P - クロロニトロベンゼンのラット及びマウスを用いた
経口（混餌）によるがん原性試験結果報告書

APPENDIX

(F1～F4)

がん原性 STUDY　NO.　0065；0066

中央労働災害防止協会
日本バイオアッセイ研究センター

APPENDIX F 1

FOOD CONSUMPTION CHANGES (TWO-YEAR STUDIES : SUMMARY)

RAT : MALE

STUDY NO. : 0065
ANIMAL : RAT F344
UNIT : g
REPORT TYPE : A1 104
SEX : MALE

FOOD CONSUMPTION CHANGES (SUMMARY)
ALL ANIMALS

Group Name	Administration week-day(effective) 1-7(7)	2-7(7)	3-7(7)	4-7(7)	5-7(7)	6-7(7)	7-7(7)
Control	13.2± 0.6	14.2± 0.7	14.7± 0.6	14.7± 0.7	15.0± 0.8	14.8± 0.8	15.3± 0.7
40 ppm	13.1± 0.6	14.2± 0.7	14.9± 0.7	14.8± 0.9	15.0± 0.8	15.5± 1.1**	15.5± 1.0
200 ppm	12.9± 1.0	14.2± 0.7	14.8± 0.8	14.8± 0.8	14.8± 1.4	15.1± 0.9	15.7± 0.8
1000 ppm	10.9± 0.5**	13.3± 0.7**	13.8± 1.0**	13.9± 0.8**	14.4± 0.7**	14.5± 0.7	14.9± 0.6*

Significant difference ; * : P ≦ 0.05 ** : P ≦ 0.01 Test of Dunnett

BAIS2

(HAN260)

STUDY NO. : 0065
ANIMAL : RAT F344
UNIT : g
REPORT TYPE : A1 104
SEX : MALE

FOOD CONSUMPTION CHANGES (SUMMARY)
ALL ANIMALS

Group Name	Administration week-day(effective) 8-7(7)	9-7(7)	10-7(7)	11-7(7)	12-7(7)	13-7(7)	14-7(7)
Control	15.2± 0.8	15.3± 0.7	14.9± 1.2	15.3± 0.8	15.0± 0.8	15.0± 0.8	14.4± 1.1
40 ppm	15.3± 1.0	15.5± 0.9	15.2± 1.1	15.6± 0.8	15.3± 0.9	15.2± 0.7	14.5± 0.8
200 ppm	15.4± 1.0	15.6± 0.9	15.3± 1.0	15.6± 0.8	15.2± 0.9	15.2± 0.9	14.7± 0.8
1000 ppm	14.9± 0.7	15.1± 0.8	14.9± 0.9	15.2± 1.0	14.7± 1.1	14.8± 0.7	14.4± 0.8

Significant difference ; * : P ≦ 0.05 ** : P ≦ 0.01 Test of Dunnett

BAIS2

(HAN260)

STUDY NO. : 0065
ANIMAL : RAT F344
UNIT : g
REPORT TYPE : A1 104
SEX : MALE

FOOD CONSUMPTION CHANGES (SUMMARY)
ALL ANIMALS

Group Name	Administration week-day(effective) 16-7(7)	18-7(7)	20-7(7)	22-7(7)	24-7(7)	26-7(7)	28-7(7)
Control	14.4± 0.9	14.4± 0.8	14.7± 0.9	15.3± 0.8	15.3± 0.8	15.2± 0.8	14.9± 0.7
40 ppm	14.6± 0.9	14.6± 0.7	14.8± 0.8	15.5± 0.9	15.6± 0.9	15.3± 1.1	15.1± 0.9
200 ppm	14.6± 0.9	14.7± 0.9	14.9± 0.9	15.3± 1.0	15.6± 1.0	15.5± 0.9	15.1± 1.3
1000 ppm	14.5± 1.0	14.5± 0.9	14.6± 1.1	15.4± 1.1	15.5± 1.3	15.6± 1.1	15.5± 1.2**

Significant difference ; * : P ≦ 0.05 ** : P ≦ 0.01 Test of Dunnett

BAIS 2

(HAN260)

STUDY NO. : 0065
ANIMAL : RAT F344
UNIT : g
REPORT TYPE : A1 104
SEX : MALE

FOOD CONSUMPTION CHANGES (SUMMARY)
ALL ANIMALS

Group Name	Administration week-day(effective) 30-7(7)	32-7(7)	34-7(7)	36-7(7)	38-7(7)	40-7(7)	42-7(7)
Control	15.3± 0.8	14.9± 0.8	14.9± 0.7	15.0± 0.8	15.2± 0.8	15.4± 0.7	15.3± 0.8
40 ppm	15.6± 0.7	15.3± 1.3*	15.5± 1.0**	15.4± 0.9	15.5± 0.9	15.7± 1.0	15.4± 0.8
200 ppm	15.9± 1.3*	15.3± 1.0	15.4± 1.0*	15.6± 1.0**	15.2± 1.4	15.6± 0.9	15.6± 1.0
1000 ppm	15.8± 1.0*	15.5± 1.0*	15.5± 1.1*	15.6± 1.1*	15.5± 1.0	15.7± 1.2	15.4± 1.0

Significant difference ; * : P ≦ 0.05 ** : P ≦ 0.01 Test of Dunnett

(HAN2GO)

STUDY NO. : 0065
ANIMAL : RAT F344
UNIT : g
REPORT TYPE : A1 104
SEX : MALE

FOOD CONSUMPTION CHANGES (SUMMARY)
ALL ANIMALS

Group Name	Administration week-day(effective) 44-7(7)	46-7(7)	48-7(7)	50-7(7)	52-7(7)	54-7(7)	56-7(7)
Control	15.1± 0.8	15.2± 0.7	15.3± 0.8	15.4± 0.9	15.4± 0.8	15.3± 0.9	15.4± 0.9
40 ppm	15.5± 1.0	15.6± 1.0	15.4± 1.0	15.6± 1.0	15.5± 0.8	15.6± 0.8	15.8± 1.1
200 ppm	15.4± 0.9	15.6± 1.1	15.7± 1.0	15.8± 1.0	15.6± 0.9	15.6± 0.9	15.6± 0.9
1000 ppm	15.3± 1.1	15.5± 1.1	15.7± 1.2	15.9± 1.4	15.7± 1.1	15.8± 1.1	15.8± 1.2

Significant difference ; * : P ≦ 0.05 ** : P ≦ 0.01 Test of Dunnett

(HAN260)

STUDY NO. : 0065
ANIMAL : RAT F344
UNIT : g
REPORT TYPE : A1 104
SEX : MALE

FOOD CONSUMPTION CHANGES (SUMMARY)
ALL ANIMALS

Group Name	Administration week-day(effective) 58-7(7)	60-7(7)	62-7(7)	64-7(7)	66-7(7)	68-7(7)	70-7(7)
Control	15.4± 0.9	15.5± 0.8	15.6± 0.9	15.8± 0.9	15.4± 0.9	15.5± 1.0	15.3± 1.1
40 ppm	15.7± 1.3	15.4± 1.5	15.6± 1.6	15.5± 1.6	15.4± 1.5	15.6± 1.1	15.3± 1.2
200 ppm	15.6± 1.0	15.7± 1.0	15.7± 1.2	15.8± 1.1	15.7± 1.1	15.9± 1.3	15.6± 1.1
1000 ppm	15.8± 1.2	15.8± 1.2	15.6± 2.2	16.0± 1.3	15.6± 1.0	15.7± 1.5	15.6± 1.5

Significant difference ; * : P ≦ 0.05 ** : P ≦ 0.01 Test of Dunnett

(HAN260)

STUDY NO. : 0065
ANIMAL : RAT F344
UNIT : g
REPORT TYPE : A1 104
SEX : MALE

FOOD CONSUMPTION CHANGES (SUMMARY)
ALL ANIMALS

Group Name	Administration week-day(effective) 72-7(7)	74-7(7)	76-7(7)	78-7(7)	80-7(7)	82-7(7)	84-7(7)
Control	15.2± 1.4	15.5± 1.7	15.5± 1.0	15.2± 1.0	15.5± 1.2	15.4± 1.2	15.3± 1.3
40 ppm	15.4± 1.3	15.7± 1.1	15.8± 1.1	15.7± 1.0	15.5± 1.5	15.6± 1.4	15.6± 1.5
200 ppm	15.7± 1.3	15.8± 1.4	15.8± 1.7	15.9± 1.5**	16.1± 1.4	15.9± 1.5	15.9± 1.4
1000 ppm	15.8± 1.3	15.6± 1.2	15.9± 1.5	15.8± 1.3	15.5± 1.3	15.2± 1.9	14.8± 3.4

Significant difference ; * : P ≦ 0.05 ** : P ≦ 0.01 Test of Dunnett

(HAN260)

STUDY NO. : 0065
ANIMAL : RAT F344
UNIT : g
REPORT TYPE : A1 104
SEX : MALE

FOOD CONSUMPTION CHANGES (SUMMARY)
ALL ANIMALS

Group Name	Administration week-day(effective) 86-7(7)	88-7(7)	90-7(7)	92-7(7)	94-7(7)	96-7(7)	98-7(7)
Control	15.3± 1.5	14.8± 1.9	14.8± 2.4	14.7± 2.3	14.8± 2.6	15.2± 1.7	15.1± 2.2
40 ppm	15.2± 1.9	15.1± 2.0	15.4± 1.3	15.5± 1.5	15.5± 1.4	15.3± 1.7	15.2± 1.7
200 ppm	16.0± 1.6	15.6± 1.7	15.8± 1.6	15.7± 1.7	16.3± 1.6**	15.6± 1.8	15.5± 1.7
1000 ppm	15.2± 2.2	15.3± 2.5	15.1± 2.1	15.5± 1.9	14.3± 2.5	14.7± 3.3	15.9± 1.5

Significant difference ; * : P ≦ 0.05 ** : P ≦ 0.01 Test of Dunnett

STUDY NO. : 0065
ANIMAL : RAT F344
UNIT : g
REPORT TYPE : A1 104
SEX : MALE

FOOD CONSUMPTION CHANGES (SUMMARY)
ALL ANIMALS

Group Name	Administration week-day(effective) 100-7(7)	102-7(7)	104-7(7)
Control	15.5± 1.7	15.3± 1.6	15.0± 2.3
40 ppm	15.5± 2.3	15.0± 2.9	15.6± 1.5
200 ppm	15.4± 2.6	15.9± 1.5	16.2± 1.7*
1000 ppm	15.5± 2.2	15.2± 1.4	20.6± 16.4

Significant difference ; * : P ≦ 0.05 ** : P ≦ 0.01 Test of Dunnett

APPENDIX F 2

FOOD CONSUMPTION CHANGES (TWO-YEAR STUDIES: SUMMARY)

RAT: FEMALE

STUDY NO. : 0065
ANIMAL : RAT F344
UNIT : g
REPORT TYPE : A1 104
SEX : FEMALE

FOOD CONSUMPTION CHANGES (SUMMARY)
ALL ANIMALS

Group Name	Administration week-day(effective) 1-7(7)	2-7(7)	3-7(7)	4-7(7)	5-7(7)	6-7(7)	7-7(7)
Control	10.6± 0.6	10.6± 0.7	10.7± 0.6	10.6± 0.7	10.9± 0.9	10.4± 0.9	10.8± 0.9
40 ppm	10.6± 0.5	10.6± 0.5	10.9± 0.6	10.6± 0.7	11.0± 1.5	10.9± 1.3	11.4± 1.7
200 ppm	10.3± 0.4	10.4± 0.8	10.9± 0.8	10.8± 1.6	10.8± 1.2	10.6± 0.9	11.0± 1.0
1000 ppm	8.3± 0.7**	10.1± 0.9**	10.2± 0.5**	10.2± 0.7*	10.6± 1.7**	10.3± 0.9	10.5± 0.7

Significant difference ; * : P ≦ 0.05 ** : P ≦ 0.01 Test of Dunnett

(HAN260)

STUDY NO. : 0065
ANIMAL : RAT F344
UNIT : g
REPORT TYPE : A1 104
SEX : FEMALE

FOOD CONSUMPTION CHANGES (SUMMARY)
ALL ANIMALS

Group Name	Administration week-day(effective) 8-7(7)	9-7(7)	10-7(7)	11-7(7)	12-7(7)	13-7(7)	14-7(7)
Control	10.7± 0.8	10.7± 0.8	10.7± 1.0	11.1± 0.8	11.2± 1.2	11.1± 1.3	10.3± 0.9
40 ppm	10.8± 1.0	11.1± 1.2	10.7± 1.3	11.4± 1.7	11.1± 1.7	11.1± 1.1	10.6± 0.9
200 ppm	10.6± 0.8	11.1± 1.4	10.8± 0.9	11.5± 1.5	11.0± 1.3	11.4± 1.4	10.7± 1.1
1000 ppm	10.3± 0.7*	10.9± 1.7	10.6± 1.5	11.6± 2.7	11.1± 2.0	11.4± 2.2	11.0± 2.6

Significant difference : * : P ≦ 0.05 ** : P ≦ 0.01 Test of Dunnett

(HAN260)

STUDY NO. : 0065
ANIMAL : RAT F344
UNIT : g
REPORT TYPE : A1 104
SEX : FEMALE

FOOD CONSUMPTION CHANGES (SUMMARY)
ALL ANIMALS

Group Name	Administration week-day(effective) 16-7(7)	18-7(7)	20-7(7)	22-7(7)	24-7(7)	26-7(7)	28-7(7)
Control	10.4± 1.1	10.5± 1.3	10.7± 1.0	10.9± 0.9	10.7± 1.0	10.8± 0.9	10.4± 0.7
40 ppm	10.4± 0.9	11.0± 1.6	11.0± 1.2	11.4± 1.2	11.0± 0.9	11.0± 1.0	10.7± 0.9
200 ppm	10.8± 1.4	10.9± 1.0*	10.7± 1.0	10.9± 0.9	10.8± 1.0	11.0± 1.4	10.6± 1.1
1000 ppm	10.8± 2.1	11.3± 2.6	10.8± 1.6	11.4± 1.8	10.7± 0.9	11.1± 1.4	10.7± 1.2

Significant difference ; * : P ≦ 0.05 ** : P ≦ 0.01 Test of Dunnett

BAIS2

(HAN260)

STUDY NO. : 0065
ANIMAL : RAT F344
UNIT : g
REPORT TYPE : A1 104
SEX : FEMALE

FOOD CONSUMPTION CHANGES (SUMMARY)
ALL ANIMALS

Group Name	Administration 30-7(7)	week-day(effective) 32-7(7)	34-7(7)	36-7(7)	38-7(7)	40-7(7)	42-7(7)
Control	11.0± 0.9	11.0± 0.9	11.1± 0.9	11.1± 1.0	11.5± 0.8	11.4± 0.9	11.3± 1.0
40 ppm	11.5± 1.2	11.6± 0.9**	11.4± 1.0	11.4± 0.9	11.7± 1.0	11.7± 1.1	11.9± 1.2
200 ppm	11.3± 1.0	11.2± 0.8	11.1± 1.1	11.3± 1.0	11.4± 1.1	11.5± 1.1	11.2± 1.4
1000 ppm	11.3± 1.3	11.3± 1.3	11.2± 1.1	11.3± 1.0	11.5± 1.4	11.4± 1.2	10.8± 1.3

Significant difference ; * : P ≦ 0.05 ** : P ≦ 0.01 Test of Dunnett

(HAN260)

STUDY NO. : 0065
ANIMAL : RAT F344
UNIT : g
REPORT TYPE : A1 104
SEX : FEMALE

FOOD CONSUMPTION CHANGES (SUMMARY)
ALL ANIMALS

Group Name	Administration week-day(effective) 44-7(7)	46-7(7)	48-7(7)	50-7(7)	52-7(7)	54-7(7)	56-7(7)
Control	11.5± 0.9	11.6± 1.0	11.6± 1.2	11.7± 1.1	11.7± 1.1	11.7± 1.1	11.8± 1.1
40 ppm	12.1± 1.1*	12.1± 1.1*	12.1± 1.2	12.4± 1.3*	12.3± 1.3*	12.3± 1.4*	12.5± 1.3*
200 ppm	11.2± 1.2	11.4± 1.2	11.5± 1.3	11.6± 1.3	11.9± 1.3	11.8± 1.5	11.9± 1.4
1000 ppm	11.0± 1.4	11.3± 1.2	11.6± 1.6	11.7± 1.5	11.9± 2.0	12.1± 1.8	12.2± 2.1

Significant difference ; * : P ≦ 0.05 ** : P ≦ 0.01 Test of Dunnett

BAIS2

(HAN260)

STUDY NO. : 0065
ANIMAL : RAT F344
UNIT : g
REPORT TYPE : A1 104
SEX : FEMALE

FOOD CONSUMPTION CHANGES (SUMMARY)
ALL ANIMALS

Group Name	Administration week-day(effective) 58-7(7)	60-7(7)	62-7(7)	64-7(7)	66-7(7)	68-7(7)	70-7(7)
Control	12.0± 1.1	12.2± 1.2	12.2± 1.0	12.1± 1.6	12.5± 1.1	12.3± 1.6	12.4± 1.3
40 ppm	12.5± 1.2*	12.5± 1.3	12.6± 1.3	12.6± 1.9	12.9± 1.2	12.8± 1.2	12.9± 1.1
200 ppm	11.9± 1.2	12.1± 1.3	12.2± 1.3	12.4± 1.5	12.4± 1.7	12.3± 0.9	12.2± 1.2
1000 ppm	12.5± 2.1	12.3± 1.7	12.6± 1.9	12.7± 1.7	12.7± 1.5	12.7± 1.5	12.3± 1.8

Significant difference ; * : P ≦ 0.05 ** : P ≦ 0.01 Test of Dunnett

(HAN260)

STUDY NO. : 0065
ANIMAL : RAT F344
UNIT : g
REPORT TYPE : A1 104
SEX : FEMALE

FOOD CONSUMPTION CHANGES (SUMMARY)
ALL ANIMALS

Group Name	Administration week-day(effective) 72-7(7)	74-7(7)	76-7(7)	78-7(7)	80-7(7)	82-7(7)	84-7(7)
Control	12.1± 2.1	12.5± 1.8	12.6± 1.5	12.8± 1.2	12.7± 1.5	12.7± 1.7	12.4± 1.8
40 ppm	13.1± 1.3*	13.7± 1.3**	13.1± 2.5	13.5± 1.6	13.3± 2.1	13.2± 2.3	13.4± 1.8*
200 ppm	12.3± 2.1	12.6± 1.2	12.5± 1.8	12.8± 1.7	12.7± 2.1	12.9± 2.0	12.9± 1.8
1000 ppm	12.8± 1.4	13.0± 2.2	13.2± 1.7	13.2± 2.3	13.3± 2.0	13.4± 2.0	13.5± 2.2*

Significant difference ; * : P ≦ 0.05 ** : P ≦ 0.01 Test of Dunnett

BAIS2

(HAN260)

