アリルクロリドのラットを用いた 吸入による 13 週間毒性試験報告書

試験番号:0340

APPENDIX

APPENDIXES

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APPENDIX A 1

CLINICAL OBSERVATION: SUMMARY, RAT: MALE

CLINICAL OBSERVATION (SUMMARY) ALL ANIMALS

STUDY NO.: 0340 ANIMAL: RAT F344/DuCrj

REPORT TYPE : A1 13

SEX : MALE

linical sign	Group Name	Adminis	stration We	ek-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	
	•	,	0	0.		0	0	٨	0	0	0	0	0	0	
TATH	0 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	
	25 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	
	50 ppm	0	•	-	0	0	0	0	0	0	0	0	0	0	
	100 ppm	0	0	0		0	0	0	0	0	0	0	0	0	
	200 ppm	0	0	0	0	2	-	· ·	_	_	· ·	_	-	_	
	400 ppm	Ü	V	U	U	2	_								
INCHBACK POSITION	0 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	
	25 ppm	. 0	0	0	0	0	0	0	0	0	0	0	0	0	
	50 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	
	100 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	
	200 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	
	400 ppm	0	0	0	0	8	-	-	_	-	-	-	-		
OILED	mag 0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Tulib	25 ppm	Ö	0	0	0	0	0	0	. 0	0	0	0	0	0	
	50 ppm	0	0	0	0	. 0	0	0	0	0	0	0	0	0	
	100 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	
	200 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	
	400 ppm	0	0	0	0	8	-	-	-	-	-	-	-	_	
ILOERECTION	mag 0	0	0	0	0	0	0	0	0	0	0	0	0	0	
I BOBNEOT FOR	25 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	
	50 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	
	100 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	
	200 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	
	400 ppm	0	0	0	0	8	-	-	-	-	-	-	-	-	
OILED PERI GENITALIA	mqq 0	0	0	0	0	0	0	0	0	0	0	0	0	0	
OTLED PERT GENTIALIA	0 ppm 25 ppm	0	0	0	0	0	0	0	Ö	Ö	0	ő	Ö	ő	
	20 ppm 50 ppm	0	0	0	0	0	0	0	0	0	0	0	0	Ö	
	100 ppm	0	0	0	0	0	0	0	0	Ö	0	Ō	0	Ō	
	200 ppm	0	0	0	Ö	. 0	Ö	0	0	Ō	Ō	0	0	0	
	400 ppm	ŏ.	Ö	0	Ô	8	-	-	_	-	-	-	-	-	
			•	•		0	0	0	0	0	٥	0	0	0	
RREGULAR BREATHING	maa 0	0	0	0 0	0	0	0	0	0	0	0	0	0	0	
	25 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	
	50 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	
	100 ppm	0	0	0	0	0	0	0	. 0	0	0	0	0	0	
	200 ppm	0	0	0	0	8	-	_	-	_	_	_	_	_	
	400 ppm	0	U	U	V	0	-	_							

ANIMAL : RAT F344/DuCrj

REPORT TYPE : A1 13

CLINICAL OBSERVATION (SUMMARY) ALL ANIMALS

SEX : MALE

PAGE: 2

Clinical sign	Group Name	Admini:	stration We	eek-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
												•		
NORMAL RESPIRA.SOUND	mqq 0	0	0	0	0	0	0	0	0	0	0	0	0	0
	25 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0
	50 ppm	0 ppm 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0	0	0	0	0	0	0					
	100 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0
	200 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	8	-	-	-	-	-	-	_	-
ALIVATION	0 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0
	25 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0
	50 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0
	100 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0
	200 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0
		0	0	0	0	8		-	-		-	-	-	-

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APPENDIX A 2

CLINICAL OBSERVATION: SUMMARY, RAT: FEMALE

CLINICAL OBSERVATION (SUMMARY) ALL ANIMALS

STUDY NO.: 0340 ANIMAL: RAT F344/DuCrj REPORT TYPE: A1 13

SEX : FEMALE

Clinical sign	Group Name		stration We	JON 447											
		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	
	_	•	•	•	^	•	^	•	٨	0	0	0	0	0	
EATH	mag 0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	25 ppm	0	0	0	0	0				0	0	0	0	Ö	
	mag 05	0	0	0	0	0	0	0	0	0	0	0	0	0	
	100 ppm	0	0	0	0	0	0	0	0	•	0	0	.0	0	
	200 ppm	0	0	0	0	0	0	0	0	0	U	U	.0	U -	
	400 ppm	0	0	0	0	5	-	_	-	-	-	_	-	-	
UNCHBACK POSITION	0 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	
	25 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	
	50 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	
	100 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	
	200 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	
	400 ppm	0	0	0	0	4	-	-	_	-	_	-	-	-	
OILED	0 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	
	25 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	
	50 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	
	100 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	
	200 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	
	400 ppm	0	0	0	0	3	-	-	-	-	-	-	-	-	
PILOERECTION	maa 0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	25 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	
	50 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	
	100 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	
	200 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	
	400 ppm	0	0	0	0	2	-	-	_	-	-	-	-	-	
SOILED PERI GENITALIA	0 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	
	25 ppm	0	0	0	0	0	0	0	0	0	. 0	0	0	0	
	50 ppm	0	0	0	0	0	0	0	. 0	0	0	0	0	0	
	100 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	
	200 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	
	400 ppm	0	0	0	0	1	-	-	-	-	-	-	-	-	
IRREGULAR BREATHING	0 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	
Inneoven Dientitio	25 ppm	Õ	Ö	Õ	0	0	0	0	0	0	0	0	0	0	
	20 ppm 50 ppm	0	0	0	0	ő	Ő	Ŏ	0	0	0	0	0	0	
	100 ppm	0	0	0	0	0	0	0	0	Ŏ	0	Ö	0	0	
	200 ppm	0	0	0	0	Ő	Ö	Ŏ	Ö	0	0	0	0	0	
	200 ppm 400 ppm	0	0	0	0	4	-	_	_	_	_	_	_	-	

ANIMAL : RAT F344/DuCrj REPORT TYPE : A1 13

CLINICAL OBSERVATION (SUMMARY)

ALL ANIMALS

SEX : FEMALE

PAGE: 4

linical sign	Group Name	Admini:	stration We	ek-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
SNORMAL RESPIRA.SOUND	0 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0
	25 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0
	50 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0
	100 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0
	200 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	Ö	0	0	0	4	-	-	-	-	-	-	-	· -
ALIVATION	mag 0	0	0	0	0	0	0	0	0	0	0	0	0	0
	25 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0
	50 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0
	100 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0
	200 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0
	400 ppm	0	0	0	0	1	-	-	-	-	-	-	-	•••

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APPENDIX B 1

BODY WEIGHT CHANGES :SUMMARY, RAT : MALE

ANIMAL : RAT F344/DuCrj

UNIT : g

REPORT TYPE: A1 13

BODY WEIGHT CHANGES ALL ANIMALS

(SUMMARY)

SEX : MALE

p Name .	Admini	stration	week-day											
	0-0		1-7		2-7		3-7		4-7		5-7		6-7	
0 ppm	113±	4	141±	6	171±	8	195±	10	215±	11	233±	13	247±	13
25 ppm	113±	4	139±	3	166±	4	190±	6	209±	8	226±	10	236±	12
50 ppm	113±	4	145±	6	179±	7	203±	8	221 ±	9	236±	8	247±	9
100 ppm	113±	4	142±	6	173±	7	197±	9	217±	12	235±	13	247±	15
200 ppm	113±	4	138±	7	168±	11	194±	12	212±	13	229±	14	239±	16
400 ppm	113±	4	133±	5**	161±	6*	184±	9*	202±	9	161±	17**	-	
		-												
Significant differen	ce; *:P≦().05	**: P ≤ 0.0)1			Test of Du	ınnett						

