

キノリンのマウスを用いた経口投与による  
がん原性試験（混水試験）報告書

試験番号：0304

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## APPENDIX A 1

CLINICAL OBSERVATION : SUMMARY, MOUSE : MALE

(2-YEAR STUDY)

STUDY NO. : 0304  
ANIMAL : MOUSE Crj:BDF1  
REPORT TYPE : A2 65

CLINICAL OBSERVATION (SUMMARY)  
ALL ANIMALS

SEX : MALE

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Clinical sign	Group Name	Administration Week-day													
		1-7	2-7	3-7	4-7	5-7	6-7	7-7	8-7	9-7	10-7	11-7	12-7	13-7	14-7
DEATH	Control	0	0	0	0	1	1	1	1	1	1	1	1	1	1
	150 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	300 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	600 ppm	1	2	2	2	2	2	3	3	3	3	3	3	3	3
MORIBUND SACRIFICE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	300 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	600 ppm	0	0	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
	150 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	300 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	600 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HUNCHBACK POSITION	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	300 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	600 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PILOERECTION	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	300 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	600 ppm	0	0	0	0	0	0	1	1	1	0	1	1	1	1
SOILED PERI GENITALIA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	300 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	600 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EXTERNAL MASS	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	300 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	600 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
INTERNAL MASS	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	300 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	600 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

STUDY NO. : 0304  
ANIMAL : MOUSE Crj:BDF1  
REPORT TYPE : A2 65

CLINICAL OBSERVATION (SUMMARY)  
ALL ANIMALS

SEX : MALE

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Clinical sign	Group Name	Administration Week-day													
		15-7	16-7	17-7	18-7	19-7	20-7	21-7	22-7	23-7	24-7	25-7	26-7	27-7	28-7
DEATH	Control	1	1	1	1	1	1	1	1	1	1	1	1	1	2
	150 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	300 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	600 ppm	3	3	3	3	3	3	3	3	3	3	3	3	3	4
MORIBUND SACRIFICE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	300 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	600 ppm	0	0	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
	150 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	300 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	600 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HUNCHBACK POSITION	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	300 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	600 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PILOERECTION	Control	0	0	0	0	0	0	0	0	0	1	1	1	1	0
	150 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	300 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	600 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SOILED PERI GENITALIA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	300 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	600 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EXTERNAL MASS	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	300 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	600 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
INTERNAL MASS	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	300 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	600 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	1

STUDY NO. : 0304  
 ANIMAL : MOUSE Crj:BDF1  
 REPORT TYPE : A2 65

CLINICAL OBSERVATION (SUMMARY)  
 ALL ANIMALS

SEX : MALE

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Clinical sign	Group Name	Administration Week-day													
		29-7	30-7	31-7	32-7	33-7	34-7	35-7	38-7	39-7	40-7	41-7	42-7	43-7	44-7
DEATH	Control	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	150 ppm	0	0	0	0	0	0	0	1	1	1	1	2	2	2
	300 ppm	0	0	0	0	0	0	0	0	0	1	1	1	1	3
	600 ppm	4	4	4	5	7	8	8	13	14	15	15	19	26	29
MORIBUND SACRIFICE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	300 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	600 ppm	0	0	0	0	0	0	0	0	0	0	1	1	1	1
LOCOMOTOR MOVEMENT DECR	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	300 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	600 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HUNCHBACK POSITION	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	300 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	600 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PILOERECTION	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0	1	0	0	0	0	0	0	0
	300 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	600 ppm	0	0	0	1	1	1	1	0	0	0	0	0	0	3
SOILED PERI GENITALIA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	300 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	600 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EXTERNAL MASS	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	300 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	600 ppm	0	0	0	0	0	0	0	0	0	0	0	0	1	0
INTERNAL MASS	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	150 ppm	0	0	1	1	2	2	2	1	1	1	1	1	1	1
	300 ppm	0	0	1	1	2	2	2	3	3	3	3	3	3	2
	600 ppm	1	2	2	2	2	2	2	3	2	2	2	2	1	1

STUDY NO. : 0304  
ANIMAL : MOUSE Crj:BDF1  
REPORT TYPE : A2 65

CLINICAL OBSERVATION (SUMMARY)  
ALL ANIMALS

SEX : MALE

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Clinical sign	Group Name	Administration Week-day													
		45-7	46-7	47-7	48-7	49-7	50-7	51-7	52-7	53-7	54-7	55-7	56-7	57-7	58-7
DEATH	Control	2	2	2	2	2	2	2	2	2	2	2	3	4	4
	150 ppm	3	4	4	4	5	5	6	6	9	9	12	13	15	15
	300 ppm	3	4	5	6	8	9	12	14	15	22	26	30	34	37
	600 ppm	31	32	33	36	37	39	41	41	43	44	45	-	-	-
MORIBUND SACRIFICE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	150 ppm	0	0	0	1	1	1	1	1	1	1	1	1	2	4
	300 ppm	0	0	0	1	2	2	2	2	3	3	4	4	5	5
	600 ppm	2	3	3	4	4	5	5	5	5	5	5	-	-	-
LOCOMOTOR MOVEMENT DECR	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0	0	1	0	0	0	0	0	0
	300 ppm	0	0	0	1	1	0	0	1	0	0	0	0	0	0
	600 ppm	0	0	0	0	0	0	0	0	0	0	-	-	-	-
HUNCHBACK POSITION	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	300 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	600 ppm	0	0	0	0	0	0	0	0	0	0	-	-	-	-
PILOERECTION	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0	0	0	0	0	0	0	1	0
	300 ppm	0	0	0	0	0	0	0	0	0	0	0	0	2	1
	600 ppm	1	1	3	0	0	2	0	0	1	1	-	-	-	-
SOILED PERI GENITALIA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	300 ppm	0	0	0	0	1	0	0	0	0	0	0	0	0	0
	600 ppm	0	0	0	0	0	0	0	0	0	0	-	-	-	-
EXTERNAL MASS	Control	0	0	0	0	0	0	0	0	0	0	1	1	0	0
	150 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	300 ppm	0	0	0	0	0	0	0	0	0	0	1	3	1	1
	600 ppm	0	0	0	1	1	0	0	0	0	0	-	-	-	-
INTERNAL MASS	Control	0	0	0	0	0	0	0	0	0	0	0	1	0	0
	150 ppm	1	0	0	0	1	1	1	2	4	5	2	3	1	1
	300 ppm	2	2	2	4	6	5	4	3	4	2	6	2	1	0
	600 ppm	0	1	1	1	2	2	1	1	1	1	-	-	-	-

STUDY NO. : 0304  
ANIMAL : MOUSE Crj:BDF1  
REPORT TYPE : A2 65

CLINICAL OBSERVATION (SUMMARY)  
ALL ANIMALS

SEX : MALE

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Clinical sign	Group Name	Administration Week-day						
		59-7	60-7	61-7	62-7	63-7	64-7	65-7
DEATH	Control	4	4	4	4	4	4	4
	150 ppm	15	17	20	20	22	26	27
	300 ppm	37	38	39	39	39	41	41
	600 ppm	-	-	-	-	-	-	-
MORIBUND SACRIFICE	Control	0	0	0	0	0	0	0
	150 ppm	4	5	7	7	7	7	8
	300 ppm	5	6	8	8	8	8	9
	600 ppm	-	-	-	-	-	-	-
LOCOMOTOR MOVEMENT DECR	Control	0	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0	0
	300 ppm	0	0	0	0	0	0	-
	600 ppm	-	-	-	-	-	-	-
HUNCHBACK POSITION	Control	0	0	0	0	0	0	0
	150 ppm	0	0	1	1	1	0	0
	300 ppm	0	0	0	1	1	1	-
	600 ppm	-	-	-	-	-	-	-
PILOERECTION	Control	0	0	0	0	0	0	0
	150 ppm	0	0	1	2	1	0	0
	300 ppm	0	0	0	1	1	1	-
	600 ppm	-	-	-	-	-	-	-
SOILED PERI GENITALIA	Control	0	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0	0
	300 ppm	0	0	0	0	0	1	-
	600 ppm	-	-	-	-	-	-	-
EXTERNAL MASS	Control	0	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0	0
	300 ppm	1	1	0	0	0	0	-
	600 ppm	-	-	-	-	-	-	-
INTERNAL MASS	Control	0	0	0	0	0	0	0
	150 ppm	4	2	1	4	3	3	2
	300 ppm	1	2	0	1	1	1	-
	600 ppm	-	-	-	-	-	-	-

STUDY NO. : 0304  
 ANIMAL : MOUSE Crj:BDF1  
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CLINICAL OBSERVATION (SUMMARY)  
 ALL ANIMALS

SEX : MALE

PAGE : 6

Clinical sign	Group Name	Administration Week-day													
		1-7	2-7	3-7	4-7	5-7	6-7	7-7	8-7	9-7	10-7	11-7	12-7	13-7	14-7
M. NOSE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	300 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	600 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. NECK	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	300 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	600 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. ABDOMEN	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	300 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	600 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. ANTERIOR. DORSUM	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	300 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	600 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. HINDLIMB	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	300 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	600 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. SCROTUM	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	300 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	600 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EDEMA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	300 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	600 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ANEMIA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	300 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	600 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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Clinical sign	Group Name	Administration Week-day													
		15-7	16-7	17-7	18-7	19-7	20-7	21-7	22-7	23-7	24-7	25-7	26-7	27-7	28-7
M. NOSE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	300 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	600 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. NECK	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	300 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	600 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. ABDOMEN	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	300 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	600 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. ANTERIOR. DORSUM	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	300 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	600 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. HINDLIMB	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	300 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	600 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. SCROTUM	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	300 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	600 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EDEMA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	300 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	600 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ANEMIA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	300 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	600 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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Clinical sign	Group Name	Administration Week-day													
		29-7	30-7	31-7	32-7	33-7	34-7	35-7	38-7	39-7	40-7	41-7	42-7	43-7	44-7
M. NOSE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	300 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	600 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. NECK	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	300 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	600 ppm	0	0	0	0	0	0	0	0	0	0	0	0	1	0
M. ABDOMEN	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	300 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	600 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. ANTERIOR, DORSUM	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	300 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	600 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. HINDLIMB	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	300 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	600 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. SCROTUM	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	300 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	600 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EDEMA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	300 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	600 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ANEMIA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	300 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	600 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	1

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Clinical sign	Group Name	Administration Week-day													
		45-7	46-7	47-7	48-7	49-7	50-7	51-7	52-7	53-7	54-7	55-7	56-7	57-7	58-7
M. NOSE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	300 ppm	0	0	0	0	0	0	0	0	0	0	0	0	1	1
	600 ppm	0	0	0	0	0	0	0	0	0	0	-	-	-	-
M. NECK	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	300 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	600 ppm	0	0	0	0	0	0	0	0	0	0	-	-	-	-
M. ABDOMEN	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	300 ppm	0	0	0	0	0	0	0	0	0	0	0	1	0	0
	600 ppm	0	0	0	0	0	0	0	0	0	0	-	-	-	-
M. ANTERIOR. DORSUM	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	300 ppm	0	0	0	0	0	0	0	0	0	0	0	1	0	0
	600 ppm	0	0	0	1	1	0	0	0	0	0	-	-	-	-
M. HINDLIMB	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	300 ppm	0	0	0	0	0	0	0	0	0	0	1	1	0	0
	600 ppm	0	0	0	0	0	0	0	0	0	0	-	-	-	-
M. SCROTUM	Control	0	0	0	0	0	0	0	0	0	0	1	1	0	0
	150 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	300 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	600 ppm	0	0	0	0	0	0	0	0	0	0	-	-	-	-
EDEMA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	300 ppm	0	0	0	0	0	0	0	0	0	0	0	1	0	0
	600 ppm	0	0	0	0	0	0	0	0	0	0	-	-	-	-
ANEMIA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	300 ppm	1	0	0	1	0	0	0	0	0	0	0	0	0	0
	600 ppm	0	0	0	0	0	0	0	0	0	1	-	-	-	-

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Clinical sign	Group Name	Administration Week-day						
		59-7	60-7	61-7	62-7	63-7	64-7	65-7
M. NOSE	Control	0	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0	0
	300 ppm	1	1	0	0	0	0	-
	600 ppm	-	-	-	-	-	-	-
M. NECK	Control	0	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0	0
	300 ppm	0	0	0	0	0	0	-
	600 ppm	-	-	-	-	-	-	-
M. ABDOMEN	Control	0	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0	0
	300 ppm	0	0	0	0	0	0	-
	600 ppm	-	-	-	-	-	-	-
M. ANTERIOR. DORSUM	Control	0	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0	0
	300 ppm	0	0	0	0	0	0	-
	600 ppm	-	-	-	-	-	-	-
M. HINDLIMB	Control	0	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0	0
	300 ppm	0	0	0	0	0	0	-
	600 ppm	-	-	-	-	-	-	-
M. SCROTUM	Control	0	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0	0
	300 ppm	0	0	0	0	0	0	-
	600 ppm	-	-	-	-	-	-	-
EDEMA	Control	0	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0	0
	300 ppm	0	0	0	0	0	0	-
	600 ppm	-	-	-	-	-	-	-
ANEMIA	Control	0	0	0	0	0	0	0
	150 ppm	0	0	1	2	1	0	0
	300 ppm	0	0	0	0	1	0	-
	600 ppm	-	-	-	-	-	-	-

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Clinical sign	Group Name	Administration Week-day													
		1-7	2-7	3-7	4-7	5-7	6-7	7-7	8-7	9-7	10-7	11-7	12-7	13-7	14-7
IRREGULAR BREATHING	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	300 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	600 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ABNORMAL RESPIRATION	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	300 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	600 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
YELLOW URINE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	300 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	600 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SMALL STOOL	Control	0	0	0	1	0	0	0	0	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	300 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	600 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
OLIGO-STOOL	Control	0	0	1	1	0	0	0	0	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	300 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	600 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SUBNORMAL TEMP	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	300 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	600 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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Clinical sign	Group Name	Administration Week-day													
		15-7	16-7	17-7	18-7	19-7	20-7	21-7	22-7	23-7	24-7	25-7	26-7	27-7	28-7
IRREGULAR BREATHING	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	300 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	600 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ABNORMAL RESPIRATION	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	300 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	600 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
YELLOW URINE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	300 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	600 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SMALL STOOL	Control	0	0	0	2	0	0	0	0	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	300 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	600 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
OLIGO-STOOL	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	300 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	600 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SUBNORMAL TEMP	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	300 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	600 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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Clinical sign	Group Name	Administration Week-day													
		29-7	30-7	31-7	32-7	33-7	34-7	35-7	38-7	39-7	40-7	41-7	42-7	43-7	44-7
IRREGULAR BREATHING	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0	1	0	0	0	0	0	0	0
	300 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	600 ppm	0	0	0	0	0	0	0	0	0	0	1	0	0	0
ABNORMAL RESPIRATION	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0	1	0	0	0	0	0	0	0
	300 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	600 ppm	0	0	0	0	0	0	0	0	0	0	1	0	0	0
YELLOW URINE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	300 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	600 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	1
SMALL STOOL	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	300 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	600 ppm	0	0	1	1	2	1	0	0	0	0	2	0	0	2
OLIGO-STOOL	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	150 ppm	0	0	0	0	1	1	1	0	0	0	0	0	0	1
	300 ppm	0	0	0	0	0	0	0	2	0	0	0	0	0	1
	600 ppm	0	0	2	2	2	1	0	0	0	0	2	0	0	3
SUBNORMAL TEMP	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	300 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	600 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

(HAN190)

BAIS 3

STUDY NO. : 0304  
 ANIMAL : MOUSE Crj:BDF1  
 REPORT TYPE : A2 65

CLINICAL OBSERVATION (SUMMARY)  
 ALL ANIMALS

SEX : MALE

PAGE : 14

Clinical sign	Group Name	Administration Week-day													
		45-7	46-7	47-7	48-7	49-7	50-7	51-7	52-7	53-7	54-7	55-7	56-7	57-7	58-7
IRREGULAR BREATHING	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0	0	0	0	0	0	0	1	0
	300 ppm	1	0	0	1	1	0	0	0	0	0	0	0	1	0
	600 ppm	0	0	0	0	0	1	0	0	0	0	-	-	-	-
ABNORMAL RESPIRATION	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0	0	0	0	0	0	0	1	0
	300 ppm	1	0	0	1	1	0	0	0	0	0	0	0	1	0
	600 ppm	0	0	0	0	0	1	0	0	0	0	-	-	-	-
YELLOW URINE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	300 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	600 ppm	0	0	0	0	0	0	0	0	0	0	-	-	-	-
SMALL STOOL	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	1	0	0	0	0	0	0	1	1
	300 ppm	0	0	0	0	1	0	0	0	0	0	0	0	1	1
	600 ppm	0	0	2	0	1	1	0	0	0	1	-	-	-	-
OLIGO-STOOL	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	1	0	3	0	0	0	0	2	3
	300 ppm	1	0	0	1	2	0	0	2	1	1	1	0	2	1
	600 ppm	1	2	2	0	2	1	0	0	0	0	-	-	-	-
SUBNORMAL TEMP	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	300 ppm	0	0	0	1	1	0	0	0	0	0	0	0	0	0
	600 ppm	0	0	0	0	0	0	0	0	0	0	-	-	-	-

(HAN190)

BAIS 3

STUDY NO. : 0304  
 ANIMAL : MOUSE Crj:BDF1  
 REPORT TYPE : A2 65

CLINICAL OBSERVATION (SUMMARY)  
 ALL ANIMALS

SEX : MALE

PAGE : 15

Clinical sign	Group Name	Administration Week-day						
		59-7	60-7	61-7	62-7	63-7	64-7	65-7
IRREGULAR BREATHING	Control	0	0	0	0	0	0	0
	150 ppm	0	0	0	1	1	0	0
	300 ppm	0	0	0	1	2	1	-
	600 ppm	-	-	-	-	-	-	-
ABNORMAL RESPIRATION	Control	0	0	0	0	0	0	0
	150 ppm	0	0	0	1	1	0	0
	300 ppm	0	0	0	1	2	1	-
	600 ppm	-	-	-	-	-	-	-
YELLOW URINE	Control	0	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0	0
	300 ppm	0	0	0	0	0	0	-
	600 ppm	-	-	-	-	-	-	-
SMALL STOOL	Control	0	0	0	0	0	0	0
	150 ppm	1	1	1	2	0	0	0
	300 ppm	3	1	0	1	1	1	-
	600 ppm	-	-	-	-	-	-	-
OLIGO-STOOL	Control	0	0	0	0	0	0	0
	150 ppm	3	2	1	1	1	0	0
	300 ppm	2	0	1	1	2	1	-
	600 ppm	-	-	-	-	-	-	-
SUBNORMAL TEMP	Control	0	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0	0
	300 ppm	0	0	0	0	0	1	-
	600 ppm	-	-	-	-	-	-	-

(HAN190)

BAIS 3

## APPENDIX A 2

CLINICAL OBSERVATION : SUMMARY, MOUSE : FEMALE  
(2-YEAR STUDY)

STUDY NO. : 0304  
 ANIMAL : MOUSE Crj:BDF1  
 REPORT TYPE : A1 50

CLINICAL OBSERVATION (SUMMARY)  
 ALL ANIMALS

SEX : FEMALE

PAGE : 1

Clinical sign	Group Name	Administration Week-day													
		1-7	2-7	3-7	4-7	5-7	6-7	7-7	8-7	9-7	10-7	11-7	12-7	13-7	14-7
DEATH	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	300 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	600 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MORIBUND SACRIFICE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	300 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	600 ppm	0	0	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
	150 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	300 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	600 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HUNCHBACK POSITION	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	300 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	600 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ATAXIC GAIT	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	300 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	600 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PILOERECTION	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	300 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	600 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FROG BELLY	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	300 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	600 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EXTERNAL MASS	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	300 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	600 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

STUDY NO. : 0304  
ANIMAL : MOUSE Crj:BDF1  
REPORT TYPE : A1 50

CLINICAL OBSERVATION (SUMMARY)  
ALL ANIMALS

SEX : FEMALE

PAGE : 2

Clinical sign	Group Name	Administration Week-day													
		15-7	16-7	17-7	18-7	19-7	20-7	21-7	22-7	23-7	24-7	25-7	26-7	27-7	28-7
DEATH	Control	0	0	1	1	1	1	1	1	1	1	1	1	1	1
	150 ppm	0	0	0	0	0	0	0	0	0	1	1	1	1	1
	300 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	600 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MORIBUND SACRIFICE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	300 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	600 ppm	0	0	0	0	0	0	0	0	0	0	0	0	1	1
LOCOMOTOR MOVEMENT DECR	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	300 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	600 ppm	0	0	0	0	0	0	0	0	0	0	0	0	1	0
HUNCHBACK POSITION	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	300 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	600 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ATAXIC GAIT	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	300 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	600 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PILOERECTION	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	300 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	600 ppm	0	0	0	0	0	0	0	0	0	0	0	0	1	0
FROG BELLY	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	300 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	600 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EXTERNAL MASS	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	300 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	600 ppm	0	0	0	0	0	0	0	0	0	0	0	1	1	0

STUDY NO. : 0304  
ANIMAL : MOUSE Crj:BDF1  
REPORT TYPE : A1 50

CLINICAL OBSERVATION (SUMMARY)  
ALL ANIMALS

SEX : FEMALE

PAGE : 3

Clinical sign	Group Name	Administration Week-day													
		29-7	30-7	31-7	32-7	33-7	34-7	35-7	38-7	39-7	40-7	41-7	42-7	43-7	44-7
DEATH	Control	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	150 ppm	1	1	1	1	2	4	4	5	5	5	5	5	6	7
	300 ppm	1	1	1	1	1	2	2	7	7	8	11	11	15	20
	600 ppm	1	3	3	4	7	10	13	24	30	33	38	41	43	44
MORIBUND SACRIFICE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	300 ppm	0	0	0	1	1	1	1	1	3	3	3	3	3	5
	600 ppm	1	1	1	1	1	2	3	5	5	5	5	5	6	6
LOCOMOTOR MOVEMENT DECR	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	300 ppm	0	0	0	1	1	0	0	0	0	0	0	0	0	0
	600 ppm	0	0	0	0	0	1	1	0	0	0	0	0	0	-
HUNCHBACK POSITION	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	300 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	600 ppm	0	0	0	0	1	0	0	0	0	0	0	0	0	-
ATAXIC GAIT	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	300 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	600 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	-
PILOBRECTION	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	300 ppm	0	0	0	0	0	0	1	0	1	0	1	2	6	3
	600 ppm	0	0	0	2	1	0	1	0	0	2	7	4	1	-
FROG BELLY	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	300 ppm	0	0	0	0	0	0	0	0	0	1	0	0	2	1
	600 ppm	0	0	0	0	0	0	0	0	0	0	0	1	0	-
EXTERNAL MASS	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0	0	0	0	0	0	0	1	1
	300 ppm	0	0	0	0	0	0	1	2	1	1	3	3	4	0
	600 ppm	1	0	1	3	6	7	10	7	6	5	5	2	1	-

STUDY NO. : 0304  
ANIMAL : MOUSE Crj:BDF1  
REPORT TYPE : A1 50

CLINICAL OBSERVATION (SUMMARY)  
ALL ANIMALS

SEX : FEMALE

PAGE : 4

Clinical sign	Group Name	Administration Week-day					
		45-7	46-7	47-7	48-7	49-7	50-7
DEATH	Control	1	1	1	1	1	1
	150 ppm	11	12	14	20	24	27
	300 ppm	23	28	31	34	36	37
	600 ppm	-	-	-	-	-	-
MORIBUND SACRIFICE	Control	0	0	0	0	0	0
	150 ppm	0	0	0	0	3	3
	300 ppm	5	5	6	6	7	7
	600 ppm	-	-	-	-	-	-
LOCOMOTOR MOVEMENT DECR	Control	0	0	0	0	0	0
	150 ppm	0	0	0	0	1	0
	300 ppm	0	0	0	0	0	0
	600 ppm	-	-	-	-	-	-
HUNCHBACK POSITION	Control	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0
	300 ppm	0	1	0	0	0	0
	600 ppm	-	-	-	-	-	-
ATAXIC GAIT	Control	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0
	300 ppm	0	0	0	0	0	0
	600 ppm	-	-	-	-	-	-
PILOERECTION	Control	0	0	0	0	1	1
	150 ppm	0	0	0	0	0	0
	300 ppm	1	4	3	1	0	0
	600 ppm	-	-	-	-	-	-
FROG BELLY	Control	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0
	300 ppm	0	0	0	0	0	0
	600 ppm	-	-	-	-	-	-
EXTERNAL MASS	Control	0	0	0	0	0	0
	150 ppm	1	1	0	1	1	0
	300 ppm	3	0	1	2	1	0
	600 ppm	-	-	-	-	-	-

STUDY NO. : 0304  
ANIMAL : MOUSE Crj:BDF1  
REPORT TYPE : A1 50

CLINICAL OBSERVATION (SUMMARY)  
ALL ANIMALS

SEX : FEMALE

PAGE : 5

Clinical sign	Group Name	Administration Week-day													
		1-7	2-7	3-7	4-7	5-7	6-7	7-7	8-7	9-7	10-7	11-7	12-7	13-7	14-7
INTERNAL MASS	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	300 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	600 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. NECK	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	300 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	600 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. BREAST	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	300 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	600 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. ABDOMEN	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	300 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	600 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. ANTERIOR. DORSUM	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	300 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	600 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. INTERSCAPULUM	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	300 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	600 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. POSTERIOR DORSUM	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	300 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	600 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. HINDLIMB	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	300 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	600 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

STUDY NO. : 0304  
ANIMAL : MOUSE Crj:BDF1  
REPORT TYPE : A1 50

CLINICAL OBSERVATION (SUMMARY)  
ALL ANIMALS

SEX : FEMALE

PAGE : 6

Clinical sign	Group Name	Administration Week-day													
		15-7	16-7	17-7	18-7	19-7	20-7	21-7	22-7	23-7	24-7	25-7	26-7	27-7	28-7
INTERNAL MASS	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	300 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	600 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. NECK	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	300 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	600 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. BREAST	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	300 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	600 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. ABDOMEN	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	300 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	600 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. ANTERIOR. DORSUM	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	300 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	600 ppm	0	0	0	0	0	0	0	0	0	0	0	1	1	0
M. INTERSCAPULUM	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	300 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	600 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. POSTERIOR DORSUM	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	300 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	600 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. HINDLIMB	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	300 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	600 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

STUDY NO. : 0304  
ANIMAL : MOUSE Crj:BDF1  
REPORT TYPE : A1 50

CLINICAL OBSERVATION (SUMMARY)  
ALL ANIMALS

SEX : FEMALE

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Clinical sign	Group Name	Administration Week-day													
		29-7	30-7	31-7	32-7	33-7	34-7	35-7	38-7	39-7	40-7	41-7	42-7	43-7	44-7
INTERNAL MASS	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0	0	0	0	0	0	1	2	2
	300 ppm	0	0	0	1	1	0	2	1	3	1	4	5	6	3
	600 ppm	1	0	0	0	1	1	1	4	2	2	3	3	0	-
M. NECK	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0	0	0	0	0	0	0	1	1
	300 ppm	0	0	0	0	0	0	1	2	1	0	1	1	2	0
	600 ppm	0	0	0	0	1	1	1	1	1	0	1	0	0	-
M. BREAST	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	300 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	600 ppm	0	0	0	0	0	1	2	1	1	1	0	0	0	-
M. ABDOMEN	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	300 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	600 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	-
M. ANTERIOR. DORSUM	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	300 ppm	0	0	0	0	0	0	0	0	0	1	2	2	2	0
	600 ppm	1	0	1	1	2	3	4	5	4	3	3	1	0	-
M. INTERSCAPULUM	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	300 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	600 ppm	0	0	0	1	2	1	2	0	0	0	1	1	1	-
M. POSTERIOR DORSUM	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	300 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	600 ppm	0	0	0	0	0	0	0	0	0	1	0	0	0	-
M. HINDLIMB	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	300 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	600 ppm	0	0	0	1	1	1	1	0	0	0	0	0	0	-

STUDY NO. : 0304  
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Clinical sign	Group Name	Administration Week-day					
		45-7	46-7	47-7	48-7	49-7	50-7
INTERNAL MASS	Control	0	0	0	0	0	0
	150 ppm	0	3	4	1	2	1
	300 ppm	0	4	2	0	0	2
	600 ppm	-	-	-	-	-	-
M. NECK	Control	0	0	0	0	0	0
	150 ppm	1	1	0	0	0	0
	300 ppm	0	0	0	0	0	0
	600 ppm	-	-	-	-	-	-
M. BREAST	Control	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0
	300 ppm	2	0	0	0	0	0
	600 ppm	-	-	-	-	-	-
M. ABDOMEN	Control	0	0	0	0	0	0
	150 ppm	0	0	0	1	1	0
	300 ppm	0	0	0	0	0	0
	600 ppm	-	-	-	-	-	-
M. ANTERIOR. DORSUM	Control	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0
	300 ppm	1	0	1	2	1	0
	600 ppm	-	-	-	-	-	-
M. INTERSCAPULUM	Control	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0
	300 ppm	0	0	0	0	0	0
	600 ppm	-	-	-	-	-	-
M. POSTERIOR DORSUM	Control	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0
	300 ppm	1	0	0	0	0	0
	600 ppm	-	-	-	-	-	-
M. HINDLIMB	Control	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0
	300 ppm	0	0	0	0	0	0
	600 ppm	-	-	-	-	-	-

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Clinical sign	Group Name	Administration Week-day													
		1-7	2-7	3-7	4-7	5-7	6-7	7-7	8-7	9-7	10-7	11-7	12-7	13-7	14-7
EDEMA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	300 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	600 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ANEMIA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	300 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	600 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JAUNDISE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	300 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	600 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SWELLING	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	300 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	600 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TORTICOLLIS	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	300 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	600 ppm	0	0	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
	150 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	300 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	600 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ABNORMAL RESPIRATION	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	300 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	600 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BRADYPNEA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	300 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	600 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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Clinical sign	Group Name	Administration Week-day													
		15-7	16-7	17-7	18-7	19-7	20-7	21-7	22-7	23-7	24-7	25-7	26-7	27-7	28-7
EDEMA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	300 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	600 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ANEMIA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	300 ppm	0	0	0	0	0	0	0	0	0	0	0	0	1	0
	600 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JAUNDISE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	300 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	600 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SWELLING	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0	0	0	0	0	0	1	1	0
	300 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	600 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TORTICOLLIS	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	300 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	600 ppm	0	0	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
	150 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	300 ppm	0	0	0	0	0	0	0	0	0	0	0	0	1	0
	600 ppm	0	0	0	0	0	0	0	0	0	0	0	0	1	0
ABNORMAL RESPIRATION	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	300 ppm	0	0	0	0	0	0	0	0	0	0	0	0	1	0
	600 ppm	0	0	0	0	0	0	0	0	0	0	0	0	1	0
BRADYPNEA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	300 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	600 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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Clinical sign	Group Name	Administration Week-day													
		29-7	30-7	31-7	32-7	33-7	34-7	35-7	38-7	39-7	40-7	41-7	42-7	43-7	44-7
EDEMA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	300 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	600 ppm	0	0	0	0	0	0	0	0	0	0	0	1	0	-
ANEMIA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	300 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	600 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	-
JAUNDISE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	150 ppm	0	0	0	0	1	0	0	0	0	0	0	0	0	0
	300 ppm	0	0	0	0	1	0	0	0	0	0	0	0	0	0
	600 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	-
SWELLING	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	300 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	600 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	-
TORTICOLLIS	Control	0	0	0	0	1	1	1	2	2	2	2	2	2	2
	150 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	300 ppm	0	0	0	0	0	0	0	0	0	0	0	1	0	0
	600 ppm	0	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
	150 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	300 ppm	0	0	0	1	0	0	0	0	1	0	0	1	0	1
	600 ppm	0	0	0	0	0	0	1	0	0	0	0	0	0	-
ABNORMAL RESPIRATION	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	300 ppm	0	0	0	1	0	0	0	0	1	0	0	1	0	1
	600 ppm	0	0	0	0	1	0	1	0	0	0	0	0	0	-
BRADYPNEA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	300 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	600 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	-

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CLINICAL OBSERVATION (SUMMARY)  
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Clinical sign	Group Name	Administration Week-day					
		45-7	46-7	47-7	48-7	49-7	50-7
EDEMA	Control	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0
	300 ppm	0	0	0	0	0	0
	600 ppm	-	-	-	-	-	-
ANEMIA	Control	0	0	0	0	0	0
	150 ppm	0	0	0	0	1	0
	300 ppm	0	0	0	0	0	0
	600 ppm	-	-	-	-	-	-
JAUNDISE	Control	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0
	300 ppm	0	0	0	0	0	0
	600 ppm	-	-	-	-	-	-
SWELLING	Control	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0
	300 ppm	0	0	0	0	0	0
	600 ppm	-	-	-	-	-	-
TORTICOLLIS	Control	2	2	2	2	2	2
	150 ppm	0	0	0	0	0	0
	300 ppm	0	0	0	0	0	0
	600 ppm	-	-	-	-	-	-
IRREGULAR BREATHING	Control	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0
	300 ppm	1	1	0	0	0	0
	600 ppm	-	-	-	-	-	-
ABNORMAL RESPIRATION	Control	0	0	0	0	0	0
	150 ppm	0	0	0	0	1	0
	300 ppm	1	1	0	0	0	0
	600 ppm	-	-	-	-	-	-
BRADYPNEA	Control	0	0	0	0	0	0
	150 ppm	0	0	0	0	1	0
	300 ppm	0	0	0	0	0	0
	600 ppm	-	-	-	-	-	-

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Clinical sign	Group Name	Administration Week-day													
		1-7	2-7	3-7	4-7	5-7	6-7	7-7	8-7	9-7	10-7	11-7	12-7	13-7	14-7
DEEP BREATHING	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	300 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	600 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
YELLOW URINE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	300 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	600 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SMALL STOOL	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	300 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	600 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
OLIGO-STOOL	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	300 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	600 ppm	1	0	0	0	0	0	0	0	0	0	0	0	0	0
SUBNORMAL TEMP	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	300 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	600 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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Clinical sign	Group Name	Administration Week-day													
		15-7	16-7	17-7	18-7	19-7	20-7	21-7	22-7	23-7	24-7	25-7	26-7	27-7	28-7
DEEP BREATHING	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	300 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	600 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
YELLOW URINE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	300 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	600 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SMALL STOOL	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	300 ppm	0	0	0	0	0	0	0	0	0	0	0	0	1	0
	600 ppm	0	0	0	0	0	0	0	0	0	0	0	0	1	0
OLIGO-STOOL	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	150 ppm	0	0	0	0	1	1	1	1	1	0	0	0	0	0
	300 ppm	0	0	0	0	0	0	0	0	0	0	0	0	2	0
	600 ppm	0	0	0	0	1	0	0	0	1	1	0	0	1	0
SUBNORMAL TEMP	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	300 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	600 ppm	0	0	0	0	0	0	0	0	0	0	0	0	1	0

(HAN190)

BAIS 3

STUDY NO. : 0304  
ANIMAL : MOUSE Crj:BDF1  
REPORT TYPE : A1 50

CLINICAL OBSERVATION (SUMMARY)  
ALL ANIMALS

SEX : FEMALE

PAGE : 15

Clinical sign	Group Name	Administration Week-day													
		29-7	30-7	31-7	32-7	33-7	34-7	35-7	38-7	39-7	40-7	41-7	42-7	43-7	44-7
DEEP BREATHING	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	300 ppm	0	0	0	1	0	0	0	0	0	0	0	0	0	0
	600 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	-
YELLOW URINE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	300 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	600 ppm	0	0	0	0	0	0	0	0	0	0	1	0	0	-
SMALL STOOL	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	300 ppm	0	0	0	0	0	0	2	0	1	0	0	1	1	3
	600 ppm	1	0	0	1	0	0	0	0	0	0	0	0	1	-
OLIGO-STOOL	Control	1	1	1	1	1	1	2	2	2	2	3	2	2	0
	150 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	300 ppm	0	0	0	0	1	0	2	0	1	0	2	1	2	3
	600 ppm	1	0	0	1	0	1	2	4	0	0	2	0	1	-
SUBNORMAL TEMP	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	300 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	600 ppm	0	0	0	0	0	1	1	0	0	0	0	0	0	-

(HAN190)

BAIS 3

STUDY NO. : 0304  
ANIMAL : MOUSE Crj:BDF1  
REPORT TYPE : A1 50

CLINICAL OBSERVATION (SUMMARY)  
ALL ANIMALS

SEX : FEMALE

PAGE : 16

Clinical sign	Group Name	Administration Week-day					
		45-7	46-7	47-7	48-7	49-7	50-7
DEEP BREATHING	Control	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0
	300 ppm	0	0	0	0	0	0
	600 ppm	-	-	-	-	-	-
YELLOW URINE	Control	0	0	0	0	0	0
	150 ppm	0	1	1	0	0	0
	300 ppm	0	0	0	0	0	0
	600 ppm	-	-	-	-	-	-
SMALL STOOL	Control	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0
	300 ppm	0	4	0	0	0	0
	600 ppm	-	-	-	-	-	-
OLIGO-STOOL	Control	0	0	0	0	0	0
	150 ppm	0	3	3	0	0	1
	300 ppm	1	7	2	1	0	1
	600 ppm	-	-	-	-	-	-
SUBNORMAL TEMP	Control	0	0	0	0	0	0
	150 ppm	0	0	0	0	0	0
	300 ppm	0	0	0	0	0	0
	600 ppm	-	-	-	-	-	-

## APPENDIX B 1

BODY WEIGHT CHANGES :SUMMARY, MOUSE : MALE  
(2-YEAR STUDY)

STUDY NO. : 0304  
ANIMAL : MOUSE Cri:BDF1  
UNIT : g  
REPORT TYPE : A2 65  
SEX : MALE

BODY WEIGHT CHANGES (SUMMARY)  
ALL ANIMALS

PAGE : 1

Group Name	Administration week											
	0		1		2		3		4		5	
Control	23.9 ±	0.8	24.5 ±	0.9	25.8 ±	1.2	26.5 ±	1.7	27.3 ±	2.1	28.6 ±	1.4
											29.5 ±	1.7
150 ppm	23.9 ±	0.8	24.1 ±	1.0	25.3 ±	1.2*	26.3 ±	1.2	26.8 ±	1.2*	27.9 ±	1.4*
											28.8 ±	1.5
300 ppm	23.9 ±	0.8	24.4 ±	0.9	25.5 ±	1.2	26.2 ±	1.3	26.8 ±	1.2*	27.7 ±	1.4**
											28.6 ±	1.5*
600 ppm	23.9 ±	0.8	23.4 ±	1.7**	24.5 ±	1.2**	25.2 ±	1.2**	25.5 ±	1.3**	26.4 ±	1.2**
											26.6 ±	1.3**

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

Test of Dunnett (0-62 weeks)

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

Test of t (65 week)

STUDY NO. : 0304  
 ANIMAL : MOUSE Cri:BDF1  
 UNIT : g  
 REPORT TYPE : A2 65  
 SEX : MALE

BODY WEIGHT CHANGES (SUMMARY)  
 ALL ANIMALS

PAGE : 2

Group Name	Administration week													
	7		8		9		10		11		12		13	
Control	30.4 ±	1.9	31.0 ±	2.0	32.0 ±	2.1	32.9 ±	2.2	33.5 ±	2.3	34.2 ±	2.4	34.8 ±	2.6
150 ppm	29.4 ±	1.6**	30.1 ±	1.7	30.8 ±	1.9**	31.6 ±	2.1**	32.3 ±	2.2**	32.9 ±	2.2*	33.8 ±	2.4
300 ppm	28.9 ±	1.7**	29.4 ±	1.7**	30.3 ±	2.0**	31.2 ±	2.1**	31.8 ±	2.1**	32.5 ±	2.3**	32.9 ±	2.3**
600 ppm	26.2 ±	1.9**	27.2 ±	1.3**	27.9 ±	1.6**	28.4 ±	1.7**	28.9 ±	1.8**	29.3 ±	1.8**	29.9 ±	2.0**

Significant difference ; \* :  $P \leq 0.05$  \*\* :  $P \leq 0.01$  Test of Dunnett (0-62 weeks)

Significant difference ; \* :  $P \leq 0.05$  \*\* :  $P \leq 0.01$  Test of t (65 week)

STUDY NO. : 0304  
ANIMAL : MOUSE Cri:BDF1  
UNIT : g  
REPORT TYPE : A2 65  
SEX : MALE

BODY WEIGHT CHANGES (SUMMARY)  
ALL ANIMALS

PAGE : 3

Group Name	Administration week													
	14		18		22		26		30		34		38	
Control	35.2 ±	2.8	35.1 ±	4.8	39.7 ±	4.1	42.1 ±	4.6	44.6 ±	4.6	46.1 ±	4.7	47.7 ±	4.8
150 ppm	34.2 ±	2.4	37.0 ±	2.8*	39.0 ±	3.2	41.1 ±	3.9	42.6 ±	4.1*	43.8 ±	4.4*	45.0 ±	4.4**
300 ppm	33.2 ±	2.6**	36.3 ±	2.8	37.7 ±	3.3	39.7 ±	3.8*	41.1 ±	4.0**	42.6 ±	4.3**	43.5 ±	4.6**
600 ppm	30.0 ±	2.0**	32.0 ±	2.4**	33.1 ±	2.6**	34.1 ±	3.0**	35.1 ±	3.2**	36.0 ±	3.9**	36.0 ±	3.6**

Significant difference ; \* :  $P \leq 0.05$  \*\* :  $P \leq 0.01$  Test of Dunnett (0-62 weeks)

Significant difference ; \* :  $P \leq 0.05$  \*\* :  $P \leq 0.01$  Test of t (65 week)

STUDY NO. : 0304  
 ANIMAL : MOUSE Cri:BDF1  
 UNIT : g  
 REPORT TYPE : A2 65  
 SEX : MALE

BODY WEIGHT CHANGES (SUMMARY)  
 ALL ANIMALS

PAGE : 4

Group Name	Administration week													
	42		46		50		54		58		62		65	
Control	48.8 ±	4.6	50.1 ±	4.7	51.2 ±	4.7	50.8 ±	4.4	52.0 ±	4.3	50.8 ±	4.1	52.3 ±	4.5
150 ppm	46.3 ±	4.3*	47.5 ±	4.4*	48.2 ±	4.7**	47.4 ±	5.1**	48.3 ±	5.2**	46.2 ±	4.7**	47.4 ±	6.0**
300 ppm	44.3 ±	4.6**	45.2 ±	4.9**	45.2 ±	5.1**	42.4 ±	6.6**	42.8 ±	6.8**	41.1 ±	4.8**	—	
600 ppm	35.2 ±	4.6**	35.5 ±	4.9**	35.1 ±	2.2**	26.1 ±	0.0 ?	—		—		—	

Significant difference ; \* :  $P \leq 0.05$  \*\* :  $P \leq 0.01$  Test of Dunnett (0-62 weeks)

Significant difference ; \* :  $P \leq 0.05$  \*\* :  $P \leq 0.01$  Test of t (65 week)

? : Significant test is not applied, because NO. of data in this group is less than 3.