STUDY NO. : 0065
ANIMAL : RAT F344
UNIT : g
REPORT TYPE : A1 104
SEX : FEMALE

FOOD CONSUMPTION CHANGES (SUMMARY)
ALL ANIMALS

Group Name	Administration week-day(effective) 86-7(7)	88-7(7)	90-7(7)	92-7(7)	94-7(7)	96-7(7)	98-7(7)
Control	12.4± 2.7	12.8± 1.2	12.9± 1.3	12.8± 2.2	12.8± 2.4	12.9± 1.6	13.1± 1.3
40 ppm	13.3± 2.1	13.2± 1.9	13.4± 1.9	13.5± 1.5	13.2± 2.5	13.2± 2.3	13.3± 3.2
200 ppm	12.7± 2.2	12.8± 2.0	12.8± 1.5	13.2± 1.2	13.7± 1.7	12.6± 2.4	13.5± 1.8
1000 ppm	13.3± 1.9	13.6± 1.8	13.5± 1.6	13.4± 1.9	13.2± 1.9	12.8± 1.9	13.5± 1.9

Significant difference ; * : P ≦ 0.05 ** : P ≦ 0.01 Test of Dunnett

(HAN260)

STUDY NO. : 0065
ANIMAL : RAT F344
UNIT : g
REPORT TYPE : A1 104
SEX : FEMALE

FOOD CONSUMPTION CHANGES (SUMMARY)
ALL ANIMALS

Group Name	Administration week-day(effective) 100-7(7)	102-7(7)	104-7(7)
Control	12.6± 2.8	13.0± 2.7	12.6± 2.9
40 ppm	14.1± 1.5*	13.7± 1.7	13.4± 1.3
200 ppm	13.4± 2.1	13.2± 2.3	12.3± 3.2
1000 ppm	12.8± 2.6	13.6± 1.8	13.5± 2.4

Significant difference ; * : P ≦ 0.05 ** : P ≦ 0.01 Test of Dunnett

(HAN260)

APPENDIX F 3

FOOD CONSUMPTION CHANGES (TWO-YEAR STUDIES: SUMMARY)

MOUSE: MALE

STUDY NO. : 0066
ANIMAL : MOUSE BDF1
UNIT : g
REPORT TYPE : A1 104
SEX : MALE

FOOD CONSUMPTION CHANGES (SUMMARY)
ALL ANIMALS

Group Name	Administration week-day(effective) 1-7(7)	2-7(7)	3-7(7)	4-7(7)	5-7(7)	6-7(7)	7-7(7)
Control	4.4± 0.4	4.0± 0.5	3.5± 0.3	3.7± 0.3	3.6± 0.3	3.9± 0.3	4.0± 0.4
125 ppm	4.6± 0.5*	3.6± 0.3**	3.7± 0.4*	3.7± 0.3	3.7± 0.3	4.0± 0.3	4.1± 0.4
500 ppm	4.7± 0.4**	3.6± 0.3**	4.4± 3.6**	3.6± 0.2	3.7± 0.3	3.9± 0.3	4.1± 0.3
2000 ppm	3.8± 0.4**	3.5± 0.4**	3.5± 0.3	3.5± 0.2**	3.6± 0.2	3.7± 0.2**	3.7± 0.3**

Significant difference ; * : P ≦ 0.05 ** : P ≦ 0.01 Test of Dunnett

(HAN260)

STUDY NO. : 0066
ANIMAL : MOUSE BDF1
UNIT : g
REPORT TYPE : A1 104
SEX : MALE

FOOD CONSUMPTION CHANGES (SUMMARY)
ALL ANIMALS

Group Name	Administration week-day(effective) 8-7(7)	9-7(7)	10-7(7)	11-7(7)	12-7(7)	13-7(7)	14-7(7)
Control	3.8± 0.4	3.3± 0.3	4.0± 0.5	4.0± 0.4	3.9± 0.4	3.3± 0.4	4.0± 0.3
125 ppm	3.8± 0.3	3.4± 0.3	3.7± 0.4**	4.1± 0.4	3.9± 0.4	3.5± 0.4	3.9± 0.3
500 ppm	3.6± 0.3**	3.4± 0.3	3.7± 0.4**	4.0± 0.3	3.8± 0.3	3.4± 0.4	3.9± 0.4
2000 ppm	3.8± 0.3	3.3± 0.3	3.3± 0.3**	3.7± 0.4**	3.6± 0.3**	3.3± 0.3	3.8± 0.3

Significant difference : * : P ≦ 0.05 ** : P ≦ 0.01 Test of Dunnett

(HAN260)

STUDY NO. : 0066
ANIMAL : MOUSE BDF1
UNIT : g
REPORT TYPE : A1 104
SEX : MALE

FOOD CONSUMPTION CHANGES (SUMMARY)
ALL ANIMALS

Group Name	Administration week-day(effective) 16-7(7)	18-7(7)	20-7(7)	22-7(7)	24-7(7)	26-7(7)	28-7(7)
Control	3.9± 0.4	4.3± 0.3	4.3± 0.4	3.7± 0.5	4.2± 0.4	4.0± 0.4	4.0± 0.4
125 ppm	3.7± 0.4	4.1± 0.4*	4.4± 0.5	3.6± 0.4	4.1± 0.4	4.0± 0.4	3.8± 0.4*
500 ppm	3.1± 0.4**	4.1± 0.4*	4.3± 0.5	3.2± 0.4**	4.0± 0.3*	3.8± 0.4*	3.9± 0.4
2000 ppm	3.6± 0.2**	4.0± 0.3**	3.8± 0.4**	3.4± 0.3**	3.8± 0.3**	3.5± 0.4**	3.8± 0.3*

Significant difference ; * : P ≦ 0.05 ** : P ≦ 0.01 Test of Dunnett

(HAN260)

STUDY NO. : 0066
ANIMAL : MOUSE BDF1
UNIT : g
REPORT TYPE : A1 104
SEX : MALE

FOOD CONSUMPTION CHANGES (SUMMARY)
ALL ANIMALS

Group Name	Administration week-day(effective) 30-7(7)	32-7(7)	34-7(7)	36-7(7)	38-7(7)	40-7(7)	42-7(7)
Control	4.1± 0.4	4.4± 0.4	3.7± 0.3	3.8± 0.4	4.2± 0.4	4.5± 0.4	4.2± 0.3
125 ppm	4.2± 0.3	4.5± 0.4	3.6± 0.3	3.5± 0.4**	4.1± 0.3	4.4± 0.4	4.0± 0.3*
500 ppm	4.1± 0.3	4.4± 0.3	3.6± 0.2	3.6± 0.4	4.2± 0.4	4.4± 0.3	4.2± 0.3
2000 ppm	3.9± 0.3*	4.0± 0.3**	3.6± 0.2	3.6± 0.4	3.9± 0.3**	4.1± 0.3**	3.9± 0.3**

Significant difference ; * : P ≦ 0.05 ** : P ≦ 0.01 Test of Dunnett

(HAN260)

STUDY NO. : 0066
ANIMAL : MOUSE BDF1
UNIT : g
REPORT TYPE : A1 104
SEX : MALE

FOOD CONSUMPTION CHANGES (SUMMARY)
ALL ANIMALS

Group Name	Administration week-day(effective) 44-7(7)	46-7(7)	48-7(7)	50-7(7)	52-7(7)	54-7(7)	56-7(7)
Control	4.2± 0.3	3.8± 0.4	4.0± 0.3	-	3.7± 0.4	4.0± 0.5	4.5± 0.4
125 ppm	4.1± 0.3	3.7± 0.3	3.8± 0.4**	4.1± 0.3	3.6± 0.3	4.3± 0.5*	4.7± 0.4
500 ppm	4.1± 0.3	3.4± 0.4**	3.8± 0.4**	4.3± 0.2	3.5± 0.3	4.3± 0.6**	4.6± 0.3
2000 ppm	4.0± 0.3*	3.2± 0.4**	3.8± 0.3**	4.0± 0.3	3.6± 0.3	4.1± 0.3	4.4± 0.4

Significant difference ; * : P ≦ 0.05 ** : P ≦ 0.01 Test of Dunnett

(HAN260)

STUDY NO. : 0066
ANIMAL : MOUSE BDF1
UNIT : g
REPORT TYPE : A1 104
SEX : MALE

FOOD CONSUMPTION CHANGES (SUMMARY)
ALL ANIMALS

Group Name	Administration week-day(effective) 58-7(7)	60-7(7)	62-7(7)	64-7(7)	66-7(7)	68-7(7)	70-7(7)
Control	4.2± 0.4	4.2± 0.4	4.5± 0.4	4.3± 0.4	3.4± 0.3	3.8± 0.5	4.0± 0.5
125 ppm	4.3± 0.5	4.2± 0.5	4.5± 0.4	3.9± 0.6**	3.3± 0.4	3.4± 0.4**	3.7± 0.4**
500 ppm	4.6± 0.4**	4.1± 0.4	4.4± 0.4	4.0± 0.6**	3.4± 0.4	3.5± 0.4**	3.9± 0.4
2000 ppm	4.4± 0.4*	4.0± 0.3*	4.4± 0.4	4.1± 0.4*	3.5± 0.4	3.6± 0.6*	3.9± 0.4

Significant difference ; * : P ≦ 0.05 ** : P ≦ 0.01 Test of Dunnett

(HAN260)

STUDY NO. : 0066
ANIMAL : MOUSE BDF1
UNIT : g
REPORT TYPE : A1 104
SEX : MALE

FOOD CONSUMPTION CHANGES (SUMMARY)
ALL ANIMALS

Group Name	Administration week-day(effective) 72-7(7)	74-7(7)	76-7(7)	78-7(7)	80-7(7)	82-7(7)	84-7(7)
Control	4.1± 0.5	4.2± 0.5	4.4± 0.4	4.3± 0.5	4.3± 0.5	4.1± 0.4	3.8± 0.4
125 ppm	3.8± 0.5**	4.2± 0.6	4.2± 0.5	3.8± 0.5**	4.3± 0.5	4.2± 0.5	4.0± 0.5
500 ppm	4.0± 0.5	4.4± 0.4	3.9± 0.4**	3.9± 0.7**	4.4± 0.4	4.2± 0.5	4.0± 0.4
2000 ppm	4.0± 0.4	4.2± 0.6	3.9± 0.5**	4.0± 0.5**	4.2± 0.5	4.0± 0.4	4.0± 0.5

Significant difference ; * : P ≦ 0.05 ** : P ≦ 0.01 Test of Dunnett

(HAN260)

STUDY NO. : 0066
ANIMAL : MOUSE BDF1
UNIT : g
REPORT TYPE : A1 104
SEX : MALE

FOOD CONSUMPTION CHANGES (SUMMARY)
ALL ANIMALS

Group Name	Administration week-day(effective) 86-7(7)	88-7(7)	90-7(7)	92-7(7)	94-7(7)	96-7(7)	98-7(7)
Control	4.0± 0.4	4.2± 0.4	4.4± 0.4	4.3± 0.4	4.5± 0.4	4.3± 0.4	4.6± 0.3
125 ppm	3.9± 0.4	4.2± 0.5	4.2± 0.5	4.3± 0.5	4.5± 0.4	4.3± 0.6	4.4± 0.5
500 ppm	3.9± 0.3	4.0± 0.4*	4.3± 0.4	4.3± 0.4	4.3± 0.4	4.3± 0.4	4.5± 0.3
2000 ppm	4.0± 0.4	4.0± 0.4	4.2± 0.3	4.3± 0.4	4.2± 0.5*	4.2± 0.4	4.4± 0.5

Significant difference ; * : P ≦ 0.05 ** : P ≦ 0.01 Test of Dunnett

(HAN260)

STUDY NO. : 0066
ANIMAL : MOUSE BDF1
UNIT : g
REPORT TYPE : A1 104
SEX : MALE

FOOD CONSUMPTION CHANGES (SUMMARY)
ALL ANIMALS

Group Name	Administration week-day(effective) 100-7(7)	102-7(7)	104-7(7)
Control	4.6± 0.5	4.8± 0.5	5.0± 0.5
125 ppm	4.3± 0.6**	4.8± 0.5	4.7± 0.7
500 ppm	4.3± 0.3**	4.6± 0.5	4.6± 0.6*
2000 ppm	4.4± 0.4	4.1± 0.6**	4.4± 0.6**

Significant difference ; * : P ≦ 0.05 ** : P ≦ 0.01 Test of Dunnett

(HAN260)

APPENDIX F 4

FOOD CONSUMPTION CHANGES (TWO-YEAR STUDIES: SUMMARY)

MOUSE: FEMALE

STUDY NO. : 0066
ANIMAL : MOUSE BDF1
UNIT : g
REPORT TYPE : A1 104
SEX : FEMALE

FOOD CONSUMPTION CHANGES (SUMMARY)
ALL ANIMALS

Group Name	Administration week-day(effective) 1-7(7)	2-7(7)	3-7(7)	4-7(7)	5-7(7)	6-7(7)	7-7(7)
Control	4.4± 0.5	3.3± 0.4	4.3± 1.3	3.3± 0.3	3.5± 0.4	3.4± 0.5	4.0± 0.3
125 ppm	4.4± 0.4	3.4± 0.4	3.5± 0.6*	3.3± 0.3	3.6± 0.4	3.5± 0.4	3.9± 0.3
500 ppm	4.3± 0.5	3.5± 0.5*	3.4± 0.3	3.4± 0.3	3.6± 0.4	3.8± 0.3**	3.9± 0.3
2000 ppm	3.2± 0.4**	3.3± 0.4	3.2± 0.2**	3.3± 0.2	3.3± 0.4*	3.4± 0.3	3.7± 0.4**

Significant difference ; * : P ≦ 0.05 ** : P ≦ 0.01 Test of Dunnett

(HAN260)

STUDY NO. : 0066
ANIMAL : MOUSE BDF1
UNIT : g
REPORT TYPE : A1 104
SEX : FEMALE

FOOD CONSUMPTION CHANGES (SUMMARY)
ALL ANIMALS

Group Name	Administration week-day(effective) 8-7(7)	9-7(7)	10-7(7)	11-7(7)	12-7(7)	13-7(7)	14-7(7)
Control	3.6± 0.3	3.5± 0.5	4.2± 0.4	3.9± 0.4	3.7± 0.3	3.9± 0.3	3.9± 0.3
125 ppm	3.4± 0.3*	3.4± 0.5	4.0± 0.4	3.7± 0.4	3.6± 0.3	3.7± 0.3*	3.8± 0.3
500 ppm	3.4± 0.3**	3.6± 0.5	4.0± 0.4	3.9± 0.4	3.7± 0.4	3.7± 0.3**	3.8± 0.3
2000 ppm	3.4± 0.3*	3.6± 0.4	3.7± 0.4**	3.5± 0.4**	3.5± 0.3**	3.5± 0.2**	3.8± 0.3

Significant difference ; * : P ≦ 0.05 ** : P ≦ 0.01 Test of Dunnett

BAIS 2

(HAN260)

STUDY NO. : 0066
ANIMAL : MOUSE BDF1
UNIT : g
REPORT TYPE : A1 104
SEX : FEMALE

FOOD CONSUMPTION CHANGES (SUMMARY)
ALL ANIMALS

Group Name	Administration week-day(effective) 16-7(7)	18-7(7)	20-7(7)	22-7(7)	24-7(7)	26-7(7)	28-7(7)
Control	3.9± 0.3	4.0± 0.4	4.2± 0.5	3.7± 0.4	4.0± 0.5	4.2± 0.5	4.5± 0.4
125 ppm	3.3± 0.4**	3.7± 0.4**	4.2± 0.5	3.5± 0.4	3.8± 0.4*	3.6± 0.4**	4.0± 0.5**
500 ppm	3.8± 0.4	3.8± 0.4	4.2± 0.4	3.6± 0.4	3.8± 0.4	4.2± 0.4	4.0± 0.4**
2000 ppm	3.6± 0.4*	3.7± 0.4**	3.8± 0.3**	3.6± 0.3	3.7± 0.3**	3.7± 0.6**	3.9± 0.4**

Significant difference : * : P ≦ 0.05 ** : P ≦ 0.01 Test of Dunnett

(HAN260)

STUDY NO. : 0066
ANIMAL : MOUSE BDF1
UNIT : g
REPORT TYPE : A1 104
SEX : FEMALE

FOOD CONSUMPTION CHANGES (SUMMARY)
ALL ANIMALS

Group Name	Administration week-day(effective) 30-7(7)	32-7(7)	34-7(7)	36-7(7)	38-7(7)	40-7(7)	42-7(7)
Control	4.4± 0.4	4.3± 0.6	4.0± 0.5	4.2± 0.4	3.6± 0.4	4.5± 0.5	3.7± 0.4
125 ppm	4.2± 0.5*	4.3± 0.6	4.0± 0.5	4.0± 0.5*	3.8± 0.4	4.1± 0.5**	3.7± 0.4
500 ppm	4.4± 0.4	4.0± 0.4**	4.2± 0.4	4.1± 0.4	3.9± 0.5**	4.2± 0.5**	3.9± 0.4
2000 ppm	4.1± 0.3**	3.9± 0.3**	4.1± 0.4	4.0± 0.3*	3.4± 0.3	4.2± 0.4**	3.8± 0.3

Significant difference ; * : P ≦ 0.05 ** : P ≦ 0.01 Test of Dunnett

(HAN260)

STUDY NO. : 0066
ANIMAL : MOUSE BDF1
UNIT : g
REPORT TYPE : A1 104
SEX : FEMALE

FOOD CONSUMPTION CHANGES (SUMMARY)
ALL ANIMALS

Group Name	Administration week-day(effective) 44-7(7)	46-7(7)	48-7(7)	50-7(7)	52-7(7)	54-7(7)	56-7(7)
Control	3.6± 0.4	4.0± 0.4	4.0± 0.5	3.9± 0.3	3.7± 0.4	4.9± 0.5	4.2± 0.4
125 ppm	3.7± 0.4	4.1± 0.5	3.9± 0.5	4.0± 0.4	3.7± 0.5	4.8± 0.6	4.1± 0.6
500 ppm	3.9± 0.5**	4.1± 0.4	4.2± 0.5*	4.4± 0.4**	3.9± 0.5*	4.9± 0.5	4.3± 0.4
2000 ppm	3.6± 0.4	4.0± 0.3	4.0± 0.4	4.0± 0.4	3.7± 0.3	3.9± 0.4**	4.0± 0.5*

Significant difference ; * : P ≦ 0.05 ** : P ≦ 0.01 Test of Dunnett

(HAN260)

STUDY NO. : 0066
ANIMAL : MOUSE BDF1
UNIT : g
REPORT TYPE : A1 104
SEX : FEMALE

FOOD CONSUMPTION CHANGES (SUMMARY)
ALL ANIMALS

Group Name	Administration week-day(effective) 58-7(7)	60-7(7)	62-7(7)	64-7(7)	66-7(7)	68-7(7)	70-7(7)
Control	4.1± 0.4	4.3± 0.5	4.1± 0.4	4.3± 0.4	4.4± 0.5	4.0± 0.5	4.5± 0.6
125 ppm	4.0± 0.6	4.0± 0.4**	4.1± 0.4	4.3± 0.5	4.3± 0.5	3.8± 0.5	4.2± 0.5*
500 ppm	4.1± 0.5	4.0± 0.4**	3.9± 0.6	4.4± 0.5	4.4± 0.4	3.8± 0.4*	4.2± 0.5*
2000 ppm	3.8± 0.4**	3.9± 0.4**	3.8± 0.4*	4.0± 0.5*	4.2± 0.4	3.8± 0.3*	4.0± 0.7**

Significant difference ; * : P ≦ 0.05 ** : P ≦ 0.01 Test of Dunnett

(HAN260)