BODY WEIGHT CHANGES ALL ANIMALS

ANIMAL : RAT F344/DuCrj

UNIT : g
REPORT TYPE : A1 13

SEX : MALE

PAGE: 2

up Name	Admini	stratio	n week-day										
	7-7		8-7		9–7		10-7	11-7		12-7		13-7	
Mag 0	259±	15	271±	16	279±	16	286± 16	287±	18	299±	19	304±	19
25 ppm	248±	13	261±	13	268±	14	274± 13	275±	13	288±	14	291±	15
50 ppm	260±	10	274±	11	279±	10	284± 12	287±	13	299±	14	298±	13
100 ppm	259±	16	271士	17	281±	17	287± 17	287±	17	298±	18	304±	18
200 ppm	253±	18	261±	18	269±	20	279± 21	277±	19	292±	21	298土	21
400 ppm	-		-		-		-			. =		-	
Significant differenc	e; *:P≦(**: P ≤ 0.0				Test of Dunnett						

(SUMMARY)

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APPENDIX B 2

BODY WEIGHT CHANGES: SUMMARY, RAT: FEMALE

ANIMAL : RAT F344/DuCrj UNIT : g REPORT TYPE : A1 13

SEX : FEMALE

BODY WEIGHT CHANGES (SUMMARY) ALL ANIMALS

PAGE: 3

p Name	Admini	stration	week-day											
	0-0		1-7		2-7		3-7		4-7		5-7		6-7	
0 ppm	97±	3	110±	4	123±	4	133±	5	139±	6	149±	6	154±	7
25 ppm	97±	2	110±	4	124±	4	134±	4	142±	5	149±	5	155±	6
50 ppm	97±	3	114±	3*	129±	5*	139±	4	145±	5	153±	6	159±	7
100 ppm	97±	2	112±	4	128±	5	138±	6	144±	6	152±	6	156±	8
200 ppm	97±	3	111±	4	125±	6	134±	7	139±	6	145±	7	148土	6
400 ppm	97±	3	108±	3 .	121±	4	129±	7	132±	9	104士	14**	-	
Significant difference;	*: P ≦ (. 05	**: P ≤ 0.	31			Test of Dunn	ett						

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ANIMAL : RAT F344/DuCrj

UNIT : g
REPORT TYPE : A1 13

BODY WEIGHT CHANGES ALL ANIMALS

(SUMMARY)

SEX : FEMALE

oup Name	Adminis	stration	week-day										
	7–7		8-7		9-7		10-7	 11-7		12-7		13-7	
0 ppm	159±	8	163±	8	166±	9	171± 9	167±	9	175±	10	178±	10
25 ppm	160±	8	164±	7	169±	8	170± 8	170±	11	175±	10	176±	10
50 ppm	165±	6	172±	7*	173±	7	178± 10	176±	9	184±	9	183±	10
100 ppm	163±	9	164±	8	171±	10	171± 8	172土	8	178±	9	182±	9
200 ppm	154±	7	157±	9	158±	8	163± 9	161±	9	167±	10	171±	12
400 ppm	-		-		-		. -	-		-		-	
Significant differe	nce; *:P≦0	.05	** : P ≤ 0.0	1			Test of Dunnett						

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APPENDIX C 1

FOOD CONSUMPTION CHANGES : SUMMARY, RAT : MALE (13 - WEEK STUDY)

FOOD CONSUMPTION CHANGES (SUMMARY) ALL ANIMALS

ANIMAL : RAT F344/DuCrj UNIT : g

REPORT TYPE: A1 13

SEX : MALE

PAGE: 1

oup Name	Administration	week-day(effective)					
	1-7(6)	2-7(7)	3-7(7)	4-7(7)	5-7(7)	6-7(7)	7–7(7)
maa 0	14.0± 0.6	15.1± 0.5	15.9± 0.4	16.6± 0.9	16.6± 0.8	16.3± 0.8	16.4± 1.0
25 ppm	13.8± 0.6	14.5± 0.7	15.2± 1.0	15.8± 0.8	15.5± 0.9	15.1± 0.9*	15.4± 0.9
50 ppm	14.0± 0.7	16.2± 1.0	16.5± 1.2	16.7± 1.1	16.9± 0.9	15.0± 1.1*	14.9± 0.8**
100 ppm	14.1± 0.7	16.2± 1.0	15.8± 0.7	16.5± 0.8	16.4± 1.2	16.2± 1.2	16.3± 1.0
200 ppm	14.1± 0.9	15.4± 1.1	16.0± 1.5	16.2± 0.8	16.6± 1.1	16.0± 0.9	16.5± 0.9
400 ppm	13.7± 0.8	16.9± 1.4**	17.7± 1.6	18.9± 1.7**	12.3± 4.6*	-	-
Significant differe	ence; *: P ≦ 0.05	** : P ≤ 0.01		Test of Dunnett			
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FOOD CONSUMPTION CHANGES (SUMMARY) ALL ANIMALS

ANIMAL : RAT F344/DuCrj

UNIT : g
REPORT TYPE : A1 13

SEX : MALE

PAGE: 2

roup Name		week-day(effective) 9-7(7)	10-7(7)	11-7(7)	12-7(7)	13-7(7)	
	8-7(7)	9-1(1)	10-1(1)		12 1(1)		
mag 0	16.6± 0.8	16.1± 0.9	15.9± 0.5	15.4± 1.0	16.0± 0.6	15.6± 0.7	
25 ppm	15.6± 1.1	15.3± 0.8	14.9± 0.8	14.4± 0.5	15.3± 0.8	14.8± 1.2	
50 ppm	15.7± 0.9	15.6± 0.9	15.3± 1.1	15.3± 1.2	15.7± 1.1	14.7± 1.0	
100 mag 001	16.5± 1.2	16.5± 1.2	16.0± 0.9	15.6± 1.0	15.9± 1.2	15.6± 0.8	
200 ppm	16.3± 1.1	16.4± 1.3	16.3± 1.3	16.1± 1.2	17.0± 1.6	16.4± 1.4	
400 ppm	-	-	.=	~	-	-	
Significant differ	ence; *: P ≤ 0.05	**: P ≦ 0.01		Test of Dunnett			

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APPENDIX C 2

FOOD CONSUMPTION CHANGES: SUMMARY, RAT: FEMALE

ANIMAL : RAT F344/DuCrj UNIT : g

UNIT : g
REPORT TYPE : A1 13

SEX : FEMALE

FOOD CONSUMPTION CHANGES (SUMMARY) ALL ANIMALS

PAGE: 3

roup Name	Administration 1—7(6)	week-day(effective) 2-7(7)	3-7(7)	4-7(7)	5-7(7)	6-7(7)	7-7(7)
0 ppm	11.2± 0.8	11.1± 0.6	11.3± 0.6	11.0± 0.6	11.8± 1.1	11.2± 0.8	11.2± 0.9
25 ppm	11.4± 0.8	11.3± 0.6	11.1± 0.6	11.4± 0.6	11.7± 0.8	11.5± 1.5	11.3± 0.9
50 ppm	11.7± 0.4	12.6± 0.8**	11.9± 0.7	12.1± 0.5	12.0± 0.6	11.5± 1.0	11.5± 0.9
100 ppm	12.2± 0.8*	13.0± 1.2**	11.8± 1.1	11.3± 0.9	11.8± 0.9	11.8± 1.1	11.9± 1.3
200 ppm	12.0± 1.0	12.4± 1.2**	11.5± 1.1	11.3± 0.9	11.6± 1.1	11.1± 1.0	11.8± 1.2
400 ppm	11.8± 0.6	13.6± 0.8**	13.2± 1.6**	12.4± 2.5	5.6± 3.5*	-	-
Significant differe	ence; *:P≦0.05	** : P ≤ 0.01		Test of Dunnett			

