	1110 ppm	3330 ppm	10000 ppm
		NO. of Animals	10 (%)	10 (%)	10 (%)	10 (%)
thymus	atrophic		0 (0)	0 (0)	0 (0)	0 (0)
spleen	black patch/zone		0 (0)	2 (20)	1 (10)	0 (0)
liver	anemic		0 (0)	0 (0)	0 (0)	0 (0)
	accentuation of lobular structure		0 (0)	0 (0)	1 (10)	1 (10)
uterus	dilated lumen		4 (40)	3 (30)	3 (30)	5 (50)

(HPT080)

BAIS 2

STUDY NO. : 0019
ANIMAL : MOUSE BDF1
REPORT TYPE : A1
SEX : FEMALE

GROSS FINDINGS (SUMMARY)
SACRIFICED ANIMALS (2W)

PAGE : 4

Organ	Findings	Group Name	30000 ppm	90000 ppm
		NO. of Animals	10 (%)	0 (%)
thymus	atrophic		1 (10)	- (-)
spleen	black patch/zone		1 (10)	- (-)
liver	anemic		8 (80)	- (-)
	accentuation of lobular structure		5 (50)	- (-)
uterus	dilated lumen		5 (50)	- (-)

(HPT080)

BAIS 2

APPENDIX B 4-1

HISTOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS

(TWO-WEEK STUDIES; SUMMARY)

RAT:MALE:DEAD AND MORIBUND ANIMALS

STUDY NO. : 0018
ANIMAL : RAT F344
REPORT TYPE : A1
SEX : MALE

HISTOLOGICAL FINDINGS : NON-NEOPLASTIC LESIONS (SUMMARY)
DEAD AND MORIBUND ANIMALS (0- 2W)

PAGE : 1

Organ	Findings	Group Name	Control				1110 ppm				3330 ppm				10000 ppm			
		No. of Animals	0				0				0				0			
		<1> (%)	<2> (%)	<3> (%)	<4> (%)	<1> (%)	<2> (%)	<3> (%)	<4> (%)	<1> (%)	<2> (%)	<3> (%)	<4> (%)	<1> (%)	<2> (%)	<3> (%)	<4> (%)	
[Circulatory system]																		
heart	hemorrhage		- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	
[Digestive system]																		
stomach	erosion:glandular stomach		- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	
	hemorrhage:glandular stomach		- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	
[Urinary system]																		
kidney	hydropic change:proximal tubule		- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	

STUDY NO. : 0018
 ANIMAL : RAT F344
 REPORT TYPE : A1
 SEX : MALE

HISTOLOGICAL FINDINGS : NON-NEOPLASTIC LESIONS (SUMMARY)
 DEAD AND MORIBUND ANIMALS (0- 2W)

PAGE : 2

		Group Name No. of Animals				30000 0	ppm 90000 3			
Organ	Findings	<1> (%)	<2> (%)	<3> (%)	<4> (%)	<1> (%)	<2> (%)	<3> (%)	<4> (%)	
[Circulatory system]										
heart	hemorrhage	- (-)	- (-)	- (-)	- (-)	1 (33)	0 (0)	0 (0)	0 (0)	
[Digestive system]										
stomach	erosion:glandular stomach	- (-)	- (-)	- (-)	- (-)	1 (33)	0 (0)	0 (0)	0 (0)	
	hemorrhage:glandular stomach	- (-)	- (-)	- (-)	- (-)	1 (33)	0 (0)	0 (0)	0 (0)	
[Urinary system]										
kidney	hydropic change:proximal tubule	- (-)	- (-)	- (-)	- (-)	0 (0)	1 (33)	0 (0)	0 (0)	

APPENDIX B 4-2

HISTOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS

(TWO-WEEK STUDIES; SUMMARY)

RAT:FEMALE:DEAD AND MORIBUND ANIMALS

STUDY NO. : 0018
 ANIMAL : RAT F344
 REPORT TYPE : A1
 SEX : FEMALE

HISTOLOGICAL FINDINGS : NON-NEOPLASTIC LESIONS (SUMMARY)
 DEAD AND MORIBUND ANIMALS (0- 2W)

PAGE : 3

Organ	Findings	Group Name	Control				1110 ppm				3330 ppm				10000 ppm			
		No. of Animals	<1> (%)	<2> (%)	<3> (%)	<4> (%)	<1> (%)	<2> (%)	<3> (%)	<4> (%)	<1> (%)	<2> (%)	<3> (%)	<4> (%)	<1> (%)	<2> (%)	<3> (%)	<4> (%)
[Respiratory system]																		
lung/branch	hemorrhage		- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
[Hematopoietic system]																		
thymus	hemorrhage		- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
[Digestive system]																		
stomach	erosion:glandular stomach		- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
liver	vacuolic change:central		- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
[Urinary system]																		
kidney	hydropic change:proximal tubule		- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
[Endocrine system]																		
adrenal	hemorrhage		- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)
[Nervous system]																		
brain	vacuolic change		- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)	- (-)

STUDY NO. : 0018
 ANIMAL : RAT F344
 REPORT TYPE : A1
 SEX : FEMALE

HISTOLOGICAL FINDINGS : NON-NEOPLASTIC LESIONS (SUMMARY)
 DEAD AND MORIBUND ANIMALS (0- 2W)

PAGE : 4

		Group Name No. of Animals				30000 ppm 2				90000 ppm 3			
Organ_____	Findings_____	<1> (%)	<2> (%)	<3> (%)	<4> (%)	<1> (%)	<2> (%)	<3> (%)	<4> (%)				
[Respiratory system]													
lung/branch	hemorrhage	1 (50)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)				
[Hematopoietic system]													
thymus	hemorrhage	1 (50)	0 (0)	0 (0)	0 (0)	1 (33)	0 (0)	0 (0)	0 (0)				
[Digestive system]													
stomach	erosion:glandular stomach	0 (0)	0 (0)	0 (0)	0 (0)	2 (67)	0 (0)	0 (0)	0 (0)				
liver	vacuolic change:centeral	0 (0)	0 (0)	0 (0)	1 (50)	0 (0)	0 (0)	0 (0)	0 (0)				
[Urinary system]													
kidney	hydropic change:proximal tubule	0 (0)	0 (0)	0 (0)	2 (100)	0 (0)	0 (0)	0 (0)	0 (0)				
[Endocrine system]													
adrenal	hemorrhage	0 (0)	0 (0)	0 (0)	0 (0)	2 (67)	0 (0)	0 (0)	0 (0)				
[Nervous system]													
brain	vacuolic change	1 (50)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)				

APPENDIX B 4-3

HISTOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS

(TWO-WEEK STUDIES:SUMMARY)

RAT:MALE:SACRIFICED ANIMALS

STUDY NO. : 0018
ANIMAL : RAT F344
REPORT TYPE : A1
SEX : MALE

HISTOLOGICAL FINDINGS : NON-NEOPLASTIC LESIONS (SUMMARY)
SACRIFICED ANIMALS (2W)

PAGE : 1

Organ	Findings	Group Name	Control				1110 ppm				3330 ppm				10000 ppm			
		No. of Animals	2				2				2				2			
		<1> (%)	<2> (%)	<3> (%)	<4> (%)	<1> (%)	<2> (%)	<3> (%)	<4> (%)	<1> (%)	<2> (%)	<3> (%)	<4> (%)	<1> (%)	<2> (%)	<3> (%)	<4> (%)	
[Respiratory system]																		
nasal cavit	nuclear enlargement:olfactory epithelium	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1 (50)	0 (0)	0 (0)	0 (0)	
lung/branch	edema:perivascular	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	
[Circulatory system]																		
heart	hemorrhage	2 (100)	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)	
[Digestive system]																		
liver	swelling:centeral	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	
	vacuolic change:centeral	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	
[Urinary system]																		
kidney	eosinophilic body	1 (50)	0 (0)	0 (0)	0 (0)	2 (100)	0 (0)	0 (0)	0 (0)	2 (100)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	2 (100)	0 (0)	
	hydropic change:proximal tubule	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	
	regeneration proximal tubule	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	
[Nervous system]																		
brain	vacuolic change	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	

STUDY NO. : 0018
 ANIMAL : RAT F344
 REPORT TYPE : A1
 SEX : MALE

HISTOLOGICAL FINDINGS : NON-NEOPLASTIC LESIONS (SUMMARY)
 SACRIFICED ANIMALS (2W)

PAGE : 2

		Group Name	30000 ppm				90000 ppm			
		No. of Animals	2				0			
Organ	Findings		<1> (%)	<2> (%)	<3> (%)	<4> (%)	<1> (%)	<2> (%)	<3> (%)	<4> (%)
[Respiratory system]										
nasal cavit	nuclear enlargement:olfactory epithelium		2 (100)	0 (0)	0 (0)	0 (0)	- (-)	- (-)	- (-)	- (-)
lung/branch	edema:perivascular		1 (50)	0 (0)	0 (0)	0 (0)	- (-)	- (-)	- (-)	- (-)
[Circulatory system]										
heart	hemorrhage		0 (0)	0 (0)	0 (0)	0 (0)	- (-)	- (-)	- (-)	- (-)
[Digestive system]										
liver	swelling:central		0 (0)	2 (100)	0 (0)	0 (0)	- (-)	- (-)	- (-)	- (-)
	vacuolic change:central		1 (50)	1 (50)	0 (0)	0 (0)	- (-)	- (-)	- (-)	- (-)
[Urinary system]										
kidney	eosinophilic body		0 (0)	0 (0)	2 (100)	0 (0)	- (-)	- (-)	- (-)	- (-)
	hydropic change:proximal tubule		1 (50)	0 (0)	0 (0)	0 (0)	- (-)	- (-)	- (-)	- (-)
	regeneration proximal tubule		1 (50)	0 (0)	0 (0)	0 (0)	- (-)	- (-)	- (-)	- (-)
[Nervous system]										
brain	vacuolic change		2 (100)	0 (0)	0 (0)	0 (0)	- (-)	- (-)	- (-)	- (-)

APPENDIX B 4-4

HISTOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS

(TWO-WEEK STUDIES:SUMMARY)

RAT:FEMALE:SACRIFICED ANIMALS

STUDY NO. : 0018
ANIMAL : RAT F344
REPORT TYPE : A1
SEX : FEMALE

HISTOLOGICAL FINDINGS : NON-NEOPLASTIC LESIONS (SUMMARY)
SACRIFICED ANIMALS (2W)

PAGE : 3

Organ	Findings	Group Name	Control				1110 ppm				3330 ppm				10000 ppm			
		No. of Animals	2				2				2				2			
			<1>	<2>	<3>	<4>	<1>	<2>	<3>	<4>	<1>	<2>	<3>	<4>	<1>	<2>	<3>	<4>
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
[Respiratory system]																		
nasal cavit	nuclear enlargement:olfactory epithelium		0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(100)	(0)	(0)	(0)
lung/branch	hemorrhage		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
[Circulatory system]																		
heart	hemorrhage		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
[Digestive system]																		
liver	swelling:central		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	vacuolic change:central		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
[Urinary system]																		
kidney	hydropic change:proximal tubule		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
[Endocrine system]																		
adrenal	hemorrhage		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
[Nervous system]																		
brain	vacuolic change		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)

STUDY NO. : 0018
 ANIMAL : RAT F344
 REPORT TYPE : A1
 SEX : FEMALE

HISTOLOGICAL FINDINGS : NON-NEOPLASTIC LESIONS (SUMMARY)
 SACRIFICED ANIMALS (2W)

PAGE : 4

		Group Name No. of Animals				30000 ppm 2				90000 ppm 0			
Organ	Findings	<1> (%)	<2> (%)	<3> (%)	<4> (%)	<1> (%)	<2> (%)	<3> (%)	<4> (%)				
[Respiratory system]													
nasal cavit	nuclear enlargement:olfactory epithelium	2 (100)	0 (0)	0 (0)	0 (0)	- (-)	- (-)	- (-)	- (-)				
lung/branch	hemorrhage	1 (50)	0 (0)	0 (0)	0 (0)	- (-)	- (-)	- (-)	- (-)				
[Circulatory system]													
heart	hemorrhage	1 (50)	0 (0)	0 (0)	0 (0)	- (-)	- (-)	- (-)	- (-)				
[Digestive system]													
liver	swelling:central	0 (0)	1 (50)	0 (0)	0 (0)	- (-)	- (-)	- (-)	- (-)				
	vacuolic change:central	0 (0)	0 (0)	0 (0)	1 (50)	- (-)	- (-)	- (-)	- (-)				
[Urinary system]													
kidney	hydropic change:proximal tubule	1 (50)	0 (0)	0 (0)	1 (50)	- (-)	- (-)	- (-)	- (-)				
[Endocrine system]													
adrenal	hemorrhage	1 (50)	0 (0)	0 (0)	0 (0)	- (-)	- (-)	- (-)	- (-)				
[Nervous system]													
brain	vacuolic change	2 (100)	0 (0)	0 (0)	0 (0)	- (-)	- (-)	- (-)	- (-)				

APPENDIX B 4-5

HISTOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS

(TWO-WEEK STUDIES;SUMMARY)

MOUSE:MALE:DEAD AND MORIBUND ANIMALS

STUDY NO. : 0019
 ANIMAL : MOUSE BDF1
 REPORT TYPE : A1
 SEX : MALE

HISTOLOGICAL FINDINGS : NON-NEOPLASTIC LESIONS (SUMMARY)
 DEAD AND MORIBUND ANIMALS (0- 2W)

PAGE : 1

Organ	Findings	Group Name Control				1110 ppm				3330 ppm				10000 ppm			
		No. of Animals 0				0				0				0			
		<1>	<2>	<3>	<4>	<1>	<2>	<3>	<4>	<1>	<2>	<3>	<4>	<1>	<2>	<3>	<4>
		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
[Hematopoietic system]																	
bone marrow	congestion	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)
thymus	atrophy	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)
	karyorrhexis	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)
spleen	atrophy	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)
[Digestive system]																	
liver	necrosis: single cell	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)

STUDY NO. : 0019
 ANIMAL : MOUSE BDF1
 REPORT TYPE : A1
 SEX : MALE

HISTOLOGICAL FINDINGS : NON-NEOPLASTIC LESIONS (SUMMARY)
 DEAD AND MORIBUND ANIMALS (0- 2W)

PAGE : 2

		Group Name No. of Animals				30000 ppm 0				90000 ppm 3			
Organ_____	Findings_____	<1> (%)	<2> (%)	<3> (%)	<4> (%)	<1> (%)	<2> (%)	<3> (%)	<4> (%)				
[Hematopoietic system]													
bone marrow	congestion	- (-)	- (-)	- (-)	- (-)	3 (100)	0 (0)	0 (0)	0 (0)				
thymus	atrophy	- (-)	- (-)	- (-)	- (-)	0 (0)	2 (67)	1 (33)	0 (0)				
	karyorrhexis	- (-)	- (-)	- (-)	- (-)	2 (67)	0 (0)	0 (0)	0 (0)				
spleen	atrophy	- (-)	- (-)	- (-)	- (-)	2 (67)	1 (33)	0 (0)	0 (0)				
[Digestive system]													
liver	necrosis:single cell	- (-)	- (-)	- (-)	- (-)	1 (33)	2 (67)	0 (0)	0 (0)				

APPENDIX B 4-6

HISTOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS

(TWO-WEEK STUDIES:SUMMARY)