## APPENDIX B 2

BODY WEIGHT CHANGES : SUMMARY, MOUSE : FEMALE  
(2-YEAR STUDY)

STUDY NO. : 0304  
 ANIMAL : MOUSE Cri:BDF1  
 UNIT : g  
 REPORT TYPE : A1 50  
 SEX : FEMALE

BODY WEIGHT CHANGES (SUMMARY)  
 ALL ANIMALS

PAGE : 1

Group Name	Administration week									
	0	1	2	3	4	5	6			
Control	19.7 ± 0.7	20.1 ± 0.7	20.9 ± 0.8	21.8 ± 0.9	22.3 ± 0.9	23.6 ± 1.0	23.6 ± 1.1			
150 ppm	19.7 ± 0.7	20.0 ± 0.8	20.8 ± 0.8	21.7 ± 0.9	22.5 ± 0.9	23.5 ± 1.2	23.3 ± 1.0			
300 ppm	19.7 ± 0.7	19.6 ± 0.8**	20.6 ± 0.9	21.6 ± 0.9	22.3 ± 1.1	23.2 ± 1.0	23.3 ± 1.2			
600 ppm	19.7 ± 0.7	19.5 ± 1.3**	20.8 ± 0.8	21.4 ± 0.8	21.9 ± 0.9	22.8 ± 0.9**	22.7 ± 0.9**			

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

Test of Dunnett

STUDY NO. : 0304  
 ANIMAL : MOUSE Cri:BDF1  
 UNIT : g  
 REPORT TYPE : A1 50  
 SEX : FEMALE

BODY WEIGHT CHANGES (SUMMARY)  
 ALL ANIMALS

PAGE : 2

Group Name	Administration week													
	7		8		9		10		11		12		13	
Control	24.3 ±	1.3	24.6 ±	1.3	25.2 ±	1.3	25.9 ±	1.6	25.8 ±	1.6	26.3 ±	1.6	26.7 ±	1.9
150 ppm	24.1 ±	1.2	24.5 ±	1.1	25.2 ±	1.2	25.4 ±	1.2	25.5 ±	1.3	26.0 ±	1.6	26.2 ±	1.8
300 ppm	24.2 ±	1.3	24.5 ±	1.3	24.9 ±	1.3	25.7 ±	1.4	25.5 ±	1.5	26.0 ±	1.8	26.5 ±	1.9
600 ppm	23.3 ±	1.0**	23.9 ±	1.1*	24.0 ±	1.1**	24.4 ±	1.2**	24.9 ±	1.3**	24.8 ±	1.3**	25.1 ±	1.5**

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

Test of Dunnett

STUDY NO. : 0304  
ANIMAL : MOUSE Cri:BDF1  
UNIT : g  
REPORT TYPE : A1 50  
SEX : FEMALE

BODY WEIGHT CHANGES (SUMMARY)  
ALL ANIMALS

PAGE : 3

Group Name	Administration week													
	14		18		22		26		30		34		38	
Control	26.5 ±	1.9	28.4 ±	2.0	30.1 ±	2.3	30.3 ±	2.9	31.8 ±	3.4	32.1 ±	3.3	32.3 ±	3.9
150 ppm	26.1 ±	1.5	28.2 ±	1.7	29.2 ±	2.6	29.8 ±	2.7	31.4 ±	2.9	31.8 ±	2.9	32.1 ±	2.8
300 ppm	26.5 ±	2.0	28.2 ±	2.3	29.7 ±	2.8	30.2 ±	2.8	31.1 ±	2.9	31.6 ±	3.0	31.8 ±	3.2
600 ppm	24.9 ±	1.2**	26.3 ±	1.7**	27.2 ±	1.9**	27.5 ±	1.8**	28.2 ±	2.1**	28.2 ±	2.9**	28.6 ±	2.5**

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

Test of Dunnett

STUDY NO. : 0304  
ANIMAL : MOUSE Cri:BDF1  
UNIT : g  
REPORT TYPE : A1 50  
SEX : FEMALE

BODY WEIGHT CHANGES (SUMMARY)  
ALL ANIMALS

PAGE : 4

Group Name	Administration week					
	42		46		50	
Control	33.0 ±	4.0	34.7 ±	4.2	34.7 ±	4.3
150 ppm	33.0 ±	3.6	33.6 ±	3.4	33.2 ±	3.9
300 ppm	29.8 ±	2.8**	30.0 ±	3.3**	32.9 ±	3.4
600 ppm	32.1 ±	5.8	—		—	

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

Test of Dunnett

## APPENDIX C 1

WATER CONSUMPTION CHANGES : SUMMARY, MOUSE : MALE  
(2-YEAR STUDY)

STUDY NO. : 0304  
ANIMAL : MOUSE Crj:BDF1  
UNIT : g  
SEX : MALE

WATER CONSUMPTION CHANGES (SUMMARY)  
ALL ANIMALS

PAGE: 1

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	4.9	6.0	6.2	7.3	6.5	6.5	5.6
150ppm	6.0	5.7	5.6	6.6	5.5	5.6	5.2
300ppm	5.2	5.5	5.2	5.1	4.5	4.7	4.4
600ppm	3.2	2.8	2.6	3.0	2.5	2.5	1.8

STUDY NO. : 0304  
ANIMAL : MOUSE Crj:BDF1  
UNIT : g  
SEX : MALE

WATER CONSUMPTION CHANGES (SUMMARY)  
ALL ANIMALS

PAGE: 2

Group Name	Administration week-day(effective)						
	8-7(7)	9-7(7)	10-7(7)	11-7(7)	12-7(7)	13-7(7)	14-7(7)
Control	6.1	6.5	6.0	5.7	5.4	5.3	4.8
150ppm	5.8	5.4	5.7	5.1	4.8	4.6	4.4
300ppm	4.6	4.2	4.3	4.0	3.9	3.6	3.3
600ppm	2.5	2.3	2.5	2.4	2.4	2.4	2.2

STUDY NO. : 0304  
ANIMAL : MOUSE Crj:BDF1  
UNIT : g  
SEX : MALE

WATER CONSUMPTION CHANGES (SUMMARY)  
ALL ANIMALS

PAGE: 3

Group Name	Administration week-day(effective)						
	18-7(7)	22-7(7)	26-7(7)	30-7(7)	34-7(7)	38-7(7)	42-7(7)
Control	—	5.7	4.2	4.2	3.9	3.9	4.0
150ppm	4.0	3.9	4.2	4.1	3.9	3.7	3.7
300ppm	4.1	3.2	3.5	3.3	3.4	3.6	3.3
600ppm	3.1	5.7	7.1	2.1	2.1	2.3	1.7

STUDY NO. : 0304  
ANIMAL : MOUSE Crj:BDF1  
UNIT : g  
SEX : MALE

WATER CONSUMPTION CHANGES (SUMMARY)  
ALL ANIMALS

PAGE: 4

Group Name	Administration week-day(effective)				
	46-7(7)	50-7(7)	54-7(7)	58-7(7)	62-7(7)
Control	3.9	4.0	4.1	4.4	4.2
150ppm	3.8	3.7	3.6	3.6	4.0
300ppm	3.1	2.9	4.0	2.6	3.0
600ppm	1.5	3.5	1.1		

## APPENDIX C 2

WATER CONSUMPTION CHANGES : SUMMARY, MOUSE : FEMALE  
(2-YEAR STUDY)

STUDY NO. : 0304

ANIMAL : MOUSE Crj:BDF1

UNIT : g

SEX : FEMALE

WATER CONSUMPTION CHANGES (SUMMARY)

ALL ANIMALS

PAGE: 1

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	4.6	5.4	5.5	6.1	5.5	5.9	6.5
150ppm	4.6	6.0	6.2	7.1	6.3	6.8	6.2
300ppm	5.0	5.4	4.8	6.0	5.3	4.8	5.1
600ppm	4.6	3.6	3.4	3.6	3.2	3.0	2.7

STUDY NO. : 0304

ANIMAL : MOUSE Crj:BDF1

UNIT : g

SEX : FEMALE

WATER CONSUMPTION CHANGES (SUMMARY)

ALL ANIMALS

PAGE: 2

Group Name	Administration week-day(effective)						
	8-7(7)	9-7(7)	10-7(7)	11-7(7)	12-7(7)	13-7(7)	14-7(7)
Control	9.1	6.1	7.7	7.8	6.4	6.5	5.9
150ppm	10.0	6.1	6.9	6.1	8.9	8.1	5.8
300ppm	8.8	4.8	5.3	4.6	5.2	4.6	7.4
600ppm	6.0	2.6	2.8	2.6	2.7	2.7	2.7

STUDY NO. : 0304  
ANIMAL : MOUSE Crj:BDF1  
UNIT : g  
SEX : FEMALE

WATER CONSUMPTION CHANGES (SUMMARY)  
ALL ANIMALS

PAGE: 3

Group Name	Administration week-day(effective)						
	18-7(7)	22-7(7)	26-7(7)	30-7(7)	34-7(7)	38-7(7)	42-7(7)
Control	6.3	6.3	5.7	5.3	5.2	5.4	5.7
150ppm	5.4	6.3	5.6	5.7	4.6	5.5	4.9
300ppm	5.4	5.8	3.8	3.7	3.7	3.3	4.0
600ppm	2.9	2.3	2.3	3.7	4.9	1.9	5.6

STUDY NO. : 0304

ANIMAL : MOUSE Crj:BDF1

UNIT : g

SEX : FEMALE

WATER CONSUMPTION CHANGES (SUMMARY)

ALL ANIMALS

PAGE: 4

Group Name	Administration week-day(effective)	
	46-7(7)	50-7(7)
Control	5.2	5.1
150ppm	4.5	5.6
300ppm	2.2	2.5
600ppm		

## APPENDIX D 1

### FOOD CONSUMPTION CHANGES : SUMMARY, MOUSE : MALE (2-YEAR STUDY)

STUDY NO. : 0304  
 ANIMAL : MOUSE Cri:BDF1  
 UNIT : g  
 REPORT TYPE : A2 65  
 SEX : MALE

FOOD CONSUMPTION CHANGES (SUMMARY)  
 ALL ANIMALS

PAGE : 1

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	3.9 ±	0.3	4.0 ±	0.3	3.8 ±	0.4	4.0 ±	0.5	3.2 ±	0.4	4.2 ±	0.3	4.4 ±	0.3
150 ppm	3.8 ±	0.3*	3.8 ±	0.3	3.9 ±	0.3	3.9 ±	0.2	3.4 ±	0.5*	4.1 ±	0.3	4.3 ±	0.3
300 ppm	3.9 ±	0.3	3.9 ±	0.3	3.9 ±	0.2	3.9 ±	0.3	4.0 ±	0.3**	4.0 ±	0.2	4.3 ±	0.3
600 ppm	4.1 ±	4.3**	3.6 ±	0.4**	3.7 ±	0.5**	3.7 ±	0.3**	3.8 ±	0.3**	3.6 ±	0.2**	3.6 ±	0.6**

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

Test of Dunnett

STUDY NO. : 0304  
 ANIMAL : MOUSE Cri:BDF1  
 UNIT : g  
 REPORT TYPE : A2 65  
 SEX : MALE

FOOD CONSUMPTION CHANGES (SUMMARY)  
 ALL ANIMALS

PAGE : 2

Group Name	Administration week-day(effective)													
	8-7 (7)		9-7 (7)		10-7 (7)		11-7 (7)		12-7 (7)		13-7 (7)		14-7 (7)	
Control	4.4 ±	0.4	4.4 ±	0.3	4.3 ±	0.3	4.4 ±	0.3	4.2 ±	0.3	4.3 ±	0.3	4.2 ±	0.3
150 ppm	4.3 ±	0.3	4.3 ±	0.3*	4.3 ±	0.3	4.3 ±	0.3	4.2 ±	0.3	4.3 ±	0.3	4.2 ±	0.2
300 ppm	4.2 ±	0.2*	4.2 ±	0.3**	4.2 ±	0.3	4.2 ±	0.3	4.1 ±	0.3	4.2 ±	0.2*	4.0 ±	0.3**
600 ppm	4.1 ±	0.4**	3.9 ±	0.3**	3.9 ±	0.3**	3.9 ±	0.3**	3.8 ±	0.3**	3.9 ±	0.3**	3.8 ±	0.3**

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

Test of Dunnett

STUDY NO. : 0304  
 ANIMAL : MOUSE Cri:BDF1  
 UNIT : g  
 REPORT TYPE : A2 65  
 SEX : MALE

FOOD CONSUMPTION CHANGES (SUMMARY)  
 ALL ANIMALS

PAGE : 3

Group Name	Administration week-day(effective)									
	18-7 (7)		22-7 (7)		26-7 (7)		30-7 (7)		34-7 (7)	
Control	3.5 ±	1.2	4.5 ±	0.5	4.4 ±	0.4	4.4 ±	0.4	4.6 ±	0.5
150 ppm	4.4 ±	0.3**	4.4 ±	0.3	4.4 ±	0.3	4.4 ±	0.3	4.5 ±	0.5
300 ppm	4.4 ±	0.3**	4.3 ±	0.3*	4.2 ±	0.3	4.2 ±	0.3*	4.4 ±	0.3
600 ppm	3.9 ±	0.3	4.0 ±	0.3**	3.8 ±	0.5**	3.9 ±	0.3**	3.9 ±	0.5**

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

Test of Dunnett

STUDY NO. : 0304  
 ANIMAL : MOUSE Crl:BDF1  
 UNIT : g  
 REPORT TYPE : A2 65  
 SEX : MALE

FOOD CONSUMPTION CHANGES (SUMMARY)  
 ALL ANIMALS

PAGE : 4

Group Name	Administration week-day(effective)									
	46-7 (7)		50-7 (7)		54-7 (7)		58-7 (7)		62-7 (7)	
Control	4.7 ±	0.5	4.6 ±	0.5	4.7 ±	0.6	4.8 ±	0.5	4.6 ±	0.3
150 ppm	4.6 ±	0.4	4.3 ±	0.6	4.4 ±	0.8	4.4 ±	0.9	4.1 ±	0.8**
300 ppm	4.4 ±	0.4*	4.0 ±	0.8**	3.3 ±	1.2**	3.5 ±	1.4**	3.7 ±	3.7*
600 ppm	3.4 ±	1.0**	3.1 ±	0.7**	2.0 ±	0.0 ?	—		—	

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

? : Significant test is not applied, because NO. of data in this group is less than 3.

## APPENDIX D 2

FOOD CONSUMPTION CHANGES : SUMMARY, MOUSE : FEMALE  
(2-YEAR STUDY)

STUDY NO. : 0304  
 ANIMAL : MOUSE Cri:BDF1  
 UNIT : g  
 REPORT TYPE : A1 50  
 SEX : FEMALE

FOOD CONSUMPTION CHANGES (SUMMARY)  
 ALL ANIMALS

PAGE : 1

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	3.3 ±	0.2	3.5 ±	0.2	3.5 ±	0.2	3.6 ±	0.4	3.9 ±	0.3	3.8 ±	0.2	4.0 ±	0.3
150 ppm	3.3 ±	0.3	3.5 ±	0.2	3.5 ±	0.2	3.7 ±	0.2	3.8 ±	0.2	3.8 ±	0.2	4.0 ±	0.3
300 ppm	3.2 ±	0.4*	3.4 ±	0.3**	3.7 ±	0.3**	3.8 ±	0.3**	4.0 ±	0.2	3.9 ±	0.4	4.0 ±	0.3
600 ppm	3.1 ±	0.6	3.3 ±	0.4**	3.5 ±	0.2	3.6 ±	0.2	3.7 ±	0.2**	3.7 ±	0.3	3.8 ±	0.2**

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

Test of Dunnett

STUDY NO. : 0304  
ANIMAL : MOUSE Crl:BDF1  
UNIT : g  
REPORT TYPE : A1 50  
SEX : FEMALE

FOOD CONSUMPTION CHANGES (SUMMARY)  
ALL ANIMALS

PAGE : 2

Group Name	Administration week-day(effective)													
	8-7 (7)		9-7 (7)		10-7 (7)		11-7 (7)		12-7 (7)		13-7 (7)		14-7 (7)	
Control	4.0 ±	0.3	4.2 ±	0.2	4.0 ±	0.3	4.1 ±	0.3	4 ±	0.3	4.1 ±	0.4	3.9 ±	0.3
150 ppm	4.0 ±	0.3	4.1 ±	0.2	4.0 ±	0.2	4.1 ±	0.3	4 ±	0.4	4.2 ±	0.4	4.0 ±	0.3
300 ppm	4.0 ±	0.3	4.1 ±	0.3	4.0 ±	0.3	4.0 ±	0.3	3.9 ±	0.3	4.1 ±	0.3	3.9 ±	0.3
600 ppm	3.8 ±	0.3**	3.9 ±	0.3**	3.8 ±	0.3**	3.8 ±	0.2**	3.7 ±	0.3**	3.8 ±	0.4**	3.7 ±	0.3**

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

Test of Dunnett

STUDY NO. : 0304  
ANIMAL : MOUSE Crl:BDF1  
UNIT : g  
REPORT TYPE : A1 50  
SEX : FEMALE

FOOD CONSUMPTION CHANGES (SUMMARY)  
ALL ANIMALS

PAGE : 3

Group Name	Administration week-day(effective)													
	18-7 (7)		22-7 (7)		26-7 (7)		30-7 (7)		34-7 (7)		38-7 (7)		42-7 (7)	
Control	4.2 ±	0.3	4.3 ±	0.4	4.0 ±	0.4	4.2 ±	0.4	4.4 ±	0.5	4.3 ±	0.5	4.0 ±	0.4
150 ppm	4.3 ±	0.3	4.3 ±	0.4	4.2 ±	0.4	4.4 ±	0.4	4.3 ±	0.5	4.3 ±	0.4	4.1 ±	0.5
300 ppm	4.1 ±	0.4	4.1 ±	0.4*	4.0 ±	0.4	4.1 ±	0.4	4.3 ±	0.5	3.9 ±	0.7*	3.4 ±	0.7**
600 ppm	3.9 ±	0.3**	3.9 ±	0.4**	3.8 ±	0.3**	3.8 ±	0.4**	3.7 ±	0.8**	3.4 ±	0.6**	3.9 ±	0.4

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

Test of Dunnett

STUDY NO. : 0304  
ANIMAL : MOUSE Cri:BDF1  
UNIT : g  
REPORT TYPE : A1 50  
SEX : FEMALE

FOOD CONSUMPTION CHANGES (SUMMARY)  
ALL ANIMALS

PAGE : 4

Group Name	Administration week-day(effective)			
	46-7 (7)		50-7 (7)	
Control	4.4 ±	0.5	4.1 ±	0.5
150 ppm	4.1 ±	0.8	4.0 ±	0.7
300 ppm	3.7 ±	1.3	3.6 ±	0.7
600 ppm	—		—	

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

## APPENDIX E 1

CHEMICAL INTAKE CHANGES : SUMMARY, MOUSE : MALE  
(2-YEAR STUDY)

STUDY NO. : 0304

ANIMAL : MOUSE Crj:BDF1

UNIT : mg/kgBW/day

SEX : MALE

CHEMICAL INTAKE CHANGES (SUMMARY)

ALL ANIMALS

PAGE: 1

Group Name	Administration week						
	1	2	3	4	5	6	7
Control	0	0	0	0	0	0	0
150ppm	37	34	32	37	30	29	27
300ppm	63	65	59	57	48	49	46
600ppm	81	69	61	71	57	56	40

STUDY NO. : 0304  
ANIMAL : MOUSE Crj:BDF1  
UNIT : mg/kgBW/day  
SEX : MALE

CHEMICAL INTAKE CHANGES (SUMMARY)  
ALL ANIMALS

PAGE: 2

Group Name	Administration week						
	8	9	10	11	12	13	14
Control	0	0	0	0	0	0	0
150ppm	29	26	27	24	22	20	19
300ppm	46	42	42	38	36	33	30
600ppm	56	50	53	49	49	47	44

STUDY NO. : 0304  
ANIMAL : MOUSE Crj:BDF1  
UNIT : mg/kgBW/day  
SEX : MALE

CHEMICAL INTAKE CHANGES (SUMMARY)  
ALL ANIMALS

PAGE: 3

Group Name	Administration week						
	18	22	26	30	34	38	42
Control	0	0	0	0	0	0	0
150ppm	16	15	15	14	13	12	12
300ppm	34	25	26	24	24	24	22
600ppm	57	104	124	36	35	38	30

STUDY NO. : 0304

ANIMAL : MOUSE Crj:BDF1

UNIT : mg/kgBW/day

SEX : MALE

CHEMICAL INTAKE CHANGES (SUMMARY)

ALL ANIMALS

PAGE: 4

Group Name	Administration week				
	46	50	54	58	62
Control	0	0	0	0	0
150ppm	12	12	12	11	13
300ppm	21	19	29	18	22
600ppm	26	59	25		

## APPENDIX E 2

CHEMICAL INTAKE CHANGES : SUMMARY, MOUSE : FEMALE  
(2-YEAR STUDY)

STUDY NO. : 0304  
ANIMAL : MOUSE Crj:BDF1  
UNIT : mg/kgBW/day  
SEX : FEMALE

CHEMICAL INTAKE CHANGES (SUMMARY)  
ALL ANIMALS

PAGE: 1

Group Name	Administration week						
	1	2	3	4	5	6	7
Control	0	0	0	0	0	0	0
150ppm	34	43	43	47	40	44	38
300ppm	77	78	67	80	68	61	64
600ppm	142	104	97	99	85	80	69

STUDY NO. : 0304  
ANIMAL : MOUSE Crj:BDF1  
UNIT : mg/kgBW/day  
SEX : FEMALE

CHEMICAL INTAKE CHANGES (SUMMARY)  
ALL ANIMALS

PAGE: 2

Group Name	Administration week		10	11	12	13	14
	8	9					
Control	0	0	0	0	0	0	0
150ppm	61	36	41	36	51	47	33
300ppm	108	57	62	54	60	52	84
600ppm	151	64	68	63	66	64	64

STUDY NO. : 0304  
ANIMAL : MOUSE Crj:BDF1  
UNIT : mg/kgBW/day  
SEX : FEMALE

CHEMICAL INTAKE CHANGES (SUMMARY)  
ALL ANIMALS

PAGE: 3

Group Name	Administration week						
	18	22	26	30	34	38	42
Control	0	0	0	0	0	0	0
150ppm	29	32	28	27	22	26	22
300ppm	57	59	38	36	35	31	40
600ppm	66	51	49	79	105	41	105

STUDY NO. : 0304  
ANIMAL : MOUSE Crj:BDF1  
UNIT : mg/kgBW/day  
SEX : FEMALE

CHEMICAL INTAKE CHANGES (SUMMARY)  
ALL ANIMALS

PAGE: 4

Group Name	Administration week	
	46	50
Control	0	0
150ppm	20	25
300ppm	22	23
600ppm		

## APPENDIX F 1

HEMATOLOGY : SUMMARY, MOUSE : MALE

(2-YEAR STUDY)

STUDY NO. : 0304  
 ANIMAL : MOUSE Crj:BDF1  
 MEASURE. TIME : 2  
 SEX : MALE

HEMATOLOGY (SUMMARY)  
 ALL ANIMALS ( 66W)

REPORT TYPE : A2

PAGE : 1

Group Name	NO. of Animals	RED BLOOD CELL 10 <sup>6</sup> /μl		HEMOGLOBIN g/dl		HEMATOCRIT %		MCV fl		MCH pg		MCHC g/dl		PLATELET 10 <sup>9</sup> /μl	
Control	44	9.98±	0.33	14.6±	0.5	46.5±	1.8	46.6±	1.5	14.7±	0.4	31.4±	0.7	1619±	168
150 ppm	13	7.67±	2.29**	11.5±	3.5**	36.8±	9.8**	48.9±	5.3	15.0±	1.0	30.9±	2.5	1049±	466**
300 ppm	0	-		-		-		-		-		-		-	
600 ppm	0	-		-		-		-		-		-		-	

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

\*\* :  $P \leq 0.01$

Test of t

(HCL070)

BAIS 3

STUDY NO. : 0304  
 ANIMAL : MOUSE Crj:BDF1  
 MEASURE. TIME : 2  
 SEX : MALE

HEMATOLOGY (SUMMARY)  
 ALL ANIMALS ( 66W)

REPORT TYPE : A2

PAGE : 2

Group Name	NO. of Animals	WBC 10 <sup>3</sup> /μl		Differential N-BAND		WBC (%) N-SEG		EOSINO		BASO		MONO		LYMPHO		OTHERS	
Control	44	2.14±	0.72	1±	1	20±	7	1±	1	0±	0	2±	1	75±	7	0±	0
150 ppm	13	2.42±	1.13	2±	3	34±	16**	1±	1*	0±	0	3±	2*	58±	17**	1±	2*
300 ppm	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
600 ppm	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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

\*\* :  $P \leq 0.01$

Test of t

(HCL070)

BAIS 3

## APPENDIX F 2

HEMATOLOGY : SUMMARY, MOUSE : FEMALE

(2-YEAR STUDY)

STUDY NO. : 0304  
 ANIMAL : MOUSE Crj:BDF1  
 MEASURE. TIME : 1  
 SEX : FEMALE

HEMATOLOGY (SUMMARY)  
 ALL ANIMALS ( 51W)

REPORT TYPE : A1

PAGE : 1

Group Name	NO. of Animals	RED BLOOD CELL 10 <sup>6</sup> /μl		HEMOGLOBIN g/dl		HEMATOCRIT %		MCV fl		MCH pg		MCHC g/dl		PLATELET 10 <sup>3</sup> /μl	
Control	45	10.13±	0.43	15.1±	0.6	44.8±	1.6	44.3±	1.3	14.9±	0.7	33.6±	0.9	1247±	168
150 ppm	20	8.32±	1.50**	12.3±	2.4**	37.9±	6.3**	45.7±	1.5**	14.8±	0.5	32.5±	1.6**	743±	402**
300 ppm	4	6.93±	0.89**	10.2±	1.5**	33.3±	3.2**	48.1±	2.3**	14.7±	0.7	30.5±	1.5**	389±	99**
600 ppm	0	-		-		-		-		-		-		-	

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

\*\* :  $P \leq 0.01$

Test of Dunnett

(HCL070)

BAIS 3

STUDY NO. : 0304  
 ANIMAL : MOUSE Crj:BDF1  
 MEASURE. TIME : 1  
 SEX : FEMALE

HEMATOLOGY (SUMMARY)  
 ALL ANIMALS ( 51W)

REPORT TYPE : A1

PAGE : 2

Group Name	NO. of Animals	WBC 10 <sup>3</sup> /μl		Differential N-BAND		WBC (%) N-SEG		EOSINO		BASO		MONO		LYMPHO		OTHERS	
Control	45	1.60±	0.83	0±	0	21±	8	2±	2	0±	0	3±	2	73±	8	0±	0
150 ppm	20	2.55±	1.69**	1±	1**	31±	9**	2±	1	0±	0	4±	2	63±	10**	1±	2
300 ppm	4	2.99±	0.63**	1±	1*	38±	18*	1±	1*	0±	0	3±	1	56±	18*	2±	2**
600 ppm	0	-		-		-		-		-		-		-		-	

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

\*\* :  $P \leq 0.01$

Test of Dunnett

(HCL070)

BAIS 3

## APPENDIX G 1

BIOCHEMISTRY : SUMMARY, MOUSE : MALE

(2-YEAR STUDY)

STUDY NO. : 0304  
 ANIMAL : MOUSE Crj:BDF1  
 MEASURE. TIME : 2  
 SEX : MALE

BIOCHEMISTRY (SUMMARY)  
 ALL ANIMALS ( 66W)

REPORT TYPE : A2

PAGE : 1

Group Name	NO. of Animals	TOTAL PROTEIN g /dl		ALBUMIN g /dl		A/G RATIO		T-BILIRUBIN mg/dl		GLUCOSE mg/dl		T-CHOLESTEROL mg/dl		TRIGLYCERIDE mg/dl	
Control	44	5.3±	0.5	2.9±	0.2	1.3±	0.1	0.16±	0.01	260±	31	112±	31	53±	17
150 ppm	14	5.1±	0.3	2.7±	0.1**	1.2±	0.2	0.23±	0.12	218±	69*	110±	18	54±	19
300 ppm	0	-		-		-		-		-		-		-	
600 ppm	0	-		-		-		-		-		-		-	

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

\*\* :  $P \leq 0.01$

Test of t

(HCL074)

BAIS 3

STUDY NO. : 0304  
 ANIMAL : MOUSE Crj:BDF1  
 MEASURE. TIME : 2  
 SEX : MALE

BIOCHEMISTRY (SUMMARY)  
 ALL ANIMALS ( 66W)

REPORT TYPE : A2

PAGE : 2

Group Name	NO. of Animals	PHOSPHOLIPID mg/dl		GOT IU/l		GPT IU/l		LDH IU/l		ALP IU/l		G-GTP IU/l		CPK IU/l	
Control	44	219±	46	56±	11	30±	30	261±	67	146±	22	1±	1	55±	32
150 ppm	14	210±	31	76±	34*	37±	19	729±	755*	111±	37**	6±	19	54±	19
300 ppm	0	-		-		-		-		-		-		-	
600 ppm	0	-		-		-		-		-		-		-	

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

\*\* :  $P \leq 0.01$

Test of t

(HCL074)

BAIS 3

STUDY NO. : 0304  
 ANIMAL : MOUSE Crj:BDF1  
 MEASURE. TIME : 2  
 SEX : MALE

BIOCHEMISTRY (SUMMARY)  
 ALL ANIMALS ( 66W)

REPORT TYPE : A2

PAGE : 3

Group Name	NO. of Animals	UREA NITROGEN mg/dl		SODIUM mEq/l		POTASSIUM mEq/l		CHLORIDE mEq/l		CALCIUM mg/dl		INORGANIC PHOSPHORUS mg/dl	
Control	44	25.2±	2.6	153±	1	4.0±	0.3	122±	2	9.0±	0.4	7.0±	1.0
150 ppm	14	24.0±	7.9	154±	2	4.3±	0.5*	121±	2	9.1±	0.4	7.6±	1.4
300 ppm	0	-		-		-		-		-		-	
600 ppm	0	-		-		-		-		-		-	

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

\*\* :  $P \leq 0.01$

Test of t

(HCL074)

BAIS 3

## APPENDIX G 2

BIOCHEMISTRY : SUMMARY, MOUSE : FEMALE  
(2-YEAR STUDY)

STUDY NO. : 0304  
ANIMAL : MOUSE Crj:BDF1  
MEASURE. TIME : 1  
SEX : FEMALE

BIOCHEMISTRY (SUMMARY)  
ALL ANIMALS ( 51W)

REPORT TYPE : A1

PAGE : 1

Group Name	NO. of Animals	TOTAL PROTEIN g /dl		ALBUMIN g /dl		A/G RATIO		T-BILIRUBIN mg/dl		GLUCOSE mg/dl		T-CHOLESTEROL mg/dl		TRIGLYCERIDE mg/dl	
Control	48	5.1±	0.3	2.9±	0.1	1.4±	0.1	0.15±	0.01	155±	29	78±	9	30±	11
150 ppm	20	5.1±	0.3	2.9±	0.2	1.3±	0.1	0.18±	0.06	166±	27	89±	14**	41±	18*
300 ppm	5	4.7±	0.4**	2.6±	0.2**	1.3±	0.1	0.22±	0.03**	178±	41	79±	6	50±	24
600 ppm	0	-		-		-		-		-		-		-	

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

\*\* :  $P \leq 0.01$

Test of Dunnett

(HCL074)

BAIS 3

STUDY NO. : 0304  
 ANIMAL : MOUSE Crj:BDF1  
 MEASURE. TIME : 1  
 SEX : FEMALE

BIOCHEMISTRY (SUMMARY)  
 ALL ANIMALS ( 51W)

REPORT TYPE : A1

PAGE : 2

Group Name	NO. of Animals	PHOSPHOLIPID mg/dl		GOT I U / l		GPT I U / l		LDH I U / l		ALP I U / l		G-GTP I U / l		CPK I U / l	
Control	48	143±	17	68±	25	26±	10	196±	51	189±	39	2±	1	46±	27
150 ppm	20	166±	25**	87±	70	110±	283**	576±	762	145±	48**	2±	1	86±	121
300 ppm	5	154±	15	75±	31	164±	208**	388±	357	113±	11**	1±	2	73±	30*
600 ppm	0	-		-		-		-		-		-		-	

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

\*\* :  $P \leq 0.01$

Test of Dunnett

(HCL074)

BAIS 3

STUDY NO. : 0304  
 ANIMAL : MOUSE Crj:BDF1  
 MEASURE. TIME : 1  
 SEX : FEMALE

BIOCHEMISTRY (SUMMARY)  
 ALL ANIMALS ( 51W)

REPORT TYPE : A1

PAGE : 3

Group Name	NO. of Animals	UREA NITROGEN mg/dl		SODIUM mEq/l		POTASSIUM mEq/l		CHLORIDE mEq/l		CALCIUM mg/dl		INORGANIC PHOSPHORUS mg/dl	
Control	48	15.5±	2.6	150±	1	4.5±	0.4	120±	2	9.1±	0.2	6.1±	0.8
150 ppm	20	17.7±	3.6*	150±	1	4.5±	0.4	120±	2	9.4±	0.3**	5.8±	0.7
300 ppm	5	20.6±	8.3	150±	2	4.6±	0.5	119±	2	9.5±	0.3**	6.6±	0.8
600 ppm	0	-		-		-		-		-		-	

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

\*\* :  $P \leq 0.01$

Test of Dunnett

(HCL074)

BAIS 3

## APPENDIX H 1

URINALYSIS : SUMMARY, MOUSE : MALE

(2-YEAR STUDY)

STUDY NO. : 0304  
ANIMAL : MOUSE Crj:BDF1  
MEASURE. TIME : 2  
SEX : MALE

# URINALYSIS

REPORT TYPE : A2

PAGE : 1

Group Name	NO. of Animals	pH_____								CHI	Protein_____						CHI	Glucose_____						CHI	Ketone body						CHI	Occult blood					CHI
		5.0	6.0	6.5	7.0	7.5	8.0	8.5	—		±	+	2+	3+	4+	—		±	+	2+	3+	4+	—		±	+	2+	3+	4+	—		±	+	2+	3+		
Control	46	0	1	1	5	15	19	5		0	3	40	3	0	0		46	0	0	0	0	0		27	16	3	0	0	0		46	0	0	0	0		
150 ppm	16	0	1	3	5	4	2	1	*	0	3	11	2	0	0		16	0	0	0	0	0		7	8	1	0	0	0		14	0	0	1	1		
300 ppm	0	—	—	—	—	—	—	—		—	—	—	—	—	—		—	—	—	—	—	—		—	—	—	—	—	—		—	—	—	—	—		
600 ppm	0	—	—	—	—	—	—	—		—	—	—	—	—	—		—	—	—	—	—	—		—	—	—	—	—	—		—	—	—	—	—		

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

Test of CHI SQUARE

(HCL101)

BAIS 3

STUDY NO. : 0304  
ANIMAL : MOUSE Crj:BDF1  
MEASURE. TIME : 2  
SEX : MALE

URINALYSIS

REPORT TYPE : A2

PAGE : 2

Group Name	NO. of Animals	Urobilinogen					CHI
		±	+	2+	3+	4+	
Control	46	46	0	0	0	0	0
150 ppm	16	16	0	0	0	0	0
300 ppm	0	-	-	-	-	-	-
600 ppm	0	-	-	-	-	-	-

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

Test of CHI SQUARE

(HCL101)

BAIS 3

## APPENDIX H 2

URINALYSIS : SUMMARY, MOUSE : FEMALE  
(2-YEAR STUDY)

STUDY NO. : 0304  
 ANIMAL : MOUSE Crj:BDF1  
 MEASURE. TIME : 1  
 SEX : FEMALE

# URINALYSIS

REPORT TYPE : A1

PAGE : 1

Group Name	NO. of Animals	pH_____								CHI	Protein_____							CHI	Glucose_____							CHI	Ketone body							CHI	Occult blood					CHI
		5.0	6.0	6.5	7.0	7.5	8.0	8.5	—		±	+	2+	3+	4+	—	±		+	2+	3+	4+	—	±	+		2+	3+	4+	—	±	+	2+		3+	4+				
Control	49	0	0	2	7	20	20	0		0	6	38	5	0	0		49	0	0	0	0	0		46	3	0	0	0	0		49	0	0	0	0					
150 ppm	21	0	1	1	2	5	12	0		0	1	11	9	0	0	**	21	0	0	0	0	0		11	9	1	0	0	0	**	21	0	0	0	0					
300 ppm	6	0	1	0	3	0	2	0	**	0	0	1	5	0	0	**	6	0	0	0	0	0		1	4	1	0	0	0	**	6	0	0	0	0					
600 ppm	0	-	-	-	-	-	-	-		-	-	-	-	-	-		-	-	-	-	-	-		-	-	-	-	-	-		-	-	-	-	-					

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

Test of CHI SQUARE

(HCL101)

BAIS 3

STUDY NO. : 0304  
ANIMAL : MOUSE Crj:BDF1  
MEASURE. TIME : 1  
SEX : FEMALE

URINALYSIS

REPORT TYPE : A1

PAGE : 2

Group Name	NO. of Animals	Urobilinogen					CHI
		±	+	2+	3+	4+	
Control	49	49	0	0	0	0	0
150 ppm	21	21	0	0	0	0	0
300 ppm	6	6	0	0	0	0	0
600 ppm	0	-	-	-	-	-	-

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

Test of CHI SQUARE

(HCL101)

BAIS 8

## APPENDIX I 1

GROSS FINDINGS : SUMMARY, MOUSE : MALE ALL ANIMALS  
(2-YEAR STUDY)

STUDY NO. : 0304  
 ANIMAL : MOUSE Crj:BDF1  
 REPORT TYPE : A2  
 SEX : MALE

GROSS FINDINGS (SUMMARY)  
 ALL ANIMALS (0- 66W)

PAGE : 1

Organ	Findings	Group Name NO. of Animals	Control 50 (%)	150 ppm 50 (%)	300 ppm 50 (%)	600 ppm 50 (%)
skin/app	thick		1 ( 2)	0 ( 0)	0 ( 0)	0 ( 0)
	scab		0 ( 0)	0 ( 0)	0 ( 0)	1 ( 2)
subcutis	edema		0 ( 0)	0 ( 0)	6 ( 12)	2 ( 4)
	mass		0 ( 0)	0 ( 0)	3 ( 6)	3 ( 6)
lung	red		0 ( 0)	0 ( 0)	1 ( 2)	1 ( 2)
	red zone		0 ( 0)	0 ( 0)	1 ( 2)	3 ( 6)
	nodule		2 ( 4)	1 ( 2)	2 ( 4)	0 ( 0)
lymph node	enlarged		0 ( 0)	1 ( 2)	1 ( 2)	2 ( 4)
spleen	enlarged		0 ( 0)	10 ( 20)	7 ( 14)	6 ( 12)
	black		0 ( 0)	0 ( 0)	1 ( 2)	1 ( 2)
	deformed		0 ( 0)	0 ( 0)	1 ( 2)	0 ( 0)
forestomach	adhesion		0 ( 0)	0 ( 0)	0 ( 0)	1 ( 2)
gl stomach	thick		0 ( 0)	0 ( 0)	1 ( 2)	0 ( 0)
stomach	nodule		0 ( 0)	0 ( 0)	1 ( 2)	1 ( 2)
liver	enlarged		0 ( 0)	2 ( 4)	3 ( 6)	0 ( 0)
	pale		0 ( 0)	0 ( 0)	1 ( 2)	0 ( 0)
	white zone		1 ( 2)	0 ( 0)	2 ( 4)	2 ( 4)
	red zone		0 ( 0)	2 ( 4)	3 ( 6)	3 ( 6)
	red patch		0 ( 0)	0 ( 0)	1 ( 2)	0 ( 0)
	nodule		4 ( 8)	8 ( 16)	9 ( 18)	12 ( 24)
	rough		0 ( 0)	0 ( 0)	1 ( 2)	0 ( 0)
pancreas	nodule		0 ( 0)	2 ( 4)	0 ( 0)	3 ( 6)

STUDY NO. : 0304  
 ANIMAL : MOUSE Crj:BDF1  
 REPORT TYPE : A2  
 SEX : MALE

GROSS FINDINGS (SUMMARY)  
 ALL ANIMALS (0- 66W)

PAGE : 2

Organ	Findings	Group Name NO. of Animals	Control 50 (%)	150 ppm 50 (%)	300 ppm 50 (%)	600 ppm 50 (%)
kidney	enlarged		0 ( 0)	1 ( 2)	1 ( 2)	0 ( 0)
	atrophic		0 ( 0)	0 ( 0)	1 ( 2)	0 ( 0)
	nodule		0 ( 0)	1 ( 2)	1 ( 2)	3 ( 6)
	deformed		0 ( 0)	1 ( 2)	0 ( 0)	0 ( 0)
	hydronephrosis		1 ( 2)	4 ( 8)	4 ( 8)	3 ( 6)
urin bladd	urine:marked retention		2 ( 4)	0 ( 0)	2 ( 4)	0 ( 0)
adrenal	enlarged		0 ( 0)	0 ( 0)	0 ( 0)	3 ( 6)
testis	red		0 ( 0)	0 ( 0)	1 ( 2)	0 ( 0)
epididymis	nodule		1 ( 2)	0 ( 0)	0 ( 0)	0 ( 0)
prostate	nodule		0 ( 0)	0 ( 0)	0 ( 0)	1 ( 2)
prep/cli gl	nodule		1 ( 2)	2 ( 4)	1 ( 2)	0 ( 0)
muscle	nodule		0 ( 0)	1 ( 2)	0 ( 0)	1 ( 2)
mediastinum	mass		0 ( 0)	1 ( 2)	0 ( 0)	1 ( 2)
peritoneum	mass		0 ( 0)	1 ( 2)	0 ( 0)	1 ( 2)
retroperit	mass		0 ( 0)	32 ( 64)	36 ( 72)	35 ( 70)
	thick		0 ( 0)	1 ( 2)	1 ( 2)	0 ( 0)
abdominal c	hemorrhage		0 ( 0)	12 ( 24)	14 ( 28)	16 ( 32)
	mass		0 ( 0)	1 ( 2)	0 ( 0)	0 ( 0)
	ascites		0 ( 0)	2 ( 4)	4 ( 8)	3 ( 6)
mesenterium	mass		1 ( 2)	14 ( 28)	17 ( 34)	10 ( 20)
thoracic ca	hemorrhage		0 ( 0)	0 ( 0)	1 ( 2)	3 ( 6)
	mass		0 ( 0)	0 ( 0)	0 ( 0)	1 ( 2)

STUDY NO. : 0304  
ANIMAL : MOUSE Crj:BDF1  
REPORT TYPE : A2  
SEX : MALE

GROSS FINDINGS (SUMMARY)  
ALL ANIMALS (0- 66W)

PAGE : 3

Organ	Findings	Group Name	Control	150 ppm	300 ppm	600 ppm
		NO. of Animals	50 (%)	50 (%)	50 (%)	50 (%)
thoracic ca	pleural fluid		0 ( 0)	1 ( 2)	3 ( 6)	3 ( 6)
other	nose:nodule		0 ( 0)	0 ( 0)	1 ( 2)	0 ( 0)
whole body	anemic		0 ( 0)	1 ( 2)	0 ( 0)	0 ( 0)

(HPT080)

BAIS 8

## APPENDIX I 2

GROSS FINDINGS : SUMMARY, MOUSE : FEMALE ALL ANIMALS  
(2-YEAR STUDY)

STUDY NO. : 0304  
 ANIMAL : MOUSE Crj:BDF1  
 REPORT TYPE : A1  
 SEX : FEMALE

GROSS FINDINGS (SUMMARY)  
 ALL ANIMALS (0- 51W)