(HAN260)

BAIS3

ANIMAL : RAT F344/DuCrj UNIT : g

REPORT TYPE: A1 13

SEX : FEMALE

FOOD CONSUMPTION CHANGES (SUMMARY) ALL ANIMALS

PAGE: 4

Group Name	Administration		10.0(0)	11 (7/7)	12-7(7)	13-7(7)
	8–7(7)	9–7(7)	10-7(7)	11-7(7)	12-1(1)	10-7(1)
	,					
0 ppm	11.0± 0.8	11.2± 1.0	11.1± 0.8	10.7± 0.8	11.0± 0.7	11.4± 1.1
25 ppm	10.8± 0.7	10.7± 0.7	11.0± 0.9	10.6± 1.1	11.0± 1.3	10.8± 1.3
Do ppiii						
50 ppm	11.8± 1.3	11.6± 0.9	10.9± 0.9	11.2± 0.9	11.8± 0.7	11.3± 0.7
100 ppm	11.5± 1.1	11.9± 1.1	11.1± 0.7	11.4± 0.9	11.3± 0.6	11.8± 0.7
,,						
200 ppm	11.4± 1.1	11.2± 0.9	11.7± 1.3	11.1± 1.4	11.2± 1.9	11.8± 1.2
400	_	_	_	_	_	
400 ppm						

Significant difference; $*: P \le 0.05$ $**: P \le 0.01$ Test of Dunnett BAIS3 (HAN260)

APPENDIX D 1

HEMATOLOGY: SUMMARY, RAT: MALE

STUDY NO.: 0340 ANIMAL: RAT F344/DuCrj

HEMATOLOGY (SUMMARY) ALL ANIMALS (14W)

SAMPLING DATE: 014-1 SEX: MALE

REPORT TYPE : A1

PAGE: 1

oup Name	NO. of Animals	RED BLOOD CELL 1 O ⁶ /µl	HEMOGLOBIN g∕dl	HEMATOCRIT %	MCV f Q	MCH pg	MCHC g∕dl	PLATELET 1 0³/μl
mop 0	10	8.95± 0.17	15.1± 0.3	44.7± 0.9	50.0± 0.3	16.9± 0.2	33.8± 0.4	691± 48
25 ppm	10	8.76± 0.98	14.8± 1.7	43.8± 4.4	50.1± 1.1	16.9± 0.2	33.8± 0.8	677± 75
50 ppm	10	8.96± 0.21	15.1± 0.3	44.7± 1.0	49.9± 0.8	16.9± 0.2	33.8± 0.2	677± 61
100 ppm	10	8.92± 0.25	15.0± 0.4	44.2± 1.2	49.6± 0.5	16.8± 0.2	33.9± 0.3	715± 56
200 ppm	10	8.84± 0.19	14.6± 0.4*	43.7± 1.0	49.4± 0.4	16.5± 0.2**	33.5± 0.4	793± 42**
400 ppm	0	-	-	-	-	-	-	-
Significant	difference;	*: P ≤ 0.05	**: P ≤ 0.01	J. 1844 -	Test of Dunnett			
CL070)								1

STUDY NO. : 0340
ANIMAL : RAT F344/DuCrj
SAMPLING DATE : 014-1
SEX : MALE REPOR

REPORT TYPE : A1

HEMATOLOGY (SUMMARY) ALL ANIMALS (140)

roup Name	NO. of Animals	RETICULO	CYTE		PROTHRO sec	MBIN TIME	APTT sec					 	
maga 0	10	27±	4		12.2±	1.2	23.1±	2.5					
25 ppm	10	34±	28		12.5±	1.5	22.6±	2.0					
50 ppm	10	25±	3		12.5±	1.4	22.6±	3.6					
100 ppm	10	27±	5		11.9±	1.1	21.2±	3.5					
200 ppm	10	37土	8*		12.2±	1.1	22.6±	2.8					
400 ppm	0	-			-		-						
Significant	t difference;	*: P ≤ 0	.05	**	: P ≤ 0.	01			Test of Dun	nett		 	
ICL070)			-								· · · · · · · · · · · · · · · · · · ·	 	 ВАІ

ANIMAL : RAT F344/DuCrj

SAMPLING DATE: 014-1

SEX : MALE

REPORT TYPE : A1

HEMATOLOGY (SUMMARY) ALL ANIMALS (14W)

Differential WBC (%) WBC Group Name NO. of MONO LYMPHO OTHERS N-SEG EOSINO BASO 1 03/με N-BAND Animals 1± 57± 1 0土 0 4± 0土 0 38± 8 1± 1 mag 0 10 2.10± 0.77 0 4土 2 59± 1± 1 0 $34\pm$ 7 $2\pm$ 1 0± 2.24± 0.88 0土 25 ppm 10 1 0± 0 4± 2 $60 \pm$ 7 0± 0 34± 7 1± 2.17± 0.57 0± 0 50 ppm 10 $1\pm$ 2 0± 0 4± 2 59士 1± 34± 1± 1 2.86± 1.16 1 100 ppm 10 0土 0 $4\pm$ 2 64± 5 2± 3 1± 1 10 3.23± 0.64* 0土 0 $29\pm$ 5** 200 ppm 400 ppm 0 Test of Dunnett Significant difference; $*: P \leq 0.05$ ** : $P \leq 0.01$ BAIS3 (HCL070)

APPENDIX D 2

HEMATOLOGY: SUMMARY, RAT: FEMALE

STUDY NO.: 0340 ANIMAL: RAT F344/DuCrj

SAMPLING DATE : 014-1 SEX : FEMALE

REPORT TYPE : A1

HEMATOLOGY (SUMMARY) ALL ANIMALS (14W)

oup Name	NO. of Animals	RED BLOG 1 O ⁶ /μ		HEMOGLO g∕dl	BIN	HEMATOC %	CRIT	MCV f &		MCH pg		MCHC g /dl		PLATELE 1 O³/μ	
0 ppm	8	8.15±	0.23	14.9±	0.5	43.4±	1.4	53.2±	0.8	18.2±	0.1	34.3±	0.4	606±	125
25 ppm	9	8.33±	0.17	15.2±	0.4	44.1±	0.9	52.9±	0.6	18.3±	0.2	34.5±	0.4	615±	106
50 ppm	10	8.10±	0.34	15.0±	0.3	42.9±	1.8	52.9±	0.3	18.6±	0.8	35.1±	1.5	641±	86
100 ppm	10	7.92±	0.26	14.6±	0.5	41.8±	1.4	52.8±	0.7	18.4±	0.4	34.8±	0.5	703±	91
200 ppm	10	7.67±	0.22**	14.1±	0.4**	41.5±	1.0*	54.1±	0.8*	18.4±	0.2	34.0±	0.4	793±	72**
400 ppm	0			-		-		-		-				-	
Significant	difference;	*: P ≤ 0).05	r*: P ≦ 0.0)1	, <u>, , , , , , , , , , , , , , , , , , </u>		Test of Dur	nett						

