

アクリル酸のラットを用いた  
吸入による 13 週間毒性試験報告書

試験番号：0677

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TABLE A

CONCENTRATIONS OF ACRYLIC ACID

IN THE INHALATION

CHAMBER OF THE 13-WEEK INHALATION STUDY

CONCENTRATIONS OF ACRYLIC ACID IN THE INHALATION  
CHAMBER OF THE 13-WEEK INHALATION STUDY

Group Name	Concentration(ppm)
	Mean $\pm$ S.D.
Control	0.0 $\pm$ 0.0
10 ppm	9.9 $\pm$ 0.2
24 ppm	23.8 $\pm$ 0.2
60 ppm	59.5 $\pm$ 0.5
150 ppm	148.5 $\pm$ 0.7
200 ppm	198.6 $\pm$ 0.8

TABLE B 1

SURVIVAL ANIMAL NUMBERS : MALE

STUDY NO. : 0677

ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]

REPORT TYPE : A1 13

SEX : MALE

## SURVIVAL ANIMAL NUMBERS

PAGE : 1

Group Name	Animals At start	Administration (Weeks)												
		1	2	3	4	5	6	7	8	9	10	11	12	13
Control	10	10/10	10/10	10/10	10/10	10/10	10/10	10/10	10/10	10/10	10/10	10/10	10/10	10/10
		100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
10ppm	10	10/10	10/10	10/10	10/10	10/10	10/10	10/10	10/10	10/10	10/10	10/10	10/10	10/10
		100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
24ppm	10	10/10	10/10	10/10	10/10	10/10	10/10	10/10	10/10	10/10	10/10	10/10	10/10	10/10
		100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
60ppm	10	10/10	10/10	10/10	10/10	10/10	10/10	10/10	10/10	10/10	10/10	10/10	10/10	10/10
		100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
150ppm	10	10/10	10/10	10/10	10/10	10/10	10/10	10/10	10/10	10/10	10/10	10/10	10/10	10/10
		100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
200ppm	10	10/10	10/10	10/10	10/10	10/10	10/10	10/10	10/10	10/10	10/10	10/10	10/10	10/10
		100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of survival/ Number of effective animals		Survival rate(%)												

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TABLE B 2

SURVIVAL ANIMAL NUMBERS : FEMALE



STUDY NO. : 0677

ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]

REPORT TYPE : A1 13

SEX : FEMALE

## SURVIVAL ANIMAL NUMBERS

PAGE : 2

Group Name	Animals At start	Administration (Weeks)												
		1	2	3	4	5	6	7	8	9	10	11	12	13
Control	10	10/10	10/10	10/10	10/10	10/10	10/10	10/10	10/10	10/10	10/10	10/10	10/10	10/10
		100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
10ppm	10	10/10	10/10	10/10	10/10	10/10	10/10	10/10	10/10	10/10	10/10	10/10	10/10	10/10
		100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
24ppm	10	10/10	10/10	10/10	10/10	10/10	10/10	10/10	10/10	10/10	10/10	10/10	10/10	10/10
		100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
60ppm	10	10/10	10/10	10/10	10/10	10/10	10/10	10/10	10/10	10/10	10/10	10/10	10/10	10/10
		100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
150ppm	10	10/10	10/10	10/10	10/10	10/10	10/10	10/10	10/10	10/10	10/10	10/10	10/10	10/10
		100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
200ppm	10	10/10	10/10	10/10	10/10	10/10	10/10	10/10	10/10	10/10	10/10	10/10	10/10	10/10
		100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of survival/ Number of effective animals														
Survival rate(%)														

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TABLE C 1

CLINICAL OBSERVATION : MALE

STUDY NO. : 0677  
ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]  
REPORT TYPE : A1 13

CLINICAL OBSERVATION (SUMMARY)  
ALL ANIMALS

SEX : MALE

PAGE : 1

Clinical sign	Group Name	Administration Week-day												
		1-7	2-7	3-7	4-7	5-7	6-7	7-7	8-7	9-7	10-7	11-7	12-7	13-7
		1	1	1	1	1	1	1	1	1	1	1	1	1
NON REMARKABLE	Control	10	10	10	10	10	10	10	10	10	10	10	10	10
	10ppm	10	10	10	10	10	10	10	10	10	10	10	10	10
	24ppm	10	10	10	10	10	10	10	10	10	10	10	10	10
	60ppm	10	10	10	10	10	10	10	10	10	10	10	10	10
	150ppm	10	10	10	10	10	10	10	10	10	10	10	10	10
	200ppm	10	10	10	10	10	10	10	10	10	10	10	10	10

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TABLE C 2

CLINICAL OBSERVATION : FEMALE

STUDY NO. : 0677  
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]  
 REPORT TYPE : A1 13

CLINICAL OBSERVATION (SUMMARY)  
 ALL ANIMALS

SEX : FEMALE

PAGE : 2

Clinical sign	Group Name	Administration Week-day												
		1-7	2-7	3-7	4-7	5-7	6-7	7-7	8-7	9-7	10-7	11-7	12-7	13-7
		1	1	1	1	1	1	1	1	1	1	1	1	1
EXOPHTHALMOS	Control	0	0	0	0	0	0	0	0	0	0	1	1	1
	10ppm	0	0	0	0	0	0	0	0	0	0	0	0	0
	24ppm	0	0	0	1	1	1	1	1	1	1	1	1	1
	60ppm	0	0	0	0	0	0	0	0	0	0	0	0	0
	150ppm	0	0	0	0	0	0	0	0	0	0	0	0	0
	200ppm	0	0	0	0	0	0	0	0	0	0	0	0	0
CATARACT	Control	0	0	0	0	0	0	0	0	1	1	1	1	1
	10ppm	0	0	0	0	0	0	0	0	0	0	0	0	0
	24ppm	0	0	0	0	0	0	0	0	0	0	0	0	0
	60ppm	0	0	0	0	0	0	0	0	0	0	0	0	0
	150ppm	0	0	0	0	0	0	0	0	0	0	0	0	0
	200ppm	0	0	0	0	0	0	0	0	0	0	0	0	0
NON REMARKABLE	Control	10	10	10	10	10	10	10	10	9	9	9	9	9
	10ppm	10	10	10	10	10	10	10	10	10	10	10	10	10
	24ppm	10	10	10	9	9	9	9	9	9	9	9	9	9
	60ppm	10	10	10	10	10	10	10	10	10	10	10	10	10
	150ppm	10	10	10	10	10	10	10	10	10	10	10	10	10
	200ppm	10	10	10	10	10	10	10	10	10	10	10	10	10

(HAN190)

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TABLE D 1

BODY WEIGHT CHANGES AND SURVIVAL ANIMAL  
NUMBERS : MALE

STUDY NO. : 0677  
ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]  
UNIT : g  
REPORT TYPE : A1 13  
SEX : MALE

MEAN BODY WEIGHTS AND SURVIVAL

PAGE : 1

Week-Day on Study	Control			10ppm			24ppm			60ppm			150ppm			200ppm		
	Av. Wt.	No. of Surviv. <10>		Av. Wt.	% of cont. <10>	No. of Surviv.	Av. Wt.	% of cont. <10>	No. of Surviv.	Av. Wt.	% of cont. <10>	No. of Surviv.	Av. Wt.	% of cont. <10>	No. of Surviv.	Av. Wt.	% of cont. <10>	No. of Surviv.
1-7	157 (10)	10/10		157 (10)	100	10/10	157 (10)	100	10/10	156 (10)	99	10/10	152 (10)	97	10/10	147 (10)	94	10/10
2-7	189 (10)	10/10		187 (10)	99	10/10	186 (10)	98	10/10	185 (10)	98	10/10	179 (10)	95	10/10	171 (10)	90	10/10
3-7	214 (10)	10/10		214 (10)	100	10/10	212 (10)	99	10/10	211 (10)	99	10/10	205 (10)	96	10/10	197 (10)	92	10/10
4-7	234 (10)	10/10		235 (10)	100	10/10	231 (10)	99	10/10	230 (10)	98	10/10	222 (10)	95	10/10	212 (10)	91	10/10
5-7	250 (10)	10/10		252 (10)	101	10/10	249 (10)	100	10/10	245 (10)	98	10/10	238 (10)	95	10/10	227 (10)	91	10/10
6-7	265 (10)	10/10		262 (10)	99	10/10	258 (10)	97	10/10	255 (10)	96	10/10	250 (10)	94	10/10	237 (10)	89	10/10
7-7	276 (10)	10/10		270 (10)	98	10/10	271 (10)	98	10/10	266 (10)	96	10/10	263 (10)	95	10/10	250 (10)	91	10/10
8-7	287 (10)	10/10		280 (10)	98	10/10	282 (10)	98	10/10	276 (10)	96	10/10	272 (10)	95	10/10	260 (10)	91	10/10
9-7	298 (10)	10/10		290 (10)	97	10/10	291 (10)	98	10/10	284 (10)	95	10/10	280 (10)	94	10/10	269 (10)	90	10/10
10-7	306 (10)	10/10		295 (10)	96	10/10	298 (10)	97	10/10	290 (10)	95	10/10	287 (10)	94	10/10	275 (10)	90	10/10
11-7	313 (10)	10/10		301 (10)	96	10/10	305 (10)	97	10/10	297 (10)	95	10/10	294 (10)	94	10/10	281 (10)	90	10/10
12-7	317 (10)	10/10		304 (10)	96	10/10	312 (10)	98	10/10	303 (10)	96	10/10	299 (10)	94	10/10	284 (10)	90	10/10
13-7	321 (10)	10/10		308 (10)	96	10/10	315 (10)	98	10/10	307 (10)	96	10/10	303 (10)	94	10/10	288 (10)	90	10/10
< >:No. of effective animals, ( ):No. of measured animals Av. Wt. : g																		