STUDY NO. : 0066
ANIMAL : MOUSE BDF1
UNIT : g
REPORT TYPE : A1 104
SEX : FEMALE

FOOD CONSUMPTION CHANGES (SUMMARY)
ALL ANIMALS

Group Name	Administration week-day(effective) 72-7(7)	74-7(7)	76-7(7)	78-7(7)	80-7(7)	82-7(7)	84-7(7)
Control	4.2± 0.9	4.2± 0.6	4.0± 0.4	3.9± 0.5	4.2± 0.5	3.9± 0.6	4.1± 0.4
125 ppm	4.3± 0.5	4.0± 0.5	4.0± 0.4	3.9± 0.5	3.9± 0.4*	4.1± 0.6	4.1± 0.7
500 ppm	4.2± 0.6	4.4± 0.6	4.1± 0.6	4.1± 0.5	4.1± 0.5	4.3± 0.5*	4.1± 0.5
2000 ppm	4.0± 0.5*	3.9± 0.5*	3.7± 0.6*	3.7± 0.4	3.8± 0.4**	3.9± 0.6	4.0± 0.5

Significant difference ; * : P ≦ 0.05 ** : P ≦ 0.01 Test of Dunnett

(HAN260)

STUDY NO. : 0066
ANIMAL : MOUSE BDF1
UNIT : g
REPORT TYPE : A1 104
SEX : FEMALE

FOOD CONSUMPTION CHANGES (SUMMARY)
ALL ANIMALS

Group Name	Administration week-day(effective) 86-7(7)	88-7(7)	90-7(7)	92-7(7)	94-7(7)	96-7(7)	98-7(7)
Control	4.2± 0.5	4.6± 0.6	4.5± 0.5	4.2± 0.6	4.1± 0.4	4.4± 0.6	4.4± 0.7
125 ppm	4.1± 0.6	4.3± 0.8	4.5± 0.8	4.2± 0.5	4.2± 0.8	4.2± 0.5	4.2± 0.9
500 ppm	4.2± 0.4	4.3± 0.5*	4.5± 0.6	4.4± 0.6	4.2± 0.5	4.4± 0.6	4.4± 0.4
2000 ppm	3.9± 0.5**	4.1± 0.4**	4.2± 0.7	4.3± 0.5	4.3± 0.6	4.2± 0.6	4.4± 0.5

Significant difference ; * : P ≦ 0.05 ** : P ≦ 0.01 Test of Dunnett

(HAN260)

STUDY NO. : 0066
ANIMAL : MOUSE BDF1
UNIT : g
REPORT TYPE : A1 104
SEX : FEMALE

FOOD CONSUMPTION CHANGES (SUMMARY)
ALL ANIMALS

Group Name	Administration week-day(effective) 100-7(7)	102-7(7)	104-7(7)
Control	4.3± 0.7	3.8± 0.8	3.8± 0.6
125 ppm	4.3± 0.7	3.5± 0.6	3.8± 0.5
500 ppm	4.2± 0.5	4.0± 0.6	4.0± 0.7
2000 ppm	4.2± 0.5	3.7± 0.6	4.0± 0.7

Significant difference : * : P ≦ 0.05 ** : P ≦ 0.01 Test of Dunnett

P - クロロニトロベンゼンのラット及びマウスを用いた
経口（混餌）によるがん原性試験結果報告書

APPENDIX

(G1～G4)

がん原性 STUDY　NO.　0065；0066

中央労働災害防止協会
日本バイオアッセイ研究センター

APPENDIX G 1

CHEMICAL INTAKE CHANGES (TWO-YEAR STUDIES: SUMMARY)

RAT: MALE

STUDY NO. : 0065
ANIMAL : RAT F344
UNIT : mg／kg／d a y
REPORT TYPE : A1 104
SEX : MALE

CHEMICAL INTAKE CHENGES (SUMMARY)
ALL ANIMALS

Group Name	Administration (weeks) 1	2	3	4	5	6	7
Control	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000
40 ppm	3.362± 0.112	2.986± 0.093	2.732± 0.086	2.493± 0.075	2.341± 0.074	2.294± 0.119	2.179± 0.093
200 ppm	16.626± 0.846	14.962± 0.463	13.654± 0.532	12.455± 0.461	11.584± 0.689	11.196± 0.562	11.064± 0.475
1000 ppm	74.057± 2.237	74.512± 1.939	67.105± 2.333	61.825± 1.975	58.904± 1.856	56.242± 2.040	55.120± 1.766

STUDY NO. : 0065
ANIMAL : RAT F344
UNIT : mg／kg／d a y
REPORT TYPE : A1 104
SEX : MALE

CHEMICAL INTAKE CHENGES (SUMMARY)
ALL ANIMALS

Group Name	Administration (weeks) 8	9	10	11	12	13	14
Control	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000
40 ppm	2.059± 0.088	2.012± 0.079	1.917± 0.094	1.919± 0.053	1.843± 0.065	1.783± 0.062	1.688± 0.073
200 ppm	10.399± 0.501	10.116± 0.451	9.646± 0.404	9.582± 0.359	9.157± 0.378	8.987± 0.346	8.530± 0.334
1000 ppm	52.717± 1.974	51.394± 1.932	49.181± 2.236	48.807± 2.533	46.520± 2.292	45.799± 1.676	44.023± 2.077

STUDY NO. : 0065
ANIMAL : RAT F344
UNIT : mg／kg／d a y
REPORT TYPE : A1 104
SEX : MALE

CHEMICAL INTAKE CHENGES (SUMMARY)
ALL ANIMALS

Group Name	Administration (weeks) 16	18	20	22	24	26	28
Control	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000
40 ppm	1.639± 0.069	1.602± 0.059	1.587± 0.071	1.620± 0.079	1.601± 0.085	1.555± 0.097	1.519± 0.083
200 ppm	8.242± 0.477	8.080± 0.377	7.986± 0.379	8.018± 0.356	8.044± 0.361	7.863± 0.299	7.615± 0.488
1000 ppm	42.758± 1.811	41.746± 2.020	41.389± 2.228	42.629± 2.230	42.163± 2.759	41.995± 2.663	41.271± 2.389

STUDY NO. : 0065
ANIMAL : RAT F344
UNIT : mg/kg/day
REPORT TYPE : A1 104
SEX : MALE

CHEMICAL INTAKE CHENGES (SUMMARY)
ALL ANIMALS

Group Name	Administration (weeks) 30	32	34	36	38	40	42
Control	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000
40 ppm	1.535± 0.053	1.488± 0.112	1.488± 0.080	1.465± 0.092	1.448± 0.082	1.447± 0.083	1.402± 0.070
200 ppm	7.907± 0.636	7.526± 0.394	7.453± 0.353	7.462± 0.310	7.146± 0.434	7.234± 0.352	7.128± 0.396
1000 ppm	41.264± 2.126	40.091± 1.589	39.904± 2.303	39.626± 2.305	38.864± 2.226	38.922± 2.397	37.585± 1.706

STUDY NO. : 0065
ANIMAL : RAT F344
UNIT : mg/kg/day
REPORT TYPE : A1 104
SEX : MALE

CHEMICAL INTAKE CHENGES (SUMMARY)
ALL ANIMALS

Group Name	Administration (weeks) 44	46	48	50	52	54	56
Control	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000
40 ppm	1.392± 0.084	1.391± 0.092	1.363± 0.084	1.367± 0.088	1.344± 0.065	1.343± 0.068	1.347± 0.088
200 ppm	6.949± 0.305	6.983± 0.336	6.938± 0.308	6.920± 0.349	6.784± 0.340	6.742± 0.331	6.706± 0.374
1000 ppm	37.045± 2.197	37.312± 2.168	37.550± 2.467	37.576± 2.983	37.046± 2.322	36.975± 2.168	36.718± 2.677

STUDY NO. : 0065
ANIMAL : RAT F344
UNIT : mg／kg／d a y
REPORT TYPE : A1 104
SEX : MALE

CHEMICAL INTAKE CHENGES (SUMMARY)
ALL ANIMALS

Group Name	Administration (weeks) 58	60	62	64	66	68	70
Control	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000
40 ppm	1.335± 0.095	1.309± 0.111	1.320± 0.111	1.314± 0.096	1.310± 0.060	1.308± 0.079	1.287± 0.079
200 ppm	6.661± 0.334	6.681± 0.337	6.680± 0.412	6.703± 0.402	6.624± 0.349	6.691± 0.418	6.569± 0.343
1000 ppm	36.703± 2.640	36.605± 2.579	35.983± 4.879	36.857± 2.727	35.933± 2.127	36.184± 3.046	35.974± 3.308

STUDY NO. : 0065
ANIMAL : RAT F344
UNIT : mg/kg/day
REPORT TYPE : A1 104
SEX : MALE

CHEMICAL INTAKE CHENGES (SUMMARY)
ALL ANIMALS

Group Name	Administration (weeks) 72	74	76	78	80	82	84
Control	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000
40 ppm	1.295± 0.105	1.317± 0.086	1.328± 0.090	1.319± 0.080	1.306± 0.120	1.310± 0.110	1.311± 0.110
200 ppm	6.605± 0.419	6.678± 0.508	6.670± 0.622	6.738± 0.543	6.834± 0.550	6.778± 0.490	6.760± 0.564
1000 ppm	36.507± 2.542	36.079± 2.402	36.877± 3.361	36.830± 2.760	36.325± 2.641	35.741± 3.874	34.823± 7.083

STUDY NO. : 0065
ANIMAL : RAT F344
UNIT : mg/kg/d a y
REPORT TYPE : A1 104
SEX : MALE

CHEMICAL INTAKE CHENGES (SUMMARY)
ALL ANIMALS

Group Name	Administration (weeks) 86	88	90	92	94	96	98
Control	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000
40 ppm	1.290± 0.136	1.288± 0.116	1.311± 0.092	1.326± 0.120	1.337± 0.114	1.329± 0.134	1.333± 0.135
200 ppm	6.849± 0.764	6.714± 0.962	6.805± 0.690	6.768± 0.723	7.063± 0.709	6.903± 1.002	6.912± 0.533
1000 ppm	36.123± 4.367	36.115± 4.645	36.044± 4.887	36.864± 4.349	33.879± 6.100	35.608± 7.776	38.561± 4.017

STUDY NO. : 0065
ANIMAL : RAT F344
UNIT : mg／kg／d a y
REPORT TYPE : A1 104
SEX : MALE

CHEMICAL INTAKE CHENGES (SUMMARY)
ALL ANIMALS

Group Name	Administration (weeks) 100	102	104
Control	0.000± 0.000	0.000± 0.000	0.000± 0.000
40 ppm	1.374± 0.204	1.343± 0.245	1.437± 0.192
200 ppm	6.865± 0.785	7.279± 1.498	7.307± 0.801
1000 ppm	38.313± 6.540	38.030± 3.712	51.173± 39.887

APPENDIX G 2

CHEMICAL INTAKE CHANGES (TWO-YEAR STUDIES: SUMMARY)

RAT: FEMALE

STUDY NO. : 0065
ANIMAL : RAT F344
UNIT : mg/kg/d a y
REPORT TYPE : A1 104
SEX : FEMALE

CHEMICAL INTAKE CHENGES (SUMMARY)
ALL ANIMALS

Group Name	Administration (weeks) 1	2	3	4	5	6	7
Control	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000
40 ppm	3.556± 0.134	3.177± 0.131	3.010± 0.119	2.781± 0.129	2.728± 0.352	2.592± 0.275	2.589± 0.349
200 ppm	17.628± 0.542	15.956± 0.752	15.251± 0.815	14.282± 1.912	13.495± 1.242	12.743± 0.695	12.724± 0.849
1000 ppm	74.365± 4.554	79.740± 6.978	73.895± 3.078	69.730± 3.526	68.349± 9.679	64.611± 4.925	63.240± 3.339

STUDY NO. : 0065
ANIMAL : RAT F344
UNIT : mg/kg/d a y
REPORT TYPE : A1 104
SEX : FEMALE

CHEMICAL INTAKE CHENGES (SUMMARY)
ALL ANIMALS

Group Name	Administration (weeks) 8	9	10	11	12	13	14
Control	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000
40 ppm	2.418± 0.169	2.401± 0.186	2.272± 0.203	2.359± 0.282	2.284± 0.279	2.246± 0.166	2.111± 0.130
200 ppm	12.020± 0.510	12.218± 1.568	11.727± 0.673	12.050± 1.262	11.402± 1.030	11.617± 1.228	10.876± 0.888
1000 ppm	60.288± 2.878	62.347± 9.583	59.594± 8.145	63.165± 14.719	59.494± 10.637	60.577± 11.490	58.092± 13.384

(HAN300)

STUDY NO. : 0065
ANIMAL : RAT F344
UNIT : mg/kg/day
REPORT TYPE : A1 104
SEX : FEMALE

CHEMICAL INTAKE CHENGES (SUMMARY)
ALL ANIMALS

Group Name	Administration (weeks) 16	18	20	22	24	26	28
Control	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000
40 ppm	2.048± 0.143	2.114± 0.285	2.072± 0.192	2.113± 0.199	2.013± 0.119	1.987± 0.161	1.925± 0.130
200 ppm	10.737± 1.240	10.604± 0.697	10.316± 0.769	10.328± 0.596	10.127± 0.673	10.216± 1.071	9.837± 0.945
1000 ppm	56.324± 10.393	57.877± 12.159	54.584± 7.391	56.591± 8.650	52.871± 3.855	53.756± 5.673	51.782± 4.773

STUDY NO. : 0065
ANIMAL : RAT F344
UNIT : mg/kg/day
REPORT TYPE : A1 104
SEX : FEMALE

CHEMICAL INTAKE CHENGES (SUMMARY)
ALL ANIMALS

Group Name	Administration (weeks) 30	32	34	36	38	40	42
Control	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000
40 ppm	2.020± 0.174	2.017± 0.154	1.964± 0.166	1.930± 0.132	1.951± 0.150	1.919± 0.178	1.918± 0.173
200 ppm	10.200± 0.683	10.058± 0.535	9.838± 0.686	9.872± 0.638	9.832± 0.720	9.705± 0.744	9.377± 1.015
1000 ppm	53.861± 5.395	53.239± 5.562	52.088± 4.309	52.303± 4.224	52.632± 6.295	51.248± 4.752	48.286± 5.403

STUDY NO. : 0065
ANIMAL : RAT F344
UNIT : mg/kg/d a y
REPORT TYPE : A1 104
SEX : FEMALE

CHEMICAL INTAKE CHENGES (SUMMARY)
ALL ANIMALS

Group Name	Administration (weeks) 44	46	48	50	52	54	56
Control	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000
40 ppm	1.920± 0.163	1.898± 0.175	1.872± 0.163	1.881± 0.205	1.846± 0.198	1.809± 0.196	1.822± 0.204
200 ppm	9.284± 0.650	9.312± 0.687	9.246± 0.768	9.293± 0.756	9.391± 0.959	9.106± 1.173	9.051± 1.149
1000 ppm	48.914± 5.838	49.609± 5.066	50.751± 7.588	50.901± 6.233	51.143± 8.099	51.446± 7.045	51.694± 8.103

STUDY NO. : 0065
ANIMAL : RAT F344
UNIT : mg/kg/day
REPORT TYPE : A1 104
SEX : FEMALE

CHEMICAL INTAKE CHENGES (SUMMARY)
ALL ANIMALS

Group Name	Administration (weeks) 58	60	62	64	66	68	70
Control	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000
40 ppm	1.805± 0.183	1.784± 0.190	1.770± 0.191	1.744± 0.251	1.764± 0.204	1.726± 0.185	1.717± 0.193
200 ppm	8.995± 0.891	9.065± 1.196	9.018± 1.161	9.128± 1.383	8.941± 1.506	8.802± 0.802	8.561± 1.028
1000 ppm	52.622± 8.182	51.368± 6.292	51.936± 7.059	52.011± 6.293	51.478± 5.888	51.115± 5.954	49.368± 6.903

STUDY NO. : 0065
ANIMAL : RAT F344
UNIT : mg/kg/day
REPORT TYPE : A1 104
SEX : FEMALE

CHEMICAL INTAKE CHENGES (SUMMARY)
ALL ANIMALS

Group Name	Administration (weeks) 72	74	76	78	80	82	84
Control	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000
40 ppm	1.726± 0.224	1.779± 0.243	1.682± 0.350	1.699± 0.264	1.673± 0.317	1.644± 0.323	1.654± 0.278
200 ppm	8.563± 1.649	8.669± 0.907	8.550± 1.302	8.751± 1.698	8.536± 1.664	8.617± 1.611	8.473± 1.548
1000 ppm	50.806± 5.962	51.712± 9.577	52.320± 8.245	51.618± 9.395	51.483± 8.932	51.795± 8.589	51.444± 9.966

STUDY NO. : 0065
ANIMAL : RAT F344
UNIT : mg／kg／d a y
REPORT TYPE : A1 104
SEX : FEMALE

CHEMICAL INTAKE CHENGES (SUMMARY)
ALL ANIMALS

Group Name	Administration (weeks) 86	88	90	92	94	96	98
Control	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000
40 ppm	1.629± 0.293	1.608± 0.269	1.638± 0.273	1.634± 0.214	1.597± 0.262	1.619± 0.270	1.615± 0.395
200 ppm	8.352± 1.752	8.405± 1.684	8.443± 1.488	8.658± 1.478	8.986± 1.838	8.345± 2.172	8.839± 1.850
1000 ppm	50.567± 9.001	51.541± 8.412	50.862± 7.726	50.874± 8.891	49.175± 7.805	48.574± 9.243	50.829± 9.936

STUDY NO. : 0065
ANIMAL : RAT F344
UNIT : mg／kg／d a y
REPORT TYPE : A1 104
SEX : FEMALE

CHEMICAL INTAKE CHENGES (SUMMARY)
ALL ANIMALS

Group Name	Administration (weeks) 100	102	104
Control	0.000± 0.000	0.000± 0.000	0.000± 0.000
40 ppm	1.710± 0.321	1.640± 0.250	1.586± 0.217
200 ppm	8.871± 2.076	8.839± 2.525	8.321± 2.863
1000 ppm	47.978± 11.948	51.408± 9.105	51.476± 10.967

APPENDIX G 3

CHEMICAL INTAKE CHANGES (TWO-YEAR STUDIES: SUMMARY)

MOUSE: MALE

STUDY NO. : 0066
ANIMAL : MOUSE BDF1
UNIT : mg/kg/day
REPORT TYPE : A1 104
SEX : MALE

CHEMICAL INTAKE CHENGES (SUMMARY)
ALL ANIMALS

Group Name	Administration (weeks) 1	2	3	4	5	6	7
Control	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000
125 ppm	25.281± 1.715	18.749± 1.225	18.448± 1.336	17.983± 1.481	17.564± 1.016	18.612± 1.120	18.403± 1.273
500 ppm	103.031± 5.869	74.706± 5.611	85.803± 71.674	70.873± 4.390	70.836± 5.212	72.395± 5.232	73.214± 5.172
2000 ppm	346.452± 22.483	301.403± 33.503	287.324± 19.193	281.928± 17.649	280.538± 16.223	276.689± 17.830	268.545± 17.392

STUDY NO. : 0066
ANIMAL : MOUSE BDF1
UNIT : mg/kg/d a y
REPORT TYPE : A1 104
SEX : MALE

CHEMICAL INTAKE CHENGES (SUMMARY)
ALL ANIMALS

Group Name	Administration (weeks) 8	9	10	11	12	13	14
Control	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000
125 ppm	16.507± 1.137	15.546± 1.135	16.258± 1.449	17.145± 1.175	15.791± 1.271	14.796± 1.137	16.006± 1.420
500 ppm	63.066± 4.821	62.264± 4.202	64.907± 5.840	66.903± 4.994	61.996± 5.046	58.538± 4.932	64.312± 6.753
2000 ppm	272.912± 18.279	252.968± 19.042	246.875± 20.735	256.865± 21.199	246.119± 16.327	234.127± 16.131	257.182± 20.230

