

メタクリル酸ブチルのラットを用いた
吸入による 2 週間毒性試験報告書

試験番号：0818

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TABLE A

CONCENTRATIONS OF BUTYL METHACRYLATE IN THE
INHALATION CHAMBER OF THE 2-WEEK INHALATION STUDY

CONCENTRATIONS OF BUTYL METHACRYLATE IN THE
INHALATION CHAMBER OF THE 2-WEEK INHALATION STUDY

Group Name	Concentration(ppm)
	Mean $\pm$ S.D.
Control	0.0 $\pm$ 0.0
63 ppm	63.1 $\pm$ 0.6
125 ppm	125.4 $\pm$ 0.5
250 ppm	249.6 $\pm$ 3.8
500 ppm	499.2 $\pm$ 2.7
1000 ppm	1000.1 $\pm$ 3.8

TABLE B 1

SURVIVAL ANIMAL NUMBERS : MALE

STUDY NO. : 0818
ANIMAL : RAT F344/DuCr1Cr1j [F344/DuCrj]
REPORT TYPE : A1 2
SEX : MALE

SURVIVAL ANIMAL NUMBERS

PAGE : 1

Group Name	Animals At start	Administration (Days)		1-2	1-3	1-4	1-5	1-6	1-7	2-1	2-2	2-3	2-4	2-5	2-6
		0-0	1-1												
Control	5	5/ 5 100.0	5/ 5 100.0	5/ 5 100.0	5/ 5 100.0	5/ 5 100.0	5/ 5 100.0	5/ 5 100.0	5/ 5 100.0	5/ 5 100.0	5/ 5 100.0	5/ 5 100.0	5/ 5 100.0	5/ 5 100.0	5/ 5 100.0
63ppm	5	5/ 5 100.0	5/ 5 100.0	5/ 5 100.0	5/ 5 100.0	5/ 5 100.0	5/ 5 100.0	5/ 5 100.0	5/ 5 100.0	5/ 5 100.0	5/ 5 100.0	5/ 5 100.0	5/ 5 100.0	5/ 5 100.0	5/ 5 100.0
125ppm	5	5/ 5 100.0	5/ 5 100.0	5/ 5 100.0	5/ 5 100.0	5/ 5 100.0	5/ 5 100.0	5/ 5 100.0	5/ 5 100.0	5/ 5 100.0	5/ 5 100.0	5/ 5 100.0	5/ 5 100.0	5/ 5 100.0	5/ 5 100.0
250ppm	5	5/ 5 100.0	5/ 5 100.0	5/ 5 100.0	5/ 5 100.0	5/ 5 100.0	5/ 5 100.0	5/ 5 100.0	5/ 5 100.0	5/ 5 100.0	5/ 5 100.0	5/ 5 100.0	5/ 5 100.0	5/ 5 100.0	5/ 5 100.0
500ppm	5	5/ 5 100.0	5/ 5 100.0	5/ 5 100.0	5/ 5 100.0	5/ 5 100.0	5/ 5 100.0	5/ 5 100.0	5/ 5 100.0	5/ 5 100.0	5/ 5 100.0	5/ 5 100.0	5/ 5 100.0	5/ 5 100.0	5/ 5 100.0
1000ppm	5	5/ 5 100.0	5/ 5 100.0	5/ 5 100.0	5/ 5 100.0	5/ 5 100.0	5/ 5 100.0	5/ 5 100.0	5/ 5 100.0	5/ 5 100.0	5/ 5 100.0	5/ 5 100.0	5/ 5 100.0	5/ 5 100.0	5/ 5 100.0
Number of survival/ Number of effective animals Survival rate(%)															

(HAN360)

BAIS5

STUDY NO. : 0818
ANIMAL : RAT F344/DuCrI CrIj [F344/DuCrj]
REPORT TYPE : A1 2
SEX : MALE

SURVIVAL ANIMAL NUMBERS

PAGE : 2

Group Name	Animals At start	Administration (Days) 2-7
Control	5	5/ 5 100.0
63ppm	5	5/ 5 100.0
125ppm	5	5/ 5 100.0
250ppm	5	5/ 5 100.0
500ppm	5	5/ 5 100.0
1000ppm	5	5/ 5 100.0
Number of survival/ Number of effective animals Survival rate(%)		

(HAN360)

BAIS5

TABLE B 2

SURVIVAL ANIMAL NUMBERS : FEMALE

STUDY NO. : 0818
ANIMAL : RAT F344/DuCrIj [F344/DuCrj]
REPORT TYPE : A1 2
SEX : FEMALE

SURVIVAL ANIMAL NUMBERS

PAGE : 3

Group Name	Animals At start	Administration (Days)													
		0-0	1-1	1-2	1-3	1-4	1-5	1-6	1-7	2-1	2-2	2-3	2-4	2-5	2-6
Control	5	5/ 5 100.0	5/ 5 100.0	5/ 5 100.0	5/ 5 100.0	5/ 5 100.0	5/ 5 100.0	5/ 5 100.0	5/ 5 100.0	5/ 5 100.0	5/ 5 100.0	5/ 5 100.0	5/ 5 100.0	5/ 5 100.0	5/ 5 100.0
63ppm	5	5/ 5 100.0	5/ 5 100.0	5/ 5 100.0	5/ 5 100.0	5/ 5 100.0	5/ 5 100.0	5/ 5 100.0	5/ 5 100.0	5/ 5 100.0	5/ 5 100.0	5/ 5 100.0	5/ 5 100.0	5/ 5 100.0	5/ 5 100.0
125ppm	5	5/ 5 100.0	5/ 5 100.0	5/ 5 100.0	5/ 5 100.0	5/ 5 100.0	5/ 5 100.0	5/ 5 100.0	5/ 5 100.0	5/ 5 100.0	5/ 5 100.0	5/ 5 100.0	5/ 5 100.0	5/ 5 100.0	5/ 5 100.0
250ppm	5	5/ 5 100.0	5/ 5 100.0	5/ 5 100.0	5/ 5 100.0	5/ 5 100.0	5/ 5 100.0	5/ 5 100.0	5/ 5 100.0	5/ 5 100.0	5/ 5 100.0	5/ 5 100.0	5/ 5 100.0	5/ 5 100.0	5/ 5 100.0
500ppm	5	5/ 5 100.0	5/ 5 100.0	5/ 5 100.0	5/ 5 100.0	5/ 5 100.0	5/ 5 100.0	5/ 5 100.0	5/ 5 100.0	5/ 5 100.0	5/ 5 100.0	5/ 5 100.0	5/ 5 100.0	5/ 5 100.0	5/ 5 100.0
1000ppm	5	5/ 5 100.0	5/ 5 100.0	5/ 5 100.0	5/ 5 100.0	5/ 5 100.0	5/ 5 100.0	5/ 5 100.0	5/ 5 100.0	5/ 5 100.0	5/ 5 100.0	5/ 5 100.0	5/ 5 100.0	5/ 5 100.0	5/ 5 100.0
Number of survival/ Number of effective animals Survival rate(%)															

(HAN360)