(BI0040)

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TABLE D 2

BODY WEIGHT CHANGES AND SURVIVAL ANIMAL  
NUMBERS : FEMALE



STUDY NO. : 0677  
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]  
 UNIT : g  
 REPORT TYPE : A1 13  
 SEX : FEMALE

MEAN BODY WEIGHTS AND SURVIVAL

PAGE : 2

Week-Day on Study	Control		10ppm			24ppm			60ppm			150ppm			200ppm		
	Av. Wt.	No. of Surviv. <10>	Av. Wt.	% of cont. <10>	No. of Surviv.	Av. Wt.	% of cont. <10>	No. of Surviv.	Av. Wt.	% of cont. <10>	No. of Surviv.	Av. Wt.	% of cont. <10>	No. of Surviv.	Av. Wt.	% of cont. <10>	No. of Surviv.
1-7	112 (10)	10/10	114 (10)	102	10/10	114 (10)	102	10/10	113 (10)	101	10/10	111 (10)	99	10/10	108 (10)	96	10/10
2-7	125 (10)	10/10	127 (10)	102	10/10	128 (10)	102	10/10	127 (10)	102	10/10	124 (10)	99	10/10	120 (10)	96	10/10
3-7	136 (10)	10/10	139 (10)	102	10/10	139 (10)	102	10/10	137 (10)	101	10/10	135 (10)	99	10/10	131 (10)	96	10/10
4-7	142 (10)	10/10	146 (10)	103	10/10	147 (10)	104	10/10	145 (10)	102	10/10	141 (10)	99	10/10	140 (10)	99	10/10
5-7	148 (10)	10/10	154 (10)	104	10/10	155 (10)	105	10/10	152 (10)	103	10/10	149 (10)	101	10/10	146 (10)	99	10/10
6-7	153 (10)	10/10	158 (10)	103	10/10	160 (10)	105	10/10	155 (10)	101	10/10	153 (10)	100	10/10	151 (10)	99	10/10
7-7	156 (10)	10/10	162 (10)	104	10/10	164 (10)	105	10/10	160 (10)	103	10/10	159 (10)	102	10/10	156 (10)	100	10/10
8-7	161 (10)	10/10	167 (10)	104	10/10	169 (10)	105	10/10	164 (10)	102	10/10	164 (10)	102	10/10	160 (10)	99	10/10
9-7	164 (10)	10/10	171 (10)	104	10/10	171 (10)	104	10/10	169 (10)	103	10/10	167 (10)	102	10/10	164 (10)	100	10/10
10-7	169 (10)	10/10	175 (10)	104	10/10	173 (10)	102	10/10	171 (10)	101	10/10	171 (10)	101	10/10	166 (10)	98	10/10
11-7	171 (10)	10/10	178 (10)	104	10/10	177 (10)	104	10/10	174 (10)	102	10/10	174 (10)	102	10/10	169 (10)	99	10/10
12-7	172 (10)	10/10	181 (10)	105	10/10	179 (10)	104	10/10	176 (10)	102	10/10	176 (10)	102	10/10	171 (10)	99	10/10
13-7	172 (10)	10/10	181 (10)	105	10/10	181 (10)	105	10/10	178 (10)	103	10/10	176 (10)	102	10/10	172 (10)	100	10/10
< >:No. of effective animals, ( ):No. of measured animals      Av. Wt. : g																	

(BI0040)

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TABLE D 3

BODY WEIGHT CHANGES : MALE

STUDY NO. : 0677  
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]  
 UNIT : g  
 REPORT TYPE : A1 13  
 SEX : MALE

BODY WEIGHT CHANGES (SUMMARY)  
 ALL ANIMALS

PAGE : 1

Group Name	Administration		week-day									
	0-0		1-7		2-7		3-7		4-7		5-7	
Control	127±	5	157±	8	189±	9	214±	8	234±	9	250±	10
10ppm	128±	5	157±	8	187±	9	214±	9	235±	10	252±	11
24ppm	127±	5	157±	9	186±	11	212±	13	231±	15	249±	15
60ppm	127±	5	156±	5	185±	9	211±	10	230±	12	245±	11
150ppm	128±	5	152±	5	179±	7	205±	8	222±	10	238±	9
200ppm	128±	5	147±	8*	171±	11**	197±	13**	212±	14**	227±	15**

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

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STUDY NO. : 0677  
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]  
 UNIT : g  
 REPORT TYPE : A1 13  
 SEX : MALE

BODY WEIGHT CHANGES (SUMMARY)  
 ALL ANIMALS

PAGE : 2

Group Name	Administration		week-day															
	7-7		8-7		9-7		10-7		11-7		12-7		13-7					
Control	276±	11	287±	12	298±	13	306±	14	313±	16	317±	15	321±	17				
10ppm	270±	12	280±	11	290±	12	295±	13	301±	12	304±	14	308±	13				
24ppm	271±	15	282±	17	291±	17	298±	17	305±	17	312±	18	315±	20				
60ppm	266±	14	276±	14	284±	13	290±	15	297±	14	303±	14	307±	16				
150ppm	263±	12	272±	13	280±	12*	287±	14*	294±	13*	299±	14	303±	13				
200ppm	250±	18**	260±	20**	269±	22**	275±	21**	281±	22**	284±	21**	288±	22**				

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

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TABLE D 4

BODY WEIGHT CHANGES : FEMALE

STUDY NO. : 0677  
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]  
 UNIT : g  
 REPORT TYPE : A1 13  
 SEX : FEMALE

BODY WEIGHT CHANGES (SUMMARY)  
 ALL ANIMALS

PAGE : 3

Group Name	Administration		week-day									
	0-0		1-7		2-7		3-7		4-7		5-7	
Control	99±	3	112±	5	125±	6	136±	9	142±	9	148±	9
10ppm	99±	3	114±	5	127±	6	139±	9	146±	8	154±	8
24ppm	100±	3	114±	4	128±	6	139±	6	147±	7	155±	6
60ppm	100±	3	113±	4	127±	6	137±	8	145±	8	152±	8
150ppm	99±	3	111±	5	124±	7	135±	6	141±	7	149±	7
200ppm	99±	3	108±	5	120±	6	131±	6	140±	6	146±	6

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

Test of Dunnett

STUDY NO. : 0677  
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]  
 UNIT : g  
 REPORT TYPE : A1 13  
 SEX : FEMALE

BODY WEIGHT CHANGES (SUMMARY)  
 ALL ANIMALS

PAGE : 4

Group Name	Administration week-day		7-7		8-7		9-7		10-7		11-7		12-7		13-7	
Control	156±	11	161±	12	164±	13	169±	15	171±	15	172±	16	172±	13		
10ppm	162±	9	167±	10	171±	12	175±	12	178±	15	181±	13	181±	13		
24ppm	164±	9	169±	9	171±	8	173±	8	177±	9	179±	9	181±	10		
60ppm	160±	9	164±	10	169±	10	171±	10	174±	10	176±	10	178±	11		
150ppm	159±	11	164±	10	167±	10	171±	10	174±	10	176±	10	176±	10		
200ppm	156±	6	160±	6	164±	7	166±	7	169±	7	171±	8	172±	8		

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

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TABLE E 1

FOOD CONSUMPTION CHANGES AND SURVIVAL

ANIMAL NUMBERS : MALE



STUDY NO. : 0677  
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]  
 UNIT : g  
 REPORT TYPE : A1 13  
 SEX : MALE

MEAN FOOD CONSUMPTION(FC) AND SURVIVAL

PAGE : 1

Week-Day on Study	Control		10ppm		24ppm		60ppm		150ppm		200ppm						
	Av. FC.	No. of Surviv. <10>	Av. FC.	% of cont. <10>	No. of Surviv.	Av. FC.	% of cont. <10>	No. of Surviv.	Av. FC.	% of cont. <10>	No. of Surviv.	Av. FC.	% of cont. <10>	No. of Surviv.	Av. FC.	% of cont. <10>	No. of Surviv.
1-7	14.6 (10)	10/10	14.2 (10)	97	10/10	14.0 (10)	96	10/10	13.9 (10)	95	10/10	13.0 (10)	89	10/10	12.6 (10)	86	10/10
2-7	16.7 (10)	10/10	15.7 (10)	94	10/10	15.9 (10)	95	10/10	15.7 (10)	94	10/10	15.1 (10)	90	10/10	13.8 (10)	83	10/10
3-7	16.8 (10)	10/10	16.3 (10)	97	10/10	16.0 (10)	95	10/10	16.1 (10)	96	10/10	16.1 (10)	96	10/10	15.0 (10)	89	10/10
4-7	17.0 (10)	10/10	16.4 (10)	96	10/10	16.3 (10)	96	10/10	16.3 (10)	96	10/10	15.9 (10)	94	10/10	14.9 (10)	88	10/10
5-7	17.0 (10)	10/10	16.4 (10)	96	10/10	16.2 (10)	95	10/10	16.2 (10)	95	10/10	15.7 (10)	92	10/10	14.9 (10)	88	10/10
6-7	16.6 (10)	10/10	16.3 (10)	98	10/10	16.1 (10)	97	10/10	16.0 (10)	96	10/10	15.4 (10)	93	10/10	14.7 (10)	89	10/10
7-7	16.9 (10)	10/10	15.9 (10)	94	10/10	16.2 (10)	96	10/10	15.6 (10)	92	10/10	15.0 (10)	89	10/10	14.8 (10)	88	10/10
8-7	16.2 (10)	10/10	15.5 (10)	96	10/10	15.7 (10)	97	10/10	15.6 (10)	96	10/10	15.0 (10)	93	10/10	14.6 (10)	90	10/10
9-7	16.1 (10)	10/10	15.1 (10)	94	10/10	15.3 (10)	95	10/10	15.3 (10)	95	10/10	15.0 (10)	93	10/10	15.0 (10)	93	10/10
10-7	16.6 ( 5)	10/10	14.8 (10)	89	10/10	15.3 (10)	92	10/10	14.7 (10)	89	10/10	14.8 (10)	89	10/10	14.6 (10)	88	10/10
11-7	16.3 (10)	10/10	15.4 (10)	94	10/10	15.2 (10)	93	10/10	15.3 (10)	94	10/10	14.8 (10)	91	10/10	14.8 (10)	91	10/10
12-7	15.9 (10)	10/10	15.1 (10)	95	10/10	15.1 (10)	95	10/10	14.8 (10)	93	10/10	14.6 (10)	92	10/10	13.9 (10)	87	10/10
13-7	15.3 (10)	10/10	14.6 (10)	95	10/10	14.9 (10)	97	10/10	14.6 (10)	95	10/10	14.3 (10)	93	10/10	13.9 (10)	91	10/10
< >:No. of effective animals, ( ):No. of measured animals																	
Av. FC. : g																	

