

3-アミノフェノールのラットを用いた  
経口投与による2週間毒性試験（混水試験）報告書

試験番号：0689

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TABLE A 1

SURVIVAL ANIMAL NUMBERS : MALE

STUDY NO. : 0689

## SURVIVAL ANIMAL NUMBERS

ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]

REPORT TYPE : A1 2

SEX : MALE

PAGE : 1

Group Name	Animals At start	Administration (Days)													
		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	2-7
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
625 ppm	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
1250 ppm	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
2500 ppm	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
5000 ppm	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
7500 ppm	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)

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TABLE A 2

SURVIVAL ANIMAL NUMBERS : FEMALE

STUDY NO. : 0689  
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]  
 REPORT TYPE : A1 2  
 SEX : FEMALE

SURVIVAL ANIMAL NUMBERS

Group Name	Animals At start	Administration (Days)													
		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	2-7
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
625 ppm	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
1250 ppm	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
2500 ppm	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
5000 ppm	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
7500 ppm	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(%)

TABLE B 1

CLINICAL OBSERVATION : MALE



STUDY NO. : 0689  
ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]  
REPORT TYPE : A1 2

CLINICAL OBSERVATION (SUMMARY)  
ALL ANIMALS

SEX : MALE

PAGE : 1

Clinical sign	Group Name	Administration Week-day			
		1-3	1-7	2-3	2-7
BROWN URINE	Control	0	0	0	0
	625 ppm	0	0	0	0
	1250 ppm	0	0	0	0
	2500 ppm	5	5	5	5
	5000 ppm	5	5	5	5
	7500 ppm	5	5	5	5
SMALL STOOL	Control	0	0	0	0
	625 ppm	0	0	0	0
	1250 ppm	0	0	0	0
	2500 ppm	0	0	0	0
	5000 ppm	0	0	0	0
	7500 ppm	5	0	0	0
NON REMARKABLE	Control	5	5	5	5
	625 ppm	5	5	5	5
	1250 ppm	5	5	5	5
	2500 ppm	0	0	0	0
	5000 ppm	0	0	0	0
	7500 ppm	0	0	0	0

(HAN190)

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**TABLE B 2**

**CLINICAL OBSERVATION : FEMALE**

STUDY NO. : 0689  
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]  
 REPORT TYPE : A1 2

CLINICAL OBSERVATION (SUMMARY)  
 ALL ANIMALS

SEX : FEMALE

PAGE : 2

Clinical sign	Group Name	Administration Week-day			
		1-3	1-7	2-3	2-7
SOILED	Control	0	0	0	0
	625 ppm	0	0	0	0
	1250 ppm	0	0	0	0
	2500 ppm	0	0	0	0
	5000 ppm	1	1	0	0
	7500 ppm	5	5	5	5
SOILED PERI-GENITALIA	Control	0	0	0	0
	625 ppm	0	0	0	0
	1250 ppm	0	0	0	0
	2500 ppm	0	0	0	0
	5000 ppm	0	0	0	0
	7500 ppm	2	2	4	4
BROWN URINE	Control	0	0	0	0
	625 ppm	0	0	0	0
	1250 ppm	0	0	0	0
	2500 ppm	5	5	5	5
	5000 ppm	5	5	5	5
	7500 ppm	5	5	5	5
SMALL STOOL	Control	0	0	0	0
	625 ppm	0	0	0	0
	1250 ppm	0	0	0	0
	2500 ppm	0	0	0	0
	5000 ppm	5	0	0	0
	7500 ppm	5	5	5	0
OLIGO-STOOL	Control	0	0	0	0
	625 ppm	0	0	0	0
	1250 ppm	0	0	0	0
	2500 ppm	0	0	0	0
	5000 ppm	0	0	0	0
	7500 ppm	0	5	5	0
NON REMARKABLE	Control	5	5	5	5
	625 ppm	5	5	5	5
	1250 ppm	5	5	5	5
	2500 ppm	0	0	0	0
	5000 ppm	0	0	0	0
	7500 ppm	0	0	0	0

TABLE C 1

BODY WEIGHT CHANGES  
AND SURVIVAL ANIMAL NUMBERS

: MALE

STUDY NO. : 0689  
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]  
 UNIT : g  
 REPORT TYPE : A1 2  
 SEX : MALE

MEAN BODY WEIGHTS AND SURVIVAL

Week-Day on Study	Control		625 ppm			1250 ppm			2500 ppm			5000 ppm			7500 ppm		
	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	125 ( 5)	5/ 5	126 ( 5)	101	5/ 5	125 ( 5)	100	5/ 5	125 ( 5)	100	5/ 5	125 ( 5)	100	5/ 5	125 ( 5)	100	5/ 5
1-3	137 ( 5)	5/ 5	139 ( 5)	101	5/ 5	137 ( 5)	100	5/ 5	136 ( 5)	99	5/ 5	129 ( 5)	94	5/ 5	120 ( 5)	88	5/ 5
1-7	155 ( 5)	5/ 5	157 ( 5)	101	5/ 5	155 ( 5)	100	5/ 5	150 ( 5)	97	5/ 5	142 ( 5)	92	5/ 5	130 ( 5)	84	5/ 5
2-3	169 ( 5)	5/ 5	172 ( 5)	102	5/ 5	168 ( 5)	99	5/ 5	163 ( 5)	96	5/ 5	152 ( 5)	90	5/ 5	137 ( 5)	81	5/ 5
2-7	191 ( 5)	5/ 5	193 ( 5)	101	5/ 5	188 ( 5)	98	5/ 5	181 ( 5)	95	5/ 5	167 ( 5)	87	5/ 5	153 ( 5)	80	5/ 5

< >:No. of effective animals, ( ):No. of measured animals Av. Wt. : g

(BI0040)

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TABLE C 2

BODY WEIGHT CHANGES  
AND SURVIVAL ANIMAL NUMBERS

: FEMALE

STUDY NO. : 0689  
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]  
 UNIT : g  
 REPORT TYPE : A1 2  
 SEX : FEMALE

MEAN BODY WEIGHTS AND SURVIVAL

Week-Day on Study	Control		625 ppm			1250 ppm			2500 ppm			5000 ppm			7500 ppm		
	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	98 ( 5)	5/ 5	98 ( 5)	100	5/ 5	99 ( 5)	101	5/ 5	98 ( 5)	100	5/ 5	98 ( 5)	100	5/ 5	98 ( 5)	100	5/ 5
1-3	105 ( 5)	5/ 5	104 ( 5)	99	5/ 5	105 ( 5)	100	5/ 5	103 ( 5)	98	5/ 5	96 ( 5)	91	5/ 5	89 ( 5)	85	5/ 5
1-7	114 ( 5)	5/ 5	112 ( 5)	98	5/ 5	112 ( 5)	98	5/ 5	110 ( 5)	96	5/ 5	103 ( 5)	90	5/ 5	88 ( 5)	77	5/ 5
2-3	119 ( 5)	5/ 5	117 ( 5)	98	5/ 5	118 ( 5)	99	5/ 5	116 ( 5)	97	5/ 5	108 ( 5)	91	5/ 5	92 ( 5)	77	5/ 5
2-7	130 ( 5)	5/ 5	126 ( 5)	97	5/ 5	127 ( 5)	98	5/ 5	126 ( 5)	97	5/ 5	114 ( 5)	88	5/ 5	98 ( 5)	75	5/ 5