BAIS5

STUDY NO. : 0818
ANIMAL : RAT F344/DuCr1Cr1j [F344/DuCrj]
REPORT TYPE : A1 2
SEX : FEMALE

SURVIVAL ANIMAL NUMBERS

PAGE : 4

Group Name	Animals At start	Administration (Days) 2-7
Control	5	5/ 5 100.0
63ppm	5	5/ 5 100.0
125ppm	5	5/ 5 100.0
250ppm	5	5/ 5 100.0
500ppm	5	5/ 5 100.0
1000ppm	5	5/ 5 100.0
Number of survival/ Number of effective animals Survival rate(%)		

(HAN360)

BAIS5

TABLE C 1

CLINICAL OBSERVATION : MALE

STUDY NO. : 0818
ANIMAL : RAT F344/DuCrI CrIj [F344/DuCrI]
REPORT TYPE : A1 2

CLINICAL OBSERVATION (SUMMARY)
ALL ANIMALS

SEX : MALE

PAGE : 1

Clinical sign	Group Name	Administration		Week-day		
		1-2	1-4	1-7	2-3	2-7
NON REMARKABLE	Control	5	5	5	5	5
	63ppm	5	5	5	5	5
	125ppm	5	5	5	5	5
	250ppm	5	5	5	5	5
	500ppm	5	5	5	5	5
	1000ppm	5	5	5	5	5

(HAN190)

BAIS 5

TABLE C 2

CLINICAL OBSERVATION : FEMALE

STUDY NO. : 0818
ANIMAL : RAT F344/DuCrI CrIj [F344/DuCrIj]
REPORT TYPE : A1 2

CLINICAL OBSERVATION (SUMMARY)
ALL ANIMALS

SEX : FEMALE

PAGE : 2

Clinical sign	Group Name	Administration Week-day				
		1-2	1-4	1-7	2-3	2-7
NON REMARKABLE	Control	5	5	5	5	5
	63ppm	5	5	5	5	5
	125ppm	5	5	5	5	5
	250ppm	5	5	5	5	5
	500ppm	5	5	5	5	5
	1000ppm	5	5	5	5	5

(HAN190)

BAIS 5

TABLE D 1

BODY WEIGHT CHANGES AND SURVIVAL ANIMAL
NUMBERS : MALE

STUDY NO. : 0818
ANIMAL : RAT F344/DuCrI CrIj [F344/DuCrj]
UNIT : g
REPORT TYPE : A1 2
SEX : MALE

MEAN BODY WEIGHTS AND SURVIVAL

PAGE : 1

Week-Day on Study	Control		63ppm		125ppm		250ppm		500ppm		1000ppm						
	Av. Wt.	No. of Surviv. < 5>	Av. Wt.	% of cont. < 5>	No. of Surviv.	Av. Wt.	% of cont. < 5>	No. of Surviv.	Av. Wt.	% of cont. < 5>	No. of Surviv.	Av. Wt.	% of cont. < 5>	No. of Surviv.	Av. Wt.	% of cont. < 5>	No. of Surviv.
0-0	111 (5)	5/ 5	111 (5)	100	5/ 5	111 (5)	100	5/ 5	111 (5)	100	5/ 5	111 (5)	100	5/ 5	111 (5)	100	5/ 5
1-2	118 (5)	5/ 5	118 (5)	100	5/ 5	118 (5)	100	5/ 5	119 (5)	101	5/ 5	118 (5)	100	5/ 5	113 (5)	96	5/ 5
1-4	124 (5)	5/ 5	124 (5)	100	5/ 5	123 (5)	99	5/ 5	123 (5)	99	5/ 5	120 (5)	97	5/ 5	114 (5)	92	5/ 5
1-7	135 (5)	5/ 5	134 (5)	99	5/ 5	131 (5)	97	5/ 5	136 (5)	101	5/ 5	133 (5)	99	5/ 5	128 (5)	95	5/ 5
2-3	146 (5)	5/ 5	145 (5)	99	5/ 5	140 (5)	96	5/ 5	145 (5)	99	5/ 5	142 (5)	97	5/ 5	133 (5)	91	5/ 5
2-7	162 (5)	5/ 5	161 (5)	99	5/ 5	158 (5)	98	5/ 5	164 (5)	101	5/ 5	161 (5)	99	5/ 5	150 (5)	93	5/ 5
< >:No. of effective animals, ():No. of measured animals																	
Av. Wt. : g																	

(B10040)

BAIS 5

TABLE D 2

**BODY WEIGHT CHANGES AND SURVIVAL ANIMAL
NUMBERS : FEMALE**

STUDY NO. : 0818
 ANIMAL : RAT F344/DuCrI CrIj [F344/DuCrj]
 UNIT : g
 REPORT TYPE : A1 2
 SEX : FEMALE

MEAN BODY WEIGHTS AND SURVIVAL

PAGE : 2

Week-Day on Study	Control		63ppm			125ppm			250ppm			500ppm			1000ppm		
	Av. Wt.	No. of Surviv. < 5>	Av. Wt.	% of cont. < 5>	No. of Surviv.	Av. Wt.	% of cont. < 5>	No. of Surviv.	Av. Wt.	% of cont. < 5>	No. of Surviv.	Av. Wt.	% of cont. < 5>	No. of Surviv.	Av. Wt.	% of cont. < 5>	No. of Surviv.
0-0	91 (5)	5/ 5	91 (5)	100	5/ 5	91 (5)	100	5/ 5	91 (5)	100	5/ 5	92 (5)	101	5/ 5	91 (5)	100	5/ 5
1-2	97 (5)	5/ 5	95 (5)	98	5/ 5	97 (5)	100	5/ 5	96 (5)	99	5/ 5	95 (5)	98	5/ 5	91 (5)	94	5/ 5
1-4	99 (5)	5/ 5	97 (5)	98	5/ 5	98 (5)	99	5/ 5	98 (5)	99	5/ 5	95 (5)	96	5/ 5	92 (5)	93	5/ 5
1-7	104 (5)	5/ 5	103 (5)	99	5/ 5	103 (5)	99	5/ 5	104 (5)	100	5/ 5	101 (5)	97	5/ 5	100 (5)	96	5/ 5
2-3	110 (5)	5/ 5	107 (5)	97	5/ 5	106 (5)	96	5/ 5	107 (5)	97	5/ 5	105 (5)	95	5/ 5	101 (5)	92	5/ 5
2-7	116 (5)	5/ 5	116 (5)	100	5/ 5	116 (5)	100	5/ 5	116 (5)	100	5/ 5	115 (5)	99	5/ 5	111 (5)	96	5/ 5
< >:No. of effective animals, ():No. of measured animals Av. Wt. : g																	

(B10040)

BAIS 5

TABLE D 3

BODY WEIGHT CHANGES : MALE

STUDY NO. : 0818
ANIMAL : RAT F344/DuCrI CrIj [F344/DuCrj]
UNIT : g
REPORT TYPE : A1 2
SEX : MALE

BODY WEIGHT CHANGES (SUMMARY)
ALL ANIMALS

PAGE : 1

Group Name	Administration		week-day									
	0-0		1-2		1-4		1-7		2-3		2-7	
Control	111±	5	118±	6	124±	8	135±	9	146±	11	162±	15
63ppm	111±	5	118±	5	124±	5	134±	5	145±	6	161±	7
125ppm	111±	5	118±	4	123±	5	131±	3	140±	4	158±	4
250ppm	111±	5	119±	6	123±	5	136±	6	145±	6	164±	7
500ppm	111±	5	118±	6	120±	8	133±	10	142±	11	161±	12
1000ppm	111±	5	113±	6	114±	7	128±	7	133±	8	150±	10