(BI0040)

BAIS 4

TABLE E 2

FOOD CONSUMPTION CHANGES AND SURVIVAL

ANIMAL NUMBERS : FEMALE

STUDY NO. : 0677  
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]  
 UNIT : g  
 REPORT TYPE : A1 13  
 SEX : FEMALE

MEAN FOOD CONSUMPTION(FC) AND SURVIVAL

PAGE : 2

Week-Day on Study	Control		10ppm			24ppm			60ppm			150ppm			200ppm		
	Av. FC.	No. of Surviv. <10>	Av. FC.	% of cont. <10>	No. of Surviv.	Av. FC.	% of cont. <10>	No. of Surviv.	Av. FC.	% of cont. <10>	No. of Surviv.	Av. FC.	% of cont. <10>	No. of Surviv.	Av. FC.	% of cont. <10>	No. of Surviv.
1-7	10.4 (10)	10/10	11.0 (10)	106	10/10	10.8 (10)	104	10/10	10.4 (10)	100	10/10	9.6 (10)	92	10/10	9.7 (10)	93	10/10
2-7	11.2 (10)	10/10	11.5 (10)	103	10/10	11.5 (10)	103	10/10	10.9 (10)	97	10/10	10.6 (10)	95	10/10	10.3 (10)	92	10/10
3-7	11.1 (10)	10/10	11.4 (10)	103	10/10	11.4 (10)	103	10/10	11.2 (10)	101	10/10	10.9 (10)	98	10/10	10.9 (10)	98	10/10
4-7	10.7 (10)	10/10	11.0 (10)	103	10/10	11.3 (10)	106	10/10	10.7 (10)	100	10/10	10.5 (10)	98	10/10	11.0 (10)	103	10/10
5-7	10.6 (10)	10/10	11.2 (10)	106	10/10	11.5 (10)	108	10/10	11.1 (10)	105	10/10	10.9 (10)	103	10/10	11.0 (10)	104	10/10
6-7	10.5 (10)	10/10	10.7 (10)	102	10/10	10.8 (10)	103	10/10	10.5 (10)	100	10/10	10.5 (10)	100	10/10	10.5 (10)	100	10/10
7-7	10.7 (10)	10/10	10.8 ( 9)	101	10/10	10.8 (10)	101	10/10	10.7 (10)	100	10/10	10.4 (10)	97	10/10	10.6 (10)	99	10/10
8-7	9.9 (10)	10/10	10.5 (10)	106	10/10	10.5 (10)	106	10/10	10.6 (10)	107	10/10	10.2 (10)	103	10/10	10.4 (10)	105	10/10
9-7	10.5 (10)	10/10	10.6 (10)	101	10/10	10.1 (10)	96	10/10	10.6 (10)	101	10/10	10.4 (10)	99	10/10	10.5 (10)	100	10/10
10-7	10.5 (10)	10/10	10.4 (10)	99	10/10	10.0 (10)	95	10/10	10.1 (10)	96	10/10	10.0 (10)	95	10/10	10.0 (10)	95	10/10
11-7	10.3 (10)	10/10	10.6 (10)	103	10/10	10.4 (10)	101	10/10	10.2 (10)	99	10/10	10.0 (10)	97	10/10	10.2 (10)	99	10/10
12-7	10.0 (10)	10/10	10.8 (10)	108	10/10	10.2 (10)	102	10/10	9.8 (10)	98	10/10	9.7 (10)	97	10/10	9.9 (10)	99	10/10
13-7	9.9 (10)	10/10	10.2 (10)	103	10/10	10.2 (10)	103	10/10	10.3 (10)	104	10/10	9.7 (10)	98	10/10	9.7 (10)	98	10/10
< >:No. of effective animals, ( ):No. of measured animals																	
Av. FC. : g																	

(BI0040)

BAIS 4

# TABLE E 3

## FOOD CONSUMPTION CHANGES : MALE

STUDY NO. : 0677  
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]  
 UNIT : g  
 REPORT TYPE : A1 13  
 SEX : MALE

FOOD CONSUMPTION CHANGES (SUMMARY)  
 ALL ANIMALS

PAGE : 1

Group Name	Administration 1-7(7)	week-day(effective) 2-7(7)	3-7(7)	4-7(7)	5-7(7)	6-7(7)	7-7(7)
Control	14.6± 1.2	16.7± 1.5	16.8± 1.5	17.0± 1.3	17.0± 1.2	16.6± 1.3	16.9± 1.1
10ppm	14.2± 0.9	15.7± 0.9	16.3± 0.8	16.4± 0.6	16.4± 0.5	16.3± 0.6	15.9± 0.6
24ppm	14.0± 0.7	15.9± 0.8	16.0± 1.0	16.3± 1.1	16.2± 0.9	16.1± 0.8	16.2± 1.3
60ppm	13.9± 0.9	15.7± 1.2	16.1± 1.3	16.3± 1.2	16.2± 0.9	16.0± 1.3	15.6± 1.2*
150ppm	13.0± 0.5**	15.1± 0.6**	16.1± 0.8	15.9± 0.9	15.7± 0.6**	15.4± 0.6	15.0± 0.5**
200ppm	12.6± 0.7**	13.8± 1.0**	15.0± 1.3**	14.9± 1.0**	14.9± 0.8**	14.7± 0.9**	14.8± 1.0**

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

Test of Dunnett

STUDY NO. : 0677  
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]  
 UNIT : g  
 REPORT TYPE : A1 13  
 SEX : MALE

FOOD CONSUMPTION CHANGES (SUMMARY)  
 ALL ANIMALS

PAGE : 2

Group Name	Administration week-day(effective)		8-7(7)		9-7(7)		10-7(7)		11-7(7)		12-7(7)		13-7(7)	
Control	16.2±	1.1	16.1±	1.4	16.6±	0.9	16.3±	1.5	15.9±	1.3	15.3±	1.0		
10ppm	15.5±	0.6	15.1±	0.7	14.8±	0.7**	15.4±	0.7	15.1±	0.8	14.6±	0.5		
24ppm	15.7±	0.9	15.3±	0.7	15.3±	0.7*	15.2±	1.0	15.1±	0.7	14.9±	1.1		
60ppm	15.6±	1.1	15.3±	0.9	14.7±	0.7**	15.3±	0.9	14.8±	0.9*	14.6±	0.7		
150ppm	15.0±	0.9*	15.0±	0.7	14.8±	0.7**	14.8±	0.8**	14.6±	0.7*	14.3±	0.6*		
200ppm	14.6±	1.1**	15.0±	1.1	14.6±	1.2**	14.8±	1.1**	13.9±	0.9**	13.9±	1.1**		

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

Test of Dunnett

(HAN260)

BAIS 4

TABLE E 4

FOOD CONSUMPTION CHANGES : FEMALE

STUDY NO. : 0677  
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]  
 UNIT : g  
 REPORT TYPE : A1 13  
 SEX : FEMALE

FOOD CONSUMPTION CHANGES (SUMMARY)  
 ALL ANIMALS

PAGE : 3

Group Name	Administration week-day(effective) 1-7(7)	2-7(7)	3-7(7)	4-7(7)	5-7(7)	6-7(7)	7-7(7)
Control	10.4± 0.3	11.2± 0.8	11.1± 1.0	10.7± 0.9	10.6± 0.9	10.5± 0.9	10.7± 0.9
10ppm	11.0± 0.5	11.5± 0.9	11.4± 1.0	11.0± 0.7	11.2± 0.7	10.7± 0.4	10.8± 0.9
24ppm	10.8± 0.7	11.5± 1.1	11.4± 0.7	11.3± 0.7	11.5± 0.7	10.8± 0.7	10.8± 0.8
60ppm	10.4± 0.5	10.9± 0.7	11.2± 1.0	10.7± 0.9	11.1± 0.8	10.5± 0.6	10.7± 0.6
150ppm	9.6± 0.5*	10.6± 0.7	10.9± 1.1	10.5± 0.7	10.9± 0.7	10.5± 0.8	10.4± 0.9
200ppm	9.7± 0.9	10.3± 0.8	10.9± 0.6	11.0± 0.8	11.0± 0.8	10.5± 0.8	10.6± 0.6

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

Test of Dunnett



STUDY NO. : 0677  
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]  
 UNIT : g  
 REPORT TYPE : A1 13  
 SEX : FEMALE