MOUSE:FEMALE:DEAD AND MORIBUND ANIMALS

STUDY NO. : 0019
 ANIMAL : MOUSE BDF1
 REPORT TYPE : A1
 SEX : FEMALE

HISTOLOGICAL FINDINGS : NON-NEOPLASTIC LESIONS (SUMMARY)
 DEAD AND MORIBUND ANIMALS (0- 2W)

PAGE : 3

Organ	Findings	Group Name	Control				1110 ppm				3330 ppm				10000 ppm			
		No. of Animals	<1>	<2>	<3>	<4>	<1>	<2>	<3>	<4>	<1>	<2>	<3>	<4>	<1>	<2>	<3>	<4>
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
[Hematopoietic system]																		
bone marrow	congestion		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
			(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)
thymus	atrophy		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
			(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)
	karyorrhexis		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
			(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)
spleen	atrophy		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
			(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)
[Digestive system]																		
liver	necrosis:single cell		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
			(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)	(-)

STUDY NO. : 0019
 ANIMAL : MOUSE BDF1
 REPORT TYPE : A1
 SEX : FEMALE

HISTOLOGICAL FINDINGS : NON-NEOPLASTIC LESIONS (SUMMARY)
 DEAD AND MORIBUND ANIMALS (0- 2W)

PAGE : 4

		Group Name No. of Animals				30000 ppm 0				90000 ppm 2			
Organ	Findings	<1> (%)	<2> (%)	<3> (%)	<4> (%)	<1> (%)	<2> (%)	<3> (%)	<4> (%)				
[Hematopoietic system]													
bone marrow	congestion	- (-)	- (-)	- (-)	- (-)	2 (100)	0 (0)	0 (0)	0 (0)				
thymus	atrophy	- (-)	- (-)	- (-)	- (-)	0 (0)	2 (100)	0 (0)	0 (0)				
	karyorrhexis	- (-)	- (-)	- (-)	- (-)	1 (50)	0 (0)	0 (0)	0 (0)				
spleen	atrophy	- (-)	- (-)	- (-)	- (-)	0 (0)	2 (100)	0 (0)	0 (0)				
[Digestive system]													
liver	necrosis:single cell	- (-)	- (-)	- (-)	- (-)	1 (50)	0 (0)	0 (0)	0 (0)				

APPENDIX B 4-7

HISTOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS

(TWO-WEEK STUDIES:SUMMARY)

MOUSE:MALE:SACRIFICED ANIMALS

STUDY NO. : 0019
 ANIMAL : MOUSE BDF1
 REPORT TYPE : A1
 SEX : MALE

HISTOLOGICAL FINDINGS : NON-NEOPLASTIC LESIONS (SUMMARY)
 SACRIFICED ANIMALS (2W)

PAGE : 1

Organ	Findings	Group Name No. of Animals				Control 2				1110 ppm 2				3330 ppm 2				10000 ppm 2			
		<1> (%)	<2> (%)	<3> (%)	<4> (%)	<1> (%)	<2> (%)	<3> (%)	<4> (%)	<1> (%)	<2> (%)	<3> (%)	<4> (%)	<1> (%)	<2> (%)	<3> (%)	<4> (%)				
[Hematopoietic system]																					
bone marrow	congestion	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)				
thymus	atrophy	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)				
spleen	deposit of melanin	1 (50)	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)				
[Digestive system]																					
liver	swelling:central	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)				

STUDY NO. : 0019
ANIMAL : MOUSE BDF1
REPORT TYPE : A1
SEX : MALE

HISTOLOGICAL FINDINGS : NON-NEOPLASTIC LESIONS (SUMMARY)
SACRIFICED ANIMALS (2W)

PAGE : 2

		Group Name No. of Animals				30000 ppm 2		90000 ppm 1			
Organ_____	Findings_____	<1> (%)	<2> (%)	<3> (%)	<4> (%)	<1> (%)	<2> (%)	<3> (%)	<4> (%)	<1> (%)	<2> (%)
[Hematopoietic system]											
bone marrow	congestion	0 (0)	0 (0)	0 (0)	0 (0)	1 (100)	0 (0)	0 (0)	0 (0)		
thymus	atrophy	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1 (100)	0 (0)	0 (0)		
spleen	deposit of melanin	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)		
[Digestive system]											
liver	swelling:central	1 (50)	1 (50)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)		

APPENDIX B 4-8

HISTOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS

(TWO-WEEK STUDIES, SUMMARY)

MOUSE:FEMALE:SACRIFICED ANIMALS

STUDY NO. : 0019
ANIMAL : MOUSE BDF1
REPORT TYPE : A1
SEX : FEMALE

HISTOLOGICAL FINDINGS : NON-NEOPLASTIC LESIONS (SUMMARY)
SACRIFICED ANIMALS (2W)

PAGE : 3

Organ	Findings	Group Name Control				1110 ppm				3330 ppm				10000 ppm			
		No. of Animals 2				2				2				2			
		<1>	<2>	<3>	<4>	<1>	<2>	<3>	<4>	<1>	<2>	<3>	<4>	<1>	<2>	<3>	<4>
		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
[Digestive system]																	
Liver	swelling:central	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)

(HPT150)

BAIS2

STUDY NO. : 0019
ANIMAL : MOUSE BDF1
REPORT TYPE : A1
SEX : FEMALE

HISTOLOGICAL FINDINGS : NON-NEOPLASTIC LESIONS (SUMMARY)
SACRIFICED ANIMALS (2W)

PAGE : 4

Organ	Findings	Group Name 30000 ppm No. of Animals 2				90000 ppm 0			
		<1> (%)	<2> (%)	<3> (%)	<4> (%)	<1> (%)	<2> (%)	<3> (%)	<4> (%)

[Digestive system]

liver	swelling:central	2	0	0	0	-	-	-	-
		(100)	(0)	(0)	(0)	(-)	(-)	(-)	(-)

(HPT150)

BAIS2

APPENDIX B 5-1

IDENTITY AND PURITY IN THE TWO-WEEK STUDIES OF 1,4-DIOXANE

PERFORMED AT THE JAPAN BIOASSAY LABORATORY

IDENTITY AND PURITY IN THE TWO-WEEK STUDIES OF 1,4-DIOXANE PERFORMED AT THE
JAPAN BIOASSAY LABORATORY

Lot no. PEN6246

1. Physical properties	<u>Determined</u>	<u>Literature Values</u>
Appearance:	Clear, colorless liquid	Clear, colorless liquid
Boiling point:	101°C	101°C (ENCYCLOPAEDIA Published by Kyooritsu CO., LTD.)

2. Spectral data

Infrared

Instrument: Hitachi 270-30

Cell: Fixed thickness Cell(NaCl)

Slit: Medium

Results: Wave Number
(CM⁻¹)

610	610
860~900	860~900
1050~1140	1050~1140
1260	1260
1295	1290
1370	1365
1460	1455
1700~1740	1700~1740
2700~3000	2690~3000

(Sadtler handbook
by Sadtler Research
Laboratories, Inc.)

3. Gas Chromatography

Instrument:	Shimazu GC-9A
Column:	SBS-1
Column Temperature:	80°C
Flow Rate:	20ml/min
Detector:	Hydrogen flame ionization(FID)
Injection Volume:	1 μl

Results: Only one major peak

Peak No.	Retention Time(min)	Retention Time Relative to Major Peak	Area (percent of Major peak)
1	3.825	1.00	100

C. Conclusions: The results of the boiling point agreed with the literature values. Impurity was not detected in test substance by Gas chromatography. The infrared spectra agreed with the literature values.

APPENDIX B 5-2

STABILITY IN THE TWO-WEEK STUDIES OF 1,4-DIOXANE
AT THE JAPAN BIOASSAY LABORATORY

Results: Only one major peak

Date	Retention Time(min)	Retention Time Relative to Major Peak	Area (percent of Major peak)
07/19/83	3.825	1.00	100
08/03/83	3.812	1.00	100

C. Conclusions: The results of the Boiling point agreed with the previous determine of test Values. Impurity was not detected in test substance by Gas chromatography. The infrared spectra agreed with the previous determine of test Values.

Consequently, 1,4-dioxane was stable as the chemical when stored for about 1 year at temperatures to 5°C.

APPENDIX B 5-3

RESULTS OF ANALYSIS OF FORMULATED DRINKING WATER
IN THE TWO-WEEK STUDIES OF 1,4-DIOXANE

RESULTS OF ANALYSIS OF FORMULATED DRINKING WATER IN THE TWO-WEEK STUDIES OF 1,4-DIOXANE

(Rat)

Date Mixed	Concentration of 1,4-Dioxane in drinking water for Taget Concentration(ppm)				
	90000 (a)	30000 (a)	10000 (a)	3330 (a)	1110 (a)
07/29/83	89991 (99.7)	29997 (100.3)	9999 (92.2)	3319.67(91.9)	1033 (93.0)

(a) Determined as a percent of taget

(Mouse)

Date Mixed	Concentration of 1,4-Dioxane in drinking water for Taget Concentration(ppm)				
	90000 (a)	30000 (a)	10000 (a)	3330 (a)	1110 (a)
07/30/83	89307 (99.2)	28097 (93.7)	9403 (94.0)	3219 (96.7)	1061 (95.6)

(a) Determined as a percent of taget

APPENDIX B 5-4

RESULTS OF STABILITY OF FORMULATED DRINKING WATER
IN THE TWO-WEEK STUDIES OF 1,4-DIOXANE

RESULTS OF STABILITY OF FORMULATED DRINKING WATER IN THE TWO-WEEK STUDIES OF 1,4-DIOXANE

(Rat)

Date Mixed	Concentration of 1,4-Dioxane in drinking water for Taget Concentration(ppm)		
	30000 (a)	10000 (a)	1110 (a)
07/29/83	29997 (92.2)	9999 (92.2)	1033 (93.9)
08/02/83	28637 (95.5)	9319 (93.2)	1037 (93.4)

(a) Determined as a percent of taget

(Mouse)

Date Mixed	Concentration of 1,4-Dioxane in drinking water for Taget Concentration(ppm)		
	30000 (a)	10000 (a)	30000 (a)
07/30/83	28097 (93.7)	9403 (94.0)	23337 (93.7)
08/03/83	28280 (94.3)	9582 (95.8)	28280 (94.3)

(a) Determined as a percent of taget

APPENDIX B 6-1

GROSS FINDINGS (TWO-WEEK STUDIES:INDIVIDUAL)

RAT:MALE

STUDY NO. : 0018
ANIMAL : RAT F344
REPORT TYPE : A1
SEX : MALE

GROUP NAME : Control

GROSS FINDINGS (INDIVIDUAL)
ALL ANIMALS (0- 2W)

PAGE : 1

Animal ID-NO.	Death Information	Time of Examination Week-Day	Organ_____	Findings_____
1001	SCHEDULED	3-1		NON-REMARKABLE
1002	SCHEDULED	3-1		NON-REMARKABLE
1003	SCHEDULED	3-1		NON-REMARKABLE
1004	SCHEDULED	3-1		NON-REMARKABLE
1005	SCHEDULED	3-1		NON-REMARKABLE
1006	SCHEDULED	3-1		NON-REMARKABLE
1007	SCHEDULED	3-1		NON-REMARKABLE
1008	SCHEDULED	3-1		NON-REMARKABLE
1009	SCHEDULED	3-1		NON-REMARKABLE
1010	SCHEDULED	3-1		NON-REMARKABLE

():Comment

(HPT045)

BAIS2

STUDY NO. : 0018
ANIMAL : RAT F344
REPORT TYPE : A1
SEX : MALE

GROUP NAME : 1110 ppm

GROSS FINDINGS (INDIVIDUAL)
ALL ANIMALS (0- 2W)

PAGE : 2

Animal ID-NO.	Death Information	Time of Examination Week-Day	Organ	Findings
1101	SCHEDULED	3-1		NON-REMARKABLE
1102	SCHEDULED	3-1		NON-REMARKABLE
1103	SCHEDULED	3-1	kidney	anemic
1104	SCHEDULED	3-1	liver	anemic
1105	SCHEDULED	3-1	liver	anemic
1106	SCHEDULED	3-1	liver	anemic
			kidney	enlarged//anemic
1107	SCHEDULED	3-1	liver	anemic
			kidney	anemic
1108	SCHEDULED	3-1	liver	anemic
			kidney	anemic
1109	SCHEDULED	3-1	liver	anemic
			kidney	anemic
1110	SCHEDULED	3-1	liver	anemic
			kidney	anemic

():Comment

(HPT045)

BATS2

STUDY NO. : 0018
ANIMAL : RAT F344
REPORT TYPE : A1
SEX : MALE

GROUP NAME : 3330 ppm

GROSS FINDINGS (INDIVIDUAL)
ALL ANIMALS (0- 2W)

PAGE : 3

Animal ID-NO.	Death Information	Time of Examination Week-Day	Organ_____	Findings_____
1201	SCHEDULED	3-1		NON-REMARKABLE
1202	SCHEDULED	3-1		NON-REMARKABLE
1203	SCHEDULED	3-1	Liver	anemic
			kidney	anemic
1204	SCHEDULED	3-1	Liver	anemic
			kidney	anemic//enlarged
1205	SCHEDULED	3-1	Liver	anemic
			kidney	anemic
1206	SCHEDULED	3-1	Liver	anemic
			kidney	anemic
1207	SCHEDULED	3-1	Liver	anemic
			kidney	anemic
1208	SCHEDULED	3-1	Liver	anemic
			kidney	anemic
1209	SCHEDULED	3-1	Liver	anemic
			kidney	anemic
1210	SCHEDULED	3-1	Liver	anemic

():Comment

STUDY NO. : 0018
ANIMAL : RAT F344
REPORT TYPE : A1
SEX : MALE

GROUP NAME : 10000 ppm

GROSS FINDINGS (INDIVIDUAL)
ALL ANIMALS (0- 2W)

PAGE : 4

Animal ID-NO.	Death Information	Time of Examination Week-Day	Organ	Findings
1301	SCHEDULED	3-1	kidney	anemic
1302	SCHEDULED	3-1	kidney	anemic
1303	SCHEDULED	3-1	liver	anemic
			kidney	anemic
1304	SCHEDULED	3-1	liver	anemic
			kidney	anemic
1305	SCHEDULED	3-1	liver	anemic
			kidney	anemic
1306	SCHEDULED	3-1	liver	anemic
			kidney	anemic
1307	SCHEDULED	3-1	liver	anemic
			kidney	anemic
1308	SCHEDULED	3-1	liver	anemic
			kidney	anemic
1309	SCHEDULED	3-1	liver	anemic
			kidney	anemic
1310	SCHEDULED	3-1	liver	anemic
			kidney	anemic

():Comment

STUDY NO. : 0018
ANIMAL : RAT F344
REPORT TYPE : A1
SEX : MALE

GROUP NAME : 30000 ppm

GROSS FINDINGS (INDIVIDUAL)
ALL ANIMALS (0- 2W)