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

Test of Dunnett

(HAN260)

BAIS 5

TABLE D 4

BODY WEIGHT CHANGES : FEMALE

STUDY NO. : 0818
ANIMAL : RAT F344/DuCrI CrIj [F344/DuCrj]
UNIT : g
REPORT TYPE : A1 2
SEX : FEMALE

BODY WEIGHT CHANGES (SUMMARY)
ALL ANIMALS

PAGE : 2

Group Name	Administration		week-day									
	0-0		1-2		1-4		1-7		2-3		2-7	
Control	91±	3	97±	4	99±	4	104±	5	110±	6	116±	3
63ppm	91±	4	95±	4	97±	5	103±	4	107±	6	116±	6
125ppm	91±	3	97±	2	98±	2	103±	2	106±	1	116±	3
250ppm	91±	4	96±	4	98±	3	104±	2	107±	2	116±	2
500ppm	92±	3	95±	4	95±	6	101±	5	105±	5	115±	5
1000ppm	91±	3	91±	3	92±	3	100±	4	101±	4	111±	5

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

Test of Dunnett

TABLE E 1

FOOD CONSUMPTION CHANGES AND SURVIVAL ANIMAL
NUMBERS : MALE

STUDY NO. : 0818
ANIMAL : RAT F344/DuCrI CrIj [F344/DuCrj]
UNIT : g
REPORT TYPE : A1 2
SEX : MALE

MEAN FOOD CONSUMPTION (FC) AND SURVIVAL

PAGE : 1

Week-Day on Study	Control		63ppm		125ppm		250ppm		500ppm		1000ppm						
	Av. FC.	No. of Surviv. < 5>	Av. FC.	% of cont. < 5>	No. of Surviv.	Av. FC.	% of cont. < 5>	No. of Surviv.	Av. FC.	% of cont. < 5>	No. of Surviv.	Av. FC.	% of cont. < 5>	No. of Surviv.			
1-7	14.9 (5)	5/ 5	14.0 (5)	94	5/ 5	14.3 (5)	96	5/ 5	14.1 (5)	95	5/ 5	13.6 (5)	91	5/ 5	12.9 (5)	87	5/ 5
2-7	15.1 (5)	5/ 5	14.5 (5)	96	5/ 5	14.3 (5)	95	5/ 5	15.0 (5)	99	5/ 5	15.2 (5)	101	5/ 5	14.1 (5)	93	5/ 5
< >:No. of effective animals, ():No. of measured animals Av. FC. : g																	

(B10040)

BAIS 5

TABLE E 2

FOOD CONSUMPTION CHANGES AND SURVIVAL ANIMAL
NUMBERS : FEMALE

STUDY NO. : 0818
 ANIMAL : RAT F344/DuCr1Cr1j [F344/DuCrj]
 UNIT : g
 REPORT TYPE : A1 2
 SEX : FEMALE

MEAN FOOD CONSUMPTION (FC) AND SURVIVAL

PAGE : 2

Week-Day on Study	Control			63ppm			125ppm			250ppm			500ppm			1000ppm		
	Av. FC.	No. of Surviv. < 5>		Av. FC.	% of cont. < 5>	No. of Surviv.	Av. FC.	% of cont. < 5>	No. of Surviv.	Av. FC.	% of cont. < 5>	No. of Surviv.	Av. FC.	% of cont. < 5>	No. of Surviv.	Av. FC.	% of cont. < 5>	No. of Surviv.
1-7	11.3 (5)	5/ 5		11.0 (5)	97	5/ 5	11.2 (5)	99	5/ 5	12.1 (5)	107	5/ 5	11.3 (5)	100	5/ 5	10.4 (5)	92	5/ 5
2-7	10.9 (5)	5/ 5		10.9 (5)	100	5/ 5	11.3 (5)	104	5/ 5	12.3 (4)	113	5/ 5	11.7 (5)	107	5/ 5	11.2 (5)	103	5/ 5
< >:No. of effective animals, ():No. of measured animals																		
Av. FC. : g																		

(B10040)

BAIS 5

TABLE E 3

FOOD CONSUMPTION CHANGES : MALE

STUDY NO. : 0818
ANIMAL : RAT F344/DuCrI CrIj [F344/DuCrIj]
UNIT : g
REPORT TYPE : A1 2
SEX : MALE

FOOD CONSUMPTION CHANGES (SUMMARY)
ALL ANIMALS

PAGE : 1

Group Name	Administration week-day (effective)	
	1-7 (7)	2-7 (7)
Control	14.9 ± 1.2	15.1 ± 1.4
63ppm	14.0 ± 1.1	14.5 ± 1.5
125ppm	14.3 ± 0.9	14.3 ± 0.5
250ppm	14.1 ± 1.0	15.0 ± 1.1
500ppm	13.6 ± 1.2	15.2 ± 1.7
1000ppm	12.9 ± 1.4	14.1 ± 1.5

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

Test of Dunnett

TABLE E 4

FOOD CONSUMPTION CHANGES : FEMALE

STUDY NO. : 0818
ANIMAL : RAT F344/DuCrIj [F344/DuCrj]
UNIT : g
REPORT TYPE : A1 2
SEX : FEMALE

FOOD CONSUMPTION CHANGES (SUMMARY)
ALL ANIMALS

PAGE : 2

Group Name	Administration week-day(effective)	
	1-7 (7)	2-7 (7)
Control	11.3± 0.7	10.9± 0.8
63ppm	11.0± 0.5	10.9± 0.6
125ppm	11.2± 0.4	11.3± 0.4
250ppm	12.1± 2.0	12.3± 2.0
500ppm	11.3± 0.7	11.7± 0.9
1000ppm	10.4± 1.0	11.2± 1.1

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

Test of Dunnett

TABLE F 1

HEMATOLOGY : MALE

STUDY NO. : 0818
ANIMAL : RAT F344/DuCrI CrIj [F344/DuCrj]
MEASURE. TIME : 1
SEX : MALE

HEMATOLOGY (SUMMARY)
ALL ANIMALS (3W)

REPORT TYPE : A1

PAGE : 1

Group Name	NO. of Animals	RED BLOOD CELL 10 ⁶ /μl		HEMOGLOBIN g/dl		HEMATOCRIT %		MCV fl		MCH pg		MCHC g/dl		PLATELET 10 ⁹ /μl	
Control	5	8.58±	0.26	15.3±	0.4	44.8±	1.0	52.2±	0.6	17.8±	0.2	34.2±	0.2	927±	32
63ppm	5	8.59±	0.08	15.2±	0.3	44.5±	0.6	51.8±	0.2	17.7±	0.2	34.2±	0.3	926±	34
125ppm	5	8.63±	0.32	15.3±	0.4	44.6±	1.3	51.7±	0.5	17.7±	0.2	34.2±	0.3	869±	46
250ppm	5	8.43±	0.13	15.0±	0.3	43.6±	0.6	51.8±	0.3	17.8±	0.1	34.3±	0.2	932±	31
500ppm	5	8.48±	0.32	15.1±	0.3	44.0±	1.1	51.9±	0.6	17.8±	0.3	34.3±	0.4	890±	74
1000ppm	5	8.65±	0.16	15.3±	0.3	44.3±	0.6	51.3±	0.6	17.7±	0.1	34.5±	0.3	777±	41**