FOOD CONSUMPTION CHANGES (SUMMARY)  
 ALL ANIMALS

PAGE : 4

Group Name	Administration 8-7(7)	week-day(effective) 9-7(7)	10-7(7)	11-7(7)	12-7(7)	13-7(7)
Control	9.9± 0.9	10.5± 1.1	10.5± 1.5	10.3± 1.2	10.0± 1.2	9.9± 1.3
10ppm	10.5± 0.9	10.6± 1.0	10.4± 1.0	10.6± 0.8	10.8± 0.8	10.2± 0.8
24ppm	10.5± 0.8	10.1± 0.8	10.0± 0.6	10.4± 0.5	10.2± 0.5	10.2± 0.7
60ppm	10.6± 0.7	10.6± 0.8	10.1± 0.8	10.2± 0.5	9.8± 0.7	10.3± 0.6
150ppm	10.2± 0.9	10.4± 0.9	10.0± 0.8	10.0± 0.8	9.7± 0.7	9.7± 0.7
200ppm	10.4± 0.7	10.5± 0.7	10.0± 0.7	10.2± 0.5	9.9± 0.7	9.7± 0.6

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

\*\* :  $P \leq 0.01$

Test of Dunnett

(HAN260)

BAIS 4

TABLE F 1

HEMATOLOGY : MALE

STUDY NO. : 0677  
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]  
 MEASURE. TIME : 1  
 SEX : MALE

HEMATOLOGY (SUMMARY)  
 ALL ANIMALS ( 14W)

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	10	9.49±	0.17	16.7±	0.3	43.4±	0.8	45.7±	0.4	17.6±	0.2	38.4±	0.5	720±	42
10ppm	10	9.49±	0.17	16.7±	0.3	43.5±	0.9	45.9±	0.4	17.6±	0.3	38.4±	0.3	726±	67
24ppm	10	9.52±	0.17	16.7±	0.4	43.6±	0.5	45.8±	0.5	17.6±	0.3	38.4±	0.4	730±	46
60ppm	10	9.44±	0.19	16.7±	0.4	43.3±	0.9	45.9±	0.3	17.7±	0.2	38.5±	0.3	725±	35
150ppm	10	9.37±	0.10	16.6±	0.3	43.1±	0.5	46.1±	0.3	17.7±	0.2	38.5±	0.3	713±	40
200ppm	10	9.44±	0.20	16.6±	0.4	43.4±	0.8	46.0±	0.4	17.6±	0.4	38.2±	0.6	718±	30

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

\*\* :  $P \leq 0.01$

Test of Dunnett

(HCL070)

BAIS 4

STUDY NO. : 0677

ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]

MEASURE. TIME : 1

SEX : MALE

REPORT TYPE : A1

HEMATOLOGY (SUMMARY)

ALL ANIMALS ( 14W)

PAGE : 2

Group Name	NO. of Animals	RETICULOCYTE %		PROTHROMBIN TIME s e c		APTT s e c	
Control	10	1.8±	0.2	14.2±	1.3	24.2±	1.6
10ppm	10	1.9±	0.1	13.2±	1.5	23.3±	1.7
24ppm	10	1.8±	0.2	12.7±	0.6**	22.8±	0.8
60ppm	10	1.9±	0.2	13.2±	1.0	23.0±	1.5
150ppm	10	1.8±	0.1	13.4±	0.5	24.0±	1.0
200ppm	10	1.8±	0.1	13.3±	1.5	23.6±	2.1

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

\*\* :  $P \leq 0.01$

Test of Dunnett

(HCL070)

BAIS 4

STUDY NO. : 0677  
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]  
 MEASURE. TIME : 1  
 SEX : MALE

HEMATOLOGY (SUMMARY)  
 ALL ANIMALS ( 14W)

REPORT TYPE : A1

PAGE : 3

Group Name	NO. of Animals	WBC 10 <sup>3</sup> /μl		Differential N-BAND		WBC (%) N-SEG		EOSINO		BASO		MONO		LYMPHO		OTHER	
Control	10	6.81±	1.40	1±	1	22±	4	1±	1	0±	0	3±	1	73±	5	0±	0
10ppm	10	6.35±	1.95	0±	1	24±	6	2±	1	0±	0	3±	1	71±	6	0±	0
24ppm	10	6.77±	1.76	1±	1	21±	5	1±	0	0±	0	3±	1	74±	5	0±	0
60ppm	10	6.46±	1.39	0±	1	22±	6	1±	0	0±	0	3±	1	74±	6	0±	0
150ppm	10	6.19±	1.24	0±	1	21±	3	2±	1	0±	0	3±	1	75±	4	0±	0
200ppm	10	6.13±	1.26	1±	1	20±	5	1±	1	0±	0	3±	1	75±	5	0±	0

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

\*\* :  $P \leq 0.01$

Test of Dunnett

(HCL070)

BAIS 4

TABLE F 2

HEMATOLOGY : FEMALE

STUDY NO. : 0677  
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]  
 MEASURE. TIME : 1  
 SEX : FEMALE

HEMATOLOGY (SUMMARY)  
 ALL ANIMALS ( 14W)

REPORT TYPE : A1

PAGE : 4

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	10	8.66± 0.23	16.5± 0.3	41.9± 0.9	48.4± 0.4	19.0± 0.2	39.3± 0.4	757± 43
10ppm	10	8.93± 0.25	17.0± 0.5	43.1± 1.1	48.3± 0.3	19.0± 0.2	39.4± 0.3	785± 38
24ppm	10	8.83± 0.19	16.8± 0.4	42.7± 0.8	48.3± 0.3	19.0± 0.2	39.2± 0.3	788± 39
60ppm	10	8.74± 0.22	16.7± 0.4	42.4± 1.1	48.5± 0.4	19.1± 0.3	39.4± 0.5	779± 46
150ppm	10	8.84± 0.16	16.7± 0.4	42.7± 0.8	48.3± 0.2	18.9± 0.2	39.2± 0.4	770± 30
200ppm	10	8.87± 0.16	16.8± 0.4	42.8± 0.8	48.3± 0.4	18.9± 0.2	39.2± 0.5	757± 65

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

Test of Dunnett

(HCL070)

BATS 4

STUDY NO. : 0677

ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]

MEASURE. TIME : 1

SEX : FEMALE

REPORT TYPE : A1

HEMATOLOGY (SUMMARY)

ALL ANIMALS ( 14W)

PAGE : 5

Group Name	NO. of Animals	RETICULOCYTE %		PROTHROMBIN TIME s e c		APTT s e c	
Control	10	1.9±	0.3	12.2±	0.5	18.1±	1.1
10ppm	10	1.8±	0.2	12.0±	0.3	17.6±	0.8
24ppm	10	1.9±	0.4	11.9±	0.4	18.0±	0.6
60ppm	10	1.8±	0.2	11.9±	0.4	18.1±	0.7
150ppm	10	1.8±	0.3	12.0±	0.6	18.1±	1.0
200ppm	10	1.8±	0.3	12.2±	0.4	18.2±	0.7

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

\*\* :  $P \leq 0.01$

Test of Dunnett

(HCL070)

BAIS 4



STUDY NO. : 0677  
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]  
 MEASURE. TIME : 1  
 SEX : FEMALE

HEMATOLOGY (SUMMARY)  
 ALL ANIMALS ( 14W)

REPORT TYPE : A1

PAGE : 6

Group Name	NO. of Animals	WBC 10 <sup>3</sup> /μl		Differential N-BAND		WBC (%) N-SEG		EOSINO		BASO		MONO		LYMPHO		OTHER	
Control	10	3.65±	1.07	0±	1	25±	6	2±	1	0±	0	3±	1	70±	6	0±	0
10ppm	10	3.94±	1.30	1±	1	19±	3*	1±	0	0±	0	3±	1	75±	3*	0±	0
24ppm	10	3.86±	1.71	1±	1	23±	4	2±	1	0±	0	3±	1	72±	5	0±	0
60ppm	10	3.91±	1.04	0±	0	20±	4	2±	1	0±	0	3±	1	75±	4*	0±	0
150ppm	10	3.99±	1.23	0±	1	19±	4*	2±	1	0±	0	3±	1	75±	4*	0±	0
200ppm	10	3.80±	1.18	0±	0	19±	2**	2±	1	0±	0	3±	1	77±	3**	0±	0

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

\*\* :  $P \leq 0.01$

Test of Dunnett

(HCL070)

BAIS 4

TABLE G 1

BIOCHEMISTRY : MALE

STUDY NO. : 0677

ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]

MEASURE. TIME : 1

SEX : MALE

REPORT TYPE : A1

## BIOCHEMISTRY (SUMMARY)

ALL ANIMALS ( 14W)

PAGE : 1

Group Name	NO. of Animals	TOTAL PROTEIN g/dl		ALBUMIN g/dl		A/G RATIO		T-BILIRUBIN mg/dl		GLUCOSE mg/dl		T-CHOLESTEROL mg/dl		TRIGLYCERIDE mg/dl	
Control	10	6.5±	0.1	3.5±	0.1	1.2±	0.1	0.12±	0.01	208±	10	58±	3	66±	17
10ppm	10	6.5±	0.2	3.5±	0.0	1.2±	0.1	0.12±	0.01	212±	24	58±	5	56±	26
24ppm	10	6.5±	0.1	3.5±	0.1	1.2±	0.1	0.12±	0.01	220±	15	60±	5	73±	22
60ppm	10	6.5±	0.1	3.5±	0.1	1.2±	0.1	0.11±	0.01	207±	13	61±	5	53±	12
150ppm	10	6.4±	0.2	3.5±	0.1	1.2±	0.1*	0.12±	0.01	209±	17	59±	3	57±	17
200ppm	10	6.3±	0.2**	3.5±	0.2	1.2±	0.1*	0.11±	0.01	207±	14	54±	3	40±	11*

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

Test of Dunnett

(HCL074)