PAGE : 1

Organ	Findings	Group Name NO. of Animals	Control 50 (%)	150 ppm 50 (%)	300 ppm 50 (%)	600 ppm 50 (%)
subcutis	red zone		0 ( 0)	0 ( 0)	1 ( 2)	1 ( 2)
	hemorrhage		0 ( 0)	0 ( 0)	0 ( 0)	3 ( 6)
	edema		0 ( 0)	2 ( 4)	4 ( 8)	5 ( 10)
	mass		0 ( 0)	2 ( 4)	15 ( 30)	37 ( 74)
lung	transparent		0 ( 0)	1 ( 2)	0 ( 0)	0 ( 0)
	red		0 ( 0)	0 ( 0)	1 ( 2)	1 ( 2)
	red zone		0 ( 0)	3 ( 6)	1 ( 2)	2 ( 4)
	nodule		0 ( 0)	1 ( 2)	0 ( 0)	1 ( 2)
lymph node	enlarged		0 ( 0)	1 ( 2)	2 ( 4)	3 ( 6)
spleen	enlarged		0 ( 0)	9 ( 18)	13 ( 26)	21 ( 42)
	white zone		0 ( 0)	1 ( 2)	0 ( 0)	0 ( 0)
	black zone		2 ( 4)	3 ( 6)	1 ( 2)	0 ( 0)
	nodule		0 ( 0)	0 ( 0)	1 ( 2)	0 ( 0)
	accentuation of lobular structure		0 ( 0)	1 ( 2)	0 ( 0)	0 ( 0)
salivary gl	nodule		0 ( 0)	1 ( 2)	0 ( 0)	1 ( 2)
stomach	nodule		0 ( 0)	0 ( 0)	2 ( 4)	0 ( 0)
liver	enlarged		0 ( 0)	4 ( 8)	6 ( 12)	1 ( 2)
	pale		0 ( 0)	0 ( 0)	1 ( 2)	0 ( 0)
	white zone		0 ( 0)	1 ( 2)	3 ( 6)	4 ( 8)
	red zone		0 ( 0)	4 ( 8)	2 ( 4)	2 ( 4)
	red patch		0 ( 0)	0 ( 0)	1 ( 2)	0 ( 0)
	nodule		0 ( 0)	2 ( 4)	6 ( 12)	10 ( 20)

STUDY NO. : 0304  
 ANIMAL : MOUSE Crj:BDF1  
 REPORT TYPE : A1  
 SEX : FEMALE

GROSS FINDINGS (SUMMARY)  
 ALL ANIMALS (0- 51W)

PAGE : 2

Organ	Findings	Group Name NO. of Animals	Control 50 (%)	150 ppm 50 (%)	300 ppm 50 (%)	600 ppm 50 (%)
liver	rough		0 ( 0)	0 ( 0)	1 ( 2)	0 ( 0)
gall bladd	dilated		0 ( 0)	1 ( 2)	0 ( 0)	0 ( 0)
pancreas	nodule		0 ( 0)	0 ( 0)	2 ( 4)	1 ( 2)
kidney	red zone		0 ( 0)	0 ( 0)	0 ( 0)	1 ( 2)
	hydronephrosis		1 ( 2)	2 ( 4)	3 ( 6)	1 ( 2)
adrenal	enlarged		0 ( 0)	0 ( 0)	1 ( 2)	0 ( 0)
	nodule		0 ( 0)	0 ( 0)	0 ( 0)	1 ( 2)
ovary	enlarged		0 ( 0)	0 ( 0)	2 ( 4)	2 ( 4)
	red		0 ( 0)	0 ( 0)	0 ( 0)	2 ( 4)
	nodule		0 ( 0)	1 ( 2)	0 ( 0)	0 ( 0)
	mass		0 ( 0)	1 ( 2)	1 ( 2)	0 ( 0)
	cyst		4 ( 8)	0 ( 0)	0 ( 0)	0 ( 0)
uterus	enlarged		0 ( 0)	0 ( 0)	1 ( 2)	0 ( 0)
	nodule		1 ( 2)	0 ( 0)	1 ( 2)	2 ( 4)
muscle	nodule		0 ( 0)	0 ( 0)	2 ( 4)	2 ( 4)
bone	nodule		0 ( 0)	0 ( 0)	1 ( 2)	0 ( 0)
mediastinum	mass		0 ( 0)	1 ( 2)	0 ( 0)	0 ( 0)
peritoneum	nodule		0 ( 0)	0 ( 0)	0 ( 0)	1 ( 2)
	mass		0 ( 0)	2 ( 4)	6 ( 12)	12 ( 24)
retroperit	mass		0 ( 0)	30 ( 60)	33 ( 66)	24 ( 48)
abdominal c	hemorrhage		0 ( 0)	16 ( 32)	20 ( 40)	19 ( 38)
	ascites		0 ( 0)	1 ( 2)	6 ( 12)	4 ( 8)

STUDY NO. : 0304  
ANIMAL : MOUSE Crj:BDF1  
REPORT TYPE : A1  
SEX : FEMALE

GROSS FINDINGS (SUMMARY)  
ALL ANIMALS (0- 51#)

PAGE : 3

Organ	Findings	Group Name	Control	150 ppm	300 ppm	600 ppm
		NO. of Animals	50 (%)	50 (%)	50 (%)	50 (%)
mesenterium	mass		1 ( 2)	16 ( 32)	18 ( 36)	8 ( 16)
adipose	nodule		0 ( 0)	2 ( 4)	2 ( 4)	1 ( 2)
thoracic ca	hemorrhage		0 ( 0)	0 ( 0)	3 ( 6)	1 ( 2)
	mass		0 ( 0)	0 ( 0)	1 ( 2)	1 ( 2)
	pleural fluid		1 ( 2)	0 ( 0)	1 ( 2)	0 ( 0)

(HPT080)

BAIS 3

## APPENDIX I 3

GROSS FINDINGS : SUMMARY, MOUSE : MALE

DEAD AND MORIBUND ANIMALS

(2-YEAR STUDY)

STUDY NO. : 0304  
 ANIMAL : MOUSE Crj:BDF1  
 REPORT TYPE : A2  
 SEX : MALE

GROSS FINDINGS (SUMMARY)  
 DEAD AND MORIBUND ANIMALS (0- 66W)

PAGE : 1

Organ	Findings	Group Name NO. of Animals	Control 4 (%)	150 ppm 35 (%)	300 ppm 50 (%)	600 ppm 50 (%)
skin/app	thick		1 ( 25)	0 ( 0)	0 ( 0)	0 ( 0)
	scab		0 ( 0)	0 ( 0)	0 ( 0)	1 ( 2)
subcutis	edema		0 ( 0)	0 ( 0)	6 ( 12)	2 ( 4)
	mass		0 ( 0)	0 ( 0)	3 ( 6)	3 ( 6)
lung	red		0 ( 0)	0 ( 0)	1 ( 2)	1 ( 2)
	red zone		0 ( 0)	0 ( 0)	1 ( 2)	3 ( 6)
	nodule		0 ( 0)	0 ( 0)	2 ( 4)	0 ( 0)
lymph node	enlarged		0 ( 0)	1 ( 3)	1 ( 2)	2 ( 4)
spleen	enlarged		0 ( 0)	10 ( 29)	7 ( 14)	6 ( 12)
	black		0 ( 0)	0 ( 0)	1 ( 2)	1 ( 2)
	deformed		0 ( 0)	0 ( 0)	1 ( 2)	0 ( 0)
forestomach	adhesion		0 ( 0)	0 ( 0)	0 ( 0)	1 ( 2)
gl stomach	thick		0 ( 0)	0 ( 0)	1 ( 2)	0 ( 0)
stomach	nodule		0 ( 0)	0 ( 0)	1 ( 2)	1 ( 2)
liver	enlarged		0 ( 0)	2 ( 6)	3 ( 6)	0 ( 0)
	pale		0 ( 0)	0 ( 0)	1 ( 2)	0 ( 0)
	white zone		0 ( 0)	0 ( 0)	2 ( 4)	2 ( 4)
	red zone		0 ( 0)	0 ( 0)	3 ( 6)	3 ( 6)
	red patch		0 ( 0)	0 ( 0)	1 ( 2)	0 ( 0)
	nodule		0 ( 0)	4 ( 11)	9 ( 18)	12 ( 24)
	rough		0 ( 0)	0 ( 0)	1 ( 2)	0 ( 0)
pancreas	nodule		0 ( 0)	2 ( 6)	0 ( 0)	3 ( 6)

STUDY NO. : 0304  
 ANIMAL : MOUSE Crj:BDF1  
 REPORT TYPE : A2  
 SEX : MALE

GROSS FINDINGS (SUMMARY)  
 DEAD AND MORIBUND ANIMALS (0- 66W)

PAGE : 2

Organ	Findings	Group Name NO. of Animals	Control 4 (%)	150 ppm 35 (%)	300 ppm 50 (%)	600 ppm 50 (%)
kidney	enlarged		0 ( 0)	1 ( 3)	1 ( 2)	0 ( 0)
	atrophic		0 ( 0)	0 ( 0)	1 ( 2)	0 ( 0)
	nodule		0 ( 0)	0 ( 0)	1 ( 2)	3 ( 6)
	deformed		0 ( 0)	1 ( 3)	0 ( 0)	0 ( 0)
	hydronephrosis		1 ( 25)	4 ( 11)	4 ( 8)	3 ( 6)
urin bladd	urine:marked retention		2 ( 50)	0 ( 0)	2 ( 4)	0 ( 0)
adrenal	enlarged		0 ( 0)	0 ( 0)	0 ( 0)	3 ( 6)
testis	red		0 ( 0)	0 ( 0)	1 ( 2)	0 ( 0)
prostate	nodule		0 ( 0)	0 ( 0)	0 ( 0)	1 ( 2)
prep/cli gl	nodule		0 ( 0)	0 ( 0)	1 ( 2)	0 ( 0)
muscle	nodule		0 ( 0)	0 ( 0)	0 ( 0)	1 ( 2)
mediastinum	mass		0 ( 0)	0 ( 0)	0 ( 0)	1 ( 2)
peritoneum	mass		0 ( 0)	1 ( 3)	0 ( 0)	1 ( 2)
retroperit	mass		0 ( 0)	25 ( 71)	36 ( 72)	35 ( 70)
	thick		0 ( 0)	1 ( 3)	1 ( 2)	0 ( 0)
abdominal c	hemorrhage		0 ( 0)	12 ( 34)	14 ( 28)	16 ( 32)
	mass		0 ( 0)	1 ( 3)	0 ( 0)	0 ( 0)
	ascites		0 ( 0)	2 ( 6)	4 ( 8)	3 ( 6)
mesenterium	mass		0 ( 0)	11 ( 31)	17 ( 34)	10 ( 20)
thoracic ca	hemorrhage		0 ( 0)	0 ( 0)	1 ( 2)	3 ( 6)
	mass		0 ( 0)	0 ( 0)	0 ( 0)	1 ( 2)
	pleural fluid		0 ( 0)	1 ( 3)	3 ( 6)	3 ( 6)

STUDY NO. : 0304  
ANIMAL : MOUSE Crj:BDF1  
REPORT TYPE : A2  
SEX : MALE

GROSS FINDINGS (SUMMARY)  
DEAD AND MORIBUND ANIMALS (0- 66W)

PAGE : 3

Organ	Findings	Group Name	Control	150 ppm	300 ppm	600 ppm
		NO. of Animals	4 (%)	35 (%)	50 (%)	50 (%)
other	nose:nodule		0 ( 0)	0 ( 0)	1 ( 2)	0 ( 0)
whole body	anemic		0 ( 0)	1 ( 3)	0 ( 0)	0 ( 0)

(HPT080)

BAIS 3

## APPENDIX I 4

GROSS FINDINGS : SUMMARY, MOUSE : FEMALE

DEAD AND MORIBUND ANIMALS

(2-YEAR STUDY)

STUDY NO. : 0304  
 ANIMAL : MOUSE Crj:BDF1  
 REPORT TYPE : A1  
 SEX : FEMALE

GROSS FINDINGS (SUMMARY)  
 DEAD AND MORIBUND ANIMALS (0- 51W)

PAGE : 1

Organ	Findings	Group Name NO. of Animals	Control 1 (%)	150 ppm 30 (%)	300 ppm 44 (%)	600 ppm 50 (%)
subcutis	red zone		0 ( 0)	0 ( 0)	1 ( 2)	1 ( 2)
	hemorrhage		0 ( 0)	0 ( 0)	0 ( 0)	3 ( 6)
	edema		0 ( 0)	2 ( 7)	4 ( 9)	5 ( 10)
	mass		0 ( 0)	1 ( 3)	13 ( 30)	37 ( 74)
lung	transparent		0 ( 0)	1 ( 3)	0 ( 0)	0 ( 0)
	red		0 ( 0)	0 ( 0)	1 ( 2)	1 ( 2)
	red zone		0 ( 0)	1 ( 3)	1 ( 2)	2 ( 4)
	nodule		0 ( 0)	0 ( 0)	0 ( 0)	1 ( 2)
lymph node	enlarged		0 ( 0)	1 ( 3)	2 ( 5)	3 ( 6)
spleen	enlarged		0 ( 0)	8 ( 27)	13 ( 30)	21 ( 42)
	white zone		0 ( 0)	1 ( 3)	0 ( 0)	0 ( 0)
	black zone		0 ( 0)	0 ( 0)	1 ( 2)	0 ( 0)
	nodule		0 ( 0)	0 ( 0)	1 ( 2)	0 ( 0)
	accentuation of lobular structure		0 ( 0)	1 ( 3)	0 ( 0)	0 ( 0)
salivary gl	nodule		0 ( 0)	1 ( 3)	0 ( 0)	1 ( 2)
stomach	nodule		0 ( 0)	0 ( 0)	1 ( 2)	0 ( 0)
liver	enlarged		0 ( 0)	1 ( 3)	3 ( 7)	1 ( 2)
	pale		0 ( 0)	0 ( 0)	1 ( 2)	0 ( 0)
	white zone		0 ( 0)	0 ( 0)	3 ( 7)	4 ( 8)
	red zone		0 ( 0)	1 ( 3)	0 ( 0)	2 ( 4)
	red patch		0 ( 0)	0 ( 0)	1 ( 2)	0 ( 0)
	nodule		0 ( 0)	2 ( 7)	4 ( 9)	10 ( 20)

STUDY NO. : 0304  
ANIMAL : MOUSE Crj:BDF1  
REPORT TYPE : A1  
SEX : FEMALE

GROSS FINDINGS (SUMMARY)  
DEAD AND MORIBUND ANIMALS (0- 51W)

PAGE : 2

Organ	Findings	Group Name NO. of Animals	Control 1 (%)	150 ppm 30 (%)	300 ppm 44 (%)	600 ppm 50 (%)
liver	rough		0 ( 0)	0 ( 0)	1 ( 2)	0 ( 0)
gall bladd	dilated		0 ( 0)	1 ( 3)	0 ( 0)	0 ( 0)
pancreas	nodule		0 ( 0)	0 ( 0)	2 ( 5)	1 ( 2)
kidney	red zone		0 ( 0)	0 ( 0)	0 ( 0)	1 ( 2)
	hydronephrosis		1 (100)	2 ( 7)	3 ( 7)	1 ( 2)
adrenal	enlarged		0 ( 0)	0 ( 0)	1 ( 2)	0 ( 0)
	nodule		0 ( 0)	0 ( 0)	0 ( 0)	1 ( 2)
ovary	enlarged		0 ( 0)	0 ( 0)	2 ( 5)	2 ( 4)
	red		0 ( 0)	0 ( 0)	0 ( 0)	2 ( 4)
uterus	enlarged		0 ( 0)	0 ( 0)	1 ( 2)	0 ( 0)
	nodule		0 ( 0)	0 ( 0)	1 ( 2)	2 ( 4)
muscle	nodule		0 ( 0)	0 ( 0)	2 ( 5)	2 ( 4)
bone	nodule		0 ( 0)	0 ( 0)	1 ( 2)	0 ( 0)
peritoneum	nodule		0 ( 0)	0 ( 0)	0 ( 0)	1 ( 2)
	mass		0 ( 0)	2 ( 7)	6 ( 14)	12 ( 24)
retroperit	mass		0 ( 0)	15 ( 50)	27 ( 61)	24 ( 48)
abdominal c	hemorrhage		0 ( 0)	16 ( 53)	20 ( 45)	19 ( 38)
	ascites		0 ( 0)	1 ( 3)	6 ( 14)	4 ( 8)
mesenterium	mass		0 ( 0)	8 ( 27)	15 ( 34)	8 ( 16)
adipose	nodule		0 ( 0)	0 ( 0)	0 ( 0)	1 ( 2)
thoracic ca	hemorrhage		0 ( 0)	0 ( 0)	2 ( 5)	1 ( 2)
	mass		0 ( 0)	0 ( 0)	0 ( 0)	1 ( 2)

STUDY NO. : 0304  
ANIMAL : MOUSE Crj:BDF1  
REPORT TYPE : A1  
SEX : FEMALE

GROSS FINDINGS (SUMMARY)  
DEAD AND MORIBUND ANIMALS (0- 51W)

PAGE : 3

Organ	Findings	Group Name NO. of Animals	Control 1 (%)	150 ppm 30 (%)	300 ppm 44 (%)	600 ppm 50 (%)
thoracic ca	pleural fluid		1 (100)	0 ( 0)	1 ( 2)	0 ( 0)

(HPT080)

BAIS 3

## APPENDIX I 5

GROSS FINDINGS : SUMMARY, MOUSE : MALE

SACRIFICED ANIMALS

(2-YEAR STUDY)

STUDY NO. : 0304  
ANIMAL : MOUSE Crj:BDF1  
REPORT TYPE : A2  
SEX : MALE

GROSS FINDINGS (SUMMARY)  
SACRIFICED ANIMALS ( 66W)

PAGE : 1

Organ	Findings	Group Name NO. of Animals	Control 46 (%)	150 ppm 15 (%)	300 ppm 0 (%)	600 ppm 0 (%)
lung	nodule		2 ( 4)	1 ( 7)	- ( -)	- ( -)
liver	white zone		1 ( 2)	0 ( 0)	- ( -)	- ( -)
	red zone		0 ( 0)	2 ( 13)	- ( -)	- ( -)
	nodule		4 ( 9)	4 ( 27)	- ( -)	- ( -)
kidney	nodule		0 ( 0)	1 ( 7)	- ( -)	- ( -)
epididymis	nodule		1 ( 2)	0 ( 0)	- ( -)	- ( -)
prep/cli gl	nodule		1 ( 2)	2 ( 13)	- ( -)	- ( -)
muscle	nodule		0 ( 0)	1 ( 7)	- ( -)	- ( -)
mediastinum	mass		0 ( 0)	1 ( 7)	- ( -)	- ( -)
retroperit	mass		0 ( 0)	7 ( 47)	- ( -)	- ( -)
mesenterium	mass		1 ( 2)	3 ( 20)	- ( -)	- ( -)

## APPENDIX I 6

GROSS FINDINGS : SUMMARY, MOUSE : FEMALE

SACRIFICED ANIMALS

(2-YEAR STUDY)

STUDY NO. : 0304  
ANIMAL : MOUSE Crj:BDF1  
REPORT TYPE : A1  
SEX : FEMALE

GROSS FINDINGS (SUMMARY)  
SACRIFICED ANIMALS ( 51W)

PAGE : 1

Organ	Findings	Group Name NO. of Animals	Control 49 (%)	150 ppm 20 (%)	300 ppm 6 (%)	600 ppm 0 (%)
subcutis	mass		0 ( 0)	1 ( 5)	2 ( 33)	- ( -)
lung	red zone		0 ( 0)	2 ( 10)	0 ( 0)	- ( -)
	nodule		0 ( 0)	1 ( 5)	0 ( 0)	- ( -)
spleen	enlarged		0 ( 0)	1 ( 5)	0 ( 0)	- ( -)
	black zone		2 ( 4)	3 ( 15)	0 ( 0)	- ( -)
stomach	nodule		0 ( 0)	0 ( 0)	1 ( 17)	- ( -)
liver	enlarged		0 ( 0)	3 ( 15)	3 ( 50)	- ( -)
	white zone		0 ( 0)	1 ( 5)	0 ( 0)	- ( -)
	red zone		0 ( 0)	3 ( 15)	2 ( 33)	- ( -)
	nodule		0 ( 0)	0 ( 0)	2 ( 33)	- ( -)
ovary	nodule		0 ( 0)	1 ( 5)	0 ( 0)	- ( -)
	mass		0 ( 0)	1 ( 5)	1 ( 17)	- ( -)
	cyst		4 ( 8)	0 ( 0)	0 ( 0)	- ( -)
uterus	nodule		1 ( 2)	0 ( 0)	0 ( 0)	- ( -)
mediastinum	mass		0 ( 0)	1 ( 5)	0 ( 0)	- ( -)
retroperit	mass		0 ( 0)	15 ( 75)	6 (100)	- ( -)
mesenterium	mass		1 ( 2)	8 ( 40)	3 ( 50)	- ( -)
adipose	nodule		0 ( 0)	2 ( 10)	2 ( 33)	- ( -)
thoracic ca	hemorrhage		0 ( 0)	0 ( 0)	1 ( 17)	- ( -)
	mass		0 ( 0)	0 ( 0)	1 ( 17)	- ( -)

## APPENDIX J 1

ORGAN WEIGHT, ABSOLUTE : SUMMARY, MOUSE : MALE

(2-YEAR STUDY)

STUDY NO. : 0304  
 ANIMAL : MOUSE Crj:BDF1  
 REPORT TYPE : A2  
 SEX : MALE  
 UNIT: g

ORGAN WEIGHT:ABSOLUTE (SUMMARY)  
 SURVIVAL ANIMALS ( 66W)

PAGE : 1

Group Name	NO. of Animals	Body Weight	ADRENALS	TESTES	HEART	LUNGS	KIDNEYS
Control	46	48.1± 4.3	0.010± 0.003	0.214± 0.027	0.217± 0.019	0.192± 0.017	0.614± 0.049
150 ppm	15	43.7± 5.8**	0.010± 0.002	0.217± 0.020	0.202± 0.027*	0.197± 0.017	0.749± 0.553
300 ppm	0	-	-	-	-	-	-
600 ppm	0	-	-	-	-	-	-

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

Test of t

(HCL040)

BAIS 3

STUDY NO. : 0304  
ANIMAL : MOUSE Crj:BDF1  
REPORT TYPE : A2  
SEX : MALE  
UNIT: g

ORGAN WEIGHT:ABSOLUTE (SUMMARY)  
SURVIVAL ANIMALS ( 66W)

PAGE : 2

Group Name	NO. of Animals	SPLEEN		LIVER		BRAIN	
Control	46	0.063±	0.012	1.746±	0.344	0.448±	0.017
150 ppm	15	0.135±	0.123*	1.812±	0.287	0.448±	0.015
300 ppm	0	-		-		-	
600 ppm	0	-		-		-	

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

Test of t

(HCL040)

BAIS 3

## APPENDIX J 2

ORGAN WEIGHT, ABSOLUTE : SUMMARY, MOUSE : FEMALE  
(2-YEAR STUDY)

STUDY NO. : 0304  
ANIMAL : MOUSE Crj:BDF1  
REPORT TYPE : A1  
SEX : FEMALE  
UNIT: g

ORGAN WEIGHT:ABSOLUTE (SUMMARY)  
SURVIVAL ANIMALS ( 51W)

PAGE : 1

Group Name	NO. of Animals	Body Weight	ADRENALS		OVARIES		HEART		LUNGS		KIDNEYS	
Control	49	31.9± 4.3	0.018±	0.004	0.061±	0.107	0.151±	0.013	0.180±	0.019	0.368±	0.020
150 ppm	20	30.3± 4.0	0.020±	0.003	0.098±	0.251	0.151±	0.016	0.198±	0.040	0.391±	0.028**
300 ppm	6	30.5± 2.0	0.015±	0.004	0.134±	0.241	0.142±	0.009	0.183±	0.012	0.443±	0.032**
600 ppm	0	-	-		-		-		-		-	

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

Test of Dunnett

(HCL040)

BAIS 3

STUDY NO. : 0304  
ANIMAL : MOUSE Crj:BDF1  
REPORT TYPE : A1  
SEX : FEMALE  
UNIT: g

ORGAN WEIGHT:ABSOLUTE (SUMMARY)  
SURVIVAL ANIMALS ( 51W)

PAGE : 2

Group Name	NO. of Animals	SPLEEN		LIVER		BRAIN	
Control	49	0.077±	0.045	1.199±	0.100	0.468±	0.023
150 ppm	20	0.137±	0.114**	1.645±	0.730**	0.471±	0.019
300 ppm	6	0.259±	0.111**	2.600±	1.052**	0.455±	0.010
600 ppm	0	-		-		-	

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

Test of Dunnett

(HCL040)

BAIS 3

## APPENDIX K 1

ORGAN WEIGHT, RELATIVE : SUMMARY, MOUSE : MALE

(2-YEAR STUDY)

STUDY NO. : 0304  
 ANIMAL : MOUSE Crj:BDF1  
 REPORT TYPE : A2  
 SEX : MALE  
 UNIT: %

ORGAN WEIGHT:RELATIVE (SUMMARY)  
 SURVIVAL ANIMALS ( 66W)

PAGE : 1

Group Name	NO. of Animals	Body Weight (g)	ADRENALS	TESTES	HEART	LUNGS	KIDNEYS
Control	46	48.1± 4.3	0.021± 0.006	0.447± 0.055	0.453± 0.049	0.400± 0.046	1.280± 0.097
150 ppm	15	43.7± 5.8**	0.023± 0.007	0.502± 0.061**	0.467± 0.052	0.459± 0.077*	1.794± 1.543
300 ppm	0	-	-	-	-	-	-
600 ppm	0	-	-	-	-	-	-

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

Test of t

(HCL042)

BAIS 3

STUDY NO. : 0304  
ANIMAL : MOUSE Crj:BDF1  
REPORT TYPE : A2  
SEX : MALE  
UNIT: %

ORGAN WEIGHT:RELATIVE (SUMMARY)  
SURVIVAL ANIMALS ( 66W)

PAGE : 2

Group Name	NO. of Animals	SPLEEN	LIVER	BRAIN
Control	46	0.131± 0.024	3.636± 0.743	0.938± 0.087
150 ppm	15	0.330± 0.329*	4.204± 0.845*	1.042± 0.132*
300 ppm	0	-	-	-
600 ppm	0	-	-	-

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

Test of t

(HCL042)

BAIS 8

## APPENDIX K 2

ORGAN WEIGHT, RELATIVE : SUMMARY, MOUSE : FEMALE  
(2-YEAR STUDY)

STUDY NO. : 0304  
ANIMAL : MOUSE Crj:BDF1  
REPORT TYPE : A1  
SEX : FEMALE  
UNIT: %

ORGAN WEIGHT:RELATIVE (SUMMARY)  
SURVIVAL ANIMALS ( 51#)

PAGE : 1

Group Name	NO. of Animals	Body Weight (g)	ADRENALS	OVARIES	HEART	LUNGS	KIDNEYS
Control	49	31.9± 4.3	0.056± 0.013	0.189± 0.315	0.482± 0.087	0.576± 0.097	1.173± 0.159
150 ppm	20	30.3± 4.0	0.065± 0.011*	0.314± 0.781	0.501± 0.058	0.665± 0.175*	1.305± 0.145**
300 ppm	6	30.5± 2.0	0.049± 0.012	0.434± 0.783	0.468± 0.031	0.600± 0.024	1.461± 0.144**
600 ppm	0	-	-	-	-	-	-

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

Test of Dunnett

(HCL042)

BAIS 8

STUDY NO. : 0304  
ANIMAL : MOUSE Crj:BDF1  
REPORT TYPE : A1  
SEX : FEMALE  
UNIT: %

ORGAN WEIGHT:RELATIVE (SUMMARY)  
SURVIVAL ANIMALS ( 51W)

PAGE : 2

Group Name	NO. of Animals	SPLEEN	LIVER	BRAIN
Control	49	0.245 ± 0.143	3.801 ± 0.382	1.500 ± 0.253
150 ppm	20	0.455 ± 0.364**	5.474 ± 2.439**	1.577 ± 0.194
300 ppm	6	0.859 ± 0.398**	8.435 ± 3.050**	1.499 ± 0.105
600 ppm	0	-	-	-

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

Test of Dunnett

(HCL042)

BAIS 3

## APPENDIX L 1

HISTOLOGICAL FINDINGS : NON-NEOPLASTIC LESIONS : SUMMARY

MOUSE : MALE : ALL ANIMALS

(2-YEAR STUDY)

STUDY NO. : 0304  
 ANIMAL : MOUSE Crj:BDF1  
 REPORT TYPE : A2  
 SEX : MALE

HISTOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)  
 ALL ANIMALS (0- 66W)

PAGE : 1

Organ_____	Findings_____	Group Name	Control				150 ppm				300 ppm				600 ppm			
		No. of Animals on Study	50				50				50				50			
		Grade	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Integumentary system/appandage}																		
skin/app			<50>				<50>				<50>				<50>			
	inflammation	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		( 0 )	( 2 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )
	scar:dermis	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
		( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 2 )	( 0 )	( 0 )	( 0 )	( 0 )
subcutis			<50>				<50>				<50>				<50>			
	mastcell hyperplasia	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		( 0 )	( 2 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )
	hyperplasia:vascular	0	0	0	0	1	0	0	0	1	0	0	0	1	0	0	0	0
		( 0 )	( 0 )	( 0 )	( 0 )	( 2 )	( 0 )	( 0 )	( 0 )	( 2 )	( 0 )	( 0 )	( 0 )	( 2 )	( 0 )	( 0 )	( 0 )	( 0 )
{Respiratory system}																		
nasal cavit			<50>				<50>				<50>				<50>			
	eosinophilic change:olfactory epithelium	12	0	0	0	15	0	0	0	11	0	0	0	3	0	0	0	0
		( 24 )	( 0 )	( 0 )	( 0 )	( 30 )	( 0 )	( 0 )	( 0 )	( 22 )	( 0 )	( 0 )	( 0 )	( 6 )	( 0 )	( 0 )	( 0 )	( 0 )
	eosinophilic change:respiratory epithelium	6	2	0	0	5	0	0	0	2	0	0	0	3	0	0	0	0
		( 12 )	( 4 )	( 0 )	( 0 )	( 10 )	( 0 )	( 0 )	( 0 )	( 4 )	( 0 )	( 0 )	( 0 )	( 6 )	( 0 )	( 0 )	( 0 )	( 0 )

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

STUDY NO. : 0304  
 ANIMAL : MOUSE Crj:BDF1  
 REPORT TYPE : A2  
 SEX : MALE

HISTOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)  
 ALL ANIMALS (0- 66W)

PAGE : 2

Organ	Findings	Group Name No. of Animals on Study Grade				Control 50				150 ppm 50				300 ppm 50				600 ppm 50			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Respiratory system}																					
nasal cavit		<50>				<50>				<50>				<50>				<50>			
	respiratory metaplasia:olfactory epithelium	15	0	0	0	4	0	0	0 *	3	0	0	0 **	3	0	0	0	3	0	0	0 **
		( 30 )	( 0 )	( 0 )	( 0 )	( 8 )	( 0 )	( 0 )	( 0 )	( 6 )	( 0 )	( 0 )	( 0 )	( 6 )	( 0 )	( 0 )	( 0 )	( 6 )	( 0 )	( 0 )	( 0 )
	respiratory metaplasia:gland	6	3	0	0	2	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0 **
		( 12 )	( 6 )	( 0 )	( 0 )	( 4 )	( 0 )	( 0 )	( 0 )	( 6 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )
	necrosis:olfactory epithelium	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
lung		( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 2 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )
	hemorrhage	2	0	0	0	1	0	0	0	0	4	1	0	1	3	2	0	1	3	2	0
		( 4 )	( 0 )	( 0 )	( 0 )	( 2 )	( 0 )	( 0 )	( 0 )	( 0 )	( 8 )	( 2 )	( 0 )	( 2 )	( 6 )	( 4 )	( 0 )	( 2 )	( 6 )	( 4 )	( 0 )
	edema	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	1	0	0	0
		( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 2 )	( 0 )	( 2 )	( 0 )	( 0 )	( 0 )	( 2 )	( 0 )	( 0 )	( 0 )
	inflammatory infiltration	1	1	0	0	16	7	0	0 **	22	12	0	0 **	20	12	0	0 **	20	12	0	0 **
		( 2 )	( 2 )	( 0 )	( 0 )	( 32 )	( 14 )	( 0 )	( 0 )	( 44 )	( 24 )	( 0 )	( 0 )	( 40 )	( 24 )	( 0 )	( 0 )	( 40 )	( 24 )	( 0 )	( 0 )
	perivascular inflammation	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0
		( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 2 )	( 0 )	( 0 )	( 2 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )
	accumulation of foamy cells	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	1	0	0	0
		( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 2 )	( 0 )	( 0 )	( 0 )	( 2 )	( 0 )	( 0 )	( 0 )	( 2 )	( 0 )	( 0 )	( 0 )

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

STUDY NO. : 0304  
ANIMAL : MOUSE Crj:BDF1  
REPORT TYPE : A2  
SEX : MALE

HISTOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)  
ALL ANIMALS (0- 66W)

PAGE : 3

Organ	Findings	Group Name No. of Animals on Study Grade	Control 50				150 ppm 50				300 ppm 50				600 ppm 50			
			1 (%)	2 (%)	3 (%)	4 (%)	1 (%)	2 (%)	3 (%)	4 (%)	1 (%)	2 (%)	3 (%)	4 (%)	1 (%)	2 (%)	3 (%)	4 (%)
{Respiratory system}																		
lung			<50>				<50>				<50>				<50>			
	bronchiolar-alveolar cell hyperplasia		0 ( 0 )	0 ( 0 )	0 ( 0 )	0 ( 0 )	2 ( 4 )	0 ( 0 )	0 ( 0 )	0 ( 0 )	0 ( 0 )	0 ( 0 )	0 ( 0 )	0 ( 0 )	0 ( 0 )	0 ( 0 )	0 ( 0 )	0 ( 0 )
	accumulation of immature blood cells		0 ( 0 )	0 ( 0 )	0 ( 0 )	0 ( 0 )	13 ( 26 )	0 ( 0 )	0 ( 0 )	0 ( 0 )	0 ** ( 0 )	21 ( 42 )	0 ( 0 )	0 ( 0 )	0 ( 0 )	0 ** ( 0 )	22 ( 44 )	0 ( 0 )
{Hematopoietic system}																		
bone marrow			<50>				<50>				<50>				<50>			
	congestion		0 ( 0 )	0 ( 0 )	0 ( 0 )	0 ( 0 )	1 ( 2 )	0 ( 0 )	0 ( 0 )	0 ( 0 )	0 ( 0 )	0 ( 0 )	0 ( 0 )	0 ( 0 )	0 ( 0 )	0 ( 0 )	3 ( 6 )	0 ( 0 )
	proliferation:histiocyte		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 )	1 ( 2 )	0 ( 0 )	
	myelofibrosis		0 ( 0 )	0 ( 0 )	0 ( 0 )	0 ( 0 )	1 ( 2 )	0 ( 0 )	0 ( 0 )	0 ( 0 )	0 ( 0 )	0 ( 0 )	0 ( 0 )	0 ( 0 )	0 ( 0 )	2 ( 4 )	0 ( 0 )	
	erythropoiesis:increased		0 ( 0 )	0 ( 0 )	0 ( 0 )	0 ( 0 )	15 ( 30 )	8 ( 16 )	0 ( 0 )	0 ( 0 )	0 ** ( 0 )	19 ( 38 )	17 ( 34 )	0 ( 0 )	0 ( 0 )	0 ** ( 0 )	20 ( 40 )	7 ( 14 )
	granulopoiesis:increased		2 ( 4 )	0 ( 0 )	0 ( 0 )	0 ( 0 )	0 ( 0 )	0 ( 0 )	0 ( 0 )	0 ( 0 )	0 ( 0 )	1 ( 2 )	0 ( 0 )	0 ( 0 )	0 ( 0 )	0 ( 0 )	0 ( 0 )	0 ( 0 )
Grade	1 : Slight	2 : Moderate	3 : Marked	4 : Severe														
< a >	a : Number of animals examined at the site																	
b	b : Number of animals with lesion																	
( c )	c : b / a * 100																	
Significant difference : * : P ≤ 0.05 ** : P ≤ 0.01 Test of Chi Square																		

STUDY NO. : 0304  
 ANIMAL : MOUSE Crj:BDF1  
 REPORT TYPE : A2  
 SEX : MALE

HISTOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)  
 ALL ANIMALS (0- 66W)

PAGE : 4

Organ	Findings	Group Name No. of Animals on Study Grade	Control 50				150 ppm 50				300 ppm 50				600 ppm 50			
			1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Hematopoietic system}																		
spleen			<50>				<50>				<50>				<50>			
	atrophy		0	0	0	0	0	0	0	0	0	0	0	0	1	3	0	0
			( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 2 )	( 6 )	( 0 )	( 0 )
	deposit of melanin		0	0	0	0	1	0	0	0	1	0	0	0	4	0	0	0
			( 0 )	( 0 )	( 0 )	( 0 )	( 2 )	( 0 )	( 0 )	( 0 )	( 2 )	( 0 )	( 0 )	( 0 )	( 8 )	( 0 )	( 0 )	( 0 )
	extramedullary hematopoiesis		0	0	0	0	5	9	26	0 **	2	8	38	0 **	3	18	23	0 **
			( 0 )	( 0 )	( 0 )	( 0 )	( 10 )	( 18 )	( 52 )	( 0 )	( 4 )	( 16 )	( 76 )	( 0 )	( 6 )	( 36 )	( 46 )	( 0 )
	follicular hyperplasia		2	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
			( 4 )	( 0 )	( 0 )	( 0 )	( 2 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )
{Circulatory system}																		
heart			<50>				<50>				<50>				<50>			
	mineralization		0	0	0	0	4	0	0	0	12	4	1	0 **	5	1	0	0 *
			( 0 )	( 0 )	( 0 )	( 0 )	( 8 )	( 0 )	( 0 )	( 0 )	( 24 )	( 8 )	( 2 )	( 0 )	( 10 )	( 2 )	( 0 )	( 0 )
	inflammatory cell nest		0	0	0	0	2	0	0	0	1	0	0	0	0	0	0	0
			( 0 )	( 0 )	( 0 )	( 0 )	( 4 )	( 0 )	( 0 )	( 0 )	( 2 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )
	myocarditis		2	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0
			( 4 )	( 0 )	( 0 )	( 0 )	( 2 )	( 0 )	( 0 )	( 0 )	( 2 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )

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

STUDY NO. : 0304  
 ANIMAL : MOUSE Crj:BDF1  
 REPORT TYPE : A2  
 SEX : MALE

HISTOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)  
 ALL ANIMALS (0- 66W)

PAGE : 5

Organ_____	Findings_____	Group Name	Control				150 ppm				300 ppm				600 ppm			
		No. of Animals on Study	50				50				50				50			
		Grade	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Circulatory system}																		
heart	arteritis		<50>				<50>				<50>				<50>			
		2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		( 4)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)
artery/aort	arteritis		<50>				<50>				<50>				<50>			
		0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		( 0)	( 0)	( 0)	( 2)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)
{Digestive system}																		
tooth	dysplasia		<50>				<50>				<50>				<50>			
		4	1	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0
		( 8)	( 2)	( 0)	( 0)	( 2)	( 0)	( 0)	( 0)	( 2)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)
tongue	arteritis		<50>				<50>				<50>				<50>			
		0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		( 0)	( 4)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)
salivary gl	lymphocytic infiltration		<50>				<50>				<50>				<50>			
		16	0	0	0	10	0	0	0	5	0	0	0 *	3	0	0	0 **	0
		( 32)	( 0)	( 0)	( 0)	( 20)	( 0)	( 0)	( 0)	( 10)	( 0)	( 0)	( 0)	( 6)	( 0)	( 0)	( 0)	( 0)
stomach	erosion:forestomach		<50>				<50>				<50>				<49>			
		0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
		( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 2)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)

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

STUDY NO. : 0304  
 ANIMAL : MOUSE Crj:BDF1  
 REPORT TYPE : A2  
 SEX : MALE

HISTOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)  
 ALL ANIMALS (0- 66W)

PAGE : 6

Organ	Findings	Group Name No. of Animals on Study Grade	Control 50				150 ppm 50				300 ppm 50				600 ppm 50			
			1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Digestive system}																		
stomach	erosion:glandular stomach		<50>				<50>				<50>				<49>			
			3	1	0	0	2	0	0	0	0	0	0	0	0	0	0	0
			( 6)	( 2)	( 0)	( 0)	( 4)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)
	hyperplasia:glandular stomach		9	32	3	0	19	21	3	0	24	13	1	0 **	28	11	0	0 **
			( 18)	( 64)	( 6)	( 0)	( 38)	( 42)	( 6)	( 0)	( 48)	( 26)	( 2)	( 0)	( 57)	( 22)	( 0)	( 0)
liver	angiectasis		<50>				<50>				<50>				<50>			
			0	0	0	0	0	0	0	0	0	1	0	0	1	2	0	0
			( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 2)	( 0)	( 0)	( 2)	( 4)	( 0)	( 0)
	hemorrhage		0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
			( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 2)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)
	necrosis:central		0	0	0	0	2	1	0	0	3	2	2	0	0	4	1	0
			( 0)	( 0)	( 0)	( 0)	( 4)	( 2)	( 0)	( 0)	( 6)	( 4)	( 4)	( 0)	( 0)	( 8)	( 2)	( 0)
	necrosis:focal		0	1	0	0	1	4	1	0	7	3	0	0 *	7	5	1	0 **
			( 0)	( 2)	( 0)	( 0)	( 2)	( 8)	( 2)	( 0)	( 14)	( 6)	( 0)	( 0)	( 14)	( 10)	( 2)	( 0)
	fatty change		5	0	0	0	6	0	0	0	1	0	0	0	0	0	0	0
			( 10)	( 0)	( 0)	( 0)	( 12)	( 0)	( 0)	( 0)	( 2)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)
	fatty change:central		13	2	0	0	1	0	0	0 **	0	0	1	0 **	0	0	0	0 **
			( 26)	( 4)	( 0)	( 0)	( 2)	( 0)	( 0)	( 0)	( 0)	( 0)	( 2)	( 0)	( 0)	( 0)	( 0)	( 0)

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

STUDY NO. : 0304  
ANIMAL : MOUSE Crj:BDF1  
REPORT TYPE : A2  
SEX : MALE

HISTOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)  
ALL ANIMALS (0- 66W)