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

Test of Dunnett

STUDY NO. : 0818
ANIMAL : RAT F344/DuCrI CrIj [F344/DuCrj]
MEASURE TIME : 1
SEX : MALE

HEMATOLOGY (SUMMARY)
ALL ANIMALS (3W)

REPORT TYPE : A1

PAGE : 2

Group Name	NO. of Animals	RETICULOCYTE %	
Control	5	2.9±	0.4
63ppm	5	2.9±	0.4
125ppm	5	3.0±	0.3
250ppm	5	3.1±	0.5
500ppm	5	3.2±	0.4
1000ppm	5	2.6±	0.4

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

Test of Dunnett

(HCL070)

BAIS5

STUDY NO. : 0818
ANIMAL : RAT F344/DuCrI CrIj [F344/DuCrj]
MEASURE. TIME : 1
SEX : MALE

REPORT TYPE : A1

HEMATOLOGY (SUMMARY)
ALL ANIMALS (3W)

PAGE : 3

Group Name	NO. of Animals	WBC 10 ³ /μl		Differential NEUTRO		WBC (%) LYMPHO		MONO		EOSINO		BASO		OTHER	
Control	5	4.11±	1.21	22±	3	75±	3	2±	1	1±	0	0±	0	1±	0
63ppm	5	3.50±	0.96	21±	3	75±	3	2±	1	1±	0	0±	0	1±	0
125ppm	5	3.22±	0.99	25±	5	72±	6	2±	0	1±	0	0±	0	1±	0
250ppm	5	3.75±	0.67	23±	5	73±	6	2±	1	1±	0	0±	0	1±	0
500ppm	5	3.93±	0.77	22±	5	74±	6	2±	1	1±	0	0±	0	1±	0
1000ppm	5	4.04±	0.72	20±	4	76±	4	3±	1	1±	0	0±	0	1±	0

Significant difference ; * : $P \leq 0.05$

** : $P \leq 0.01$

Test of Dunnett

(HCL070)

BAIS5

TABLE F 2

HEMATOLOGY : FEMALE

STUDY NO. : 0818
ANIMAL : RAT F344/DuCrI CrIj [F344/DuCrj]
MEASURE. TIME : 1
SEX : FEMALE

HEMATOLOGY (SUMMARY)
ALL ANIMALS (3W)

REPORT TYPE : A1

PAGE : 4

Group Name	NO. of Animals	RED BLOOD CELL 10 ⁶ /μl		HEMOGLOBIN g/dl		HEMATOCRIT %		MCV fl		MCH pg		MCHC g/dl		PLATELET 10 ³ /μl	
Control	5	8.90±	0.34	16.1±	0.5	45.9±	1.6	51.6±	0.2	18.1±	0.2	35.1±	0.4	871±	96
63ppm	5	8.91±	0.32	15.9±	0.6	45.9±	1.5	51.6±	0.5	17.8±	0.1*	34.6±	0.4	852±	58
125ppm	5	8.70±	0.38	15.7±	0.8	45.0±	2.3	51.7±	0.4	18.1±	0.2	35.0±	0.5	839±	26
250ppm	5	8.78±	0.13	15.9±	0.3	45.3±	0.9	51.6±	0.4	18.1±	0.1	35.0±	0.3	781±	45
500ppm	5	8.80±	0.24	15.6±	0.4	45.2±	1.2	51.4±	0.4	17.8±	0.2*	34.7±	0.4	734±	72*
1000ppm	5	8.80±	0.39	15.7±	0.8	45.1±	2.1	51.3±	0.4	17.9±	0.2	34.9±	0.4	712±	76**

Significant difference ; * : $P \leq 0.05$

** : $P \leq 0.01$

Test of Dunnett

STUDY NO. : 0818
ANIMAL : RAT F344/DuCrI CrIj [F344/DuCrIj]
MEASURE. TIME : 1
SEX : FEMALE

HEMATOLOGY (SUMMARY)
ALL ANIMALS (3W)

REPORT TYPE : A1

PAGE : 5

Group Name	NO. of Animals	RETICULOCYTE %	
Control	5	1.5±	0.2
63ppm	5	1.7±	0.3
125ppm	5	1.5±	0.2
250ppm	5	1.5±	0.2
500ppm	5	1.5±	0.2
1000ppm	5	1.4±	0.4

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

Test of Dunnett

(HCL070)

BAIS 5

STUDY NO. : 0818
 ANIMAL : RAT F344/DuCrIj [F344/DuCrj]
 MEASURE. TIME : 1
 SEX : FEMALE

HEMATOLOGY (SUMMARY)
 ALL ANIMALS (3W)

REPORT TYPE : A1

PAGE : 6

Group Name	NO. of Animals	WBC 10 ³ /μl		Differential NEUTRO		WBC (%) LYMPHO		MONO		EOSINO		BASO		OTHER	
Control	5	2.97±	0.74	16±	2	81±	1	2±	0	1±	0	0±	0	1±	1
63ppm	5	3.34±	0.59	19±	4	77±	3	2±	0	1±	0	0±	0	1±	0
125ppm	5	3.39±	0.31	17±	4	78±	3	3±	0	1±	0	0±	0	1±	1
250ppm	5	3.07±	1.02	19±	8	77±	8	2±	0	1±	0	0±	0	1±	0
500ppm	5	3.56±	1.11	18±	3	77±	3	3±	1	1±	0	0±	0	1±	0
1000ppm	5	3.16±	1.20	20±	8	74±	8	3±	0	1±	0	0±	0	1±	1

Significant difference ; * : $P \leq 0.05$

** : $P \leq 0.01$

Test of Dunnett

(HCL070)

BAIS5

TABLE G 1

BIOCHEMISTRY : MALE

STUDY NO. : 0818
 ANIMAL : RAT F344/DuCrIj [F344/DuCrj]
 MEASURE TIME : 1
 SEX : MALE

BIOCHEMISTRY (SUMMARY)
 ALL ANIMALS (3W)

REPORT TYPE : A1

PAGE : 1

Group Name	NO. of Animals	TOTAL PROTEIN g/dl		ALBUMIN g/dl		A/G RATIO		T-BILIRUBIN mg/dl		GLUCOSE mg/dl		T-CHOLESTEROL mg/dl		TRIGLYCERIDE mg/dl	
Control	5	5.5±	0.1	3.2±	0.1	1.4±	0.0	0.03±	0.01	149±	14	61±	5	48±	17
63ppm	5	5.5±	0.1	3.2±	0.1	1.5±	0.1	0.04±	0.01*	141±	4	59±	4	42±	10
125ppm	5	5.5±	0.1	3.3±	0.1	1.4±	0.1	0.04±	0.01	151±	5	59±	4	45±	6
250ppm	5	5.4±	0.1	3.2±	0.1	1.5±	0.1	0.03±	0.00	148±	14	57±	4	40±	9
500ppm	5	5.5±	0.0	3.2±	0.1	1.5±	0.1	0.04±	0.00	143±	11	58±	2	32±	9
1000ppm	5	5.4±	0.1	3.2±	0.0	1.5±	0.1	0.04±	0.01**	151±	19	59±	5	33±	7