BAIS 4

STUDY NO. : 0677

ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]

MEASURE. TIME : 1

SEX : MALE

REPORT TYPE : A1

## BIOCHEMISTRY (SUMMARY)

ALL ANIMALS ( 14W)

PAGE : 2

Group Name	NO. of Animals	PHOSPHOLIPID mg/dl		AST I U / l		ALT I U / l		LDH I U / l		ALP I U / l		G-GTP I U / l		CK I U / l	
Control	10	111±	5	84±	14	50±	9	144±	38	243±	14	1±	0	97±	15
10ppm	10	110±	9	83±	24	47±	10	148±	52	250±	23	1±	0	100±	20
24ppm	10	113±	8	85±	24	49±	10	146±	61	251±	14	1±	0	102±	26
60ppm	10	111±	6	77±	19	43±	10	130±	46	241±	19	1±	0	94±	14
150ppm	10	109±	6	79±	13	44±	6	125±	30	244±	12	1±	0	98±	10
200ppm	10	102±	6*	70±	8	39±	3**	124±	42	245±	25	1±	0	98±	13

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

Test of Dunnett

(HCL074)

BAIS 4

STUDY NO. : 0677

ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]

MEASURE. TIME : 1

SEX : MALE

REPORT TYPE : A1

## BIOCHEMISTRY (SUMMARY)

ALL ANIMALS ( 14W)

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	10	17.8±	1.0	0.6±	0.0	142±	1	3.2±	0.1	104±	1	10.2±	0.2	5.4±	0.7
10ppm	10	18.6±	0.5	0.6±	0.0	143±	1	3.1±	0.2	104±	1	10.2±	0.2	5.5±	0.6
24ppm	10	19.1±	1.1*	0.6±	0.1	142±	1	3.1±	0.1	104±	1	10.3±	0.3	5.4±	0.8
60ppm	10	18.5±	1.0	0.6±	0.1	142±	1	3.1±	0.1	104±	1	10.2±	0.1	5.5±	0.6
150ppm	10	19.3±	1.3**	0.6±	0.0	142±	1	3.1±	0.2	104±	1	10.2±	0.2	5.7±	0.7
200ppm	10	19.3±	0.4**	0.6±	0.0	142±	1	3.2±	0.2	104±	1	10.1±	0.2	5.8±	0.8

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

Test of Dunnett

(HCL074)

BAIS 4

TABLE G 2

BIOCHEMISTRY : FEMALE

STUDY NO. : 0677  
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]  
 MEASURE. TIME : 1  
 SEX : FEMALE

BIOCHEMISTRY (SUMMARY)  
 ALL ANIMALS ( 14W)

REPORT TYPE : A1

PAGE : 4

Group Name	NO. of Animals	TOTAL PROTEIN g/dl		ALBUMIN g/dl		A/G RATIO		T-BILIRUBIN mg/dl		GLUCOSE mg/dl		T-CHOLESTEROL mg/dl		TRIGLYCERIDE mg/dl	
Control	10	6.2±	0.2	3.5±	0.2	1.2±	0.1	0.12±	0.01	144±	18	61±	6	13±	4
10ppm	10	6.3±	0.2	3.6±	0.1	1.3±	0.1	0.12±	0.01	146±	17	68±	8	12±	3
24ppm	10	6.3±	0.2	3.5±	0.1	1.3±	0.1	0.12±	0.01	158±	16	80±	5**	15±	6
60ppm	10	6.3±	0.1	3.5±	0.1	1.3±	0.1	0.12±	0.00	155±	10	69±	5	14±	3
150ppm	10	6.2±	0.2	3.5±	0.1	1.3±	0.1	0.12±	0.01	147±	19	68±	7	12±	2
200ppm	10	6.1±	0.2	3.5±	0.1	1.3±	0.1	0.13±	0.01	146±	15	65±	9	13±	2

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

\*\* :  $P \leq 0.01$

Test of Dunnett

(HCL074)

BAIS 4

STUDY NO. : 0677

ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]

MEASURE. TIME : 1

SEX : FEMALE

REPORT TYPE : A1

## BIOCHEMISTRY (SUMMARY)

ALL ANIMALS ( 14W)

PAGE : 5

Group Name	NO. of Animals	PHOSPHOLIPID mg/dl		AST I U / l		ALT I U / l		LDH I U / l		ALP I U / l		G-GTP I U / l		CK I U / l	
Control	10	119±	9	71±	6	33±	4	169±	82	205±	32	1±	1	108±	31
10ppm	10	132±	13	68±	4	33±	5	150±	45	183±	16	1±	1	100±	13
24ppm	10	151±	12**	72±	6	37±	6	162±	76	190±	13	2±	1	107±	28
60ppm	10	134±	9*	70±	8	37±	13	166±	53	190±	25	1±	0	135±	77
150ppm	10	129±	13	72±	6	39±	13	186±	85	192±	20	1±	0	127±	56
200ppm	10	126±	14	68±	5	32±	4	196±	109	204±	22	2±	1	115±	39

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

Test of Dunnett

(HCL074)

BAIS 4



STUDY NO. : 0677  
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]  
 MEASURE, TIME : 1  
 SEX : FEMALE

BIOCHEMISTRY (SUMMARY)  
 ALL ANIMALS ( 14W )

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	10	18.7±	1.3	0.6±	0.1	142±	1	3.4±	0.3	107±	1	9.8±	0.2	5.2±	1.2
10ppm	10	18.3±	1.0	0.6±	0.0	142±	1	3.3±	0.2	106±	2	9.9±	0.2	5.3±	1.0
24ppm	10	20.1±	1.6	0.7±	0.1	142±	1	3.2±	0.2	106±	1	10.0±	0.1	5.1±	0.9
60ppm	10	19.0±	1.4	0.7±	0.1	142±	1	3.2±	0.2	106±	1	10.0±	0.2	5.0±	0.8
150ppm	10	19.6±	1.9	0.7±	0.1	142±	1	3.4±	0.1	106±	1	9.9±	0.2	5.5±	0.6
200ppm	10	18.7±	2.0	0.6±	0.0	142±	2	3.4±	0.2	106±	1	9.9±	0.2	5.6±	0.5

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

\*\* :  $P \leq 0.01$

Test of Dunnett

(HCL074)

BAIS 4

TABLE H 1

URINALYSIS : MALE

STUDY NO. : 0677

ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]

MEASURE. TIME : 1

SEX : MALE

REPORT TYPE : A1

## URINALYSIS

PAGE : 1

Group Name	NO. of Animals	pH							CHI	Protein						CHI	Glucose						CHI	Ketone body						CHI	Bilirubin				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	10	0	0	0	1	2	5	2		0	6	4	0	0	0		10	0	0	0	0	0		8	2	0	0	0	0		10	0	0	0	
10ppm	10	0	0	0	1	3	5	1		0	6	4	0	0	0		10	0	0	0	0	0		10	0	0	0	0	0		10	0	0	0	
24ppm	10	0	0	0	0	4	5	1		0	4	3	3	0	0		10	0	0	0	0	0		6	3	1	0	0	0		10	0	0	0	
60ppm	10	0	0	0	0	3	5	2		0	2	6	2	0	0		10	0	0	0	0	0		6	3	1	0	0	0		10	0	0	0	
150ppm	10	0	0	1	0	4	4	1		0	6	4	0	0	0		10	0	0	0	0	0		10	0	0	0	0	0		10	0	0	0	
200ppm	10	0	0	0	0	1	8	1		0	3	4	3	0	0		10	0	0	0	0	0		5	3	2	0	0	0		10	0	0	0	

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

Test of CHI SQUARE

(HCL101)

BAIS 4

STUDY NO. : 0677

ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]

MEASURE. TIME : 1

SEX : MALE

REPORT TYPE : A1

URINALYSIS

PAGE : 2

Group Name	NO. of Animals	Occult blood					CHI	Urobilinogen					CHI
		-	±	+	2+	3+		±	+	2+	3+	4+	
Control	10	10	0	0	0	0	0	10	0	0	0	0	0
10ppm	10	10	0	0	0	0	0	10	0	0	0	0	0
24ppm	10	10	0	0	0	0	0	10	0	0	0	0	0
60ppm	10	10	0	0	0	0	0	10	0	0	0	0	0
150ppm	10	10	0	0	0	0	0	10	0	0	0	0	0
200ppm	10	10	0	0	0	0	0	10	0	0	0	0	0

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

Test of CHI SQUARE

(HCL101)

BAIS 4

TABLE H 2

URINALYSIS : FEMALE

STUDY NO. : 0677

## URINALYSIS

ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]

MEASURE. TIME : 1

SEX : FEMALE

REPORT TYPE : A1

PAGE : 3

Group Name	NO. of Animals	pH							CHI	Protein						CHI	Glucose						CHI	Ketone body						CHI	Bilirubin				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	10	0	0	0	0	0	3	7		3	7	0	0	0	0		10	0	0	0	0	0		10	0	0	0	0	0		10	0	0	0	
10ppm	10	0	0	0	0	3	4	3		3	5	2	0	0	0		10	0	0	0	0	0		10	0	0	0	0	0		10	0	0	0	
24ppm	10	0	0	0	2	2	2	4		1	8	1	0	0	0		10	0	0	0	0	0		10	0	0	0	0	0		10	0	0	0	
60ppm	10	0	0	1	0	1	5	3		5	3	2	0	0	0		10	0	0	0	0	0		10	0	0	0	0	0		10	0	0	0	
150ppm	10	0	0	0	0	2	5	3		6	2	2	0	0	0		10	0	0	0	0	0		9	1	0	0	0	0		10	0	0	0	
200ppm	10	0	0	0	0	2	5	3		6	4	0	0	0	0		10	0	0	0	0	0		10	0	0	0	0	0		10	0	0	0	