ANIMAL : RAT F344/DuCrj

SAMPLING DATE: 014-1 SEX: FEMALE

REPORT TYPE : A1

HEMATOLOGY (SUMMARY) ALL ANIMALS (14W)

Group Name	NO. of Animals	RETICULO ‰	OCYTE .	PROTHROME sec	BIN TIME	APTT sec					
0 ppm	8	31±	7	10.8±	0.3	17.8±	1.8				
25 ppm	9	22±	5*	10.9±	0.3	17.0±	2.2				
50 ppm	10	25±	5	10.9±	0.4	17.6±	1.3				
100 ppm	10	27±	6	10.7±	0.3	17.0±	1.3				
200 ppm	10	38±	7	10.8±	0.2	17.1±	2,2				
400 ppm	0			-		-					
Significant	t difference;	*: P ≤ 0	.05	**: P ≤ 0.01				Test of Dur	nnett	 	
(HCL070)						-				 	BAIS3

(HCL070)

ANIMAL : RAT F344/DuCrj

SAMPLING DATE: 014-1

SEX : FEMALE

REPORT TYPE : A1

HEMATOLOGY (SUMMARY) ALL ANIMALS (14W)

roup Name	NO. of Animals	WBC 1 O³∕		Dif N-BAND	ferentia	L WBC (% N-SEG	·)	EOSINO		BASO		MONO		LYMPHO		OTHERS	
mag 0	8	1.57±	1.26	0±	1	36±	9	2±	1	0±	0	5±	2	57±	9	0±	1
25 ppm	9	1.20±	0.45	0±	0	33±	8	2±	1	0±	0	4±	2	61±	6	0±	1
50 ppm	10	1.49±	0.68	0±	1	30±	9	1±	2	0±	0	4±	2	64±	8	1±	1
100 ppm	10	2.22±	0.74	0±	0	27±	6	1±	1	0±	0	4±	2	67±	6	1±	1
200 ppm	10	2.80±	0.85*	0±	1	29士	7	2土	1	0±	0	4±	1	64±	8	1±	1
400 ppm	0	-				-		-		-		-		-		-	
Significan	t difference	; *:P;	≦ 0.05	**: P ≦	0.01			Test	of Duni	nett							
HCI 070)																	BAIS

(HCL070)

APPENDIX E 1

BIOCHEMISTRY: SUMMARY, RAT: MALE

ANIMAL : RAT F344/DuCrj

BIOCHEMISTRY (SUMMARY) ALL ANIMALS (14W)

SAMPLING DATE: 014-2

SEX : MALE

REPORT TYPE : A1

PAGE: 1

oup Name	NO. of Animals	TOTAL PI	ROTEIN	g∕d¢ ALBUMIN		A/G RATIO		T-BILIRUBIN mg/dl		GLUCOSE mg/dl		T-CHOLESTEROL mg/dl		TRIGLYCERID mg/dl	
maja 0	10	6.2±	0.1	3.9±	0.0	1.6±	0.1	0.12±	0.01	166±	14	58±	6	55±	19
25 ppm	10	6.2±	0.1	3.8±	0.1	1.6±	0.1	0.12±	0.01	163±	11	58±	4	47±	16
50 ppm	10	6.2±	0.1	3.8±	0.1	1.6±	0.1	0.12±	0.01	159±	6	59±	3	50±	14
100 ppm	10	6.3±	0.1	3.9±	0.1	1.7±	0.1	0.13±	0.01	165±	11	63±	5	67±	24
200 ppm	10	6.4±	0.2*	4.0±	0.1**	1.7±	0.1	0.13±	0.01	162±	11	63±	7	55±	25
400 ppm	0					-		-				-		-	
	defference;	*: P ≤ 0	.05	**: P ≤ 0.0	01	- 1 ***		Test of Du	nnett						
074)															

(HCL074)

ANIMAL : RAT F344/DuCrj

SAMPLING DATE: 014-2

SEX : MALE

REPORT TYPE : A1

BIOCHEMISTRY (SUMMARY) ALL ANIMALS (14W)

CPK ALP G-GTP GOT GPT LDH Group Name NO. of PHOSPHOLIPID IU/l IU/l IU/l IU/l IU/Q IU/l mg/dl Animals $2\pm$ 1 114± 18 6 175士 25 $275 \pm$ 15 43士 10 $71 \pm$ 6 0 ppm 10 105士 108± 17 25 $2\pm$ 1 39 $267 \pm$ 44土 6 184士 10 $105\pm$ 8 $76\pm$ 11 25 ppm 103± 10 $242 \pm$ 23* $2\pm$ 195± 43 84士 19 47土 8 50 ppm 10 104士 6 $247 \pm$ 14 $2\pm$ 89± 8** $168 \pm$ 24 8 $71\pm$ 7 $42\pm$ 10 $113\pm$ 100 ppm 84± 6** 74± 211 41± 3 141土 19 283± 125** 12 65± 4 10 110± 200 ppm 0 400 ppm Significant defference; $*: P \leq 0.05$ ** : $P \leq 0.01$ Test of Dunnett

(HCL074)

BAIS3

ANIMAL : RAT F344/DuCrj

SAMPLING DATE: 014-2

SEX : MALE

REPORT TYPE : A1

BIOCHEMISTRY (SUMMARY) ALL ANIMALS (14W)

	NO. of Animals	UREA NITROGEN mg∕dl	CREATININE mg/dl	SODIUM mEq/Q	POTASSIUM mEq/Q	CHLORIDE mEq∕ Ø	CALCIUM mg/dl	INORGANIC PHOSPHORUS
0 ppm	10	18.5± 1.1	0.5± 0.0	142± 1	4.0± 0.3	107± 1	10.0± 0.2	5.9± 1.0
25 ppm	10	17.6± 1.1	0.5± 0.0	142± 1	4.0± 0.2	107± 1	10.0± 0.2	5.5± 1.0
50 ppm	10	18.4± 1.5	0.5± 0.1	142± 1	4.0± 0.2	108± 2	10.0± 0.2	5.7± 1.1
100 ppm	10	17.8± 1.1	0.5± 0.1	142± 1	4.0± 0.1	106± 1	10.0± 0.1	5.9± 1.0
200 ppm	10	26.1± 27.7	1.1± 1.7	140± 3	5.0± 2.6	105± 3	10.1± 0.2	7.6± 3.8
400 ppm	0	-	-	-	-	-	-	-
Significant	defference;	*: P ≤ 0.05	** : P ≤ 0.01		Test of Dunnett			

(HCL074)

BAIS3

APPENDIX E 2

BIOCHEMISTRY: SUMMARY, RAT: FEMALE

ANIMAL : RAT F344/DuCrj

SAMPLING DATE: 014-2

SEX : FEMALE REPORT TYPE : A1 BIOCHEMISTRY (SUMMARY) ALL ANIMALS (14W)

oup Name	NO. of Animals	TOTAL PROTEIN g∕dl		ALBUMIN g∕dl		A/G RATIO		T-BILIRUBIN mg/dl		mg∕dl mg∕dl		T-CHOLESTEROL mg∕dl		TRIGLYCERI mg/dl	
0 ppm	8	6.3±	0.2	3.8±	0.1	1.6±	0.1	0.13±	0.01	134±	8	71±	9	13±	3
25 ppm	9	6.1±	0.2	3.8±	0.1	1.6±	0.1	0.14±	0.01	131±	11	67±	7	13±	3
50 ppm	10	6.1±	0.2	3.8±	0.1	1.6±	0.1	0.14±	0.01	129±	17	69±	8	14±	3
100 ppm	10	6.1±	0.2	3.7±	0.1	1.6±	0.1	0.14±	0.01	137±	8	76±	7	16±	3
200 ppm	10	6.0±	0.1*	3.7±	0.1	1.7±	0.1	0.14±	0.01	135±	10	83±	7**	20±	6**
400 ppm	0	-		-				-		-		-		-	