< >:No. of effective animals, ( ):No. of measured animals      Av. Wt. : g

TABLE C 3

BODY WEIGHT CHANGES : MALE



STUDY NO. : 0689  
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]  
 UNIT : g  
 REPORT TYPE : A1 2  
 SEX : MALE

BODY WEIGHT CHANGES (SUMMARY)  
 ALL ANIMALS

Group Name	Administration week-day		1-3		1-7		2-3		2-7	
	0-0									
Control	125 ± 4		137 ± 6		155 ± 8		169 ± 9		191 ± 8	
625 ppm	126 ± 4		139 ± 5		157 ± 7		172 ± 8		193 ± 10	
1250 ppm	125 ± 4		137 ± 4		155 ± 5		168 ± 7		188 ± 7	
2500 ppm	125 ± 4		136 ± 3		150 ± 4		163 ± 6		181 ± 7	
5000 ppm	125 ± 4		129 ± 6		142 ± 7*		152 ± 6**		167 ± 6**	
7500 ppm	125 ± 6		120 ± 7**		130 ± 9**		137 ± 9**		153 ± 10**	

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

Test of Dunnett

TABLE C 4

BODY WEIGHT CHANGES : FEMALE

STUDY NO. : 0689  
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]  
 UNIT : g  
 REPORT TYPE : A1 2  
 SEX : FEMALE

BODY WEIGHT CHANGES (SUMMARY)  
 ALL ANIMALS

Group Name	Administration week-day				
	0-0	1-3	1-7	2-3	2-7
Control	98± 2	105± 4	114± 3	119± 3	130± 3
625 ppm	98± 2	104± 1	112± 3	117± 3	126± 6
1250 ppm	99± 3	105± 3	112± 3	118± 4	127± 5
2500 ppm	98± 3	103± 3	110± 2	116± 3	126± 3
5000 ppm	98± 2	96± 2**	103± 3**	108± 5**	114± 7**
7500 ppm	98± 2	89± 3**	88± 6**	92± 6**	98± 5**

Significant difference ; \* : P ≤ 0.05    \*\* : P ≤ 0.01

Test of Dunnett

TABLE D 1

FOOD CONSUMPTION CHANGES  
AND SURVIVAL ANIMAL NUMBERS

: MALE

STUDY NO. : 0689  
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]  
 UNIT : g  
 REPORT TYPE : A1 2  
 SEX : MALE

MEAN FOOD CONSUMPTION(FC) AND SURVIVAL

Week-Day on Study	Control		625 ppm			1250 ppm			2500 ppm			5000 ppm			7500 ppm		
	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.
1-3	14.2 ( 5)	5/ 5	14.3 ( 5)	101	5/ 5	13.9 ( 5)	98	5/ 5	13.2 ( 5)	93	5/ 5	12.1 ( 5)	85	5/ 5	10.1 ( 5)	71	5/ 5
1-7	15.3 ( 5)	5/ 5	15.2 ( 5)	99	5/ 5	14.5 ( 5)	95	5/ 5	13.7 ( 5)	90	5/ 5	12.8 ( 5)	84	5/ 5	10.8 ( 5)	71	5/ 5
2-3	15.4 ( 5)	5/ 5	15.2 ( 5)	99	5/ 5	14.4 ( 5)	94	5/ 5	13.7 ( 5)	89	5/ 5	12.8 ( 5)	83	5/ 5	11.0 ( 5)	71	5/ 5
2-7	16.0 ( 5)	5/ 5	16.1 ( 5)	101	5/ 5	15.9 ( 5)	99	5/ 5	14.8 ( 5)	93	5/ 5	13.6 ( 5)	85	5/ 5	12.6 ( 5)	79	5/ 5

< >:No. of effective animals, ( ) :No. of measured animals      Av. FC. : g

TABLE D 2

FOOD CONSUMPTION CHANGES  
AND SURVIVAL ANIMAL NUMBERS

: FEMALE

STUDY NO. : 0689  
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]  
 UNIT : g  
 REPORT TYPE : A1 2  
 SEX : FEMALE

MEAN FOOD CONSUMPTION(FC) AND SURVIVAL

Week-Day on Study	Control		625 ppm		1250 ppm		2500 ppm		5000 ppm		7500 ppm						
	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.			
1-3	11.0 ( 5)	5/ 5	10.7 ( 5)	97	5/ 5	10.4 ( 5)	95	5/ 5	9.9 ( 5)	90	5/ 5	7.9 ( 5)	72	5/ 5	6.7 ( 5)	61	5/ 5
1-7	11.0 ( 5)	5/ 5	10.9 ( 5)	99	5/ 5	10.7 ( 5)	97	5/ 5	10.2 ( 5)	93	5/ 5	9.3 ( 5)	85	5/ 5	7.1 ( 5)	65	5/ 5
2-3	10.7 ( 5)	5/ 5	10.4 ( 5)	97	5/ 5	10.5 ( 5)	98	5/ 5	9.9 ( 5)	93	5/ 5	9.1 ( 5)	85	5/ 5	7.9 ( 5)	74	5/ 5
2-7	11.3 ( 5)	5/ 5	10.8 ( 5)	96	5/ 5	11.2 ( 5)	99	5/ 5	10.9 ( 5)	96	5/ 5	9.4 ( 5)	83	5/ 5	8.6 ( 5)	76	5/ 5

< >:No. of effective animals, ( ) :No. of measured animals      Av. FC. : g

TABLE D 3

FOOD CONSUMPTION CHANGES : MALE



STUDY NO. : 0689  
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]  
 UNIT : g  
 REPORT TYPE : A1 2  
 SEX : MALE

FOOD CONSUMPTION CHANGES (SUMMARY)  
 ALL ANIMALS

Group Name	Administration week-day(effective)			
	1-3(3)	1-7(4)	2-3(3)	2-7(4)
Control	14.2± 1.5	15.3± 1.5	15.4± 1.3	16.0± 0.8
625 ppm	14.3± 0.8	15.2± 0.9	15.2± 1.1	16.1± 1.3
1250 ppm	13.9± 0.6	14.5± 1.0	14.4± 3.4	15.9± 0.8
2500 ppm	13.2± 0.4	13.7± 0.5	13.7± 0.8	14.8± 0.5
5000 ppm	12.1± 1.2**	12.8± 0.7**	12.8± 0.3**	13.6± 0.3**
7500 ppm	10.1± 1.0**	10.8± 1.4**	11.0± 1.0**	12.6± 0.9**

Significant difference ; \* : P ≤ 0.05    \*\* : P ≤ 0.01

Test of Dunnett

TABLE D 4

FOOD CONSUMPTION CHANGES : FEMALE

STUDY NO. : 0689  
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]  
 UNIT : g  
 REPORT TYPE : A1 2  
 SEX : FEMALE