PAGE : 7

Organ	Findings	Group Name No. of Animals on Study Grade	Control 50				150 ppm 50				300 ppm 50				600 ppm 50			
			1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Digestive system}																		
liver			<50>				<50>				<50>				<50>			
	degeneration:central		0	0	0	0	8	2	0	0 **	12	5	1	0 **	4	3	0	0 *
			( 0 )	( 0 )	( 0 )	( 0 )	( 16 )	( 4 )	( 0 )	( 0 )	( 24 )	( 10 )	( 2 )	( 0 )	( 8 )	( 6 )	( 0 )	( 0 )
	inflammatory cell nest		0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0
			( 0 )	( 0 )	( 0 )	( 0 )	( 6 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )
	hyperplasia		0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
			( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 2 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )
	extramedullary hematopoiesis		0	0	0	0	12	0	0	0 **	3	1	0	0	6	0	0	0 *
			( 0 )	( 0 )	( 0 )	( 0 )	( 24 )	( 0 )	( 0 )	( 0 )	( 6 )	( 2 )	( 0 )	( 0 )	( 12 )	( 0 )	( 0 )	( 0 )
	accumulation of immature blood cells		0	0	0	0	14	12	4	0 **	11	27	3	0 **	14	12	2	0 **
			( 0 )	( 0 )	( 0 )	( 0 )	( 28 )	( 24 )	( 8 )	( 0 )	( 22 )	( 54 )	( 6 )	( 0 )	( 28 )	( 24 )	( 4 )	( 0 )
	erythrostasis		0	0	0	0	1	0	0	0	1	1	0	0	1	2	0	0
			( 0 )	( 0 )	( 0 )	( 0 )	( 2 )	( 0 )	( 0 )	( 0 )	( 2 )	( 2 )	( 0 )	( 0 )	( 2 )	( 4 )	( 0 )	( 0 )
	acidophilic cell focus		0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
			( 0 )	( 0 )	( 0 )	( 0 )	( 2 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )
	basophilic cell focus		2	0	0	0	3	0	0	0	2	0	0	0	0	0	0	0
			( 4 )	( 0 )	( 0 )	( 0 )	( 6 )	( 0 )	( 0 )	( 0 )	( 4 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )

Grade 1 : Slight 2 : Moderate 3 : Marked 4 : Severe

< a > a : Number of animals examined at the site

b : Number of animals with lesion

( c ) c : b / a \* 100

Significant difference ; \* :  $P \leq 0.05$  \*\* :  $P \leq 0.01$  Test of Chi Square

STUDY NO. : 0304  
 ANIMAL : MOUSE Crj:BDF1  
 REPORT TYPE : A2  
 SEX : MALE

HISTOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)  
 ALL ANIMALS (0- 66W)

PAGE : 8

Organ	Findings	Group Name No. of Animals on Study Grade	Control 50				150 ppm 50				300 ppm 50				600 ppm 50			
			1 (%)	2 (%)	3 (%)	4 (%)	1 (%)	2 (%)	3 (%)	4 (%)	1 (%)	2 (%)	3 (%)	4 (%)	1 (%)	2 (%)	3 (%)	4 (%)
{Digestive system}																		
liver			<50>				<50>				<50>				<50>			
	vacuolated cell focus		2 ( 4)	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)
	mobilization of Kuppfer cell		0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	1 ( 2)	0 ( 0)	1 ( 2)	0 ( 0)	3 ( 6)	4 ( 8)	1 ( 2)	0 * ( 0)	1 ( 2)	4 ( 8)	3 ( 6)	0 * ( 0)
pancreas			<50>				<50>				<50>				<50>			
	atrophy		1 ( 2)	0 ( 0)	0 ( 0)	0 ( 0)	1 ( 2)	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			<50>				<50>				<50>				<50>			
	infarct		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 ( 2)	0 ( 0)	0 ( 0)	0 ( 0)
	hyaline droplet		0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	2 ( 4)	0 ( 0)	0 ( 0)	0 ( 0)	1 ( 2)	1 ( 2)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)
	basophilic change		0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	2 ( 4)	0 ( 0)	0 ( 0)	0 ( 0)	2 ( 4)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)
Grade	1 : Slight      2 : Moderate      3 : Marked      4 : Severe																	
< a >	a : Number of animals examined at the site																	
b	b : Number of animals with lesion																	
( c )	c : b / a * 100																	
Significant difference ;    * : P ≤ 0.05    ** : P ≤ 0.01    Test of Chi Square																		

STUDY NO. : 0304  
 ANIMAL : MOUSE Crj:BDF1  
 REPORT TYPE : A2  
 SEX : MALE

HISTOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)  
 ALL ANIMALS (0- 66W)

PAGE : 9

Organ	Findings	Group Name	Control				150 ppm				300 ppm				600 ppm			
		No. of Animals on Study	50				50				50				50			
		Grade	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Urinary system}																		
kidney			<50>				<50>				<50>				<50>			
	deposit of hemosiderin		0	0	0	0	4	4	0	0 *	4	1	0	0	3	1	0	0
			( 0 )	( 0 )	( 0 )	( 0 )	( 8 )	( 8 )	( 0 )	( 0 )	( 8 )	( 2 )	( 0 )	( 0 )	( 6 )	( 2 )	( 0 )	( 0 )
	inflammatory polyp		0	0	0	0	0	1	0	0	1	0	1	0	1	0	0	0
			( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 2 )	( 0 )	( 0 )	( 2 )	( 0 )	( 2 )	( 0 )	( 2 )	( 0 )	( 0 )	( 0 )
	hydronephrosis		0	1	0	0	2	5	1	0	4	2	2	0	4	2	1	0
			( 0 )	( 2 )	( 0 )	( 0 )	( 4 )	( 10 )	( 2 )	( 0 )	( 8 )	( 4 )	( 4 )	( 0 )	( 8 )	( 4 )	( 2 )	( 0 )
tubular necrosis		0	0	0	0	0	0	0	0	1	0	0	0	1	1	0	0	
		( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 2 )	( 0 )	( 0 )	( 0 )	( 2 )	( 2 )	( 0 )	( 0 )	
papillary necrosis		0	1	0	0	2	1	0	0	0	2	0	0	0	2	0	0	
		( 0 )	( 2 )	( 0 )	( 0 )	( 4 )	( 2 )	( 0 )	( 0 )	( 0 )	( 4 )	( 0 )	( 0 )	( 0 )	( 4 )	( 0 )	( 0 )	
mineralization:papilla		0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	
		( 0 )	( 0 )	( 0 )	( 0 )	( 2 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	
dilatation:tubular lumen		1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	
		( 2 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 2 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	
ureter			<50>				<50>				<50>				<50>			
	inflammatory polyp		0	0	0	0	0	2	0	0	0	1	0	0	0	0	0	0
			( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 4 )	( 0 )	( 0 )	( 0 )	( 2 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )

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

STUDY NO. : 0304  
 ANIMAL : MOUSE Crj:BDF1  
 REPORT TYPE : A2  
 SEX : MALE

HISTOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)  
 ALL ANIMALS (0- 66W)

PAGE : 10

Organ	Findings	Group Name No. of Animals on Study Grade	Control 50				150 ppm 50				300 ppm 50				600 ppm 50			
			1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Endocrine system}																		
pituitary	cyst		<50>				<50>				<48>				<50>			
			1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			( 2)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)
	Rathke pouch		4	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
			( 8)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 2)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)
thyroid	cystic thyroid follicle		<47>				<47>				<50>				<48>			
			1	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0
			( 2)	( 0)	( 0)	( 0)	( 2)	( 0)	( 0)	( 0)	( 2)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)
parathyroid	cyst		<23>				<12>				<19>				<14>			
			2	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
			( 9)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 5)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)
adrenal	necrosis:zonal		<49>				<50>				<50>				<50>			
			0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
			( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 2)	( 0)	( 0)	( 0)
	necrosis:focal		0	0	0	0	0	0	0	0	0	0	2	0	1	0	2	0
			( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 4)	( 0)	( 2)	( 0)	( 4)	( 0)
	spindle-cell hyperplasia		22	0	0	0	23	1	0	0	12	0	0	0 *	11	0	0	0 *
			( 45)	( 0)	( 0)	( 0)	( 46)	( 2)	( 0)	( 0)	( 24)	( 0)	( 0)	( 0)	( 22)	( 0)	( 0)	( 0)

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

STUDY NO. : 0304  
 ANIMAL : MOUSE Crj:BDF1  
 REPORT TYPE : A2  
 SEX : MALE

HISTOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)  
 ALL ANIMALS (0- 66W)

PAGE : 11

		Group Name No. of Animals on Study Grade	Control 50				150 ppm 50				300 ppm 50				600 ppm 50			
Organ	Findings		1 (%)	2 (%)	3 (%)	4 (%)	1 (%)	2 (%)	3 (%)	4 (%)	1 (%)	2 (%)	3 (%)	4 (%)	1 (%)	2 (%)	3 (%)	4 (%)
{Endocrine system}																		
adrenal			<49>				<50>				<50>				<50>			
	hyperplasia:cortical cell		1 ( 2 )	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 )
{Reproductive system}																		
testis			<50>				<50>				<50>				<50>			
	atrophy		0 ( 0 )	0 ( 0 )	0 ( 0 )	0 ( 0 )	0 ( 0 )	2 ( 4 )	0 ( 0 )	0 ( 0 )	4 ( 8 )	1 ( 2 )	1 ( 2 )	0 ( 0 )	1 ( 2 )	1 ( 2 )	0 ( 0 )	0 ( 0 )
	hemorrhage		0 ( 0 )	0 ( 0 )	0 ( 0 )	0 ( 0 )	0 ( 0 )	0 ( 0 )	0 ( 0 )	0 ( 0 )	1 ( 2 )	0 ( 0 )	0 ( 0 )	0 ( 0 )	0 ( 0 )	0 ( 0 )	0 ( 0 )	0 ( 0 )
	mineralization		29 ( 58 )	1 ( 2 )	0 ( 0 )	0 ( 0 )	15 ( 30 )	0 ( 0 )	0 ( 0 )	0 ( 0 )	0 ( 0 )	4 ( 8 )	0 ( 0 )	0 ( 0 )	0 ( 0 )	0 ( 0 )	0 ( 0 )	0 ( 0 )
epididymis			<50>				<50>				<50>				<50>			
	hemorrhage		0 ( 0 )	0 ( 0 )	0 ( 0 )	0 ( 0 )	0 ( 0 )	0 ( 0 )	0 ( 0 )	0 ( 0 )	0 ( 0 )	1 ( 2 )	0 ( 0 )	0 ( 0 )	0 ( 0 )	0 ( 0 )	0 ( 0 )	0 ( 0 )
	mineralization		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 ( 2 )	0 ( 0 )	0 ( 0 )	0 ( 0 )
Grade			1 : Slight	2 : Moderate	3 : Marked	4 : Severe												
< a >			a : Number of animals examined at the site															
b			b : Number of animals with lesion															
( c )			c : b / a * 100															
Significant difference ;			* : P ≤ 0.05    ** : P ≤ 0.01    Test of Chi Square															

STUDY NO. : 0304  
 ANIMAL : MOUSE Crj:BDF1  
 REPORT TYPE : A2  
 SEX : MALE

HISTOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)  
 ALL ANIMALS (0- 66%)

PAGE : 12

Organ	Findings	Group Name No. of Animals on Study Grade	Control 50				150 ppm 50				300 ppm 50				600 ppm 50			
			1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Reproductive system}																		
epididymis			<50>				<50>				<50>				<50>			
	inflammation		0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
			( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 2 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )
	spermatogenic granuloma		0	1	0	0	0	0	0	0	0	2	0	0	1	0	0	0
			( 0 )	( 2 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 4 )	( 0 )	( 0 )	( 2 )	( 0 )	( 0 )	( 0 )
	debris of spermatc elements		0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0
			( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 2 )	( 0 )	( 0 )	( 0 )	( 0 )	( 2 )	( 0 )	( 0 )
semin ves			<50>				<50>				<50>				<50>			
	inflammation		0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
			( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 2 )	( 0 )	( 0 )
prostate			<50>				<50>				<50>				<50>			
	inflammation		0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
			( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 2 )	( 0 )
	hyperplasia		1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			( 2 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )
prep/cli gl			<50>				<50>				<50>				<50>			
	duct ectasia		0	1	0	0	0	1	0	0	1	0	0	0	0	0	0	0
			( 0 )	( 2 )	( 0 )	( 0 )	( 0 )	( 0 )	( 2 )	( 0 )	( 2 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )

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

STUDY NO. : 0304  
 ANIMAL : MOUSE Crj:BDF1  
 REPORT TYPE : A2  
 SEX : MALE

HISTOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)  
 ALL ANIMALS (0- 66W)

PAGE : 13

Organ	Findings	Group Name No. of Animals on Study Grade	Control 50				150 ppm 50				300 ppm 50				600 ppm 50			
			1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Nervous system}																		
brain	hemorrhage		<50>				<50>				<50>				<50>			
			2	0	0	0	2	0	0	0	7	1	0	0	2	0	0	0
			( 4 )	( 0 )	( 0 )	( 0 )	( 4 )	( 0 )	( 0 )	( 0 )	( 14 )	( 2 )	( 0 )	( 0 )	( 4 )	( 0 )	( 0 )	( 0 )
	mineralization		<50>				<50>				<50>				<50>			
			13	0	0	0	17	0	0	0	16	0	0	0	5	0	0	0
			( 26 )	( 0 )	( 0 )	( 0 )	( 34 )	( 0 )	( 0 )	( 0 )	( 32 )	( 0 )	( 0 )	( 0 )	( 10 )	( 0 )	( 0 )	( 0 )
{Special sense organs/appendage}																		
Harder gl	lymphocytic infiltration		<50>				<50>				<50>				<50>			
			3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			( 6 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )
{Body cavities}																		
peritoneum	hyperplasia:vascular		<50>				<50>				<50>				<50>			
			0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
			( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 2 )	( 0 )	( 0 )	( 0 )
mesenterium	hemorrhage		<50>				<50>				<50>				<50>			
			1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			( 2 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )
Grade 1 : Slight 2 : Moderate 3 : Marked 4 : Severe																		
< a > a : Number of animals examined at the site																		
b b : Number of animals with lesion																		
( c ) c : b / a * 100																		
Significant difference ; * : P ≤ 0.05 ** : P ≤ 0.01 Test of Chi Square																		
(HPT150)																		

STUDY NO. : 0304  
 ANIMAL : MOUSE Crj:BDF1  
 REPORT TYPE : A2  
 SEX : MALE

HISTOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)  
 ALL ANIMALS (0- 66W)

PAGE : 14

Organ	Findings	Group Name No. of Animals on Study Grade	Control 50				150 ppm 50				300 ppm 50				600 ppm 50			
			1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)

{Body cavities}

mesenterium		<50>				<50>				<50>				<50>			
hyperplasia:vascular		0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
		( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 2 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )

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

(HPT150)

BAIS3

## APPENDIX L 2

HISTOLOGICAL FINDINGS : NON-NEOPLASTIC LESIONS : SUMMARY

MOUSE : FEMALE: ALL ANIMALS

(2-YEAR STUDY)

STUDY NO. : 0304  
 ANIMAL : MOUSE Crj:BDF1  
 REPORT TYPE : A1  
 SEX : FEMALE

HISTOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)  
 ALL ANIMALS (0- 51W)

PAGE : 1

Organ_____	Findings_____	Group Name No. of Animals on Study Grade	Control 50				150 ppm 50				300 ppm 50				600 ppm 50			
			1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)

---

{Integumentary system/appandage}																			
subcutis			<50>				<50>				<50>				<50>				
	hemorrhage		0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	5	0 *
			( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 2 )	( 4 )	( 10 )	( 0 )
	mastcell hyperplasia		0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
			( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 2 )	( 0 )	( 0 )	( 0 )
	hyperplasia:vascular		0	0	0	0	0	0	0	0	1	1	0	0	0	1	0	0	0
			( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 2 )	( 2 )	( 0 )	( 0 )	( 0 )	( 2 )	( 0 )	( 0 )	( 0 )

{Respiratory system}																			
nasal cavit			<50>				<50>				<50>				<50>				
	eosinophilic change:olfactory epithelium		1	0	0	0	0	0	0	0	2	0	0	0	0	2	0	0	0
			( 2 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 4 )	( 0 )	( 0 )	( 0 )	( 0 )	( 4 )	( 0 )	( 0 )	( 0 )
	eosinophilic change:respiratory epithelium		20	0	0	0	24	5	0	0 *	27	8	1	0 **	0	26	16	4	0 **
			( 40 )	( 0 )	( 0 )	( 0 )	( 48 )	( 10 )	( 0 )	( 0 )	( 54 )	( 16 )	( 2 )	( 0 )	( 0 )	( 52 )	( 32 )	( 8 )	( 0 )
	respiratory metaplasia:olfactory epithelium		3	0	0	0	5	0	0	0	6	0	0	0	0	3	0	0	0
			( 6 )	( 0 )	( 0 )	( 0 )	( 10 )	( 0 )	( 0 )	( 0 )	( 12 )	( 0 )	( 0 )	( 0 )	( 0 )	( 6 )	( 0 )	( 0 )	( 0 )
	respiratory metaplasia:gland		1	0	0	0	2	0	0	0	3	0	0	0	0	10	0	0	0 *
			( 2 )	( 0 )	( 0 )	( 0 )	( 4 )	( 0 )	( 0 )	( 0 )	( 6 )	( 0 )	( 0 )	( 0 )	( 0 )	( 20 )	( 0 )	( 0 )	( 0 )

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

STUDY NO. : 0304  
 ANIMAL : MOUSE Crj:BDF1  
 REPORT TYPE : A1  
 SEX : FEMALE

HISTOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)  
 ALL ANIMALS (0- 51W)

PAGE : 2

Organ	Findings	Group Name No. of Animals on Study Grade	Control 50				150 ppm 50				300 ppm 50				600 ppm 50			
			1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Respiratory system}																		
lung			<50>				<50>				<50>				<50>			
	hemorrhage		0	0	0	0	0	1	1	0	2	0	2	0	2	5	1	0 *
			( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 2 )	( 2 )	( 0 )	( 4 )	( 0 )	( 4 )	( 0 )	( 4 )	( 10 )	( 2 )	( 0 )
	edema		0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0
			( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 4 )	( 0 )	( 0 )
	inflammatory infiltration		0	0	0	0	10	12	0	0 **	21	10	0	0 **	24	15	0	0 **
			( 0 )	( 0 )	( 0 )	( 0 )	( 20 )	( 24 )	( 0 )	( 0 )	( 42 )	( 20 )	( 0 )	( 0 )	( 48 )	( 30 )	( 0 )	( 0 )
	perivascular inflammation		0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
			( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 2 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )
	accumulation of foamy cells		0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0
			( 0 )	( 0 )	( 0 )	( 0 )	( 2 )	( 0 )	( 0 )	( 0 )	( 0 )	( 2 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )
	accumulation of immature blood cells		0	0	0	0	14	0	0	0 **	25	0	0	0 **	29	0	0	0 **
			( 0 )	( 0 )	( 0 )	( 0 )	( 28 )	( 0 )	( 0 )	( 0 )	( 50 )	( 0 )	( 0 )	( 0 )	( 58 )	( 0 )	( 0 )	( 0 )
{Hematopoietic system}																		
bone marrow			<50>				<50>				<50>				<50>			
	myelofibrosis		0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
			( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 2 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )

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

STUDY NO. : 0304  
 ANIMAL : MOUSE Crj:BDF1  
 REPORT TYPE : A1  
 SEX : FEMALE

HISTOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)  
 ALL ANIMALS (0- 51W)

PAGE : 3

Organ_____	Findings_____	Group Name No. of Animals on Study Grade	Control 50				150 ppm 50				300 ppm 50				600 ppm 50			
			1 (%)	2 (%)	3 (%)	4 (%)	1 (%)	2 (%)	3 (%)	4 (%)	1 (%)	2 (%)	3 (%)	4 (%)	1 (%)	2 (%)	3 (%)	4 (%)
{Hematopoietic system}																		
bone marrow	erythropoiesis:increased		<50>				<50>				<50>				<50>			
		0 ( 0 )	0 ( 0 )	0 ( 0 )	0 ( 0 )	15 ( 30 )	12 ( 24 )	0 ( 0 )	0 ** ( 0 )	18 ( 36 )	15 ( 30 )	0 ( 0 )	0 ** ( 0 )	26 ( 52 )	9 ( 18 )	0 ( 0 )	0 ** ( 0 )	
	granulopoiesis:increased		1 ( 2 )	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																
	atrophy		<50>				<50>				<50>				<50>			
		0 ( 0 )	1 ( 2 )	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 )	
	deposit of hemosiderin		0 ( 0 )	0 ( 0 )	0 ( 0 )	0 ( 0 )	0 ( 0 )	1 ( 2 )	0 ( 0 )	0 ( 0 )	0 ( 0 )	0 ( 0 )	0 ( 0 )	0 ( 0 )	0 ( 0 )	0 ( 0 )	0 ( 0 )	
			deposit of melanin		3 ( 6 )	0 ( 0 )	0 ( 0 )	0 ( 0 )	3 ( 6 )	0 ( 0 )	0 ( 0 )	0 ( 0 )	2 ( 4 )	0 ( 0 )	0 ( 0 )	0 ( 0 )	0 ( 0 )	0 ( 0 )
	extramedullary hematopoiesis				0 ( 0 )	0 ( 0 )	0 ( 0 )	0 ( 0 )	7 ( 14 )	11 ( 22 )	18 ( 36 )	0 ** ( 0 )	6 ( 12 )	23 ( 46 )	18 ( 36 )	0 ** ( 0 )	6 ( 12 )	23 ( 46 )
		{Circulatory system}																
heart	mineralization		<50>				<50>				<50>				<50>			
		0 ( 0 )	0 ( 0 )	0 ( 0 )	0 ( 0 )	2 ( 4 )	0 ( 0 )	0 ( 0 )	0 ( 0 )	5 ( 10 )	0 ( 0 )	0 ( 0 )	0 ( 0 )	1 ( 2 )	0 ( 0 )	0 ( 0 )	0 ( 0 )	

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

STUDY NO. : 0304  
 ANIMAL : MOUSE Crj:BDF1  
 REPORT TYPE : A1  
 SEX : FEMALE

HISTOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)  
 ALL ANIMALS (0- 51W)

PAGE : 4

Organ	Findings	Group Name No. of Animals on Study Grade	Control 50				150 ppm 50				300 ppm 50				600 ppm 50			
			1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Circulatory system}																		
heart	myocarditis		<50>				<50>				<50>				<50>			
			0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0
			( 0 )	( 0 )	( 0 )	( 0 )	( 4 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )
	arteritis		0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0
			( 0 )	( 2 )	( 2 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )
artery/aort	arteritis		<50>				<50>				<50>				<50>			
			1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			( 2 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )
{Digestive system}																		
tongue	erosion		<50>				<50>				<50>				<50>			
			0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
			( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 2 )	( 0 )	( 0 )	( 0 )
	mastcell hyperplasia		0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
			( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 2 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )
	arteritis		0	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0
			( 0 )	( 2 )	( 2 )	( 0 )	( 2 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )

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

STUDY NO. : 0304  
 ANIMAL : MOUSE Crj:BDF1  
 REPORT TYPE : A1  
 SEX : FEMALE

HISTOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)  
 ALL ANIMALS (0- 51W)

PAGE : 5

Organ	Findings	Group Name No. of Animals on Study Grade	Control 50				150 ppm 50				300 ppm 50				600 ppm 50			
			1 (%)	2 (%)	3 (%)	4 (%)	1 (%)	2 (%)	3 (%)	4 (%)	1 (%)	2 (%)	3 (%)	4 (%)	1 (%)	2 (%)	3 (%)	4 (%)
{Digestive system}																		
salivary gl	lymphocytic infiltration		<50>				<50>				<50>				<50>			
		25 ( 50)	1 ( 2)	0 ( 0)	0 ( 0)	13 ( 26)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	6 ( 12)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	2 ( 4)	0 ( 0)	0 ( 0)
stomach	erosion:forestomach		<50>				<50>				<50>				<50>			
		0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	1 ( 2)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)
	hyperplasia:forestomach		1 ( 2)	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)
		erosion:glandular stomach		1 ( 2)	0 ( 0)	0 ( 0)	0 ( 0)	1 ( 2)	0 ( 0)	0 ( 0)	0 ( 0)	2 ( 4)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)
	hyperplasia:glandular stomach			24 ( 48)	17 ( 34)	0 ( 0)	0 ( 0)	22 ( 44)	17 ( 34)	0 ( 0)	0 ( 0)	28 ( 56)	13 ( 26)	1 ( 2)	0 ( 0)	22 ( 44)	6 ( 12)	0 ( 0)
liver	angiectasis		<50>				<50>				<50>				<50>			
		0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	3 ( 6)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	3 ( 6)	0 ( 0)	0 ( 0)	3 ( 6)	3 ( 6)	1 ( 2)	0 ( 0)
	thrombus		0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	1 ( 2)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)
Grade	1 : Slight      2 : Moderate      3 : Marked      4 : Severe																	
< a >	a : Number of animals examined at the site																	
b	b : Number of animals with lesion																	
( c )	c : b / a * 100																	
Significant difference :    * : P ≤ 0.05    ** : P ≤ 0.01    Test of Chi Square																		

STUDY NO. : 0304  
ANIMAL : MOUSE Crj:BDF1  
REPORT TYPE : A1  
SEX : FEMALE

HISTOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)  
ALL ANIMALS (0- 51W)

PAGE : 6

Organ	Findings	Group Name No. of Animals on Study Grade				Control 50				150 ppm 50				300 ppm 50				600 ppm 50			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Digestive system}																					
liver		<50>				<50>				<50>				<50>				<50>			
	necrosis:central	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0
		( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 4 )	( 0 )	( 0 )	( 0 )	( 4 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )
	necrosis:focal	1	0	0	0	5	1	0	0	6	2	1	0	5	4	3	0 *				
		( 2 )	( 0 )	( 0 )	( 0 )	( 10 )	( 2 )	( 0 )	( 0 )	( 12 )	( 4 )	( 2 )	( 0 )	( 10 )	( 8 )	( 6 )	( 0 )				
	degeneration:central	0	0	0	0	3	3	0	0 *	1	1	0	0	9	2	0	0 **				
		( 0 )	( 0 )	( 0 )	( 0 )	( 6 )	( 6 )	( 0 )	( 0 )	( 2 )	( 2 )	( 0 )	( 0 )	( 18 )	( 4 )	( 0 )	( 0 )				
	granulation	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
		( 2 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )				
	inflammatory cell nest	11	0	0	0	11	0	0	0	1	0	0	0 **	1	0	0	0 **				
		( 22 )	( 0 )	( 0 )	( 0 )	( 22 )	( 0 )	( 0 )	( 0 )	( 2 )	( 0 )	( 0 )	( 0 )	( 2 )	( 0 )	( 0 )	( 0 )				
	perivascular inflammation	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0				
		( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 2 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )				
	extramedullary hematopoiesis	0	0	0	0	2	1	0	0	10	0	0	0 **	6	0	0	0 *				
		( 0 )	( 0 )	( 0 )	( 0 )	( 4 )	( 2 )	( 0 )	( 0 )	( 20 )	( 0 )	( 0 )	( 0 )	( 12 )	( 0 )	( 0 )	( 0 )				
	accumulation of immature blood cells	0	0	0	0	16	14	6	0 **	18	19	10	0 **	12	22	12	0 **				
		( 0 )	( 0 )	( 0 )	( 0 )	( 32 )	( 28 )	( 12 )	( 0 )	( 36 )	( 38 )	( 20 )	( 0 )	( 24 )	( 44 )	( 24 )	( 0 )				

Grade 1 : Slight 2 : Moderate 3 : Marked 4 : Severe

< a > a : Number of animals examined at the site

b : Number of animals with lesion

( c ) c : b / a \* 100

Significant difference ; \* : P ≤ 0.05 \*\* : P ≤ 0.01 Test of Chi Square

STUDY NO. : 0304  
 ANIMAL : MOUSE Crj:BDF1  
 REPORT TYPE : A1  
 SEX : FEMALE

HISTOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)  
 ALL ANIMALS (0- 51W)

PAGE : 7

Organ	Findings	Group Name No. of Animals on Study Grade	Control 50				150 ppm 50				300 ppm 50				600 ppm 50			
			1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Digestive system}																		
liver	erythrostasis		<50>				<50>				<50>				<50>			
			0	0	0	0	0	0	0	0	1	0	0	0	2	0	0	0
			( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 2 )	( 0 )	( 0 )	( 0 )	( 4 )	( 0 )	( 0 )	( 0 )
	mobilization of Kupffer cell		0	0	0	0	2	4	0	0 *	2	5	1	0 *	7	3	0	0 **
			( 0 )	( 0 )	( 0 )	( 0 )	( 4 )	( 8 )	( 0 )	( 0 )	( 4 )	( 10 )	( 2 )	( 0 )	( 14 )	( 6 )	( 0 )	( 0 )
pancreas	atrophy		<50>				<50>				<50>				<50>			
			0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
			( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 2 )	( 0 )	( 0 )	( 0 )
{Urinary system}																		
kidney	infarct		<50>				<50>				<50>				<50>			
			1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			( 2 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )
	hyaline droplet		0	0	0	0	0	0	0	0	2	3	1	0	1	1	0	0
			( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 4 )	( 6 )	( 2 )	( 0 )	( 2 )	( 2 )	( 0 )	( 0 )
	deposit of hemosiderin		0	0	0	0	7	4	0	0 **	12	1	0	0 **	9	4	0	0 **
			( 0 )	( 0 )	( 0 )	( 0 )	( 14 )	( 8 )	( 0 )	( 0 )	( 24 )	( 2 )	( 0 )	( 0 )	( 18 )	( 8 )	( 0 )	( 0 )

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

STUDY NO. : 0304  
 ANIMAL : MOUSE Crj:BDF1  
 REPORT TYPE : A1  
 SEX : FEMALE

HISTOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)  
 ALL ANIMALS (0- 51W)

PAGE : 8

Organ	Findings	Group Name No. of Animals on Study Grade	Control 50				150 ppm 50				300 ppm 50				600 ppm 50			
			1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Urinary system}																		
kidney			<50>				<50>				<50>				<50>			
	perivascular inflammation		0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
			( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 2 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )
	hydronephrosis		0	0	1	0	3	1	1	0	3	3	0	0	0	1	1	0
			( 0 )	( 0 )	( 2 )	( 0 )	( 6 )	( 2 )	( 2 )	( 0 )	( 6 )	( 6 )	( 0 )	( 0 )	( 0 )	( 2 )	( 2 )	( 0 )
	tubular necrosis		0	0	0	0	0	1	1	0	1	1	1	0	2	2	1	0
			( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 2 )	( 2 )	( 0 )	( 2 )	( 2 )	( 2 )	( 0 )	( 4 )	( 4 )	( 2 )	( 0 )
	papillary necrosis		0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
			( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 2 )	( 0 )	( 0 )
	mineralization:papilla		1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			( 2 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )
	mineralization:cortex		1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			( 2 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )
ureter			<50>				<50>				<50>				<50>			
	inflammatory polyp		0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
			( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 2 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )
urin bladd			<48>				<46>				<48>				<47>			
	inflammation		0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
			( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 2 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )

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

STUDY NO. : 0304  
ANIMAL : MOUSE Crj:BDf1  
REPORT TYPE : A1  
SEX : FEMALE

HISTOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)  
ALL ANIMALS (0- 51W)

PAGE : 9

Organ	Findings	Group Name No. of Animals on Study Grade	Control 50				150 ppm 50				300 ppm 50				600 ppm 50			
			1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Endocrine system}																		
pituitary	hyperplasia		<50>				<48>				<50>				<48>			
			0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
			( 0 )	( 0 )	( 0 )	( 0 )	( 2 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )
thyroid	inflammatory infiltration		<50>				<48>				<49>				<50>			
			0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0
			( 0 )	( 0 )	( 0 )	( 0 )	( 2 )	( 0 )	( 0 )	( 0 )	( 2 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )
adrenal	thrombus		<50>				<50>				<49>				<50>			
			0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
			( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 2 )	( 0 )	( 0 )
	necrosis:zonal		0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
			( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 2 )	( 0 )	( 0 )
	necrosis:focal		0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
			( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 2 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )
	extramedullary hematopoiesis		0	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0
			( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 4 )	( 0 )	( 0 )	( 0 )	( 4 )	( 0 )	( 0 )	( 0 )
	spindle-cell hyperplasia		14	34	1	0	23	26	1	0	27	20	1	0	36	13	0	0 **
			( 28 )	( 68 )	( 2 )	( 0 )	( 46 )	( 52 )	( 2 )	( 0 )	( 55 )	( 41 )	( 2 )	( 0 )	( 72 )	( 26 )	( 0 )	( 0 )

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

STUDY NO. : 0304  
 ANIMAL : MOUSE Crj:BDF1  
 REPORT TYPE : A1  
 SEX : FEMALE

HISTOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)  
 ALL ANIMALS (0- 51W)

PAGE : 10

Organ	Findings	Group Name No. of Animals on Study Grade	Control 50				150 ppm 50				300 ppm 50				600 ppm 50			
			1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Reproductive system}																		
ovary			<50>				<50>				<50>				<50>			
	hemorrhage		0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
			( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 2 )	( 0 )	( 0 )	( 0 )
	thrombus		0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0
		( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 2 )	( 0 )	( 0 )	( 2 )	( 0 )	( 0 )
	necrosis		0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
		( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 2 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )
	cyst		3	2	0	0	3	1	0	0	1	0	0	0	0	0	0	0
		( 6 )	( 4 )	( 0 )	( 0 )	( 6 )	( 2 )	( 0 )	( 0 )	( 2 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )
uterus			<50>				<50>				<50>				<50>			
	cystic endometrial hyperplasia		25	0	0	0	23	0	0	0	15	0	0	0	13	0	0	0 *
		( 50 )	( 0 )	( 0 )	( 0 )	( 46 )	( 0 )	( 0 )	( 0 )	( 30 )	( 0 )	( 0 )	( 0 )	( 26 )	( 0 )	( 0 )	( 0 )	( 0 )
{Nervous system}																		
brain			<50>				<50>				<50>				<50>			
	hemorrhage		1	0	0	0	5	0	0	0	5	1	0	0	8	1	0	0 *
		( 2 )	( 0 )	( 0 )	( 0 )	( 10 )	( 0 )	( 0 )	( 0 )	( 10 )	( 2 )	( 0 )	( 0 )	( 16 )	( 2 )	( 0 )	( 0 )	( 0 )
Grade	1 : Slight	2 : Moderate	3 : Marked	4 : Severe														
< a >	a : Number of animals examined at the site																	
b	b : Number of animals with lesion																	
( c )	c : b / a * 100																	
Significant difference ; * : P ≤ 0.05 ** : P ≤ 0.01 Test of Chi Square																		
(HPT150)																		

BAIS3

STUDY NO. : 0304  
 ANIMAL : MOUSE Crj:BDF1  
 REPORT TYPE : A1  
 SEX : FEMALE

HISTOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)  
 ALL ANIMALS (0- 51W)

PAGE : 11

		Group Name	Control				150 ppm				300 ppm				600 ppm			
		No. of Animals on Study	50				50				50				50			
		Grade	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Organ	Findings		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Nervous system}																		
brain			<50>				<50>				<50>				<50>			
	mineralization		9	0	0	0	6	0	0	0	1	0	0	0 *	0	0	0	0 **
			( 18)	( 0)	( 0)	( 0)	( 12)	( 0)	( 0)	( 0)	( 2)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)
	degeneration:granular cell		0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
			( 0)	( 0)	( 0)	( 0)	( 2)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)
spinal cord			<50>				<49>				<50>				<50>			
	hemorrhage		0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
			( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 2)	( 0)	( 0)	( 0)
	gliosis		1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			( 2)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)
{Special sense organs/appendage}																		
Harder gl			<50>				<50>				<50>				<50>			
	lymphocytic infiltration		0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0
		( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 2)	( 0)	( 0)	( 0)	( 2)	( 0)	( 0)	( 0)	
{Musculoskeletal system}																		
muscle			<50>				<50>				<50>				<50>			
	mineralization		0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0
		( 0)	( 0)	( 0)	( 0)	( 2)	( 0)	( 0)	( 0)	( 2)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	

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

STUDY NO. : 0304  
 ANIMAL : MOUSE Crj:BDF1  
 REPORT TYPE : A1  
 SEX : FEMALE

HISTOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)  
 ALL ANIMALS (0- 51W)

PAGE : 12

Organ_____	Findings_____	Group Name	Control				150 ppm				300 ppm				600 ppm			
		No. of Animals on Study	50				50				50				50			
		Grade	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
<hr/>																		
{Body cavities}																		
retroperit			<50>				<50>				<50>				<50>			
	thrombus		0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
			( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 2 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )
mesenterium			<50>				<50>				<50>				<50>			
	hemorrhage		0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			( 0 )	( 2 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )

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

(HPT150)

BAIS3

APPENDIX L 3

HISTOLOGICAL FINDINGS : NON-NEOPLASTIC LESIONS : SUMMARY

MOUSE : MALE : DEAD AND MORIBUND ANIMALS

(2-YEAR STUDY)

STUDY NO. : 0304  
 ANIMAL : MOUSE Crj:BDF1  
 REPORT TYPE : A2  
 SEX : MALE

HISTOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)  
 DEAD AND MORIBUND ANIMALS (0- 66W)

PAGE : 1

		Group Name	Control				150 ppm				300 ppm				600 ppm			
		No. of Animals on Study	4				35				50				50			
Organ_____	Findings_____	Grade	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Integumentary system/appandage}																		
skin/app			< 4>				<35>				<50>				<50>			
	inflammation		0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			( 0 )	( 25 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )
	scar:dermis		0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
			( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 2 )	( 0 )	( 0 )	( 0 )
subcutis			< 4>				<35>				<50>				<50>			
	mastcell hyperplasia		0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			( 0 )	( 25 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )
	hyperplasia:vascular		0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0
			( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 2 )	( 0 )	( 0 )	( 0 )	( 2 )	( 0 )	( 0 )	( 0 )
{Respiratory system}																		
nasal cavit			< 4>				<35>				<50>				<50>			
	eosinophilic change:olfactory epithelium		0	0	0	0	8	0	0	0	11	0	0	0	3	0	0	0
			( 0 )	( 0 )	( 0 )	( 0 )	( 23 )	( 0 )	( 0 )	( 0 )	( 22 )	( 0 )	( 0 )	( 0 )	( 6 )	( 0 )	( 0 )	( 0 )
	eosinophilic change:respiratory epithelium		1	0	0	0	1	0	0	0	2	0	0	0	3	0	0	0
			( 25 )	( 0 )	( 0 )	( 0 )	( 3 )	( 0 )	( 0 )	( 0 )	( 4 )	( 0 )	( 0 )	( 0 )	( 6 )	( 0 )	( 0 )	( 0 )

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

STUDY NO. : 0304  
 ANIMAL : MOUSE Crj:BDF1  
 REPORT TYPE : A2  
 SEX : MALE

HISTOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)  
 DEAD AND MORIBUND ANIMALS (0- 66W)

PAGE : 2

Organ	Findings	Control No. of Animals on Study Grade				150 ppm 35				300 ppm 50				600 ppm 50			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Respiratory system}																	
nasal cavit		< 4>				<35>				<50>				<50>			
	respiratory metaplasia:olfactory epithelium	1	0	0	0	2	0	0	0	3	0	0	0	3	0	0	0
		( 25)	( 0)	( 0)	( 0)	( 6)	( 0)	( 0)	( 0)	( 6)	( 0)	( 0)	( 0)	( 6)	( 0)	( 0)	( 0)
	respiratory metaplasia:gland	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0
		( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 6)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)
	necrosis:olfactory epithelium	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
		( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 2)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)
lung		< 4>				<35>				<50>				<50>			
	hemorrhage	0	0	0	0	1	0	0	0	0	4	1	0	1	3	2	0
		( 0)	( 0)	( 0)	( 0)	( 3)	( 0)	( 0)	( 0)	( 0)	( 8)	( 2)	( 0)	( 2)	( 6)	( 4)	( 0)
	edema	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0
		( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 2)	( 0)	( 2)	( 0)	( 0)	( 0)
	inflammatory infiltration	1	1	0	0	15	7	0	0	22	12	0	0	20	12	0	0
		( 25)	( 25)	( 0)	( 0)	( 43)	( 20)	( 0)	( 0)	( 44)	( 24)	( 0)	( 0)	( 40)	( 24)	( 0)	( 0)
	perivascular inflammation	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0
		( 0)	( 0)	( 0)	( 0)	( 0)	( 3)	( 0)	( 0)	( 2)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)
	accumulation of foamy cells	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0
		( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 2)	( 0)	( 0)	( 0)	( 2)	( 0)	( 0)	( 0)

Grade 1 : Slight 2 : Moderate 3 : Marked 4 : Severe

< a > a : Number of animals examined at the site

b : Number of animals with lesion

( c ) c : b / a \* 100

Significant difference ; \* : P ≤ 0.05 \*\* : P ≤ 0.01 Test of Chi Square

STUDY NO. : 0304  
 ANIMAL : MOUSE Crj:BDF1  
 REPORT TYPE : A2  
 SEX : MALE

HISTOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)  
 DEAD AND MORIBUND ANIMALS (0- 66W)

PAGE : 3

		Group Name	Control				150 ppm				300 ppm				600 ppm			
		No. of Animals on Study	4				35				50				50			
Organ_____	Findings_____	Grade	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Respiratory system}																		
lung			< 4>				<35>				<50>				<50>			
	bronchiolar-alveolar cell hyperplasia		0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
			( 0)	( 0)	( 0)	( 0)	( 3)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)
	accumulation of immature blood cells		0	0	0	0	11	0	0	0	21	0	0	0	22	0	0	0
			( 0)	( 0)	( 0)	( 0)	( 31)	( 0)	( 0)	( 0)	( 42)	( 0)	( 0)	( 0)	( 44)	( 0)	( 0)	( 0)
{Hematopoietic system}																		
bone marrow			< 4>				<35>				<50>				<50>			
	congestion		0	0	0	0	1	0	0	0	0	0	0	0	0	3	0	0
			( 0)	( 0)	( 0)	( 0)	( 3)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 6)	( 0)	( 0)
	proliferation:histiocyte		0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
			( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 2)	( 0)	( 0)	( 0)
	myelofibrosis		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)	( 4)	( 0)	( 0)	( 0)
	erythropoiesis:increased		0	0	0	0	13	8	0	0	19	17	0	0 *	20	7	0	0
			( 0)	( 0)	( 0)	( 0)	( 37)	( 23)	( 0)	( 0)	( 38)	( 34)	( 0)	( 0)	( 40)	( 14)	( 0)	( 0)
	granulopoiesis:increased		2	0	0	0	0	0	0	0 **	1	0	0	0 **	0	0	0	0 **
			( 50)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 2)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)

Grade 1 : Slight 2 : Moderate 3 : Marked 4 : Severe

< a > a : Number of animals examined at the site

b b : Number of animals with lesion

( c ) c : b / a \* 100

Significant difference ; \* : P ≤ 0.05 \*\* : P ≤ 0.01 Test of Chi Square

STUDY NO. : 0304  
 ANIMAL : MOUSE Crj:BDF1  
 REPORT TYPE : A2  
 SEX : MALE

HISTOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)  
 DEAD AND MORIBUND ANIMALS (0- 66W)

PAGE : 4

Organ_____	Findings_____	Group Name	Control				150 ppm				300 ppm				600 ppm				
		No. of Animals on Study	4				35				50				50				
		Grade	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	
{Hematopoietic system}																			
spleen			< 4>				<35>				<50>				<50>				
	atrophy		0	0	0	0	0	0	0	0	0	0	0	0	0	1	3	0	0
			( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 2)	( 6)	( 0)	( 0)
	deposit of melanin		0	0	0	0	1	0	0	0	1	0	0	0	4	0	0	0	
			( 0)	( 0)	( 0)	( 0)	( 3)	( 0)	( 0)	( 0)	( 2)	( 0)	( 0)	( 0)	( 8)	( 0)	( 0)	( 0)	
	extramedullary hematopoiesis		0	0	0	0	3	7	24	0 **	2	8	38	0 **	3	18	23	0 **	
			( 0)	( 0)	( 0)	( 0)	( 9)	( 20)	( 69)	( 0)	( 4)	( 16)	( 76)	( 0)	( 6)	( 36)	( 46)	( 0)	
{Circulatory system}																			
heart			< 4>				<35>				<50>				<50>				
	mineralization		0	0	0	0	4	0	0	0	12	4	1	0	5	1	0	0	
			( 0)	( 0)	( 0)	( 0)	( 11)	( 0)	( 0)	( 0)	( 24)	( 8)	( 2)	( 0)	( 10)	( 2)	( 0)	( 0)	
	inflammatory cell nest		0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	
			( 0)	( 0)	( 0)	( 0)	( 3)	( 0)	( 0)	( 0)	( 2)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	
	myocarditis		2	0	0	0	1	0	0	0 *	1	0	0	0 **	0	0	0	0 **	
			( 50)	( 0)	( 0)	( 0)	( 3)	( 0)	( 0)	( 0)	( 2)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	
	arteritis		1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
			( 25)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	