Significant difference ; * : $P \leq 0.05$

** : $P \leq 0.01$

Test of Dunnett

STUDY NO. : 0818
 ANIMAL : RAT F344/DuCrIj [F344/DuCrj]
 MEASURE TIME : 1
 SEX : MALE

BIOCHEMISTRY (SUMMARY)
 ALL ANIMALS (3W)

REPORT TYPE : A1

PAGE : 2

Group Name	NO. of Animals	PHOSPHOLIPID mg/dl		AST U/L		ALT U/L		LDH U/L		ALP U/L		G-GTP U/L		CK U/L	
Control	5	111±	7	61±	4	32±	1	66±	7	1104±	80	0.5±	0.1	207±	17
63ppm	5	110±	5	62±	2	32±	2	58±	3	1102±	78	0.5±	0.1	224±	28
125ppm	5	108±	6	62±	2	33±	2	65±	5	1055±	23	0.4±	0.1	202±	29
250ppm	5	107±	4	62±	2	31±	2	65±	17	1041±	58	0.5±	0.2	197±	31
500ppm	5	108±	6	64±	2	31±	2	97±	33	1034±	75	0.5±	0.1	206±	14
1000ppm	5	110±	8	75±	5**	37±	4**	105±	42	987±	58	0.5±	0.2	201±	26

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

Test of Dunnett

(HCL074)

BAIS5

STUDY NO. : 0818
 ANIMAL : RAT F344/DuCrICrIj [F344/DuCrj]
 MEASURE. TIME : 1
 SEX : MALE

BIOCHEMISTRY (SUMMARY)
 ALL ANIMALS (3W)

REPORT TYPE : A1

PAGE : 3

Group Name	NO. of Animals	UREA NITROGEN mg/dℓ		CREATININE mg/dℓ		SODIUM mEq/ℓ		POTASSIUM mEq/ℓ		CHLORIDE mEq/ℓ		CALCIUM mg/dℓ		INORGANIC PHOSPHORUS mg/dℓ	
Control	5	17.5±	1.1	0.25±	0.03	142±	1	3.8±	0.5	104±	1	10.0±	0.3	8.2±	0.7
63ppm	5	17.9±	0.9	0.26±	0.03	142±	1	3.5±	0.2	104±	2	9.9±	0.4	8.6±	0.8
125ppm	5	18.1±	1.5	0.25±	0.01	142±	1	3.8±	0.5	105±	1	9.8±	0.4	9.0±	0.9
250ppm	5	18.9±	0.7	0.26±	0.02	142±	1	3.8±	0.3	104±	1	9.7±	0.1	8.6±	0.4
500ppm	5	18.7±	0.7	0.26±	0.02	143±	1	3.9±	0.3	106±	1	9.9±	0.1	8.7±	0.5
1000ppm	5	19.7±	2.2	0.26±	0.02	142±	1	3.7±	0.2	106±	2	9.8±	0.3	9.0±	0.7

Significant difference ; * : $P \leq 0.05$

** : $P \leq 0.01$

Test of Dunnett

TABLE G 2

BIOCHEMISTRY : FEMALE

STUDY NO. : 0818
 ANIMAL : RAT F344/DuCrIj [F344/DuCrj]
 MEASURE TIME : 1
 SEX : FEMALE

BIOCHEMISTRY (SUMMARY)
 ALL ANIMALS (3W)

REPORT TYPE : A1

PAGE : 4

Group Name	NO. of Animals	TOTAL PROTEIN g/dl		ALBUMIN g/dl		A/G RATIO		T-BILIRUBIN mg/dl		GLUCOSE mg/dl		T-CHOLESTEROL mg/dl		TRIGLYCERIDE mg/dl	
Control	5	5.5±	0.2	3.3±	0.1	1.5±	0.0	0.03±	0.01	134±	10	74±	5	21±	8
63ppm	5	5.5±	0.1	3.3±	0.0	1.5±	0.1	0.04±	0.01	127±	10	70±	5	18±	6
125ppm	5	5.5±	0.0	3.3±	0.0	1.5±	0.0	0.04±	0.00	127±	8	71±	3	22±	8
250ppm	5	5.5±	0.2	3.3±	0.1	1.5±	0.1	0.04±	0.00	142±	17	71±	10	19±	7
500ppm	5	5.4±	0.1	3.3±	0.1	1.5±	0.1	0.04±	0.01*	144±	6	73±	8	17±	3
1000ppm	5	5.5±	0.2	3.3±	0.1	1.5±	0.0	0.05±	0.01**	149±	9	80±	6	25±	8

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

Test of Dunnett

STUDY NO. : 0818
 ANIMAL : RAT F344/DuCrIj [F344/DuCrIj]
 MEASURE. TIME : 1
 SEX : FEMALE REPORT TYPE : A1

BIOCHEMISTRY (SUMMARY)
 ALL ANIMALS (3W)

PAGE : 5

Group Name	NO. of Animals	PHOSPHOLIPID mg/dl		AST U/L		ALT U/L		LDH U/L		ALP U/L		G-GTP U/L		CK U/L	
Control	5	136±	9	66±	3	30±	1	83±	15	914±	43	0.7±	0.2	185±	10
63ppm	5	133±	8	65±	6	29±	4	85±	34	895±	84	0.9±	0.2	171±	25
125ppm	5	134±	7	65±	4	30±	2	98±	50	872±	51	0.9±	0.1	203±	41
250ppm	5	130±	15	67±	6	30±	4	102±	40	843±	81	0.8±	0.3	186±	16
500ppm	5	130±	12	69±	4	30±	3	80±	26	866±	74	0.9±	0.2	179±	28
1000ppm	5	149±	11	69±	3	31±	2	97±	31	858±	69	1.0±	0.2	175±	27

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

Test of Dunnett

(HCL074)

BAIS 5

STUDY NO. : 0818
 ANIMAL : RAT F344/DuCrI CrIj [F344/DuCrj]
 MEASURE. TIME : 1
 SEX : FEMALE

BIOCHEMISTRY (SUMMARY)
 ALL ANIMALS (3W)

REPORT TYPE : A1

PAGE : 6

Group Name	NO. of Animals	UREA NITROGEN mg/dl		CREATININE mg/dl		SODIUM mEq/l		POTASSIUM mEq/l		CHLORIDE mEq/l		CALCIUM mg/dl		INORGANIC PHOSPHORUS mg/dl	
Control	5	18.4±	1.3	0.26±	0.02	142±	1	3.5±	0.2	106±	2	9.9±	0.2	8.2±	0.5
63ppm	5	18.6±	1.7	0.27±	0.02	142±	1	3.6±	0.3	107±	1	9.7±	0.3	8.1±	0.3
125ppm	5	19.4±	1.2	0.28±	0.03	142±	1	3.8±	0.1	108±	1	9.6±	0.2	8.3±	0.4
250ppm	5	21.1±	1.3	0.28±	0.03	142±	2	3.7±	0.1	108±	2	9.8±	0.2	8.4±	0.4
500ppm	5	21.5±	1.8*	0.28±	0.01	141±	1	3.7±	0.2	107±	2	9.8±	0.3	8.8±	0.6
1000ppm	5	21.2±	2.5	0.26±	0.02	140±	1*	3.9±	0.3	107±	3	9.7±	0.3	8.6±	0.7