FOOD CONSUMPTION CHANGES (SUMMARY)  
 ALL ANIMALS

Group Name	Administration week-day(effective)			
	1-3(3)	1-7(4)	2-3(3)	2-7(4)
Control	11.0± 0.8	11.0± 0.5	10.7± 0.7	11.3± 0.8
625 ppm	10.7± 0.3	10.9± 0.7	10.4± 0.5	10.8± 0.6
1250 ppm	10.4± 0.3	10.7± 0.5	10.5± 0.5	11.2± 0.6
2500 ppm	9.9± 0.4**	10.2± 0.2	9.9± 0.6	10.9± 0.9
5000 ppm	7.9± 0.3**	9.3± 0.5**	9.1± 1.2**	9.4± 1.0**
7500 ppm	6.7± 0.4**	7.1± 1.1**	7.9± 0.4**	8.6± 0.4**

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

TABLE E 1

WATER CONSUMPTION CHANGES  
AND SURVIVAL ANIMAL NUMBERS

: MALE

STUDY NO. : 0689  
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]  
 UNIT : g  
 REPORT TYPE : A1 2  
 SEX : MALE

MEAN WATER CONSUMPTION(WC) AND SURVIVAL

PAGE : 1

Week-Day on Study	Control		625 ppm		1250 ppm		2500 ppm		5000 ppm		7500 ppm						
	Av.WC.	No. of Surviv. < 5>	Av.WC.	% of cont. < 5>	No. of Surviv.	Av.WC.	% of cont. < 5>	No. of Surviv.	Av.WC.	% of cont. < 5>	No. of Surviv.	Av.WC.	% of cont. < 5>	No. of Surviv.			
1-3	18.6 ( 5)	5/ 5	16.9 ( 5)	91	5/ 5	17.0 ( 5)	91	5/ 5	14.4 ( 5)	77	5/ 5	12.1 ( 5)	65	5/ 5	7.8 ( 5)	42	5/ 5
1-7	18.0 ( 5)	5/ 5	17.3 ( 5)	96	5/ 5	17.1 ( 5)	95	5/ 5	13.4 ( 5)	74	5/ 5	12.0 ( 5)	67	5/ 5	9.4 ( 5)	52	5/ 5
2-3	18.9 ( 5)	5/ 5	18.0 ( 5)	95	5/ 5	17.7 ( 5)	94	5/ 5	14.0 ( 5)	74	5/ 5	12.1 ( 5)	64	5/ 5	10.1 ( 5)	53	5/ 5
2-7	18.9 ( 5)	5/ 5	17.7 ( 5)	94	5/ 5	17.4 ( 5)	92	5/ 5	13.8 ( 5)	73	5/ 5	13.5 ( 5)	71	5/ 5	10.3 ( 5)	54	5/ 5

< >:No. of effective animals, ( ):No. of measured animals Av. WC. : g

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TABLE E 2

WATER CONSUMPTION CHANGES  
AND SURVIVAL ANIMAL NUMBERS

: FEMALE

STUDY NO. : 0689  
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]  
 UNIT : g  
 REPORT TYPE : A1 2  
 SEX : FEMALE

MEAN WATER CONSUMPTION(WC) AND SURVIVAL

Week-Day on Study	Control		625 ppm			1250 ppm			2500 ppm			5000 ppm			7500 ppm		
	Av. WC.	No. of Surviv. < 5>	Av. WC.	% of cont. < 5>	No. of Surviv.	Av. WC.	% of cont. < 5>	No. of Surviv.	Av. WC.	% of cont. < 5>	No. of Surviv.	Av. WC.	% of cont. < 5>	No. of Surviv.	Av. WC.	% of cont. < 5>	No. of Surviv.
1-3	13.6 ( 5)	5/ 5	13.7 ( 5)	101	5/ 5	13.5 ( 5)	99	5/ 5	11.6 ( 5)	85	5/ 5	7.4 ( 5)	54	5/ 5	5.4 ( 5)	40	5/ 5
1-7	13.5 ( 5)	5/ 5	13.7 ( 5)	101	5/ 5	13.0 ( 5)	96	5/ 5	10.9 ( 5)	81	5/ 5	8.9 ( 5)	66	5/ 5	6.5 ( 5)	48	5/ 5
2-3	14.1 ( 5)	5/ 5	14.0 ( 5)	99	5/ 5	12.9 ( 5)	91	5/ 5	10.4 ( 5)	74	5/ 5	8.8 ( 5)	62	5/ 5	8.0 ( 5)	57	5/ 5
2-7	14.0 ( 5)	5/ 5	13.0 ( 5)	93	5/ 5	12.5 ( 5)	89	5/ 5	10.8 ( 5)	77	5/ 5	8.2 ( 5)	59	5/ 5	7.8 ( 5)	56	5/ 5

< >:No. of effective animals, ( ) :No. of measured animals      Av. WC. : g

TABLE E 3

WATER CONSUMPTION CHANGES : MALE



STUDY NO. : 0689  
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]  
 UNIT : g  
 REPORT TYPE : A1 2  
 SEX : MALE

WATER CONSUMPTION CHANGES (SUMMARY)  
 ALL ANIMALS

Group Name	Administration week-day(effective)			
	1-3(3)	1-7(4)	2-3(3)	2-7(4)
Control	18.6± 2.2	18.0± 1.0	18.9± 1.3	18.9± 1.1
625 ppm	16.9± 0.6	17.3± 0.4	18.0± 0.9	17.7± 0.4
1250 ppm	17.0± 1.0	17.1± 1.7	17.7± 2.7	17.4± 1.7
2500 ppm	14.4± 0.5**	13.4± 0.6**	14.0± 0.5**	13.8± 0.5**
5000 ppm	12.1± 0.8**	12.0± 0.5**	12.1± 0.5**	13.5± 1.4**
7500 ppm	7.8± 0.9**	9.4± 1.5**	10.1± 0.7**	10.3± 0.7**

Significant difference ; \* : P ≤ 0.05    \*\* : P ≤ 0.01

Test of Dunnett

TABLE E 4

WATER CONSUMPTION CHANGES : FEMALE

STUDY NO. : 0689  
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]  
 UNIT : g  
 REPORT TYPE : A1 2  
 SEX : FEMALE

WATER CONSUMPTION CHANGES (SUMMARY)  
 ALL ANIMALS

Group Name	Administration week-day(effective)			
	1-3(3)	1-7(4)	2-3(3)	2-7(4)
Control	13.6± 0.6	13.5± 0.8	14.1± 1.2	14.0± 0.6
625 ppm	13.7± 0.8	13.7± 0.7	14.0± 1.6	13.0± 1.0
1250 ppm	13.5± 1.0	13.0± 0.4	12.9± 0.6	12.5± 0.3*
2500 ppm	11.6± 0.5**	10.9± 1.0**	10.4± 0.7**	10.8± 0.9**
5000 ppm	7.4± 0.2**	8.9± 1.1**	8.8± 1.1**	8.2± 0.7**
7500 ppm	5.4± 0.2**	6.5± 1.3**	8.0± 0.5**	7.8± 0.7**