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

STUDY NO. : 0304  
 ANIMAL : MOUSE Crj:BDF1  
 REPORT TYPE : A2  
 SEX : MALE

HISTOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)  
 DEAD AND MORIBUND ANIMALS (0- 66W)

PAGE : 5

Organ	Findings	Group Name No. of Animals on Study Grade	Control 4				150 ppm 35				300 ppm 50				600 ppm 50			
			1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Circulatory system}																		
artery/aort	arteritis		< 4>				<35>				<50>				<50>			
			0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
			( 0)	( 0)	( 25)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)
{Digestive system}																		
tooth	dysplasia		< 4>				<35>				<50>				<50>			
			1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
			( 25)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 2)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)
tongue	arteritis		< 4>				<35>				<50>				<50>			
			0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			( 0)	( 25)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)
salivary gl	lymphocytic infiltration		< 4>				<35>				<50>				<50>			
			0	0	0	0	4	0	0	0	5	0	0	0	3	0	0	0
			( 0)	( 0)	( 0)	( 0)	( 11)	( 0)	( 0)	( 0)	( 10)	( 0)	( 0)	( 0)	( 6)	( 0)	( 0)	( 0)
stomach	erosion:forestomach		< 4>				<35>				<50>				<49>			
			0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
			( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 2)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)
	hyperplasia:glandular stomach		1	1	0	0	18	11	0	0	24	13	1	0	28	11	0	0
			( 25)	( 25)	( 0)	( 0)	( 51)	( 31)	( 0)	( 0)	( 48)	( 26)	( 2)	( 0)	( 57)	( 22)	( 0)	( 0)

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

STUDY NO. : 0304  
 ANIMAL : MOUSE Crj:BDF1  
 REPORT TYPE : A2  
 SEX : MALE

HISTOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)  
 DEAD AND MORIBUND ANIMALS (0- 66W)

PAGE : 6

Organ_____	Findings_____	Group Name	Control				150 ppm				300 ppm				600 ppm			
		No. of Animals on Study	4				35				50				50			
		Grade	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
<hr/>																		
{Digestive system}																		
liver			< 4>				<35>				<50>				<50>			
	angiectasis		0	0	0	0	0	0	0	0	0	1	0	0	1	2	0	0
			( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 2 )	( 0 )	( 0 )	( 2 )	( 4 )	( 0 )	( 0 )
	hemorrhage		0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
			( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 2 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )
	necrosis:central		0	0	0	0	2	1	0	0	3	2	2	0	0	4	1	0
			( 0 )	( 0 )	( 0 )	( 0 )	( 6 )	( 3 )	( 0 )	( 0 )	( 6 )	( 4 )	( 4 )	( 0 )	( 0 )	( 8 )	( 2 )	( 0 )
	necrosis:focal		0	0	0	0	1	3	1	0	7	3	0	0	7	5	1	0
		( 0 )	( 0 )	( 0 )	( 0 )	( 3 )	( 9 )	( 3 )	( 0 )	( 14 )	( 6 )	( 0 )	( 0 )	( 14 )	( 10 )	( 2 )	( 0 )	
	fatty change		0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	
			( 0 )	( 0 )	( 0 )	( 0 )	( 3 )	( 0 )	( 0 )	( 2 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	
	fatty change:central		0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	
			( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 2 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	
	degeneration:central		0	0	0	0	8	2	0	12	5	1	0	4	3	0	0	
			( 0 )	( 0 )	( 0 )	( 0 )	( 23 )	( 6 )	( 0 )	( 24 )	( 10 )	( 2 )	( 0 )	( 8 )	( 6 )	( 0 )	( 0 )	
	hyperplasia		0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	
			( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 2 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	

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

STUDY NO. : 0304  
ANIMAL : MOUSE Crj:BDF1  
REPORT TYPE : A2  
SEX : MALE

HISTOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)  
DEAD AND MORIBUND ANIMALS (0- 66%)

PAGE : 7

Organ	Findings	Group Name No. of Animals on Study Grade	Control 4				150 ppm 35				300 ppm 50				600 ppm 50			
			1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Digestive system}																		
liver			< 4>				<35>				<50>				<50>			
	extramedullary hematopoiesis		0	0	0	0	10	0	0	0	3	1	0	0	6	0	0	0
			( 0 )	( 0 )	( 0 )	( 0 )	( 29 )	( 0 )	( 0 )	( 0 )	( 6 )	( 2 )	( 0 )	( 0 )	( 12 )	( 0 )	( 0 )	( 0 )
	accumulation of immature blood cells		0	0	0	0	13	11	3	0 *	11	27	3	0 **	14	12	2	0
			( 0 )	( 0 )	( 0 )	( 0 )	( 37 )	( 31 )	( 9 )	( 0 )	( 22 )	( 54 )	( 6 )	( 0 )	( 28 )	( 24 )	( 4 )	( 0 )
	erythrostasis		0	0	0	0	0	0	0	0	1	1	0	0	1	2	0	0
			( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 2 )	( 2 )	( 0 )	( 0 )	( 2 )	( 4 )	( 0 )	( 0 )
	basophilic cell focus		0	0	0	0	1	0	0	0	2	0	0	0	0	0	0	0
			( 0 )	( 0 )	( 0 )	( 0 )	( 3 )	( 0 )	( 0 )	( 0 )	( 4 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )
	mobilization of Kupffer cell		0	0	0	0	0	0	1	0	3	4	1	0	1	4	3	0
			( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 3 )	( 0 )	( 6 )	( 8 )	( 2 )	( 0 )	( 2 )	( 8 )	( 6 )	( 0 )
pancreas			< 4>				<35>				<50>				<50>			
	atrophy		0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
			( 0 )	( 0 )	( 0 )	( 0 )	( 3 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )
{Urinary system}																		
kidney			< 4>				<35>				<50>				<50>			
	infarct		0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
			( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 2 )	( 0 )	( 0 )	( 0 )

Grade 1 : Slight 2 : Moderate 3 : Marked 4 : Severe

< a > a : Number of animals examined at the site

b : Number of animals with lesion

( c ) c : b / a \* 100

Significant difference : \* : P ≤ 0.05 \*\* : P ≤ 0.01 Test of Chi Square

STUDY NO. : 0304  
 ANIMAL : MOUSE Crj:BDF1  
 REPORT TYPE : A2  
 SEX : MALE

HISTOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)  
 DEAD AND MORIBUND ANIMALS (0- 66W)

PAGE : 8

Organ	Findings	Group Name No. of Animals on Study Grade	Control 4				150 ppm 35				300 ppm 50				600 ppm 50			
			1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Urinary system}																		
kidney			< 4>				<35>				<50>				<50>			
	hyaline droplet		0	0	0	0	2	0	0	0	1	1	0	0	0	0	0	0
			( 0 )	( 0 )	( 0 )	( 0 )	( 6 )	( 0 )	( 0 )	( 0 )	( 2 )	( 2 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )
	basophilic change		0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0
			( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 4 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )
	deposit of hemosiderin		0	0	0	0	4	4	0	0	4	1	0	0	3	1	0	0
			( 0 )	( 0 )	( 0 )	( 0 )	( 11 )	( 11 )	( 0 )	( 0 )	( 8 )	( 2 )	( 0 )	( 0 )	( 6 )	( 2 )	( 0 )	( 0 )
	inflammatory polyp		0	0	0	0	0	0	0	0	1	0	1	0	1	0	0	0
			( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 2 )	( 0 )	( 2 )	( 0 )	( 2 )	( 0 )	( 0 )	( 0 )
	hydronephrosis		0	1	0	0	2	4	1	0	4	2	2	0	4	2	1	0
			( 0 )	( 25 )	( 0 )	( 0 )	( 6 )	( 11 )	( 3 )	( 0 )	( 8 )	( 4 )	( 4 )	( 0 )	( 8 )	( 4 )	( 2 )	( 0 )
	tubular necrosis		0	0	0	0	0	0	0	0	1	0	0	0	1	1	0	0
			( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 2 )	( 0 )	( 0 )	( 0 )	( 2 )	( 2 )	( 0 )	( 0 )
	papillary necrosis		0	1	0	0	2	1	0	0	0	2	0	0	0	2	0	0
			( 0 )	( 25 )	( 0 )	( 0 )	( 6 )	( 3 )	( 0 )	( 0 )	( 0 )	( 4 )	( 0 )	( 0 )	( 0 )	( 4 )	( 0 )	( 0 )
	mineralization:papilla		0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
			( 0 )	( 0 )	( 0 )	( 0 )	( 3 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )

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

STUDY NO. : 0304  
 ANIMAL : MOUSE Crj:BDF1  
 REPORT TYPE : A2  
 SEX : MALE

HISTOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)  
 DEAD AND MORIBUND ANIMALS (0- 66W)

PAGE : 9

		Group Name	Control				150 ppm				300 ppm				600 ppm			
		No. of Animals on Study	4				35				50				50			
		Grade	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Organ_____	Findings_____		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Urinary system}																		
kidney			< 4>				<35>				<50>				<50>			
	dilatation:tubular lumen		1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
			( 25)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 2)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)
ureter			< 4>				<35>				<50>				<50>			
	inflammatory polyp		0	0	0	0	0	2	0	0	0	1	0	0	0	0	0	0
			( 0)	( 0)	( 0)	( 0)	( 0)	( 6)	( 0)	( 0)	( 0)	( 2)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)
{Endocrine system}																		
pituitary			< 4>				<35>				<48>				<50>			
	Rathke pouch		0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
			( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 2)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)
thyroid			< 4>				<32>				<50>				<48>			
	cystic thyroid follicle		0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0
			( 0)	( 0)	( 0)	( 0)	( 3)	( 0)	( 0)	( 0)	( 2)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)
parathyroid			< 3>				<10>				<19>				<14>			
	cyst		0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
			( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 5)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)
adrenal			< 3>				<35>				<50>				<50>			
	necrosis:zonal		0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
			( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 2)	( 0)	( 0)	( 0)

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

STUDY NO. : 0304  
ANIMAL : MOUSE Crj:BDF1  
REPORT TYPE : A2  
SEX : MALE

HISTOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)  
DEAD AND MORIBUND ANIMALS (0- 66W)

PAGE : 10

Organ	Findings	Group Name No. of Animals on Study Grade	Control 4				150 ppm 35				300 ppm 50				600 ppm 50			
			1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Endocrine system}																		
adrenal	necrosis:focal		< 3>				<35>				<50>				<50>			
			0	0	0	0	0	0	0	0	0	0	2	0	1	0	2	0
			( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 4 )	( 0 )	( 2 )	( 0 )	( 4 )	( 0 )
	spindle-cell hyperplasia		< 3>				<35>				<50>				<50>			
			0	0	0	0	15	1	0	0	12	0	0	0	11	0	0	0
			( 0 )	( 0 )	( 0 )	( 0 )	( 43 )	( 3 )	( 0 )	( 0 )	( 24 )	( 0 )	( 0 )	( 0 )	( 22 )	( 0 )	( 0 )	( 0 )
{Reproductive system}																		
testis	atrophy		< 4>				<35>				<50>				<50>			
			0	0	0	0	0	2	0	0	4	1	1	0	1	1	0	0
			( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 6 )	( 0 )	( 0 )	( 8 )	( 2 )	( 2 )	( 0 )	( 2 )	( 2 )	( 0 )	( 0 )
	hemorrhage		< 4>				<35>				<50>				<50>			
			0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
			( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 2 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )
	mineralization		< 4>				<35>				<50>				<50>			
			1	0	0	0	9	0	0	0	4	0	0	0	0	0	0	0
			( 25 )	( 0 )	( 0 )	( 0 )	( 26 )	( 0 )	( 0 )	( 0 )	( 8 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )
epididymis	hemorrhage		< 4>				<35>				<50>				<50>			
			0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
			( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 2 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )

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

STUDY NO. : 0304  
 ANIMAL : MOUSE Crj:BDF1  
 REPORT TYPE : A2  
 SEX : MALE

HISTOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)  
 DEAD AND MORIBUND ANIMALS (0- 66W)

PAGE : 11

Organ	Findings	Group Name No. of Animals on Study Grade	Control 4				150 ppm 35				300 ppm 50				600 ppm 50			
			1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Reproductive system}																		
epididymis			< 4>				<35>				<50>				<50>			
	mineralization		0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
			( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 2 )	( 0 )	( 0 )	( 0 )
	inflammation		0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
			( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 2 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )
	spermatogenic granuloma		0	0	0	0	0	0	0	0	0	2	0	0	1	0	0	0
			( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 4 )	( 0 )	( 0 )	( 2 )	( 0 )	( 0 )	( 0 )
	debris of spermatic elements		0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0
			( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 2 )	( 0 )	( 0 )	( 0 )	( 0 )	( 2 )	( 0 )	( 0 )
semin ves			< 4>				<35>				<50>				<50>			
	inflammation		0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
			( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 2 )	( 0 )	( 0 )
prostate			< 4>				<35>				<50>				<50>			
	inflammation		0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
			( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 2 )	( 0 )
prep/cli gl			< 4>				<35>				<50>				<50>			
	duct ectasia		0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
			( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 2 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )

Grade 1 : Slight 2 : Moderate 3 : Marked 4 : Severe

< a > a : Number of animals examined at the site

b : Number of animals with lesion

( c ) c : b / a \* 100

Significant difference ; \* : P ≤ 0.05 \*\* : P ≤ 0.01 Test of Chi Square

STUDY NO. : 0304  
 ANIMAL : MOUSE Crj:BDF1  
 REPORT TYPE : A2  
 SEX : MALE

HISTOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)  
 DEAD AND MORIBUND ANIMALS (0- 66W)

PAGE : 12

Organ	Findings	Group Name No. of Animals on Study Grade	Control 4				150 ppm 35				300 ppm 50				600 ppm 50			
			1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Nervous system}																		
brain	hemorrhage		< 4>				<35>				<50>				<50>			
			1	0	0	0	2	0	0	0	7	1	0	0	2	0	0	0
			( 25)	( 0)	( 0)	( 0)	( 6)	( 0)	( 0)	( 0)	( 14)	( 2)	( 0)	( 0)	( 4)	( 0)	( 0)	( 0)
	mineralization		< 4>				<35>				<50>				<50>			
			0	0	0	0	13	0	0	0	15	0	0	0	5	0	0	0
			( 0)	( 0)	( 0)	( 0)	( 37)	( 0)	( 0)	( 0)	( 32)	( 0)	( 0)	( 0)	( 10)	( 0)	( 0)	( 0)
{Body cavities}																		
peritoneum	hyperplasia:vascular		< 4>				<35>				<50>				<50>			
			0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
			( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 2)	( 0)	( 0)	( 0)
mesenterium	hyperplasia:vascular		< 4>				<35>				<50>				<50>			
			0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
			( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 2)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)

Grade 1 : Slight 2 : Moderate 3 : Marked 4 : Severe

< a > a : Number of animals examined at the site

b b : Number of animals with lesion

( c ) c : b / a \* 100

Significant difference ; \* : P ≤ 0.05 \*\* : P ≤ 0.01 Test of Chi Square

(HPT150)

BAIS3

## APPENDIX L 4

HISTOLOGICAL FINDINGS : NON-NEOPLASTIC LESIONS : SUMMARY

MOUSE : FEMALE: DEAD AND MORIBUND ANIMALS

(2-YEAR STUDY)

STUDY NO. : 0304  
 ANIMAL : MOUSE Crj:BDF1  
 REPORT TYPE : A1  
 SEX : FEMALE

HISTOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)  
 DEAD AND MORIBUND ANIMALS (0- 51W)

PAGE : 1

Organ	Findings	Control 1				150 ppm 30				300 ppm 44				600 ppm 50			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Integumentary system/appandage}																	
subcutis		< 1>				<30>				<44>				<50>			
	hemorrhage	0	0	0	0 ?	0	0	0	0	0	0	0	0	1	2	5	0
		( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 2 )	( 4 )	( 10 )	( 0 )
	mastcell hyperplasia	0	0	0	0 ?	0	0	0	0	0	0	0	0	1	0	0	0 **
		( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 2 )	( 0 )	( 0 )	( 0 )
	hyperplasia:vascular	0	0	0	0 ?	0	0	0	0	0	0	0	0	1	0	0	0 **
		( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 2 )	( 0 )	( 0 )	( 0 )
{Respiratory system}																	
nasal cavit		< 1>				<30>				<44>				<50>			
	eosinophilic change:olfactory epithelium	0	0	0	0 ?	0	0	0	0	2	0	0	0 *	2	0	0	0 *
		( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 5 )	( 0 )	( 0 )	( 0 )	( 4 )	( 0 )	( 0 )	( 0 )
	eosinophilic change:respiratory epithelium	0	0	0	0 ?	12	3	0	0	24	6	1	0	26	16	4	0 *
		( 0 )	( 0 )	( 0 )	( 0 )	( 40 )	( 10 )	( 0 )	( 0 )	( 55 )	( 14 )	( 2 )	( 0 )	( 52 )	( 32 )	( 8 )	( 0 )

Grade 1 : Slight 2 : Moderate 3 : Marked 4 : Severe

< a > a : Number of animals examined at the site

b : Number of animals with lesion

( c ) c : b / a \* 100

Significant difference ; \* :  $P \leq 0.05$  \*\* :  $P \leq 0.01$  Test of Chi Square

? : Significant test is not applied,because No. of data in this group is less than 3.

(HPT150)

BAIS3

STUDY NO. : 0304  
 ANIMAL : MOUSE Crj:BDF1  
 REPORT TYPE : A1  
 SEX : FEMALE

HISTOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)  
 DEAD AND MORIBUND ANIMALS (0- 51W)

PAGE : 2

Organ	Findings	Group Name No. of Animals on Study Grade				Control 1				150 ppm 30				300 ppm 44				600 ppm 50			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Respiratory system}																					
nasal cavit		< 1>				<30>				<44>				<50>							
	respiratory metaplasia:olfactory epithelium	0	0	0	0 ?	3	0	0	0	6	0	0	0	3	0	0	0				
		( 0 )	( 0 )	( 0 )	( 0 )	( 10 )	( 0 )	( 0 )	( 0 )	( 14 )	( 0 )	( 0 )	( 0 )	( 6 )	( 0 )	( 0 )	( 0 )				
	respiratory metaplasia:gland	0	0	0	0 ?	1	0	0	0 **	3	0	0	0	10	0	0	0				
		( 0 )	( 0 )	( 0 )	( 0 )	( 3 )	( 0 )	( 0 )	( 0 )	( 7 )	( 0 )	( 0 )	( 0 )	( 20 )	( 0 )	( 0 )	( 0 )				
lung		< 1>				<30>				<44>				<50>							
	hemorrhage	0	0	0	0 ?	0	1	1	0	2	0	2	0	2	5	1	0				
		( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 3 )	( 3 )	( 0 )	( 5 )	( 0 )	( 5 )	( 0 )	( 4 )	( 10 )	( 2 )	( 0 )				
	edema	0	0	0	0 ?	0	0	0	0	0	0	0	0	0	2	0	0 *				
		( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 4 )	( 0 )	( 0 )				
	inflammatory infiltration	0	0	0	0 ?	10	12	0	0	20	10	0	0	24	15	0	0				
		( 0 )	( 0 )	( 0 )	( 0 )	( 33 )	( 40 )	( 0 )	( 0 )	( 45 )	( 23 )	( 0 )	( 0 )	( 48 )	( 30 )	( 0 )	( 0 )				
	accumulation of foamy cells	0	0	0	0 ?	0	0	0	0	0	1	0	0 **	0	0	0	0				
		( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 2 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )				

Grade 1 : Slight 2 : Moderate 3 : Marked 4 : Severe

< a > a : Number of animals examined at the site

b : Number of animals with lesion

( c ) c : b / a \* 100

Significant difference ; \* :  $P \leq 0.05$  \*\* :  $P \leq 0.01$  Test of Chi Square

? : Significant test is not applied,because No. of data in this group is less than 3.

STUDY NO. : 0304  
 ANIMAL : MOUSE Crj:BDF1  
 REPORT TYPE : A1  
 SEX : FEMALE

HISTOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)  
 DEAD AND MORIBUND ANIMALS (0- 51W)

PAGE : 3

Organ	Findings	Group Name No. of Animals on Study Grade	Control 1				150 ppm 30				300 ppm 44				600 ppm 50			
			1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Respiratory system}																		
lung	accumulation of immature blood cells		< 1>				<30>				<44>				<50>			
			0	0	0	0 ?	13	0	0	0	23	0	0	0	29	0	0	0
			( 0 )	( 0 )	( 0 )	( 0 )	( 43 )	( 0 )	( 0 )	( 0 )	( 52 )	( 0 )	( 0 )	( 0 )	( 58 )	( 0 )	( 0 )	( 0 )
{Hematopoietic system}																		
bone marrow	myelofibrosis		< 1>				<30>				<44>				<50>			
			0	0	0	0 ?	0	0	0	0	1	0	0	0 **	0	0	0	0
			( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 2 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )
	erythropoiesis:increased		0	0	0	0 ?	11	12	0	0	16	15	0	0	26	9	0	0
			( 0 )	( 0 )	( 0 )	( 0 )	( 37 )	( 40 )	( 0 )	( 0 )	( 36 )	( 34 )	( 0 )	( 0 )	( 52 )	( 18 )	( 0 )	( 0 )
spleen	atrophy		< 1>				<30>				<44>				<50>			
			0	1	0	0 ?	0	0	0	0 **	0	0	0	0 **	0	0	0	0 **
			( 0 )	( 100 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )
	deposit of hemosiderin		0	0	0	0 ?	0	1	0	0 **	0	0	0	0	0	0	0	0
			( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 3 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )

Grade 1 : Slight 2 : Moderate 3 : Marked 4 : Severe

< a > a : Number of animals examined at the site

b : Number of animals with lesion

( c ) c : b / a \* 100

Significant difference ; \* :  $P \leq 0.05$  \*\* :  $P \leq 0.01$  Test of Chi Square

? : Significant test is not applied, because No. of data in this group is less than 3.

STUDY NO. : 0304  
ANIMAL : MOUSE Crj:BDF1  
REPORT TYPE : A1  
SEX : FEMALE

HISTOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)  
DEAD AND MORIBUND ANIMALS (0- 51W)

PAGE : 4

Organ_____	Findings_____	Group Name No. of Animals on Study Grade				Control 1				150 ppm 30				300 ppm 44				600 ppm 50			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4				
		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)				
{Hematopoietic system}																					
spleen		< 1>				<30>				<44>				<50>							
	deposit of melanin	0	0	0	0 ?	0	0	0	0	2	0	0	0 *	0	0	0	0				
		( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 5 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )				
	extramedullary hematopoiesis	0	0	0	0 ?	0	9	18	0 *	2	21	18	0 *	6	23	21	0 **				
		( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 30 )	( 60 )	( 0 )	( 5 )	( 48 )	( 41 )	( 0 )	( 12 )	( 46 )	( 42 )	( 0 )				
{Circulatory system}																					
heart		< 1>				<30>				<44>				<50>							
	mineralization	0	0	0	0 ?	2	0	0	0	5	0	0	0	1	0	0	0 **				
		( 0 )	( 0 )	( 0 )	( 0 )	( 7 )	( 0 )	( 0 )	( 0 )	( 11 )	( 0 )	( 0 )	( 0 )	( 2 )	( 0 )	( 0 )	( 0 )				
	myocarditis	0	0	0	0 ?	1	0	0	0 **	0	0	0	0	0	0	0	0				
		( 0 )	( 0 )	( 0 )	( 0 )	( 3 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )				
{Digestive system}																					
tongue		< 1>				<30>				<44>				<50>							
	erosion	0	0	0	0 ?	0	0	0	0	0	0	0	0	1	0	0	0 **				
		( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 2 )	( 0 )	( 0 )	( 0 )				

Grade 1 : Slight 2 : Moderate 3 : Marked 4 : Severe

< a > a : Number of animals examined at the site

b b : Number of animals with lesion

( c ) c : b / a \* 100

Significant difference ; \* :  $P \leq 0.05$  \*\* :  $P \leq 0.01$  Test of Chi Square

? : Significant test is not applied, because No. of data in this group is less than 3.

STUDY NO. : 0304  
ANIMAL : MOUSE Crj:BDF1  
REPORT TYPE : A1  
SEX : FEMALE

HISTOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)  
DEAD AND MORIBUND ANIMALS (0- 51W)

PAGE : 5

Organ	Findings	Group Name No. of Animals on Study Grade	Control 1				150 ppm 30				300 ppm 44				600 ppm 50			
			1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Digestive system}																		
tongue	mastcell hyperplasia		< 1>				<30>				<44>				<50>			
			0	0	0	0 ?	0	0	0	0	1	0	0	0 **	0	0	0	0
			( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 2 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )
salivary gl	lymphocytic infiltration		< 1>				<30>				<44>				<50>			
			0	0	0	0 ?	5	0	0	0	2	0	0	0 *	2	0	0	0 *
			( 0 )	( 0 )	( 0 )	( 0 )	( 17 )	( 0 )	( 0 )	( 0 )	( 5 )	( 0 )	( 0 )	( 0 )	( 4 )	( 0 )	( 0 )	( 0 )
stomach	erosion:glandular stomach		< 1>				<30>				<44>				<50>			
			0	0	0	0 ?	1	0	0	0 **	1	0	0	0 **	0	0	0	0
			( 0 )	( 0 )	( 0 )	( 0 )	( 3 )	( 0 )	( 0 )	( 0 )	( 2 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )
	hyperplasia:glandular stomach		0	0	0	0 ?	12	8	0	0	27	8	1	0	22	6	0	0
			( 0 )	( 0 )	( 0 )	( 0 )	( 40 )	( 27 )	( 0 )	( 0 )	( 61 )	( 18 )	( 2 )	( 0 )	( 44 )	( 12 )	( 0 )	( 0 )
liver	angiectasis		< 1>				<30>				<44>				<50>			
			0	0	0	0 ?	0	2	0	0	0	2	0	0 *	3	3	1	0
			( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 7 )	( 0 )	( 0 )	( 0 )	( 5 )	( 0 )	( 0 )	( 6 )	( 6 )	( 2 )	( 0 )
	necrosis:central		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 )	( 5 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )

Grade 1 : Slight 2 : Moderate 3 : Marked 4 : Severe  
< a > a : Number of animals examined at the site  
b : Number of animals with lesion  
( c ) c : b / a \* 100  
Significant difference ; \* :  $P \leq 0.05$  \*\* :  $P \leq 0.01$  Test of Chi Square  
? : Significant test is not applied,because No. of data in this group is less than 3.

STUDY NO. : 0304  
 ANIMAL : MOUSE Crj:BDF1  
 REPORT TYPE : A1  
 SEX : FEMALE

HISTOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)  
 DEAD AND MORIBUND ANIMALS (0- 51W)

PAGE : 6

Organ	Findings	Control No. of Animals on Study Grade				150 ppm 30				300 ppm 44				600 ppm 50			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Digestive system}																	
liver		< 1 >				<30>				<44>				<50>			
	necrosis:focal	0	0	0	?	3	0	0	0	4	2	1	0	5	4	3	0
		( 0 )	( 0 )	( 0 )	( 0 )	( 10 )	( 0 )	( 0 )	( 0 )	( 9 )	( 5 )	( 2 )	( 0 )	( 10 )	( 8 )	( 6 )	( 0 )
	degeneration:central	0	0	0	?	3	3	0	0	1	1	0	0	9	2	0	0
		( 0 )	( 0 )	( 0 )	( 0 )	( 10 )	( 10 )	( 0 )	( 0 )	( 2 )	( 2 )	( 0 )	( 0 )	( 18 )	( 4 )	( 0 )	( 0 )
	inflammatory cell nest	0	0	0	?	0	0	0	0	0	0	0	0	1	0	0	0 **
		( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 2 )	( 0 )	( 0 )	( 0 )
	extramedullary hematopoiesis	0	0	0	?	2	1	0	0	9	0	0	0	6	0	0	0
		( 0 )	( 0 )	( 0 )	( 0 )	( 7 )	( 3 )	( 0 )	( 0 )	( 20 )	( 0 )	( 0 )	( 0 )	( 12 )	( 0 )	( 0 )	( 0 )
	accumulation of immature blood cells	0	0	0	?	10	9	5	0	15	18	8	0 *	12	22	12	0 *
		( 0 )	( 0 )	( 0 )	( 0 )	( 33 )	( 30 )	( 17 )	( 0 )	( 34 )	( 41 )	( 18 )	( 0 )	( 24 )	( 44 )	( 24 )	( 0 )
	erythrostasis	0	0	0	?	0	0	0	0	1	0	0	0 **	2	0	0	0 *
		( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 2 )	( 0 )	( 0 )	( 0 )	( 4 )	( 0 )	( 0 )	( 0 )
	mobilization of Kupffer cell	0	0	0	?	0	1	0	0 **	1	4	1	0	7	3	0	0
		( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 3 )	( 0 )	( 0 )	( 2 )	( 9 )	( 2 )	( 0 )	( 14 )	( 6 )	( 0 )	( 0 )

Grade 1 : Slight 2 : Moderate 3 : Marked 4 : Severe

< a > a : Number of animals examined at the site

b : Number of animals with lesion

( c ) c : b / a \* 100

Significant difference ; \* :  $P \leq 0.05$  \*\* :  $P \leq 0.01$  Test of Chi Square

? : Significant test is not applied,because No. of data in this group is less than 3.

STUDY NO. : 0304  
 ANIMAL : MOUSE Crj:BDF1  
 REPORT TYPE : A1  
 SEX : FEMALE

HISTOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)  
 DEAD AND MORIBUND ANIMALS (0- 51W)

PAGE : 7

Organ	Findings	Control No. of Animals on Study Grade				150 ppm 30				300 ppm 44				600 ppm 50			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Digestive system}																	
pancreas		< 1>				<30>				<44>				<50>			
	atrophy	0	0	0	0 ?	0	0	0	0	0	0	0	0	1	0	0	0 **
		( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 2 )	( 0 )	( 0 )	( 0 )
{Urinary system}																	
kidney		< 1>				<30>				<44>				<50>			
	hyaline droplet	0	0	0	0 ?	0	0	0	0	2	3	1	0	1	1	0	0
		( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 5 )	( 7 )	( 2 )	( 0 )	( 2 )	( 2 )	( 0 )	( 0 )
	deposit of hemosiderin	0	0	0	0 ?	5	4	0	0	12	1	0	0	9	4	0	0
		( 0 )	( 0 )	( 0 )	( 0 )	( 17 )	( 13 )	( 0 )	( 0 )	( 27 )	( 2 )	( 0 )	( 0 )	( 18 )	( 8 )	( 0 )	( 0 )
	perivascular inflammation	0	0	0	0 ?	0	0	0	0	1	0	0	0 **	0	0	0	0
		( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 2 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )
	hydronephrosis	0	0	1	0 ?	2	1	1	0 **	3	2	0	0 **	0	1	1	0 **
		( 0 )	( 0 )	( 100 )	( 0 )	( 7 )	( 3 )	( 3 )	( 0 )	( 7 )	( 5 )	( 0 )	( 0 )	( 0 )	( 2 )	( 2 )	( 0 )

Grade 1 : Slight 2 : Moderate 3 : Marked 4 : Severe

< a > a : Number of animals examined at the site

b : Number of animals with lesion

( c ) c : b / a \* 100

Significant difference ; \* :  $P \leq 0.05$  \*\* :  $P \leq 0.01$  Test of Chi Square

? : Significant test is not applied, because No. of data in this group is less than 3.

STUDY NO. : 0304  
ANIMAL : MOUSE Crj:BDF1  
REPORT TYPE : A1  
SEX : FEMALE

HISTOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)  
DEAD AND MORIBUND ANIMALS (0- 51W)

PAGE : 8

Organ	Findings	Group Name	Control				150 ppm				300 ppm				600 ppm			
		No. of Animals on Study	1				30				44				50			
		Grade	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Urinary system}																		
kidney	tubular necrosis		< 1>				<30>				<44>				<50>			
		0	0	0	0	?	0	1	1	0	1	1	1	0	2	2	1	0
		( 0 )	( 0 )	( 0 )	( 0 )		( 0 )	( 3 )	( 3 )	( 0 )	( 2 )	( 2 )	( 2 )	( 0 )	( 4 )	( 4 )	( 2 )	( 0 )
	papillary necrosis		0	0	0	0	?	0	0	0	0	0	0	0	0	1	0	0 **
		( 0 )	( 0 )	( 0 )	( 0 )		( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 2 )	( 0 )	( 0 )
ureter	inflammatory polyp		< 1>				<30>				<44>				<50>			
		0	0	0	0	?	0	1	0	0	0	0	0	0	0	0	0	0
		( 0 )	( 0 )	( 0 )	( 0 )		( 0 )	( 3 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )
{Endocrine system}																		
pituitary	hyperplasia		< 1>				<28>				<44>				<48>			
		0	0	0	0	?	1	0	0	0	0	0	0	0	0	0	0	0
		( 0 )	( 0 )	( 0 )	( 0 )		( 4 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )
thyroid	inflammatory infiltration		< 1>				<28>				<43>				<50>			
		0	0	0	0	?	0	0	0	0	1	0	0	0	0	0	0	0
		( 0 )	( 0 )	( 0 )	( 0 )		( 0 )	( 0 )	( 0 )	( 0 )	( 2 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )
Grade	1 : Slight      2 : Moderate      3 : Marked      4 : Severe																	
< a >	a : Number of animals examined at the site																	
b	b : Number of animals with lesion																	
( c )	c : b / a * 100																	
Significant difference ;    * : P ≤ 0.05    ** : P ≤ 0.01    Test of Chi Square																		
? : Significant test is not applied,because No. of data in this group is less than 3.																		

STUDY NO. : 0304  
 ANIMAL : MOUSE Crj:BDF1  
 REPORT TYPE : A1  
 SEX : FEMALE

HISTOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)  
 DEAD AND MORIBUND ANIMALS (0- 51W)

PAGE : 9

Organ	Findings	Group Name No. of Animals on Study Grade	Control 1				150 ppm 30				300 ppm 44				600 ppm 50			
			1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Endocrine system}																		
adrenal			< 1>				<30>				<43>				<50>			
	thrombus		0	0	0	0 ?	0	0	0	0	0	0	0	0	0	1	0	0 **
			( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 2 )	( 0 )	( 0 )
	necrosis:zonal		0	0	0	0 ?	0	0	0	0	0	0	0	0	0	1	0	0 **
			( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 2 )	( 0 )	( 0 )
	necrosis:focal		0	0	0	0 ?	0	0	0	0	1	0	0	0 **	0	0	0	0
			( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 2 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )
	extramedullary hematopoiesis		0	0	0	0 ?	0	0	0	0	2	0	0	0 *	2	0	0	0 *
			( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 5 )	( 0 )	( 0 )	( 0 )	( 4 )	( 0 )	( 0 )	( 0 )
	spindle-cell hyperplasia		0	0	0	0 ?	17	13	0	0 **	25	17	0	0 **	36	13	0	0 **
			( 0 )	( 0 )	( 0 )	( 0 )	( 57 )	( 43 )	( 0 )	( 0 )	( 58 )	( 40 )	( 0 )	( 0 )	( 72 )	( 26 )	( 0 )	( 0 )
{Reproductive system}																		
ovary			< 1>				<30>				<44>				<50>			
	hemorrhage		0	0	0	0 ?	0	0	0	0	0	0	0	0	1	0	0	0 **
			( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 2 )	( 0 )	( 0 )	( 0 )

Grade 1 : Slight 2 : Moderate 3 : Marked 4 : Severe

< a > a : Number of animals examined at the site

b : Number of animals with lesion

( c ) c : b / a \* 100

Significant difference ; \* :  $P \leq 0.05$  \*\* :  $P \leq 0.01$  Test of Chi Square

? : Significant test is not applied,because No. of data in this group is less than 3.

STUDY NO. : 0304  
 ANIMAL : MOUSE Crj:BDF1  
 REPORT TYPE : A1  
 SEX : FEMALE

HISTOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)  
 DEAD AND MORIBUND ANIMALS (0- 51W)

PAGE : 10

		Group Name	Control				150 ppm				300 ppm				600 ppm			
		No. of Animals on Study	1				30				44				50			
Organ	Findings	Grade	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Reproductive system}																		
ovary			< 1>				<30>				<44>				<50>			
	thrombus		0	0	0	0 ?	0	0	0	0	0	0	1	0 **	0	1	0	0 **
			( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 2 )	( 0 )	( 0 )	( 2 )	( 0 )	( 0 )
	necrosis		0	0	0	0 ?	0	0	1	0 **	0	0	0	0	0	0	0	0
			( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 3 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )
	cyst		0	0	0	0 ?	1	1	0	0	1	0	0	0 **	0	0	0	0
			( 0 )	( 0 )	( 0 )	( 0 )	( 3 )	( 3 )	( 0 )	( 0 )	( 2 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )
uterus			< 1>				<30>				<44>				<50>			
	cystic endometrial hyperplasia		0	0	0	0 ?	12	0	0	0	12	0	0	0	13	0	0	0
			( 0 )	( 0 )	( 0 )	( 0 )	( 40 )	( 0 )	( 0 )	( 0 )	( 27 )	( 0 )	( 0 )	( 0 )	( 26 )	( 0 )	( 0 )	( 0 )
{Nervous system}																		
brain			< 1>				<30>				<44>				<50>			
	hemorrhage		0	0	0	0 ?	5	0	0	0	5	1	0	0	8	1	0	0
			( 0 )	( 0 )	( 0 )	( 0 )	( 17 )	( 0 )	( 0 )	( 0 )	( 11 )	( 2 )	( 0 )	( 0 )	( 16 )	( 2 )	( 0 )	( 0 )

Grade 1 : Slight 2 : Moderate 3 : Marked 4 : Severe

< a > a : Number of animals examined at the site

b b : Number of animals with lesion

( c ) c : b / a \* 100

Significant difference ; \* :  $P \leq 0.05$  \*\* :  $P \leq 0.01$  Test of Chi Square

? : Significant test is not applied, because No. of data in this group is less than 3.

STUDY NO. : 0304  
 ANIMAL : MOUSE Crj:BDF1  
 REPORT TYPE : A1  
 SEX : FEMALE

HISTOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)  
 DEAD AND MORIBUND ANIMALS (0- 51W)

PAGE : 11

		Group Name	Control				150 ppm				300 ppm				600 ppm			
		No. of Animals on Study	1				30				44				50			
Organ_____	Findings_____	Grade	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Nervous system}																		
brain	mineralization		< 1>				<30>				<44>				<50>			
			0	0	0	0 ?	2	0	0	0	0	0	0	0	0	0	0	0
			( 0 )	( 0 )	( 0 )	( 0 )	( 7 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )
spinal cord	hemorrhage		< 1>				<29>				<44>				<50>			
			0	0	0	0 ?	0	0	0	0	0	0	0	0	1	0	0	0 **
			( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 2 )	( 0 )	( 0 )	( 0 )
{Special sense organs/appendage}																		
Harder gl	lymphocytic infiltration		< 1>				<30>				<44>				<50>			
			0	0	0	0 ?	0	0	0	0	0	0	0	0	1	0	0	0 **
			( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 2 )	( 0 )	( 0 )	( 0 )
{Musculoskeletal system}																		
muscle	mineralization		< 1>				<30>				<44>				<50>			
			0	0	0	0 ?	1	0	0	0 **	1	0	0	0 **	0	0	0	0
			( 0 )	( 0 )	( 0 )	( 0 )	( 3 )	( 0 )	( 0 )	( 0 )	( 2 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )

Grade 1 : Slight 2 : Moderate 3 : Marked 4 : Severe

< a > a : Number of animals examined at the site

b b : Number of animals with lesion

( c ) c : b / a \* 100

Significant difference ; \* :  $P \leq 0.05$  \*\* :  $P \leq 0.01$  Test of Chi Square

? : Significant test is not applied, because No. of data in this group is less than 3.

STUDY NO. : 0304  
 ANIMAL : MOUSE Crj:BDF1  
 REPORT TYPE : A1  
 SEX : FEMALE

HISTOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)  
 DEAD AND MORIBUND ANIMALS (0- 51W)

PAGE : 12

Organ	Findings	Group Name				Control				150 ppm				300 ppm				600 ppm			
		No. of Animals on Study				1				30				44				50			
		Grade				1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
		(%)				(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)

{Body cavities}

retroperit		< 1>				<30>				<44>				<50>			
	thrombus	0	0	0	0	?	0	0	0	0	0	1	0	0	0	0	0
		( 0)	( 0)	( 0)	( 0)		( 0)	( 0)	( 0)	( 0)	( 0)	( 2)	( 0)	( 0)	( 0)	( 0)	( 0)

Grade 1 : Slight 2 : Moderate 3 : Marked 4 : Severe

< a > a : Number of animals examined at the site

b : Number of animals with lesion

( c ) c : b / a \* 100

Significant difference ; \* :  $P \leq 0.05$  \*\* :  $P \leq 0.01$  Test of Chi Square

? : Significant test is not applied, because No. of data in this group is less than 3.