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

Test of CHI SQUARE

(HCL101)

BAIS-4

STUDY NO. : 0677

URINALYSIS

ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]

MEASURE. TIME : 1

SEX : FEMALE

REPORT TYPE : A1

PAGE : 4

Group Name	NO. of Animals	Occult blood					CHI	Urobilinogen					CHI
		-	±	+	2+	3+		±	+	2+	3+	4+	
Control	10	10	0	0	0	0	0	10	0	0	0	0	0
10ppm	10	10	0	0	0	0	0	10	0	0	0	0	0
24ppm	10	10	0	0	0	0	0	10	0	0	0	0	0
60ppm	10	10	0	0	0	0	0	10	0	0	0	0	0
150ppm	10	10	0	0	0	0	0	10	0	0	0	0	0
200ppm	10	10	0	0	0	0	0	10	0	0	0	0	0

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

Test of CHI SQUARE

(HCL101)

BAIS 4

TABLE I 1

GROSS FINDINGS : MALE



STUDY NO. : 0677  
ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]  
REPORT TYPE : A1  
SEX : MALE

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

PAGE : 1

Organ	Findings	Group Name	Control	10ppm	24ppm	60ppm
		NO. of Animals	10 (%)	10 (%)	10 (%)	10 (%)
liver	herniation		1 ( 10)	3 ( 30)	0 ( 0)	1 ( 10)

(HPT080)

BAIS 4

STUDY NO. : 0677  
ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]  
REPORT TYPE : A1  
SEX : MALE

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

PAGE : 2

Organ	Findings	Group Name		150ppm		200ppm	
		NO. of Animals		10	(%)	10	(%)
liver	herniation			0	( 0)	0	( 0)

(HPT080)

BAIS 4

TABLE I 2

GROSS FINDINGS : FEMALE

STUDY NO. : 0677  
ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]  
REPORT TYPE : A1  
SEX : FEMALE

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

PAGE : 3

Organ	Findings	Group Name NO. of Animals	Control	10ppm	24ppm	60ppm
			10 (%)	10 (%)	10 (%)	10 (%)
liver	herniation		0 ( 0)	1 ( 10)	0 ( 0)	2 ( 20)
	enlarged		0 ( 0)	0 ( 0)	1 ( 10)	0 ( 0)
	white		1 ( 10)	0 ( 0)	0 ( 0)	0 ( 0)

(HPT080)

BAIS 4

STUDY NO. : 0677  
ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]  
REPORT TYPE : A1  
SEX : FEMALE

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

PAGE : 4

Organ	Findings	Group Name NO. of Animals	150ppm		200ppm	
			10	(%)	10	(%)
liver	herniation		3	( 30)	2	( 20)
	enlarged		0	( 0)	0	( 0)
	white		0	( 0)	0	( 0)

(HPT080)

BAIS 4

TABLE J 1

ORGAN WEIGHT, ABSOLUTE : MALE

STUDY NO. : 0677  
ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]  
REPORT TYPE : A1  
SEX : MALE  
UNIT: g

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

PAGE : 1

Group Name	NO. of Animals	Body Weight	THYMUS	ADRENALS	TESTES	HEART	LUNGS
Control	10	301± 15	0.249± 0.044	0.058± 0.006	3.142± 0.109	0.917± 0.071	0.990± 0.042
10ppm	10	289± 12	0.218± 0.037	0.057± 0.006	3.128± 0.095	0.897± 0.061	0.961± 0.056
24ppm	10	295± 17	0.205± 0.034*	0.053± 0.007	3.128± 0.138	0.925± 0.094	0.954± 0.075
60ppm	10	287± 13	0.216± 0.023	0.054± 0.007	3.074± 0.213	0.877± 0.045	0.959± 0.055
150ppm	10	282± 13*	0.199± 0.029**	0.055± 0.006	3.105± 0.078	0.891± 0.064	0.945± 0.049
200ppm	10	267± 20**	0.186± 0.019**	0.055± 0.007	2.881± 0.481	0.867± 0.080	0.919± 0.061

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

Test of Dunnett

(HCL040)

BAIS 4

STUDY NO. : 0677  
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]  
 REPORT TYPE : A1  
 SEX : MALE  
 UNIT: g

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

PAGE : 2

Group Name	NO. of Animals	KIDNEYS		SPLEEN		LIVER		BRAIN	
Control	10	1.786±	0.092	0.561±	0.035	7.203±	0.300	1.909±	0.041
10ppm	10	1.731±	0.065	0.532±	0.034	6.886±	0.349	1.908±	0.053
24ppm	10	1.750±	0.135	0.538±	0.042	7.151±	0.655	1.908±	0.065
60ppm	10	1.704±	0.081	0.528±	0.031	6.842±	0.307	1.887±	0.052
150ppm	10	1.695±	0.060	0.531±	0.014	6.646±	0.310**	1.890±	0.049
200ppm	10	1.665±	0.115	0.509±	0.045	6.344±	0.631**	1.880±	0.045

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

Test of Dunnett

(HCL040)

BAIS 4



TABLE J 2

ORGAN WEIGHT, ABSOLUTE : FEMALE

STUDY NO. : 0677  
ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]  
REPORT TYPE : A1  
SEX : FEMALE  
UNIT: g

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

PAGE : 3

Group Name	NO. of Animals	Body Weight	THYMUS	ADRENALS	OVARIES	HEART	LUNGS
Control	10	159± 14	0.172± 0.029	0.058± 0.006	0.089± 0.010	0.590± 0.043	0.677± 0.041
10ppm	10	168± 14	0.181± 0.026	0.058± 0.004	0.094± 0.008	0.601± 0.042	0.691± 0.029
24ppm	10	167± 9	0.188± 0.024	0.056± 0.007	0.090± 0.009	0.616± 0.049	0.692± 0.063
60ppm	10	164± 9	0.178± 0.013	0.057± 0.008	0.097± 0.011	0.618± 0.061	0.701± 0.034
150ppm	10	162± 9	0.182± 0.027	0.056± 0.004	0.088± 0.006	0.598± 0.041	0.686± 0.032
200ppm	10	158± 7	0.175± 0.019	0.059± 0.008	0.091± 0.008	0.597± 0.037	0.669± 0.038

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

Test of Dunnett

(HCL040)

BAIS 4

STUDY NO. : 0677  
ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]  
REPORT TYPE : A1  
SEX : FEMALE  
UNIT: g

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

PAGE : 4

Group Name	NO. of Animals	KIDNEYS		SPLEEN		LIVER		BRAIN	
Control	10	1.031±	0.046	0.355±	0.022	3.669±	0.344	1.733±	0.062
10ppm	10	1.068±	0.066	0.352±	0.021	3.778±	0.244	1.723±	0.035
24ppm	10	1.060±	0.070	0.355±	0.027	3.781±	0.177	1.761±	0.055
60ppm	10	1.077±	0.053	0.354±	0.020	3.879±	0.182	1.749±	0.019
150ppm	10	1.047±	0.055	0.356±	0.020	3.769±	0.208	1.759±	0.027
200ppm	10	1.032±	0.043	0.345±	0.022	3.781±	0.187	1.724±	0.063

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

Test of Dunnett

(HCL040)

BAIS 4

TABLE K 1

ORGAN WEIGHT, RELATIVE : MALE

STUDY NO. : 0677  
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]  
 REPORT TYPE : A1  
 SEX : MALE  
 UNIT: %

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

PAGE : 1

Group Name	NO. of Animals	Body Weight (g)	THYMUS	ADRENALS	TESTES	HEART	LUNGS
Control	10	301± 15	0.083± 0.014	0.019± 0.002	1.045± 0.033	0.305± 0.011	0.330± 0.016
10ppm	10	289± 12	0.076± 0.012	0.020± 0.003	1.084± 0.045	0.310± 0.013	0.333± 0.019
24ppm	10	295± 17	0.070± 0.011*	0.018± 0.002	1.064± 0.045	0.314± 0.021	0.324± 0.017
60ppm	10	287± 13	0.075± 0.008	0.019± 0.002	1.071± 0.050	0.306± 0.018	0.335± 0.020
150ppm	10	282± 13*	0.070± 0.009*	0.019± 0.002	1.103± 0.031**	0.317± 0.019	0.335± 0.012
200ppm	10	267± 20**	0.070± 0.005*	0.021± 0.002	1.078± 0.153*	0.325± 0.010	0.345± 0.012

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

Test of Dunnett

(HCL042)

BAIS 4

STUDY NO. : 0677  
ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]  
REPORT TYPE : A1  
SEX : MALE  
UNIT: %

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

PAGE : 2

Group Name	NO. of Animals	KIDNEYS	SPLEEN	LIVER	BRAIN
Control	10	0.594± 0.018	0.187± 0.012	2.397± 0.074	0.636± 0.026
10ppm	10	0.600± 0.020	0.184± 0.011	2.383± 0.058	0.661± 0.021
24ppm	10	0.594± 0.023	0.183± 0.006	2.425± 0.092	0.649± 0.023
60ppm	10	0.594± 0.023	0.184± 0.011	2.386± 0.061	0.659± 0.023
150ppm	10	0.602± 0.028	0.189± 0.006	2.359± 0.071	0.671± 0.021*
200ppm	10	0.625± 0.020*	0.191± 0.004	2.376± 0.080	0.708± 0.039**

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

Test of Dunnett

(HCL042)

BAIS 4

TABLE K 2

ORGAN WEIGHT, RELATIVE : FEMALE

STUDY NO. : 0677  
ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]  
REPORT TYPE : A1  
SEX : FEMALE  
UNIT: %