ANIMAL : RAT F344/DuCrj

SAMPLING DATE: 014-2 SEX: FEMALE R

BIOCHEMISTRY (SUMMARY) ALL ANIMALS (14W)

⊅ Name	NO. of Animals	PHOSPHO mg/dl	LIPID	GOT I U / l		GPT IU/l	,	LDH IU/	Q	ALP IU/		G-GTP IU∕£		CPK IU/0	
mqq 0	8	131±	14	70±	8	38±	13	289±	112	200±	24	2±	1	139±	26
25 ppm	9	121±	10	75±	8	38±	9	320±	187	207±	19	3±	1	150±	73
50 ppm	10	125±	13	68±	5	32±	6	234±	44	193±	17	2±	1	115±	14
100 ppm	10	134±	12	70±	8	37±	12	259±	60	202±	21	3±	1	117±	19
200 ppm	10	154±	13**	66±	5	32±	5	254±	70	183±	24	2±	1	111±	21
400 ppm	0	-		**				-		-		-		-	

ANIMAL : RAT F344/DuCri

SAMPLING DATE: 014-2

SEX : FEMALE

REPORT TYPE : A1

BIOCHEMISTRY (SUMMARY) ALL ANIMALS (14W)

0.5± 0.0 0.5± 0.1	141± 1 142± 1 141± 1	3.8± 0.3 3.9± 0.3 3.8± 0.1	108± 2 109± 2 108± 1	9.7± 0.3 9.7± 0.2 9.7± 0.2	5.4± 1.4 5.0± 1.4 5.2± 1.1
0.5± 0.1	141± 1				
		3.8± 0.1	108± 1	9.7± 0.2	5.2± 1.1
0.5± 0.0	1401				
	140土 1	3.9± 0.2	107± 2	9.7± 0.3	5.6± 1.0
0.5± 0.0	140± 1	4.1± 0.2	109± 2	9.7± 0.3	5.7± 1.0
-	-	-	-	-	_
-		-			

(HCL074)

BAIS3

APPENDIX F 1

URINALYSIS: SUMMARY, RAT: MALE

URINALYSIS

STUDY NO.: 0340

ANIMAL : RAT F344/DuCrj

SAMPLING DATE: 013-4 SEX: MALE

REPORT TYPE : A1

PAGE: 1

up Name	NO. of Animals	рН <u>_</u> 5.0	6.0	6.5	7.0	7.5	8.0	8.5 CHI	Protein - ± + 2+ 3+ 4+ CHI	Glucose	Ketone body - ± + 2+ 3+ 4+ CHI	Bilirubin + 2+ 3+ CHI
0 ppm	10	0	0	0	1	1	3	5	0 2 6 2 0 0	10 0 0 0 0 0	5 4 1 0 0 0	10 0 0 0
25 ppm	10	0	0	0	1	2	4	3	0 2 6 2 0 0	10 0 0 0 0 0	5 4 1 0 0 0	10 0 0 0
50 ppm	10	0	0	0	3	5	1	1	0 7 3 0 0 0	10 0 0 0 0 0	10 0 0 0 0 0 *	10 0 0 0
100 ppm	10	0	0	0	0	5	3	2	0 5 4 1 0 0	10 0 0 0 0 0	7 0 3 0 0 0	10 0 0 0
200 ppm	10	0	0	0	0	4	2	4	0 4 6 0 0 0	10 0 0 0 0 0	8 2 0 0 0 0	10 0 0 0
400 ppm	0	_		_		_	_	_				

(HCL101)

URINALYSIS

STUDY NO.: 0340

ANIMAL : RAT F344/DuCrj SAMPLING DATE : 013-4 SEX : MALE REPOR

REPORT TYPE : A1

Group Name	NO. of Animals	0ccult blood - ± + 2+ 3+ CHI	Urobilinosen ± + 2+ 3+ 4+ CHI		
mag 0	10	10 0 0 0 0	10 0 0 0 0		
25 ppm	10	10 0 0 0 0	10 0 0 0 0		
50 ppm	10	9 1 0 0 0	10 0 0 0 0		
100 ppm	10	10 0 0 0 0	10 0 0 0 0		
200 ppm	10	9 0 1 0 0	10 0 0 0 0		
400 ppm	0				
Significan	t difference	; *:P≤0.05 **	:: P ≤ 0.01	Test of CHI SQUARE	
(HCL101)					 BAIS3

PAGE: 2

(HCL101)

APPENDIX F 2

URINALYSIS : SUMMARY, RAT : FEMALE

URINALYSIS

STUDY NO. : 0340

ANIMAL : RAT F344/DuCrj SAMPLING DATE : 013-4 SEX : FEMALE REPOR

REPORT TYPE : A1

PAGE: 3

oup Name	NO. of	Вq						****	Protein	Glucose	Ketone body	Bilirubin
A Maile	Animals		6.0	6.5	7.0	7.5	8.0	8.5 CHI	- ± + 2+ 3+ 4+ CHI	- ± + 2+ 3+ 4+ CHI	- ± + 2+ 3+ 4+ CHI	- + 2+ 3+ CHI
mag 0	10	0	0	0	0	1	9	0	1 5 4 0 0 0	10 0 0 0 0 0	10 0 0 0 0 0	10 0 0 0
25 ppm	10	0	0	0	0	1	9	0	1 6 3 0 0 0	10 0 0 0 0 0	10 0 0 0 0 0	10 0 0 0
50 ppm	10	0	0	0	0	3	4	3	2 7 1 0 0 0	10 0 0 0 0 0	10 0 0 0 0 0	10 0 0 0
100 ppm	10	0	0	1	2	3	4	0	3 6 1 0 0 0	10 0 0 0 0 0	10 0 0 0 0 0	10 0 0 0
200 ppm	10	0	0	0	0	0	10	0	4 4 2 0 0 0	10 0 0 0 0 0	10 0 0 0 0 0	10 0 0 0
400 ppm	0	-	-		_	-	-	-				

(HCL101)

URINALYSIS

ANIMAL : RAT F344/DuCrj

SAMPLING DATE: 013-4

SEX : FEMALE

REPORT TYPE : A1

Group Name	NO. of Animals	Occult blood ± + 2+ 3+ CHI	Urabilinagen ± + 2+ 3+ 4+ CHI		
0 ppm	10	10 0 0 0 0	10 0 0 0 0		
25 ppm	10	10 0 0 0 0	10 0 0 0 0		
50 ppm	10	10 0 0 0 0	10 0 0 0 0		
100 ppm	10	10 0 0 0 0	10 0 0 0 0		
200 ppm	10	10 0 0 0 0	10 0 0 0 0		
400 ppm	0				
Significan	t difference	; *: P ≤ 0.05 **	: P ≤ 0.01	Test of CHI SQUARE	
(HCL101)					BAIS 3

APPENDIX G 1

GROSS FINDINGS: SUMMARY, RAT: MALE

DEAD AND MORIBUND ANIMALS

STUDY NO. : 0340 ANIMAL : RAT F344/DuCrj

GROSS FINDINGS (SUMMARY) DEAD AND MORIBUND ANIMALS (0- 14W)