Significant difference ; * : $P \leq 0.05$

** : $P \leq 0.01$

Test of Dunnett

(HCL074)

BAIS5

TABLE H 1

GROSS FINDINGS : MALE

STUDY NO. : 0818
ANIMAL : RAT F344/DuCrI CrIj [F344/DuCrI]
REPORT TYPE : A1
SEX : MALE

GROSS FINDINGS (SUMMARY)
ALL ANIMALS (0- 3W)

PAGE : 1

Organ	Findings	Group Name NO. of Animals	Control		63ppm		125ppm		250ppm	
			5	(%)	5	(%)	5	(%)	5	(%)
liver	herniation		0	(0)	0	(0)	0	(0)	2	(40)

(HPT080)

BAIS 5

STUDY NO. : 0818
ANIMAL : RAT F344/DuCr1Cr1j [F344/DuCrj]
REPORT TYPE : A1
SEX : MALE

GROSS FINDINGS (SUMMARY)
ALL ANIMALS (0- 3W)

PAGE : 2

Organ	Findings	Group Name		500ppm		1000ppm	
		NO. of Animals		5	(%)	5	(%)
liver	herniation			1	(20)	1	(20)

(HPT080)

BAIS 5

TABLE H 2

GROSS FINDINGS : FEMALE

STUDY NO. : 0818
ANIMAL : RAT F344/DuCr1Cr1j [F344/DuCrj]
REPORT TYPE : A1
SEX : FEMALE

GROSS FINDINGS (SUMMARY)
ALL ANIMALS (0- 3W)

PAGE : 3

Organ	Findings	Group Name NO. of Animals	Control		63ppm		125ppm		250ppm	
			5	(%)	5	(%)	5	(%)	5	(%)
liver	herniation		1	(20)	0	(0)	0	(0)	1	(20)

(HPT080)

BAIS 5

STUDY NO. : 0818
ANIMAL : RAT F344/DuCr1Cr1j [F344/DuCrj]
REPORT TYPE : A1
SEX : FEMALE

GROSS FINDINGS (SUMMARY)
ALL ANIMALS (0- 3W)

PAGE : 4

Organ	Findings	Group Name NO. of Animals	500ppm		1000ppm	
			5	(%)	5	(%)
liver	herniation		0	(0)	1	(20)

(HPT080)

BAIS 5

TABLE I 1

ORGAN WEIGHT, ABSOLUTE : MALE

STUDY NO. : 0818
ANIMAL : RAT F344/DuCrIj [F344/DuCrj]
REPORT TYPE : A1
SEX : MALE
UNIT: g

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

PAGE : 1

Group Name	NO. of Animals	Body Weight	THYMUS	ADRENALS	TESTES	HEART	LUNGS
Control	5	145± 14	0.249± 0.026	0.046± 0.001	2.307± 0.313	0.544± 0.034	0.674± 0.041
63ppm	5	143± 6	0.272± 0.026	0.043± 0.006	2.392± 0.170	0.557± 0.011	0.671± 0.029
125ppm	5	138± 3	0.247± 0.015	0.043± 0.002	2.340± 0.166	0.535± 0.033	0.654± 0.015
250ppm	5	144± 5	0.252± 0.007	0.044± 0.007	2.374± 0.133	0.544± 0.018	0.681± 0.035
500ppm	5	141± 10	0.257± 0.025	0.048± 0.003	2.294± 0.230	0.551± 0.037	0.703± 0.033
1000ppm	5	130± 8	0.228± 0.028	0.045± 0.003	2.202± 0.159	0.521± 0.022	0.650± 0.013

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

Test of Dunnett

(HCL040)

BAIS 5

STUDY NO. : 0818
ANIMAL : RAT F344/DuCrIj [F344/DuCrj]
REPORT TYPE : A1
SEX : MALE
UNIT: g

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

PAGE : 2

Group Name	NO. of Animals	KIDNEYS		SPLEEN		LIVER		BRAIN	
Control	5	1.151±	0.069	0.369±	0.035	4.278±	0.485	1.737±	0.035
63ppm	5	1.136±	0.030	0.365±	0.029	4.214±	0.180	1.735±	0.024
125ppm	5	1.156±	0.038	0.382±	0.059	4.156±	0.181	1.712±	0.048
250ppm	5	1.196±	0.073	0.360±	0.019	4.335±	0.231	1.696±	0.056
500ppm	5	1.208±	0.051	0.365±	0.019	4.281±	0.403	1.728±	0.041
1000ppm	5	1.096±	0.057	0.328±	0.019	3.916±	0.219	1.706±	0.026

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

Test of Dunnett

(HCL040)

BAIS 5

TABLE I 2

ORGAN WEIGHT, ABSOLUTE : FEMALE

STUDY NO. : 0818
ANIMAL : RAT F344/DuCrI CrIj [F344/DuCrj]
REPORT TYPE : A1
SEX : FEMALE
UNIT: g

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

PAGE : 3

Group Name	NO. of Animals	Body Weight		THYMUS		ADRENALS		OVARIES		HEART		LUNGS	
Control	5	104±	3	0.244±	0.022	0.050±	0.005	0.081±	0.011	0.433±	0.032	0.563±	0.032
63ppm	5	102±	4	0.243±	0.025	0.049±	0.006	0.087±	0.017	0.434±	0.023	0.553±	0.050
125ppm	5	102±	1	0.231±	0.024	0.050±	0.004	0.087±	0.018	0.451±	0.036	0.559±	0.031
250ppm	5	101±	1	0.232±	0.018	0.051±	0.003	0.088±	0.014	0.426±	0.017	0.562±	0.014
500ppm	5	99±	5	0.233±	0.017	0.047±	0.005	0.086±	0.014	0.428±	0.018	0.558±	0.025
1000ppm	5	96±	4**	0.209±	0.025	0.046±	0.002	0.081±	0.016	0.406±	0.011	0.527±	0.019

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

Test of Dunnett

(HCL040)

BAIS 5

STUDY NO. : 0818
ANIMAL : RAT F344/DuCrI CrIj [F344/DuCrj]
REPORT TYPE : A1
SEX : FEMALE
UNIT: g

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

PAGE : 4

Group Name	NO. of Animals	KIDNEYS		SPLEEN		LIVER		BRAIN	
Control	5	0.901±	0.047	0.280±	0.014	3.195±	0.163	1.596±	0.023
63ppm	5	0.915±	0.052	0.272±	0.032	3.127±	0.265	1.616±	0.028
125ppm	5	0.922±	0.035	0.274±	0.012	3.304±	0.167	1.614±	0.039
250ppm	5	0.930±	0.015	0.271±	0.018	3.170±	0.133	1.603±	0.034
500ppm	5	0.921±	0.067	0.271±	0.015	3.242±	0.196	1.605±	0.041
1000ppm	5	0.906±	0.029	0.252±	0.006	3.082±	0.089	1.583±	0.032