PAGE : 5

Animal ID-NO.	Death Information	Time of Examination Week-Day	Organ	Findings
1401	SCHEDULED	3-1	liver	accentuation of lobular structure//anemic
1402	SCHEDULED	3-1	liver	accentuation of lobular structure//yellow
			kidney	anemic
1403	SCHEDULED	3-1	liver	accentuation of lobular structure//yellow
			kidney	enlarged//anemic
1404	SCHEDULED	3-1	liver	anemic
			kidney	anemic
1405	SCHEDULED	3-1	liver	anemic//yellow//accentuation of lobular structure
			kidney	anemic
1406	SCHEDULED	3-1	liver	accentuation of lobular structure//yellow
			kidney	anemic
1407	SCHEDULED	3-1	liver	accentuation of lobular structure//yellow
			kidney	anemic
1408	SCHEDULED	3-1	liver	accentuation of lobular structure//anemic//yellow
			kidney	anemic
1409	SCHEDULED	3-1	thymus	edema
			liver	accentuation of lobular structure//anemic//yellow
			kidney	anemic
1410	SCHEDULED	3-1	liver	accentuation of lobular structure//anemic//yellow
			kidney	anemic

():Comment

STUDY NO. : 0018
ANIMAL : RAT F344
REPORT TYPE : A1
SEX : MALE

GROUP NAME : 90000 ppm

GROSS FINDINGS (INDIVIDUAL)
ALL ANIMALS (0- 2W)

PAGE : 6

Animal ID-NO.	Death Information	Time of Examination Week-Day	Organ_____	Findings_____
1501	DEAD	2-4	thymus	atrophic
			stomach	fluid:black
			whole body	wasting
1502	DEAD	2-3	thymus	atrophic
			gl stomach	red patch/zone
			stomach	fluid:black
			whole body	wasting
1503	DEAD	2-3	thymus	atrophic
			gl stomach	red patch/zone
			whole body	wasting
1504	DEAD	2-3	thymus	atrophic
			whole body	wasting
1505	DEAD	2-5	thymus	atrophic
			gl stomach	red patch/zone
			whole body	wasting
1506	DEAD	2-3	thymus	atrophic
			gl stomach	red patch/zone
			whole body	wasting
1507	DEAD	2-4	thymus	atrophic
			whole body	wasting

():Comment

STUDY NO. : 0018
ANIMAL : RAT F344
REPORT TYPE : A1
SEX : MALE

GROUP NAME : 90000 ppm

GROSS FINDINGS (INDIVIDUAL)
ALL ANIMALS (0- 2W)

PAGE : 7

Animal ID-NO.	Death Information	Time of Examination Week-Day	Organ	Findings
1508	DEAD	2-5	thymus	atrophic
			gl stomach	red patch/zone
			whole body	wasting
1509	MORIBUND	2-6	thymus	atrophic
			gl stomach	red patch/zone
			whole body	wasting
1510	DEAD	2-1	thymus	atrophic
			whole body	wasting

():Comment

(HPT045)

BAIS2

APPENDIX B 6-2

GROSS FINDINGS (TWO-WEEK STUDIES:INDIVIDUAL)

RAT:FEMALE

STUDY NO. : 0018
ANIMAL : RAT F344
REPORT TYPE : A1
SEX : FEMALE

GROUP NAME : Control

GROSS FINDINGS (INDIVIDUAL)
ALL ANIMALS (0- 2W)

PAGE : 8

Animal ID-NO.	Death Information	Time of Examination Week-Day	Organ	Findings
2001	SCHEDULED	3-1	uterus	dilated lumen
2002	SCHEDULED	3-1	uterus	dilated lumen
2003	SCHEDULED	3-1	liver	anemic
2004	SCHEDULED	3-1		NON-REMARKABLE
2005	SCHEDULED	3-1	liver	anemic
			uterus	dilated lumen
2006	SCHEDULED	3-1	liver	anemic
2007	SCHEDULED	3-1	liver	anemic
			kidney	anemic
			uterus	dilated lumen
2008	SCHEDULED	3-1	liver	anemic
2009	SCHEDULED	3-1	liver	anemic
			uterus	dilated lumen
2010	SCHEDULED	3-1	liver	anemic

():Comment

(HPT045)

BAIS2

STUDY NO. : 0018
ANIMAL : RAT F344
REPORT TYPE : A1
SEX : FEMALE

GROUP NAME : 1110 ppm

GROSS FINDINGS (INDIVIDUAL)
ALL ANIMALS (0- 2W)

PAGE : 9

Animal ID-NO.	Death Information	Time of Examination Week-Day	Organ_____	Findings_____
2101	SCHEDULED	3-1		NON-REMARKABLE
2102	SCHEDULED	3-1		NON-REMARKABLE
2103	SCHEDULED	3-1	liver	anemic
			uterus	dilated lumen
2104	SCHEDULED	3-1	liver	anemic
2105	SCHEDULED	3-1		NON-REMARKABLE
2106	SCHEDULED	3-1	uterus	dilated lumen
2107	SCHEDULED	3-1	liver	anemic
2108	SCHEDULED	3-1	liver	anemic
2109	SCHEDULED	3-1		NON-REMARKABLE
2110	SCHEDULED	3-1	liver	anemic

():Comment

(HPT045)

BAIS2

STUDY NO. : 0018
ANIMAL : RAT F344
REPORT TYPE : A1
SEX : FEMALE

GROUP NAME : 3330 ppm

GROSS FINDINGS (INDIVIDUAL)
ALL ANIMALS (0- 2W)

PAGE : 10

Animal ID-NO.	Death Information	Time of Examination Week-Day	Organ_____	Findings_____
2201	SCHEDULED	3-1		NON-REMARKABLE
2202	SCHEDULED	3-1		NON-REMARKABLE
2203	SCHEDULED	3-1	liver	anemic
			kidney	anemic
2204	SCHEDULED	3-1	liver	anemic
2205	SCHEDULED	3-1	liver	anemic
			uterus	dilated lumen
2206	SCHEDULED	3-1	liver	anemic
			kidney	anemic
			uterus	dilated lumen
2207	SCHEDULED	3-1	liver	anemic
			kidney	anemic
			uterus	dilated lumen
2208	SCHEDULED	3-1	liver	anemic
			kidney	anemic
			uterus	dilated lumen
2209	SCHEDULED	3-1	liver	anemic
			kidney	anemic
2210	SCHEDULED	3-1	liver	anemic
			kidney	anemic

():Comment

STUDY NO. : 0018
ANIMAL : RAT F344
REPORT TYPE : A1
SEX : FEMALE

GROUP NAME : 3330 ppm

GROSS FINDINGS (INDIVIDUAL)
ALL ANIMALS (0- 2W)

PAGE : 11

Animal ID-NO.	Death Information	Time of Examination Week-Day	Organ_____	Findings_____
			uterus	dilated lumen

():Comment

(HPT045)

BAIS2

STUDY NO. : 0018
ANIMAL : RAT F344
REPORT TYPE : A1
SEX : FEMALE

GROUP NAME : 10000 ppm

GROSS FINDINGS (INDIVIDUAL)
ALL ANIMALS (0- 2W)

PAGE : 12

Animal ID-NO.	Death Information	Time of Examination Week-Day	Organ	Findings
2301	SCHEDULED	3-1		NON-REMARKABLE
2302	SCHEDULED	3-1		NON-REMARKABLE
2303	SCHEDULED	3-1	liver	anemic
			kidney	anemic
2304	SCHEDULED	3-1	liver	anemic
			kidney	anemic
			uterus	dilated lumen
2305	SCHEDULED	3-1	uterus	dilated lumen
2306	SCHEDULED	3-1	liver	anemic
			kidney	anemic
			uterus	dilated lumen
2307	SCHEDULED	3-1	liver	anemic
2308	SCHEDULED	3-1	liver	anemic
			kidney	anemic
			uterus	dilated lumen
2309	SCHEDULED	3-1	liver	anemic//yellow
2310	SCHEDULED	3-1	liver	anemic

():Comment

(HPT045)

BAIS2

STUDY NO. : 0018
ANIMAL : RAT F344
REPORT TYPE : A1
SEX : FEMALE

GROUP NAME : 30000 ppm

GROSS FINDINGS (INDIVIDUAL)
ALL ANIMALS (0- 2W)

PAGE : 13

Animal ID-NO.	Death Information	Time of Examination Week-Day	Organ_____	Findings_____
2401	SCHEDULED	3-1		NON-REMARKABLE
2402	SCHEDULED	3-1	thymus	atrophic
			kidney	anemic//yellow//rough
2403	SCHEDULED	3-1	thymus	atrophic
2404	SCHEDULED	3-1	thymus	atrophic
			spleen	atrophic
			uterus	dilated lumen
2405	SCHEDULED	3-1	thymus	atrophic
			spleen	atrophic
2406	SCHEDULED	3-1	thymus	atrophic
			liver	anemic
			kidney	anemic
2407	DEAD	2-3	thymus	atrophic//red,dark
			kidney	enlarged,anemic
2408	SCHEDULED	3-1	spleen	atrophic
			liver	anemic
			kidney	anemic
2409	MORIBUND	2-5	thymus	atrophic
			gl stomach	red patch/zone
			liver	turbid

():Comment

STUDY NO. : 0018
ANIMAL : RAT F344
REPORT TYPE : A1
SEX : FEMALE

GROUP NAME : 30000 ppm

GROSS FINDINGS (INDIVIDUAL)
ALL ANIMALS (0- 2W)

PAGE : 14

Animal ID-NO.	Death Information	Time of Examination Week-Day	Organ_____	Findings_____
			kidney	anemic//rough
			whole body	wasting
2410	SCHEDULED	3-1	thymus	atrophic

():Comment

(HPT045)

BAIS2

STUDY NO. : 0018
ANIMAL : RAT F344
REPORT TYPE : A1
SEX : FEMALE

GROUP NAME : 90000 ppm

GROSS FINDINGS (INDIVIDUAL)
ALL ANIMALS (0- 2W)

PAGE : 15

Animal ID-NO.	Death Information	Time of Examination Week-Day	Organ	Findings
2501	DEAD	2-3	thymus	atrophic
2502	DEAD	2-2	thymus	atrophic
			gl stomach	red patch/zone
			liver	red
			whole body	wasting
2503	DEAD	2-3	thymus	atrophic
			gl stomach	red patch/zone
			whole body	wasting
2504	DEAD	2-2	thymus	atrophic
			gl stomach	red patch/zone
			whole body	wasting
2505	DEAD	2-4	thymus	atrophic
			gl stomach	red patch/zone
			whole body	wasting
2506	DEAD	2-4	thymus	atrophic
			gl stomach	red patch/zone
2507	DEAD	2-1	thymus	atrophic
			gl stomach	red patch/zone
			whole body	wasting
2508	DEAD	2-3	thymus	atrophic

():Comment

STUDY NO. : 0018
ANIMAL : RAT F344
REPORT TYPE : A1
SEX : FEMALE

GROUP NAME : 90000 ppm

GROSS FINDINGS (INDIVIDUAL)
ALL ANIMALS (0- 2W)

PAGE : 16

Animal ID-NO.	Death Information	Time of Examination Week-Day	Organ_____	Findings_____
2509	DEAD	2-4	gl stomach	red patch/zone
			whole body	wasting
			thymus	atrophic
			gl stomach	red patch/zone
2510	DEAD	2-2	whole body	wasting
			thymus	atrophic
			liver	red
			whole body	wasting

():Comment

(HPT045)

BAIS2

APPENDIX B 6-3

GROSS FINDINGS (TWO-WEEK STUDIES:INDIVIDUAL)

MOUSE:MALE

STUDY NO. : 0019
ANIMAL : MOUSE BDF1
REPORT TYPE : A1
SEX : MALE

GROUP NAME : Control

GROSS FINDINGS (INDIVIDUAL)
ALL ANIMALS (0- 2W)

PAGE : 1

Animal ID-NO.	Death Information	Time of Examination Week-Day	Organ_____	Findings_____
1001	SCHEDULED	3-1		NON-REMARKABLE
1002	SCHEDULED	3-1	spleen	black patch/zone
1003	SCHEDULED	3-1		NON-REMARKABLE
1004	SCHEDULED	3-1		NON-REMARKABLE
1005	SCHEDULED	3-1		NON-REMARKABLE
1006	SCHEDULED	3-1		NON-REMARKABLE
1007	SCHEDULED	3-1		NON-REMARKABLE
1008	SCHEDULED	3-1		NON-REMARKABLE
1009	SCHEDULED	3-1		NON-REMARKABLE
1010	SCHEDULED	3-1		NON-REMARKABLE

():Comment

(HPT045)

BAIS2

STUDY NO. : 0019
ANIMAL : MOUSE BDF1
REPORT TYPE : A1
SEX : MALE

GROUP NAME : 1110 ppm

GROSS FINDINGS (INDIVIDUAL)
ALL ANIMALS (0- 2W)

PAGE : 2

Animal ID-NO.	Death Information	Time of Examination Week-Day	Organ_____	Findings_____
1101	SCHEDULED	3-1		NON-REMARKABLE
1102	SCHEDULED	3-1		NON-REMARKABLE
1103	SCHEDULED	3-1		NON-REMARKABLE
1104	SCHEDULED	3-1		NON-REMARKABLE
1105	SCHEDULED	3-1		NON-REMARKABLE
1106	SCHEDULED	3-1		NON-REMARKABLE
1107	SCHEDULED	3-1		NON-REMARKABLE
1108	SCHEDULED	3-1		NON-REMARKABLE
1109	SCHEDULED	3-1		NON-REMARKABLE
1110	SCHEDULED	3-1		NON-REMARKABLE

():Comment

(HPT045)

BAIS2

STUDY NO. : 0019
ANIMAL : MOUSE BDF1
REPORT TYPE : A1
SEX : MALE

GROUP NAME : 3330 ppm

GROSS FINDINGS (INDIVIDUAL)
ALL ANIMALS (0- 2W)

PAGE : 3

Animal ID-NO.	Death Information	Time of Examination Week-Day	Organ_____	Findings_____
1201	SCHEDULED	3-1		NON-REMARKABLE
1202	SCHEDULED	3-1		NON-REMARKABLE
1203	SCHEDULED	3-1		NON-REMARKABLE
1204	SCHEDULED	3-1		NON-REMARKABLE
1205	SCHEDULED	3-1		NON-REMARKABLE
1206	SCHEDULED	3-1		NON-REMARKABLE
1207	SCHEDULED	3-1		NON-REMARKABLE
1208	SCHEDULED	3-1		NON-REMARKABLE
1209	SCHEDULED	3-1		NON-REMARKABLE
1210	SCHEDULED	3-1		NON-REMARKABLE

():Comment

(HPT045)

BAIS2

STUDY NO. : 0019
ANIMAL : MOUSE BDF1
REPORT TYPE : A1
SEX : MALE

GROUP NAME : 10000 ppm

GROSS FINDINGS (INDIVIDUAL)
ALL ANIMALS (0- 2W)

PAGE : 4

Animal ID-NO.	Death Information	Time of Examination Week-Day	Organ	Findings
1301	SCHEDULED	3-1		NON-REMARKABLE
1302	SCHEDULED	3-1		NON-REMARKABLE
1303	SCHEDULED	3-1		NON-REMARKABLE
1304	SCHEDULED	3-1		NON-REMARKABLE
1305	SCHEDULED	3-1	Liver	anemic
1306	SCHEDULED	3-1	Liver	anemic
			kidney	anemic
1307	SCHEDULED	3-1	Liver	anemic
1308	SCHEDULED	3-1		NON-REMARKABLE
1309	SCHEDULED	3-1	spleen	black patch/zone,2,mm
			kidney	anemic
1310	SCHEDULED	3-1	Liver	anemic

():Comment

(HPT045)