STUDY NO. : 0066
ANIMAL : MOUSE BDF1
UNIT : mg/kg/d a y
REPORT TYPE : A1 104
SEX : MALE

CHEMICAL INTAKE CHENGES (SUMMARY)
ALL ANIMALS

Group Name	Administration (weeks) 16	18	20	22	24	26	28
Control	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000
125 ppm	15.019± 1.197	15.662± 1.282	16.702± 1.705	13.774± 1.234	15.530± 1.684	14.762± 1.214	14.134± 1.122
500 ppm	53.324± 6.715	63.951± 6.738	66.645± 7.035	50.381± 6.651	60.260± 6.048	57.399± 6.175	57.455± 5.538
2000 ppm	238.928± 15.954	260.414± 19.473	250.677± 22.822	222.497± 16.699	242.840± 17.898	224.297± 21.962	234.771± 17.733

STUDY NO. : 0066
ANIMAL : MOUSE BDF1
UNIT : mg／kg／d a y
REPORT TYPE : A1 104
SEX : MALE

CHEMICAL INTAKE CHENGES (SUMMARY)
ALL ANIMALS

Group Name	Administration (weeks) 30	32	34	36	38	40	42
Control	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000
125 ppm	15.324± 1.366	16.045± 1.310	13.294± 1.257	13.064± 1.485	14.904± 1.561	15.466± 1.327	14.448± 1.293
500 ppm	59.075± 5.738	62.412± 5.692	52.414± 4.466	53.021± 6.339	59.536± 6.499	59.507± 5.714	58.610± 5.509
2000 ppm	238.793± 20.217	237.366± 16.779	220.171± 15.638	219.368± 18.188	230.704± 19.260	234.980± 18.074	228.218± 20.068

STUDY NO. : 0066
ANIMAL : MOUSE BDF1
UNIT : mg/kg/d a y
REPORT TYPE : A1 104
SEX : MALE

CHEMICAL INTAKE CHENGES (SUMMARY)
ALL ANIMALS

Group Name	Administration (weeks) 44	46	48	50	52	54	56
Control	0.000± 0.000	0.000± 0.000	0.000± 0.000	-	0.000± 0.000	0.000± 0.000	0.000± 0.000
125 ppm	14.706± 1.342	13.623± 1.188	13.765± 1.253	14.071± 1.260	13.265± 1.360	15.505± 2.080	16.473± 1.750
500 ppm	57.010± 5.324	50.196± 6.528	53.698± 6.301	58.196± 5.209	50.642± 5.201	60.217± 9.043	63.051± 7.336
2000 ppm	229.368± 17.533	198.790± 19.903	222.502± 19.000	225.918± 19.561	213.669± 18.048	240.068± 21.545	246.308± 23.085

STUDY NO. : 0066
ANIMAL : MOUSE BDF1
UNIT : mg/kg/d a y
REPORT TYPE : A1 104
SEX : MALE

CHEMICAL INTAKE CHENGES (SUMMARY)
ALL ANIMALS

Group Name	Administration (weeks) 58	60	62	64	66	68	70
Control	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000
125 ppm	14.988± 1.481	14.248± 1.474	15.351± 1.289	13.407± 1.771	12.202± 1.557	12.847± 1.735	13.975± 1.635
500 ppm	60.824± 6.606	54.566± 6.458	59.963± 6.657	53.480± 7.510	48.894± 6.113	51.103± 5.823	56.391± 7.208
2000 ppm	239.920± 23.042	219.374± 21.487	243.594± 29.255	228.506± 20.756	204.530± 24.586	210.329± 30.531	227.472± 32.105

STUDY NO. : 0066
ANIMAL : MOUSE BDF1
UNIT : mg/kg/day
REPORT TYPE : A1 104
SEX : MALE

CHEMICAL INTAKE CHENGES (SUMMARY)
ALL ANIMALS

Group Name	Administration (weeks) 72	74	76	78	80	82	84
Control	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000
125 ppm	14.762± 1.697	16.302± 2.422	16.014± 2.297	14.721± 1.730	15.959± 1.897	15.487± 1.870	14.726± 1.799
500 ppm	58.346± 8.019	62.953± 7.391	57.177± 7.422	57.356± 8.802	62.549± 8.009	59.102± 7.799	56.425± 6.716
2000 ppm	239.830± 27.933	246.315± 43.684	236.966± 37.779	239.474± 39.289	246.734± 34.823	230.424± 30.095	230.252± 33.377

STUDY NO. : 0066
ANIMAL : MOUSE BDF1
UNIT : mg/kg/d a y
REPORT TYPE : A1 104
SEX : MALE

CHEMICAL INTAKE CHENGES (SUMMARY)
ALL ANIMALS

Group Name	Administration (weeks) 86	88	90	92	94	96	98
Control	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000
125 ppm	14.278± 1.465	15.224± 1.762	15.320± 1.815	15.479± 1.733	16.241± 1.450	15.488± 1.911	15.927± 1.661
500 ppm	56.548± 6.872	57.831± 6.694	61.436± 7.434	61.646± 9.160	61.182± 7.297	60.556± 7.038	63.305± 7.915
2000 ppm	226.093± 26.442	233.229± 30.146	238.894± 31.747	240.870± 27.326	235.957± 29.775	241.927± 38.060	254.069± 39.313

STUDY NO. : 0066
ANIMAL : MOUSE BDF1
UNIT : mg/kg/d a y
REPORT TYPE : A1 104
SEX : MALE

CHEMICAL INTAKE CHENGES (SUMMARY)
ALL ANIMALS

Group Name	Administration (weeks) 100	102	104
Control	0.000± 0.000	0.000± 0.000	0.000± 0.000
125 ppm	15.734± 2.459	16.981± 2.540	16.019± 2.343
500 ppm	61.309± 7.956	64.080± 9.153	62.344± 7.752
2000 ppm	252.892± 34.403	237.293± 31.366	249.508± 38.374

APPENDIX G 4

CHEMICAL INTAKE CHANGES (TWO-YEAR STUDIES: SUMMARY)

MOUSE: FEMALE

STUDY NO. : 0066
ANIMAL : MOUSE BDF1
UNIT : mg／kg／d a y
REPORT TYPE : A1 104
SEX : FEMALE

CHEMICAL INTAKE CHENGES (SUMMARY)
ALL ANIMALS

Group Name	Administration (weeks) 1	2	3	4	5	6	7
Control	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000
125 ppm	28.453± 1.968	20.880± 1.903	20.189± 2.905	20.021± 1.382	20.868± 1.740	20.599± 1.700	21.367± 1.571
500 ppm	116.433± 10.096	86.165± 10.090	81.826± 8.278	82.279± 6.555	85.348± 8.237	86.812± 7.364	86.193± 7.139
2000 ppm	365.704± 52.562	325.060± 30.345	304.813± 16.232	310.809± 17.879	305.659± 28.012	310.559± 27.256	321.951± 33.898

STUDY NO. : 0066
ANIMAL : MOUSE BDF1
UNIT : mg/kg/day
REPORT TYPE : A1 104
SEX : FEMALE

CHEMICAL INTAKE CHENGES (SUMMARY)
ALL ANIMALS

Group Name	Administration (weeks) 8	9	10	11	12	13	14
Control	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000
125 ppm	19.304± 1.388	19.816± 2.778	21.438± 1.894	19.865± 1.430	18.534± 1.327	19.214± 1.369	19.144± 1.353
500 ppm	75.721± 7.054	81.781± 9.382	88.168± 9.073	83.456± 7.925	77.222± 7.276	77.857± 7.581	79.521± 6.991
2000 ppm	307.667± 23.739	315.487± 31.520	310.316± 29.004	294.216± 34.960	288.015± 21.943	287.478± 17.887	303.972± 21.186

STUDY NO. : 0066
ANIMAL : MOUSE BDF1
UNIT : mg/kg/day
REPORT TYPE : A1 104
SEX : FEMALE

CHEMICAL INTAKE CHENGES (SUMMARY)
ALL ANIMALS

Group Name	Administration (weeks) 16	18	20	22	24	26	28
Control	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000
125 ppm	17.342± 1.813	18.265± 1.660	19.978± 1.940	17.730± 1.600	18.470± 1.594	17.881± 1.886	19.166± 2.275
500 ppm	78.242± 6.574	76.918± 7.296	82.352± 6.508	73.176± 6.618	76.196± 6.687	80.140± 7.763	78.956± 8.041
2000 ppm	282.892± 26.532	298.308± 23.358	290.926± 19.555	279.831± 19.433	282.596± 24.385	280.016± 54.281	296.813± 27.936

STUDY NO. : 0066
ANIMAL : MOUSE BDF1
UNIT : mg／kg／d a y
REPORT TYPE : A1 104
SEX : FEMALE

CHEMICAL INTAKE CHENGES (SUMMARY)
ALL ANIMALS

Group Name	Administration (weeks) 30	32	34	36	38	40	42
Control	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000
125 ppm	19.013± 1.721	19.496± 2.038	17.736± 1.654	17.222± 1.742	16.974± 1.891	17.252± 1.850	16.279± 1.843
500 ppm	79.721± 7.541	75.995± 7.347	73.664± 5.726	71.356± 6.456	69.551± 7.613	69.649± 6.612	67.959± 7.532
2000 ppm	288.904± 21.673	283.624± 18.716	283.432± 23.956	275.004± 15.038	240.125± 20.673	278.994± 25.789	258.165± 21.128

STUDY NO. : 0066
ANIMAL : MOUSE BDF1
UNIT : mg/kg/day
REPORT TYPE : A1 104
SEX : FEMALE

CHEMICAL INTAKE CHENGES (SUMMARY)
ALL ANIMALS

Group Name	Administration (weeks) 44	46	48	50	52	54	56
Control	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000
125 ppm	16.161± 1.999	16.868± 1.855	16.086± 1.724	16.362± 1.805	15.540± 1.705	19.203± 2.222	17.019± 2.275
500 ppm	66.540± 7.269	68.459± 6.406	68.155± 7.557	71.184± 6.919	63.877± 7.201	76.537± 7.813	69.472± 7.868
2000 ppm	247.966± 28.329	263.737± 26.970	260.567± 34.697	256.783± 22.253	241.809± 22.625	258.611± 27.924	261.208± 37.707

STUDY NO. : 0066
ANIMAL : MOUSE BDF1
UNIT : mg/kg/d a y
REPORT TYPE : A1 104
SEX : FEMALE

CHEMICAL INTAKE CHENGES (SUMMARY)
ALL ANIMALS

Group Name	Administration (weeks) 58	60	62	64	66	68	70
Control	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000
125 ppm	16.358± 2.316	16.320± 1.938	16.867± 2.586	16.988± 2.030	17.039± 1.720	15.583± 1.980	16.960± 2.217
500 ppm	66.522± 7.298	64.642± 7.003	64.089± 7.730	67.761± 7.204	67.817± 7.762	61.206± 5.916	68.310± 8.477
2000 ppm	245.033± 37.819	243.011± 31.556	248.147± 29.433	252.568± 28.553	265.481± 34.817	246.522± 23.852	264.726± 39.349

STUDY NO. : 0066
ANIMAL : MOUSE BDF1
UNIT : mg/kg/day
REPORT TYPE : A1 104
SEX : FEMALE

CHEMICAL INTAKE CHENGES (SUMMARY)
ALL ANIMALS

Group Name	Administration (weeks) 72	74	76	78	80	82	84
Control	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000
125 ppm	17.416± 2.035	16.397± 2.313	16.243± 1.629	15.977± 2.065	15.820± 1.948	16.248± 2.110	16.684± 3.581
500 ppm	67.656± 8.070	70.761± 8.600	66.481± 7.141	67.375± 8.331	65.033± 6.548	67.518± 7.215	65.392± 7.427
2000 ppm	258.363± 34.558	248.960± 38.180	239.378± 38.025	250.007± 29.896	248.119± 33.586	253.464± 36.321	257.710± 30.933

STUDY NO. : 0066
ANIMAL : MOUSE BDF1
UNIT : mg/kg/d a y
REPORT TYPE : A1 104
SEX : FEMALE

CHEMICAL INTAKE CHENGES (SUMMARY)
ALL ANIMALS

Group Name	Administration (weeks) 86	88	90	92	94	96	98
Control	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000
125 ppm	16.476± 2.306	16.858± 2.666	17.619± 2.173	16.829± 2.086	16.962± 3.118	17.027± 1.905	16.688± 3.462
500 ppm	67.256± 6.867	68.290± 8.237	72.988± 15.807	71.929± 13.020	68.309± 10.647	71.696± 11.616	70.147± 11.199
2000 ppm	252.507± 37.536	266.201± 36.257	275.883± 55.256	284.293± 44.720	282.344± 53.285	271.863± 45.327	282.199± 51.308

STUDY NO. : 0066
ANIMAL : MOUSE BDF1
UNIT : mg／kg／d a y
REPORT TYPE : A1 104
SEX : FEMALE

CHEMICAL INTAKE CHENGES (SUMMARY)
ALL ANIMALS

Group Name	Administration (weeks) 100	102	104
Control	0.000± 0.000	0.000± 0.000	0.000± 0.000
125 ppm	17.101± 2.840	14.451± 2.691	15.744± 2.317
500 ppm	69.530± 11.081	66.444± 14.629	65.689± 11.157
2000 ppm	286.605± 52.667	245.479± 39.568	267.271± 58.024

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APPENDIX

(H1～H4)

がん原性 STUDY　NO.　0065；0066

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APPENDIX H 1

HEMATOLOGY (TWO-YEAR STUDIES: SUMMARY)

RAT: MALE

STUDY NO. : 0065
ANIMAL : RAT F344
REPORT TYPE : A1
SEX : MALE

HEMATOLOGY(1) (SUMMARY)
SURVIVAL ANIMALS (104)

Group Name	NO. of Animals	RED BLOOD CELL $10^6/\mu\ell$	HEMOGLOBIN g/dℓ	HEMATOCRIT %	MCV f ℓ	PLATELET $10^3/\mu\ell$
Control	41	8.79± 1.97	15.8± 3.1	44.1± 8.6	51.1± 5.2	977± 208
40 ppm	46	9.28± 1.57	16.5± 2.7	45.9± 7.4	49.4± 1.7	1031± 239
200 ppm	42	8.38± 0.91	15.3± 1.4*	43.0± 4.1	51.4± 2.5*	1102± 198*
1000 ppm	12	6.26± 1.48**	14.9± 2.6	38.8± 6.5**	64.1± 10.7**	1253± 309**

Significant difference ; * : P ≦ 0.05 ** : P ≦ 0.01 Test of Dunnett

STUDY NO. : 0065
ANIMAL : RAT F344
REPORT TYPE : A1
SEX : MALE

HEMATOLOGY(2) (SUMMARY)
SURVIVAL ANIMALS (104)

Group Name	NO. of Animals	WBC $10^3/\mu\ell$		Differential WBC (%) N-BAND		N-SEG		EOSINO		BASO		MONO		LYMPHO		OTHER	
Control	41	6.29±	3.89	0±	1	49±	10	1±	1	0±	0	7±	2	40±	10	2±	2
40 ppm	46	6.46±	3.30	0±	1	51±	13	1±	1	0±	0	7±	2	39±	12	2±	2
200 ppm	42	6.02±	1.46	0±	0	50±	9	1±	1	0±	0	7±	2	39±	9	2±	1
1000 ppm	12	18.40±	5.93**	1±	1*	55±	12	1±	1	0±	0	6±	2	35±	13	2±	2

Significant difference ; * : P ≦ 0.05 ** : P ≦ 0.01 Test of Dunnett

APPENDIX H 2

HEMATOLOGY (TWO-YEAR STUDIES: SUMMARY)

RAT: FEMALE

STUDY NO. : 0065
ANIMAL : RAT F344
REPORT TYPE : A1
SEX : FEMALE

HEMATOLOGY(1) (SUMMARY)
SURVIVAL ANIMALS (104)

Group Name	NO. of Animals	RED BLOOD CELL $10^6/\mu\ell$	HEMOGLOBIN g/dℓ	HEMATOCRIT %	MCV f ℓ	PLATELET $10^3/\mu\ell$
Control	36	8.13± 0.73	15.6± 1.3	43.4± 3.6	53.5± 3.3	788± 105
40 ppm	41	8.08± 0.51	15.6± 0.8	43.6± 2.2	54.0± 1.7	820± 107
200 ppm	38	6.88± 1.48**	14.2± 2.1**	39.8± 6.3**	59.6± 9.7**	703± 246*
1000 ppm	28	4.94± 0.80**	13.6± 1.8**	36.7± 4.7**	75.1± 7.8**	896± 251

Significant difference ; * : P ≦ 0.05 ** : P ≦ 0.01 Test of Dunnett

STUDY NO. : 0065
ANIMAL : RAT F344
REPORT TYPE : A1
SEX : FEMALE

HEMATOLOGY(2) (SUMMARY)
SURVIVAL ANIMALS (104)

Group Name	NO. of Animals	WBC $10^3/\mu\ell$	Differential WBC (%) N-BAND	N-SEG	EOSINO	BASO	MONO	LYMPHO	OTHER
Control	36	5.43± 10.00	0± 0	46± 14	1± 1	0± 0	6± 2	44± 13	3± 7
40 ppm	41	3.72± 3.78	0± 0	42± 10	1± 1	0± 0	6± 2	48± 10	2± 5
200 ppm	38	12.38± 44.01	0± 0	41± 13	1± 1	0± 0	6± 2	47± 11	5± 11*
1000 ppm	28	13.74± 5.22**	0± 1	46± 14	1± 1	0± 0	5± 2*	46± 14	2± 2

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

APPENDIX H 3

HEMATOLOGY (TWO-YEAR STUDIES: SUMMARY)

MOUSE: MALE

STUDY NO. : 0066
ANIMAL : MOUSE BDF1
REPORT TYPE : A1
SEX : MALE

HEMATOLOGY(1) (SUMMARY)
SURVIVAL ANIMALS (104)

Group Name	NO. of Animals	RED BLOOD CELL $10^6/\mu\ell$	HEMOGLOBIN g/dℓ	HEMATOCRIT %	MCV f ℓ	PLATELET $10^3/\mu\ell$
Control	45	10.03± 0.82	14.8± 0.8	43.8± 2.4	43.8± 3.0	2248± 513
125 ppm	48	10.02± 0.75	14.6± 0.9	43.4± 3.1	43.3± 1.4	2325± 401
500 ppm	41	9.60± 1.02*	14.2± 1.3	42.1± 4.5	43.8± 1.1	2445± 531
2000 ppm	37	7.25± 1.14**	14.9± 2.3	34.3± 4.7**	47.6± 2.8**	2857± 897**

Significant difference ; * : P ≦ 0.05 ** : P ≦ 0.01 Test of Dunnett

STUDY NO. : 0066
ANIMAL : MOUSE BDF1
REPORT TYPE : A1
SEX : MALE

HEMATOLOGY(2) (SUMMARY)
SURVIVAL ANIMALS (104)