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

TABLE F 1

CHEMICAL INTAKE CHANGES : MALE

STUDY NO. : 0689  
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]  
 UNIT : mg/kg/day  
 REPORT TYPE : A1 2  
 SEX : MALE

CHEMICAL INTAKE CHANGES (SUMMARY)  
 ALL ANIMALS

Group Name	Administration (Week-Day)							
	1-3		1-7		2-3		2-7	
Control	0±	0	0±	0	0±	0	0±	0
625 ppm	76±	5	69±	3	66±	3	57±	3
1250 ppm	155±	6	138±	9	131±	15	115±	7
2500 ppm	265±	7	222±	4	215±	8	191±	6
5000 ppm	470±	36	424±	22	398±	27	404±	44
7500 ppm	490±	53	541±	60	552±	39	505±	18

TABLE F 2

CHEMICAL INTAKE CHANGES : FEMALE

STUDY NO. : 0689  
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]  
 UNIT : mg/kg/day  
 REPORT TYPE : A1 2  
 SEX : FEMALE

CHEMICAL INTAKE CHANGES (SUMMARY)  
 ALL ANIMALS

Group Name	Administration (Week-Day)							
	1-3		1-7		2-3		2-7	
Control	0±	0	0±	0	0±	0	0±	0
625 ppm	82±	4	77±	3	75±	8	64±	3
1250 ppm	161±	13	145±	5	136±	6	123±	3
2500 ppm	281±	9	249±	19	224±	11	214±	14
5000 ppm	385±	14	431±	42	405±	35	362±	16
7500 ppm	457±	20	551±	79	652±	53	596±	62

TABLE G 1

HEMATOLOGY : MALE



STUDY NO. : 0689  
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]  
 MEASURE. TIME : 1  
 SEX : MALE

HEMATOLOGY (SUMMARY)  
 ALL ANIMALS ( 2W)

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 p g	MCHC g/dℓ	PLATELET 10 <sup>5</sup> /μℓ
Control	5	7.82± 0.20	14.9± 0.3	40.8± 1.1	52.1± 0.4	19.1± 0.2	36.7± 0.2	905± 60
625 ppm	5	7.67± 0.06	14.8± 0.1	40.2± 0.5	52.4± 0.6	19.3± 0.2	36.9± 0.5	903± 30
1250 ppm	5	7.59± 0.21	14.7± 0.4	40.1± 1.1	52.9± 0.2*	19.3± 0.2	36.6± 0.4	911± 29
2500 ppm	5	7.89± 0.22	15.1± 0.4	41.4± 1.2	52.6± 0.5	19.2± 0.1	36.5± 0.3	911± 23
5000 ppm	5	7.90± 0.17	15.3± 0.3	41.2± 0.7	52.2± 0.3	19.3± 0.2	37.1± 0.2	848± 48
7500 ppm	5	8.07± 0.13	15.4± 0.3	41.6± 0.4	51.6± 0.4	19.1± 0.3	36.9± 0.3	777± 44**

Significant difference ; \* : P ≤ 0.05    \*\* : P ≤ 0.01

Test of Dunnett

(HCL070)

BAIS 4

STUDY NO. : 0689  
ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]  
MEASURE. TIME : 1  
SEX : MALE

HEMATOLOGY (SUMMARY)  
ALL ANIMALS ( 2W)

REPORT TYPE : A1

PAGE : 2

Group Name	NO. of Animals	RETICULOCYTE %		METHEMOGLOBIN %	
Control	5	3.4±	0.3	0.7±	0.1
625 ppm	5	3.5±	0.2	0.9±	0.1
1250 ppm	5	3.5±	0.4	1.2±	0.7*
2500 ppm	5	3.3±	0.3	0.9±	0.2
5000 ppm	5	3.0±	0.3	0.9±	0.1
7500 ppm	5	3.1±	0.2	1.1±	0.2**

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

\*\* :  $P \leq 0.01$

Test of Dunnett

(HCL070)

BAIS 4

STUDY NO. : 0689  
ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]  
MEASURE. TIME : 1  
SEX : MALE REPORT TYPE : A1

HEMATOLOGY (SUMMARY)  
ALL ANIMALS ( 2W)

PAGE : 3

Group Name	NO. of Animals	WBC 10 <sup>3</sup> /μl	Differential WBC (%)
Control	5	5.28 ± 0.34	
625 ppm	5	6.17 ± 1.06	
1250 ppm	5	5.03 ± 0.53	
2500 ppm	5	5.55 ± 0.47	
5000 ppm	5	5.05 ± 0.59	
7500 ppm	5	5.14 ± 0.53	

Significant difference ; \* : P ≤ 0.05    \*\* : P ≤ 0.01

Test of Dunnett

(HCL070)

BAIS 4

TABLE G 2

HEMATOLOGY : FEMALE

STUDY NO. : 0689

ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]

MEASURE. TIME : 1

SEX : FEMALE

REPORT TYPE : A1

HEMATOLOGY (SUMMARY)

ALL ANIMALS ( 2W)

Group Name	NO. of Animals	RED BLOOD CELL 10 <sup>6</sup> /μℓ	HEMOGLOBIN g/dℓ	HEMATOCRIT %	MCV fℓ	MCH p g	MCHC g/dℓ	PLATELET 10 <sup>6</sup> /μℓ
Control	5	8.08± 0.13	15.6± 0.2	41.5± 0.6	51.4± 0.2	19.3± 0.1	37.5± 0.3	859± 53
625 ppm	5	8.19± 0.34	15.7± 0.6	41.8± 1.6	51.1± 0.2	19.1± 0.3	37.5± 0.4	855± 52
1250 ppm	5	8.25± 0.14	15.8± 0.2	42.1± 0.4	51.1± 0.4	19.1± 0.1	37.4± 0.2	855± 98
2500 ppm	5	8.16± 0.24	15.7± 0.4	41.7± 1.0	51.1± 0.5	19.3± 0.2	37.7± 0.4	858± 44
5000 ppm	5	8.32± 0.09	16.0± 0.1	42.2± 0.4	50.8± 0.3*	19.2± 0.2	37.9± 0.4	756± 83
7500 ppm	5	8.15± 0.30	15.6± 0.5	41.1± 1.4	50.4± 0.4**	19.2± 0.4	38.0± 0.5	691± 49**

Significant difference : \* : P ≤ 0.05

\*\* : P ≤ 0.01

Test of Dunnett

STUDY NO. : 0689  
ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]  
MEASURE. TIME : 1  
SEX : FEMALE

HEMATOLOGY (SUMMARY)  
ALL ANIMALS ( 2W)