BAIS2

STUDY NO. : 0019
ANIMAL : MOUSE BDF1
REPORT TYPE : A1
SEX : MALE

GROUP NAME : 30000 ppm

GROSS FINDINGS (INDIVIDUAL)
ALL ANIMALS (0- 2W)

PAGE : 5

Animal ID-NO.	Death Information	Time of Examination Week-Day	Organ	Findings
1401	SCHEDULED	3-1	thymus	atrophic
			liver	accentuation of lobular structure
1402	SCHEDULED	3-1	thymus	atrophic
			liver	accentuation of lobular structure
1403	SCHEDULED	3-1	thymus	atrophic
			liver	anemic
1404	SCHEDULED	3-1	liver	accentuation of lobular structure//anemic
1405	SCHEDULED	3-1	liver	anemic
1406	SCHEDULED	3-1	liver	anemic
1407	SCHEDULED	3-1	thymus	atrophic
			liver	anemic//accentuation of lobular structure
1408	SCHEDULED	3-1	liver	accentuation of lobular structure//anemic
1409	SCHEDULED	3-1	thymus	atrophic
			liver	accentuation of lobular structure//anemic
1410	SCHEDULED	3-1	thymus	atrophic
			liver	accentuation of lobular structure//anemic

():Comment

(HPT045)

BAIS2

STUDY NO. : 0019
ANIMAL : MOUSE BDF1
REPORT TYPE : A1
SEX : MALE

GROUP NAME : 90000 ppm

GROSS FINDINGS (INDIVIDUAL)
ALL ANIMALS (0- 2W)

PAGE : 6

Animal ID-NO.	Death Information	Time of Examination Week-Day	Organ_____	Findings_____
1501	MORIBUND	2-4	thymus	atrophic
			gl stomach	red patch/zone
			small intes	fluid:brown,dark,upper
			whole body	wasting
1502	DEAD	2-4	lung/branch	red patch/zone,dark
			thymus	atrophic
			gl stomach	red patch/zone
1503	DEAD	2-2	thymus	atrophic
			gl stomach	red patch/zone
1504	DEAD	2-1	thymus	atrophic
			gl stomach	red patch/zone
			whole body	wasting
1505	DEAD	2-3	thymus	atrophic
1506	DEAD	2-1	thymus	atrophic
			gl stomach	red patch/zone,a few
			whole body	wasting
1507	DEAD	2-2	thymus	atrophic
			gl stomach	red patch/zone
1508	SCHEDULED	3-1	thymus	atrophic
			gl stomach	red patch/zone

():Comment

STUDY NO. : 0019
ANIMAL : MOUSE BDF1
REPORT TYPE : A1
SEX : MALE

GROUP NAME : 90000 ppm

GROSS FINDINGS (INDIVIDUAL)
ALL ANIMALS (0- 2W)

PAGE : 7

Animal ID-NO.	Death Information	Time of Examination Week-Day	Organ	Findings
1509	DEAD	2-5	small intes	fluid:brown,upper
			semin ves	atrophic
			thymus	atrophic
			sl stomach	red patch/zone
1510	DEAD	2-3	small intes	fluid:brown,dark,upper
			lung/branch	red patch/zone,dark
			thymus	atrophic
			sl stomach	red patch/zone

():Comment

(HPT045)

BAIS2

APPENDIX B 6-4

GROSS FINDINGS (TWO-WEEK STUDIES:INDIVIDUAL)

MOUSE:FEMALE

STUDY NO. : 0019
ANIMAL : MOUSE BDF1
REPORT TYPE : A1
SEX : FEMALE

GROUP NAME : Control

GROSS FINDINGS (INDIVIDUAL)
ALL ANIMALS (0- 2W)

PAGE : 8

Animal ID-NO.	Death Information	Time of Examination Week-Day	Organ_____	Findings_____
2001	SCHEDULED	3-1		NON-REMARKABLE
2002	SCHEDULED	3-1	uterus	dilated lumen
2003	SCHEDULED	3-1		NON-REMARKABLE
2004	SCHEDULED	3-1	uterus	dilated lumen
2005	SCHEDULED	3-1		NON-REMARKABLE
2006	SCHEDULED	3-1	uterus	dilated lumen
2007	SCHEDULED	3-1		NON-REMARKABLE
2008	SCHEDULED	3-1	uterus	dilated lumen
2009	SCHEDULED	3-1		NON-REMARKABLE
2010	SCHEDULED	3-1		NON-REMARKABLE

():Comment

(HPT045)

BAIS2

STUDY NO. : 0019
ANIMAL : MOUSE BDF1
REPORT TYPE : A1
SEX : FEMALE

GROUP NAME : 1110 ppm

GROSS FINDINGS (INDIVIDUAL)
ALL ANIMALS (0- 2W)

PAGE : 9

Animal ID-NO.	Death Information	Time of Examination Week-Day	Organ_____	Findings_____
2101	SCHEDULED	3-1		NON-REMARKABLE
2102	SCHEDULED	3-1	uterus	dilated lumen
2103	SCHEDULED	3-1		NON-REMARKABLE
2104	SCHEDULED	3-1		NON-REMARKABLE
2105	SCHEDULED	3-1		NON-REMARKABLE
2106	SCHEDULED	3-1		NON-REMARKABLE
2107	SCHEDULED	3-1		NON-REMARKABLE
2108	SCHEDULED	3-1	uterus	dilated lumen
2109	SCHEDULED	3-1	spleen	black patch/zone,2,mm
			uterus	dilated lumen
2110	SCHEDULED	3-1	spleen	black patch/zone,1,mm

():Comment

(HPT045)

BAIS2

STUDY NO. : 0019
ANIMAL : MOUSE BDF1
REPORT TYPE : A1
SEX : FEMALE

GROUP NAME : 3330 ppm

GROSS FINDINGS (INDIVIDUAL)
ALL ANIMALS (0- 2W)

PAGE : 10

Animal ID-NO.	Death Information	Time of Examination Week-Day	Organ_____	Findings_____
2201	SCHEDULED	3-1	Liver	accentuation of lobular structure
			uterus	dilated lumen
2202	SCHEDULED	3-1		NON-REMARKABLE
2203	SCHEDULED	3-1		NON-REMARKABLE
2204	SCHEDULED	3-1	uterus	dilated lumen
2205	SCHEDULED	3-1		NON-REMARKABLE
2206	SCHEDULED	3-1	spleen	black patch/zone,2,mm
2207	SCHEDULED	3-1		NON-REMARKABLE
2208	SCHEDULED	3-1		NON-REMARKABLE
2209	SCHEDULED	3-1		NON-REMARKABLE
2210	SCHEDULED	3-1	uterus	dilated lumen

():Comment

(HPT045)

BAIS2

STUDY NO. : 0019
ANIMAL : MOUSE BDF1
REPORT TYPE : A1
SEX : FEMALE

GROUP NAME : 10000 ppm

GROSS FINDINGS (INDIVIDUAL)
ALL ANIMALS (0- 2W)

PAGE : 11

Animal ID-NO.	Death Information	Time of Examination Week-Day	Organ	Findings
2301	SCHEDULED	3-1	uterus	dilated lumen
2302	SCHEDULED	3-1	liver	accentuation of lobular structure
2303	SCHEDULED	3-1	uterus	dilated lumen
2304	SCHEDULED	3-1	uterus	dilated lumen
2305	SCHEDULED	3-1	uterus	dilated lumen
2306	SCHEDULED	3-1	uterus	dilated lumen
2307	SCHEDULED	3-1		NON-REMARKABLE
2308	SCHEDULED	3-1		NON-REMARKABLE
2309	SCHEDULED	3-1		NON-REMARKABLE
2310	SCHEDULED	3-1		NON-REMARKABLE

():Comment

(HPT045)

BAIS2

STUDY NO. : 0019
ANIMAL : MOUSE BDF1
REPORT TYPE : A1
SEX : FEMALE

GROUP NAME : 30000 ppm

GROSS FINDINGS (INDIVIDUAL)
ALL ANIMALS (0- 2W)

PAGE : 12

Animal ID-NO.	Death Information	Time of Examination Week-Day	Organ_____	Findings_____
2401	SCHEDULED	3-1	liver	accentuation of lobular structure
2402	SCHEDULED	3-1		NON-REMARKABLE
2403	SCHEDULED	3-1	liver	accentuation of lobular structure//anemic
			uterus	dilated lumen
2404	SCHEDULED	3-1	liver	anemic
2405	SCHEDULED	3-1	thymus	atrophic
			spleen	black patch/zone,2,mm
			liver	anemic
			uterus	dilated lumen
2406	SCHEDULED	3-1	liver	accentuation of lobular structure//anemic
2407	SCHEDULED	3-1	liver	accentuation of lobular structure//anemic
			uterus	dilated lumen
2408	SCHEDULED	3-1	liver	anemic
			uterus	dilated lumen
2409	SCHEDULED	3-1	liver	accentuation of lobular structure//anemic
2410	SCHEDULED	3-1	liver	anemic
			uterus	dilated lumen

():Comment

(HPT045)

BAIS2

STUDY NO. : 0019
ANIMAL : MOUSE BDF1
REPORT TYPE : A1
SEX : FEMALE

GROUP NAME : 90000 ppm

GROSS FINDINGS (INDIVIDUAL)
ALL ANIMALS (0- 2W)

PAGE : 13

Animal ID-NO.	Death Information	Time of Examination Week-Day	Organ_____	Findings_____
2501	DEAD	2-3	lung/branch	red patch/zone,dark
			thymus	atrophic
			gl stomach	red patch/zone
2502	DEAD	2-1	thymus	atrophic
			gl stomach	red patch/zone
2503	DEAD	2-1	thymus	atrophic
			gl stomach	red patch/zone
2504	DEAD	2-3	lung/branch	red patch/zone,dark
			gl stomach	red patch/zone
			small intes	fluid:brown,dark,upper
			whole body	wasting
2505	DEAD	2-1	thymus	atrophic
			gl stomach	red patch/zone
			small intes	fluid:brown,dark,upper
			whole body	wasting
2506	DEAD	2-2	thymus	atrophic
			gl stomach	red patch/zone
			small intes	fluid:brown,dark,upper
2507	DEAD	2-3	lung/branch	red patch/zone
			thymus	atrophic

():Comment

STUDY NO. : 0019
ANIMAL : MOUSE BDF1
REPORT TYPE : A1
SEX : FEMALE

GROUP NAME : 90000 ppm

GROSS FINDINGS (INDIVIDUAL)
ALL ANIMALS (0- 2W)

PAGE : 14

Animal ID-NO.	Death Information	Time of Examination Week-Day	Organ_____	Findings_____
2508	DEAD	2-1	gl stomach	red patch/zone
			liver	red patch/zone,dark
			thymus	atrophic
			gl stomach	red patch/zone
2509	DEAD	2-1	whole body	wasting
			gl stomach	red patch/zone
			whole body	wasting
2510	DEAD	1-7	thymus	atrophic
			gl stomach	red patch/zone
			small intes	fluid:brown,dark,upper

():Comment

(HPT045)

BAIS2

APPENDIX B 7-1

HISTOLOGICAL FINDINGS (TWO-WEEK STUDIES:INDIVIDUAL)

RAT:MALE

STUDY NO. : 0018
ANIMAL : RAT F344
REPORT TYPE : A1
SEX : MALE

GROUP NAME : Control

HISTOLOGICAL FINDINGS (INDIVIDUAL)
ALL ANIMALS (0- 2W)

PAGE : 1

Animal ID-NO.	Death Information	Time of Examination Week-Day	Organ_____	Findings_____
1001	SCHEDULED	3-1	lung/branch	NON-REMARKABLE
			bone marrow	NON-REMARKABLE
			lymph node	NON-REMARKABLE
			thymus	NON-REMARKABLE
			spleen	NON-REMARKABLE
			heart	hemorrhage,<1>,focal
			stomach	NON-REMARKABLE
			small intes	NON-REMARKABLE
			large intes	NON-REMARKABLE
			liver	NON-REMARKABLE
			pancreas	NON-REMARKABLE
			kidney	eosinophilic body,<1>
			pituitary	NON-REMARKABLE
			adrenal	NON-REMARKABLE
1003	SCHEDULED	3-1	testis	NON-REMARKABLE
			brain	NON-REMARKABLE
			lung/branch	NON-REMARKABLE
			bone marrow	NON-REMARKABLE
			lymph node	NON-REMARKABLE
			thymus	NON-REMARKABLE

():Comment

<1>:Slight

<2>:Moderate

<3>:Marked

<4>:Severe

' ':Context

STUDY NO. : 0018
ANIMAL : RAT F344
REPORT TYPE : A1
SEX : MALE

GROUP NAME : Control

HISTOLOGICAL FINDINGS (INDIVIDUAL)
ALL ANIMALS (0- 2W)

PAGE : 2

Animal ID-NO.	Death Information	Time of Examination Week-Day	Organ_____	Findings_____
1003	SCHEDULED	3-1	spleen	NON-REMARKABLE
			heart	hemorrhage,<1>,focal
			stomach	NON-REMARKABLE
			small intes	NON-REMARKABLE
			large intes	NON-REMARKABLE
			liver	NON-REMARKABLE
			pancreas	NON-REMARKABLE
			kidney	NON-REMARKABLE
			pituitary	NOT-EXAMINE
			adrenal	NON-REMARKABLE
			testis	NON-REMARKABLE
			brain	NON-REMARKABLE
<div>():Comment<1>:Slight<2>:Moderate<3>:Marked<4>:Severe' ':Context</div>				
(HPT050)				BA1S2

STUDY NO. : 0018
ANIMAL : RAT F344
REPORT TYPE : A1
SEX : MALE

GROUP NAME : 1110 ppm

HISTOLOGICAL FINDINGS (INDIVIDUAL)
ALL ANIMALS (0- 2W)

PAGE : 3

Animal ID-NO.	Death Information	Time of Examination Week-Day	Organ	Findings
1101	SCHEDULED	3-1	lung/branch	NON-REMARKABLE
			bone marrow	NON-REMARKABLE
			lymph node	NON-REMARKABLE
			thymus	NON-REMARKABLE
			spleen	NON-REMARKABLE
			heart	NON-REMARKABLE
			stomach	NON-REMARKABLE
			small intes	NON-REMARKABLE
			large intes	NON-REMARKABLE
			liver	NON-REMARKABLE
			pancreas	NON-REMARKABLE
			kidney	eosinophilic body,<1>
			pituitary	NON-REMARKABLE
			adrenal	NON-REMARKABLE
			testis	NON-REMARKABLE
1102	SCHEDULED	3-1	brain	NON-REMARKABLE
			lung/branch	NON-REMARKABLE
			bone marrow	NON-REMARKABLE
			lymph node	NON-REMARKABLE
			thymus	NON-REMARKABLE

():Comment

<1>:Slight

<2>:Moderate

<3>:Marked

<4>:Severe

' ':Context

STUDY NO. : 0018
ANIMAL : RAT F344
REPORT TYPE : A1
SEX : MALE

GROUP NAME : 1110 ppm

HISTOLOGICAL FINDINGS (INDIVIDUAL)
ALL ANIMALS (0- 2W)

PAGE : 4

Animal ID-NO.	Death Information	Time of Examination Week-Day	Organ	Findings
1102	SCHEDULED	3-1	spleen	NON-REMARKABLE
			heart	NON-REMARKABLE
			stomach	NON-REMARKABLE
			small intes	NON-REMARKABLE
			large intes	NON-REMARKABLE
			liver	NON-REMARKABLE
			pancreas	NON-REMARKABLE
			kidney	eosinophilic body,<1>
			pituitary	NON-REMARKABLE
			adrenal	NON-REMARKABLE
			testis	NON-REMARKABLE
			brain	NON-REMARKABLE