REPORT TYPE : A1 : MALE SEX

PAGE: 1

Organ	Findings	Group Name NO. of Animals	0 ppm 0 (%)	25 ppm 0 (%)	50 ppm 0 (%)	100 ppm 0 (%)
lung	red zone		- (-)	- (-)	- (-)	- (-)
	valuminus		- (-)	- (-)	- (-)	- (-)
liver	herniation		- (-)	- (-)	- (-)	- (-)
urin bladd	urine:marked retention		- (-)	- (-)	- (-)	- (-)
		•				
(UDTOPO)						BAIS

(HPT080)

ANIMAL : RAT F344/DuCrj

GROSS FINDINGS (SUMMARY) DEAD AND MORIBUND ANIMALS (0- 14W)

REPORT TYPE : A1 SEX : MALE

Organ	Findings	Group Name NO. of Animals	200 ppm 0 (%)	400 ppm 10 (%)	
lung	red zone		- (-)	10 (100)	
	voluminus		- (-)	7 (70)	
Liver	herniation		- (-)	1 (10)	
urin bladd	urine:marked retention		- (-)	9 (90)	
(HPT080)					BAIS

APPENDIX G 2

GROSS FINDINGS : SUMMARY, RAT : MALE : SACRIFICED ANIMALS

ANIMAL : RAT F344/DuCrj

GROSS FINDINGS (SUMMARY) SACRIFICED ANIMALS (14W)

REPORT TYPE : A1

SEX : MALE

SACRIFICED ANIMALS (

Organ	Findings	Group Name 0 ppm NO. of Animals 10 (%)	25 ppm 10 (%)	50 ppm 10 (%)	100 ppm 10 (%)
uns	brown zone	0 (0)	0 (0)	0 (0)	0 (0)
er	herniation	3 (30)	1 (10)	0 (0)	4 (40)

STUDY NO. : 0340 ANIMAL : RAT F344/DuCrj

GROSS FINDINGS (SUMMARY) SACRIFICED ANIMALS (14W)

REPORT TYPE : A1

SEX : MALE

Organ	Findings	Group Name NO. of Animals	200 ppm 10 (%)	400 ppm 0 (%)	
lung .	brown zone		1 (10)	- (-)	
liver	herniation		1 (10)	- (-)	

(HPT080)

BAIS 3

APPENDIX G 3

GROSS FINDINGS: SUMMARY, RAT: FEMALE

DEAD AND MORIBUND ANIMALS

STUDY NO. : 0340 ANIMAL : RAT F344/DuCrj

GROSS FINDINGS (SUMMARY) DEAD AND MORIBUND ANIMALS (0- 14W)

REPORT TYPE : A1

SEX : FEMALE

PAGE: 3

)rgan	Findings	Group Name 0 ppm NO. of Animals 0 (%)	25 ppm 0 (%)	50 ppm 0 (%)	100 ppm 0 (%)
ung	red zone	- (-)	- (-)	- (-)	- (-)
	valuminus	- (-)	- (-)	- (-)	- (-)
mus	atrophic	- (-)	- (-)	- (-)	- (-)
er	herniation	- (-)	- (-)	- (-)	- (-)
in bladd	urine:marked retention	- (-)	- (-)	- (-)	- (-)

(HPT080)

ANIMAL : RAT F344/DuCrj

GROSS FINDINGS (SUMMARY)

DEAD AND MORIBUND ANIMALS (0- 14W)

REPORT TYPE : A1

PAGE: 4 SEX : FEMALE

0rgan	Findings	Group Name 200 ppm NO. of Animals 0 (%)	400 ppm 10 (%)	
lung	red zone	- (-)	9 (90)	
	voluminus	- (-)	6 (60)	
thymus	atrophic	- (-)	2 (20)	
Liver	herniation	- (-)	1 (10)	
urin bladd	urine:marked retention	- (-)	5 (50)	
(HPT080)				BAIS 3

(HPT080)

APPENDIX G 4

GROSS FINDINGS: SUMMARY, RAT: FEMALE: SACRIFICED ANIMALS

ANIMAL : RAT F344/DuCrj REPORT TYPE : A1

SEX : FEMALE

GROSS FINDINGS (SUMMARY) SACRIFICED ANIMALS (14W)

)rgan	Findings	Group Name 0 ppm NO. of Animals 10 (%)	25 ppm 10 (%)	50 ppm 10 (%)	100 ppm 10 (%)
ung	brown zone	0 (0)	0 (0)	0 (0)	0 (0)
ver	herniation	3 (30)	2 (20)	1 (10)	1 (10)

STUDY NO. : 0340
ANIMAL : RAT F344/DuCrj
REPORT TYPE : A1
SEX : FEMALE

GROSS FINDINGS (SUMMARY) SACRIFICED ANIMALS (14W)

0rgan	Findings	Group Name 20 NO. of Animals 10	00 ppm (%)	400 ppm 0 (%)	
lung	brawn zane	2	(20)	- (-)	
liver	herniation	1	(10)	- (-)	
(HPT080)					BAIS 3

APPENDIX H 1

ORGAN WEIGHT, ABSOLUTE: SUMMARY, RAT: MALE
(13 - WEEK STUDY)

ANIMAL : RAT F344/DuCrj

REPORT TYPE : A1 SEX : MALE UNIT: g

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

PAGE: 1

coup Name	NO. of Animals	Body Weight	THYMUS	ADRENALS	TESTES	HEART	LUNGS	
mag 0	10	283± 17	0.236± 0.025	0.052± 0.004	2.929± 0.101	0.875± 0.045	0.952± 0.052	
25 ppm	10	271± 14	0.234± 0.031	0.048± 0.005	2.843± 0.149	0.850± 0.044	0.922± 0.072	
50 ppm	10	280± 14	0.220± 0.048	0.048± 0.006	2.889± 0.071	0.881± 0.052	0.958± 0.057	
100 ppm	10	283± 16	0.252± 0.029	0.051± 0.005	2.863± 0.113	0.896± 0.065	0.980± 0.047	
200 ppm	10	276± 19	0.236± 0.038	0.050± 0.004	2.767± 0.096**	0.896± 0.060	1.083± 0.102**	
400 ppm	0		-	-	-	-	-	
Significan	nt difference;	*: P ≤ 0.05	**: P ≤ 0.01	Test	t of Dunnett			
CL040)								

ANIMAL : RAT 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	LIVI	ER	BRA	1IN	
mad 0	10	1.744± 0.079	0.536± 0.0	32 7.093±	0.481	1.888±	0.048	
25 ppm	10	1.728± 0.112	0.517± 0.0	17 6.714土	0.497	1.867±	0.023	
50 ppm	10	1.882± 0.077	√* 0.538± 0.0	16 7.090±	0.355	1.850±	0.091	
100 ppm	10	2.027± 0.107	*** 0.527± 0.0	32 7.559±	0.466	1.843±	0.045	
200 ppm	10	2.102± 0.124	1** 0.552± 0.0	31 7.886±	0.498**	1.789±	0.056**	
400 ppm	0	-	-	-		-		
Significan	t difference;	*: P ≤ 0.05	** : P ≤ 0.01		Te	st of Dunnet	tt	

(IICL040)

BAIS 3

APPENDIX H 2

ORGAN WEIGHT, ABSOLUTE: SUMMARY, RAT: FEMALE
(13 - WEEK STUDY)