Group Name	NO. of Animals	WBC $10^3/\mu\ell$		Differential WBC (%) N-BAND		N-SEG		EOSINO		BASO		MONO		LYMPHO		OTHER	
Control	45	1.69±	1.09	5±	2	38±	10	2±	1	0±	0	3±	2	51±	12	1±	2
125 ppm	48	1.59±	0.79	4±	2	39±	14	2±	2	0±	0	4±	3	50±	15	1±	1
500 ppm	41	1.57±	0.70	5±	2	39±	12	2±	2	0±	0	4±	2	51±	12	0±	1
2000 ppm	37	6.53±	4.57**	5±	2	37±	15	2±	2	0±	0	4±	2	52±	16	1±	1

Significant difference ; * : P ≦ 0.05 ** : P ≦ 0.01 Test of Dunnett

APPENDIX H 4

HEMATOLOGY (TWO-YEAR STUDIES: SUMMARY)

MOUSE: FEMALE

STUDY NO. : 0066
ANIMAL : MOUSE BDF1
REPORT TYPE : A1
SEX : FEMALE

HEMATOLOGY(1) (SUMMARY)
SURVIVAL ANIMALS (104)

Group Name	NO. of Animals	RED BLOOD CELL $10^6/\mu\ell$	HEMOGLOBIN g/dℓ	HEMATOCRIT %	MCV f ℓ	PLATELET $10^3/\mu\ell$
Control	30	10.17± 1.10	14.6± 1.4	43.7± 4.9	43.0± 1.9	1392± 448
125 ppm	33	9.46± 2.09	13.8± 2.4	40.9± 7.5	44.0± 4.9	1334± 491
500 ppm	35	9.05± 1.23**	13.6± 1.9	39.5± 6.1*	43.6± 2.9	1517± 443
2000 ppm	28	6.83± 0.75**	14.3± 1.5	33.9± 2.6**	49.8± 3.4**	1763± 438**

Significant difference ; * : P ≦ 0.05 ** : P ≦ 0.01 Test of Dunnett

STUDY NO. : 0066
ANIMAL : MOUSE BDF1
REPORT TYPE : A1
SEX : FEMALE

HEMATOLOGY(2) (SUMMARY)
SURVIVAL ANIMALS (104)

Group Name	NO. of Animals	WBC $10^3/\mu\ell$		Differential WBC (%) N-BAND		N-SEG		EOSINO		BASO		MONO		LYMPHO		OTHER	
Control	30	2.02±	1.99	4±	2	34±	14	2±	3	0±	0	5±	5	52±	16	2±	2
125 ppm	33	2.15±	1.58	6±	2	41±	14	3±	5	0±	0	5±	4	44±	15	2±	2
500 ppm	35	2.68±	3.80	5±	5	38±	15	1±	1	0±	0	4±	3	50±	16	2±	3
2000 ppm	28	5.90±	2.99**	5±	3	30±	12	2±	1	0±	0	5±	3	56±	15	2±	3

Significant difference ; * : P ≦ 0.05 ** : P ≦ 0.01 Test of Dunnett

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APPENDIX

(I1～I4)

がん原性 STUDY　NO.　0065；0066

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APPENDIX I 1

BIOCHEMISTRY (TWO-YEAR STUDIES: SUMMARY)

RAT: MALE

STUDY NO. : 0065
ANIMAL : RAT F344
REPORT TYPE : A1
SEX : MALE

BIOCHEMISTRY (SUMMARY)
SURVIVAL ANIMALS (104)

Group Name	NO. of Animals	TOTAL PROTEIN g/dℓ	ALBUMIN g/dℓ	A/G RATIO	T-BILIRUBIN mg/dℓ	GLUCOSE mg/dℓ	T-CHOLESTEROL mg/dℓ	TRIGLYCERIDE mg/dℓ
Control	42	6.8± 0.5	3.2± 0.2	0.9± 0.1	0.31± 0.26	162± 34	154± 41	151± 158
40 ppm	46	6.8± 0.4	3.2± 0.3	0.9± 0.1	0.23± 0.07	162± 19	155± 45	143± 88
200 ppm	42	6.8± 0.4	3.2± 0.2	0.9± 0.1	0.24± 0.05	167± 21	175± 62	162± 141
1000 ppm	12	6.4± 0.6*	3.0± 0.4	0.9± 0.1	0.54± 0.65**	162± 23	125± 34	142± 81

Significant difference ; * : P ≦ 0.05 ** : P ≦ 0.01 Test of Dunnett

STUDY NO. : 0065
ANIMAL : RAT F344
REPORT TYPE : A1
SEX : MALE

BIOCHEMISTRY (SUMMARY)
SURVIVAL ANIMALS (104)

Group Name	NO. of Animals	PHOSPHOLIPID mg/dℓ	GOT IU/ℓ	GPT IU/ℓ	LDH IU/ℓ	ALP IU/ℓ	LAP IU/ℓ	G-GTP IU/ℓ
Control	42	233± 75	88± 80	21± 20	310± 433	196± 193	47± 7	4± 4
40 ppm	46	233± 71	58± 14	16± 4	186± 67	177± 79	48± 6	3± 2
200 ppm	42	265± 114	57± 18	16± 5	179± 60	162± 47	46± 5	4± 3
1000 ppm	12	215± 111	149± 255	17± 16	247± 160	249± 197*	54± 14	5± 6

Significant difference ; * : P ≦ 0.05 ** : P ≦ 0.01 Test of Dunnett

STUDY NO. : 0065
ANIMAL : RAT F344
REPORT TYPE : A1
SEX : MALE

BIOCHEMISTRY (SUMMARY)
SURVIVAL ANIMALS (104)

Group Name	NO. of Animals	CPK IU/ℓ	UREA NITROGEN mg/dℓ	CREATININE mg/dℓ	SODIUM mEq/ℓ	POTASSIUM mEq/ℓ	CHLORIDE mEq/ℓ	CALCIUM mg/dℓ
Control	42	92± 114	24.0± 16.8	0.6± 0.2	143± 3	3.7± 0.7	107± 2	10.6± 0.6
40 ppm	46	73± 20	22.8± 17.4	0.7± 0.1	142± 2	3.6± 0.4	106± 1	10.7± 0.4
200 ppm	42	72± 17	20.8± 4.1	0.7± 0.1	142± 1	3.5± 0.3	106± 2	10.7± 0.4
1000 ppm	12	80± 26	22.6± 5.0	0.7± 0.1	144± 1	3.8± 0.5	107± 2	10.5± 0.6

Significant difference ; * : P ≦ 0.05 ** : P ≦ 0.01 Test of Dunnett

STUDY NO. : 0065
ANIMAL : RAT F344
REPORT TYPE : A1
SEX : MALE

BIOCHEMISTRY (SUMMARY)
SURVIVAL ANIMALS (104)

Group Name	NO. of Animals	INORGANIC PHOSPHORUS mg/dℓ
Control	42	4.2± 1.1
40 ppm	46	3.9± 2.0
200 ppm	42	3.8± 0.6
1000 ppm	12	4.4± 0.8

Significant difference ; * : P ≦ 0.05 ** : P ≦ 0.01 Test of Dunnett

APPENDIX I 2

BIOCHEMISTRY (TWO-YEAR STUDIES: SUMMARY)

RAT: FEMALE

STUDY NO. : 0065
ANIMAL : RAT F344
REPORT TYPE : A1
SEX : FEMALE

BIOCHEMISTRY (SUMMARY)
SURVIVAL ANIMALS (104)

Group Name	NO. of Animals	TOTAL PROTEIN g/dℓ	ALBUMIN g/dℓ	A/G RATIO	T-BILIRUBIN mg/dℓ	GLUCOSE mg/dℓ	T-CHOLESTEROL mg/dℓ	TRIGLYCERIDE mg/dℓ
Control	36	7.1± 0.4	3.7± 0.3	1.1± 0.1	0.22± 0.04	161± 26	124± 24	121± 52
40 ppm	41	7.3± 0.4	3.8± 0.3	1.1± 0.1	0.24± 0.10	165± 25	141± 25**	136± 86
200 ppm	38	6.9± 0.9	3.8± 0.5	1.2± 0.1**	0.37± 0.44**	159± 35	120± 28	112± 60
1000 ppm	28	7.1± 0.8	3.8± 0.6	1.1± 0.2	1.13± 3.52**	142± 36*	137± 48	108± 60

Significant difference : * : P ≦ 0.05 ** : P ≦ 0.01 Test of Dunnett

STUDY NO. : 0065
ANIMAL : RAT F344
REPORT TYPE : A1
SEX : FEMALE

BIOCHEMISTRY (SUMMARY)
SURVIVAL ANIMALS (104)

Group Name	NO. of Animals	PHOSPHOLIPID mg/dℓ	GOT IU/ℓ	GPT IU/ℓ	LDH IU/ℓ	ALP IU/ℓ	LAP IU/ℓ	G-GTP IU/ℓ
Control	36	223± 45	100± 51	28± 12	218± 161	159± 191	43± 4	2± 2
40 ppm	41	252± 48*	86± 26	25± 7	217± 97	114± 33	43± 3	2± 2
200 ppm	38	222± 58	152± 264	34± 42	300± 452	151± 131	43± 10	2± 2*
1000 ppm	28	256± 127	149± 165	27± 37**	286± 201	166± 147	43± 8	2± 6*

Significant difference ; * : P ≦ 0.05 ** : P ≦ 0.01 Test of Dunnett

STUDY NO. : 0065
ANIMAL : RAT F344
REPORT TYPE : A1
SEX : FEMALE

BIOCHEMISTRY (SUMMARY)
SURVIVAL ANIMALS (104)

Group Name	NO. of Animals	CPK IU/ℓ		UREA NITROGEN mg/dℓ		CREATININE mg/dℓ		SODIUM mEq/ℓ		POTASSIUM mEq/ℓ		CHLORIDE mEq/ℓ		CALCIUM mg/dℓ	
Control	36	69±	16	15.8±	2.1	0.5±	0.1	142±	2	3.5±	0.4	106±	2	10.8±	0.5
40 ppm	41	68±	16	16.2±	2.0	0.5±	0.1	142±	1	3.6±	0.5	105±	2	10.8±	0.4
200 ppm	38	88±	102	19.1±	9.0	0.5±	0.1	142±	2	3.5±	0.5	106±	2	10.6±	0.8
1000 ppm	28	95±	86	23.2±	9.5**	0.5±	0.1	143±	2	3.9±	0.5*	105±	3	10.8±	0.7

Significant difference ; * : P ≦ 0.05 ** : P ≦ 0.01 Test of Dunnett

STUDY NO. : 0065
ANIMAL : RAT F344
REPORT TYPE : A1
SEX : FEMALE

BIOCHEMISTRY (SUMMARY)
SURVIVAL ANIMALS (104)

Group Name	NO. of Animals	INORGANIC PHOSPHORUS mg/dℓ
Control	36	3.5± 1.1
40 ppm	41	3.4± 0.9
200 ppm	38	3.7± 1.2
1000 ppm	28	4.2± 0.8*

Significant difference ; * : P ≦ 0.05 ** : P ≦ 0.01 Test of Dunnett

APPENDIX I 3

BIOCHEMISTRY (TWO-YEAR STUDIES: SUMMARY)

MOUSE: MALE

STUDY NO. : 0066
ANIMAL : MOUSE BDF1
REPORT TYPE : A1
SEX : MALE

BIOCHEMISTRY (SUMMARY)
SURVIVAL ANIMALS (104)

Group Name	NO. of Animals	TOTAL PROTEIN g/dℓ	ALBUMIN g/dℓ	A/G RATIO	T-BILIRUBIN mg/dℓ	GLUCOSE mg/dℓ	T-CHOLESTEROL mg/dℓ	TRIGLYCERIDE mg/dℓ
Control	44	5.6± 0.5	2.9± 0.2	1.1± 0.1	0.51± 0.20	195± 34	100± 38	60± 11
125 ppm	45	5.5± 0.7	2.9± 0.4	1.1± 0.2	0.50± 0.26	188± 45	98± 50	59± 11
500 ppm	39	5.5± 0.3	2.9± 0.2	1.1± 0.2	0.50± 0.17	185± 36	93± 14	64± 13
2000 ppm	37	5.5± 0.4	2.9± 0.3	1.1± 0.2	0.49± 0.18	186± 32	97± 22	63± 15

Significant difference ; * : P ≦ 0.05 ** : P ≦ 0.01 Test of Dunnett

STUDY NO. : 0066
ANIMAL : MOUSE BDF1
REPORT TYPE : A1
SEX : MALE

BIOCHEMISTRY (SUMMARY)
SURVIVAL ANIMALS (104)

Group Name	NO. of Animals	PHOSPHOLIPID mg/dℓ	GOT IU/ℓ	GPT IU/ℓ	LDH IU/ℓ	ALP IU/ℓ	LAP IU/ℓ	CPK IU/ℓ
Control	44	168± 61	52± 15	13± 12	521± 178	170± 57	57± 23	60± 26
125 ppm	45	166± 63	112± 350	35± 95	811± 1963	201± 210	58± 31	69± 38
500 ppm	39	161± 20	53± 21	13± 8	557± 257	165± 32	50± 5	70± 29
2000 ppm	37	170± 31	66± 26*	18± 15	690± 310*	172± 42	53± 10	87± 30**

Significant difference ; * : P ≦ 0.05 ** : P ≦ 0.01 Test of Dunnett

STUDY NO. : 0066
ANIMAL : MOUSE BDF1
REPORT TYPE : A1
SEX : MALE

BIOCHEMISTRY (SUMMARY)
SURVIVAL ANIMALS (104)

Group Name	NO. of Animals	UREA NITROGEN mg/dℓ	SODIUM mEq/ℓ	POTASSIUM mEq/ℓ	CHLORIDE mEq/ℓ	CALCIUM mg/dℓ	INORGANIC PHOSPHORUS mg/dℓ
Control	44	26.4± 3.1	155± 4	5.2± 0.7	125± 4	9.0± 0.5	8.5± 1.6
125 ppm	45	29.1± 15.6	154± 3	5.3± 1.4	124± 3	9.0± 0.6	8.6± 2.2
500 ppm	39	27.4± 3.2	155± 4	5.1± 0.6	126± 3	8.9± 0.4	8.9± 1.7
2000 ppm	37	29.6± 6.5	154± 3	5.4± 0.7	125± 3	9.0± 0.4	8.4± 1.1

Significant difference ; * : P ≦ 0.05 ** : P ≦ 0.01 Test of Dunnett

APPENDIX I 4

BIOCHEMISTRY (TWO-YEAR STUDIES: SUMMARY)

MOUSE: FEMALE

STUDY NO. : 0066
ANIMAL : MOUSE BDF1
REPORT TYPE : A1
SEX : FEMALE

BIOCHEMISTRY (SUMMARY)
SURVIVAL ANIMALS (104)

Group Name	NO. of Animals	TOTAL PROTEIN g/dℓ	ALBUMIN g/dℓ	A/G RATIO	T-BILIRUBIN mg/dℓ	GLUCOSE mg/dℓ	T-CHOLESTEROL mg/dℓ	TRIGLYCERIDE mg/dℓ
Control	28	5.4± 0.7	2.9± 0.3	1.2± 0.2	0.51± 0.30	151± 40	65± 10	59± 14
125 ppm	33	5.5± 0.9	3.0± 0.4	1.3± 0.3	0.54± 0.22	142± 37	73± 22	63± 15
500 ppm	34	5.5± 0.4	2.9± 0.3	1.1± 0.2	0.47± 0.13	150± 34	78± 20**	64± 14
2000 ppm	28	5.4± 0.4	3.0± 0.2	1.3± 0.1	0.55± 0.15	166± 27	88± 22**	72± 18**

Significant difference ; * : P ≦ 0.05 ** : P ≦ 0.01 Test of Dunnett

STUDY NO. : 0066
ANIMAL : MOUSE BDF1
REPORT TYPE : A1
SEX : FEMALE

BIOCHEMISTRY (SUMMARY)
SURVIVAL ANIMALS (104)

Group Name	NO. of Animals	PHOSPHOLIPID mg/dℓ	GOT IU/ℓ	GPT IU/ℓ	LDH IU/ℓ	ALP IU/ℓ	LAP IU/ℓ	CPK IU/ℓ
Control	28	111± 20	140± 258	30± 54	807± 1127	291± 105	63± 19	73± 46
125 ppm	33	125± 26	143± 338	39± 111	1229± 3467	278± 98	59± 19	68± 34
500 ppm	34	131± 28**	104± 116	25± 30	764± 899	302± 125	59± 16	88± 77
2000 ppm	28	160± 35**	87± 48	23± 17	736± 317	249± 117	67± 26	73± 35

Significant difference ; * : P ≦ 0.05 ** : P ≦ 0.01 Test of Dunnett

STUDY NO. : 0066
ANIMAL : MOUSE BDF1
REPORT TYPE : A1
SEX : FEMALE

BIOCHEMISTRY (SUMMARY)
SURVIVAL ANIMALS (104)

Group Name	NO. of Animals	UREA NITROGEN mg/dℓ	SODIUM mEq/ℓ	POTASSIUM mEq/ℓ	CHLORIDE mEq/ℓ	CALCIUM mg/dℓ	INORGANIC PHOSPHORUS mg/dℓ
Control	28	23.5± 14.0	155± 5	4.9± 0.9	125± 4	9.0± 0.3	7.2± 1.7
125 ppm	33	21.1± 6.9	155± 4	5.1± 0.7	125± 3	9.2± 0.5	8.0± 3.1
500 ppm	34	23.8± 19.7	154± 4	4.9± 0.7	126± 4	9.1± 0.5	7.4± 1.9
2000 ppm	28	23.0± 7.2	153± 2	5.5± 0.5**	124± 3	9.2± 0.4	7.0± 1.2

Significant difference ; * : P ≦ 0.05 ** : P ≦ 0.01 Test of Dunnett

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APPENDIX

(J1～J4)

がん原性 STUDY　NO.　0065；0066

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APPENDIX J 1

URINALYSIS (TWO-YEAR STUDIES: SUMMARY)

RAT: MALE

STUDY NO. : 0065 URINALYSIS
ANIMAL : RAT F344
SAMPLING DATE : 104-7
SEX : MALE REPORT TYPE : A1

Group Name	NO. of Animals	pH 5.0	6.0	6.5	7.0	7.5	8.0	8.5	CHI	Protein −	±	+	2+	3+	4+	CHI	Glucose −	±	+	2+	3+	4+	CHI	Ketone body −	+	2+	3+	CHI	Bilirubin −	+	2+	3+	CHI
Control	43	0	1	10	13	16	3	0		0	0	1	1	13	28		43	0	0	0	0	0		43	0	0	0		43	0	0	0	
40 ppm	46	0	0	8	14	21	3	0		0	0	0	0	11	35		46	0	0	0	0	0		46	0	0	0		46	0	0	0	
200 ppm	42	0	1	8	12	19	2	0		0	0	0	0	14	28		42	0	0	0	0	0		42	0	0	0		42	0	0	0	
1000 ppm	12	0	1	0	4	5	2	0		0	0	0	2	5	5		12	0	0	0	0	0		12	0	0	0		11	1	0	0	

Significent difference ; * : P ≦ 0.05 ** : P ≦ 0.01 Test of CHI SQUARE

STUDY NO. : 0065 URINALYSIS
ANIMAL : RAT F344
SAMPLING DATE : 104-7
SEX : MALE REPORT TYPE : A1

Group Name	NO. of Animals	Occult blood −	±	+	2+	3+	CHI	Urobilinogen ±	+	2+	3+	4+	CHI
Control	43	40	3	0	0	0		43	0	0	0	0	
40 ppm	46	46	0	0	0	0		46	0	0	0	0	
200 ppm	42	41	1	0	0	0		42	0	0	0	0	
1000 ppm	12	10	1	1	0	0		12	0	0	0	0	