():Comment <1>:Slight <2>:Moderate <3>:Marked <4>:Severe ' ':Context

(HPT050)

BAIS2

STUDY NO. : 0018
ANIMAL : RAT F344
REPORT TYPE : A1
SEX : MALE

GROUP NAME : 3330 ppm

HISTOLOGICAL FINDINGS (INDIVIDUAL)
ALL ANIMALS (0- 2w)

PAGE : 5

Animal ID-NO.	Death Information	Time of Examination Week-Day	Organ_____	Findings_____
1201	SCHEDULED	3-1	Lung/branch	NON-REMARKABLE
			bone marrow	NON-REMARKABLE
			Lymph node	NON-REMARKABLE
			thymus	NON-REMARKABLE
			spleen	NON-REMARKABLE
			heart	NON-REMARKABLE
			stomach	NON-REMARKABLE
			small intes	NON-REMARKABLE
			large intes	NON-REMARKABLE
			liver	NON-REMARKABLE
			pancreas	NON-REMARKABLE
			kidney	eosinophilic body,<1>
			pituitary	NON-REMARKABLE
			adrenal	NON-REMARKABLE
1202	SCHEDULED	3-1	testis	NON-REMARKABLE
			brain	NON-REMARKABLE
			Lung/branch	NON-REMARKABLE
			bone marrow	NON-REMARKABLE
			Lymph node	NON-REMARKABLE
			thymus	NON-REMARKABLE

():Comment

<1>:Slight

<2>:Moderate

<3>:Marked

<4>:Severe

' ':Context

STUDY NO. : 0018
ANIMAL : RAT F344
REPORT TYPE : A1
SEX : MALE

GROUP NAME : 3330 ppm

HISTOLOGICAL FINDINGS (INDIVIDUAL)
ALL ANIMALS (0- 2W)

PAGE : 6

Animal ID-NO.	Death Information	Time of Examination Week-Day	Organ_____	Findings_____
1202	SCHEDULED	3-1	spleen	NON-REMARKABLE
			heart	NON-REMARKABLE
			stomach	NON-REMARKABLE
			small intes	NON-REMARKABLE
			large intes	NON-REMARKABLE
			liver	NON-REMARKABLE
			pancreas	NON-REMARKABLE
			kidney	eosinophilic body,<1>
			pituitary	NON-REMARKABLE
			adrenal	NON-REMARKABLE
			testis	NON-REMARKABLE
			brain	NON-REMARKABLE

():Comment <1>:Slight <2>:Moderate <3>:Marked <4>:Severe ' ':Context

(HPT050)

BAIS2

STUDY NO. : 0018
ANIMAL : RAT F344
REPORT TYPE : A1
SEX : MALE

GROUP NAME : 10000 ppm

HISTOLOGICAL FINDINGS (INDIVIDUAL)
ALL ANIMALS (0- 2W)

PAGE : 7

Animal ID-NO.	Death Information	Time of Examination Week-Day	Organ	Findings
1301	SCHEDULED	3-1	lung/branch	NON-REMARKABLE
			bone marrow	NON-REMARKABLE
			lymph node	NON-REMARKABLE
			thymus	NON-REMARKABLE
			spleen	NOT-EXAMINE
			heart	NON-REMARKABLE
			stomach	NON-REMARKABLE
			small intes	NON-REMARKABLE
			large intes	NON-REMARKABLE
			Liver	NON-REMARKABLE
			pancreas	NON-REMARKABLE
			kidney	eosinophilic body,<3>
			pituitary	NON-REMARKABLE
			adrenal	NON-REMARKABLE
			testis	NON-REMARKABLE
1302	SCHEDULED	3-1	brain	NON-REMARKABLE
			nasal cavit	nuclear enlargement:olfactory epithelium,<1>,supporting cell
			lung/branch	NON-REMARKABLE
			bone marrow	NON-REMARKABLE
			lymph node	NON-REMARKABLE

():Comment

<1>:Slight

<2>:Moderate

<3>:Marked

<4>:Severe

' ':Context

STUDY NO. : 0018
ANIMAL : RAT F344
REPORT TYPE : A1
SEX : MALE

GROUP NAME : 10000 ppm

HISTOLOGICAL FINDINGS (INDIVIDUAL)
ALL ANIMALS (0- 2W)

PAGE : 8

Animal ID-NO.	Death Information	Time of Examination Week-Day	Organ_____	Findings_____
1302	SCHEDULED	3-1	thymus	NON-REMARKABLE
			spleen	NON-REMARKABLE
			heart	NON-REMARKABLE
			stomach	NON-REMARKABLE
			small intes	NON-REMARKABLE
			large intes	NON-REMARKABLE
			liver	NON-REMARKABLE
			pancreas	NON-REMARKABLE
			kidney	eosinophilic body,<3>
			pituitary	NON-REMARKABLE
			adrenal	NON-REMARKABLE
			testis	NON-REMARKABLE
			brain	NON-REMARKABLE

():Comment

<1>:Slight

<2>:Moderate

<3>:Marked

<4>:Severe

' ':Context

(HPT050)

BAIS2

STUDY NO. : 0018
ANIMAL : RAT F344
REPORT TYPE : A1
SEX : MALE

GROUP NAME : 30000 ppm

HISTOLOGICAL FINDINGS (INDIVIDUAL)
ALL ANIMALS (0- 2W)

PAGE : 9

Animal ID-NO.	Death Information	Time of Examination Week-Day	Organ_____	Findings_____
1401	SCHEDULED	3-1	nasal cavit	nuclear enlargement:olfactory epithelium,<1>,supporting cell
			lung/branch	NON-REMARKABLE
			bone marrow	NON-REMARKABLE
			lymph node	NON-REMARKABLE
			thymus	NON-REMARKABLE
			spleen	NON-REMARKABLE
			heart	NON-REMARKABLE
			stomach	NON-REMARKABLE
			small intes	NON-REMARKABLE
			large intes	NON-REMARKABLE
			liver	vacuolic change:central,<1>//swelling:central,<2>
			pancreas	NON-REMARKABLE
			kidney	eosinophilic body,<3>//hydropic change:proximal tubule,<1>//regeneration proximal tubule,<1>,with,mineralization
			pituitary	NON-REMARKABLE
			adrenal	NON-REMARKABLE
			testis	NON-REMARKABLE
1402	SCHEDULED	3-1	nasal cavit	nuclear enlargement:olfactory epithelium,<1>,supporting cell
			lung/branch	edema:perivascular,<1>
			bone marrow	NON-REMARKABLE

():Comment

<1>:Slight

<2>:Moderate

<3>:Marked

<4>:Severe

' ':Context

STUDY NO. : 0018
ANIMAL : RAT F344
REPORT TYPE : A1
SEX : MALE

GROUP NAME : 30000 ppm

HISTOLOGICAL FINDINGS (INDIVIDUAL)
ALL ANIMALS (0- 2W)

PAGE : 10

Animal ID-NO.	Death Information	Time of Examination Week-Day	Organ_____	Findings_____
1402	SCHEDULED	3-1	lymph node	NON-REMARKABLE
			thymus	NON-REMARKABLE
			spleen	NON-REMARKABLE
			heart	NON-REMARKABLE
			stomach	NON-REMARKABLE
			small intes	NON-REMARKABLE
			large intes	NON-REMARKABLE
			liver	vacuolic change:central,<2>//swelling:central,<2>
			pancreas	NON-REMARKABLE
			kidney	eosinophilic body,<3>
			pituitary	NON-REMARKABLE
			adrenal	NON-REMARKABLE
			testis	NON-REMARKABLE
			brain	vacuolic change,<1>,medulla,cerebrum,hyppocampus,brainstem,cerebellum

():Comment <1>:Slight <2>:Moderate <3>:Marked <4>:Severe ' ':Context

(HPT050)

BAIS2

STUDY NO. : 0018
ANIMAL : RAT F344
REPORT TYPE : A1
SEX : MALE

GROUP NAME : 90000 ppm

HISTOLOGICAL FINDINGS (INDIVIDUAL)
ALL ANIMALS (0- 2W)

PAGE : 11

Animal ID-NO.	Death Information	Time of Examination Week-Day	Organ	Findings
1503	DEAD	2-3	lung/branch	NON-REMARKABLE
			bone marrow	NON-REMARKABLE
			lymph node	NON-REMARKABLE
			thymus	NON-REMARKABLE
			spleen	NON-REMARKABLE
			heart	NON-REMARKABLE
			stomach	erosion:glandular stomach,<1>
			small intes	NON-REMARKABLE
			large intes	NON-REMARKABLE
			liver	NON-REMARKABLE
			pancreas	NON-REMARKABLE
			kidney	NON-REMARKABLE
			pituitary	NON-REMARKABLE
			adrenal	NON-REMARKABLE
			testis	NON-REMARKABLE
			brain	NON-REMARKABLE
			Cause of Death	no microscopical confirmation
1509	MORIBUND	2-6	lung/branch	NON-REMARKABLE
			bone marrow	NON-REMARKABLE

():Comment

<1>:Slight

<2>:Moderate

<3>:Marked

<4>:Severe

' ':Context

STUDY NO. : 0018
ANIMAL : RAT F344
REPORT TYPE : A1
SEX : MALE

GROUP NAME : 90000 ppm

HISTOLOGICAL FINDINGS (INDIVIDUAL)
ALL ANIMALS (0- 2W)

PAGE : 12

Animal ID-NO.	Death Information	Time of Examination Week-Day	Organ	Findings
1509	MORIBUND	2-6	lymph node	NON-REMARKABLE
			thymus	NON-REMARKABLE
			spleen	NON-REMARKABLE
			heart	NON-REMARKABLE
			stomach	hemorrhage:glandular stomach,<1>
			small intes	NON-REMARKABLE
			large intes	NON-REMARKABLE
			liver	NON-REMARKABLE
			pancreas	NON-REMARKABLE
			kidney	NON-REMARKABLE
			pituitary	NON-REMARKABLE
			adrenal	NON-REMARKABLE
			testis	NON-REMARKABLE
			brain	NON-REMARKABLE
1510	DEAD	2-1	Cause of Death	no microscopical confirmation
			Lung/branch	NON-REMARKABLE
			bone marrow	NON-REMARKABLE
			lymph node	NON-REMARKABLE
			thymus	NON-REMARKABLE

():Comment

<1>:Slight

<2>:Moderate

<3>:Marked

<4>:Severe

' ':Context

STUDY NO. : 0018
ANIMAL : RAT F344
REPORT TYPE : A1
SEX : MALE

GROUP NAME : 90000 ppm

HISTOLOGICAL FINDINGS (INDIVIDUAL)
ALL ANIMALS (0- 2W)

PAGE : 13

Animal ID-NO.	Death Information	Time of Examination Week-Day	Organ	Findings
1510	DEAD	2-1	spleen	NON-REMARKABLE
			heart	hemorrhage,<1>,focal
			stomach	NON-REMARKABLE
			small intes	NON-REMARKABLE
			large intes	NON-REMARKABLE
			liver	NON-REMARKABLE
			pancreas	NON-REMARKABLE
			kidney	hydropic change:proximal tubule,<2>
			pituitary	NON-REMARKABLE
			adrenal	NON-REMARKABLE
			testis	NON-REMARKABLE
			brain	NON-REMARKABLE

Cause of Death no microscopical confirmation

():Comment <1>:Slight <2>:Moderate <3>:Marked <4>:Severe ' ':Context

(HPT050)

BAIS2

APPENDIX B 7-2

HISTOLOGICAL FINDINGS (TWO-WEEK STUDIES:INDIVIDUAL)

RAT:FEMALE

STUDY NO. : 0018
ANIMAL : RAT F344
REPORT TYPE : A1
SEX : FEMALE

GROUP NAME : Control

HISTOLOGICAL FINDINGS (INDIVIDUAL)
ALL ANIMALS (0- 2W)

PAGE : 14

Animal ID-NO.	Death Information	Time of Examination Week-Day	Organ_____	Findings_____
2001	SCHEDULED	3-1	lung/branch	NON-REMARKABLE
			bone marrow	NON-REMARKABLE
			lymph node	NON-REMARKABLE
			thymus	NON-REMARKABLE
			spleen	NON-REMARKABLE
			heart	NON-REMARKABLE
			stomach	NON-REMARKABLE
			small intes	NON-REMARKABLE
			large intes	NON-REMARKABLE
			liver	NON-REMARKABLE
			pancreas	NON-REMARKABLE
			kidney	NON-REMARKABLE
			pituitary	NOT-EXAMINE
			adrenal	NON-REMARKABLE
			ovary	NON-REMARKABLE
2002	SCHEDULED	3-1	brain	NON-REMARKABLE
			lung/branch	NON-REMARKABLE
			bone marrow	NON-REMARKABLE
			lymph node	NON-REMARKABLE
			thymus	NON-REMARKABLE

():Comment <1>:Slight <2>:Moderate <3>:Marked <4>:Severe ' ':Context

STUDY NO. : 0018
ANIMAL : RAT F344
REPORT TYPE : A1
SEX : FEMALE

GROUP NAME : Control

HISTOLOGICAL FINDINGS (INDIVIDUAL)
ALL ANIMALS (0- 2W)

PAGE : 15

Animal ID-NO.	Death Information	Time of Examination Week-Day	Organ_____	Findings_____
2002	SCHEDULED	3-1	spleen	NON-REMARKABLE
			heart	NON-REMARKABLE
			stomach	NON-REMARKABLE
			small intes	NON-REMARKABLE
			large intes	NON-REMARKABLE
			liver	NON-REMARKABLE
			pancreas	NON-REMARKABLE
			kidney	NON-REMARKABLE
			pituitary	NON-REMARKABLE
			adrenal	NON-REMARKABLE
			ovary	NON-REMARKABLE
			brain	NON-REMARKABLE

():Comment <1>:Slight <2>:Moderate <3>:Marked <4>:Severe ' ':Context

(HPT050)

BAIS2

STUDY NO. : 0018
ANIMAL : RAT F344
REPORT TYPE : A1
SEX : FEMALE

GROUP NAME : 1110 ppm

HISTOLOGICAL FINDINGS (INDIVIDUAL)
ALL ANIMALS (0- 2W)

PAGE : 16

Animal ID-NO.	Death Information	Time of Examination Week-Day	Organ	Findings
2101	SCHEDULED	3-1	Lung/branch	NON-REMARKABLE
			bone marrow	NON-REMARKABLE
			lymph node	NON-REMARKABLE
			thymus	NON-REMARKABLE
			spleen	NON-REMARKABLE
			heart	NON-REMARKABLE
			stomach	NON-REMARKABLE
			small intes	NON-REMARKABLE
			large intes	NON-REMARKABLE
			liver	NON-REMARKABLE
			pancreas	NON-REMARKABLE
			kidney	NON-REMARKABLE
			pituitary	NON-REMARKABLE
			adrenal	NON-REMARKABLE
			ovary	NON-REMARKABLE
2102	SCHEDULED	3-1	brain	NON-REMARKABLE
			Lung/branch	NON-REMARKABLE
			bone marrow	NON-REMARKABLE
			lymph node	NON-REMARKABLE
			thymus	NON-REMARKABLE