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

PAGE : 3

Group Name	NO. of Animals	Body Weight (g)	THYMUS	ADRENALS	OVARIES	HEART	LUNGS
Control	10	159± 14	0.108± 0.014	0.036± 0.004	0.056± 0.008	0.373± 0.030	0.427± 0.020
10ppm	10	168± 14	0.108± 0.019	0.034± 0.003	0.056± 0.007	0.358± 0.021	0.412± 0.026
24ppm	10	167± 9	0.113± 0.014	0.033± 0.004	0.054± 0.006	0.369± 0.022	0.414± 0.026
60ppm	10	164± 9	0.109± 0.005	0.035± 0.005	0.059± 0.005	0.378± 0.027	0.430± 0.022
150ppm	10	162± 9	0.113± 0.017	0.035± 0.003	0.055± 0.005	0.370± 0.017	0.425± 0.019
200ppm	10	158± 7	0.110± 0.009	0.037± 0.005	0.058± 0.005	0.377± 0.021	0.423± 0.016

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

Test of Dunnett

(HCL042)

BAIS 4



STUDY NO. : 0677  
ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]  
REPORT TYPE : A1  
SEX : FEMALE  
UNIT: %

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

PAGE : 4

Group Name	NO. of Animals	KIDNEYS	SPLEEN	LIVER	BRAIN
Control	10	0.652± 0.041	0.224± 0.015	2.313± 0.151	1.097± 0.079
10ppm	10	0.636± 0.020	0.210± 0.012*	2.247± 0.099	1.029± 0.084
24ppm	10	0.635± 0.031	0.212± 0.009	2.264± 0.048	1.056± 0.054
60ppm	10	0.659± 0.028	0.217± 0.010	2.373± 0.066	1.073± 0.071
150ppm	10	0.648± 0.016	0.220± 0.006	2.333± 0.056	1.091± 0.053
200ppm	10	0.653± 0.011	0.218± 0.010	2.393± 0.091	1.092± 0.046

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

Test of Dunnett

(HCL042)

BAIS 4

TABLE L 1

HISTOPATHOLOGICAL FINDINGS :  
NON-NEOPLASTIC LESIONS : MALE

STUDY NO. : 0677  
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]  
 REPORT TYPE : A1  
 SEX : MALE

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

PAGE : 1

		Group Name	Control				10ppm				24ppm				60ppm			
		No. of Animals on Study	10				10				10				10			
Organ	Findings	Grade	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Respiratory system}																		
nasal cavit			<10>				<10>				<10>				<10>			
	respiratory metaplasia:olfactory epithelium		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 )	( 10 )	( 0 )	( 0 )	( 0 )
	squamous cell metaplasia:respiratory epithelium		0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0 *
			( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 50 )	( 0 )	( 0 )	( 0 )
	squamous cell metaplasia: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 )
	atrophy:olfactory nerve		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	
	atrophy:olfactory epithelium		0	0	0	0	0	0	0	0	2	0	0	0	7	2	0	0 **
			( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 20 )	( 0 )	( 0 )	( 0 )	( 70 )	( 20 )	( 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 )
	necrosis: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 )
	lung		<10>				<10>				<10>				<10>			
	ossification		0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
		( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 10 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	

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. : 0677  
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]  
 REPORT TYPE : A1  
 SEX : MALE

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

PAGE : 2

Organ	Findings	Group Name No. of Animals on Study				150ppm				200ppm			
		Grade				10				10			
		1	2	3	4	1	2	3	4	1	2	3	4
		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Respiratory system}													
nasal cavit													
	respiratory metaplasia:olfactory epithelium	<10>				<10>				<10>			
		0	0	0	0	0	0	0	0	0	0	0	0
		( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)
	squamous cell metaplasia:respiratory epithelium	2	6	0	0 **	0	9	0	0 **	0	9	0	0 **
		( 20)	( 60)	( 0)	( 0)	( 0)	( 90)	( 0)	( 0)	( 0)	( 90)	( 0)	( 0)
	squamous cell metaplasia:olfactory epithelium	10	0	0	0 **	9	1	0	0 **	9	1	0	0 **
		(100)	( 0)	( 0)	( 0)	( 90)	( 10)	( 0)	( 0)	( 90)	( 10)	( 0)	( 0)
	atrophy:olfactory nerve	10	0	0	0 **	9	1	0	0 **	9	1	0	0 **
		(100)	( 0)	( 0)	( 0)	( 90)	( 10)	( 0)	( 0)	( 90)	( 10)	( 0)	( 0)
	atrophy:olfactory epithelium	1	9	0	0 **	0	10	0	0 **	0	10	0	0 **
		( 10)	( 90)	( 0)	( 0)	( 0)	(100)	( 0)	( 0)	( 0)	(100)	( 0)	( 0)
	necrosis:olfactory epithelium	1	0	0	0	2	0	0	0	2	0	0	0
		( 10)	( 0)	( 0)	( 0)	( 20)	( 0)	( 0)	( 0)	( 20)	( 0)	( 0)	( 0)
	necrosis:respiratory epithelium	0	0	0	0	1	0	0	0	1	0	0	0
		( 0)	( 0)	( 0)	( 0)	( 10)	( 0)	( 0)	( 0)	( 10)	( 0)	( 0)	( 0)
lung													
	ossification	<10>				<10>				<10>			
		0	0	0	0	0	0	0	0	0	0	0	0
		( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)

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. : 0677  
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]  
 REPORT TYPE : A1  
 SEX : MALE

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

PAGE : 3

		Group Name	Control				10ppm				24ppm				60ppm			
		No. of Animals on Study	10				10				10				10			
Organ	Findings	Grade	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
(Respiratory system)																		
lung			<10>				<10>				<10>				<10>			
	accumulation of foamy cells		0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
			( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 10 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )
(Hematopoietic system)																		
thymus			<10>				<10>				<10>				<10>			
	atrophy		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )
(Circulatory system)																		
heart			<10>				<10>				<10>				<10>			
	inflammatory cell nest		0	0	0	0	2	0	0	0	1	0	0	0	0	0	0	0
			( 0 )	( 0 )	( 0 )	( 0 )	( 20 )	( 0 )	( 0 )	( 0 )	( 10 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )
(Digestive system)																		
liver			<10>				<10>				<10>				<10>			
	herniation		0	0	0	0	3	0	0	0	0	0	0	0	1	0	0	0
			( 0 )	( 0 )	( 0 )	( 0 )	( 30 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 10 )	( 0 )	( 0 )	( 0 )

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

STUDY NO. : 0677  
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]  
 REPORT TYPE : A1  
 SEX : MALE

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

PAGE : 4

		Group Name	.150ppm				200ppm			
		No. of Animals on Study	10				10			
Organ	Findings	Grade	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
(Respiratory system)										
lung			<10>				<10>			
	accumulation of foamy cells		0	0	0	0	0	0	0	0
			( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)
(Hematopoietic system)										
thymus			<10>				<10>			
	atrophy		0	0	0	0	1	0	0	0
			( 0)	( 0)	( 0)	( 0)	( 10)	( 0)	( 0)	( 0)
(Circulatory system)										
heart			<10>				<10>			
	inflammatory cell nest		0	0	0	0	0	0	0	0
			( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)
(Digestive system)										
liver			<10>				<10>			
	herniation		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  
 Significant difference ; \* :  $P \leq 0.05$  \*\* :  $P \leq 0.01$  Test of Chi Square

STUDY NO. : 0677  
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]  
 REPORT TYPE : A1  
 SEX : MALE

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

PAGE : 5

Organ	Findings	Group Name	Control				10ppm				24ppm				60ppm			
		No. of Animals on Study	10				10				10				10			
		Grade	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Urinary system}																		
kidney	eosinophilic body		<10>				<10>				<10>				<10>			
		1	9	0	0	1	8	0	0	0	10	0	0	0	10	0	0	
		( 10)	( 90)	( 0)	( 0)	( 10)	( 80)	( 0)	( 0)	( 0)	( 100)	( 0)	( 0)	( 0)	( 100)	( 0)	( 0)	
	regeneration:proximal tubule		1	0	0	0	1	0	0	0	2	0	0	0	2	0	0	0
			( 10)	( 0)	( 0)	( 0)	( 10)	( 0)	( 0)	( 0)	( 20)	( 0)	( 0)	( 0)	( 20)	( 0)	( 0)	( 0)
{Endocrine system}																		
thyroid	ultimibranhial body remanet		<10>				<10>				<10>				<10>			
		0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	
		( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 10)	( 0)	( 0)	( 0)	( 10)	( 0)	( 0)	( 0)	
{Reproductive system}																		
testis	atrophy		<10>				<10>				<10>				<10>			
		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)	( 20)	( 0)	( 0)	( 0)		
epididymis	debris of spermatic elements		<10>				<10>				<10>				<10>			
		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
		( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 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. : 0677  
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]  
 REPORT TYPE : A1  
 SEX : MALE

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

PAGE : 6

Organ	Findings	Group Name No. of Animals on Study				150ppm				200ppm			
		Grade				10				10			
		1	2	3	4	1	2	3	4	1	2	3	4
		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Urinary system}													
kidney	eosinophilic body	0 ( 0)	10 (100)	0 ( 0)	0 ( 0)	0 ( 0)	10 (100)	0 ( 0)	0 ( 0)	0 ( 0)	10 (100)	0 ( 0)	0 ( 0)
	regeneration:proximal tubule	2 ( 20)	0 ( 0)	0 ( 0)	0 ( 0)	1 ( 10)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)
{Endocrine system}													
thyroid	ultimibranchial body remanet	1 ( 10)	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	atrophy	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	1 ( 10)	0 ( 0)	1 ( 10)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)
epididymis	debris of spermatic elements	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	1 ( 10)	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. : 0677  
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]  
 REPORT TYPE : A1  
 SEX : MALE