ANIMAL : RAT F344/DuCrj

REPORT TYPE : A1 SEX : FEMALE UNIT: g

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

PAGE: 3

roup Name	NO. of Animals	Bady Weight	THYMUS	ADRENALS	OVARIES	HEART	LUNGS	
mag 0	10	163± 9	0.187± 0.025	0.056± 0.005	0.101± 0.015	0.597± 0.041	0.748± 0.046	
25 ppm	10	162± 9	0.190± 0.030	0.057± 0.009	0.100± 0.009	0.575± 0.027	0.728± 0.052	
50 ppm	10	169± 9	0.195± 0.022	0.057± 0.006	0.105± 0.012	0.605± 0.031	0.725± 0.037	
100 ppm	10	165± 9	0.184± 0.022	0.060± 0.004	0.105± 0.007	0.614± 0.038	0.738± 0.030	
200 ppm	10	155± 12	0.180± 0.023	0.054± 0.003	0.100± 0.019	0.572± 0.042	0.795± 0.079	
400 ppm	0	<u>-</u> ·	-	-	-	-	-	
Significan	t difference;	*: P ≤ 0.05 **	: P ≦ 0.01	Test	t of Dunnett			
HCL040)								I

(HCL040)

ANIMAL : RAT F344/DuCrj REPORT TYPE : A1

SEX : FEMALE
UNIT: g

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

PAGE: 4

Group Name	NO. of Animals	KID	NEYS	SPLI	EEN	LIVE	ER	BRAI	N
maq 0	10	1.101±	0.056	0.365±	0.028	3.939±	0.316	1.743±	0.040
25 ppm	10	1.124±	0.064	0.351±	0.032	3.805±	0.360	1.770±	0.041
50 ppm	10	1.163±	0.033*	0.362±	0.017	4.000±	0.185	1.743±	0.036
100 ppm	10	1.212±	0.037**	0.362±	0.021	4.028±	0.163	1.695±	0.065
200 ppm	10	1.216±	0.070**	0.365±	0.021	4.029±	0.268	1.664±	0.037**
400 ppm	0	-		-		_		-	
Significan	t difference;	*: P ≤ 0.	05 **	: P ≤ 0.01			1	Test of Dunnet	t

(HCL040)

BAIS 3

APPENDIX I 1

ORGAN WEIGHT, RELATIVE : SUMMARY, RAT : MALE

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

STUDY NO. : 0340

ANIMAL : RAT F344/DuCrj

REPORT TYPE : A1

SEX: MALE UNIT: %

HEART LUNGS TESTES THYMUS ADRENALS Body Weight NO. of Group Name (g) Animals 0.309± 0.019 0.336 ± 0.019 0.084 ± 0.008 0.019 ± 0.002 1.036 ± 0.055 283± 17 10 0 ppm 1.050 ± 0.059 0.314 ± 0.013 0.340 ± 0.025 0.018 ± 0.002 271± 14 0.086 ± 0.012 10 25 ppm 0.315 ± 0.013 0.342 ± 0.016 1.034 ± 0.042 0.079± 0.016 0.017 ± 0.002 280士 14 50 ppm 10 0.317 ± 0.024 0.347 ± 0.022 1.012 ± 0.036 0.089 ± 0.012 0.018 ± 0.002 10 283± 16 100 ppm 0.326 ± 0.016 0.394 ± 0.033** 0.086± 0.011 0.018 ± 0.001 1.008 ± 0.066 10 276士 19 200 ppm 0 400 ppm Test of Dunnett Significant difference; $*: P \leq 0.05$ ** : $P \leq 0.01$

PAGE: 1

(IICL042) BAIS 3

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

STUDY NO.: 0340

ANIMAL : RAT F344/DuCrj

REPORT TYPE : A1 SEX : MALE

UNIT: %

PAGE: 2

	NO. of Animals	KIDNEYS	SPLEEN	LIVER	BRAIN	
maa 0	10	0.616± 0.024	0.189± 0.009	2.502± 0.053	0.668± 0.040	
25 ppm	10	0.637± 0.013	0.191± 0.020	2.475± 0.085	0.690± 0.033	
50 ppm	10	0.673± 0.021*	0.192± 0.008	2.534± 0.067	0.661± 0.023	
100 ppm	10	0.716± 0.008**	0.186± 0.008	2.670± 0.073**	0.652± 0.036	
200 ppm	10	0.764± 0.030**	0.201± 0.009*	2.864± 0.044**	0.651± 0.032	
400 ppm	0	-	-	-	-	

BAIS 3 (HCL042)

APPENDIX I 2

ORGAN WEIGHT, RELATIVE: SUMMARY, RAT: FEMALE

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

STUDY NO.: 0340 ANIMAL : RAT F344/DuCrj

REPORT TYPE : A1 SEX : FEMALE UNIT: %

HEART LUNGS ADRENALS Body Weight OVARIES THYMUS NO. of Group Name

	Animals	(g)					
0 ppm	10	163± 9	0.115± 0.013	0.034± 0.004	0.062± 0.008	0.367± 0.021	0.461± 0.031
25 ppm	10	162± 9	0.117± 0.016	0.035± 0.006	0.062± 0.006	0.356± 0.017	0.451± 0.027
50 ppm	10	169± 9	0.115± 0.009	0.034± 0.004	0.062± 0.010	0.358± 0.019	0.429± 0.020
100 ppm	10	165± 9	0.112± 0.013	0.036± 0.004	0.064± 0.004	0.373± 0.026	0.448± 0.023
200 ppm	10	155± 12	0.115± 0.012	0.035± 0.003	0.065± 0.015	0.368± 0.017	0.513± 0.058
400 ppm	0	-	~	-	-	- -	-
Significant	difference;	*: P ≤ 0.05	**: P ≤ 0,01	Tes	st of Dunnett		

PAGE: 3

BAIS 3 (HCL042)

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

STUDY NO.: 0340 ANIMAL: RAT F344/DuCrj

REPORT TYPE : A1
SEX : FEMALE

UNIT: %

oup Name	NO. of Animals	KIDNEYS	SPLEEN	LIVER	BRAIN
0 ppm	10	0.678± 0.028	0.225± 0.018	2.422± 0.124	1.075± 0.057
25 ppm	10	0.696± 0.029	0.217± 0.011	2.351± 0.139	1.097± 0.054
50 ppm	10	0.688± 0.026	0.214± 0.011	2.365± 0.087	1.032± 0.060
100 ppm	10	0.737± 0.038**	0.220± 0.017	2.447± 0.091	1.031± 0.066
200 ppm	10	0.785± 0.042**	0.236± 0.010	2.597± 0.078**	1.077± 0.086
400 ppm	0	-	-	-	-
Significan	t difference;	*: P ≤ 0.05 **:	P ≤ 0.01	Test	of Dunnett

PAGE: 4

(HCL042) BAIS 3

APPENDIX J 1

HISTOLOGICAL FINDINGS: NON-NEOPLASTIC LESIONS: SUMMARY

RAT: MALE: DEAD AND MORIBUND ANIMALS

HISTOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY) DEAD AND MORIBUND ANIMALS (0- 14W)