Significent difference ; * : P ≦ 0.05 ** : P ≦ 0.01 Test of CHI SQUARE

APPENDIX J 2

URINALYSIS (TWO-YEAR STUDIES: SUMMARY)

RAT: FEMALE

STUDY NO. : 0065
ANIMAL : RAT F344
SAMPLING DATE : 104-7
SEX : FEMALE REPORT TYPE : A1

URINALYSIS

Group Name	NO. of Animals	pH 5.0	6.0	6.5	7.0	7.5	8.0	8.5	CHI	Protein −	±	+	2+	3+	4+	CHI	Glucose −	±	+	2+	3+	4+	CHI	Ketone body −	+	2+	3+	CHI	Bilirubin −	+	2+	3+	CHI
Control	38	0	4	9	14	7	4	0		0	0	3	8	19	8		38	0	0	0	0	0		34	4	0	0		34	3	0	1	
40 ppm	41	0	0	10	7	13	11	0	*	0	0	1	5	26	9		41	0	0	0	0	0		40	1	0	0		41	0	0	0	
200 ppm	38	0	6	8	5	12	6	1		0	0	4	13	20	1		38	0	0	0	0	0		35	3	0	0		36	1	1	0	
1000 ppm	28	0	5	2	3	14	4	0	*	0	0	1	7	17	3		28	0	0	0	0	0		22	6	0	0		20	7	0	1	

Significant difference ; * : P ≦ 0.05 ** : P ≦ 0.01 Test of CHI SQUARE

STUDY NO. : 0065
ANIMAL : RAT F344
SAMPLING DATE : 104-7
SEX : FEMALE REPORT TYPE : A1

URINALYSIS

Group Name	NO. of Animals	Occult blood −	±	+	2+	3+	CHI	Urobilinogen ±	+	2+	3+	4+	CHI
Control	38	33	2	1	1	1		37	0	0	1	0	
40 ppm	41	37	3	1	0	0		41	0	0	0	0	
200 ppm	38	36	1	0	1	0		37	1	0	0	0	
1000 ppm	28	28	0	0	0	0		26	1	1	0	0	

Significent difference ; * : P ≦ 0.05 ** : P ≦ 0.01 Test of CHI SQUARE

APPENDIX J 3

URINALYSIS (TWO-YEAR STUDIES: SUMMARY)

MOUSE: MALE

STUDY NO. : 0066
ANIMAL : MOUSE BDF1
SAMPLING DATE : 104-7
SEX : MALE REPORT TYPE : A1

URINALYSIS

Group Name	NO. of Animals	pH 5.0	6.0	6.5	7.0	7.5	8.0	8.5	CHI	Protein −	±	+	2+	3+	4+	CHI	Glucose −	±	+	2+	3+	4+	CHI	Ketone body −	+	2+	3+	CHI	Occult blood −	±	+	2+	3+	CHI
Control	47	0	8	33	3	3	0	0		0	2	20	25	0	0		47	0	0	0	0	0		6	41	0	0		45	1	1	0	0	
125 ppm	49	0	17	25	6	1	0	0		0	1	24	23	1	0		49	0	0	0	0	0		4	44	1	0		45	0	1	1	2	
500 ppm	42	0	6	20	14	2	0	0	*	0	1	29	12	0	0	*	42	0	0	0	0	0		20	22	0	0	**	41	0	1	0	0	
2000 ppm	38	0	7	25	6	0	0	0		0	0	25	13	0	0		38	0	0	0	0	0		14	24	0	0	**	37	0	1	0	0	

Significent difference ; * : P ≦ 0.05 ** : P ≦ 0.01 Test of CHI SQUARE

STUDY NO. : 0066 URINALYSIS
ANIMAL : MOUSE BDF1
SAMPLING DATE : 104-7
SEX : MALE REPORT TYPE : A1

Group Name	NO. of Animals	Urobilinogen ±	+	2+	3+	4+	CHI
Control	47	47	0	0	0	0	
125 ppm	49	49	0	0	0	0	
500 ppm	42	42	0	0	0	0	
2000 ppm	38	38	0	0	0	0	

Significent difference ; * : P ≦ 0.05 ** : P ≦ 0.01 Test of CHI SQUARE

APPENDIX J 4

URINALYSIS (TWO-YEAR STUDIES: SUMMARY)

MOUSE: FEMALE

STUDY NO. : 0066
ANIMAL : MOUSE BDF1
SAMPLING DATE : 104-7
SEX : FEMALE REPORT TYPE : A1

URINALYSIS

Group Name	NO. of Animals	pH 5.0	6.0	6.5	7.0	7.5	8.0	8.5	CHI	Protein −	±	+	2+	3+	4+	CHI	Glucose −	±	+	2+	3+	4+	CHI	Ketone body −	+	2+	3+	CHI	Occult blood −	±	+	2+	3+	CHI
Control	32	0	13	17	2	0	0	0		0	0	12	17	3	0		32	0	0	0	0	0		5	27	0	0		23	4	3	0	2	
125 ppm	35	0	21	13	1	0	0	0		0	0	9	19	5	2		35	0	0	0	0	0		6	28	1	0		30	2	2	0	1	
500 ppm	35	0	5	29	1	0	0	0	*	0	0	18	17	0	0		35	0	0	0	0	0		9	26	0	0		34	0	0	1	0	*
2000 ppm	29	0	6	23	0	0	0	0		0	1	14	14	0	0		25	4	0	0	0	0	*	5	24	0	0		28	0	0	1	0	*

Significent difference ; * : P ≦ 0.05 ** : P ≦ 0.01 Test of CHI SQUARE

STUDY NO. : 0066
ANIMAL : MOUSE BDF1
SAMPLING DATE : 104-7
SEX : FEMALE REPORT TYPE : A1

URINALYSIS

Group Name	NO. of Animals	Urobilinogen ±	+	2+	3+	4+	CHI
Control	32	30	2	0	0	0	
125 ppm	35	34	1	0	0	0	
500 ppm	35	35	0	0	0	0	
2000 ppm	29	14	15	0	0	0	**

Significent difference ; * : P ≦ 0.05 ** : P ≦ 0.01 Test of CHI SQUARE

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APPENDIX

(K1～K8)

がん原性 STUDY　NO.　0065；0066

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APPENDIX K 1

GROSS FINDINGS (TWO-YEAR STUDIES: SUMMARY)

RAT: MALE: DEAD AND MORIBUND ANIMALS

STUDY NO. : 0065
ANIMAL : RAT F344
REPORT TYPE : A1
SEX : MALE

GROSS FINDINGS (SUMMARY)
DEAD AND MORIBUND ANIMALS (0-104W)

Organ	Findings	Group Name / NO. of Animals	Control 7 (%)	40 ppm 4 (%)	200 ppm 8 (%)	1000 ppm 38 (%)
skin/app	nodule		0 (0)	0 (0)	0 (0)	1 (3)
subcutis	jaundice		1 (14)	0 (0)	0 (0)	5 (13)
	mass		0 (0)	1 (25)	2 (25)	3 (8)
lung	red		2 (29)	0 (0)	4 (50)	7 (18)
	red patch/zone		0 (0)	0 (0)	0 (0)	1 (3)
	red zone		0 (0)	1 (25)	0 (0)	0 (0)
	brown zone		1 (14)	0 (0)	0 (0)	0 (0)
	edema		0 (0)	0 (0)	0 (0)	2 (5)
	nodule		0 (0)	1 (25)	0 (0)	1 (3)
bone marrow	red		0 (0)	0 (0)	0 (0)	1 (3)
lymph node	enlarged		0 (0)	1 (25)	0 (0)	6 (16)
	red		0 (0)	0 (0)	0 (0)	5 (13)
	nodule		0 (0)	0 (0)	0 (0)	1 (3)
thymus	enlarged		0 (0)	0 (0)	0 (0)	2 (5)
	involution		1 (14)	0 (0)	0 (0)	0 (0)
spleen	enlarged		3 (43)	0 (0)	1 (13)	11 (29)
	turbid		0 (0)	0 (0)	1 (13)	1 (3)
	brown		0 (0)	0 (0)	0 (0)	2 (5)
	white zone		1 (14)	0 (0)	1 (13)	2 (5)
	red zone		0 (0)	0 (0)	0 (0)	1 (3)
	brown zone		0 (0)	0 (0)	1 (13)	0 (0)
	nodule		0 (0)	0 (0)	0 (0)	17 (45)

STUDY NO. : 0065
ANIMAL : RAT F344
REPORT TYPE : A1
SEX : MALE

GROSS FINDINGS (SUMMARY)
DEAD AND MORIBUND ANIMALS (0-104W)

Organ	Findings	Group Name / NO. of Animals	Control 7 (%)	40 ppm 4 (%)	200 ppm 8 (%)	1000 ppm 38 (%)
spleen	cyst		0 (0)	0 (0)	0 (0)	1 (3)
	deformed		0 (0)	0 (0)	0 (0)	3 (8)
	rough		0 (0)	0 (0)	5 (63)	0 (0)
	granular		0 (0)	0 (0)	0 (0)	6 (16)
heart	dilated		1 (14)	1 (25)	0 (0)	0 (0)
artery/aort	induration		1 (14)	0 (0)	0 (0)	0 (0)
forestomach	ulcer		0 (0)	0 (0)	1 (13)	3 (8)
	thick		1 (14)	0 (0)	0 (0)	0 (0)
gl stomach	red patch/zone		0 (0)	0 (0)	0 (0)	1 (3)
	red zone		0 (0)	0 (0)	0 (0)	1 (3)
	ulcer		1 (14)	0 (0)	1 (13)	1 (3)
	thick		3 (43)	0 (0)	2 (25)	9 (24)
	fluid:black		0 (0)	2 (50)	0 (0)	0 (0)
large intes	fluid:red		0 (0)	0 (0)	0 (0)	1 (3)
liver	enlarged		0 (0)	0 (0)	0 (0)	2 (5)
	white zone		0 (0)	0 (0)	0 (0)	1 (3)
	red zone		0 (0)	0 (0)	0 (0)	1 (3)
	nodule		0 (0)	0 (0)	1 (13)	11 (29)
	ulcer		0 (0)	0 (0)	0 (0)	1 (3)
	herniation		2 (29)	1 (25)	1 (13)	2 (5)
pancreas	nodule		0 (0)	0 (0)	0 (0)	6 (16)
kidney	black		0 (0)	0 (0)	0 (0)	1 (3)

STUDY NO. : 0065
ANIMAL : RAT F344
REPORT TYPE : A1
SEX : MALE

GROSS FINDINGS (SUMMARY)
DEAD AND MORIBUND ANIMALS (0-104W)

Organ	Findings	Group Name NO. of Animals	Control 7 (%)	40 ppm 4 (%)	200 ppm 8 (%)	1000 ppm 38 (%)
kidney	cyst		0 (0)	0 (0)	0 (0)	1 (3)
	granular		1 (14)	1 (25)	1 (13)	3 (8)
urin bladd	rupture		1 (14)	0 (0)	0 (0)	0 (0)
	urine:marked retention		0 (0)	0 (0)	0 (0)	1 (3)
	fluid:red		0 (0)	0 (0)	0 (0)	2 (5)
pituitary	enlarged		1 (14)	1 (25)	3 (38)	0 (0)
	red patch/zone		0 (0)	0 (0)	0 (0)	2 (5)
	colored patch/zone		0 (0)	0 (0)	0 (0)	1 (3)
	red zone		0 (0)	1 (25)	1 (13)	1 (3)
	nodule		1 (14)	1 (25)	0 (0)	4 (11)
thyroid	enlarged		0 (0)	0 (0)	0 (0)	2 (5)
	white zone		0 (0)	0 (0)	0 (0)	1 (3)
parathyroid	enlarged		0 (0)	0 (0)	0 (0)	2 (5)
adrenal	enlarged		0 (0)	0 (0)	1 (13)	2 (5)
testis	atrophic		1 (14)	1 (25)	0 (0)	2 (5)
	red patch/zone		0 (0)	0 (0)	0 (0)	1 (3)
	nodule		5 (71)	3 (75)	3 (38)	28 (74)
epididymis	nodule		0 (0)	0 (0)	0 (0)	1 (3)
semin ves	nodule		0 (0)	0 (0)	0 (0)	2 (5)
prep/cli gl	nodule		0 (0)	0 (0)	0 (0)	1 (3)
brain	hemorrhage		1 (14)	0 (0)	0 (0)	0 (0)
	nodule		0 (0)	0 (0)	1 (13)	0 (0)

STUDY NO. : 0065
ANIMAL : RAT F344
REPORT TYPE : A1
SEX : MALE

GROSS FINDINGS (SUMMARY)
DEAD AND MORIBUND ANIMALS (0-104W)

Organ	Findings	Group Name NO. of Animals	Control 7 (%)	40 ppm 4 (%)	200 ppm 8 (%)	1000 ppm 38 (%)
spinal cord	hemorrhage		1 (14)	0 (0)	0 (0)	0 (0)
eye	red		1 (14)	0 (0)	0 (0)	0 (0)
Zymbal gl	nodule		0 (0)	1 (25)	1 (13)	0 (0)
bone	nodule		0 (0)	0 (0)	0 (0)	1 (3)
	soft		0 (0)	0 (0)	0 (0)	2 (5)
peritoneum	nodule		0 (0)	0 (0)	0 (0)	10 (26)
	granular		0 (0)	0 (0)	0 (0)	1 (3)
	thick		0 (0)	0 (0)	0 (0)	1 (3)
retroperit	nodule		0 (0)	0 (0)	0 (0)	1 (3)
abdominal c	hemorrhage		1 (14)	0 (0)	1 (13)	20 (53)
	nodule		0 (0)	0 (0)	0 (0)	1 (3)
	mass		0 (0)	0 (0)	0 (0)	13 (34)
	nodular		0 (0)	0 (0)	0 (0)	1 (3)
	ascites		1 (14)	0 (0)	0 (0)	5 (13)
adipose	nodule		0 (0)	0 (0)	2 (25)	1 (3)
thoracic ca	hemorrhage		0 (0)	0 (0)	0 (0)	6 (16)
	pleural fluid		1 (14)	0 (0)	0 (0)	7 (18)
other	ear:nodule		0 (0)	0 (0)	1 (13)	0 (0)
whole body	anemic		0 (0)	0 (0)	1 (13)	0 (0)
	jaundice		0 (0)	0 (0)	0 (0)	1 (3)

APPENDIX K 2

GROSS FINDINGS (TWO-YEAR STUDIES: SUMMARY)

RAT: FEMALE: DEAD AND MORIBUND ANIMALS

STUDY NO. : 0065
ANIMAL : RAT F344
REPORT TYPE : A1
SEX : FEMALE

GROSS FINDINGS (SUMMARY)
DEAD AND MORIBUND ANIMALS (0-104W)

Organ	Findings	Group Name / NO. of Animals	Control 14 (%)	40 ppm 9 (%)	200 ppm 12 (%)	1000 ppm 22 (%)
subcutis	jaundice		3 (21)	0 (0)	0 (0)	2 (9)
	nodule		0 (0)	0 (0)	0 (0)	1 (5)
	mass		2 (14)	0 (0)	4 (33)	1 (5)
lung	dark		1 (7)	0 (0)	0 (0)	0 (0)
	red		1 (7)	2 (22)	4 (33)	8 (36)
	red patch/zone		0 (0)	0 (0)	2 (17)	0 (0)
	white zone		1 (7)	0 (0)	0 (0)	0 (0)
	red zone		2 (14)	0 (0)	1 (8)	1 (5)
	yellow zone		1 (7)	0 (0)	0 (0)	0 (0)
	edema		0 (0)	0 (0)	1 (8)	0 (0)
	nodule		1 (7)	0 (0)	0 (0)	2 (9)
lymph node	enlarged		3 (21)	0 (0)	2 (17)	0 (0)
	red		1 (7)	1 (11)	2 (17)	4 (18)
spleen	enlarged		6 (43)	1 (11)	6 (50)	11 (50)
	atrophic		0 (0)	1 (11)	0 (0)	0 (0)
	turbid		1 (7)	0 (0)	1 (8)	2 (9)
	white zone		0 (0)	0 (0)	0 (0)	1 (5)
	nodule		1 (7)	0 (0)	1 (8)	9 (41)
	deformed		0 (0)	0 (0)	3 (25)	6 (27)
	rough		0 (0)	0 (0)	1 (8)	0 (0)
	granular		0 (0)	0 (0)	3 (25)	12 (55)
heart	white zone		0 (0)	0 (0)	0 (0)	1 (5)

STUDY NO. : 0065
ANIMAL : RAT F344
REPORT TYPE : A1
SEX : FEMALE

GROSS FINDINGS (SUMMARY)
DEAD AND MORIBUND ANIMALS (0-104W)

Organ	Findings	Group Name / NO. of Animals	Control 14 (%)	40 ppm 9 (%)	200 ppm 12 (%)	1000 ppm 22 (%)
heart	dilated		0 (0)	0 (0)	1 (8)	0 (0)
	fluid:red		0 (0)	0 (0)	0 (0)	1 (5)
forestomach	yellow		0 (0)	0 (0)	0 (0)	1 (5)
	red patch/zone		0 (0)	1 (11)	0 (0)	0 (0)
	nodule		0 (0)	1 (11)	0 (0)	0 (0)
	rupture		1 (7)	0 (0)	0 (0)	0 (0)
	ulcer		4 (29)	2 (22)	1 (8)	4 (18)
	thick		2 (14)	0 (0)	0 (0)	0 (0)
gl stomach	red patch/zone		1 (7)	0 (0)	0 (0)	0 (0)
	black patch/zone		1 (7)	0 (0)	1 (8)	2 (9)
	nodule		0 (0)	0 (0)	0 (0)	1 (5)
	ulcer		6 (43)	1 (11)	2 (17)	2 (9)
	erosion		0 (0)	0 (0)	1 (8)	0 (0)
	thick		3 (21)	0 (0)	1 (8)	1 (5)
	fluid:black		2 (14)	2 (22)	0 (0)	2 (9)
liver	enlarged		0 (0)	0 (0)	0 (0)	1 (5)
	pale		3 (21)	0 (0)	0 (0)	0 (0)
	white zone		0 (0)	0 (0)	1 (8)	1 (5)
	red zone		0 (0)	0 (0)	0 (0)	1 (5)
	yellow zone		0 (0)	0 (0)	1 (8)	0 (0)
	nodule		1 (7)	0 (0)	0 (0)	7 (32)
	granular		3 (21)	0 (0)	0 (0)	0 (0)

STUDY NO. : 0065
ANIMAL : RAT F344
REPORT TYPE : A1
SEX : FEMALE

GROSS FINDINGS (SUMMARY)
DEAD AND MORIBUND ANIMALS (0-104W)