REPORT TYPE : A1

PAGE : 5

Group Name	NO. of Animals	RETICULOCYTE %		METHEMOGLOBIN %	
Control	5	1.9±	0.2	0.8±	0.2
625 ppm	5	1.9±	0.4	0.8±	0.2
1250 ppm	5	2.0±	0.3	0.8±	0.1
2500 ppm	5	2.1±	0.3	0.8±	0.2
5000 ppm	5	1.8±	0.4	0.9±	0.0
7500 ppm	5	2.5±	0.7	1.4±	0.3**

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

Test of Dunnett

(ICL070)

BAIS 4

STUDY NO. : 0689  
ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]  
MEASURE. TIME : 1  
SEX : FEMALE REPORT TYPE : A1

HEMATOLOGY (SUMMARY)  
ALL ANIMALS ( 2W)

PAGE : 6

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Group Name	NO. of Animals	WBC 10 <sup>3</sup> /μℓ	Differential WBC (%)
Control	5	4.70 ± 0.71	
625 ppm	5	5.35 ± 1.21	
1250 ppm	5	4.89 ± 1.24	
2500 ppm	5	4.25 ± 0.79	
5000 ppm	5	4.98 ± 0.69	
7500 ppm	5	5.70 ± 1.06	

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Significant difference ; \* : P ≤ 0.05

\*\* : P ≤ 0.01

Test of Dunnett

(HCL070)

BAIS 4

TABLE H 1

BIOCHEMISTRY : MALE



STUDY NO. : 0689  
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]  
 MEASURE. TIME : 1  
 SEX : MALE REPORT TYPE : A1

BIOCHEMISTRY (SUMMARY)  
 ALL ANIMALS ( 2W)

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		PHOSPHOLIPID mg/dℓ	
Control	5	5.7±	0.2	3.2±	0.1	1.3±	0.1	0.10±	0.01	193±	11	64±	4	133±	10
625 ppm	5	5.8±	0.1	3.2±	0.1	1.3±	0.1	0.09±	0.01	191±	15	69±	3	142±	8
1250 ppm	5	5.8±	0.1	3.3±	0.1	1.3±	0.1	0.09±	0.01	192±	14	67±	2	141±	3
2500 ppm	5	5.8±	0.1	3.3±	0.1	1.3±	0.1	0.10±	0.01	194±	8	69±	3	142±	6
5000 ppm	5	5.9±	0.1	3.3±	0.1	1.3±	0.0	0.10±	0.01	189±	9	74±	2**	154±	6**
7500 ppm	5	6.1±	0.1**	3.5±	0.1**	1.3±	0.0	0.12±	0.01**	176±	5	79±	5**	153±	13**

Significant difference ; \* : P ≤ 0.05    \*\* : P ≤ 0.01

Test of Dunnett

STUDY NO. : 0689

ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCr1j]

MEASURE. TIME : 1

SEX : MALE

REPORT TYPE : A1

BIOCHEMISTRY (SUMMARY)

ALL ANIMALS ( 2W)

PAGE : 2

Group Name	NO. of Animals	AST IU/ℓ		ALT IU/ℓ		LDH IU/ℓ		G-GTP IU/ℓ		CK IU/ℓ		UREA NITROGEN mg/dℓ		CREATININE mg/dℓ	
Control	5	56±	2	31±	2	127±	52	1±	1	150±	18	15.8±	2.1	0.4±	0.0
625 ppm	5	55±	0	31±	2	130±	52	1±	0	160±	15	16.4±	1.2	0.4±	0.0
1250 ppm	5	56±	5	31±	2	145±	57	1±	0	153±	17	16.4±	2.2	0.4±	0.0
2500 ppm	5	53±	4	32±	2	129±	55	1±	0	131±	16	17.0±	1.1	0.4±	0.0
5000 ppm	5	53±	2	33±	1	147±	77	1±	0	132±	25	17.4±	1.3	0.4±	0.0
7500 ppm	5	54±	4	34±	3	124±	39	1±	0	114±	13*	18.8±	1.3	0.4±	0.0

Significant difference ; \* : P ≤ 0.05

\*\* : P ≤ 0.01

Test of Dunnett

(HCL074)

BAIS 4

STUDY NO. : 0689  
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]  
 MEASURE. TIME : 1  
 SEX : MALE REPORT TYPE : A1

BIOCHEMISTRY (SUMMARY)  
 ALL ANIMALS ( 2W)

Group Name	NO. of Animals	SODIUM mEq/ℓ		POTASSIUM mEq/ℓ		CHLORIDE mEq/ℓ		CALCIUM mg/dℓ		INORGANIC PHOSPHORUS mg/dℓ	
Control	5	142±	1	4.1±	0.2	104±	1	11.0±	0.1	7.6±	0.7
625 ppm	5	141±	1	4.2±	0.2	102±	1	11.2±	0.2	8.2±	1.1
1250 ppm	5	142±	1	4.1±	0.3	105±	1	11.0±	0.2	7.5±	0.8
2500 ppm	5	141±	1	4.0±	0.1	105±	1	11.0±	0.2	7.6±	0.8
5000 ppm	5	142±	1	4.1±	0.4	105±	1	10.9±	0.2	7.4±	0.9
7500 ppm	5	143±	2	4.3±	0.4	106±	1	11.0±	0.4	7.3±	1.2

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

Test of Dunnett

**TABLE H 2**

**BIOCHEMISTRY : FEMALE**

STUDY NO. : 0689

ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]

MEASURE TIME : 1

SEX : FEMALE

REPORT TYPE : A1

## BIOCHEMISTRY (SUMMARY)

ALL ANIMALS ( 2W)

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		PHOSPHOLIPID mg/dl	
Control	5	5.6±	0.1	3.3±	0.1	1.4±	0.1	0.10±	0.01	190±	4	71±	3	141±	11
625 ppm	5	5.6±	0.1	3.3±	0.1	1.5±	0.1	0.10±	0.00	187±	10	74±	3	137±	7
1250 ppm	5	5.6±	0.1	3.3±	0.1	1.4±	0.1	0.09±	0.01	182±	10	77±	5	144±	8
2500 ppm	5	5.6±	0.1	3.3±	0.0	1.4±	0.1	0.10±	0.01	183±	5	76±	5	144±	7
5000 ppm	5	5.8±	0.1*	3.4±	0.1	1.5±	0.1	0.11±	0.01**	185±	10	77±	2	142±	6
7500 ppm	5	5.8±	0.1*	3.5±	0.1**	1.5±	0.1	0.13±	0.01**	173±	7	72±	3	141±	6

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

Test of Dunnett

(HCL074)

BAIS 4

STUDY NO. : 0689  
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]  
 MEASURE. TIME : 1  
 SEX : FEMALE REPORT TYPE : A1

BIOCHEMISTRY (SUMMARY)  
 ALL ANIMALS ( 2W)