():Comment

<1>:Slight

<2>:Moderate

<3>:Marked

<4>:Severe

' ':Context

STUDY NO. : 0018
ANIMAL : RAT F344
REPORT TYPE : A1
SEX : FEMALE

GROUP NAME : 1110 ppm

HISTOLOGICAL FINDINGS (INDIVIDUAL)
ALL ANIMALS (0- 2W)

PAGE : 17

Animal ID-NO.	Death Information	Time of Examination Week-Day	Organ	Findings
2102	SCHEDULED	3-1	spleen	NON-REMARKABLE
			heart	NON-REMARKABLE
			stomach	NON-REMARKABLE
			small intes	NON-REMARKABLE
			large intes	NON-REMARKABLE
			liver	NON-REMARKABLE
			pancreas	NON-REMARKABLE
			kidney	NON-REMARKABLE
			pituitary	NON-REMARKABLE
			adrenal	NON-REMARKABLE
			ovary	NON-REMARKABLE
			brain	NON-REMARKABLE

():Comment

<1>:Slight

<2>:Moderate

<3>:Marked

<4>:Severe

' ':Context

(HPT050)

BAIS2

STUDY NO. : 0018
ANIMAL : RAT F344
REPORT TYPE : A1
SEX : FEMALE

GROUP NAME : 3330 ppm

HISTOLOGICAL FINDINGS (INDIVIDUAL)
ALL ANIMALS (0- 2W)

PAGE : 18

Animal ID-NO.	Death Information	Time of Examination Week-Day	Organ_____	Findings_____
2201	SCHEDULED	3-1	Lung/branch	NON-REMARKABLE
			bone marrow	NON-REMARKABLE
			lymph node	NON-REMARKABLE
			thymus	NON-REMARKABLE
			spleen	NON-REMARKABLE
			heart	NON-REMARKABLE
			stomach	NON-REMARKABLE
			small intes	NON-REMARKABLE
			large intes	NON-REMARKABLE
			liver	NON-REMARKABLE
			pancreas	NON-REMARKABLE
			kidney	NON-REMARKABLE
			pituitary	NON-REMARKABLE
			adrenal	NON-REMARKABLE
			ovary	NON-REMARKABLE
2202	SCHEDULED	3-1	brain	NON-REMARKABLE
			Lung/branch	NON-REMARKABLE
			bone marrow	NON-REMARKABLE
			lymph node	NON-REMARKABLE
			thymus	NON-REMARKABLE

():Comment

<1>:Slight

<2>:Moderate

<3>:Marked

<4>:Severe

' ':Context

STUDY NO. : 0018
ANIMAL : RAT F344
REPORT TYPE : A1
SEX : FEMALE

GROUP NAME : 3330 ppm

HISTOLOGICAL FINDINGS (INDIVIDUAL)
ALL ANIMALS (0- 2W)

PAGE : 19

Animal ID-NO.	Death Information	Time of Examination Week-Day	Organ_____	Findings_____
2202	SCHEDULED	3-1	spleen	NON-REMARKABLE
			heart	NON-REMARKABLE
			stomach	NON-REMARKABLE
			small intes	NON-REMARKABLE
			large intes	NON-REMARKABLE
			liver	NON-REMARKABLE
			pancreas	NON-REMARKABLE
			kidney	NON-REMARKABLE
			pituitary	NON-REMARKABLE
			adrenal	NON-REMARKABLE
			ovary	NON-REMARKABLE
			brain	NON-REMARKABLE

():Comment <1>:Slight <2>:Moderate <3>:Marked <4>:Severe ' ':Context

(HPT050)

BAIS2

STUDY NO. : 0018
ANIMAL : RAT F344
REPORT TYPE : A1
SEX : FEMALE

GROUP NAME : 10000 ppm

HISTOLOGICAL FINDINGS (INDIVIDUAL)
ALL ANIMALS (0- 2W)

PAGE : 20

Animal ID-NO.	Death Information	Time of Examination Week-Day	Organ	Findings
2301	SCHEDULED	3-1	nasal cavit	nuclear enlargement:olfactory epithelium,<1>,supporting cell
			lung/branch	NON-REMARKABLE
			bone marrow	NON-REMARKABLE
			lymph node	NON-REMARKABLE
			thymus	NON-REMARKABLE
			spleen	NON-REMARKABLE
			heart	NON-REMARKABLE
			stomach	NON-REMARKABLE
			small intes	NON-REMARKABLE
			large intes	NON-REMARKABLE
			liver	NON-REMARKABLE
			pancreas	NON-REMARKABLE
			kidney	NON-REMARKABLE
			pituitary	NON-REMARKABLE
			adrenal	NON-REMARKABLE
			ovary	NON-REMARKABLE
			brain	NON-REMARKABLE
2302	SCHEDULED	3-1	nasal cavit	nuclear enlargement:olfactory epithelium,<1>,supporting cell
			lung/branch	NON-REMARKABLE
			bone marrow	NON-REMARKABLE

():Comment

<1>:Slight

<2>:Moderate

<3>:Marked

<4>:Severe

' ':Context

STUDY NO. : 0018
ANIMAL : RAT F344
REPORT TYPE : A1
SEX : FEMALE

GROUP NAME : 10000 ppm

HISTOLOGICAL FINDINGS (INDIVIDUAL)
ALL ANIMALS (0- 2W)

PAGE : 21

Animal ID-NO.	Death Information	Time of Examination Week-Day	Organ	Findings
2302	SCHEDULED	3-1	Lymph node	NON-REMARKABLE
			thymus	NON-REMARKABLE
			spleen	NON-REMARKABLE
			heart	NON-REMARKABLE
			stomach	NON-REMARKABLE
			small intes	NON-REMARKABLE
			large intes	NON-REMARKABLE
			liver	NON-REMARKABLE
			pancreas	NON-REMARKABLE
			kidney	NON-REMARKABLE
			pituitary	NON-REMARKABLE
			adrenal	NON-REMARKABLE
			ovary	NON-REMARKABLE
			brain	NON-REMARKABLE

():Comment

<1>:Slight

<2>:Moderate

<3>:Marked

<4>:Severe

' ':Context

(HPT050)

BAIS2

STUDY NO. : 0018
ANIMAL : RAT F344
REPORT TYPE : A1
SEX : FEMALE

GROUP NAME : 30000 ppm

HISTOLOGICAL FINDINGS (INDIVIDUAL)
ALL ANIMALS (0- 2W)

PAGE : 22

Animal ID-NO.	Death Information	Time of Examination Week-Day	Organ	Findings
2401	SCHEDULED	3-1	nasal cavit	nuclear enlargement:olfactory epithelium,<1>,supporting cell
			lung/branch	NON-REMARKABLE
			bone marrow	NON-REMARKABLE
			lymph node	NON-REMARKABLE
			thymus	NON-REMARKABLE
			spleen	NON-REMARKABLE
			heart	NON-REMARKABLE
			stomach	NON-REMARKABLE
			small intes	NON-REMARKABLE
			large intes	NON-REMARKABLE
			liver	swelling:central,<2>
			pancreas	NON-REMARKABLE
			kidney	hydropic change:proximal tubule,<1>
			pituitary	NON-REMARKABLE
			adrenal	NON-REMARKABLE
			ovary	NON-REMARKABLE
2402	SCHEDULED	3-1	brain	vacuolic change,<1>,brainstem,hyppocampus,cerebellum,corpus callosum
			nasal cavit	nuclear enlargement:olfactory epithelium,<1>,supporting cell
			lung/branch	hemorrhage,<1>,focal
			bone marrow	NON-REMARKABLE

():Comment

<1>:Slight

<2>:Moderate

<3>:Marked

<4>:Severe

' ':Context

STUDY NO. : 0018
ANIMAL : RAT F344
REPORT TYPE : A1
SEX : FEMALE

GROUP NAME : 30000 ppm

HISTOLOGICAL FINDINGS (INDIVIDUAL)
ALL ANIMALS (0- 2W)

PAGE : 23

Animal ID-NO.	Death Information	Time of Examination Week-Day	Organ	Findings
2402	SCHEDULED	3-1	Lymph node	NON-REMARKABLE
			spleen	NON-REMARKABLE
			heart	hemorrhage,<1>,focal
			stomach	NON-REMARKABLE
			small intes	NON-REMARKABLE
			large intes	NON-REMARKABLE
			liver	vacuolic change:central,<4>
			pancreas	NON-REMARKABLE
			kidney	hydropic change:proximal tubule,<4>
			pituitary	NON-REMARKABLE
			adrenal	hemorrhage,<1>,cortex
			ovary	NON-REMARKABLE
			brain	vacuolic change,<1>,brainstem,hippocampus,cerebellum
2407	DEAD	2-3	lung/bronch	NON-REMARKABLE
			bone marrow	NON-REMARKABLE
			lymph node	NON-REMARKABLE
			thymus	hemorrhage,<1>
			spleen	NON-REMARKABLE
			heart	NON-REMARKABLE
			stomach	NON-REMARKABLE

():Comment

<1>:Slight

<2>:Moderate

<3>:Marked

<4>:Severe

' ':Context

STUDY NO. : 0018
ANIMAL : RAT F344
REPORT TYPE : A1
SEX : FEMALE

GROUP NAME : 30000 ppm

HISTOLOGICAL FINDINGS (INDIVIDUAL)
ALL ANIMALS (0- 2W)

PAGE : 24

Animal ID-NO.	Death Information	Time of Examination Week-Day	Organ_____	Findings_____
2407	DEAD	2-3	small intes	NON-REMARKABLE
			large intes	NON-REMARKABLE
			liver	NON-REMARKABLE
			pancreas	NON-REMARKABLE
			kidney	hydropic change:proximal tubule,<4>
			pituitary	NON-REMARKABLE
			adrenal	NON-REMARKABLE
			ovary	NON-REMARKABLE
			brain	NON-REMARKABLE
			Cause of Death	renal lesion
2409	MORIBUND	2-5	lung/branch	hemorrhage,<1>,focal
			bone marrow	NON-REMARKABLE
			lymph node	NON-REMARKABLE
			thymus	NON-REMARKABLE
			spleen	NON-REMARKABLE
			heart	NON-REMARKABLE
			stomach	NON-REMARKABLE
			small intes	NON-REMARKABLE
			large intes	NON-REMARKABLE

():Comment

<1>:Slight

<2>:Moderate

<3>:Marked

<4>:Severe

' ':Context

STUDY NO. : 0018
ANIMAL : RAT F344
REPORT TYPE : A1
SEX : FEMALE

GROUP NAME : 30000 ppm

HISTOLOGICAL FINDINGS (INDIVIDUAL)
ALL ANIMALS (0- 2W)

PAGE : 25

Animal ID-NO.	Death Information	Time of Examination Week-Day	Organ	Findings
2409	MORIBUND	2-5	liver	vacuolic change:central,<4>
			pancreas	NON-REMARKABLE
			kidney	hydropic change:proximal tubule,<4>
			pituitary	NON-REMARKABLE
			adrenal	NON-REMARKABLE
			ovary	NON-REMARKABLE
			brain	vacuolic change,<1>,hyppocampus,cerebellum
Cause of Death			renal lesion	

():Comment <1>:Slight <2>:Moderate <3>:Marked <4>:Severe ' ':Context

(HPT050)

BAIS2

STUDY NO. : 0018
ANIMAL : RAT F344
REPORT TYPE : A1
SEX : FEMALE

GROUP NAME : 90000 ppm

HISTOLOGICAL FINDINGS (INDIVIDUAL)
ALL ANIMALS (0- 2W)

PAGE : 26

Animal ID-NO.	Death Information	Time of Examination Week-Day	Organ	Findings
2504	DEAD	2-2	lung/branch	NON-REMARKABLE
			bone marrow	NON-REMARKABLE
			lymph node	NON-REMARKABLE
			thymus	NON-REMARKABLE
			spleen	NON-REMARKABLE
			heart	NON-REMARKABLE
			stomach	erosion:glandular stomach,<1>
			small intes	NON-REMARKABLE
			large intes	NON-REMARKABLE
			liver	NON-REMARKABLE
			pancreas	NON-REMARKABLE
			kidney	NON-REMARKABLE
			pituitary	NON-REMARKABLE
			adrenal	NON-REMARKABLE
			ovary	NON-REMARKABLE
			brain	NON-REMARKABLE
			Cause of Death	no microscopical confirmation
2506	DEAD	2-4	lung/branch	NON-REMARKABLE
			bone marrow	NON-REMARKABLE

():Comment

<1>:Slight

<2>:Moderate

<3>:Marked

<4>:Severe

' ':Context

STUDY NO. : 0018
ANIMAL : RAT F344
REPORT TYPE : A1
SEX : FEMALE

GROUP NAME : 90000 ppm

HISTOLOGICAL FINDINGS (INDIVIDUAL)
ALL ANIMALS (0- 2W)

PAGE : 27

Animal ID-NO.	Death Information	Time of Examination Week-Day	Organ	Findings
2506	DEAD	2-4	Lymph node	NON-REMARKABLE
			thymus	NON-REMARKABLE
			spleen	NON-REMARKABLE
			heart	NON-REMARKABLE
			stomach	NON-REMARKABLE
			small intes	NON-REMARKABLE
			large intes	NON-REMARKABLE
			liver	NON-REMARKABLE
			pancreas	NON-REMARKABLE
			kidney	NON-REMARKABLE
			pituitary	NON-REMARKABLE
			adrenal	hemorrhage,<1>,cortex
			ovary	NON-REMARKABLE
			brain	NON-REMARKABLE
2507	DEAD	2-1	Cause of Death	no microscopical confirmation
			Lung/branch	NON-REMARKABLE
			bone marrow	NON-REMARKABLE
			lymph node	NON-REMARKABLE
			thymus	hemorrhage,<1>

():Comment

<1>:Slight

<2>:Moderate

<3>:Marked

<4>:Severe

' ':Context

STUDY NO. : 0018
ANIMAL : RAT F344
REPORT TYPE : A1
SEX : FEMALE

GROUP NAME : 90000 ppm

HISTOLOGICAL FINDINGS (INDIVIDUAL)
ALL ANIMALS (0- 2W)

PAGE : 28

Animal ID-NO.	Death Information	Time of Examination Week-Day	Organ	Findings
2507	DEAD	2-1	spleen	NON-REMARKABLE
			heart	NON-REMARKABLE
			stomach	erosion:glandular stomach,<1>
			small intes	NON-REMARKABLE
			large intes	NON-REMARKABLE
			liver	NON-REMARKABLE
			pancreas	NON-REMARKABLE
			kidney	NON-REMARKABLE
			pituitary	NON-REMARKABLE
			adrenal	hemorrhage,<1>,cortex
			ovary	NON-REMARKABLE
			brain	NON-REMARKABLE
Cause of Death no microscopical confirmation				

():Comment <1>:Slight <2>:Moderate <3>:Marked <4>:Severe ' ':Context

(HPT050)

BAIS2

APPENDIX B 7-3

HISTOLOGICAL FINDINGS (TWO-WEEK STUDIES:INDIVIDUAL)

MOUSE:MALE

STUDY NO. : 0019
ANIMAL : MOUSE BDF1
REPORT TYPE : A1
SEX : MALE

GROUP NAME : Control

HISTOLOGICAL FINDINGS (INDIVIDUAL)
ALL ANIMALS (0- 2W)