(HPT150)

BAIS3

## APPENDIX L 5

HISTOLOGICAL FINDINGS : NON-NEOPLASTIC LESIONS : SUMMARY

MOUSE : MALE : SACRIFICED ANIMALS

(2-YEAR STUDY)

STUDY NO. : 0304  
ANIMAL : MOUSE Crj:BDF1  
REPORT TYPE : A2  
SEX : MALE

HISTOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)  
SACRIFICED ANIMALS ( 66W)

PAGE : 1

Organ_____	Findings_____	Group Name	Control				150 ppm				300 ppm				600 ppm			
		No. of Animals on Study	46				15				0				0			
		Grade	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Integumentary system/appandage}																		
subcutis			<46>				<15>				< 0>				< 0>			
hyperplasia:vascular			0	0	0	0	1	0	0	0	-	-	-	-	-	-	-	-
			( 0 )	( 0 )	( 0 )	( 0 )	( 7 )	( 0 )	( 0 )	( 0 )	( - )	( - )	( - )	( - )	( - )	( - )	( - )	( - )
{Respiratory system}																		
nasal cavit			<46>				<15>				< 0>				< 0>			
eosinophilic change:olfactory epithelium			12	0	0	0	7	0	0	0	-	-	-	-	-	-	-	-
			( 26 )	( 0 )	( 0 )	( 0 )	( 47 )	( 0 )	( 0 )	( 0 )	( - )	( - )	( - )	( - )	( - )	( - )	( - )	( - )
eosinophilic change:respiratory epithelium			5	2	0	0	4	0	0	0	-	-	-	-	-	-	-	-
			( 11 )	( 4 )	( 0 )	( 0 )	( 27 )	( 0 )	( 0 )	( 0 )	( - )	( - )	( - )	( - )	( - )	( - )	( - )	( - )
respiratory metaplasia:olfactory epithelium			14	0	0	0	2	0	0	0	-	-	-	-	-	-	-	-
			( 30 )	( 0 )	( 0 )	( 0 )	( 13 )	( 0 )	( 0 )	( 0 )	( - )	( - )	( - )	( - )	( - )	( - )	( - )	( - )
respiratory metaplasia:gland			6	3	0	0	2	0	0	0	-	-	-	-	-	-	-	-
			( 13 )	( 7 )	( 0 )	( 0 )	( 13 )	( 0 )	( 0 )	( 0 )	( - )	( - )	( - )	( - )	( - )	( - )	( - )	( - )
lung			<46>				<15>				< 0>				< 0>			
hemorrhage			2	0	0	0	0	0	0	0	-	-	-	-	-	-	-	-
			( 4 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( - )	( - )	( - )	( - )	( - )	( - )	( - )	( - )

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

(HPT150)

BAIS3

STUDY NO. : 0304  
ANIMAL : MOUSE Crj:BDF1  
REPORT TYPE : A2  
SEX : MALE

HISTOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)  
SACRIFICED ANIMALS ( 66W)

PAGE : 2

Organ	Findings	Group Name No. of Animals on Study Grade	Control 46				150 ppm 15				300 ppm 0				600 ppm 0			
			1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Respiratory system}																		
lung			<46>				<15>				< 0>				< 0>			
	inflammatory infiltration		0	0	0	0	1	0	0	0	-	-	-	-	-	-	-	-
			( 0 )	( 0 )	( 0 )	( 0 )	( 7 )	( 0 )	( 0 )	( 0 )	( - )	( - )	( - )	( - )	( - )	( - )	( - )	( - )
	bronchiolar-alveolar cell hyperplasia		0	0	0	0	1	0	0	0	-	-	-	-	-	-	-	-
			( 0 )	( 0 )	( 0 )	( 0 )	( 7 )	( 0 )	( 0 )	( 0 )	( - )	( - )	( - )	( - )	( - )	( - )	( - )	( - )
	accumulation of immature blood cells		0	0	0	0	2	0	0	0	-	-	-	-	-	-	-	-
			( 0 )	( 0 )	( 0 )	( 0 )	( 13 )	( 0 )	( 0 )	( 0 )	( - )	( - )	( - )	( - )	( - )	( - )	( - )	( - )
{Hematopoietic system}																		
bone marrow			<46>				<15>				< 0>				< 0>			
	myelofibrosis		0	0	0	0	1	0	0	0	-	-	-	-	-	-	-	-
			( 0 )	( 0 )	( 0 )	( 0 )	( 7 )	( 0 )	( 0 )	( 0 )	( - )	( - )	( - )	( - )	( - )	( - )	( - )	( - )
	erythropoiesis:increased		0	0	0	0	2	0	0	0	-	-	-	-	-	-	-	-
			( 0 )	( 0 )	( 0 )	( 0 )	( 13 )	( 0 )	( 0 )	( 0 )	( - )	( - )	( - )	( - )	( - )	( - )	( - )	( - )
spleen			<46>				<15>				< 0>				< 0>			
	extramedullary hematopoiesis		0	0	0	0	2	2	2	0 **	-	-	-	-	-	-	-	-
			( 0 )	( 0 )	( 0 )	( 0 )	( 13 )	( 13 )	( 13 )	( 0 )	( - )	( - )	( - )	( - )	( - )	( - )	( - )	( - )

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

STUDY NO. : 0304  
 ANIMAL : MOUSE Crj:BDF1  
 REPORT TYPE : A2  
 SEX : MALE

HISTOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)  
 SACRIFICED ANIMALS ( 66W)

PAGE : 3

		Group Name	Control				150 ppm				300 ppm				600 ppm			
		No. of Animals on Study	46				15				0				0			
		Grade	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Organ	Findings		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Hematopoietic system}																		
spleen			<46>				<15>				< 0>				< 0>			
	follicular hyperplasia		2	0	0	0	1	0	0	0	-	-	-	-	-	-	-	-
			( 4 )	( 0 )	( 0 )	( 0 )	( 7 )	( 0 )	( 0 )	( 0 )	( - )	( - )	( - )	( - )	( - )	( - )	( - )	( - )
{Circulatory system}																		
heart			<46>				<15>				< 0>				< 0>			
	inflammatory cell nest		0	0	0	0	1	0	0	0	-	-	-	-	-	-	-	-
			( 0 )	( 0 )	( 0 )	( 0 )	( 7 )	( 0 )	( 0 )	( 0 )	( - )	( - )	( - )	( - )	( - )	( - )	( - )	( - )
	arteritis		1	0	0	0	0	0	0	0	-	-	-	-	-	-	-	-
			( 2 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( - )	( - )	( - )	( - )	( - )	( - )	( - )	( - )
{Digestive system}																		
tooth			<46>				<15>				< 0>				< 0>			
	dysplasia		3	1	0	0	1	0	0	0	-	-	-	-	-	-	-	-
			( 7 )	( 2 )	( 0 )	( 0 )	( 7 )	( 0 )	( 0 )	( 0 )	( - )	( - )	( - )	( - )	( - )	( - )	( - )	( - )
tongue			<46>				<15>				< 0>				< 0>			
	arteritis		0	1	0	0	0	0	0	0	-	-	-	-	-	-	-	-
			( 0 )	( 2 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( - )	( - )	( - )	( - )	( - )	( - )	( - )	( - )
Grade	1 : Slight		2 : Moderate		3 : Marked		4 : Severe											
< a >	a : Number of animals examined at the site																	
b	b : Number of animals with lesion																	
( c )	c : b / a * 100																	
Significant difference ; * : P ≤ 0.05 ** : P ≤ 0.01 Test of Chi Square																		

STUDY NO. : 0304  
 ANIMAL : MOUSE Crj:BDF1  
 REPORT TYPE : A2  
 SEX : MALE

HISTOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)  
 SACRIFICED ANIMALS ( 66W)

PAGE : 4

Organ	Findings	Group Name No. of Animals on Study Grade				Control 46				150 ppm 15				300 ppm 0				600 ppm 0			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Digestive system}																					
salivary gl		<46>				<15>				< 0>				< 0>				< 0>			
	lymphocytic infiltration	16	0	0	0	6	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-
		( 35)	( 0)	( 0)	( 0)	( 40)	( 0)	( 0)	( 0)	( -)	( -)	( -)	( -)	( -)	( -)	( -)	( -)	( -)	( -)	( -)	( -)
stomach		<46>				<15>				< 0>				< 0>				< 0>			
	erosion:glandular stomach	3	1	0	0	2	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-
		( 7)	( 2)	( 0)	( 0)	( 13)	( 0)	( 0)	( 0)	( -)	( -)	( -)	( -)	( -)	( -)	( -)	( -)	( -)	( -)	( -)	( -)
	hyperplasia:glandular stomach	8	31	3	0	1	10	3	0	-	-	-	-	-	-	-	-	-	-	-	-
		( 17)	( 67)	( 7)	( 0)	( 7)	( 67)	( 20)	( 0)	( -)	( -)	( -)	( -)	( -)	( -)	( -)	( -)	( -)	( -)	( -)	( -)
liver		<46>				<15>				< 0>				< 0>				< 0>			
	necrosis:focal	0	1	0	0	0	1	0	0	-	-	-	-	-	-	-	-	-	-	-	-
		( 0)	( 2)	( 0)	( 0)	( 0)	( 7)	( 0)	( 0)	( -)	( -)	( -)	( -)	( -)	( -)	( -)	( -)	( -)	( -)	( -)	( -)
	fatty change	5	0	0	0	5	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-
		( 11)	( 0)	( 0)	( 0)	( 33)	( 0)	( 0)	( 0)	( -)	( -)	( -)	( -)	( -)	( -)	( -)	( -)	( -)	( -)	( -)	( -)
	fatty change:central	13	2	0	0	1	0	0	0	-	-	-	-	-	-	-	-	-	-	-	-
		( 28)	( 4)	( 0)	( 0)	( 7)	( 0)	( 0)	( 0)	( -)	( -)	( -)	( -)	( -)	( -)	( -)	( -)	( -)	( -)	( -)	( -)
	inflammatory cell nest	0	0	0	0	3	0	0	0 *	-	-	-	-	-	-	-	-	-	-	-	-
		( 0)	( 0)	( 0)	( 0)	( 20)	( 0)	( 0)	( 0)	( -)	( -)	( -)	( -)	( -)	( -)	( -)	( -)	( -)	( -)	( -)	( -)

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

STUDY NO. : 0304  
 ANIMAL : MOUSE Crj:BDF1  
 REPORT TYPE : A2  
 SEX : MALE

HISTOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)  
 SACRIFICED ANIMALS ( 66W)

PAGE : 5

Organ	Findings	Group Name No. of Animals on Study Grade	Control 46				150 ppm 15				300 ppm 0				600 ppm 0			
			1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Digestive system}																		
liver			<46>				<15>				< 0>				< 0>			
	extramedullary hematopoiesis		0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	2 ( 13)	0 ( 0)	0 ( 0)	0 ( 0)	- ( -)	- ( -)	- ( -)	- ( -)	- ( -)	- ( -)	- ( -)	- ( -)
	accumulation of immature blood cells		0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	1 ( 7)	1 ( 7)	1 ( 7)	0 * ( 0)	- ( -)	- ( -)	- ( -)	- ( -)	- ( -)	- ( -)	- ( -)	- ( -)
	erythrostasis		0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	1 ( 7)	0 ( 0)	0 ( 0)	0 ( 0)	- ( -)	- ( -)	- ( -)	- ( -)	- ( -)	- ( -)	- ( -)	- ( -)
	acidophilic cell focus		0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	1 ( 7)	0 ( 0)	0 ( 0)	0 ( 0)	- ( -)	- ( -)	- ( -)	- ( -)	- ( -)	- ( -)	- ( -)	- ( -)
	basophilic cell focus		2 ( 4)	0 ( 0)	0 ( 0)	0 ( 0)	2 ( 13)	0 ( 0)	0 ( 0)	0 ( 0)	- ( -)	- ( -)	- ( -)	- ( -)	- ( -)	- ( -)	- ( -)	- ( -)
	vacuolated cell focus		2 ( 4)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	- ( -)	- ( -)	- ( -)	- ( -)	- ( -)	- ( -)	- ( -)	- ( -)
pancreas	mobilization of Kuppfer cell		0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	1 ( 7)	0 ( 0)	0 ( 0)	0 ( 0)	- ( -)	- ( -)	- ( -)	- ( -)	- ( -)	- ( -)	- ( -)	- ( -)
	atrophy		<46>				<15>				< 0>				< 0>			
			1 ( 2)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	- ( -)	- ( -)	- ( -)	- ( -)	- ( -)	- ( -)	- ( -)	- ( -)

Grade 1 : Slight 2 : Moderate 3 : Marked 4 : Severe

< a > a : Number of animals examined at the site

b : Number of animals with lesion

( c ) c : b / a \* 100

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

STUDY NO. : 0304  
 ANIMAL : MOUSE Crj:BDF1  
 REPORT TYPE : A2  
 SEX : MALE

HISTOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)  
 SACRIFICED ANIMALS ( 66W)

PAGE : 6

Organ	Findings	Group Name	Control				150 ppm				300 ppm				600 ppm			
		No. of Animals on Study	46				15				0				0			
		Grade	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Urinary system}																		
kidney			<46>				<15>				< 0>				< 0>			
	basophilic change		0	0	0	0	2	0	0	0	-	-	-	-	-	-	-	-
			( 0 )	( 0 )	( 0 )	( 0 )	( 13 )	( 0 )	( 0 )	( 0 )	( - )	( - )	( - )	( - )	( - )	( - )	( - )	( - )
	inflammatory polyp		0	0	0	0	0	1	0	0	-	-	-	-	-	-	-	-
			( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 7 )	( 0 )	( 0 )	( - )	( - )	( - )	( - )	( - )	( - )	( - )	( - )
	hydronephrosis		0	0	0	0	0	1	0	0	-	-	-	-	-	-	-	-
			( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 7 )	( 0 )	( 0 )	( - )	( - )	( - )	( - )	( - )	( - )	( - )	( - )
{Endocrine system}																		
pituitary			<46>				<15>				< 0>				< 0>			
	cyst		1	0	0	0	0	0	0	0	-	-	-	-	-	-	-	-
			( 2 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( - )	( - )	( - )	( - )	( - )	( - )	( - )	( - )
	Rathke pouch		4	0	0	0	0	0	0	0	-	-	-	-	-	-	-	-
			( 9 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( - )	( - )	( - )	( - )	( - )	( - )	( - )	( - )
thyroid			<43>				<15>				< 0>				< 0>			
	cystic thyroid follicle		1	0	0	0	0	0	0	0	-	-	-	-	-	-	-	-
			( 2 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( - )	( - )	( - )	( - )	( - )	( - )	( - )	( - )
Grade 1 : Slight 2 : Moderate 3 : Marked 4 : Severe																		
< a > a : Number of animals examined at the site																		
b : Number of animals with lesion																		
( c ) c : b / a * 100																		
Significant difference ; * : P ≤ 0.05 ** : P ≤ 0.01 Test of Chi Square																		

(HPT150)

BAIS3

STUDY NO. : 0304  
ANIMAL : MOUSE Crj:BDF1  
REPORT TYPE : A2  
SEX : MALE

HISTOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)  
SACRIFICED ANIMALS ( 66W)

PAGE : 7

Organ	Findings	Group Name No. of Animals on Study Grade	Control 46				150 ppm 15				300 ppm 0				600 ppm 0			
			1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Endocrine system}																		
parathyroid	cyst		<20>				< 2>				< 0>				< 0>			
			2	0	0	0	0	0	0	0	-	-	-	-	-	-	-	-
			( 10)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( -)	( -)	( -)	( -)	( -)	( -)	( -)	( -)
adrenal	spindle-cell hyperplasia		<46>				<15>				< 0>				< 0>			
			22	0	0	0	8	0	0	0	-	-	-	-	-	-	-	-
			( 48)	( 0)	( 0)	( 0)	( 53)	( 0)	( 0)	( 0)	( -)	( -)	( -)	( -)	( -)	( -)	( -)	( -)
	hyperplasia:cortical cell		1	0	0	0	0	0	0	0	-	-	-	-	-	-	-	-
			( 2)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( -)	( -)	( -)	( -)	( -)	( -)	( -)	( -)
{Reproductive system}																		
testis	mineralization		<46>				<15>				< 0>				< 0>			
			28	1	0	0	6	0	0	0	-	-	-	-	-	-	-	-
			( 61)	( 2)	( 0)	( 0)	( 40)	( 0)	( 0)	( 0)	( -)	( -)	( -)	( -)	( -)	( -)	( -)	( -)
epididymis	spermatogenic granuloma		<46>				<15>				< 0>				< 0>			
			0	1	0	0	0	0	0	0	-	-	-	-	-	-	-	-
			( 0)	( 2)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( -)	( -)	( -)	( -)	( -)	( -)	( -)	( -)
prostate	hyperplasia		<46>				<15>				< 0>				< 0>			
			1	0	0	0	0	0	0	0	-	-	-	-	-	-	-	-
			( 2)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( -)	( -)	( -)	( -)	( -)	( -)	( -)	( -)

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

STUDY NO. : 0304  
 ANIMAL : MOUSE Crj:BDF1  
 REPORT TYPE : A2  
 SEX : MALE

HISTOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)  
 SACRIFICED ANIMALS ( 66W)

PAGE : 8

Organ	Findings	Group Name No. of Animals on Study Grade	Control 46				150 ppm 15				300 ppm 0				600 ppm 0			
			1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Reproductive system}																		
prep/cli gl			<46>				<15>				< 0>				< 0>			
	duct ectasia		0	1	0	0	0	1	0	0	-	-	-	-	-	-	-	-
			( 0)	( 2)	( 0)	( 0)	( 0)	( 7)	( 0)	( 0)	( -)	( -)	( -)	( -)	( -)	( -)	( -)	( -)
{Nervous system}																		
brain			<46>				<15>				< 0>				< 0>			
	hemorrhage		1	0	0	0	0	0	0	0	-	-	-	-	-	-	-	-
			( 2)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( -)	( -)	( -)	( -)	( -)	( -)	( -)	( -)
	mineralization		13	0	0	0	4	0	0	0	-	-	-	-	-	-	-	-
			( 28)	( 0)	( 0)	( 0)	( 27)	( 0)	( 0)	( 0)	( -)	( -)	( -)	( -)	( -)	( -)	( -)	( -)
{Special sense organs/appendage}																		
Harder gl			<46>				<15>				< 0>				< 0>			
	lymphocytic infiltration		3	0	0	0	0	0	0	0	-	-	-	-	-	-	-	-
			( 7)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( -)	( -)	( -)	( -)	( -)	( -)	( -)	( -)
{Body cavities}																		
mesenterium			<46>				<15>				< 0>				< 0>			
	hemorrhage		1	0	0	0	0	0	0	0	-	-	-	-	-	-	-	-
			( 2)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( -)	( -)	( -)	( -)	( -)	( -)	( -)	( -)

Grade 1 : Slight 2 : Moderate 3 : Marked 4 : Severe

< a > a : Number of animals examined at the site

b b : Number of animals with lesion

( c ) c : b / a \* 100

Significant difference ; \* : P ≤ 0.05 \*\* : P ≤ 0.01 Test of Chi Square

## APPENDIX L 6

HISTOLOGICAL FINDINGS : NON-NEOPLASTIC LESIONS : SUMMARY

MOUSE : FEMALE: SACRIFICED ANIMALS

(2-YEAR STUDY)

STUDY NO. : 0304  
 ANIMAL : MOUSE Crj:BDF1  
 REPORT TYPE : A1  
 SEX : FEMALE

HISTOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)  
 SACRIFICED ANIMALS ( 51W)

PAGE : 1

Organ	Findings	Group Name No. of Animals on Study Grade				Control 49				150 ppm 20				300 ppm 6				600 ppm 0			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Integumentary system/appandage}																					
subcutis		<49>				<20>				< 6>				< 0>							
	hyperplasia:vascular	0	0	0	0	0	0	0	0	1	1	0	0 **	-	-	-	-	-	-	-	-
		( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 17)	( 17)	( 0)	( 0)	( -)	( -)	( -)	( -)	( -)	( -)	( -)	( -)
{Respiratory system}																					
nasal cavit		<49>				<20>				< 6>				< 0>							
	eosinophilic change:olfactory epithelium	1	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-	-	-	-	-
		( 2)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( -)	( -)	( -)	( -)	( -)	( -)	( -)	( -)
		<49>				<20>				< 6>				< 0>							
	eosinophilic change:respiratory epithelium	20	0	0	0	12	2	0	0 *	3	2	0	0 **	-	-	-	-	-	-	-	-
		( 41)	( 0)	( 0)	( 0)	( 60)	( 10)	( 0)	( 0)	( 50)	( 33)	( 0)	( 0)	( -)	( -)	( -)	( -)	( -)	( -)	( -)	( -)
		<49>				<20>				< 6>				< 0>							
	respiratory metaplasia:olfactory epithelium	3	0	0	0	2	0	0	0	0	0	0	0	-	-	-	-	-	-	-	-
		( 6)	( 0)	( 0)	( 0)	( 10)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( -)	( -)	( -)	( -)	( -)	( -)	( -)	( -)
		<49>				<20>				< 6>				< 0>							
	respiratory metaplasia:gland	1	0	0	0	1	0	0	0	0	0	0	0	-	-	-	-	-	-	-	-
		( 2)	( 0)	( 0)	( 0)	( 5)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( -)	( -)	( -)	( -)	( -)	( -)	( -)	( -)
lung		<49>				<20>				< 6>				< 0>							
	inflammatory infiltration	0	0	0	0	0	0	0	0	1	0	0	0	-	-	-	-	-	-	-	-
		( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 17)	( 0)	( 0)	( 0)	( -)	( -)	( -)	( -)	( -)	( -)	( -)	( -)

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

STUDY NO. : 0304  
 ANIMAL : MOUSE Crj:BDF1  
 REPORT TYPE : A1  
 SEX : FEMALE

HISTOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)  
 SACRIFICED ANIMALS ( 51W)

PAGE : 2

		Group Name	Control				150 ppm				300 ppm				600 ppm			
		No. of Animals on Study	49				20				6				0			
Organ	Findings	Grade	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Respiratory system}																		
lung			<49>				<20>				< 6>				< 0>			
	perivascular inflammation		0	0	0	0	0	0	0	0	1	0	0	0	-	-	-	-
			( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 17)	( 0)	( 0)	( 0)	( -)	( -)	( -)	( -)
	accumulation of foamy cells		0	0	0	0	1	0	0	0	0	0	0	0	-	-	-	-
			( 0)	( 0)	( 0)	( 0)	( 5)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( -)	( -)	( -)	( -)
	accumulation of immature blood cells		0	0	0	0	1	0	0	0	2	0	0	0 **	-	-	-	-
			( 0)	( 0)	( 0)	( 0)	( 5)	( 0)	( 0)	( 0)	( 33)	( 0)	( 0)	( 0)	( -)	( -)	( -)	( -)
{Hematopoietic system}																		
bone marrow			<49>				<20>				< 6>				< 0>			
	erythropoiesis:increased		0	0	0	0	4	0	0	0 **	2	0	0	0 **	-	-	-	-
			( 0)	( 0)	( 0)	( 0)	( 20)	( 0)	( 0)	( 0)	( 33)	( 0)	( 0)	( 0)	( -)	( -)	( -)	( -)
	granulopoiesis:increased		1	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-
			( 2)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( -)	( -)	( -)	( -)
spleen			<49>				<20>				< 6>				< 0>			
	deposit of melanin		3	0	0	0	3	0	0	0	0	0	0	0	-	-	-	-
			( 6)	( 0)	( 0)	( 0)	( 15)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( -)	( -)	( -)	( -)
Grade 1 : Slight 2 : Moderate 3 : Marked 4 : Severe																		
< a >		a : Number of animals examined at the site																
b		b : Number of animals with lesion																
( c )		c : b / a * 100																
Significant difference : * : P ≤ 0.05 ** : P ≤ 0.01 Test of Chi Square																		

(HPT150)

BAIS3

STUDY NO. : 0304  
 ANIMAL : MOUSE Crj:BDF1  
 REPORT TYPE : A1  
 SEX : FEMALE

HISTOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)  
 SACRIFICED ANIMALS ( 51W)

PAGE : 3

Organ	Findings	Group Name No. of Animals on Study Grade	Control 49				150 ppm 20				300 ppm 6				600 ppm 0			
			1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Hematopoietic system}																		
spleen	extramedullary hematopoiesis		<49>				<20>				< 6>				< 0>			
			0	0	0	0	7	2	0	0 **	4	2	0	0 **	-	-	-	-
			( 0 )	( 0 )	( 0 )	( 0 )	( 35 )	( 10 )	( 0 )	( 0 )	( 67 )	( 33 )	( 0 )	( 0 )	( - )	( - )	( - )	( - )
{Circulatory system}																		
heart	myocarditis		<49>				<20>				< 6>				< 0>			
			0	0	0	0	1	0	0	0	0	0	0	0	-	-	-	-
			( 0 )	( 0 )	( 0 )	( 0 )	( 5 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( - )	( - )	( - )	( - )
	arteritis		0	1	1	0	0	0	0	0	0	0	0	0	-	-	-	-
			( 0 )	( 2 )	( 2 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( - )	( - )	( - )	( - )
artery/aort	arteritis		<49>				<20>				< 6>				< 0>			
			1	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-
			( 2 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( - )	( - )	( - )	( - )
{Digestive system}																		
tongue	arteritis		<49>				<20>				< 6>				< 0>			
			0	1	1	0	1	0	0	0	0	0	0	0	-	-	-	-
			( 0 )	( 2 )	( 2 )	( 0 )	( 5 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( - )	( - )	( - )	( - )

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

STUDY NO. : 0304  
ANIMAL : MOUSE Crj:BDF1  
REPORT TYPE : A1  
SEX : FEMALE

HISTOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)  
SACRIFICED ANIMALS ( 51W)

PAGE : 4

Organ	Findings	Group Name No. of Animals on Study Grade	Control 49				150 ppm 20				300 ppm 6				600 ppm 0			
			1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Digestive system}																		
salivary gl			<49>				<20>				< 6>				< 0>			
	lymphocytic infiltration		25 ( 51)	1 ( 2)	0 ( 0)	0 ( 0)	8 ( 40)	0 ( 0)	0 ( 0)	0 ( 0)	4 ( 67)	0 ( 0)	0 ( 0)	0 ( 0)	- ( -)	- ( -)	- ( -)	- ( -)
stomach			<49>				<20>				< 6>				< 0>			
	erosion:forestomach		0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	1 ( 5)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	- ( -)	- ( -)	- ( -)	- ( -)
	hyperplasia:forestomach		1 ( 2)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	- ( -)	- ( -)	- ( -)	- ( -)
	erosion:glandular stomach		1 ( 2)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	1 ( 17)	0 ( 0)	0 ( 0)	0 ( 0)	- ( -)	- ( -)	- ( -)	- ( -)
	hyperplasia:glandular stomach		24 ( 49)	17 ( 35)	0 ( 0)	0 ( 0)	10 ( 50)	9 ( 45)	0 ( 0)	0 ( 0)	1 ( 17)	5 ( 83)	0 ( 0)	0 ( 0)	- ( -)	- ( -)	- ( -)	- ( -)
liver			<49>				<20>				< 6>				< 0>			
	angiectasis		0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	1 ( 5)	0 ( 0)	0 ( 0)	0 ( 0)	1 ( 17)	0 ( 0)	0 ( 0)	- ( -)	- ( -)	- ( -)	- ( -)
	thrombus		0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	1 ( 17)	0 ( 0)	0 ( 0)	- ( -)	- ( -)	- ( -)	- ( -)

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

STUDY NO. : 0304  
ANIMAL : MOUSE Crj:BDF1  
REPORT TYPE : A1  
SEX : FEMALE

HISTOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)  
SACRIFICED ANIMALS ( 51W)

PAGE : 5

Organ	Findings	Group Name No. of Animals on Study Grade	Control 49				150 ppm 20				300 ppm 6				600 ppm 0			
			1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Digestive system}																		
liver			<49>				<20>				< 6>				< 0>			
	necrosis:focal		1	0	0	0	2	1	0	0	2	0	0	0 *	-	-	-	-
			( 2)	( 0)	( 0)	( 0)	( 10)	( 5)	( 0)	( 0)	( 33)	( 0)	( 0)	( 0)	( -)	( -)	( -)	( -)
	granulation		1	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-
			( 2)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( -)	( -)	( -)	( -)
	inflammatory cell nest		11	0	0	0	11	0	0	0 *	1	0	0	0	-	-	-	-
			( 22)	( 0)	( 0)	( 0)	( 55)	( 0)	( 0)	( 0)	( 17)	( 0)	( 0)	( 0)	( -)	( -)	( -)	( -)
	perivascular inflammation		0	0	0	0	0	0	0	0	0	1	0	0	-	-	-	-
			( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 17)	( 0)	( 0)	( -)	( -)	( -)	( -)
	extramedullary hematopoiesis		0	0	0	0	0	0	0	0	1	0	0	0	-	-	-	-
			( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 17)	( 0)	( 0)	( 0)	( -)	( -)	( -)	( -)
	accumulation of immature blood cells		0	0	0	0	6	5	1	0 **	3	1	2	0 **	-	-	-	-
			( 0)	( 0)	( 0)	( 0)	( 30)	( 25)	( 5)	( 0)	( 50)	( 17)	( 33)	( 0)	( -)	( -)	( -)	( -)
	mobilization of Kuppfer cell		0	0	0	0	2	3	0	0 **	1	1	0	0 **	-	-	-	-
			( 0)	( 0)	( 0)	( 0)	( 10)	( 15)	( 0)	( 0)	( 17)	( 17)	( 0)	( 0)	( -)	( -)	( -)	( -)

{Urinary system}

kidney			<49>				<20>				< 6>				< 0>			
	infarct		1	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-
			( 2)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( -)	( -)	( -)	( -)

Grade 1 : Slight 2 : Moderate 3 : Marked 4 : Severe

< a > a : Number of animals examined at the site

b : Number of animals with lesion

( c ) c : b / a \* 100

Significant difference : \* : P ≤ 0.05 \*\* : P ≤ 0.01 Test of Chi Square

STUDY NO. : 0304  
ANIMAL : MOUSE Crj:BDF1  
REPORT TYPE : A1  
SEX : FEMALE

HISTOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)  
SACRIFICED ANIMALS ( 51W)

PAGE : 6

Organ	Findings	Group Name No. of Animals on Study Grade	Control 49				150 ppm 20				300 ppm 6				600 ppm 0			
			1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Urinary system}																		
kidney			<49>				<20>				< 6>				< 0>			
	deposit of hemosiderin		0	0	0	0	2	0	0	0	0	0	0	0	-	-	-	-
			( 0 )	( 0 )	( 0 )	( 0 )	( 10 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( - )	( - )	( - )	( - )
	hydronephrosis		0	0	0	0	1	0	0	0	0	1	0	0	-	-	-	-
			( 0 )	( 0 )	( 0 )	( 0 )	( 5 )	( 0 )	( 0 )	( 0 )	( 0 )	( 1 )	( 0 )	( 0 )	( - )	( - )	( - )	( - )
	mineralization:papilla		1	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-
			( 2 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( - )	( - )	( - )	( - )
	mineralization:cortex		1	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-
			( 2 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( - )	( - )	( - )	( - )
urin bladd			<48>				<19>				< 6>				< 0>			
	inflammation		0	0	0	0	0	1	0	0	0	0	0	0	-	-	-	-
			( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 5 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( - )	( - )	( - )	( - )
{Endocrine system}																		
thyroid			<49>				<20>				< 6>				< 0>			
	inflammatory infiltration		0	0	0	0	1	0	0	0	0	0	0	0	-	-	-	-
			( 0 )	( 0 )	( 0 )	( 0 )	( 5 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( - )	( - )	( - )	( - )

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

STUDY NO. : 0304  
 ANIMAL : MOUSE Crj:BDF1  
 REPORT TYPE : A1  
 SEX : FEMALE

HISTOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)  
 SACRIFICED ANIMALS ( 51W)

PAGE : 7

Organ	Findings	Group Name No. of Animals on Study Grade	Control 49				150 ppm 20				300 ppm 6				600 ppm 0			
			1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Endocrine system}																		
adrenal	spindle-cell hyperplasia		<49>				<20>				< 6>				< 0>			
			14	34	1	0	6	13	1	0	2	3	1	0	-	-	-	-
			( 29)	( 69)	( 2)	( 0)	( 30)	( 65)	( 5)	( 0)	( 33)	( 50)	( 17)	( 0)	( -)	( -)	( -)	( -)
{Reproductive system}																		
ovary	cyst		<49>				<20>				< 6>				< 0>			
			3	2	0	0	2	0	0	0	0	0	0	0	-	-	-	-
			( 6)	( 4)	( 0)	( 0)	( 10)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( -)	( -)	( -)	( -)
uterus	cystic endometrial hyperplasia		<49>				<20>				< 6>				< 0>			
			25	0	0	0	11	0	0	0	3	0	0	0	-	-	-	-
			( 51)	( 0)	( 0)	( 0)	( 55)	( 0)	( 0)	( 0)	( 50)	( 0)	( 0)	( 0)	( -)	( -)	( -)	( -)
{Nervous system}																		
brain	hemorrhage		<49>				<20>				< 6>				< 0>			
			1	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-
			( 2)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( -)	( -)	( -)	( -)
	mineralization		<49>				<20>				< 6>				< 0>			
			9	0	0	0	4	0	0	0	1	0	0	0	-	-	-	-
			( 18)	( 0)	( 0)	( 0)	( 20)	( 0)	( 0)	( 0)	( 17)	( 0)	( 0)	( 0)	( -)	( -)	( -)	( -)
Grade 1 : Slight 2 : Moderate 3 : Marked 4 : Severe																		
< a > a : Number of animals examined at the site																		
b b : Number of animals with lesion																		
( c ) c : b / a * 100																		
Significant difference ; * : P ≤ 0.05 ** : P ≤ 0.01 Test of Chi Square																		

STUDY NO. : 0304  
 ANIMAL : MOUSE Crj:BDF1  
 REPORT TYPE : A1  
 SEX : FEMALE

HISTOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)  
 SACRIFICED ANIMALS ( 51W)

PAGE : 8

Organ	Findings	Group Name No. of Animals on Study Grade				Control 49				150 ppm 20				300 ppm 6				600 ppm 0			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Nervous system}																					
brain	degeneration:granular cell	<49>				<20>				< 6>				< 0>							
		0	0	0	0	1	0	0	0	0	0	0	0	-	-	-	-	-	-	-	-
		( 0)	( 0)	( 0)	( 0)	( 5)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( -)	( -)	( -)	( -)				
spinal cord	gliosis	<49>				<20>				< 6>				< 0>							
		1	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-	-	-	-	-
		( 2)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( -)	( -)	( -)	( -)				
{Special sense organs/appendage}																					
Harder gl	lymphocytic infiltration	<49>				<20>				< 6>				< 0>							
		0	0	0	0	0	0	0	0	1	0	0	0	-	-	-	-	-	-	-	-
		( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 17)	( 0)	( 0)	( 0)	( -)	( -)	( -)	( -)				
{Body cavities}																					
mesenterium	hemorrhage	<49>				<20>				< 6>				< 0>							
		0	1	0	0	0	0	0	0	0	0	0	0	-	-	-	-	-	-	-	-
		( 0)	( 2)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( -)	( -)	( -)	( -)				

Grade 1 : Slight 2 : Moderate 3 : Marked 4 : Severe

< a > a : Number of animals examined at the site

b b : Number of animals with lesion

( c ) c : b / a \* 100

Significant difference ; \* : P ≤ 0.05 \*\* : P ≤ 0.01 Test of Chi Square

(HPT150)

BAIS3

## APPENDIX M 1

NUMBER OF ANIMALS WITH TUMORS AND NUMBER OF TUMORS-TIME RELATED

MOUSE : MALE

(2-YEAR STUDY)

STUDY NO. : 0304  
ANIMAL : MOUSE Crj:BDF1  
REPORT TYPE : A2  
SEX : MALE

NUMBER OF ANIMALS WITH TUMORS AND NUMBER OF TUMORS - TIME RELATED

PAGE : 1

Time-related Weeks	Items	Group Name	Control	150 ppm	300 ppm	600 ppm
0 - 35	NO. OF EXAMINED ANIMALS		2	0	0	8
	NO. OF ANIMALS WITH TUMORS		0	0	0	4
	NO. OF ANIMALS WITH SINGLE TUMORS		0	0	0	3
	NO. OF ANIMALS WITH MULTIPLE TUMORS		0	0	0	1
	NO. OF BENIGN TUMORS		0	0	0	0
	NO. OF MALIGNANT TUMORS		0	0	0	5
	NO. OF TOTAL TUMORS		0	0	0	5
36 - 45	NO. OF EXAMINED ANIMALS		0	3	3	25
	NO. OF ANIMALS WITH TUMORS		0	3	3	25
	NO. OF ANIMALS WITH SINGLE TUMORS		0	3	2	16
	NO. OF ANIMALS WITH MULTIPLE TUMORS		0	0	1	9
	NO. OF BENIGN TUMORS		0	0	0	4
	NO. OF MALIGNANT TUMORS		0	3	4	33
	NO. OF TOTAL TUMORS		0	3	4	37
46 - 55	NO. OF EXAMINED ANIMALS		0	10	27	17
	NO. OF ANIMALS WITH TUMORS		0	10	27	17
	NO. OF ANIMALS WITH SINGLE TUMORS		0	7	12	3
	NO. OF ANIMALS WITH MULTIPLE TUMORS		0	3	15	14
	NO. OF BENIGN TUMORS		0	2	5	3
	NO. OF MALIGNANT TUMORS		0	12	38	35
	NO. OF TOTAL TUMORS		0	14	43	38
56 - 65	NO. OF EXAMINED ANIMALS		2	22	20	0
	NO. OF ANIMALS WITH TUMORS		1	21	20	0
	NO. OF ANIMALS WITH SINGLE TUMORS		1	11	11	0
	NO. OF ANIMALS WITH MULTIPLE TUMORS		0	10	9	0
	NO. OF BENIGN TUMORS		0	2	4	0
	NO. OF MALIGNANT TUMORS		1	33	27	0
	NO. OF TOTAL TUMORS		1	35	31	0

STUDY NO. : 0304  
 ANIMAL : MOUSE Crj:BDF1  
 REPORT TYPE : A2  
 SEX : MALE

NUMBER OF ANIMALS WITH TUMORS AND NUMBER OF TUMORS - TIME RELATED

PAGE : 2

Time-related Weeks	Items	Group Name	Control	150 ppm	300 ppm	600 ppm
66 - 66	NO. OF EXAMINED ANIMALS		46	15	0	0
	NO. OF ANIMALS WITH TUMORS		8	14	0	0
	NO. OF ANIMALS WITH SINGLE TUMORS		5	7	0	0
	NO. OF ANIMALS WITH MULTIPLE TUMORS		3	7	0	0
	NO. OF BENIGN TUMORS		8	6	0	0
	NO. OF MALIGNANT TUMORS		3	19	0	0
	NO. OF TOTAL TUMORS		11	25	0	0
0 - 66	NO. OF EXAMINED ANIMALS		50	50	50	50
	NO. OF ANIMALS WITH TUMORS		9	48	50	46
	NO. OF ANIMALS WITH SINGLE TUMORS		6	28	25	22
	NO. OF ANIMALS WITH MULTIPLE TUMORS		3	20	25	24
	NO. OF BENIGN TUMORS		8	10	9	7
	NO. OF MALIGNANT TUMORS		4	67	69	73
	NO. OF TOTAL TUMORS		12	77	78	80

(HPT070)

BAIS3

## APPENDIX M 2

NUMBER OF ANIMALS WITH TUMORS AND NUMBER OF TUMORS-TIME RELATED

MOUSE : FEMALE

(2-YEAR STUDY)

STUDY NO. : 0304  
ANIMAL : MOUSE Crj:BDf1  
REPORT TYPE : A1  
SEX : FEMALE

NUMBER OF ANIMALS WITH TUMORS AND NUMBER OF TUMORS - TIME RELATED

PAGE : 3

Time-related Weeks	Items	Group Name	Control	150 ppm	300 ppm	600 ppm
0 - 25	NO. OF EXAMINED ANIMALS		1	1	0	0
	NO. OF ANIMALS WITH TUMORS		0	0	0	0
	NO. OF ANIMALS WITH SINGLE TUMORS		0	0	0	0
	NO. OF ANIMALS WITH MULTIPLE TUMORS		0	0	0	0
	NO. OF BENIGN TUMORS		0	0	0	0
	NO. OF MALIGNANT TUMORS		0	0	0	0
	NO. OF TOTAL TUMORS		0	0	0	0
26 - 35	NO. OF EXAMINED ANIMALS		0	3	3	16
	NO. OF ANIMALS WITH TUMORS		0	3	3	16
	NO. OF ANIMALS WITH SINGLE TUMORS		0	3	3	6
	NO. OF ANIMALS WITH MULTIPLE TUMORS		0	0	0	10
	NO. OF BENIGN TUMORS		0	0	0	7
	NO. OF MALIGNANT TUMORS		0	3	3	25
	NO. OF TOTAL TUMORS		0	3	3	32
36 - 45	NO. OF EXAMINED ANIMALS		0	7	25	34
	NO. OF ANIMALS WITH TUMORS		0	7	25	34
	NO. OF ANIMALS WITH SINGLE TUMORS		0	5	11	2
	NO. OF ANIMALS WITH MULTIPLE TUMORS		0	2	14	32
	NO. OF BENIGN TUMORS		0	0	9	21
	NO. OF MALIGNANT TUMORS		0	9	42	77
	NO. OF TOTAL TUMORS		0	9	51	98
46 - 50	NO. OF EXAMINED ANIMALS		0	19	16	0
	NO. OF ANIMALS WITH TUMORS		0	18	16	0
	NO. OF ANIMALS WITH SINGLE TUMORS		0	10	3	0
	NO. OF ANIMALS WITH MULTIPLE TUMORS		0	8	13	0
	NO. OF BENIGN TUMORS		0	4	8	0
	NO. OF MALIGNANT TUMORS		0	24	32	0
	NO. OF TOTAL TUMORS		0	28	40	0

STUDY NO. : 0304  
 ANIMAL : MOUSE Crj:BDF1  
 REPORT TYPE : A1  
 SEX : FEMALE

NUMBER OF ANIMALS WITH TUMORS AND NUMBER OF TUMORS - TIME RELATED

PAGE : 4

Time-related Weeks	Items	Group Name	Control	150 ppm	300 ppm	600 ppm
51 - 51	NO. OF EXAMINED ANIMALS		49	20	6	0
	NO. OF ANIMALS WITH TUMORS		10	18	6	0
	NO. OF ANIMALS WITH SINGLE TUMORS		9	6	1	0
	NO. OF ANIMALS WITH MULTIPLE TUMORS		1	12	5	0
	NO. OF BENIGN TUMORS		6	8	4	0
	NO. OF MALIGNANT TUMORS		5	25	16	0
	NO. OF TOTAL TUMORS		11	33	20	0
0 - 51	NO. OF EXAMINED ANIMALS		50	50	50	50
	NO. OF ANIMALS WITH TUMORS		10	46	50	50
	NO. OF ANIMALS WITH SINGLE TUMORS		9	24	18	8
	NO. OF ANIMALS WITH MULTIPLE TUMORS		1	22	32	42
	NO. OF BENIGN TUMORS		6	12	21	28
	NO. OF MALIGNANT TUMORS		5	61	93	102
	NO. OF TOTAL TUMORS		11	73	114	130

(HPT070)

BAIS3

## APPENDIX N 1

HISTOLOGICAL FINDINGS : NEOPLASTIC LESIONS : SUMMARY

MOUSE : MALE: ALL ANIMALS

(2-YEAR STUDY)

STUDY NO. : 0304  
 ANIMAL : MOUSE Crj:BDF1  
 REPORT TYPE : A2  
 SEX : MALE

HISTOLOGICAL FINDINGS : NEOPLASTIC LESIONS (SUMMARY)  
 ALL ANIMALS (0- 66W)

PAGE : 1

Organ	Findings	Group Name No. of animals on Study	Control 50	150 ppm 50	300 ppm 50	600 ppm 50
{Integumentary system/appandage}						
subcutis	hemangioma		<50> 0 ( 0%)	<50> 0 ( 0%)	<50> 1 ( 2%)	<50> 0 ( 0%)
	hemangiosarcoma		0 ( 0%)	2 ( 4%)	2 ( 4%)	3 ( 6%)
{Respiratory system}						
lung	bronchiolar-alveolar adenoma		<50> 1 ( 2%)	<50> 4 ( 8%)	<50> 3 ( 6%)	<50> 0 ( 0%)
	bronchiolar-alveolar carcinoma		2 ( 4%)	2 ( 4%)	0 ( 0%)	0 ( 0%)
{Hematopoietic system}						
lymph node	malignant lymphoma		<50> 0 ( 0%)	<50> 0 ( 0%)	<50> 1 ( 2%)	<50> 0 ( 0%)
spleen	histiocytic sarcoma		<50> 1 ( 2%)	<50> 0 ( 0%)	<50> 0 ( 0%)	<50> 0 ( 0%)
{Digestive system}						
liver	hemangioma		<50> 1 ( 2%)	<50> 1 ( 2%)	<50> 1 ( 2%)	<50> 1 ( 2%)
	hepatocellular adenoma		4 ( 8%)	4 ( 8%)	3 ( 6%)	0 ( 0%)
	histiocytic sarcoma		0 ( 0%)	0 ( 0%)	3 ( 6%)	1 ( 2%)
	hemangiosarcoma		0 ( 0%)	2 ( 4%)	1 ( 2%)	12 ( 24%)