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

Test of Dunnett

(HCL040)

BAIS 5

TABLE J 1

ORGAN WEIGHT, RELATIVE : MALE

STUDY NO. : 0818
ANIMAL : RAT F344/DuCrI CrIj [F344/DuCrj]
REPORT TYPE : A1
SEX : MALE
UNIT: %

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

PAGE : 1

Group Name	NO. of Animals	Body Weight (g)	THYMUS	ADRENALS	TESTES	HEART	LUNGS
Control	5	145± 14	0.173± 0.018	0.032± 0.004	1.595± 0.179	0.377± 0.018	0.467± 0.021
63ppm	5	143± 6	0.190± 0.016	0.030± 0.005	1.675± 0.093	0.390± 0.018	0.470± 0.010
125ppm	5	138± 3	0.178± 0.011	0.031± 0.002	1.693± 0.115	0.387± 0.028	0.473± 0.019
250ppm	5	144± 5	0.176± 0.008	0.031± 0.005	1.654± 0.091	0.379± 0.020	0.474± 0.020
500ppm	5	141± 10	0.182± 0.012	0.034± 0.004	1.629± 0.141	0.391± 0.023	0.499± 0.013
1000ppm	5	130± 8	0.175± 0.018	0.034± 0.003	1.694± 0.124	0.401± 0.012	0.501± 0.029*

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

Test of Dunnett

(HCL042)

BAIS 5

STUDY NO. : 0818
ANIMAL : RAT F344/DuCrI CrIj [F344/DuCrj]
REPORT TYPE : A1
SEX : MALE
UNIT: %

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

PAGE : 2

Group Name	NO. of Animals	KIDNEYS	SPLEEN	LIVER	BRAIN
Control	5	0.798± 0.053	0.255± 0.002	2.951± 0.101	1.209± 0.122
63ppm	5	0.796± 0.043	0.255± 0.014	2.952± 0.057	1.216± 0.049
125ppm	5	0.837± 0.032	0.275± 0.036	3.007± 0.101	1.239± 0.048
250ppm	5	0.832± 0.026	0.251± 0.009	3.017± 0.056	1.182± 0.054
500ppm	5	0.858± 0.024	0.260± 0.007	3.033± 0.105	1.229± 0.069
1000ppm	5	0.843± 0.034	0.252± 0.004	3.009± 0.075	1.314± 0.089

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

Test of Dunnett

(HCL042)

BAIS 5

TABLE J 2

ORGAN WEIGHT, RELATIVE : FEMALE

STUDY NO. : 0818
ANIMAL : RAT F344/DuCrIj [F344/DuCrj]
REPORT TYPE : A1
SEX : FEMALE
UNIT: %

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

PAGE : 3

Group Name	NO. of Animals	Body Weight (g)	THYMUS	ADRENALS	OVARIES	HEART	LUNGS
Control	5	104± 3	0.235± 0.024	0.049± 0.004	0.078± 0.010	0.417± 0.028	0.543± 0.021
63ppm	5	102± 4	0.238± 0.016	0.048± 0.005	0.086± 0.017	0.426± 0.015	0.542± 0.033
125ppm	5	102± 1	0.226± 0.021	0.049± 0.004	0.085± 0.016	0.441± 0.030	0.546± 0.023
250ppm	5	101± 1	0.229± 0.018	0.050± 0.003	0.086± 0.014	0.420± 0.018	0.554± 0.018
500ppm	5	99± 5	0.236± 0.021	0.048± 0.005	0.086± 0.010	0.433± 0.014	0.564± 0.008
1000ppm	5	96± 4**	0.217± 0.018	0.048± 0.002	0.085± 0.020	0.423± 0.017	0.549± 0.016

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

Test of Dunnett

(HCL042)

BAIS 5

STUDY NO. : 0818
 ANIMAL : RAT F344/DuCrI CrIj [F344/DuCrj]
 REPORT TYPE : A1
 SEX : FEMALE
 UNIT: %

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

PAGE : 4

Group Name	NO. of Animals	KIDNEYS	SPLEEN	LIVER	BRAIN
Control	5	0.870 ± 0.040	0.271 ± 0.015	3.083 ± 0.123	1.541 ± 0.030
63ppm	5	0.899 ± 0.016	0.267 ± 0.021	3.068 ± 0.165	1.590 ± 0.072
125ppm	5	0.902 ± 0.021	0.268 ± 0.008	3.232 ± 0.139	1.579 ± 0.019
250ppm	5	0.917 ± 0.014	0.268 ± 0.020	3.126 ± 0.127	1.581 ± 0.031
500ppm	5	0.929 ± 0.033*	0.274 ± 0.012	3.274 ± 0.079	1.625 ± 0.095
1000ppm	5	0.945 ± 0.055**	0.263 ± 0.014	3.213 ± 0.096	1.652 ± 0.078

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

Test of Dunnett

(HCL042)

BAIS 5

TABLE K 1

HISTOPATHOLOGICAL FINDINGS :
NON-NEOPLASTIC LESIONS : MALE
ALL ANIMALS

STUDY NO. : 0818
ANIMAL : RAT F344/DuCrI CrIj [F344/DuCrIj]
REPORT TYPE : A1
SEX : MALE

HISTOPATHOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)
ALL ANIMALS (0- 3W)

PAGE : 1

Organ	Findings	Group Name No. of Animals on Study Grade	Control				63ppm				125ppm				250ppm			
			1+ (%)	2+ (%)	3+ (%)	4+ (%)	1+ (%)	2+ (%)	3+ (%)	4+ (%)	1+ (%)	2+ (%)	3+ (%)	4+ (%)	1+ (%)	2+ (%)	3+ (%)	4+ (%)
[Respiratory system]																		
nasal cavit			< 5>				< 5>				< 5>				< 5>			
	inflammation:respiratory epithelium		0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
	respiratory metaplasia:gland		1 (20)	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)
	squamous cell metaplasia:respiratory epithelium		0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
	regeneration:respiratory epithelium		0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
	regeneration:olfactory epithelium		0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
	necrosis:olfactory epithelium		0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
[Digestive system]																		
liver			< 5>				< 5>				< 5>				< 5>			
	herniation		0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	2 (40)	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																	

STUDY NO. : 0818
 ANIMAL : RAT F344/DuCr1Cr1j [F344/DuCrj]
 REPORT TYPE : A1
 SEX : MALE

HISTOPATHOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)
 ALL ANIMALS (0- 3W)