PAGE : 1

Animal ID-NO.	Death Information	Time of Examination Week-Day	Organ_____	Findings_____
1001	SCHEDULED	3-1	lung/branch	NON-REMARKABLE
			bone marrow	NON-REMARKABLE
			lymph node	NON-REMARKABLE
			thymus	NON-REMARKABLE
			spleen	NON-REMARKABLE
			heart	NON-REMARKABLE
			stomach	NON-REMARKABLE
			small intes	NON-REMARKABLE
			large intes	NON-REMARKABLE
			liver	NON-REMARKABLE
			pancreas	NON-REMARKABLE
			kidney	NON-REMARKABLE
			pituitary	NON-REMARKABLE
			adrenal	NON-REMARKABLE
			testis	NON-REMARKABLE
1002	SCHEDULED	3-1	brain	NON-REMARKABLE
			lung/branch	NON-REMARKABLE
			bone marrow	NON-REMARKABLE
			lymph node	NON-REMARKABLE
			thymus	NON-REMARKABLE

():Comment

<1>:Slight

<2>:Moderate

<3>:Marked

<4>:Severe

' ':Context

STUDY NO. : 0019
ANIMAL : MOUSE BDF1
REPORT TYPE : A1
SEX : MALE

GROUP NAME : Control

HISTOLOGICAL FINDINGS (INDIVIDUAL)
ALL ANIMALS (0- 2W)

PAGE : 2

Animal ID-NO.	Death Information	Time of Examination Week-Day	Organ_____	Findings_____
1002	SCHEDULED	3-1	spleen	deposit of melanin,<1>
			heart	NON-REMARKABLE
			stomach	NON-REMARKABLE
			small intes	NON-REMARKABLE
			large intes	NON-REMARKABLE
			liver	NON-REMARKABLE
			pancreas	NON-REMARKABLE
			kidney	NON-REMARKABLE
			pituitary	NON-REMARKABLE
			adrenal	NON-REMARKABLE
			testis	NON-REMARKABLE
			brain	NON-REMARKABLE

():Comment <1>:Slight <2>:Moderate <3>:Marked <4>:Severe ' ':Context

(HPT050)

BAIS2

STUDY NO. : 0019
ANIMAL : MOUSE BDF1
REPORT TYPE : A1
SEX : MALE

GROUP NAME : 1110 ppm

HISTOLOGICAL FINDINGS (INDIVIDUAL)
ALL ANIMALS (0- 2W)

PAGE : 3

Animal ID-NO.	Death Information	Time of Examination Week-Day	Organ	Findings
1101	SCHEDULED	3-1	Lung/branch	NON-REMARKABLE
			bone marrow	NON-REMARKABLE
			Lymph node	NON-REMARKABLE
			thymus	NON-REMARKABLE
			spleen	NON-REMARKABLE
			heart	NON-REMARKABLE
			stomach	NON-REMARKABLE
			small intes	NON-REMARKABLE
			large intes	NON-REMARKABLE
			liver	NON-REMARKABLE
			pancreas	NON-REMARKABLE
			kidney	NON-REMARKABLE
			pituitary	NON-REMARKABLE
			adrenal	NON-REMARKABLE
			testis	NON-REMARKABLE
1102	SCHEDULED	3-1	brain	NON-REMARKABLE
			Lung/branch	NON-REMARKABLE
			bone marrow	NON-REMARKABLE
			Lymph node	NON-REMARKABLE
			thymus	NON-REMARKABLE

():Comment

<1>:Slight

<2>:Moderate

<3>:Marked

<4>:Severe

' ':Context

STUDY NO. : 0019
ANIMAL : MOUSE BDF1
REPORT TYPE : A1
SEX : MALE

GROUP NAME : 1110 ppm

HISTOLOGICAL FINDINGS (INDIVIDUAL)
ALL ANIMALS (0- 2W)

PAGE : 4

Animal ID-NO.	Death Information	Time of Examination Week-Day	Organ	Findings
1102	SCHEDULED	3-1	spleen	NON-REMARKABLE
			heart	NON-REMARKABLE
			stomach	NON-REMARKABLE
			small intes	NON-REMARKABLE
			large intes	NON-REMARKABLE
			liver	NON-REMARKABLE
			pancreas	NON-REMARKABLE
			kidney	NON-REMARKABLE
			pituitary	NON-REMARKABLE
			adrenal	NON-REMARKABLE
			testis	NON-REMARKABLE
			brain	NON-REMARKABLE

():Comment <1>:Slight <2>:Moderate <3>:Marked <4>:Severe ' ':Context

(HPT050)

BAIS2

STUDY NO. : 0019
ANIMAL : MOUSE BDF1
REPORT TYPE : A1
SEX : MALE

GROUP NAME : 3330 ppm

HISTOLOGICAL FINDINGS (INDIVIDUAL)
ALL ANIMALS (0- 2W)

PAGE : 5

Animal ID-NO.	Death Information	Time of Examination Week-Day	Organ	Findings
1201	SCHEDULED	3-1	lung/branch	NON-REMARKABLE
			bone marrow	NON-REMARKABLE
			lymph node	NON-REMARKABLE
			thymus	NON-REMARKABLE
			spleen	NON-REMARKABLE
			heart	NON-REMARKABLE
			stomach	NON-REMARKABLE
			small intes	NON-REMARKABLE
			large intes	NON-REMARKABLE
			liver	NON-REMARKABLE
			pancreas	NON-REMARKABLE
			kidney	NON-REMARKABLE
			pituitary	NON-REMARKABLE
			adrenal	NON-REMARKABLE
			testis	NON-REMARKABLE
1202	SCHEDULED	3-1	lung/branch	NON-REMARKABLE
			bone marrow	NON-REMARKABLE
			lymph node	NON-REMARKABLE
			thymus	NON-REMARKABLE

():Comment <1>:Slight <2>:Moderate <3>:Marked <4>:Severe ' ':Context

STUDY NO. : 0019
ANIMAL : MOUSE BDF1
REPORT TYPE : A1
SEX : MALE

GROUP NAME : 3330 ppm

HISTOLOGICAL FINDINGS (INDIVIDUAL)
ALL ANIMALS (0- 2W)

PAGE : 6

Animal ID-NO.	Death Information	Time of Examination Week-Day	Organ_____	Findings_____
1202	SCHEDULED	3-1	spleen	NON-REMARKABLE
			heart	NON-REMARKABLE
			stomach	NON-REMARKABLE
			small intes	NON-REMARKABLE
			large intes	NON-REMARKABLE
			liver	NON-REMARKABLE
			pancreas	NON-REMARKABLE
			kidney	NON-REMARKABLE
			pituitary	NON-REMARKABLE
			adrenal	NON-REMARKABLE
			testis	NON-REMARKABLE
			brain	NON-REMARKABLE

():Comment

<1>:Slight

<2>:Moderate

<3>:Marked

<4>:Severe

' ':Context

(HPT050)

BA1S2

STUDY NO. : 0019
ANIMAL : MOUSE BDF1
REPORT TYPE : A1
SEX : MALE

GROUP NAME : 10000 ppm

HISTOLOGICAL FINDINGS (INDIVIDUAL)
ALL ANIMALS (0- 2W)

PAGE : 7

Animal ID-NO.	Death Information	Time of Examination Week-Day	Organ	Findings
1301	SCHEDULED	3-1	lung/branch	NON-REMARKABLE
			bone marrow	NON-REMARKABLE
			lymph node	NON-REMARKABLE
			thymus	NON-REMARKABLE
			spleen	NON-REMARKABLE
			heart	NON-REMARKABLE
			stomach	NON-REMARKABLE
			small intes	NON-REMARKABLE
			large intes	NON-REMARKABLE
			liver	NON-REMARKABLE
			pancreas	NON-REMARKABLE
			kidney	NON-REMARKABLE
			pituitary	NON-REMARKABLE
			adrenal	NON-REMARKABLE
			testis	NON-REMARKABLE
1302	SCHEDULED	3-1	lung/branch	NON-REMARKABLE
			bone marrow	NON-REMARKABLE
			lymph node	NON-REMARKABLE
			thymus	NON-REMARKABLE

():Comment

<1>:Slight

<2>:Moderate

<3>:Marked

<4>:Severe

' ':Context

STUDY NO. : 0019
ANIMAL : MOUSE BDF1
REPORT TYPE : A1
SEX : MALE

GROUP NAME : 10000 ppm

HISTOLOGICAL FINDINGS (INDIVIDUAL)
ALL ANIMALS (0- 2W)

PAGE : 8

Animal ID-NO.	Death Information	Time of Examination Week-Day	Organ	Findings
1302	SCHEDULED	3-1	spleen	NON-REMARKABLE
			heart	NON-REMARKABLE
			stomach	NON-REMARKABLE
			small intes	NON-REMARKABLE
			large intes	NON-REMARKABLE
			liver	NON-REMARKABLE
			pancreas	NON-REMARKABLE
			kidney	NON-REMARKABLE
			pituitary	NON-REMARKABLE
			adrenal	NON-REMARKABLE
			testis	NON-REMARKABLE
			brain	NON-REMARKABLE

():Comment <1>:Slight <2>:Moderate <3>:Marked <4>:Severe ' ':Context

(HPT050)

BAIS2

STUDY NO. : 0019
ANIMAL : MOUSE BDF1
REPORT TYPE : A1
SEX : MALE

GROUP NAME : 30000 ppm

HISTOLOGICAL FINDINGS (INDIVIDUAL)
ALL ANIMALS (0- 2W)

PAGE : 9

Animal ID-NO.	Death Information	Time of Examination Week-Day	Organ_____	Findings_____
1401	SCHEDULED	3-1	lung/branch	NON-REMARKABLE
			bone marrow	NON-REMARKABLE
			lymph node	NON-REMARKABLE
			thymus	NON-REMARKABLE
			spleen	NON-REMARKABLE
			heart	NON-REMARKABLE
			stomach	NON-REMARKABLE
			small intes	NON-REMARKABLE
			large intes	NON-REMARKABLE
			liver	swelling:central,<2>
			pancreas	NON-REMARKABLE
			kidney	NON-REMARKABLE
			pituitary	NOT-EXAMINE
			adrenal	NON-REMARKABLE
			testis	NON-REMARKABLE
1402	SCHEDULED	3-1	brain	NON-REMARKABLE
			lung/branch	NON-REMARKABLE
			bone marrow	NON-REMARKABLE
			lymph node	NON-REMARKABLE
			thymus	NOT-EXAMINE

():Comment

<1>:Slight

<2>:Moderate

<3>:Marked

<4>:Severe

' ':Context

STUDY NO. : 0019
ANIMAL : MOUSE BDF1
REPORT TYPE : A1
SEX : MALE

GROUP NAME : 30000 ppm

HISTOLOGICAL FINDINGS (INDIVIDUAL)
ALL ANIMALS (0- 2W)

PAGE : 10

Animal ID-NO.	Death Information	Time of Examination Week-Day	Organ_____	Findings_____
1402	SCHEDULED	3-1	spleen	NON-REMARKABLE
			heart	NON-REMARKABLE
			stomach	NON-REMARKABLE
			small intes	NON-REMARKABLE
			large intes	NON-REMARKABLE
			liver	swelling:central,<1>
			pancreas	NON-REMARKABLE
			kidney	NON-REMARKABLE
			pituitary	NON-REMARKABLE
			adrenal	NON-REMARKABLE
			testis	NON-REMARKABLE
			brain	NON-REMARKABLE

():Comment <1>:Slight <2>:Moderate <3>:Marked <4>:Severe ' ':Context

(HPT050)

BAIS2

STUDY NO. : 0019
ANIMAL : MOUSE BDF1
REPORT TYPE : A1
SEX : MALE

GROUP NAME : 90000 ppm

HISTOLOGICAL FINDINGS (INDIVIDUAL)
ALL ANIMALS (0- 2W)

PAGE : 11

Animal ID-NO.	Death Information	Time of Examination Week-Day	Organ	Findings
1501	MORIBUND	2-4	Lung/branch	NON-REMARKABLE
			bone marrow	congestion,<1>
			lymph node	NON-REMARKABLE
			thymus	atrophy,<2>//karyorrhexis,<1>
			spleen	atrophy,<1>
			heart	NON-REMARKABLE
			stomach	NON-REMARKABLE
			small intes	NON-REMARKABLE
			large intes	NON-REMARKABLE
			liver	necrosis:single cell,<2>
			pancreas	NON-REMARKABLE
			kidney	NON-REMARKABLE
			pituitary	NOT-EXAMINE
			adrenal	NON-REMARKABLE
			testis	NON-REMARKABLE
			brain	NON-REMARKABLE
	Cause of Death	no microscopical confirmation		
1502	DEAD	2-4	Lung/branch	NON-REMARKABLE
			bone marrow	congestion,<1>

():Comment

<1>:Slight

<2>:Moderate

<3>:Marked

<4>:Severe

' ':Context

STUDY NO. : 0019
ANIMAL : MOUSE BDF1
REPORT TYPE : A1
SEX : MALE

GROUP NAME : 90000 ppm

HISTOLOGICAL FINDINGS (INDIVIDUAL)
ALL ANIMALS (0- 2w)

PAGE : 12

Animal ID-NO.	Death Information	Time of Examination Week-Day	Organ	Findings
1502	DEAD	2-4	Lymph node	NON-REMARKABLE
			thymus	atrophy,<3>
			spleen	atrophy,<2>
			heart	NON-REMARKABLE
			stomach	NON-REMARKABLE
			small intes	NON-REMARKABLE
			large intes	NON-REMARKABLE
			liver	necrosis:single cell,<1>
			pancreas	NON-REMARKABLE
			kidney	NON-REMARKABLE
			pituitary	NOT-EXAMINE
			adrenal	NON-REMARKABLE
			testis	NON-REMARKABLE
			brain	NON-REMARKABLE
1506	DEAD	2-1	Cause of Death	hepatic lesion
			Lung/branch	NON-REMARKABLE
			bone marrow	congestion,<1>
			Lymph node	NON-REMARKABLE
			thymus	atrophy,<2>//karyorrhexis,<1>

():Comment

<1>:Slight

<2>:Moderate

<3>:Marked

<4>:Severe

' ':Context

STUDY NO. : 0019
ANIMAL : MOUSE BDF1
REPORT TYPE : A1
SEX : MALE

GROUP NAME : 90000 ppm

HISTOLOGICAL FINDINGS (INDIVIDUAL)
ALL ANIMALS (0- 2W)

PAGE : 13

Animal ID-NO.	Death Information	Time of Examination Week-Day	Organ_____	Findings_____
1506	DEAD	2-1	spleen	atrophy,<1>
			heart	NON-REMARKABLE
			stomach	NON-REMARKABLE
			small intes	NON-REMARKABLE
			large intes	NON-REMARKABLE
			liver	necrosis:single cell,<2>
			pancreas	NON-REMARKABLE
			kidney	NON-REMARKABLE
			pituitary	NON-REMARKABLE
			adrenal	NON-REMARKABLE
			testis	NON-REMARKABLE
			brain	NON-REMARKABLE
			Cause of Death	hepatic lesion
1508	SCHEDULED	3-1	lung/branch	NON-REMARKABLE
			bone marrow	congestion,<1>
			lymph node	NON-REMARKABLE
			thymus	atrophy,<2>
			spleen	NOT-EXAMINE
			heart	NON-REMARKABLE