Organ	Findings	Group Name NO. of Animals	Control 14 (%)	40 ppm 9 (%)	200 ppm 12 (%)	1000 ppm 22 (%)
liver	adhesion		0 (0)	0 (0)	0 (0)	1 (5)
	herniation		3 (21)	2 (22)	1 (8)	0 (0)
pancreas	nodule		0 (0)	0 (0)	0 (0)	3 (14)
kidney	dark		0 (0)	0 (0)	0 (0)	1 (5)
	red		0 (0)	0 (0)	0 (0)	1 (5)
	black		0 (0)	0 (0)	0 (0)	3 (14)
	nodule		0 (0)	0 (0)	0 (0)	1 (5)
	granular		0 (0)	0 (0)	0 (0)	1 (5)
urin bladd	fluid:red		0 (0)	0 (0)	0 (0)	1 (5)
pituitary	enlarged		3 (21)	4 (44)	3 (25)	3 (14)
	red patch/zone		0 (0)	0 (0)	1 (8)	0 (0)
	red zone		1 (7)	0 (0)	1 (8)	0 (0)
	brown zone		1 (7)	0 (0)	0 (0)	0 (0)
	nodule		2 (14)	0 (0)	2 (17)	2 (9)
adrenal	enlarged		0 (0)	0 (0)	0 (0)	1 (5)
ovary	fluid:yellow		0 (0)	0 (0)	1 (8)	0 (0)
uterus	nodule		1 (7)	2 (22)	1 (8)	2 (9)
	mass		0 (0)	0 (0)	0 (0)	1 (5)
vagina	nodule		1 (7)	0 (0)	0 (0)	0 (0)
	mass		0 (0)	1 (11)	0 (0)	0 (0)
	fluid:white		0 (0)	1 (11)	0 (0)	0 (0)
	fluid:green		0 (0)	0 (0)	0 (0)	1 (5)

Organ	Findings	Group Name / NO. of Animals	Control 14 (%)	40 ppm 9 (%)	200 ppm 12 (%)	1000 ppm 22 (%)
spinal cord	hemorrhage		0 (0)	0 (0)	1 (8)	0 (0)
eye	white		0 (0)	0 (0)	0 (0)	1 (5)
	red		1 (7)	1 (11)	0 (0)	0 (0)
Harder gl	red patch/zone		0 (0)	0 (0)	0 (0)	2 (9)
	black patch/zone		0 (0)	0 (0)	0 (0)	5 (23)
Zymbal gl	nodule		0 (0)	1 (11)	0 (0)	1 (5)
muscle	nodule		1 (7)	0 (0)	0 (0)	0 (0)
bone	induration		1 (7)	0 (0)	0 (0)	0 (0)
vertebra	nodule		0 (0)	0 (0)	0 (0)	1 (5)
pleura	nodule		0 (0)	0 (0)	0 (0)	1 (5)
mediastinum	nodule		0 (0)	0 (0)	0 (0)	1 (5)
	mass		0 (0)	0 (0)	0 (0)	1 (5)
peritoneum	nodule		0 (0)	0 (0)	0 (0)	7 (32)
abdominal c	hemorrhage		0 (0)	0 (0)	3 (25)	10 (45)
	nodule		0 (0)	0 (0)	0 (0)	2 (9)
	mass		1 (7)	0 (0)	1 (8)	4 (18)
	ascites		0 (0)	0 (0)	0 (0)	3 (14)
adipose	nodule		0 (0)	0 (0)	1 (8)	0 (0)
thoracic ca	hemorrhage		1 (7)	0 (0)	0 (0)	5 (23)
	pleural fluid		3 (21)	0 (0)	2 (17)	2 (9)
other	mass		0 (0)	1 (11)	0 (0)	0 (0)
	thick		1 (7)	0 (0)	0 (0)	0 (0)

STUDY NO. : 0065
ANIMAL : RAT F344
REPORT TYPE : AI
SEX : FEMALE

GROSS FINDINGS (SUMMARY)
DEAD AND MORIBUND ANIMALS (0-104W)

Organ	Findings	Group Name NO. of Animals	Control 14 (%)	40 ppm 9 (%)	200 ppm 12 (%)	1000 ppm 22 (%)
whole body	dark		0 (0)	0 (0)	0 (0)	1 (5)
	brown		0 (0)	0 (0)	0 (0)	1 (5)
	wasting		0 (0)	0 (0)	1 (8)	0 (0)

APPENDIX K 3

GROSS FINDINGS (TWO-YEAR STUDIES: SUMMARY)

RAT: MALE: SACRIFICED ANIMALS

STUDY NO. : 0065
ANIMAL : RAT F344
REPORT TYPE : A1
SEX : MALE

GROSS FINDINGS (SUMMARY)
SACRIFICED ANIMALS (104W)

Organ	Findings	Group Name / NO. of Animals	Control 43 (%)	40 ppm 46 (%)	200 ppm 42 (%)	1000 ppm 12 (%)
skin/app	nodule		1 (2)	1 (2)	0 (0)	0 (0)
subcutis	mass		7 (16)	10 (22)	7 (17)	1 (8)
lung	red patch/zone		1 (2)	0 (0)	1 (2)	0 (0)
	white zone		0 (0)	0 (0)	1 (2)	0 (0)
	congestion		1 (2)	0 (0)	0 (0)	0 (0)
	nodule		6 (14)	3 (7)	3 (7)	0 (0)
lymph node	enlarged		1 (2)	1 (2)	3 (7)	2 (17)
spleen	enlarged		8 (19)	7 (15)	27 (64)	4 (33)
	atrophic		0 (0)	0 (0)	2 (5)	0 (0)
	turbid		0 (0)	0 (0)	20 (48)	0 (0)
	brown		2 (5)	1 (2)	2 (5)	0 (0)
	white zone		0 (0)	0 (0)	2 (5)	0 (0)
	brown zone		0 (0)	0 (0)	4 (10)	0 (0)
	infarct		0 (0)	0 (0)	6 (14)	0 (0)
	nodule		0 (0)	0 (0)	7 (17)	12 (100)
	cyst		0 (0)	0 (0)	21 (50)	1 (8)
	deformed		1 (2)	0 (0)	5 (12)	2 (17)
	rough		0 (0)	0 (0)	35 (83)	2 (17)
oral cavity	nodule		0 (0)	0 (0)	1 (2)	0 (0)
tongue	tongue:nodule		1 (2)	0 (0)	0 (0)	0 (0)
forestomach	ulcer		0 (0)	1 (2)	0 (0)	0 (0)
gl stomach	red zone		1 (2)	0 (0)	0 (0)	0 (0)

STUDY NO. : 0065
ANIMAL : RAT F344
REPORT TYPE : A1
SEX : MALE

GROSS FINDINGS (SUMMARY)
SACRIFICED ANIMALS (104W)

Organ	Findings	Group Name / NO. of Animals	Control 43 (%)	40 ppm 46 (%)	200 ppm 42 (%)	1000 ppm 12 (%)
gl stomach	nodule		1 (2)	1 (2)	0 (0)	0 (0)
	ulcer		1 (2)	1 (2)	1 (2)	0 (0)
small intes	adhesion		0 (0)	0 (0)	0 (0)	1 (8)
liver	enlarged		1 (2)	0 (0)	0 (0)	1 (8)
	yellow		1 (2)	1 (2)	0 (0)	0 (0)
	red zone		0 (0)	0 (0)	0 (0)	1 (8)
	nodule		2 (5)	6 (13)	2 (5)	1 (8)
	cyst		0 (0)	1 (2)	0 (0)	0 (0)
	rough		3 (7)	0 (0)	2 (5)	0 (0)
	herniation		3 (7)	3 (7)	1 (2)	0 (0)
pancreas	nodule		2 (5)	5 (11)	5 (12)	6 (50)
kidney	enlarged		0 (0)	1 (2)	0 (0)	0 (0)
	brown		0 (0)	1 (2)	0 (0)	0 (0)
	black		2 (5)	0 (0)	0 (0)	0 (0)
	granular		16 (37)	28 (61)	31 (74)	4 (33)
pituitary	enlarged		9 (21)	5 (11)	6 (14)	1 (8)
	red patch/zone		3 (7)	1 (2)	1 (2)	0 (0)
	red zone		2 (5)	0 (0)	2 (5)	1 (8)
	nodule		6 (14)	5 (11)	9 (21)	1 (8)
thyroid	enlarged		0 (0)	3 (7)	3 (7)	2 (17)
	red patch/zone		0 (0)	1 (2)	0 (0)	0 (0)
	black patch/zone		0 (0)	1 (2)	1 (2)	1 (8)

Organ	Findings	Group Name NO. of Animals	Control 43 (%)	40 ppm 46 (%)	200 ppm 42 (%)	1000 ppm 12 (%)
thyroid	nodule		1 (2)	0 (0)	2 (5)	0 (0)
adrenal	enlarged		2 (5)	4 (9)	1 (2)	2 (17)
	nodule		0 (0)	0 (0)	0 (0)	2 (17)
testis	enlarged		2 (5)	3 (7)	3 (7)	0 (0)
	atrophic		10 (23)	9 (20)	12 (29)	3 (25)
	brown		0 (0)	0 (0)	1 (2)	0 (0)
	nodule		37 (86)	45 (98)	40 (95)	11 (92)
	cyst		2 (5)	1 (2)	0 (0)	1 (8)
prep/cli gl	nodule		3 (7)	5 (11)	2 (5)	0 (0)
eye	turbid		1 (2)	0 (0)	0 (0)	2 (17)
	white		0 (0)	0 (0)	1 (2)	0 (0)
	white zone		0 (0)	1 (2)	0 (0)	0 (0)
Harder gl	red patch/zone		0 (0)	0 (0)	0 (0)	1 (8)
	nodule		0 (0)	1 (2)	0 (0)	0 (0)
Zymbal gl	nodule		1 (2)	1 (2)	0 (0)	0 (0)
bone	nodule		1 (2)	0 (0)	0 (0)	0 (0)
pleura	nodule		0 (0)	0 (0)	0 (0)	1 (8)
mediastinum	nodule		0 (0)	0 (0)	0 (0)	2 (17)
peritoneum	nodule		3 (7)	0 (0)	0 (0)	3 (25)
abdominal c	ascites		2 (5)	0 (0)	0 (0)	1 (8)
adipose	nodule		4 (9)	8 (17)	4 (10)	1 (8)
thoracic ca	pleural fluid		1 (2)	0 (0)	0 (0)	0 (0)

Organ	Findings	Group Name / NO. of Animals	Control 43 (%)	40 ppm 46 (%)	200 ppm 42 (%)	1000 ppm 12 (%)
other	nodule		0 (0)	1 (2)	0 (0)	0 (0)
	tail:nodule		1 (2)	1 (2)	0 (0)	1 (8)
whole body	dark		0 (0)	0 (0)	0 (0)	10 (83)
	colored		0 (0)	0 (0)	0 (0)	2 (17)
	anemic		0 (0)	1 (2)	1 (2)	0 (0)

APPENDIX K 4

GROSS FINDINGS (TWO-YEAR STUDIES: SUMMARY)

RAT: FEMALE: SACRIFICED ANIMALS

STUDY NO. : 0065
ANIMAL : RAT F344
REPORT TYPE : A1
SEX : FEMALE

GROSS FINDINGS (SUMMARY)
SACRIFICED ANIMALS (104W)

Organ	Findings	Group Name / NO. of Animals	Control 36 (%)	40 ppm 41 (%)	200 ppm 38 (%)	1000 ppm 28 (%)
subcutis	jaundice		0 (0)	0 (0)	0 (0)	1 (4)
	mass		13 (36)	7 (17)	10 (26)	9 (32)
	cyst		0 (0)	0 (0)	1 (3)	0 (0)
lung	black patch/zone		0 (0)	0 (0)	1 (3)	0 (0)
	white zone		0 (0)	1 (2)	0 (0)	0 (0)
	red zone		0 (0)	0 (0)	1 (3)	0 (0)
	nodule		1 (3)	1 (2)	1 (3)	0 (0)
lymph node	enlarged		0 (0)	0 (0)	2 (5)	2 (7)
spleen	enlarged		4 (11)	2 (5)	36 (95)	21 (75)
	turbid		0 (0)	0 (0)	26 (68)	14 (50)
	brown		0 (0)	0 (0)	3 (8)	1 (4)
	white zone		0 (0)	0 (0)	1 (3)	2 (7)
	brown zone		0 (0)	0 (0)	1 (3)	0 (0)
	infarct		0 (0)	0 (0)	3 (8)	4 (14)
	nodule		0 (0)	0 (0)	2 (5)	19 (68)
	cyst		0 (0)	0 (0)	13 (34)	6 (21)
	deformed		0 (0)	1 (2)	3 (8)	9 (32)
	rough		0 (0)	0 (0)	36 (95)	22 (79)
heart	white zone		0 (0)	0 (0)	0 (0)	1 (4)
oral cavity	nodule		1 (3)	0 (0)	0 (0)	0 (0)
salivary gl	nodule		0 (0)	1 (2)	0 (0)	0 (0)
forestomach	ulcer		0 (0)	0 (0)	1 (3)	1 (4)

Organ	Findings	Group Name / NO. of Animals	Control 36 (%)	40 ppm 41 (%)	200 ppm 38 (%)	1000 ppm 28 (%)
gl stomach	ulcer		0 (0)	0 (0)	0 (0)	1 (4)
	erosion		0 (0)	0 (0)	1 (3)	0 (0)
rectum	nodule		1 (3)	0 (0)	0 (0)	1 (4)
liver	dark		0 (0)	0 (0)	1 (3)	1 (4)
	yellow		0 (0)	0 (0)	1 (3)	0 (0)
	brown		0 (0)	0 (0)	1 (3)	2 (7)
	black		0 (0)	0 (0)	0 (0)	2 (7)
	red zone		1 (3)	1 (2)	1 (3)	0 (0)
	nodule		0 (0)	1 (2)	1 (3)	3 (11)
	cyst		0 (0)	0 (0)	0 (0)	1 (4)
	rough		5 (14)	0 (0)	1 (3)	0 (0)
	granular		0 (0)	0 (0)	1 (3)	0 (0)
	herniation		2 (6)	2 (5)	5 (13)	1 (4)
pancreas	red		0 (0)	0 (0)	1 (3)	0 (0)
	black		0 (0)	0 (0)	0 (0)	1 (4)
	nodule		2 (6)	1 (2)	5 (13)	22 (79)
	mass		0 (0)	0 (0)	1 (3)	0 (0)
kidney	dark		0 (0)	0 (0)	1 (3)	0 (0)
	black		0 (0)	0 (0)	1 (3)	4 (14)
	granular		3 (8)	9 (22)	2 (5)	1 (4)
pituitary	enlarged		9 (25)	11 (27)	4 (11)	3 (11)
	red		1 (3)	1 (2)	0 (0)	0 (0)

Organ	Findings	Group Name / NO. of Animals	Control 36 (%)	40 ppm 41 (%)	200 ppm 38 (%)	1000 ppm 28 (%)
pituitary	red patch/zone		2 (6)	3 (7)	5 (13)	1 (4)
	white zone		1 (3)	0 (0)	0 (0)	0 (0)
	red zone		0 (0)	0 (0)	1 (3)	2 (7)
	nodule		11 (31)	12 (29)	12 (32)	6 (21)
	cyst		0 (0)	0 (0)	1 (3)	0 (0)
thyroid	enlarged		1 (3)	1 (2)	0 (0)	0 (0)
	red patch/zone		0 (0)	0 (0)	1 (3)	0 (0)
	black patch/zone		0 (0)	0 (0)	1 (3)	0 (0)
	nodule		1 (3)	1 (2)	0 (0)	0 (0)
adrenal	enlarged		0 (0)	1 (2)	1 (3)	3 (11)
	brown		0 (0)	1 (2)	0 (0)	0 (0)
ovary	enlarged		1 (3)	0 (0)	0 (0)	0 (0)
	nodule		0 (0)	0 (0)	0 (0)	1 (4)
	cyst		1 (3)	1 (2)	1 (3)	2 (7)
uterus	atrophic		1 (3)	0 (0)	0 (0)	0 (0)
	nodule		8 (22)	6 (15)	1 (3)	6 (21)
prep/cli gl	nodule		3 (8)	1 (2)	4 (11)	1 (4)
eye	white		1 (3)	0 (0)	0 (0)	0 (0)
Harder gl	red patch/zone		0 (0)	0 (0)	0 (0)	18 (64)
Zymbal gl	nodule		0 (0)	0 (0)	1 (3)	0 (0)
mediastinum	nodule		0 (0)	0 (0)	0 (0)	1 (4)
peritoneum	nodule		0 (0)	0 (0)	0 (0)	2 (7)

Organ	Findings	Group Name / NO. of Animals	Control 36 (%)	40 ppm 41 (%)	200 ppm 38 (%)	1000 ppm 28 (%)
retroperit	nodule		1 (3)	0 (0)	0 (0)	0 (0)
abdominal c	hemorrhage		0 (0)	0 (0)	1 (3)	0 (0)
	ascites		0 (0)	0 (0)	0 (0)	1 (4)
adipose	nodule		1 (3)	0 (0)	1 (3)	1 (4)
thoracic ca	hemorrhage		0 (0)	0 (0)	1 (3)	1 (4)
	pleural fluid		0 (0)	0 (0)	0 (0)	2 (7)
other	nodule		1 (3)	1 (2)	0 (0)	0 (0)
	tail:nodule		0 (0)	0 (0)	1 (3)	0 (0)
	ear:nodule		0 (0)	1 (2)	0 (0)	2 (7)
whole body	colored		0 (0)	0 (0)	1 (3)	24 (86)
	wasting		1 (3)	0 (0)	1 (3)	1 (4)

APPENDIX K 5

GROSS FINDINGS (TWO-YEAR STUDIES: SUMMARY)

MOUSE: MALE: DEAD AND MORIBUND ANIMALS

STUDY NO. : 0066
ANIMAL : MOUSE BDF1
REPORT TYPE : A1
SEX : MALE

GROSS FINDINGS (SUMMARY)
DEAD AND MORIBUND ANIMALS (0-104W)

Organ	Findings	Group Name / NO. of Animals	Control 3 (%)	125 ppm 1 (%)	500 ppm 8 (%)	2000 ppm 12 (%)
subcutis	edema		0 (0)	0 (0)	1 (13)	1 (8)
lung	red		1 (33)	0 (0)	2 (25)	1 (8)
	red patch/zone		0 (0)	0 (0)	1 (13)	0 (0)
	red zone		0 (0)	0 (0)	1 (13)	1 (8)
	congestion		0 (0)	0 (0)	0 (0)	1 (8)
	edema		0 (0)	0 (0)	0 (0)	2 (17)
	adhesion		0 (0)	0 (0)	0 (0)	1 (8)
lymph node	enlarged		1 (33)	0 (0)	0 (0)	3 (25)
spleen	enlarged		1 (33)	0 (0)	0 (0)	3 (25)
	atrophic		0 (0)	1 (100)	0 (0)	0 (0)
	nodule		2 (67)	0 (0)	0 (0)	1 (8)
heart	white zone		0 (0)	0 (0)	1 (13)	1 (8)
	dilated		0 (0)	0 (0)	0 (0)	1 (8)
forestomach	ulcer		0 (0)	1 (100)	2 (25)	0 (0)
gl stomach	red		0 (0)	0 (0)	1 (13)	0 (0)
	fluid:black		0 (0)	0 (0)	1 (13)	0 (0)
stomach	fluid:red		0 (0)	0 (0)	1 (13)	0 (0)
duodenum	red		0 (0)	0 (0)	1 (13)	0 (0)
jejunum	fluid:red		0 (0)	0 (0)	1 (13)	0 (0)
small intes	fluid:black		1 (33)	0 (0)	0 (0)	0 (0)
colon	nodule		0 (0)	0 (0)	0 (0)	1 (8)
liver	enlarged		0 (0)	0 (0)	0 (0)	2 (17)