Group Name	NO. of Animals	AST IU/ℓ	ALT IU/ℓ	LDH IU/ℓ	G-GTP IU/ℓ	CK IU/ℓ	UREA NITROGEN mg/dℓ	CREATININE mg/dℓ
Control	5	60± 4	29± 1	191± 39	1± 1	157± 22	19.1± 1.3	0.5± 0.1
625 ppm	5	67± 5	33± 1	185± 51	2± 1	149± 20	18.3± 0.9	0.5± 0.1
1250 ppm	5	61± 3	32± 2	195± 55	1± 0	149± 19	19.2± 3.2	0.4± 0.1
2500 ppm	5	61± 2	31± 3	243± 77	2± 1	164± 32	19.6± 4.0	0.4± 0.1
5000 ppm	5	61± 3	33± 3	228± 84	1± 0	142± 38	20.1± 2.5	0.5± 0.1
7500 ppm	5	71± 7**	39± 4**	270± 130	2± 0	144± 46	24.7± 4.0*	0.4± 0.1

Significant difference ; \* : P ≤ 0.05    \*\* : P ≤ 0.01

Test of Dunnett

STUDY NO. : 0689  
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]  
 MEASURE. TIME : 1  
 SEX : FEMALE REPORT TYPE : A1

BIOCHEMISTRY (SUMMARY)  
 ALL ANIMALS ( 2W)

Group Name	NO. of Animals	SODIUM mEq/ℓ		POTASSIUM mEq/ℓ		CHLORIDE mEq/ℓ		CALCIUM mg/dℓ		INORGANIC PHOSPHORUS mg/dℓ	
Control	5	141±	2	3.9±	0.2	105±	1	10.9±	0.1	6.3±	1.4
625 ppm	5	141±	1	3.9±	0.1	106±	2	10.6±	0.2	6.1±	1.2
1250 ppm	5	141±	1	3.8±	0.2	106±	2	10.5±	0.2*	6.3±	1.7
2500 ppm	5	141±	1	4.0±	0.2	107±	1	10.7±	0.2	5.9±	1.2
5000 ppm	5	142±	2	3.8±	0.2	107±	2	10.6±	0.1	6.1±	1.8
7500 ppm	5	144±	2*	3.9±	0.3	109±	2**	10.5±	0.2*	5.5±	1.7

Significant difference ; \* : P ≤ 0.05

\*\* : P ≤ 0.01

Test of Dunnett

TABLE I 1

GROSS FINDINGS : MALE :

ALL ANIMALS



STUDY NO. : 0689  
ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]  
REPORT TYPE : AI  
SEX : MALE

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

---

Organ	Findings	Group Name NO. of Animals	Control 5 (%)	625 ppm 5 (%)	1250 ppm 5 (%)	2500 ppm 5 (%)
liver	herniation		0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)
brain	deformed		1 ( 20)	0 ( 0)	0 ( 0)	0 ( 0)

---

STUDY NO. : 0689  
ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]  
REPORT TYPE : A1  
SEX : MALE

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

PAGE : 2

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Organ	Findings	Group Name NO. of Animals	5000 ppm 5 (%)	7500 ppm 5 (%)
liver	herniation		1 ( 20)	1 ( 20)
brain	deformed		0 ( 0)	0 ( 0)

---

(HPT080)

BAIS 4

TABLE I 2

GROSS FINDINGS : FEMALE :  
ALL ANIMALS

STUDY NO. : 0689  
ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]  
REPORT TYPE : A1  
SEX : FEMALE

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

PAGE : 3

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Organ	Findings	Group Name NO. of Animals	Control	625 ppm	1250 ppm	2500 ppm
			5 (%)	5 (%)	5 (%)	5 (%)
liver	herniation		0 ( 0)	0 ( 0)	1 ( 20)	1 ( 20)

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(HPT080)

BAIS 4

STUDY NO. : 0689  
ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]  
REPORT TYPE : A1  
SEX : FEMALE

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

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Organ	Findings	Group Name NO. of Animals	5000 ppm 5 (%)	7500 ppm 5 (%)
liver	herniation		0 ( 0)	1 ( 20)

---

TABLE J 1

ORGAN WEIGHT, ABSOLUTE : MALE

STUDY NO. : 0689  
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]  
 REPORT TYPE : A1  
 SEX : MALE  
 UNIT: g

ORGAN WEIGHT:ABSOLUTE (SUMMARY)  
 SURVIVAL ANIMALS ( 2W)

Group Name	NO. of Animals	Body Weight	THYMUS	ADRENALS	TESTES	HEART	LUNGS
Control	5	191± 8	0.323± 0.025	0.041± 0.006	2.479± 0.093	0.634± 0.027	0.772± 0.037
625 ppm	5	193± 10	0.368± 0.023	0.039± 0.004	2.446± 0.100	0.665± 0.042	0.806± 0.049
1250 ppm	5	188± 7	0.356± 0.035	0.036± 0.006	2.450± 0.122	0.638± 0.036	0.780± 0.048
2500 ppm	5	181± 7	0.357± 0.036	0.034± 0.003	2.457± 0.104	0.635± 0.035	0.759± 0.059
5000 ppm	5	167± 6**	0.309± 0.026	0.036± 0.004	2.444± 0.103	0.590± 0.033	0.718± 0.048
7500 ppm	5	153± 10**	0.263± 0.016*	0.040± 0.008	2.397± 0.144	0.533± 0.023**	0.705± 0.044

Significant difference ; \* : P ≤ 0.05    \*\* : P ≤ 0.01

Test of Dunnett

STUDY NO. : 0689  
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]  
 REPORT TYPE : A1  
 SEX : MALE  
 UNIT: g

ORGAN WEIGHT: ABSOLUTE (SUMMARY)  
 SURVIVAL ANIMALS ( 2W)

Group Name	NO. of Animals	KIDNEYS		SPLEEN		LIVER		BRAIN		THYROID	
Control	5	1.407±	0.089	0.465±	0.037	7.634±	0.445	1.663±	0.130	0.022±	0.005
625 ppm	5	1.529±	0.082	0.496±	0.038	7.824±	0.547	1.737±	0.051	0.020±	0.004
1250 ppm	5	1.517±	0.095	0.462±	0.029	7.862±	0.594	1.707±	0.028	0.025±	0.004
2500 ppm	5	1.556±	0.106	0.446±	0.034	7.792±	0.672	1.752±	0.026	0.022±	0.005
5000 ppm	5	1.528±	0.085	0.426±	0.029	7.323±	0.397	1.715±	0.034	0.024±	0.004
7500 ppm	5	1.505±	0.103	0.390±	0.033**	6.740±	0.623	1.689±	0.027	0.029±	0.005

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

Test of Dunnett



TABLE J 2

ORGAN WEIGHT, ABSOLUTE : FEMALE

STUDY NO. : 0689  
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]  
 REPORT TYPE : A1  
 SEX : FEMALE  
 UNIT: g

ORGAN WEIGHT:ABSOLUTE (SUMMARY)  
 SURVIVAL ANIMALS ( 2W)