< a > a : Number of animals examined at the site  
 b ( c ) b : Number of animals with neoplasm c : b / a \* 100

(HPT085)

BAIS3

STUDY NO. : 0304  
 ANIMAL : MOUSE Crj:BDF1  
 REPORT TYPE : A2  
 SEX : MALE

HISTOLOGICAL FINDINGS : NEOPLASTIC LESIONS (SUMMARY)  
 ALL ANIMALS (0- 66W)

PAGE : 2

Organ	Findings	Group Name No. of animals on Study	Control 50	150 ppm 50	300 ppm 50	600 ppm 50
{Digestive system}						
liver			<50>	<50>	<50>	<50>
	hepatocellular carcinoma		0 ( 0%)	4 ( 8%)	0 ( 0%)	1 ( 2%)
{Urinary system}						
kidney			<50>	<50>	<50>	<50>
	renal cell carcinoma		0 ( 0%)	1 ( 2%)	2 ( 4%)	2 ( 4%)
{Endocrine system}						
pituitary			<50>	<50>	<48>	<50>
	adenoma		1 ( 2%)	0 ( 0%)	0 ( 0%)	0 ( 0%)
thyroid			<47>	<47>	<50>	<48>
	follicular adenoma		1 ( 2%)	0 ( 0%)	0 ( 0%)	0 ( 0%)
{Reproductive system}						
epididymis			<50>	<50>	<50>	<50>
	histiocytic sarcoma		1 ( 2%)	0 ( 0%)	0 ( 0%)	0 ( 0%)
prostate			<50>	<50>	<50>	<50>
	hemangioma		0 ( 0%)	0 ( 0%)	0 ( 0%)	1 ( 2%)
{Body cavities}						
pleura			<50>	<50>	<50>	<50>
	hemangiosarcoma		0 ( 0%)	0 ( 0%)	0 ( 0%)	1 ( 2%)
mediastinum			<50>	<50>	<50>	<50>
	hemangiosarcoma		0 ( 0%)	2 ( 4%)	0 ( 0%)	1 ( 2%)
peritoneum			<50>	<50>	<50>	<50>
	hemangiosarcoma		0 ( 0%)	0 ( 0%)	0 ( 0%)	1 ( 2%)

< a > a : Number of animals examined at the site  
 b ( c ) b : Number of animals with neoplasm c : b / a \* 100

STUDY NO. : 0304  
ANIMAL : MOUSE Crj:BDF1  
REPORT TYPE : A2  
SEX : MALE

HISTOLOGICAL FINDINGS : NEOPLASTIC LESIONS (SUMMARY)  
ALL ANIMALS (0- 66W)

PAGE : 3

Organ	Findings	Group Name No. of animals on Study	Control 50	150 ppm 50	300 ppm 50	600 ppm 50
{Body cavities}						
retroperit	hemangioma		<50> 0 ( 0%)	<50> 0 ( 0%)	<50> 0 ( 0%)	<50> 3 ( 6%)
	hemangiosarcoma		0 ( 0%)	35 ( 70%)	38 ( 76%)	35 ( 70%)
mesenterium	hemangioma		<50> 0 ( 0%)	<50> 1 ( 2%)	<50> 1 ( 2%)	<50> 2 ( 4%)
	hemangiosarcoma		0 ( 0%)	19 ( 38%)	22 ( 44%)	16 ( 32%)

< a > a : Number of animals examined at the site  
b ( c ) b : Number of animals with neoplasm c : b / a \* 100

(HPT085)

BAIS3

## APPENDIX N 2

HISTOLOGICAL FINDINGS : NEOPLASTIC LESIONS : SUMMARY

MOUSE : FEMALE: ALL ANIMALS

(2-YEAR STUDY)

STUDY NO. : 0304  
 ANIMAL : MOUSE Crj:BDP1  
 REPORT TYPE : A1  
 SEX : FEMALE

HISTOLOGICAL FINDINGS : NEOPLASTIC LESIONS (SUMMARY)  
 ALL ANIMALS (0- 51W)

PAGE : 1

Organ	Findings	Group Name No. of animals on Study	Control 50	150 ppm 50	300 ppm 50	600 ppm 50
{Integumentary system/appandage}						
subcutis	hemangioma		<50> 0 ( 0%)	<50> 0 ( 0%)	<50> 7 ( 14%)	<50> 15 ( 30%)
	leiomyosarcoma		0 ( 0%)	1 ( 2%)	0 ( 0%)	0 ( 0%)
	hemangiosarcoma		0 ( 0%)	4 ( 8%)	15 ( 30%)	33 ( 66%)
{Respiratory system}						
lung	bronchiolar-alveolar adenoma		<50> 2 ( 4%)	<50> 0 ( 0%)	<50> 0 ( 0%)	<50> 1 ( 2%)
	bronchiolar-alveolar carcinoma		0 ( 0%)	1 ( 2%)	0 ( 0%)	0 ( 0%)
{Hematopoietic system}						
spleen	malignant lymphoma		<50> 3 ( 6%)	<50> 1 ( 2%)	<50> 0 ( 0%)	<50> 0 ( 0%)
{Digestive system}						
liver	hemangioma		<50> 0 ( 0%)	<50> 1 ( 2%)	<50> 2 ( 4%)	<50> 5 ( 10%)
	hepatocellular adenoma		0 ( 0%)	0 ( 0%)	2 ( 4%)	1 ( 2%)
	histiocytic sarcoma		0 ( 0%)	2 ( 4%)	6 ( 12%)	4 ( 8%)
	hemangiosarcoma		0 ( 0%)	0 ( 0%)	0 ( 0%)	2 ( 4%)

< a > a : Number of animals examined at the site  
 b ( c ) b : Number of animals with neoplasm c : b / a \* 100

(HPT085)

BAIS3

STUDY NO. : 0304  
 ANIMAL : MOUSE Crj:BDF1  
 REPORT TYPE : A1  
 SEX : FEMALE

HISTOLOGICAL FINDINGS : NEOPLASTIC LESIONS (SUMMARY)  
 ALL ANIMALS (0- 51W)

PAGE : 2

Organ	Findings	Group Name No. of animals on Study	Control 50	150 ppm 50	300 ppm 50	600 ppm 50
{Endocrine system}						
pituitary			<50>	<48>	<50>	<48>
	adenoma		0 ( 0%)	0 ( 0%)	1 ( 2%)	0 ( 0%)
{Reproductive system}						
ovary			<50>	<50>	<50>	<50>
	cystadenoma		2 ( 4%)	1 ( 2%)	0 ( 0%)	0 ( 0%)
	hemangioma		1 ( 2%)	0 ( 0%)	0 ( 0%)	0 ( 0%)
	hemangiosarcoma		0 ( 0%)	1 ( 2%)	4 ( 8%)	1 ( 2%)
uterus			<50>	<50>	<50>	<50>
	histiocytic sarcoma		2 ( 4%)	0 ( 0%)	3 ( 6%)	1 ( 2%)
	hemangiosarcoma		0 ( 0%)	1 ( 2%)	0 ( 0%)	0 ( 0%)
mammary gl			<50>	<50>	<50>	<50>
	adenocarcinoma		0 ( 0%)	0 ( 0%)	1 ( 2%)	0 ( 0%)
{Special sense organs/appendage}						
Harder gl			<50>	<50>	<50>	<50>
	adenoma		1 ( 2%)	1 ( 2%)	0 ( 0%)	0 ( 0%)
{Musculoskeletal system}						
muscle			<50>	<50>	<50>	<50>
	hemangiosarcoma		0 ( 0%)	0 ( 0%)	0 ( 0%)	2 ( 4%)
{Body cavities}						
pleura			<50>	<50>	<50>	<50>
	hemangiosarcoma		0 ( 0%)	0 ( 0%)	1 ( 2%)	0 ( 0%)

< a > a : Number of animals examined at the site  
 b ( c ) b : Number of animals with neoplasm c : b / a \* 100

STUDY NO. : 0304  
 ANIMAL : MOUSE Crj:BDF1  
 REPORT TYPE : A1  
 SEX : FEMALE

HISTOLOGICAL FINDINGS : NEOPLASTIC LESIONS (SUMMARY)  
 ALL ANIMALS (0- 51W)

PAGE : 3

Organ	Findings	Group Name No. of animals on Study	Control 50	150 ppm 50	300 ppm 50	600 ppm 50
{Body cavities}						
mediastinum	hemangioma		<50> 0 ( 0%)	<50> 0 ( 0%)	<50> 0 ( 0%)	<50> 1 ( 2%)
	hemangiosarcoma		0 ( 0%)	2 ( 4%)	3 ( 6%)	1 ( 2%)
peritoneum	hemangioma		<50> 0 ( 0%)	<50> 2 ( 4%)	<50> 6 ( 12%)	<50> 2 ( 4%)
	hemangiosarcoma		0 ( 0%)	3 ( 6%)	6 ( 12%)	15 ( 30%)
retroperit	hemangioma		<50> 0 ( 0%)	<50> 5 ( 10%)	<50> 1 ( 2%)	<50> 1 ( 2%)
	hemangiosarcoma		0 ( 0%)	27 ( 54%)	36 ( 72%)	32 ( 64%)
mesenterium	hemangioma		<50> 0 ( 0%)	<50> 2 ( 4%)	<50> 2 ( 4%)	<50> 2 ( 4%)
	hemangiosarcoma		0 ( 0%)	18 ( 36%)	18 ( 36%)	11 ( 22%)

< a > a : Number of animals examined at the site  
 b ( c ) b : Number of animals with neoplasm c : b / a \* 100

(HPT085)

BAIS3

## APPENDIX O 1

### NEOPLASTIC LESIONS-INCIDENCE AND STATISTICAL ANALYSIS

MOUSE : MALE: (2-YEAR STUDY)

STUDY No. : 0304  
ANIMAL : MOUSE Crj:BDF1  
SEX : MALE

NEOPLASTIC LESIONS-INCIDENCE AND STATISTICAL ANALYSIS

PAGE : 1

Group Name	Control	150 ppm	300 ppm	600 ppm
SITE : subcutis TUMOR : hemangiosarcoma				
Tumor rate				
Overall rates(a)	0/50( 0.0)	2/50( 4.0)	2/50( 4.0)	3/50( 6.0)
Adjusted rates(b)	0.0	12.50	0.0	5.88
Terminal rates(c)	0/46( 0.0)	1/15( 6.7)	0/ 0( 0.0)	0/ 0( 0.0)
Statistical analysis				
Peto test				
Standard method(d)	P = 0.0018**			
Prevalence method(d)	P = 0.0052**			
Combined analysis(d)	P = 0.0001**			
Cochran-Armitage test(e)	P = 0.1347			
Fisher Exact test(e)		P = 0.2475	P = 0.2475	P = 0.1212
SITE : subcutis TUMOR : hemangioma, hemangiosarcoma				
Tumor rate				
Overall rates(a)	0/50( 0.0)	2/50( 4.0)	3/50( 6.0)	3/50( 6.0)
Adjusted rates(b)	0.0	12.50	6.67	5.88
Terminal rates(c)	0/46( 0.0)	1/15( 6.7)	0/ 0( 0.0)	0/ 0( 0.0)
Statistical analysis				
Peto test				
Standard method(d)	P = 0.0018**			
Prevalence method(d)	P = 0.0030**			
Combined analysis(d)	P < 0.0001**			
Cochran-Armitage test(e)	P = 0.1432			
Fisher Exact test(e)		P = 0.2475	P = 0.1212	P = 0.1212
SITE : lung TUMOR : bronchiolar-alveolar adenoma				
Tumor rate				
Overall rates(a)	1/50( 2.0)	4/50( 8.0)	3/50( 6.0)	0/50( 0.0)
Adjusted rates(b)	2.17	20.00	7.89	0.0
Terminal rates(c)	1/46( 2.2)	3/15( 20.0)	0/ 0( 0.0)	0/ 0( 0.0)
Statistical analysis				
Peto test				
Standard method(d)	P = -----			
Prevalence method(d)	P = 0.1356			
Combined analysis(d)	P = -----			
Cochran-Armitage test(e)	P = 0.3291			
Fisher Exact test(e)		P = 0.1811	P = 0.3087	P = 0.5000

(HPT360A)

BAIS3

STUDY No. : 0304  
ANIMAL : MOUSE Crj:BDF1  
SEX : MALE

NEOPLASTIC LESIONS-INCIDENCE AND STATISTICAL ANALYSIS

PAGE : 2

Group Name	Control	150 ppm	300 ppm	600 ppm
SITE : lung TUMOR : bronchiolar-alveolar adenoma, bronchiolar-alveolar carcinoma				
Tumor rate				
Overall rates(a)	3/50( 6.0)	6/50( 12.0)	3/50( 6.0)	0/50( 0.0)
Adjusted rates(b)	6.52	26.67	7.89	0.0
Terminal rates(c)	3/46( 6.5)	4/15( 26.7)	0/ 0( 0.0)	0/ 0( 0.0)
Statistical analysis				
Peto test				
Standard method(d)	P = -----			
Prevalence method(d)	P = 0.1930			
Combined analysis(d)	P = -----			
Cochran-Armitage test(e)	P = 0.0700			
Fisher Exact test(e)		P = 0.2435	P = 0.6611	P = 0.1212
SITE : liver TUMOR : hepatocellular adenoma				
Tumor rate				
Overall rates(a)	4/50( 8.0)	4/50( 8.0)	3/50( 6.0)	0/50( 0.0)
Adjusted rates(b)	8.70	14.81	33.33	0.0
Terminal rates(c)	4/46( 8.7)	2/15( 13.3)	0/ 0( 0.0)	0/ 0( 0.0)
Statistical analysis				
Peto test				
Standard method(d)	P = -----			
Prevalence method(d)	P = 0.1742			
Combined analysis(d)	P = -----			
Cochran-Armitage test(e)	P = 0.0524			
Fisher Exact test(e)		P = 0.6425	P = 0.5000	P = 0.0587
SITE : liver TUMOR : histiocytic sarcoma				
Tumor rate				
Overall rates(a)	0/50( 0.0)	0/50( 0.0)	3/50( 6.0)	1/50( 2.0)
Adjusted rates(b)	0.0	0.0	0.0	0.0
Terminal rates(c)	0/46( 0.0)	0/15( 0.0)	0/ 0( 0.0)	0/ 0( 0.0)
Statistical analysis				
Peto test				
Standard method(d)	P = 0.0079**			
Prevalence method(d)	P = -----			
Combined analysis(d)	P = 0.0079**			
Cochran-Armitage test(e)	P = 0.3056			
Fisher Exact test(e)		P = N.C.	P = 0.1212	P = 0.5000

(HPT360A)

BAIS3

STUDY No. : 0304  
ANIMAL : MOUSE Crj:BDF1  
SEX : MALE

NEOPLASTIC LESIONS-INCIDENCE AND STATISTICAL ANALYSIS

PAGE : 3

Group Name	Control	150 ppm	300 ppm	600 ppm
SITE : liver TUMOR : hemangiosarcoma				
Tumor rate				
Overall rates(a)	0/50( 0.0)	2/50( 4.0)	1/50( 2.0)	12/50( 24.0)
Adjusted rates(b)	0.0	6.67	0.0	33.33
Terminal rates(c)	0/46( 0.0)	1/15( 6.7)	0/ 0( 0.0)	0/ 0( 0.0)
Statistical analysis				
Peto test				
Standard method(d)	P = 0.0003**			
Prevalence method(d)	P < 0.0001**			
Combined analysis(d)	P < 0.0001**			
Cochran-Armitage test(e)	P < 0.0001**			
Fisher Exact test(e)		P = 0.2475	P = 0.5000	P = 0.0001**
SITE : liver TUMOR : hepatocellular carcinoma				
Tumor rate				
Overall rates(a)	0/50( 0.0)	4/50( 8.0)	0/50( 0.0)	1/50( 2.0)
Adjusted rates(b)	0.0	20.00	0.0	7.14
Terminal rates(c)	0/46( 0.0)	3/15( 20.0)	0/ 0( 0.0)	0/ 0( 0.0)
Statistical analysis				
Peto test				
Standard method(d)	P = -----			
Prevalence method(d)	P = 0.0077**			
Combined analysis(d)	P = -----			
Cochran-Armitage test(e)	P = 0.8183			
Fisher Exact test(e)		P = 0.0587	P = N.C.	P = 0.5000
SITE : liver TUMOR : hemangioma, hemangiosarcoma				
Tumor rate				
Overall rates(a)	1/50( 2.0)	3/50( 6.0)	2/50( 4.0)	13/50( 26.0)
Adjusted rates(b)	2.17	6.67	2.22	33.33
Terminal rates(c)	1/46( 2.2)	1/15( 6.7)	0/ 0( 0.0)	0/ 0( 0.0)
Statistical analysis				
Peto test				
Standard method(d)	P = 0.0003**			
Prevalence method(d)	P < 0.0001**			
Combined analysis(d)	P < 0.0001**			
Cochran-Armitage test(e)	P < 0.0001**			
Fisher Exact test(e)		P = 0.3087	P = 0.5000	P = 0.0004**

(HPT360A)

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STUDY No. : 0304  
ANIMAL : MOUSE Crj:BDF1  
SEX : MALE

NEOPLASTIC LESIONS-INCIDENCE AND STATISTICAL ANALYSIS

PAGE : 4

Group Name	Control	150 ppm	300 ppm	600 ppm
SITE : liver TUMOR : hepatocellular adenoma, hepatocellular carcinoma				
Tumor rate				
Overall rates(a)	4/50( 8.0)	8/50( 16.0)	3/50( 6.0)	1/50( 2.0)
Adjusted rates(b)	8.70	33.33	33.33	7.14
Terminal rates(c)	4/46( 8.7)	5/15( 33.3)	0/ 0( 0.0)	0/ 0( 0.0)
Statistical analysis				
Peto test				
Standard method(d)	P = -----			
Prevalence method(d)	P = 0.0530			
Combined analysis(d)	P = -----			
Cochran-Armitage test(e)	P = 0.0780			
Fisher Exact test(e)		P = 0.1783	P = 0.5000	P = 0.1811
SITE : retroperitoneum TUMOR : hemangioma				
Tumor rate				
Overall rates(a)	0/50( 0.0)	0/50( 0.0)	0/50( 0.0)	3/50( 6.0)
Adjusted rates(b)	0.0	0.0	0.0	4.35
Terminal rates(c)	0/46( 0.0)	0/15( 0.0)	0/ 0( 0.0)	0/ 0( 0.0)
Statistical analysis				
Peto test				
Standard method(d)	P = 0.0092**?			
Prevalence method(d)	P = 0.0456* ?			
Combined analysis(d)	P = 0.0011**?			
Cochran-Armitage test(e)	P = 0.0079**			
Fisher Exact test(e)		P = N.C.	P = N.C.	P = 0.1212
SITE : retroperitoneum TUMOR : hemangiosarcoma				
Tumor rate				
Overall rates(a)	0/50( 0.0)	35/50( 70.0)	38/50( 76.0)	35/50( 70.0)
Adjusted rates(b)	0.0	52.94	66.67	100.00
Terminal rates(c)	0/46( 0.0)	7/15( 46.7)	0/ 0( 0.0)	0/ 0( 0.0)
Statistical analysis				
Peto test				
Standard method(d)	P < 0.0001**			
Prevalence method(d)	P < 0.0001**			
Combined analysis(d)	P < 0.0001**			
Cochran-Armitage test(e)	P < 0.0001**			
Fisher Exact test(e)		P < 0.0001**	P < 0.0001**	P < 0.0001**

(HPT360A)

BAIS3

STUDY No. : 0304  
ANIMAL : MOUSE Crj:BDF1  
SEX : MALE

NEOPLASTIC LESIONS-INCIDENCE AND STATISTICAL ANALYSIS

PAGE : 5

Group Name	Control	150 ppm	300 ppm	600 ppm
SITE : retroperitoneum TUMOR : hemangioma, hemangiosarcoma				
Tumor rate				
Overall rates(a)	0/50( 0.0)	35/50( 70.0)	38/50( 76.0)	38/50( 76.0)
Adjusted rates(b)	0.0	52.94	66.67	100.00
Terminal rates(c)	0/46( 0.0)	7/15( 46.7)	0/ 0( 0.0)	0/ 0( 0.0)
Statistical analysis				
Peto test				
Standard method(d)	P < 0.0001**			
Prevalence method(d)	P < 0.0001**			
Combined analysis(d)	P < 0.0001**			
Cochran-Armitage test(e)	P < 0.0001**			
Fisher Exact test(e)		P < 0.0001**	P < 0.0001**	P < 0.0001**
SITE : mesenterium TUMOR : hemangiosarcoma				
Tumor rate				
Overall rates(a)	0/50( 0.0)	19/50( 38.0)	22/50( 44.0)	16/50( 32.0)
Adjusted rates(b)	0.0	32.35	50.00	57.14
Terminal rates(c)	0/46( 0.0)	3/15( 20.0)	0/ 0( 0.0)	0/ 0( 0.0)
Statistical analysis				
Peto test				
Standard method(d)	P < 0.0001**?			
Prevalence method(d)	P = 0.0001**			
Combined analysis(d)	P < 0.0001**?			
Cochran-Armitage test(e)	P = 0.0039**			
Fisher Exact test(e)		P < 0.0001**	P < 0.0001**	P < 0.0001**

(HPT360A)

BAIS3

STUDY No. : 0304  
ANIMAL : MOUSE Crj:BDF1  
SEX : MALE

NEOPLASTIC LESIONS-INCIDENCE AND STATISTICAL ANALYSIS

PAGE : 6

Group Name	Control	150 ppm	300 ppm	600 ppm
SITE : mesenterium TUMOR : hemangioma, hemangiosarcoma				
Tumor rate				
Overall rates(a)	0/50( 0.0)	20/50( 40.0)	23/50( 46.0)	17/50( 34.0)
Adjusted rates(b)	0.0	35.29	50.00	71.43
Terminal rates(c)	0/46( 0.0)	4/15( 26.7)	0/ 0( 0.0)	0/ 0( 0.0)
Statistical analysis				
Peto test				
Standard method(d)	P < 0.0001**?			
Prevalence method(d)	P < 0.0001**			
Combined analysis(d)	P < 0.0001**?			
Cochran-Armitage test(e)	P = 0.0025**			
Fisher Exact test(e)		P < 0.0001**	P < 0.0001**	P < 0.0001**

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(a): Number of tumor-bearing animals/number of animals examined at the site.

(b): Kaplan-Meire estimated tumor incidence at the end of the study after adjusting for intercurrent mortality.

(c): Observed tumor incidence at terminal kill.

(d): Beneath the control incidence are the P-values associated with the trend test.

Standard method : Death analysis

Prevalence method : Incidental tumor test

Combined analysis : Death analysis + Incidental tumor test

(e): The Cochran-Armitage and Fisher exact test compare directly the overall incidence rates.

? : The conditional probabilities of the largest and smallest possible outcomes can not be estimated or this P-value is beyond the estimated P-value.

----- : There is no data which should be statistical analysis.

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

N.C. : Statistical value cannot be calculated and was not significant.

STUDY No. : 0304  
ANIMAL : MOUSE Crj:BDF1  
SEX : MALE

NEOPLASTIC LESIONS—INCIDENCE AND STATISTICAL ANALYSIS

PAGE : 1

Group Name	Control	150 ppm	300 ppm	600 ppm
SITE : ALL SITE TUMOR : hemangioma				
Tumor rate				
Overall rates(a)	1/50( 2.0)	2/50( 4.0)	3/50( 6.0)	7/50( 14.0)
Adjusted rates(b)	2.17	6.67	10.53	50.00
Terminal rates(c)	1/46( 2.2)	1/15( 6.7)	0/ 0( 0.0)	0/ 0( 0.0)
Statistical analysis				
Peto test				
Standard method(d)	P = 0.0092**?			
Prevalence method(d)	P = 0.0022**			
Combined analysis(d)	P = 0.0002**			
Cochran-Armitage test(e)	P = 0.0102*			
Fisher Exact test(e)		P = 0.5000	P = 0.3087	P = 0.0297*
SITE : ALL SITE TUMOR : hemangiosarcoma				
Tumor rate				
Overall rates(a)	0/50( 0.0)	43/50( 86.0)	47/50( 94.0)	43/50( 86.0)
Adjusted rates(b)	0.0	60.00	100.00	0.0
Terminal rates(c)	0/46( 0.0)	9/15( 60.0)	0/ 0( 0.0)	0/ 0( 0.0)
Statistical analysis				
Peto test				
Standard method(d)	P < 0.0001**			
Prevalence method(d)	P < 0.0001**			
Combined analysis(d)	P < 0.0001**			
Cochran-Armitage test(e)	P < 0.0001**			
Fisher Exact test(e)		P < 0.0001**	P < 0.0001**	P < 0.0001**

(HPT360A)

BAIS3

- (a): Number of tumor-bearing animals/number of animals examined at the site.  
(b): Kaplan-Meire estimated tumor incidence at the end of the study after adjusting for intercurrent mortality.  
(c): Observed tumor incidence at terminal kill.  
(d): Beneath the control incidence are the P-values associated with the trend test.  
Standard method : Death analysis  
Prevalence method : Incidental tumor test  
Combined analysis : Death analysis + Incidental tumor test  
(e): The Cochran-Armitage and Fisher exact test compare directly the overall incidence rates.  
? : The conditional probabilities of the largest and smallest possible out comes can not estimated or this P-value is beyond the estimated P-value.  
----- : There is no data which should be statistical analysis.  
Significant difference : \* :  $P \leq 0.05$  \*\* :  $P \leq 0.01$   
N.C.:Statistical value cannot be calculated and was not significant.

## APPENDIX O 2

### NEOPLASTIC LESIONS-INCIDENCE AND STATISTICAL ANALYSIS

MOUSE : FEMALE: (2-YEAR STUDY)

STUDY No. : 0304  
ANIMAL : MOUSE Crj:BDF1  
SEX : FEMALE

NEOPLASTIC LESIONS-INCIDENCE AND STATISTICAL ANALYSIS

PAGE : 7

Group Name	Control	150 ppm	300 ppm	600 ppm
SITE : subcutis TUMOR : hemangioma				
Tumor rate				
Overall rates(a)	0/50( 0.0)	0/50( 0.0)	7/50( 14.0)	15/50( 30.0)
Adjusted rates(b)	0.0	0.0	28.57	44.44
Terminal rates(c)	0/49( 0.0)	0/20( 0.0)	1/ 6( 16.7)	0/ 0( 0.0)
Statistical analysis				
Peto test				
Standard method(d)	P = 0.0909			
Prevalence method(d)	P < 0.0001**			
Combined analysis(d)	P < 0.0001**			
Cochran-Armitage test(e)	P < 0.0001**			
Fisher Exact test(e)		P = N.C.	P = 0.0062**	P < 0.0001**
SITE : subcutis TUMOR : hemangiosarcoma				
Tumor rate				
Overall rates(a)	0/50( 0.0)	4/50( 8.0)	15/50( 30.0)	33/50( 66.0)
Adjusted rates(b)	0.0	15.00	33.33	60.87
Terminal rates(c)	0/49( 0.0)	3/20( 15.0)	2/ 6( 33.3)	0/ 0( 0.0)
Statistical analysis				
Peto test				
Standard method(d)	P < 0.0001**?			
Prevalence method(d)	P < 0.0001**?			
Combined analysis(d)	P < 0.0001**?			
Cochran-Armitage test(e)	P < 0.0001**			
Fisher Exact test(e)		P = 0.0587	P < 0.0001**	P < 0.0001**
SITE : subcutis TUMOR : hemangioma, hemangiosarcoma				
Tumor rate				
Overall rates(a)	0/50( 0.0)	4/50( 8.0)	19/50( 38.0)	41/50( 82.0)
Adjusted rates(b)	0.0	15.00	34.62	86.96
Terminal rates(c)	0/49( 0.0)	3/20( 15.0)	2/ 6( 33.3)	0/ 0( 0.0)
Statistical analysis				
Peto test				
Standard method(d)	P < 0.0001**?			
Prevalence method(d)	P < 0.0001**?			
Combined analysis(d)	P < 0.0001**?			
Cochran-Armitage test(e)	P < 0.0001**			
Fisher Exact test(e)		P = 0.0587	P < 0.0001**	P < 0.0001**

(HPT360A)

BAIS3

STUDY No. : 0304  
ANIMAL : MOUSE Crj:BDF1  
SEX : FEMALE

NEOPLASTIC LESIONS—INCIDENCE AND STATISTICAL ANALYSIS

PAGE : 8

Group Name	Control	150 ppm	300 ppm	600 ppm
SITE : spleen TUMOR : malignant lymphoma				
Tumor rate				
Overall rates(a)	3/50( 6.0)	1/50( 2.0)	0/50( 0.0)	0/50( 0.0)
Adjusted rates(b)	6.12	0.0	0.0	0.0
Terminal rates(c)	3/49( 6.1)	0/20( 0.0)	0/ 6( 0.0)	0/ 0( 0.0)
Statistical analysis				
Peto test				
Standard method(d)	P = 0.5406			
Prevalence method(d)	P = 0.8991 ?			
Combined analysis(d)	P = 0.8397			
Cochran-Armitage test(e)	P = 0.0405*			
Fisher Exact test(e)		P = 0.3087	P = 0.1212	P = 0.1212
SITE : liver TUMOR : hemangioma				
Tumor rate				
Overall rates(a)	0/50( 0.0)	1/50( 2.0)	2/50( 4.0)	5/50( 10.0)
Adjusted rates(b)	0.0	0.0	11.11	10.87
Terminal rates(c)	0/49( 0.0)	0/20( 0.0)	0/ 6( 0.0)	0/ 0( 0.0)
Statistical analysis				
Peto test				
Standard method(d)	P = 0.2725			
Prevalence method(d)	P = 0.0010**			
Combined analysis(d)	P = 0.0009**			
Cochran-Armitage test(e)	P = 0.0073**			
Fisher Exact test(e)		P = 0.5000	P = 0.2475	P = 0.0281*
SITE : liver TUMOR : histiocytic sarcoma				
Tumor rate				
Overall rates(a)	0/50( 0.0)	2/50( 4.0)	6/50( 12.0)	4/50( 8.0)
Adjusted rates(b)	0.0	5.00	16.67	5.71
Terminal rates(c)	0/49( 0.0)	1/20( 5.0)	1/ 6( 16.7)	0/ 0( 0.0)
Statistical analysis				
Peto test				
Standard method(d)	P = 0.0002**			
Prevalence method(d)	P = 0.0022**			
Combined analysis(d)	P < 0.0001**			
Cochran-Armitage test(e)	P = 0.0700			
Fisher Exact test(e)		P = 0.2475	P = 0.0133*	P = 0.0587

(HPT360A)

BAIS3

STUDY No. : 0304  
ANIMAL : MOUSE Crj:BDF1  
SEX : FEMALE

NEOPLASTIC LESIONS-INCIDENCE AND STATISTICAL ANALYSIS

PAGE : 9

Group Name	Control	150 ppm	300 ppm	600 ppm
SITE : liver TUMOR : hemangioma, hemangiosarcoma				
Tumor rate				
Overall rates(a)	0/50( 0.0)	1/50( 2.0)	2/50( 4.0)	7/50( 14.0)
Adjusted rates(b)	0.0	0.0	11.11	15.38
Terminal rates(c)	0/49( 0.0)	0/20( 0.0)	0/ 6( 0.0)	0/ 0( 0.0)
Statistical analysis				
Peto test				
Standard method(d)	P = 0.2725			
Prevalence method(d)	P = 0.0001**			
Combined analysis(d)	P = 0.0001**			
Cochran-Armitage test(e)	P = 0.0007**			
Fisher Exact test(e)		P = 0.5000	P = 0.2475	P = 0.0062**
SITE : ovary TUMOR : hemangiosarcoma				
Tumor rate				
Overall rates(a)	0/50( 0.0)	1/50( 2.0)	4/50( 8.0)	1/50( 2.0)
Adjusted rates(b)	0.0	5.00	28.57	2.63
Terminal rates(c)	0/49( 0.0)	1/20( 5.0)	1/ 6( 16.7)	0/ 0( 0.0)
Statistical analysis				
Peto test				
Standard method(d)	P = 0.3777			
Prevalence method(d)	P = 0.0009**			
Combined analysis(d)	P = 0.0085**			
Cochran-Armitage test(e)	P = 0.4835			
Fisher Exact test(e)		P = 0.5000	P = 0.0587	P = 0.5000
SITE : ovary TUMOR : hemangioma, hemangiosarcoma				
Tumor rate				
Overall rates(a)	1/50( 2.0)	1/50( 2.0)	4/50( 8.0)	1/50( 2.0)
Adjusted rates(b)	2.04	5.00	28.57	2.63
Terminal rates(c)	1/49( 2.0)	1/20( 5.0)	1/ 6( 16.7)	0/ 0( 0.0)
Statistical analysis				
Peto test				
Standard method(d)	P = 0.3777			
Prevalence method(d)	P = 0.0030**			
Combined analysis(d)	P = 0.0146*			
Cochran-Armitage test(e)	P = 0.8453			
Fisher Exact test(e)		P = 0.7525	P = 0.1811	P = 0.7525

(HPT360A)

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STUDY No. : 0304  
ANIMAL : MOUSE Crj:BDF1  
SEX : FEMALE

NEOPLASTIC LESIONS-INCIDENCE AND STATISTICAL ANALYSIS

PAGE : 10

Group Name	Control	150 ppm	300 ppm	600 ppm
SITE : uterus TUMOR : histiocytic sarcoma				
Tumor rate				
Overall rates(a)	2/50( 4.0)	0/50( 0.0)	3/50( 6.0)	1/50( 2.0)
Adjusted rates(b)	4.08	0.0	18.67	2.94
Terminal rates(c)	2/49( 4.1)	0/20( 0.0)	1/ 6( 16.7)	0/ 0( 0.0)
Statistical analysis				
Peto test				
Standard method(d)	P = -----			
Prevalence method(d)	P = 0.0922			
Combined analysis(d)	P = -----			
Cochran-Armitage test(e)	P = 0.8886			
Fisher Exact test(e)		P = 0.2475	P = 0.5000	P = 0.5000
SITE : mediastinum TUMOR : hemangiosarcoma				
Tumor rate				
Overall rates(a)	0/50( 0.0)	2/50( 4.0)	3/50( 6.0)	1/50( 2.0)
Adjusted rates(b)	0.0	9.09	28.57	5.56
Terminal rates(c)	0/49( 0.0)	1/20( 5.0)	1/ 6( 16.7)	0/ 0( 0.0)
Statistical analysis				
Peto test				
Standard method(d)	P = -----			
Prevalence method(d)	P = 0.0038**			
Combined analysis(d)	P = -----			
Cochran-Armitage test(e)	P = 0.6742			
Fisher Exact test(e)		P = 0.2475	P = 0.1212	P = 0.5000
SITE : mediastinum TUMOR : hemangioma, hemangiosarcoma				
Tumor rate				
Overall rates(a)	0/50( 0.0)	2/50( 4.0)	3/50( 6.0)	2/50( 4.0)
Adjusted rates(b)	0.0	9.09	28.57	11.11
Terminal rates(c)	0/49( 0.0)	1/20( 5.0)	1/ 6( 16.7)	0/ 0( 0.0)
Statistical analysis				
Peto test				
Standard method(d)	P = -----			
Prevalence method(d)	P = 0.0008**			
Combined analysis(d)	P = -----			
Cochran-Armitage test(e)	P = 0.3293			
Fisher Exact test(e)		P = 0.2475	P = 0.1212	P = 0.2475

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STUDY No. : 0304  
ANIMAL : MOUSE Crj:BDF1  
SEX : FEMALE

NEOPLASTIC LESIONS-INCIDENCE AND STATISTICAL ANALYSIS

PAGE : 11

Group Name	Control	150 ppm	300 ppm	600 ppm
SITE : peritoneum TUMOR : hemangioma				
Tumor rate				
Overall rates(a)	0/50( 0.0)	2/50( 4.0)	6/50( 12.0)	2/50( 4.0)
Adjusted rates(b)	0.0	5.41	16.67	66.67
Terminal rates(c)	0/49( 0.0)	0/20( 0.0)	1/ 6( 16.7)	0/ 0( 0.0)
Statistical analysis				
Peto test				
Standard method(d)	P = -----			
Prevalence method(d)	P = 0.0005**			
Combined analysis(d)	P = -----			
Cochran-Armitage test(e)	P = 0.3236			
Fisher Exact test(e)		P = 0.2475	P = 0.0133*	P = 0.2475
SITE : peritoneum TUMOR : hemangiosarcoma				
Tumor rate				
Overall rates(a)	0/50( 0.0)	3/50( 6.0)	6/50( 12.0)	15/50( 30.0)
Adjusted rates(b)	0.0	6.67	17.24	33.33
Terminal rates(c)	0/49( 0.0)	0/20( 0.0)	1/ 6( 16.7)	0/ 0( 0.0)
Statistical analysis				
Peto test				
Standard method(d)	P < 0.0001**			
Prevalence method(d)	P < 0.0001**			
Combined analysis(d)	P < 0.0001**			
Cochran-Armitage test(e)	P < 0.0001**			
Fisher Exact test(e)		P = 0.1212	P = 0.0133*	P < 0.0001**
SITE : peritoneum TUMOR : hemangioma, hemangiosarcoma				
Tumor rate				
Overall rates(a)	0/50( 0.0)	5/50( 10.0)	12/50( 24.0)	17/50( 34.0)
Adjusted rates(b)	0.0	11.11	33.33	75.00
Terminal rates(c)	0/49( 0.0)	0/20( 0.0)	2/ 6( 33.3)	0/ 0( 0.0)
Statistical analysis				
Peto test				
Standard method(d)	P < 0.0001**			
Prevalence method(d)	P < 0.0001**			
Combined analysis(d)	P < 0.0001**			
Cochran-Armitage test(e)	P < 0.0001**			
Fisher Exact test(e)		P = 0.0281*	P = 0.0001**	P < 0.0001**

(HPT360A)

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STUDY No. : 0304  
ANIMAL : MOUSE Crj:BDF1  
SEX : FEMALE

NEOPLASTIC LESIONS-INCIDENCE AND STATISTICAL ANALYSIS

PAGE : 12

Group Name	Control	150 ppm	300 ppm	600 ppm
SITE : retroperitoneum TUMOR : hemangioma				
Tumor rate				
Overall rates(a)	0/50( 0.0)	5/50( 10.0)	1/50( 2.0)	1/50( 2.0)
Adjusted rates(b)	0.0	25.00	3.13	4.17
Terminal rates(c)	0/49( 0.0)	5/20( 25.0)	0/ 6( 0.0)	0/ 0( 0.0)
Statistical analysis				
Peto test				
Standard method(d)	P = -----			
Prevalence method(d)	P = 0.0284*			
Combined analysis(d)	P = -----			
Cochran-Armitage test(e)	P = 0.7450			
Fisher Exact test(e)		P = 0.0281*	P = 0.5000	P = 0.5000
SITE : retroperitoneum TUMOR : hemangiosarcoma				
Tumor rate				
Overall rates(a)	0/50( 0.0)	27/50( 54.0)	36/50( 72.0)	32/50( 64.0)
Adjusted rates(b)	0.0	61.90	100.00	66.67
Terminal rates(c)	0/49( 0.0)	12/20( 60.0)	6/ 6(100.0)	0/ 0( 0.0)
Statistical analysis				
Peto test				
Standard method(d)	P < 0.0001**?			
Prevalence method(d)	P < 0.0001**			
Combined analysis(d)	P < 0.0001**			
Cochran-Armitage test(e)	P < 0.0001**			
Fisher Exact test(e)		P < 0.0001**	P < 0.0001**	P < 0.0001**
SITE : retroperitoneum TUMOR : hemangioma, hemangiosarcoma				
Tumor rate				
Overall rates(a)	0/50( 0.0)	30/50( 60.0)	37/50( 74.0)	33/50( 66.0)
Adjusted rates(b)	0.0	76.19	100.00	66.67
Terminal rates(c)	0/49( 0.0)	15/20( 75.0)	6/ 6(100.0)	0/ 0( 0.0)
Statistical analysis				
Peto test				
Standard method(d)	P < 0.0001**?			
Prevalence method(d)	P < 0.0001**			
Combined analysis(d)	P < 0.0001**			
Cochran-Armitage test(e)	P < 0.0001**			
Fisher Exact test(e)		P < 0.0001**	P < 0.0001**	P < 0.0001**

(HPT360A)

BAIS3

STUDY No. : 0304  
ANIMAL : MOUSE Crj:BDF1  
SEX : FEMALE

NEOPLASTIC LESIONS-INCIDENCE AND STATISTICAL ANALYSIS

PAGE : 13

Group Name	Control	150 ppm	300 ppm	600 ppm
SITE : mesenterium TUMOR : hemangiosarcoma				
Tumor rate				
Overall rates(a)	0/50( 0.0)	18/50( 36.0)	18/50( 36.0)	11/50( 22.0)
Adjusted rates(b)	0.0	30.00	58.33	100.00
Terminal rates(c)	0/49( 0.0)	6/20( 30.0)	3/ 6( 50.0)	0/ 0( 0.0)
Statistical analysis				
Peto test				
Standard method(d)	P = 0.0001**			
Prevalence method(d)	P = 0.0006**			
Combined analysis(d)	P < 0.0001**			
Cochran-Armitage test(e)	P = 0.0757			
Fisher Exact test(e)		P < 0.0001**	P < 0.0001**	P = 0.0003**
SITE : mesenterium TUMOR : hemangioma, hemangiosarcoma				
Tumor rate				
Overall rates(a)	0/50( 0.0)	20/50( 40.0)	20/50( 40.0)	13/50( 26.0)
Adjusted rates(b)	0.0	40.00	66.67	100.00
Terminal rates(c)	0/49( 0.0)	8/20( 40.0)	3/ 6( 50.0)	0/ 0( 0.0)
Statistical analysis				
Peto test				
Standard method(d)	P = 0.0001**			
Prevalence method(d)	P < 0.0001**			
Combined analysis(d)	P < 0.0001**?			
Cochran-Armitage test(e)	P = 0.0370*			
Fisher Exact test(e)		P < 0.0001**	P < 0.0001**	P < 0.0001**

(HPT360A)

BAIS3

- (a): Number of tumor-bearing animals/number of animals examined at the site.  
(b): Kaplan-Meire estimated tumor incidence at the end of the study after adjusting for intercurrent mortality.  
(c): Observed tumor incidence at terminal kill.  
(d): Beneath the control incidence are the P-values associated with the trend test.  
Standard method : Death analysis  
Prevalence method : Incidental tumor test  
Combined analysis : Death analysis + Incidental tumor test  
(e): The Cochran-Armitage and Fisher exact test compare directly the overall incidence rates.  
? : The conditional probabilities of the largest and smallest possible outcomes cannot be estimated or this P-value is beyond the estimated P-value.  
— : There is no data which should be statistical analysis.  
Significant difference ; \* :  $P \leq 0.05$  \*\* :  $P \leq 0.01$   
N.C. : Statistical value cannot be calculated and was not significant.