STUDY NO. : 0066
ANIMAL : MOUSE BDF1
REPORT TYPE : A1
SEX : MALE

GROSS FINDINGS (SUMMARY)
DEAD AND MORIBUND ANIMALS (0-104W)

Organ	Findings	Group Name NO. of Animals	Control 3 (%)	125 ppm 1 (%)	500 ppm 8 (%)	2000 ppm 12 (%)
liver	red		0 (0)	1 (100)	0 (0)	0 (0)
	white zone		0 (0)	0 (0)	1 (13)	1 (8)
	green zone		1 (33)	0 (0)	1 (13)	0 (0)
	black zone		0 (0)	0 (0)	0 (0)	1 (8)
	nodule		1 (33)	0 (0)	3 (38)	4 (33)
kidney	pale		0 (0)	0 (0)	1 (13)	1 (8)
	hydronephrosis		1 (33)	0 (0)	0 (0)	0 (0)
urin bladd	urine:marked retention		0 (0)	0 (0)	0 (0)	2 (17)
thyroid	enlarged		0 (0)	0 (0)	1 (13)	0 (0)
epididymis	nodule		0 (0)	0 (0)	1 (13)	0 (0)
brain	hemorrhage		0 (0)	0 (0)	1 (13)	0 (0)
peritoneum	nodule		0 (0)	0 (0)	0 (0)	1 (8)
abdominal c	hemorrhage		2 (67)	0 (0)	0 (0)	1 (8)
	mass		0 (0)	0 (0)	0 (0)	1 (8)
	ascites		0 (0)	0 (0)	1 (13)	1 (8)
adipose	nodule		0 (0)	0 (0)	1 (13)	1 (8)
thoracic ca	mass		0 (0)	0 (0)	1 (13)	0 (0)
	pleural fluid		0 (0)	0 (0)	1 (13)	2 (17)
other	nodule		0 (0)	0 (0)	1 (13)	0 (0)
whole body	wasting		0 (0)	0 (0)	1 (13)	0 (0)

APPENDIX K 6

GROSS FINDINGS (TWO-YEAR STUDIES: SUMMARY)

MOUSE: FEMALE: DEAD AND MORIBUND ANIMALS

Organ	Findings	Group Name NO. of Animals	Control 18 (%)	125 ppm 15 (%)	500 ppm 15 (%)	2000 ppm 21 (%)
subcutis	red zone		1 (6)	0 (0)	0 (0)	0 (0)
	edema		6 (33)	2 (13)	3 (20)	1 (5)
	mass		0 (0)	0 (0)	1 (7)	0 (0)
lung	white		0 (0)	0 (0)	0 (0)	1 (5)
	red		5 (28)	2 (13)	2 (13)	3 (14)
	white patch/zone		0 (0)	1 (7)	1 (7)	0 (0)
	white zone		0 (0)	1 (7)	0 (0)	2 (10)
	red zone		1 (6)	1 (7)	4 (27)	1 (5)
	edema		2 (11)	2 (13)	0 (0)	7 (33)
	nodule		3 (17)	2 (13)	0 (0)	1 (5)
	atelectasis		0 (0)	0 (0)	0 (0)	1 (5)
lymph node	enlarged		6 (33)	4 (27)	6 (40)	3 (14)
	red		0 (0)	1 (7)	1 (7)	0 (0)
thymus	atrophic		1 (6)	0 (0)	0 (0)	1 (5)
spleen	enlarged		4 (22)	4 (27)	8 (53)	7 (33)
	pale		1 (6)	0 (0)	0 (0)	0 (0)
	black		0 (0)	0 (0)	0 (0)	1 (5)
	white patch/zone		0 (0)	0 (0)	1 (7)	0 (0)
	white zone		1 (6)	0 (0)	1 (7)	0 (0)
	black zone		1 (6)	0 (0)	0 (0)	0 (0)
	nodule		0 (0)	0 (0)	2 (13)	4 (19)
heart	white zone		0 (0)	0 (0)	0 (0)	1 (5)

Organ	Findings	Group Name NO. of Animals	Control 18 (%)	125 ppm 15 (%)	500 ppm 15 (%)	2000 ppm 21 (%)
heart	cyst		0 (0)	0 (0)	0 (0)	1 (5)
	dilated		0 (0)	0 (0)	0 (0)	3 (14)
forestomach	ulcer		1 (6)	0 (0)	0 (0)	0 (0)
	thick		1 (6)	0 (0)	0 (0)	0 (0)
gl stomach	red patch/zone		1 (6)	0 (0)	0 (0)	0 (0)
	red zone		0 (0)	0 (0)	1 (7)	0 (0)
	hemorrhage		0 (0)	0 (0)	0 (0)	1 (5)
	thick		1 (6)	2 (13)	0 (0)	1 (5)
	fluid:black		2 (11)	1 (7)	1 (7)	0 (0)
liver	enlarged		4 (22)	3 (20)	2 (13)	3 (14)
	pale		0 (0)	1 (7)	1 (7)	0 (0)
	dark		0 (0)	0 (0)	0 (0)	2 (10)
	brown		0 (0)	0 (0)	0 (0)	2 (10)
	red patch/zone		0 (0)	0 (0)	0 (0)	1 (5)
	black patch/zone		0 (0)	1 (7)	0 (0)	0 (0)
	white zone		3 (17)	4 (27)	3 (20)	2 (10)
	red zone		0 (0)	1 (7)	1 (7)	0 (0)
	black zone		0 (0)	0 (0)	1 (7)	0 (0)
	nodule		2 (11)	1 (7)	5 (33)	3 (14)
	rough		1 (6)	0 (0)	0 (0)	0 (0)
	granular		0 (0)	0 (0)	1 (7)	0 (0)
	adhesion		0 (0)	1 (7)	1 (7)	0 (0)

Organ	Findings	Group Name NO. of Animals	Control 18 (%)	125 ppm 15 (%)	500 ppm 15 (%)	2000 ppm 21 (%)
gall bladd	dilated		0 (0)	1 (7)	0 (0)	0 (0)
pancreas	nodule		0 (0)	1 (7)	0 (0)	0 (0)
	nodular		0 (0)	1 (7)	0 (0)	0 (0)
kidney	enlarged		1 (6)	0 (0)	0 (0)	0 (0)
	pale		0 (0)	0 (0)	2 (13)	1 (5)
	white		0 (0)	1 (7)	0 (0)	0 (0)
	yellow zone		1 (6)	0 (0)	0 (0)	0 (0)
	nodule		0 (0)	0 (0)	1 (7)	0 (0)
	hydronephrosis		1 (6)	1 (7)	1 (7)	0 (0)
ureter	dilated		0 (0)	1 (7)	0 (0)	0 (0)
pituitary	nodule		0 (0)	0 (0)	1 (7)	0 (0)
ovary	enlarged		0 (0)	2 (13)	4 (27)	1 (5)
	nodule		0 (0)	0 (0)	1 (7)	0 (0)
	cyst		1 (6)	1 (7)	1 (7)	0 (0)
	fluid:transparent		3 (17)	0 (0)	0 (0)	1 (5)
uterus	enlarged		0 (0)	0 (0)	0 (0)	1 (5)
	nodule		3 (17)	5 (33)	6 (40)	2 (10)
	dilated		0 (0)	0 (0)	0 (0)	1 (5)
brain	red patch/zone		1 (6)	0 (0)	0 (0)	0 (0)
Harder gl	nodule		0 (0)	1 (7)	0 (0)	0 (0)
mediastinum	nodule		0 (0)	0 (0)	0 (0)	1 (5)
	mass		0 (0)	0 (0)	0 (0)	1 (5)

Organ	Findings	Group Name NO. of Animals	Control 18 (%)	125 ppm 15 (%)	500 ppm 15 (%)	2000 ppm 21 (%)
peritoneum	red patch/zone		0 (0)	0 (0)	1 (7)	0 (0)
abdominal c	hemorrhage		1 (6)	4 (27)	4 (27)	2 (10)
	ascites		7 (39)	4 (27)	6 (40)	4 (19)
adipose	yellow		0 (0)	0 (0)	1 (7)	0 (0)
	nodule		1 (6)	0 (0)	0 (0)	1 (5)
thoracic ca	hemorrhage		1 (6)	0 (0)	0 (0)	0 (0)
	pleural fluid		6 (33)	5 (33)	5 (33)	8 (38)
other	hemorrhage		1 (6)	0 (0)	0 (0)	0 (0)
	nodule		1 (6)	0 (0)	1 (7)	1 (5)
	lip:nodule		0 (0)	0 (0)	0 (0)	1 (5)
	forelimb:nodule		0 (0)	1 (7)	0 (0)	0 (0)
whole body	anemic		0 (0)	2 (13)	0 (0)	0 (0)
	wasting		1 (6)	0 (0)	0 (0)	2 (10)

APPENDIX K 7

GROSS FINDINGS (TWO-YEAR STUDIES: SUMMARY)

MOUSE: MALE: SACRIFICED ANIMALS

STUDY NO. : 0066
ANIMAL : MOUSE BDF1
REPORT TYPE : A1
SEX : MALE

GROSS FINDINGS (SUMMARY)
SACRIFICED ANIMALS (104W)

Organ	Findings	Group Name / NO. of Animals	Control 47 (%)	125 ppm 49 (%)	500 ppm 42 (%)	2000 ppm 38 (%)
skin/app	ulcer		1 (2)	0 (0)	0 (0)	0 (0)
subcutis	mass		0 (0)	0 (0)	0 (0)	1 (3)
lung	white zone		0 (0)	1 (2)	0 (0)	0 (0)
	red zone		0 (0)	1 (2)	0 (0)	0 (0)
	yellow zone		0 (0)	1 (2)	0 (0)	0 (0)
	nodule		2 (4)	4 (8)	5 (12)	6 (16)
lymph node	enlarged		2 (4)	3 (6)	1 (2)	4 (11)
spleen	enlarged		1 (2)	2 (4)	0 (0)	2 (5)
	pale		1 (2)	0 (0)	0 (0)	0 (0)
	dark		0 (0)	0 (0)	1 (2)	0 (0)
	red		0 (0)	1 (2)	0 (0)	0 (0)
	black zone		2 (4)	5 (10)	2 (5)	0 (0)
	nodule		2 (4)	0 (0)	2 (5)	2 (5)
forestomach	nodule		0 (0)	0 (0)	2 (5)	0 (0)
	ulcer		0 (0)	0 (0)	1 (2)	0 (0)
gl stomach	nodule		0 (0)	0 (0)	0 (0)	1 (3)
	ulcer		1 (2)	0 (0)	0 (0)	0 (0)
small intes	nodule		1 (2)	2 (4)	0 (0)	0 (0)
liver	enlarged		0 (0)	0 (0)	0 (0)	1 (3)
	yellow		0 (0)	0 (0)	1 (2)	0 (0)
	colored		0 (0)	0 (0)	0 (0)	1 (3)
	red zone		1 (2)	3 (6)	1 (2)	0 (0)

Organ	Findings	Group Name / NO. of Animals	Control 47	(%)	125 ppm 49	(%)	500 ppm 42	(%)	2000 ppm 38	(%)
liver	yellow zone		1	(2)	0	(0)	3	(7)	1	(3)
	brown zone		1	(2)	0	(0)	0	(0)	1	(3)
	nodule		8	(17)	8	(16)	6	(14)	8	(21)
	cyst		0	(0)	0	(0)	1	(2)	0	(0)
	abscess		0	(0)	1	(2)	0	(0)	0	(0)
pancreas	nodule		1	(2)	1	(2)	0	(0)	0	(0)
kidney	enlarged		1	(2)	0	(0)	0	(0)	1	(3)
	brown		0	(0)	0	(0)	0	(0)	1	(3)
	infarct		0	(0)	0	(0)	0	(0)	1	(3)
	nodule		1	(2)	0	(0)	0	(0)	0	(0)
	deformed		0	(0)	1	(2)	1	(2)	3	(8)
	hydronephrosis		1	(2)	0	(0)	1	(2)	0	(0)
ureter	dilated		0	(0)	0	(0)	1	(2)	0	(0)
urin bladd	nodule		0	(0)	1	(2)	1	(2)	0	(0)
	urine:turbid		0	(0)	1	(2)	0	(0)	0	(0)
pituitary	nodule		0	(0)	0	(0)	1	(2)	0	(0)
testis	enlarged		0	(0)	0	(0)	1	(2)	1	(3)
	nodule		0	(0)	0	(0)	0	(0)	1	(3)
epididymis	enlarged		0	(0)	0	(0)	0	(0)	1	(3)
	brown zone		1	(2)	0	(0)	0	(0)	0	(0)
	hemorrhage		0	(0)	0	(0)	0	(0)	1	(3)
prep/cli gl	nodule		1	(2)	1	(2)	1	(2)	1	(3)

Organ	Findings	Group Name / NO. of Animals	Control 47 (%)	125 ppm 49 (%)	500 ppm 42 (%)	2000 ppm 38 (%)
brain	nodule		0 (0)	0 (0)	1 (2)	0 (0)
Harder gl	nodule		2 (4)	1 (2)	1 (2)	2 (5)
Zymbal gl	mass		0 (0)	1 (2)	0 (0)	0 (0)
muscle	nodule		0 (0)	1 (2)	0 (0)	0 (0)
peritoneum	nodule		1 (2)	0 (0)	0 (0)	0 (0)
abdominal c	hemorrhage		0 (0)	1 (2)	0 (0)	0 (0)
mesenterium	hemorrhage		4 (9)	2 (4)	3 (7)	0 (0)
adipose	nodule		4 (9)	2 (4)	0 (0)	3 (8)
whole body	brown		0 (0)	0 (0)	0 (0)	1 (3)
	colored		0 (0)	0 (0)	0 (0)	36 (95)
	wasting		0 (0)	0 (0)	0 (0)	1 (3)

APPENDIX K 8

GROSS FINDINGS (TWO-YEAR STUDIES: SUMMARY)

MOUSE: FEMALE: SACRIFICED ANIMALS

Organ	Findings	Group Name / NO. of Animals	Control 32	(%)	125 ppm 35	(%)	500 ppm 35	(%)	2000 ppm 29	(%)
subcutis	nodule		0	(0)	1	(3)	0	(0)	0	(0)
	mass		1	(3)	1	(3)	2	(6)	2	(7)
nasal cavit	nodule		0	(0)	0	(0)	0	(0)	1	(3)
lung	red		2	(6)	1	(3)	0	(0)	0	(0)
	white zone		1	(3)	1	(3)	0	(0)	0	(0)
	yellow zone		0	(0)	1	(3)	1	(3)	1	(3)
	nodule		4	(13)	2	(6)	5	(14)	6	(21)
lymph node	enlarged		4	(13)	6	(17)	3	(9)	8	(28)
spleen	enlarged		2	(6)	10	(29)	5	(14)	8	(28)
	dark		0	(0)	0	(0)	1	(3)	0	(0)
	black		0	(0)	0	(0)	1	(3)	0	(0)
	black zone		1	(3)	0	(0)	0	(0)	0	(0)
	nodule		1	(3)	1	(3)	3	(9)	5	(17)
	scarred		0	(0)	0	(0)	0	(0)	1	(3)
salivary gl	enlarged		0	(0)	0	(0)	0	(0)	1	(3)
	nodule		0	(0)	1	(3)	0	(0)	0	(0)
forestomach	nodule		0	(0)	1	(3)	1	(3)	2	(7)
ileum	nodule		0	(0)	0	(0)	1	(3)	0	(0)
small intes	nodule		0	(0)	0	(0)	0	(0)	1	(3)
	fluid:black		1	(3)	0	(0)	0	(0)	0	(0)
large intes	fluid:black		1	(3)	0	(0)	0	(0)	0	(0)
liver	enlarged		1	(3)	2	(6)	1	(3)	1	(3)

STUDY NO. : 0066
ANIMAL : MOUSE BDF1
REPORT TYPE : A1
SEX : FEMALE

GROSS FINDINGS (SUMMARY)
SACRIFICED ANIMALS (104W)

Organ	Findings	Group Name NO. of Animals	Control 32 (%)	125 ppm 35 (%)	500 ppm 35 (%)	2000 ppm 29 (%)
liver	pale		0 (0)	1 (3)	1 (3)	0 (0)
	white patch/zone		0 (0)	1 (3)	0 (0)	0 (0)
	white zone		0 (0)	1 (3)	0 (0)	0 (0)
	red zone		6 (19)	7 (20)	4 (11)	0 (0)
	yellow zone		0 (0)	1 (3)	0 (0)	0 (0)
	hemorrhage		0 (0)	1 (3)	0 (0)	0 (0)
	nodule		7 (22)	8 (23)	3 (9)	11 (38)
	cyst		0 (0)	0 (0)	1 (3)	0 (0)
	ulcer		0 (0)	0 (0)	1 (3)	0 (0)
	abscess		0 (0)	1 (3)	0 (0)	0 (0)
pancreas	nodule		2 (6)	1 (3)	0 (0)	1 (3)
kidney	enlarged		2 (6)	0 (0)	2 (6)	0 (0)
	pale		0 (0)	1 (3)	0 (0)	0 (0)
	brown		0 (0)	1 (3)	0 (0)	0 (0)
	red zone		0 (0)	1 (3)	0 (0)	0 (0)
	nodule		0 (0)	0 (0)	0 (0)	1 (3)
	granular		0 (0)	1 (3)	0 (0)	0 (0)
	hydronephrosis		0 (0)	1 (3)	1 (3)	0 (0)
ureter	dilated		0 (0)	0 (0)	1 (3)	0 (0)
pituitary	enlarged		1 (3)	0 (0)	0 (0)	0 (0)
	red patch/zone		1 (3)	1 (3)	1 (3)	0 (0)
	nodule		1 (3)	0 (0)	1 (3)	0 (0)

Organ	Findings	Group Name NO. of Animals	Control 32 (%)	125 ppm 35 (%)	500 ppm 35 (%)	2000 ppm 29 (%)
ovary	enlarged		0 (0)	0 (0)	0 (0)	1 (3)
	red		1 (3)	1 (3)	0 (0)	2 (7)
	nodule		0 (0)	1 (3)	0 (0)	0 (0)
	cyst		10 (31)	13 (37)	14 (40)	10 (34)
uterus	nodule		4 (13)	5 (14)	3 (9)	6 (21)
	dilated lumen		0 (0)	0 (0)	1 (3)	0 (0)
mammary gl	nodule		0 (0)	0 (0)	0 (0)	1 (3)
Harder gl	enlarged		0 (0)	0 (0)	1 (3)	0 (0)
mediastinum	nodule		0 (0)	0 (0)	0 (0)	1 (3)
	mass		1 (3)	0 (0)	0 (0)	0 (0)
retroperit	nodule		0 (0)	1 (3)	0 (0)	0 (0)
abdominal c	hemorrhage		0 (0)	1 (3)	1 (3)	1 (3)
	ascites		1 (3)	3 (9)	0 (0)	2 (7)
mesenterium	hemorrhage		0 (0)	0 (0)	0 (0)	1 (3)
	nodule		0 (0)	1 (3)	0 (0)	0 (0)
adipose	nodule		1 (3)	1 (3)	1 (3)	0 (0)
thoracic ca	pleural fluid		1 (3)	1 (3)	1 (3)	0 (0)
whole body	colored		0 (0)	0 (0)	0 (0)	28 (97)
	wasting		3 (9)	1 (3)	0 (0)	1 (3)