Group Name	NO. of Animals	Body Weight	THYMUS	ADRENALS	OVARIES	HEART	LUNGS
Control	5	130± 3	0.294± 0.030	0.045± 0.003	0.085± 0.013	0.493± 0.023	0.623± 0.023
625 ppm	5	126± 6	0.299± 0.030	0.042± 0.005	0.069± 0.006	0.490± 0.028	0.613± 0.044
1250 ppm	5	127± 5	0.295± 0.048	0.044± 0.004	0.075± 0.014	0.477± 0.048	0.621± 0.030
2500 ppm	5	126± 3	0.308± 0.016	0.047± 0.004	0.078± 0.009	0.462± 0.010	0.626± 0.035
5000 ppm	5	114± 7**	0.267± 0.031	0.041± 0.005	0.076± 0.011	0.446± 0.023*	0.591± 0.038
7500 ppm	5	98± 5**	0.212± 0.016**	0.036± 0.002**	0.052± 0.008**	0.389± 0.014**	0.525± 0.032**

Significant difference ; \* : P ≤ 0.05 \*\* : P ≤ 0.01

Test of Dunnett

STUDY NO. : 0689  
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]  
 REPORT TYPE : A1  
 SEX : FEMALE  
 UNIT: g

ORGAN WEIGHT:ABSOLUTE (SUMMARY)  
 SURVIVAL ANIMALS ( 2W)

Group Name	NO. of Animals	KIDNEYS		SPLEEN		LIVER		BRAIN		THYROID	
Control	5	1.036±	0.017	0.351±	0.014	4.981±	0.170	1.610±	0.027	0.018±	0.004
625 ppm	5	1.061±	0.044	0.334±	0.025	4.544±	0.367	1.640±	0.038	0.016±	0.002
1250 ppm	5	1.094±	0.048	0.329±	0.021	4.785±	0.393	1.640±	0.022	0.019±	0.003
2500 ppm	5	1.108±	0.043*	0.337±	0.024	4.876±	0.324	1.602±	0.031	0.018±	0.002
5000 ppm	5	1.139±	0.030**	0.299±	0.012**	4.600±	0.239	1.640±	0.021	0.021±	0.003
7500 ppm	5	1.055±	0.033	0.284±	0.019**	4.061±	0.210**	1.575±	0.024	0.024±	0.004*

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

Test of Dunnett

TABLE K 1

ORGAN WEIGHT, RELATIVE : MALE

STUDY NO. : 0689  
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]  
 REPORT TYPE : A1  
 SEX : MALE  
 UNIT: %

ORGAN WEIGHT:RELATIVE (SUMMARY)  
 SURVIVAL ANIMALS ( 2W)

Group Name	NO. of Animals	Body Weight (g)	THYMUS	ADRENALS	TESTES	HEART	LUNGS
Control	5	191± 8	0.169± 0.015	0.022± 0.003	1.300± 0.034	0.332± 0.010	0.405± 0.008
625 ppm	5	193± 10	0.190± 0.008	0.020± 0.003	1.269± 0.082	0.344± 0.018	0.418± 0.029
1250 ppm	5	188± 7	0.189± 0.016	0.019± 0.002	1.301± 0.061	0.339± 0.007	0.414± 0.017
2500 ppm	5	181± 7	0.197± 0.014**	0.019± 0.002	1.359± 0.045	0.351± 0.014	0.419± 0.022
5000 ppm	5	167± 6**	0.184± 0.009	0.022± 0.003	1.461± 0.074**	0.352± 0.011	0.429± 0.022
7500 ppm	5	153± 10**	0.172± 0.010	0.026± 0.005	1.566± 0.066**	0.349± 0.015	0.461± 0.034**

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

Test of Dunnett

STUDY NO. : 0689  
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]  
 REPORT TYPE : A1  
 SEX : MALE  
 UNIT: %

ORGAN WEIGHT:RELATIVE (SUMMARY)  
 SURVIVAL ANIMALS ( 2W)

Group Name	NO. of Animals	KIDNEYS	SPLEEN	LIVER	BRAIN	THYROID
Control	5	0.737 ± 0.038	0.243 ± 0.018	4.002 ± 0.171	0.874 ± 0.085	0.011 ± 0.002
625 ppm	5	0.792 ± 0.018*	0.257 ± 0.015	4.048 ± 0.130	0.901 ± 0.045	0.010 ± 0.002
1250 ppm	5	0.805 ± 0.022**	0.245 ± 0.008	4.169 ± 0.186	0.907 ± 0.021	0.013 ± 0.002
2500 ppm	5	0.861 ± 0.037**	0.247 ± 0.013	4.306 ± 0.248*	0.970 ± 0.024*	0.012 ± 0.002
5000 ppm	5	0.913 ± 0.030**	0.255 ± 0.008	4.373 ± 0.090*	1.025 ± 0.028**	0.015 ± 0.002
7500 ppm	5	0.982 ± 0.034**	0.254 ± 0.007	4.395 ± 0.186**	1.106 ± 0.064**	0.019 ± 0.004**

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

Test of Dunnett

TABLE K 2

ORGAN WEIGHT, RELATIVE : FEMALE

STUDY NO. : 0689  
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]  
 REPORT TYPE : A1  
 SEX : FEMALE  
 UNIT: %

ORGAN WEIGHT:RELATIVE (SUMMARY)  
 SURVIVAL ANIMALS ( 2W)

Group Name	NO. of Animals	Body Weight (g)	THYMUS	ADRENALS	OVARIES	HEART	LUNGS
Control	5	130± 3	0.227± 0.021	0.035± 0.002	0.065± 0.010	0.380± 0.019	0.481± 0.011
625 ppm	5	126± 6	0.237± 0.015	0.033± 0.003	0.055± 0.005	0.389± 0.023	0.485± 0.030
1250 ppm	5	127± 5	0.231± 0.036	0.034± 0.002	0.058± 0.009	0.374± 0.025	0.487± 0.014
2500 ppm	5	126± 3	0.245± 0.016	0.037± 0.003	0.062± 0.007	0.367± 0.014	0.498± 0.028
5000 ppm	5	114± 7**	0.236± 0.027	0.037± 0.003	0.066± 0.008	0.393± 0.020	0.521± 0.018
7500 ppm	5	98± 5**	0.216± 0.011	0.037± 0.002	0.053± 0.009	0.397± 0.025	0.536± 0.037**

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

Test of Dunnett



STUDY NO. : 0689  
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]  
 REPORT TYPE : A1  
 SEX : FEMALE  
 UNIT: %

ORGAN WEIGHT:RELATIVE (SUMMARY)  
 SURVIVAL ANIMALS ( 2W)

Group Name	NO. of Animals	KIDNEYS	SPLEEN	LIVER	BRAIN	THYROID
Control	5	0.800 ± 0.025	0.271 ± 0.009	3.844 ± 0.118	1.243 ± 0.026	0.014 ± 0.003
625 ppm	5	0.841 ± 0.032	0.264 ± 0.013	3.598 ± 0.170	1.301 ± 0.033	0.013 ± 0.002
1250 ppm	5	0.859 ± 0.028*	0.258 ± 0.008	3.753 ± 0.209	1.289 ± 0.051	0.015 ± 0.003
2500 ppm	5	0.880 ± 0.020**	0.268 ± 0.015	3.875 ± 0.198	1.274 ± 0.043	0.014 ± 0.002
5000 ppm	5	1.005 ± 0.045**	0.264 ± 0.016	4.054 ± 0.122	1.449 ± 0.104**	0.019 ± 0.003
7500 ppm	5	1.076 ± 0.045**	0.289 ± 0.013	4.139 ± 0.167*	1.607 ± 0.090**	0.025 ± 0.005**