():Comment

<1>:Slight

<2>:Moderate

<3>:Marked

<4>:Severe

' ':Context

STUDY NO. : 0019
ANIMAL : MOUSE BDF1
REPORT TYPE : A1
SEX : MALE

GROUP NAME : 90000 ppm

HISTOLOGICAL FINDINGS (INDIVIDUAL)
ALL ANIMALS (0- 2W)

PAGE : 14

Animal ID-NO.	Death Information	Time of Examination Week-Day	Organ	Findings
1508	SCHEDULED	3-1	stomach	NON-REMARKABLE
			small intes	NON-REMARKABLE
			large intes	NON-REMARKABLE
			liver	NON-REMARKABLE
			pancreas	NON-REMARKABLE
			kidney	NON-REMARKABLE
			pituitary	NOT-EXAMINE
			adrenal	NON-REMARKABLE
			testis	NON-REMARKABLE
			brain	NON-REMARKABLE

():Comment

<1>:Slight

<2>:Moderate

<3>:Marked

<4>:Severe

' ':Context

(HPT050)

BAIS2

APPENDIX B 7-4

HISTOLOGICAL FINDINGS (TWO-WEEK STUDIES:INDIVIDUAL)

MOUSE:FEMALE

STUDY NO. : 0019
ANIMAL : MOUSE BDF1
REPORT TYPE : A1
SEX : FEMALE

GROUP NAME : Control

HISTOLOGICAL FINDINGS (INDIVIDUAL)
ALL ANIMALS (0- 2W)

PAGE : 15

Animal ID-NO.	Death Information	Time of Examination Week-Day	Organ_____	Findings_____
2001	SCHEDULED	3-1	Lung/branch	NON-REMARKABLE
			bone marrow	NON-REMARKABLE
			Lymph node	NON-REMARKABLE
			thymus	NON-REMARKABLE
			spleen	NON-REMARKABLE
			heart	NON-REMARKABLE
			stomach	NON-REMARKABLE
			small intes	NON-REMARKABLE
			large intes	NON-REMARKABLE
			liver	NON-REMARKABLE
			pancreas	NON-REMARKABLE
			kidney	NON-REMARKABLE
			pituitary	NON-REMARKABLE
			adrenal	NON-REMARKABLE
2002	SCHEDULED	3-1	ovary	NON-REMARKABLE
			brain	NON-REMARKABLE
			lung/branch	NON-REMARKABLE
			bone marrow	NON-REMARKABLE
			Lymph node	NON-REMARKABLE
			thymus	NON-REMARKABLE

():Comment

<1>:Slight

<2>:Moderate

<3>:Marked

<4>:Severe

' ':Context

STUDY NO. : 0019
ANIMAL : MOUSE BDF1
REPORT TYPE : A1
SEX : FEMALE

GROUP NAME : Control

HISTOLOGICAL FINDINGS (INDIVIDUAL)
ALL ANIMALS (0- 2W)

PAGE : 16

Animal ID-NO.	Death Information	Time of Examination Week-Day	Organ_____	Findings_____
2002	SCHEDULED	3-1	spleen	NON-REMARKABLE
			heart	NON-REMARKABLE
			stomach	NON-REMARKABLE
			small intes	NON-REMARKABLE
			large intes	NON-REMARKABLE
			liver	NON-REMARKABLE
			pancreas	NON-REMARKABLE
			kidney	NON-REMARKABLE
			pituitary	NOT-EXAMINE
			adrenal	NON-REMARKABLE
			ovary	NON-REMARKABLE
			brain	NON-REMARKABLE

():Comment <1>:Slight <2>:Moderate <3>:Marked <4>:Severe ' ':Context

STUDY NO. : 0019
ANIMAL : MOUSE BDF1
REPORT TYPE : A1
SEX : FEMALE

GROUP NAME : 1110 ppm

HISTOLOGICAL FINDINGS (INDIVIDUAL)
ALL ANIMALS (0- 2W)

PAGE : 17

Animal ID-NO.	Death Information	Time of Examination Week-Day	Organ_____	Findings_____
2101	SCHEDULED	3-1	lung/branch	NON-REMARKABLE
			bone marrow	NOT-EXAMINE
			lymph node	NON-REMARKABLE
			thymus	NON-REMARKABLE
			spleen	NON-REMARKABLE
			heart	NON-REMARKABLE
			stomach	NON-REMARKABLE
			small intes	NON-REMARKABLE
			large intes	NON-REMARKABLE
			liver	NON-REMARKABLE
			pancreas	NON-REMARKABLE
			kidney	NON-REMARKABLE
			pituitary	NON-REMARKABLE
			adrenal	NON-REMARKABLE
			ovary	NON-REMARKABLE
2102	SCHEDULED	3-1	lung/branch	NON-REMARKABLE
			bone marrow	NON-REMARKABLE
			lymph node	NON-REMARKABLE
			thymus	NON-REMARKABLE

():Comment <1>:Slight <2>:Moderate <3>:Marked <4>:Severe ' ':Context

STUDY NO. : 0019
ANIMAL : MOUSE BDF1
REPORT TYPE : A1
SEX : FEMALE

GROUP NAME : 1110 ppm

HISTOLOGICAL FINDINGS (INDIVIDUAL)
ALL ANIMALS (0- 2W)

PAGE : 18

Animal ID-NO.	Death Information	Time of Examination Week-Day	Organ_____	Findings_____
2102	SCHEDULED	3-1	spleen	NON-REMARKABLE
			heart	NON-REMARKABLE
			stomach	NON-REMARKABLE
			small intes	NON-REMARKABLE
			large intes	NON-REMARKABLE
			liver	NON-REMARKABLE
			pancreas	NON-REMARKABLE
			kidney	NON-REMARKABLE
			pituitary	NON-REMARKABLE
			adrenal	NON-REMARKABLE
			ovary	NON-REMARKABLE
			brain	NON-REMARKABLE

():Comment <1>:Slight <2>:Moderate <3>:Marked <4>:Severe ' ':Context

(HPT050)

BAIS2

STUDY NO. : 0019
ANIMAL : MOUSE BDF1
REPORT TYPE : A1
SEX : FEMALE

GROUP NAME : 3330 ppm

HISTOLOGICAL FINDINGS (INDIVIDUAL)
ALL ANIMALS (0- 2W)

PAGE : 19

Animal ID-NO.	Death Information	Time of Examination Week-Day	Organ	Findings
2201	SCHEDULED	3-1	lung/branch	NON-REMARKABLE
			bone marrow	NON-REMARKABLE
			lymph node	NON-REMARKABLE
			thymus	NON-REMARKABLE
			spleen	NON-REMARKABLE
			heart	NON-REMARKABLE
			stomach	NON-REMARKABLE
			small intes	NON-REMARKABLE
			large intes	NON-REMARKABLE
			liver	NON-REMARKABLE
			pancreas	NON-REMARKABLE
			kidney	NON-REMARKABLE
			pituitary	NOT-EXAMINE
			adrenal	NON-REMARKABLE
			ovary	NON-REMARKABLE
2202	SCHEDULED	3-1	brain	NON-REMARKABLE
			lung/branch	NON-REMARKABLE
			bone marrow	NON-REMARKABLE
			lymph node	NON-REMARKABLE
			thymus	NON-REMARKABLE

():Comment <1>:Slight <2>:Moderate <3>:Marked <4>:Severe ' ':Context

STUDY NO. : 0019
ANIMAL : MOUSE BDF1
REPORT TYPE : A1
SEX : FEMALE

GROUP NAME : 3330 ppm

HISTOLOGICAL FINDINGS (INDIVIDUAL)
ALL ANIMALS (0- 2W)

PAGE : 20

Animal ID-NO.	Death Information	Time of Examination Week-Day	Organ	Findings
2202	SCHEDULED	3-1	spleen	NON-REMARKABLE
			heart	NON-REMARKABLE
			stomach	NON-REMARKABLE
			small intes	NON-REMARKABLE
			large intes	NON-REMARKABLE
			liver	NON-REMARKABLE
			pancreas	NON-REMARKABLE
			kidney	NON-REMARKABLE
			pituitary	NON-REMARKABLE
			adrenal	NON-REMARKABLE
			ovary	NON-REMARKABLE
			brain	NON-REMARKABLE

():Comment <1>:Slight <2>:Moderate <3>:Marked <4>:Severe ' ':Context

(HPT050)

BAIS2

STUDY NO. : 0019
ANIMAL : MOUSE BDF1
REPORT TYPE : A1
SEX : FEMALE

GROUP NAME : 10000 ppm

HISTOLOGICAL FINDINGS (INDIVIDUAL)
ALL ANIMALS (0- 2W)

PAGE : 21

Animal ID-NO.	Death Information	Time of Examination Week-Day	Organ	Findings
2301	SCHEDULED	3-1	lung/branch	NON-REMARKABLE
			bone marrow	NON-REMARKABLE
			lymph node	NON-REMARKABLE
			thymus	NON-REMARKABLE
			spleen	NON-REMARKABLE
			heart	NON-REMARKABLE
			stomach	NON-REMARKABLE
			small intes	NON-REMARKABLE
			large intes	NON-REMARKABLE
			liver	NON-REMARKABLE
			pancreas	NON-REMARKABLE
			kidney	NON-REMARKABLE
			pituitary	NON-REMARKABLE
			adrenal	NON-REMARKABLE
			ovary	NON-REMARKABLE
2302	SCHEDULED	3-1	brain	NON-REMARKABLE
			lung/branch	NON-REMARKABLE
			bone marrow	NON-REMARKABLE
			lymph node	NON-REMARKABLE
			thymus	NON-REMARKABLE

():Comment <1>:Slight <2>:Moderate <3>:Marked <4>:Severe ' ':Context

STUDY NO. : 0019
ANIMAL : MOUSE BDF1
REPORT TYPE : A1
SEX : FEMALE

GROUP NAME : 10000 ppm

HISTOLOGICAL FINDINGS (INDIVIDUAL)
ALL ANIMALS (0- 2W)

PAGE : 22

Animal ID-NO.	Death Information	Time of Examination Week-Day	Organ_____	Findings_____
2302	SCHEDULED	3-1	spleen	NON-REMARKABLE
			heart	NON-REMARKABLE
			stomach	NON-REMARKABLE
			small intes	NON-REMARKABLE
			large intes	NON-REMARKABLE
			liver	NON-REMARKABLE
			pancreas	NON-REMARKABLE
			kidney	NON-REMARKABLE
			pituitary	NON-REMARKABLE
			adrenal	NON-REMARKABLE
			ovary	NON-REMARKABLE
			brain	NON-REMARKABLE

():Comment <1>:Slight <2>:Moderate <3>:Marked <4>:Severe ' ':Context

(HPT050)

BAIS2

STUDY NO. : 0019
ANIMAL : MOUSE BDF1
REPORT TYPE : A1
SEX : FEMALE

GROUP NAME : 30000 ppm

HISTOLOGICAL FINDINGS (INDIVIDUAL)
ALL ANIMALS (0- 2W)

PAGE : 23

Animal ID-NO.	Death Information	Time of Examination Week-Day	Organ	Findings
2401	SCHEDULED	3-1	lung/branch	NON-REMARKABLE
			bone marrow	NON-REMARKABLE
			lymph node	NON-REMARKABLE
			thymus	NON-REMARKABLE
			spleen	NON-REMARKABLE
			heart	NON-REMARKABLE
			stomach	NON-REMARKABLE
			small intes	NON-REMARKABLE
			large intes	NON-REMARKABLE
			liver	swelling:central,<1>
			pancreas	NON-REMARKABLE
			kidney	NON-REMARKABLE
			pituitary	NON-REMARKABLE
			adrenal	NON-REMARKABLE
			ovary	NON-REMARKABLE
2402	SCHEDULED	3-1	brain	NON-REMARKABLE
			lung/branch	NON-REMARKABLE
			bone marrow	NON-REMARKABLE
			lymph node	NON-REMARKABLE
			thymus	NON-REMARKABLE

():Comment

<1>:Slight

<2>:Moderate

<3>:Marked

<4>:Severe

' ':Context

STUDY NO. : 0019
ANIMAL : MOUSE BDF1
REPORT TYPE : A1
SEX : FEMALE

GROUP NAME : 30000 ppm

HISTOLOGICAL FINDINGS (INDIVIDUAL)
ALL ANIMALS (0- 2W)

PAGE : 24

Animal ID-NO.	Death Information	Time of Examination Week-Day	Organ	Findings
2402	SCHEDULED	3-1	spleen	NON-REMARKABLE
			heart	NON-REMARKABLE
			stomach	NON-REMARKABLE
			small intes	NON-REMARKABLE
			large intes	NON-REMARKABLE
			Liver	swelling:central,<1>
			pancreas	NON-REMARKABLE
			kidney	NON-REMARKABLE
			pituitary	NON-REMARKABLE
			adrenal	NON-REMARKABLE
			ovary	NON-REMARKABLE
			brain	NON-REMARKABLE
():Comment <1>:Slight <2>:Moderate <3>:Marked <4>:Severe ' ':Context				
(HPT050)				BAIS2

STUDY NO. : 0019
ANIMAL : MOUSE BDF1
REPORT TYPE : A1
SEX : FEMALE

GROUP NAME : 90000 ppm

HISTOLOGICAL FINDINGS (INDIVIDUAL)
ALL ANIMALS (0- 2W)

PAGE : 25

Animal ID-NO.	Death Information	Time of Examination Week-Day	Organ_____	Findings_____
2501	DEAD	2-3	lung/branch	NON-REMARKABLE
			bone marrow	congestion,<1>
			lymph node	NON-REMARKABLE
			thymus	atrophy,<2>
			spleen	atrophy,<2>
			heart	NON-REMARKABLE
			stomach	NON-REMARKABLE
			small intes	NON-REMARKABLE
			large intes	NON-REMARKABLE
			liver	NON-REMARKABLE
			pancreas	NON-REMARKABLE
			kidney	NON-REMARKABLE
			pituitary	NOT-EXAMINE
			adrenal	NON-REMARKABLE
			ovary	NON-REMARKABLE
2510	DEAD	1-7	brain	NON-REMARKABLE
			Cause of Death	hepatic lesion
			lung/branch	NON-REMARKABLE
			bone marrow	congestion,<1>

():Comment

<1>:Slight

<2>:Moderate

<3>:Marked

<4>:Severe

' ':Context

STUDY NO. : 0019
ANIMAL : MOUSE BDF1
REPORT TYPE : A1
SEX : FEMALE

GROUP NAME : 90000 ppm

HISTOLOGICAL FINDINGS (INDIVIDUAL)
ALL ANIMALS (0- 2W)

PAGE : 26

Animal ID-NO.	Death Information	Time of Examination Week-Day	Organ	Findings
2510	DEAD	1-7	lymph node	NON-REMARKABLE
			thymus	atrophy,<2>//karyorrhexis,<1>
			spleen	atrophy,<2>
			heart	NON-REMARKABLE
			stomach	NON-REMARKABLE
			small intes	NON-REMARKABLE
			large intes	NON-REMARKABLE
			liver	necrosis:single cell,<1>
			pancreas	NON-REMARKABLE
			kidney	NON-REMARKABLE
			pituitary	NON-REMARKABLE
			adrenal	NON-REMARKABLE
			ovary	NON-REMARKABLE
			brain	NON-REMARKABLE
			Cause of Death	hepatic lesion

():Comment <1>:Slight <2>:Moderate <3>:Marked <4>:Severe ' ':Context

(HPT050)

BAIS2