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

PAGE : 7

		Group Name	Control				10ppm				24ppm				60ppm			
		No. of Animals on Study	10				10				10				10			
		Grade	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Organ_____	Findings_____		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
<hr/>																		
(Reproductive system)																		
prostate			<10>				<10>				<10>				<10>			
	inflammation		1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			( 10 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )
 (Special sense organs/appendage)																		
Harder gl			<10>				<10>				<10>				<10>			
	lymphocytic infiltration		1	0	0	0	2	0	0	0	1	0	0	0	1	0	0	0
			( 10 )	( 0 )	( 0 )	( 0 )	( 20 )	( 0 )	( 0 )	( 0 )	( 10 )	( 0 )	( 0 )	( 0 )	( 10 )	( 0 )	( 0 )	( 0 )

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

(HPT150)

BAIS4

STUDY NO. : 0677  
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]  
 REPORT TYPE : A1  
 SEX : MALE

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

PAGE : 8

		Group Name				150ppm				200ppm			
		No. of Animals on Study				10				10			
		Grade				1	2	3	4	1	2	3	4
Organ	Findings					(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)

{Reproductive system}

prostate	inflammation	<10>				<10>			
		0	0	0	0	0	0	0	0
		( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)

{Special sense organs/appendage}

Harder gl	lymphocytic infiltration	<10>				<10>			
		3	0	0	0	1	0	0	0
		( 30)	( 0)	( 0)	( 0)	( 10)	( 0)	( 0)	( 0)

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

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

b b : Number of animals with lesion

( c ) c : b / a \* 100

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

(HPT150)

BAIS4

TABLE L 2

HISTOPATHOLOGICAL FINDINGS :  
NON-NEOPLASTIC LESIONS : FEMALE

STUDY NO. : 0677  
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]  
 REPORT TYPE : A1  
 SEX : FEMALE

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

PAGE : 9

Organ	Findings	Group Name No. of Animals on Study				Control				10ppm				24ppm				60ppm			
		Grade				10				10				10				10			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Respiratory system}																					
nasal cavit		<10>				<10>				<10>				<10>				<10>			
	squamous cell metaplasia:respiratory epithelium	0	0	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 )	( 0 )	( 0 )	( 0 )	( 0 )	( 10 )	( 0 )	( 0 )	( 0 )
	squamous cell metaplasia: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 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )
	atrophy:olfactory nerve	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )
	atrophy:olfactory epithelium	0	0	0	0	0	0	0	0	6	0	0	0 *	8	1	0	0 **	8	1	0	0 **
		( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 60 )	( 0 )	( 0 )	( 0 )	( 80 )	( 10 )	( 0 )	( 0 )	( 80 )	( 10 )	( 0 )	( 0 )
lung		<10>				<10>				<10>				<10>				<10>			
	ossification	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 )	( 0 )	( 0 )	( 0 )	( 10 )	( 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	0	0	0	0	0	0	0	0
		( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 10 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )
{Hematopoietic system}																					
bone marrow		<10>				<10>				<10>				<10>				<10>			
	granulation	1	0	0	0	1	0	0	0	1	0	0	0	1	0	0	0	1	1	0	0
		( 10 )	( 0 )	( 0 )	( 0 )	( 10 )	( 0 )	( 0 )	( 0 )	( 10 )	( 0 )	( 0 )	( 0 )	( 10 )	( 0 )	( 0 )	( 0 )	( 10 )	( 10 )	( 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. : 0677  
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]  
 REPORT TYPE : A1  
 SEX : FEMALE

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

PAGE : 10

		Group Name		150ppm				200ppm			
		No. of Animals on Study		10				10			
Organ	Findings	Grade		1	2	3	4	1	2	3	4
		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Respiratory system}											
nasal cavit		<10>				<10>					
	squamous cell metaplasia:respiratory epithelium	7	0	0	0 **	6	1	0	0 **		
		( 70)	( 0)	( 0)	( 0)	( 60)	( 10)	( 0)	( 0)		
	squamous cell metaplasia:olfactory epithelium	5	0	0	0 *	10	0	0	0 **		
		( 50)	( 0)	( 0)	( 0)	(100)	( 0)	( 0)	( 0)		
	atrophy:olfactory nerve	9	0	0	0 **	10	0	0	0 **		
		( 90)	( 0)	( 0)	( 0)	(100)	( 0)	( 0)	( 0)		
	atrophy:olfactory epithelium	3	7	0	0 **	0	10	0	0 **		
		( 30)	( 70)	( 0)	( 0)	( 0)	(100)	( 0)	( 0)		
lung		<10>				<10>					
	ossification	1	0	0	0	0	0	0	0		
		( 10)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)		
	accumulation of foamy cells	0	0	0	0	2	0	0	0		
		( 0)	( 0)	( 0)	( 0)	( 20)	( 0)	( 0)	( 0)		
{Hematopoietic system}											
bone marrow		<10>				<10>					
	granulation	2	0	0	0	1	0	0	0		
		( 20)	( 0)	( 0)	( 0)	( 10)	( 0)	( 0)	( 0)		

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 ALL ANIMALS (0- 14W)

PAGE : 11

Organ	Findings	Group Name No. of Animals on Study				Control 10				10ppm 10				24ppm 10				60ppm 10			
		Grade																			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
(Digestive system)																					
liver	herniation	<10>				<10>				<10>				<10>				<10>			
		0	0	0	0	1	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0
		( 0)	( 0)	( 0)	( 0)	( 10)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 20)	( 0)	( 0)	( 0)	( 20)	( 0)	( 0)	( 0)
	inflammatory cell nest	3	0	0	0	2	0	0	0	1	0	0	0	2	0	0	0	2	0	0	0
		( 30)	( 0)	( 0)	( 0)	( 20)	( 0)	( 0)	( 0)	( 10)	( 0)	( 0)	( 0)	( 20)	( 0)	( 0)	( 0)	( 20)	( 0)	( 0)	( 0)
(Urinary system)																					
kidney	mineralization:cortico-medullary junction	<10>				<10>				<10>				<10>				<10>			
		2	0	0	0	2	0	0	0	2	0	0	0	2	0	0	0	2	0	0	0
		( 20)	( 0)	( 0)	( 0)	( 20)	( 0)	( 0)	( 0)	( 20)	( 0)	( 0)	( 0)	( 20)	( 0)	( 0)	( 0)	( 20)	( 0)	( 0)	( 0)
	regeneration:proximal tubule	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		( 10)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)
(Endocrine system)																					
pituitary	Rathke pouch	<10>				<10>				<10>				<10>				<10>			
		1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		( 10)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)

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 ALL ANIMALS (0- 14W)

PAGE : 12

		Group Name	150ppm				200ppm			
		No. of Animals on Study	10				10			
Organ	Findings	Grade	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
(Digestive system)										
liver			<10>				<10>			
	herniation		3	0	0	0	2	0	0	0
			( 30)	( 0)	( 0)	( 0)	( 20)	( 0)	( 0)	( 0)
	inflammatory cell nest		2	0	0	0	1	0	0	0
			( 20)	( 0)	( 0)	( 0)	( 10)	( 0)	( 0)	( 0)
(Urinary system)										
kidney			<10>				<10>			
	mineralization:cortico-medullary junction		3	0	0	0	2	0	0	0
			( 30)	( 0)	( 0)	( 0)	( 20)	( 0)	( 0)	( 0)
	regeneration:proximal tubule		0	0	0	0	0	0	0	0
			( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)
(Endocrine system)										
pituitary			<10>				<10>			
	Rathke pouch		0	0	0	0	0	0	0	0
			( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)

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PAGE : 13

Organ	Findings	Group Name No. of Animals on Study				Control				10ppm				24ppm				60ppm			
		Grade				10				10				10				10			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Endocrine system}																					
thyroid		<10>				<10>				<10>				<10>				<10>			
	ultimibranhial body remanet	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0
		( 10 )	( 0 )	( 0 )	( 0 )	( 10 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 20 )	( 0 )	( 0 )	( 0 )
{Special sense organs/appendage}																					
eye		<10>				<10>				<10>				<10>				<10>			
	cataract	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		( 0 )	( 0 )	( 10 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )
	retinal atrophy	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0
		( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 10 )	( 0 )	( 0 )	( 0 )	( 10 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )
Harder gl		<10>				<10>				<10>				<10>				<10>			
	lymphocytic infiltration	5	0	0	0	4	1	0	0	4	0	0	0	4	0	0	0	6	0	0	0
		( 50 )	( 0 )	( 0 )	( 0 )	( 40 )	( 10 )	( 0 )	( 0 )	( 40 )	( 0 )	( 0 )	( 0 )	( 40 )	( 0 )	( 0 )	( 0 )	( 60 )	( 0 )	( 0 )	( 0 )

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PAGE : 14

		Group Name	150ppm				200ppm			
		No. of Animals on Study	10				10			
Organ_____	Findings_____	Grade	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
<hr/>										
{Endocrine system}										
thyroid			<10>				<10>			
	ultimibranhial body remanet		0	0	0	0	0	0	0	0
			( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)
{Special sense organs/appendage}										
eye			<10>				<10>			
	cataract		0	0	0	0	0	0	0	0
			( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)
	retinal atrophy		0	0	0	0	0	0	0	0
			( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)
Harder gl			<10>				<10>			
	lymphocytic infiltration		6	0	0	0	3	0	0	0
			( 60)	( 0)	( 0)	( 0)	( 30)	( 0)	( 0)	( 0)

Grade 1 : Slight 2 : Moderate 3 : Marked 4 : Severe  
 < a > a : Number of animals examined at the site  
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(HPT150)

BAIS4