STUDY No. : 0304  
ANIMAL : MOUSE Crj:BDF1  
SEX : FEMALE

NEOPLASTIC LESIONS-INCIDENCE AND STATISTICAL ANALYSIS

PAGE : 2

Group Name	Control	150 ppm	300 ppm	600 ppm
SITE : ALL SITE TUMOR : hemangioma				
Tumor rate				
Overall rates(a)	1/50( 2.0)	9/50( 18.0)	16/50( 32.0)	24/50( 48.0)
Adjusted rates(b)	2.04	30.00	50.00	75.00
Terminal rates(c)	1/49( 2.0)	6/20( 30.0)	2/ 6( 33.3)	0/ 0( 0.0)
Statistical analysis				
Peto test				
Standard method(d)	P = 0.0636			
Prevalence method(d)	P < 0.0001**			
Combined analysis(d)	P < 0.0001**?			
Cochran-Armitage test(e)	P < 0.0001**			
Fisher Exact test(e)		P = 0.0078**	P < 0.0001**	P < 0.0001**
SITE : ALL SITE TUMOR : hemangiosarcoma				
Tumor rate				
Overall rates(a)	0/50( 0.0)	43/50( 86.0)	48/50( 96.0)	49/50( 98.0)
Adjusted rates(b)	0.0	85.71	100.00	100.00
Terminal rates(c)	0/49( 0.0)	17/20( 85.0)	6/ 6(100.0)	0/ 0( 0.0)
Statistical analysis				
Peto test				
Standard method(d)	P < 0.0001**			
Prevalence method(d)	P < 0.0001**?			
Combined analysis(d)	P < 0.0001**			
Cochran-Armitage test(e)	P < 0.0001**			
Fisher Exact test(e)		P < 0.0001**	P < 0.0001**	P < 0.0001**

(HPT360A)

BAIS3

- (a): Number of tumor-bearing animals/number of animals examined at the site.  
(b): Kaplan-Meire estimated tumor incidence at the end of the study after adjusting for intercurrent mortality.  
(c): Observed tumor incidence at terminal kill.  
(d): Beneath the control incidence are the P-values associated with the trend test.  
Standard method : Death analysis  
Prevalence method : Incidental tumor test  
Combined analysis : Death analysis + Incidental tumor test  
(e): The Cochran-Armitage and Fisher exact test compare directly the overall incidence rates.  
? : The conditional probabilities of the largest and smallest possible out comes can not estimated or this P-value is beyond the estimated P-value.  
----- : There is no data which should be statistical analysis.  
Significant difference ; \* :  $P \leq 0.05$  \*\* :  $P \leq 0.01$   
N.C.:Statistical value cannot be calculated and was not significant.

## APPENDIX P 1

HISTOLOGICAL FINDINGS : METASTASIS OF TUMOR : SUMMARY

MOUSE : MALE: ALL ANIMALS

(2-YEAR STUDY)

STUDY NO. : 0304  
 ANIMAL : MOUSE Crj:BDF1  
 REPORT TYPE : A2  
 SEX : MALE

HISTOLOGICAL FINDINGS : METASTASIS OF TUMOR (SUMMARY)  
 ALL ANIMALS (0- 66W)

PAGE : 1

Organ	Findings	Group Name No. of Animals on Study	Control 50	150 ppm 50	300 ppm 50	600 ppm 50
{Respiratory system}						
lung			<50>	<50>	<50>	<50>
	metastasis:liver tumor		0	0	1	0
	metastasis:subcutis tumor		0	0	2	0
	metastasis:retroperitoneum tumor		0	1	3	4
	metastasis:mesenterium tumor		0	0	0	1
{Hematopoietic system}						
bone marrow			<50>	<50>	<50>	<50>
	metastasis:liver tumor		0	0	1	0
lymph node			<50>	<50>	<50>	<50>
	metastasis:liver tumor		0	0	1	1
	metastasis:retroperitoneum tumor		0	3	1	0
	metastasis:mesenterium tumor		0	1	6	1
spleen			<50>	<50>	<50>	<50>
	metastasis:liver tumor		0	0	1	1
{Digestive system}						
stomach			<50>	<50>	<50>	<50>
	metastasis:mesenterium tumor		0	2	2	2
liver			<50>	<50>	<50>	<50>
	metastasis:mesenterium tumor		0	0	0	1
pancreas			<50>	<50>	<50>	<50>
	metastasis:retroperitoneum tumor		0	0	4	2
< a >	a : Number of animals examined at the site					
b	b : Number of animals with lesion					

STUDY NO. : 0304  
ANIMAL : MOUSE Crj:BDF1  
REPORT TYPE : A2  
SEX : MALE

HISTOLOGICAL FINDINGS : METASTASIS OF TUMOR (SUMMARY)  
ALL ANIMALS (0- 66W)

PAGE : 2

Group Name No. of Animals on Study		Control 50	150 ppm 50	300 ppm 50	600 ppm 50
Organ	Findings				
{Digestive system}					
pancreas	metastasis:mesenterium tumor	<50> 0	<50> 3	<50> 3	<50> 1
{Urinary system}					
kidney	leukemic cell infiltration	<50> 0	<50> 0	<50> 1	<50> 0
	metastasis:retroperitoneum tumor	0	2	2	4
	metastasis:mesenterium tumor	0	1	0	0
{Endocrine system}					
adrenal	metastasis:retroperitoneum tumor	<50> 0	<50> 1	<50> 0	<50> 3
{Reproductive system}					
prostate	metastasis:retroperitoneum tumor	<50> 0	<50> 1	<50> 1	<50> 0
{Special sense organs/appendage}					
eye	metastasis:subcutis tumor	<50> 0	<50> 0	<50> 0	<50> 1
< a >	a : Number of animals examined at the site				
b	b : Number of animals with lesion				

## APPENDIX P 2

HISTOLOGICAL FINDINGS : METASTASIS OF TUMOR : SUMMARY

MOUSE : FEMALE: ALL ANIMALS

(2-YEAR STUDY)

STUDY NO. : 0304  
 ANIMAL : MOUSE Crj:BDF1  
 REPORT TYPE : A1  
 SEX : FEMALE

HISTOLOGICAL FINDINGS : METASTASIS OF TUMOR (SUMMARY)  
 ALL ANIMALS (0- 51W)

PAGE : 1

Organ	Findings	Group Name No. of Animals on Study	Control 50	150 ppm 50	300 ppm 50	600 ppm 50
{Respiratory system}						
lung	leukemic cell infiltration		<50> 1	<50> 1	<50> 0	<50> 0
	metastasis:liver tumor		0	2	6	2
	metastasis:subcutis tumor		0	0	1	1
	metastasis:ovary tumor		0	0	1	0
	metastasis:muscle tumor		0	0	0	1
	metastasis:retroperitoneum tumor		0	3	0	3
{Hematopoietic system}						
bone marrow	metastasis:liver tumor		<50> 0	<50> 2	<50> 4	<50> 0
lymph node	leukemic cell infiltration		<50> 1	<50> 0	<50> 0	<50> 0
	metastasis:liver tumor		0	0	2	0
	metastasis:retroperitoneum tumor		0	1	2	1
	metastasis:mesenterium tumor		0	0	3	1
spleen	metastasis:liver tumor		<50> 0	<50> 2	<50> 4	<50> 1
{Digestive system}						
stomach	metastasis:mesenterium tumor		<50> 0	<50> 0	<50> 2	<50> 0

< a > a : Number of animals examined at the site  
 b b : Number of animals with lesion

STUDY NO. : 0304  
 ANIMAL : MOUSE Crj:BDF1  
 REPORT TYPE : A1  
 SEX : FEMALE

HISTOLOGICAL FINDINGS : METASTASIS OF TUMOR (SUMMARY)  
 ALL ANIMALS (0- 51W)

PAGE : 2

Group Name No. of Animals on Study		Control 50	150 ppm 50	300 ppm 50	600 ppm 50
Organ	Findings				
{Digestive system}					
liver	leukemic cell infiltration	<50> 2	<50> 0	<50> 0	<50> 0
	metastasis:peritoneum tumor	0	0	1	1
	metastasis:mesenterium tumor	0	2	0	0
pancreas	metastasis:mesenterium tumor	<50> 0	<50> 2	<50> 2	<50> 0
{Urinary system}					
kidney	leukemic cell infiltration	<50> 3	<50> 0	<50> 0	<50> 0
	urin bladd	<48> 1	<48> 0	<48> 0	<47> 0
{Endocrine system}					
adrenal	metastasis:retroperitoneum tumor	<50> 0	<50> 0	<50> 1	<50> 1
{Reproductive system}					
ovary	metastasis:liver tumor	<50> 0	<50> 0	<50> 2	<50> 0

< a > a : Number of animals examined at the site  
 b b : Number of animals with lesion

(JPT150)

BAIS3

## APPENDIX P 3

HISTOLOGICAL FINDINGS : METASTASIS OF TUMOR : SUMMARY

MOUSE : MALE: DEAD AND MORIBUND ANIMALS

(2-YEAR STUDY)

STUDY NO. : 0304  
ANIMAL : MOUSE Crj:BDF1  
REPORT TYPE : A2  
SEX : MALE

HISTOLOGICAL FINDINGS : METASTASIS OF TUMOR (SUMMARY)  
DEAD AND MORIBUND ANIMALS (0- 66W)

PAGE : 1

Group Name		Control	150 ppm	300 ppm	600 ppm
No. of Animals on Study		4	35	50	50
Organ	Findings				
{Respiratory system}					
lung		< 4>	<35>	<50>	<50>
	metastasis:liver tumor	0	0	1	0
	metastasis:subcutis tumor	0	0	2	0
	metastasis:retroperitoneum tumor	0	0	3	4
	metastasis:mesenterium tumor	0	0	0	1
{Hematopoietic system}					
bone marrow		< 4>	<35>	<50>	<50>
	metastasis:liver tumor	0	0	1	0
lymph node		< 4>	<35>	<50>	<50>
	metastasis:liver tumor	0	0	1	1
	metastasis:retroperitoneum tumor	0	2	1	0
	metastasis:mesenterium tumor	0	1	6	1
spleen		< 4>	<35>	<50>	<50>
	metastasis:liver tumor	0	0	1	1
{Digestive system}					
stomach		< 4>	<35>	<50>	<50>
	metastasis:mesenterium tumor	0	2	2	2
liver		< 4>	<35>	<50>	<50>
	metastasis:mesenterium tumor	0	0	0	1
pancreas		< 4>	<35>	<50>	<50>
	metastasis:retroperitoneum tumor	0	0	4	2
< a >	a : Number of animals examined at the site				
b	b : Number of animals with lesion				

STUDY NO. : 0304  
 ANIMAL : MOUSE Crj:BDF1  
 REPORT TYPE : A2  
 SEX : MALE

HISTOLOGICAL FINDINGS : METASTASIS OF TUMOR (SUMMARY)  
 DEAD AND MORIBUND ANIMALS (0- 66W)

PAGE : 2

Group Name No. of Animals on Study		Control 4	150 ppm 35	300 ppm 50	600 ppm 50
Organ	Findings				
{Digestive system}					
pancreas		< 4>	<35>	<50>	<50>
	metastasis:mesenterium tumor	0	3	3	1
{Urinary system}					
kidney		< 4>	<35>	<50>	<50>
	leukemic cell infiltration	0	0	1	0
	metastasis:retroperitoneum tumor	0	2	2	4
	metastasis:mesenterium tumor	0	1	0	0
{Endocrine system}					
adrenal		< 4>	<35>	<50>	<50>
	metastasis:retroperitoneum tumor	0	1	0	3
{Reproductive system}					
prostate		< 4>	<35>	<50>	<50>
	metastasis:retroperitoneum tumor	0	1	1	0
{Special sense organs/appendage}					
eye		< 4>	<35>	<50>	<50>
	metastasis:subcutis tumor	0	0	0	1
< a > a : Number of animals examined at the site b b : Number of animals with lesion					

(JPT150)

BAIS3

## APPENDIX P 4

HISTOLOGICAL FINDINGS : METASTASIS OF TUMOR : SUMMARY

MOUSE : FEMALE: DEAD AND MORIBUND ANIMALS

(2-YEAR STUDY)

STUDY NO. : 0304  
 ANIMAL : MOUSE Crj:BDF1  
 REPORT TYPE : A1  
 SEX : FEMALE

HISTOLOGICAL FINDINGS : METASTASIS OF TUMOR (SUMMARY)  
 DEAD AND MORIBUND ANIMALS (0- 51W)

PAGE : 1

Group Name No. of Animals on Study		Control 1	150 ppm 30	300 ppm 44	600 ppm 50
Organ	Findings				
(Respiratory system)					
lung		< 1>	<30>	<44>	<50>
	leukemic cell infiltration	0	1	0	0
	metastasis:liver tumor	0	1	5	2
	metastasis:subcutis tumor	0	0	1	1
	metastasis:ovary tumor	0	0	1	0
	metastasis:muscle tumor	0	0	0	1
	metastasis:retroperitoneum tumor	0	1	0	3
(Hematopoietic system)					
bone marrow		< 1>	<30>	<44>	<50>
	metastasis:liver tumor	0	1	4	0
lymph node		< 1>	<30>	<44>	<50>
	metastasis:liver tumor	0	0	2	0
	metastasis:retroperitoneum tumor	0	0	1	1
	metastasis:mesenterium tumor	0	0	2	1
spleen		< 1>	<30>	<44>	<50>
	metastasis:liver tumor	0	1	4	1
(Digestive system)					
stomach		< 1>	<30>	<44>	<50>
	metastasis:mesenterium tumor	0	0	1	0
liver		< 1>	<30>	<44>	<50>
	metastasis:peritoneum tumor	0	0	1	1
< a >	a : Number of animals examined at the site				
b	b : Number of animals with lesion				

STUDY NO. : 0304  
ANIMAL : MOUSE Crj:BDF1  
REPORT TYPE : A1  
SEX : FEMALE

HISTOLOGICAL FINDINGS : METASTASIS OF TUMOR (SUMMARY)  
DEAD AND MORIBUND ANIMALS (0- 51W)

PAGE : 2

Group Name		Control	150 ppm	300 ppm	600 ppm
No. of Animals on Study		1	30	44	50
Organ	Findings				
{Digestive system}					
liver		< 1>	<30>	<44>	<50>
	metastasis:mesenterium tumor	0	1	0	0
pancreas		< 1>	<30>	<44>	<50>
	metastasis:mesenterium tumor	0	2	1	0
{Endocrine system}					
adrenal		< 1>	<30>	<44>	<50>
	metastasis:retroperitoneum tumor	0	0	0	1
{Reproductive system}					
ovary		< 1>	<30>	<44>	<50>
	metastasis:liver tumor	0	0	2	0
< a >	a : Number of animals examined at the site				
b	b : Number of animals with lesion				
(JPT150)					

BAIS3

## APPENDIX P 5

HISTOLOGICAL FINDINGS : METASTASIS OF TUMOR : SUMMARY

MOUSE : MALE: SACRIFICED ANIMALS

(2-YEAR STUDY)

STUDY NO. : 0304  
ANIMAL : MOUSE Crj:BDF1  
REPORT TYPE : A2  
SEX : MALE

HISTOLOGICAL FINDINGS : METASTASIS OF TUMOR (SUMMARY)  
SACRIFICED ANIMALS ( 66W)

PAGE : 1

		Group Name	Control	150 ppm	300 ppm	600 ppm
		No. of Animals on Study	46	15	0	0
Organ	Findings					
{Respiratory system}						
lung	metastasis:retroperitoneum tumor		<46> 0	<15> 1	< 0> -	< 0> -
{Hematopoietic system}						
lymph node	metastasis:retroperitoneum tumor		<46> 0	<15> 1	< 0> -	< 0> -
< a >      a : Number of animals examined at the site						
b            b : Number of animals with lesion						

{JPT150}

BAIS3

## APPENDIX P 6

HISTOLOGICAL FINDINGS : METASTASIS OF TUMOR : SUMMARY

MOUSE : FEMALE: SACRIFICED ANIMALS

(2-YEAR STUDY)

STUDY NO. : 0304  
 ANIMAL : MOUSE Crj:BDF1  
 REPORT TYPE : A1  
 SEX : FEMALE

HISTOLOGICAL FINDINGS : METASTASIS OF TUMOR (SUMMARY)  
 SACRIFICED ANIMALS ( 51W)

PAGE : 1

Group Name No. of Animals on Study		Control 49	150 ppm 20	300 ppm 6	600 ppm 0
Organ	Findings				
{Respiratory system}					
lung		<49>	<20>	< 6>	< 0>
	leukemic cell infiltration	1	0	0	-
	metastasis:liver tumor	0	1	1	-
	metastasis:retroperitoneum tumor	0	2	0	-
{Hematopoietic system}					
bone marrow		<49>	<20>	< 6>	< 0>
	metastasis:liver tumor	0	1	0	-
lymph node		<49>	<20>	< 6>	< 0>
	leukemic cell infiltration	1	0	0	-
	metastasis:retroperitoneum tumor	0	1	1	-
	metastasis:mesenterium tumor	0	0	1	-
spleen		<49>	<20>	< 6>	< 0>
	metastasis:liver tumor	0	1	0	-
{Digestive system}					
stomach		<49>	<20>	< 6>	< 0>
	metastasis:mesenterium tumor	0	0	1	-
liver		<49>	<20>	< 6>	< 0>
	leukemic cell infiltration	2	0	0	-
	metastasis:mesenterium tumor	0	1	0	-
pancreas		<49>	<20>	< 6>	< 0>
	metastasis:mesenterium tumor	0	0	1	-
< a >	a : Number of animals examined at the site				
b	b : Number of animals with lesion				

STUDY NO. : 0304  
ANIMAL : MOUSE Crj:BDF1  
REPORT TYPE : A1  
SEX : FEMALE

HISTOLOGICAL FINDINGS : METASTASIS OF TUMOR (SUMMARY)  
SACRIFICED ANIMALS ( 51W)

PAGE : 2

		Group Name	Control	150 ppm	300 ppm	600 ppm
		No. of Animals on Study	49	20	6	0
Organ	Findings					
{Urinary system}						
kidney			<49>	<20>	< 6>	< 0>
	leukemic cell infiltration		3	0	0	-
urin bladd			<48>	<19>	< 6>	< 0>
	leukemic cell infiltration		1	0	0	-
{Endocrine system}						
adrenal			<49>	<20>	< 6>	< 0>
	metastasis:retroperitoneum tumor		0	0	1	-
< a >		a : Number of animals examined at the site				
b		b : Number of animals with lesion				

(JPT150)

BAIS3

## APPENDIX Q 1

### IDENTITY AND IMPURITY OF QUINOLINE IN THE 2-YEAR DRINKING WATER STUDY

## IDENTITY AND IMPURITY OF QUINOLINE IN THE 2-YEAR DRINKING WATER STUDY

Test Substance : Quinoline (Tokyo Kasei Kogyo Co., Ltd.)

A. Lot No. : FHE02

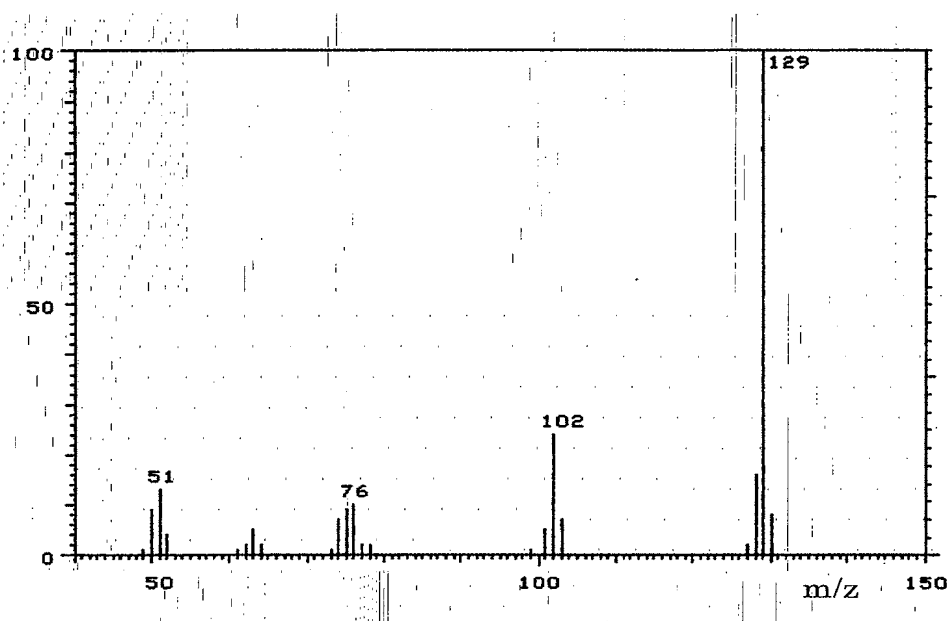
## 1. Spectral Data

Mass Spectrometry

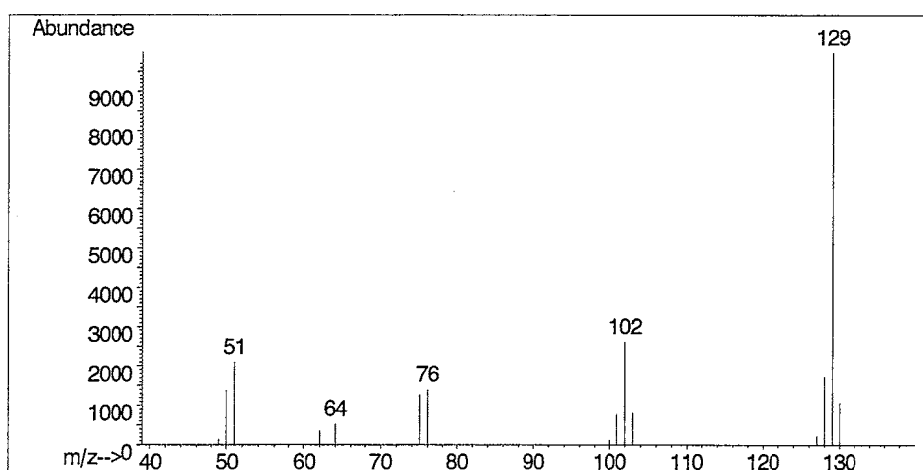
Instrument : Hitachi M-80B Mass Spectrometer

Ionization : EI (Electron Ionization)

Ionization Voltage : 70eV



Mass Spectrum of Test Substance



Mass Spectrum of Literature Data\*

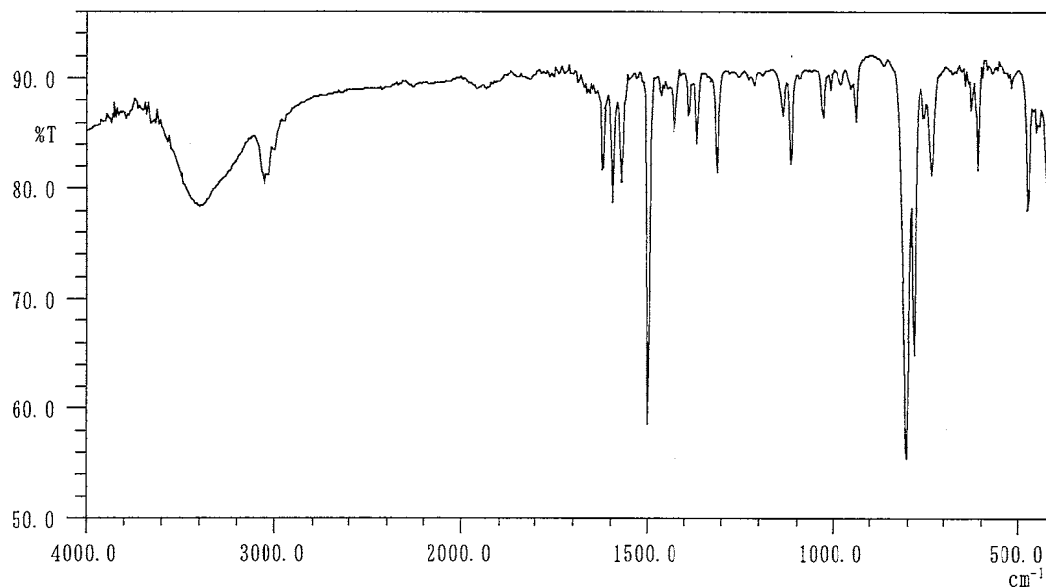
Results: The mass spectrum was consistent with literature spectrum.

(\*Fred W. McLafferty (1994) Wiley Registry of Mass Spectral Data, 6th edition.  
John Wiley and Sons, Inc. (U.S.), Entry Number 6221)

Infrared Spectrometry

Instrument : Shimadzu FTIR-8200PC Infrared Spectrometer

Cell : KBr

Resolution : 4  $\text{cm}^{-1}$ 

Infrared Spectrum of Test Substance

<u>Determined Values</u>	<u>Literature Values</u> <sup>*</sup>
Wave Number ( $\text{cm}^{-1}$ )	Wave Number ( $\text{cm}^{-1}$ )
440~ 460	440~ 460
460~ 500	460~ 500
600~ 640	600~ 640
720~ 760	720~ 760
760~ 800	760~ 800
800~ 840	800~ 840
920~ 960	920~ 960
1020~1040	1020~1040
1100~1130	1100~1130
1130~1160	1130~1160
1300~1320	1300~1320
1340~1380	1340~1380
1380~1400	1380~1400
1400~1440	1400~1440
1480~1520	1480~1520
1560~1580	1560~1580
1580~1600	1580~1600
1600~1640	1600~1640
2890~3120	
3120~3720	3120~3720

Results: The infrared spectrum was consistent with literature spectrum.

(\*William W. Simons (1978) The Sadtler Handbook of Infrared Spectra.

Sadtler Research Laboratories, Inc. (U.K.), p.218)

## 2. Impurity

Instrument : Hewlett Packard 5890A Gas Chromatograph  
Column : INNOWAX (0.2 mm  $\phi$   $\times$  50 m)  
Column Temperature : 190° C  
Flow Rate : 1 mL/min  
Detector : FID (Flame Ionization Detector)  
Injection Volume : 1  $\mu$ L

Sample Name	Peak No.	Area (%)	Peak Name
Test Substance	1	0.205	2-Methyl Naphthalene
	2	99.671	Quinoline
	3	0.124	Isoquinoline

Results: Gas chromatography indicated one major peak (peak No.2) and two impurities. It was identified only by comparing its gas chromatograph with that of 2-methyl naphthalene (peak No.1), and isoquinoline (peak No.3) in the quinoline, the amount in the test substance were 0.205%, and 0.124%.

3. Conclusions: The test substance was identified as quinoline, by the mass spectrum and the infrared spectrum. Gas chromatography indicated one major peak (peak No.2) and two impurities. It was identified only by comparing its gas chromatograph with that of 2-methyl naphthalene, and isoquinoline, the amount in the test substance were 0.205%, and 0.124%.

B. Lot No. : FHE03

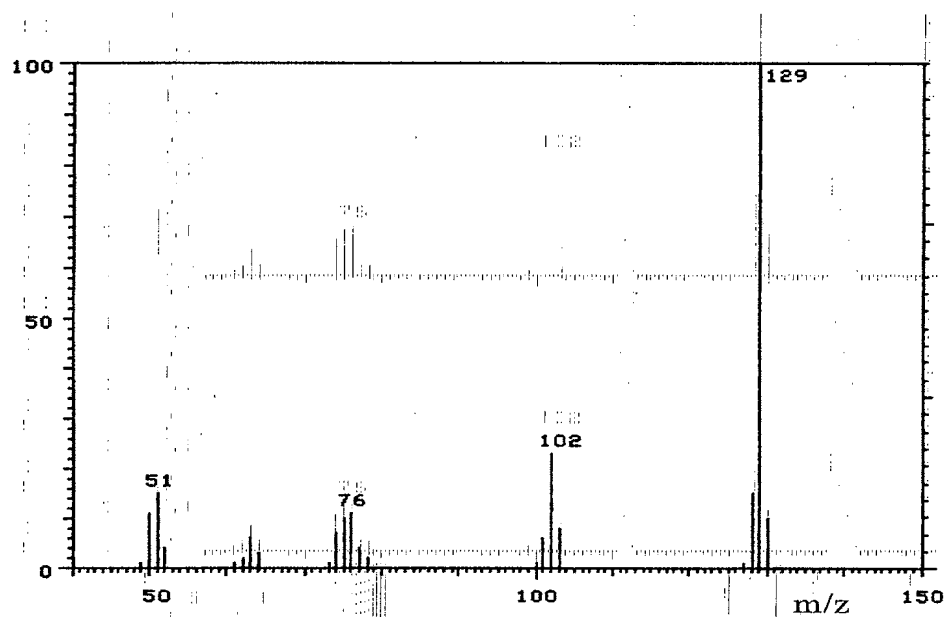
## 1. Spectral Data

### Mass Spectrometry

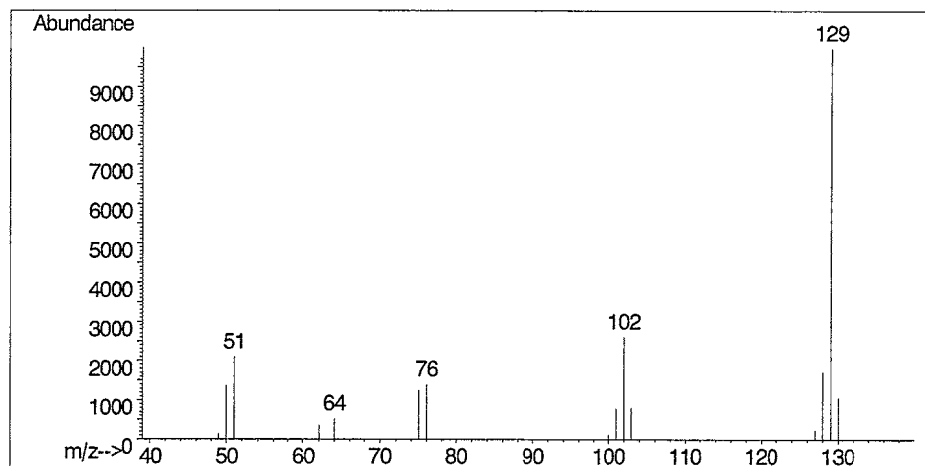
Instrument : Hitachi M-80B Mass Spectrometer

Ionization : EI (Electron Ionization)

Ionization Voltage : 70eV



Mass Spectrum of Test Substance



Mass Spectrum of Literature Data\*

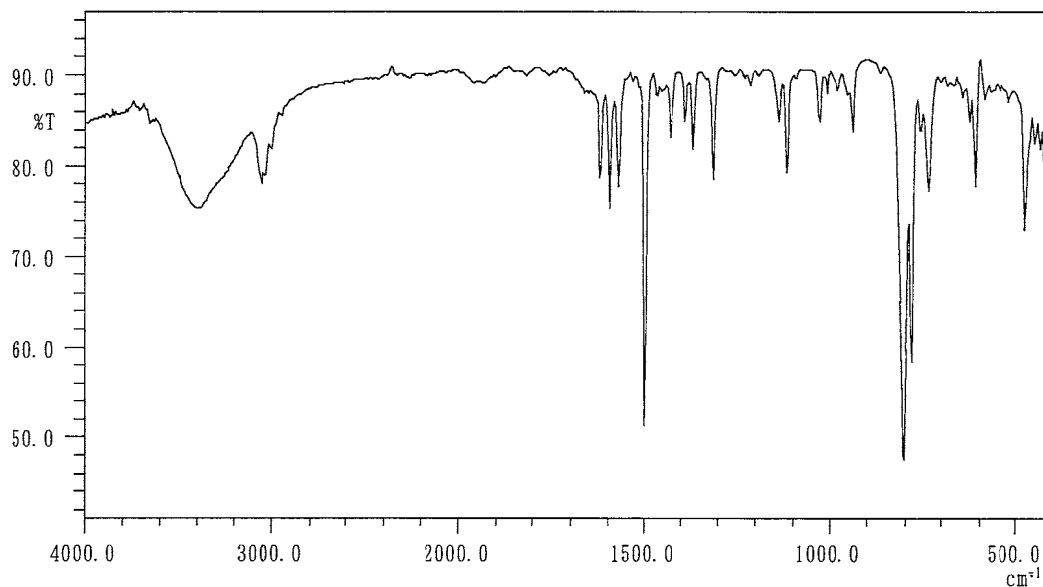
Results: The mass spectrum was consistent with literature spectrum.

(\*Fred W. McLafferty (1994) Wiley Registry of Mass Spectral Data, 6th edition.  
John Wiley and Sons, Inc. (U.S.), Entry Number 6221)

Infrared Spectrometry

Instrument : Shimadzu FTIR-8200PC Infrared Spectrometer

Cell : KBr

Resolution : 4  $\text{cm}^{-1}$ 

Infrared Spectrum of Test Substance

<u>Determined Values</u>	<u>Literature Values</u> *
Wave Number ( $\text{cm}^{-1}$ )	Wave Number ( $\text{cm}^{-1}$ )
440~460	440~460
460~500	460~500
600~640	600~640
720~760	720~760
760~800	760~800
800~840	800~840
920~960	920~960
1020~1040	1020~1040
1100~1130	1100~1130
1130~1160	1130~1160
1300~1320	1300~1320
1340~1380	1340~1380
1380~1400	1380~1400
1400~1440	1400~1440
1480~1520	1480~1520
1560~1580	1560~1580
1580~1600	1580~1600
1600~1640	1600~1640
2890~3120	
3120~3720	3120~3720

Results: The infrared spectrum was consistent with literature spectrum.

(\*William W. Simons (1978) The Sadtler Handbook of Infrared Spectra.

Sadtler Research Laboratories, Inc. (U.K.), p.218)

## 2. Impurity

Instrument : Hewlett Packard 5890A Gas Chromatograph  
Column : INNOWAX (0.2 mm  $\phi$   $\times$  50 m)  
Column Temperature : 190° C  
Flow Rate : 1 mL/min  
Detector : FID (Flame Ionization Detector)  
Injection Volume : 1  $\mu$ L

Sample Name	Peak No.	Area (%)	Peak Name
Test Substance	1	0.166	2-Methyl Naphthalene
	2	99.692	Quinoline
	3	0.142	Isoquinoline

Results: Gas chromatography indicated one major peak (peak No.2) and two impurities. It was identified only by comparing its gas chromatograph with that of 2-methyl naphthalene (peak No.1), and isoquinoline (peak No.3) in the quinoline, the amount in the test substance were 0.166%, and 0.142%.

3. Conclusions: The test substance was identified as quinoline, by the mass spectrum and the infrared spectrum. Gas chromatography indicated one major peak (peak No.2) and two impurities. It was identified only by comparing its gas chromatograph with that of 2-methyl naphthalene, and isoquinoline, the amount in the test substance were 0.166%, and 0.142%.

## APPENDIX Q 2

### STABILITY OF QUINOLINE IN THE 2-YEAR DRINKING WATER STUDY

## STABILITY OF QUINOLINE IN THE 2-YEAR DRINKING WATER STUDY

Test Substance : Quinoline (Tokyo Kasei Kogyo Co., Ltd.)

A. Lot No. : FHE02

1. Sample : This lot was used from 1996.3.13 to 1996.8.28. Test substance was stored at room temperature in a dark room.

## 2. Gas Chromatography

Instrument : Hewlett Packard 5890A Gas Chromatograph

Column : INNOWAX (0.2 mm  $\phi$   $\times$  50 m)

Column Temperature : 190° C

Flow Rate : 1 mL/min

Detector : FID (Flame Ionization Detector)

Injection Volume : 1  $\mu$ L

Date (date analyzed)	Peak No.	Retention Time (min)	Area (%)
1996.2.9	1	5.680	0.205
	2	6.726	99.671
	3	7.186	0.124
1996.8.30	1	5.680	0.205
	2	6.728	99.671
	3	7.186	0.124

Results: Gas chromatography indicated one major peak (peak No.2) and two impurities (peaks No.1 and No.3 < 1% of total area) analyzed at 1996.2.9 and one major peak (peak No.2) and two impurities (peaks No.1 and No.3 < 1% of total area) analyzed at 1996.8.30. No new trace impurity peak in the test substance analyzed at 1996.8.30 was detected.

3. Conclusions: The test substance was stable for about 6 months at room temperature in a dark room.

B. Lot No. : FHE03

1. Sample : This lot was used from 1996.8.28 to 1998.2.28. Test substance was stored at room temperature in a dark room.

2. Gas Chromatography

Instrument : Hewlett Packard 5890A Gas Chromatograph

Column : INNOWAX (0.2 mm $\phi$   $\times$  50 m)

Column Temperature : 190° C

Flow Rate : 1 mL/min

Detector : FID (Flame Ionization Detector)

Injection Volume : 1  $\mu$ L

Date (date analyzed)	Peak No.	Retention Time (min)	Area (%)
1996.8.22	1	5.683	0.166
	2	6.728	99.692
	3	7.188	0.142
1998.2.28	1	5.675	0.165
	2	6.727	99.692
	3	7.182	0.143

Results: Gas chromatography indicated one major peak (peak No.2) and two impurities (peaks No.1 and No.3 < 1% of total area) analyzed at 1996.8.22 and one major peak (peak No.2) and two impurities (peaks No.1 and No.3 < 1% of total area) analyzed at 1998.2.28. No new trace impurity peak in the test substance analyzed at 1998.2.28 was detected.

3. Conclusions: The test substance was stable for about 18 months at room temperature in a dark room.

## APPENDIX Q 3

CONCENTRATION OF QUINOLINE IN FORMULATED WATER IN THE  
2-YEAR DRINKING WATER STUDY

# CONCENTRATION OF QUINOLINE IN FORMULATED WATER IN THE 2-YEAR DRINKING WATER STUDY

Date Analyzed	Target Concentration					
	Male			Female		
	150 <sup>a</sup>	300	600	150	300	600
1996.03.13	153 (102) <sup>b</sup>	303 (101)	597 (99.5)	152 (101)	303 (101)	606 (101)
1996.05.14	150 (100)	300 (100)	594 (99.0)	147 (98.0)	292 (97.3)	591 (98.5)
1996.08.06	145 (96.7)	293 (97.7)	588 (98.0)	145 (96.7)	294 (98.0)	592 (98.7)
1996.10.29	148 (98.7)	294 (98.0)	585 (97.5)	147 (98.0)	295 (98.3)	586 (97.7)
1997.01.21	143 (95.3)	294 (98.0)	590 (98.3)	144 (96.0)	292 (97.3)	590 (98.3)
1997.04.15	151 (101)	294 (98.0)	- <sup>c</sup>	-	-	-

<sup>a</sup> ppm

<sup>b</sup> %

<sup>c</sup> No preparation for this concentration was made due to no survival animal.

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

Instrument : Hewlett Packard 1090 High Performance Liquid Chromatograph

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

Column Temperature : 50° C

Flow Rate : 1 mL/min

Mobile Phase : Methanol : Distilled Water = 3 : 2

Detector : UV (280 nm)

Injection Volume : 2.5  $\mu$ L

## APPENDIX Q 4

### STABILITY OF QUINOLINE IN FORMULATED WATER IN THE 2-YEAR DRINKING WATER STUDY

## STABILITY OF QUINOLINE IN FORMULATED WATER IN THE 2-YEAR DRINKING WATER STUDY

Date Prepared	Date Analyzed	Target Concentration	
		150 <sup>a</sup>	600
1996.3.13	1996.3.13	153 (100) <sup>b</sup>	597 (100)
	1996.3.21	150 <sup>c</sup> (98.0)	598 (100)

<sup>a</sup> ppm

<sup>b</sup> % (Percentage was based on the concentration on date of preparation.)

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

Instrument : Hewlett Packard 1090 High Performance Liquid Chromatograph

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

Column Temperature : 50° C

Flow Rate : 1 mL/min

Mobile Phase : Methanol : Distilled Water = 3 : 2

Detector : UV (280 nm)

Injection Volume : 2.5  $\mu$ L

## APPENDIX R 1

### METHODS FOR HEMATOLOGY AND BIOCHEMISTRY IN THE 2-YEAR DRINKING WATER STUDY OF QUINOLINE

METHODS FOR HEMATOLOGY, BIOCHEMISTRY AND URINALYSIS  
IN THE 2-YEAR DRINKING WATER STUDY OF QUINOLINE

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

1) Automatic blood cell analyzer (Technicon H-1 : Bayer Corporation)

2) Automatic blood cell differential analyzer (Hitachi 8200 : Hitachi, Ltd.)

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

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

## APPENDIX R 2

UNITS AND DECIMAL PLACE FOR HEMATOLOGY AND BIOCHEMISTRY IN THE  
2-YEAR DRINKING WATER STUDY OF QUINOLINE

UNITS AND DECIMAL PLACE FOR HEMATOLOGY AND BIOCHEMISTRY  
IN THE 2-YEAR DRINKING WATER STUDY OF QUINOLINE

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

## APPENDIX S 1

### HISTORICAL CONTROL DATA OF CELECTED NEOPLASTIC LESIONS

Crj:BDF<sub>1</sub> MICE IN JAPAN BIOASSAY RESEARCH CENTER

Historical Control Data of Selected Neoplastic Lesions Crj:BDF<sub>1</sub> mice  
in Japan Bioassay Research Center

Lesions(*:malignant)	Male n=997			Female n=998		
	Animal with Tumors	Rate %	Range %	Animal with Tumors	Rate %	Range %
<b>Retroperitoneum</b>						
Hemangioma	3	0.3	0-2	4	0.4	0-4
Hemangiosarcoma*	1	0.1	0-2	5	0.5	0-2
<b>Mesenterium</b>						
Hemangioma	1	0.1	0-2	0	0	0
Hemangiosarcoma*	0	0	0	0	0	0
<b>Liver</b>						
Hemangioma	9	0.9	0-10	5	0.5	0-4
Hemangiosarcoma*	42	4.2	0-12	22	2.2	0-8
Histiocytic sarcoma	29	2.9	0-8	15	1.5	0-4
Hepatocellular adenoma	171	17.2	4-34	51	5.1	2-10
Hepatocellular carcinoma*	217	21.8	2-42	25	2.5	0-8
<b>Skin/appendage</b>						
Hemangioma	3	0.3	0-2	4	0.4	0-4
Hemangiosarcoma*	3	0.3	0-2	5	0.5	0-2
<b>Plura</b>						
Hemangiosarcoma*	0	0	0	0	0	0
<b>Mediastinum</b>						
Hemangioma	0	0	0	0	0	0
Hemangiosarcoma*	1	0.1	0-2	0	0	0
<b>Peritoneum</b>						
Hemangioma	6	0.6	0-12	1	0.1	0-2
Hemangiosarcoma*	1	0.1	0-2	1	0.1	0-2
<b>Ovary</b>						
Hemangioma	-	-	-	4	0.4	0-4
Hemangiosarcoma*	-	-	-	0	0	0
<b>Muscle</b>						
Hemangiosarcoma*	2	0.2	0-2	1	0.1	0-2
<b>Prostate</b>						
Hemangioma	0	0	0	-	-	-
<b>Uterus</b>						
Hemangiosarcoma*	-	-	-	4	0.4	0-2

Historical Control Data of Selected Neoplastic Lesions Crj:BDF<sub>1</sub> mice  
in Japan Bioassay Research Center (continued)

Lesions(*:malignant)	Male n=997			Female n=998		
	Animal with Tumors	Rate %	Range %	Animal with Tumors	Rate %	Range %
All site						
Hemangioma	45	4.5	0-14	26	2.6	0-12
Hemangiosarcoma*	61	6.1	0-14	39	3.9	0-8
Kidney						
Renal cell carcinoma	0	0	0	0	0	0
Spleen						
Malignant lymphoma	43	4.3	2-8	73	7.3	0-26