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

Test of Dunnett

TABLE L 1

HISTOPATHOLOGICAL FINDINGS :  
NON-NEOPLASTIC LESIONS : MALE :  
ALL ANIMALS

STUDY NO. : 0689  
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]  
 REPORT TYPE : A1  
 SEX : MALE

HISTOPATHOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)  
 ALL ANIMALS (0- 2W)

Organ	Findings	Control				625 ppm				1250 ppm				2500 ppm			
		No. of Animals on Study				5				5				5			
Grade		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
(Digestive system)																	
liver	herniation	< 5>				< 5>				< 5>				< 5>			
		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)	( 20)	( 0)	( 0)	( 0)
(Urinary system)																	
kidney	eosinophilic body	< 5>				< 5>				< 5>				< 5>			
		5	0	0	0	5	0	0	0	5	0	0	0	1	4	0	0
		(100)	( 0)	( 0)	( 0)	(100)	( 0)	( 0)	( 0)	(100)	( 0)	( 0)	( 0)	( 20)	( 80)	( 0)	( 0)
	mineralization:papilla	< 5>				< 5>				< 5>				< 5>			
		1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
		( 20)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 20)	( 0)	( 0)	( 0)
(Endocrine system)																	
thyroid	ultimibranchial body remanet	< 5>				< 5>				< 5>				< 5>			
		1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
		( 20)	( 0)	( 0)	( 0)	( 20)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)
	follicular hyperplasia	< 5>				< 5>				< 5>				< 5>			
		0	0	0	0	0	0	0	0	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 : Number of animals with lesion  
 ( c ) c : b / a \* 100

STUDY NO. : 0689  
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]  
 REPORT TYPE : A1  
 SEX : MALE

HISTOPATHOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)  
 ALL ANIMALS (0- 2W)

Organ	Findings	Group Name No. of Animals on Study	5000 ppm				7500 ppm				
			Grade	1	2	3	4	Grade	1	2	3
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)

{Digestive system}

liver	herniation		< 5>				< 5>			
			1	0	0	0	1	0	0	0
			( 20)	( 0)	( 0)	( 0)	( 20)	( 0)	( 0)	( 0)

{Urinary system}

kidney	eosinophilic body		< 5>				< 5>			
			0	5	0	0	0	5	0	0
			( 0)	(100)	( 0)	( 0)	( 0)	(100)	( 0)	( 0)
	mineralization:papilla		2	0	0	0	0	0	0	0
			( 40)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)

{Endocrine system}

thyroid	ultimibranchial body remanet		< 5>				< 5>			
			1	0	0	0	0	0	0	0
			( 20)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)
	follicular hyperplasia		0	0	0	0	1	0	0	0
			( 0)	( 0)	( 0)	( 0)	( 20)	( 0)	( 0)	( 0)

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

TABLE L 2

HISTOPATHOLOGICAL FINDINGS :  
NON-NEOPLASTIC LESIONS : FEMALE :  
ALL ANIMALS

STUDY NO. : 0689  
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]  
 REPORT TYPE : A1  
 SEX : FEMALE

HISTOPATHOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)  
 ALL ANIMALS (0- 2W)

Organ	Findings	Group Name No. of Animals on Study Grade	Control 5				625 ppm 5				1250 ppm 5				2500 ppm 5			
			1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
(Hematopoietic system)																		
spleen	deposit of hemosiderin		< 5>				< 5>				< 5>				< 5>			
			0	0	0	0	0	0	0	0	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	herniation		< 5>				< 5>				< 5>				< 5>			
			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)
	inflammatory cell nest		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)	( 20)	( 0)	( 0)	( 0)
(Urinary system)																		
kidney	mineralization:cortico-medullary junction		< 5>				< 5>				< 5>				< 5>			
			0	0	0	0	1	0	0	0	0	0	0	0	2	0	0	0
			( 0)	( 0)	( 0)	( 0)	( 20)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 40)	( 0)	( 0)	( 0)
	mineralization:papilla		0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0
			( 0)	( 0)	( 0)	( 0)	( 20)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 20)	( 0)	( 0)	( 0)
Grade	1 : Slight	2 : Moderate	3 : Marked	4 : Severe														
< a >	a : Number of animals examined at the site																	
b	b : Number of animals with lesion																	
( c )	c : b / a * 100																	

STUDY NO. : 0689  
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]  
 REPORT TYPE : A1  
 SEX : FEMALE

HISTOPATHOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)  
 ALL ANIMALS (0- 2W)

Organ	Findings	5000 ppm				7500 ppm			
		1	2	3	4	1	2	3	4
Group Name		5				5			
No. of Animals on Study		5				5			
Grade		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
(Hematopoietic system)									
spleen	deposit of hemosiderin	< 5>				< 5>			
		0	0	0	0	5	0	0	0
		( 0)	( 0)	( 0)	( 0)	(100)	( 0)	( 0)	( 0)
(Digestive system)									
liver	herniation	< 5>				< 5>			
		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)
(Urinary system)									
kidney	mineralization:cortico-medullary junction	< 5>				< 5>			
		1	0	0	0	1	0	0	0
		( 20)	( 0)	( 0)	( 0)	( 20)	( 0)	( 0)	( 0)
	mineralization:papilla	1	0	0	0	0	0	0	0
		( 20)	( 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

STUDY NO. : 0689  
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]  
 REPORT TYPE : A1  
 SEX : FEMALE

HISTOPATHOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)  
 ALL ANIMALS (0- 2W)

Organ	Findings	Control				625 ppm				1250 ppm				2500 ppm			
		No. of Animals on Study				No. of Animals on Study				No. of Animals on Study				No. of Animals on Study			
Grade		5				5				5				5			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
(Urinary system)																	
kidney	regeneration:proximal tubule	< 5>				< 5>				< 5>				< 5>			
		1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		( 20)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)
(Endocrine system)																	
thyroid	ultimibranchial body remanet	< 5>				< 5>				< 5>				< 5>			
		0	0	0	0	0	0	0	0	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 : Number of animals with lesion  
 ( c ) c : b / a \* 100



STUDY NO. : 0689  
 ANIMAL : RAT F344/DuCr1Cr1j[F344/DuCrj]  
 REPORT TYPE : A1  
 SEX : FEMALE

HISTOPATHOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)  
 ALL ANIMALS (0- 2W)

Organ	Findings	5000 ppm				7500 ppm				
		No. of Animals on Study				5				
		Grade	1	2	3	4	1	2	3	4
		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	
(Urinary system)										
kidney	regeneration:proximal tubule	< 5>				< 5>				
		0	0	0	0	0	0	0	0	
		( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	
(Endocrine system)										
thyroid	ultimibranchial body remanet	< 5>				< 5>				
		1	0	0	0	0	0	0	0	
		( 20)	( 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