PAGE : 2

Organ_____	Findings_____	Group Name	500ppm				1000ppm			
		No. of Animals on Study	1+	2+	3+	4+	1+	2+	3+	4+
		Grade	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
(Respiratory system)										
nasal cavit			< 5>				< 5>			
	inflammation:respiratory epithelium		0 (0)	0 (0)	0 (0)	0 (0)	2 (40)	0 (0)	0 (0)	0 (0)
	respiratory metaplasia:gland		0 (0)	0 (0)	0 (0)	0 (0)	1 (20)	0 (0)	0 (0)	0 (0)
	squamous cell metaplasia:respiratory epithelium		0 (0)	0 (0)	0 (0)	0 (0)	2 (40)	0 (0)	0 (0)	0 (0)
	regeneration:respiratory epithelium		3 (60)	0 (0)	0 (0)	0 (0)	5 (100)	0 (0)	0 (0)	0 (0)
	regeneration:olfactory epithelium		0 (0)	0 (0)	0 (0)	0 (0)	4 (80)	0 (0)	0 (0)	0 (0)
	necrosis:olfactory epithelium		0 (0)	0 (0)	0 (0)	0 (0)	1 (20)	0 (0)	0 (0)	0 (0)
(Digestive system)										
liver			< 5>				< 5>			
	herniation		1 (20)	0 (0)	0 (0)	0 (0)	1 (20)	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

STUDY NO. : 0818
 ANIMAL : RAT F344/DuCrI CrIj [F344/DuCrIj]
 REPORT TYPE : A1
 SEX : MALE

HISTOPATHOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)
 ALL ANIMALS (0- 3W)

PAGE : 3

Organ	Findings	Group Name No. of Animals on Study Grade	Control 5				63ppm 5				125ppm 5				250ppm 5			
			1+ (%)	2+ (%)	3+ (%)	4+ (%)	1+ (%)	2+ (%)	3+ (%)	4+ (%)	1+ (%)	2+ (%)	3+ (%)	4+ (%)	1+ (%)	2+ (%)	3+ (%)	4+ (%)
(Digestive system)																		
liver	inflammatory cell nest		< 5>				< 5>				< 5>				< 5>			
		0 (0)	0 (0)	0 (0)	0 (0)	1 (20)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
(Urinary system)																		
kidney	mineralization:papilla		< 5>				< 5>				< 5>				< 5>			
		1 (20)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
	regeneration:proximal tubule		0 (0)	0 (0)	0 (0)	0 (0)	1 (20)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
Grade	1+ : Slight	2+ : Moderate	3+ : Marked	4+ : Severe														
< a >	a : Number of animals examined at the site																	
b	b : Number of animals with lesion																	
(c)	c : b / a * 100																	

(HPT150)

BAIS5

STUDY NO. : 0818
 ANIMAL : RAT F344/DuCrI CrIj [F344/DuCrIj]
 REPORT TYPE : A1
 SEX : MALE

HISTOPATHOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)
 ALL ANIMALS (0- 3W)

PAGE : 4

Organ_____	Findings_____	Group Name	500ppm				1000ppm			
		No. of Animals on Study	5				5			
		Grade	1+	2+	3+	4+	1+	2+	3+	4+
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
(Digestive system)										
liver			< 5>				< 5>			
	inflammatory cell nest		1	0	0	0	0	0	0	0
			(20)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
 (Urinary system)										
kidney			< 5>				< 5>			
	mineralization:papilla		1	0	0	0	0	0	0	0
			(20)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	regeneration:proximal tubule		0	0	0	0	0	0	0	0
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)

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

TABLE K 2

HISTOPATHOLOGICAL FINDINGS :
NON-NEOPLASTIC LESIONS : FEMALE
ALL ANIMALS

STUDY NO. : 0818
ANIMAL : RAT F344/DuCrI CrIj [F344/DuCrIj]
REPORT TYPE : A1
SEX : FEMALE

HISTOPATHOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)
ALL ANIMALS (0- 3W)

PAGE : 5

Organ	Findings	Group Name No. of Animals on Study Grade	Control				63ppm				125ppm				250ppm			
			1+ (%)	2+ (%)	3+ (%)	4+ (%)	1+ (%)	2+ (%)	3+ (%)	4+ (%)	1+ (%)	2+ (%)	3+ (%)	4+ (%)	1+ (%)	2+ (%)	3+ (%)	4+ (%)
(Respiratory system)																		
nasal cavit			< 5>				< 5>				< 5>				< 5>			
	inflammation:respiratory epithelium		0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
	respiratory metaplasia:gland		1 (20)	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)
	squamous cell metaplasia:respiratory epithelium		0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
	regeneration:respiratory epithelium		0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
	regeneration:olfactory epithelium		0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
(Digestive system)																		
liver			< 5>				< 5>				< 5>				< 5>			
	herniation		1 (20)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1 (20)	0 (0)	0 (0)	0 (0)
	inflammatory cell nest		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 (20)	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																	

STUDY NO. : 0818
 ANIMAL : RAT F344/DuCrI CrIj [F344/DuCrj]
 REPORT TYPE : A1
 SEX : FEMALE

HISTOPATHOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)
 ALL ANIMALS (0- 3W)

PAGE : 6

		Group Name	500ppm				1000ppm			
		No. of Animals on Study	5				5			
Organ_____	Findings_____	Grade	1+	2+	3+	4+	1+	2+	3+	4+
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
(Respiratory system)										
nasal cavit			< 5>				< 5>			
	inflammation:respiratory epithelium		0	0	0	0	3	0	0	0
			(0)	(0)	(0)	(0)	(60)	(0)	(0)	(0)
	respiratory metaplasia:gland		0	0	0	0	0	0	0	0
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	squamous cell metaplasia:respiratory epithelium		0	0	0	0	3	0	0	0
			(0)	(0)	(0)	(0)	(60)	(0)	(0)	(0)
	regeneration:respiratory epithelium		1	0	0	0	5	0	0	0
			(20)	(0)	(0)	(0)	(100)	(0)	(0)	(0)
	regeneration:olfactory epithelium		0	0	0	0	3	0	0	0
			(0)	(0)	(0)	(0)	(60)	(0)	(0)	(0)
(Digestive system)										
liver			< 5>				< 5>			
	herniation		0	0	0	0	1	0	0	0
			(0)	(0)	(0)	(0)	(20)	(0)	(0)	(0)
	inflammatory cell nest		0	0	0	0	0	0	0	0
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)

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

STUDY NO. : 0818
 ANIMAL : RAT F344/DuCrjCrj [F344/DuCrj]
 REPORT TYPE : A1
 SEX : FEMALE

HISTOPATHOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)
 ALL ANIMALS (0- 3W)

PAGE : 7

Organ_____	Findings_____	Group Name	Control				63ppm				125ppm				250ppm			
		No. of Animals on Study	5				5				5				5			
		Grade	1+	2+	3+	4+	1+	2+	3+	4+	1+	2+	3+	4+	1+	2+	3+	4+
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
(Urinary system)																		
kidney			< 5>				< 5>				< 5>				< 5>			
	mineralization:cortico-medullary junction		0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(20)	(0)	(0)	(0)	(20)	(0)	(0)	(0)

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

(HPT150)

BA1S5

STUDY NO. : 0818
ANIMAL : RAT F344/DuCrI CrIj [F344/DuCrIj]
REPORT TYPE : A1
SEX : FEMALE

HISTOPATHOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)
ALL ANIMALS (0- 3W)

PAGE : 8

Organ	Findings	Group Name No. of Animals on Study Grade	500ppm				1000ppm			
			1+ (%)	2+ (%)	3+ (%)	4+ (%)	1+ (%)	2+ (%)	3+ (%)	4+ (%)

(Urinary system)

kidney	mineralization:cortico-medullary junction	< 5>				< 5>			
		1 (20)	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			

(HPT150)

BAIS5