ANIMAL : RAT F344/DuCrj

REPORT TYPE : A1
SEX : MALE

Organ	Group No. of Grade	ame 0 ppm Animals on Study 0 1 2 3 4 (%) (%) (%) (%)	25 ppm 0 1 2 3 4 (%) (%) (%) (%)	50 ppm 0 1 2 3 4 (%) (%) (%)	100 ppm 0 1 2 3 4 (%) (%) (%) (%)
[Respiratory	system]				
nasal cavit	thrombus 负枪	< 0> (-) (-) (-) (-)	(-) (-) (-) (-)	(-) (-) (-)	< 0> (-) (-) (-) (-)
	cartilaginous metaplasia 駅争んむ	(-) (-) (-) (-)	(-) (-) (-)	(-) (-) (-)	(-) (-) (-) (-)
	goblet cell hyperplasia 杯	(-) (-) (-)	(-) (-) (-)	(-) (-) (-) (-)	(-) (-) (-) (-)
·	necrosis:olfactory epithelium	(-) (-) (-) (-)	(-) (-) (-)	(-) (-) (-)	(-) (-) (-) (-)
	deposit of freign body	(-) (-) (-) (-)	(-) (-) (-)	(-) (-) (-) (-)	(-) (-) (-) (-)
.arynx 以表 ^写	hyperplasia:epithelium	< 0> (-) (-) (-) (-)	< 0> (-) (-) (-) (-)	< 0> (-) (-) (-) (-)	< 0> (-) (-) (-) (-)
trachea	hyperplasia:epithelium	< 0> (-) (-) (-) (-)	< 0> (-) (-) (-) (-)	< 0> (-) (-) (-) (-)	(-) (-) (-) (-)
Grade <a> b	1: Slight 2: Moderate 3: Mark a: Number of animals examined at the site b: Number of animals with lesion c: b/a * 100	ed 4 : Severe			

HISTOLOGICAL FINDINGS : NON-NEOPLASTIC LESIONS (SUMMARY)

ANIMAL : RAT F344/DuCrj

REPORT TYPE : A1 SEX : MALE DEAD AND MORIBUND ANIMALS (0- 14W)

rgan	Group Name No. of Ani Grade Findings	200 ppm mals on Study 0 1 2 3 4 (%) (%) (%) (%)	400 ppm 10 1 2 3 4 (%) (%) (%) (%)	
Respiratory:	system]			
nasal ca∪it	thrambus	< 0> (-) (-) (-) (-)	1 0 9 0 (10) (0) (90) (0)	
	cartilaginous metaplasia	(-) (-) (-) (-)	0 1 0 0 (0) (10) (0) (0)	
	goblet cell hyperplasia	(-) (-) (-) (-)	6 0 0 0 (60) (0) (0) (0)	
	necrosis:olfactory epithelium	(-) (-) (-)	5 5 0 0 (50) (50) (0) (0)	
	deposit of freign body	(-) (-) (-)	2 0 0 0 (20) (0) (0) (0)	
larynx	hyperplasia:epithelium	< 0> (-) (-) (-) (-)	8 0 0 0 (80) (0) (0) (0)	
trachea	hyperplasia:epithelium	< 0> (-) (-) (-) (-)	7 0 0 0 (70) (0) (0) (0)	
Grade <a> b (c)	1: Slight 2: Moderate 3: Marked a: Number of animals examined at the site b: Number of animals with lesion c: b/a * 100	4: Severe		

HISTOLOGICAL FINDINGS : NON-NEOPLASTIC LESIONS (SUMMARY)

ANIMAL : RAT F344/DuCri

DEAD AND MORIBUND ANIMALS (0- 14W)

REPORT TYPE: A1 PAGE: 3 : MALE 50 ppm 100 ppm 25 ppm mag 0 Group Name 0 0 0 No. of Animals on Study 0 2 3 4 Grade (%) (%) (%) (%) (%) (%) Findings_ [Respiratory system] < 0> lung bacteria (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) branchapneumonia (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) deposit of freign body (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) [Hematopoietic system] thymus atrophy (-) (-) (-) (-) (-) (-) (-) (-) (-) < 0> spleen extramedullary hematopoiesis. (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) [Digestive system] Liver herniation (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) 3 : Marked 4 : Severe 1 : Slight 2 : Moderate Grade a: Number of animals examined at the site (a) b: Number of animals with lesion b c:b/a*100(c)

BAIS3

HISTOLOGICAL FINDINGS : NON-NEOPLASTIC LESIONS (SUMMARY)

ANIMAL : RAT F344/DuCrj

REPORT TYPE : A1

SEX : MALE

DEAD AND MORIBUND ANIMALS (0- 14W)

rgan	Findings	Group Name 200 ppm No. of Animals on Study 0 Grade 1 2 3 4 (%) (%) (%) (%)	400 ppm 10 10 1 2 3 4 (%) (%) (%) (%)	
Respiratory	v system]			
lung	bacteria	(-) (-) (-) (-)	3 0 0 0 (30) (0) (0) (0)	
	branchapneumonia	(-) (-) (-) (-)	0 0 1 9 (0) (10) (90)	
	deposit of freign body	(-) (-) (-) (-)	4 0 0 0 0 (40) (0) (0)	
[Hematopoie	tic system]			
thymus	atrophy	(-) (-) (-)	(8) 0 3 0 0. (0) (38) (0) (0)	
spleen	extramedullary hematopoiesis	(-) (-) (-) (-)	(10) 1 0 0 0 (10) (0) (0) (0)	
[Digestive	system]			
Liver	herniation	(-) (-) (-) (-)	(10) 1 0 0 0 (10) (0) (0) (0)	

HISTOLOGICAL FINDINGS : NON-NEOPLASTIC LESIONS (SUMMARY)

PAGE: 5

ANIMAL : RAT F344/DuCrj

REPORT TYPE : A1 SEX : MALE

DEAD AND MORIBUND ANIMALS (0- 14W)

EX :	MALE				
organ		up Name 0 ppm of Animals on Study 0 de <u>1 2 3 4</u> (%) (%) (%) (%)	25 ppm 0 1 2 3 4 (%) (%) (%)	50 ppm 0 1 2 3 4 (%) (%) (%) (%)	100 ppm 0 1 2 3 4 (%) (%) (%) (%)
Digestive sy	rstem]				
iver	congestion	(-) (-) (-)	(-) (-) (-) (-)	(-) (-) (-) (-)	(-) (-) (-) (-)
Urinary syst	tem]				
idney	easinaphilic body	(-) (-) (-) (-)	(-) (-) (-) (-)	(-) (-) (-) (-)	(-) (-) (-) (-)
	mineralization:papilla	(-) (-) (-) (-)	(-) (-) (-) (-)	(-) (-) (-)	(-) (-) (-)
·	nuclear enlargement:proximal tubule	(-) (-) (-) (-)	(-) (-) (-)	(-) (-) (-)	(-) (-) (-) (-)
indocrine s	vstem]				
hyroid	ultimibranchial body remanet	(-) (-) (-) (-)	< 0> (-) (-) (-) (-)	< 0> (-) (-) (-) (-)	< 0> (-) (-) (-) (-)
rade a > b	1: Slight 2: Moderate 3: M a: Number of animals examined at the site b: Number of animals with lesion c: b/a * 100	farked 4 : Severe			

ANIMAL : RAT F344/DuCrj

HISTOLOGICAL FINDINGS : NON-NEOPLASTIC LESIONS (SUMMARY)

REPORT TYPE : A1

SEX : MALE

DEAD AND MORIBUND ANIMALS (0- 14W)

0rgan	Findings	Group Name 200 ppm No. of Animals on Study 0 Grade 1 2 3 4 (%) (%) (%)	400 ppm 10 1 2 3 4 (%) (%) (%)	
[Digesti∪e s	system]			
liver	congestion),G—	< 0> (-) (-) (-) (-)	<10> 0 10 0 0 (0) (100) (0) (0)	
[Urinary sy:	stem]			
kidney	easinaphilic body	< 0> (-) (-) (-) (-)	<10> 8 1 0 0 (80) (10) (0) (0)	
	mineralization:papilla		1 0 0 0 (10) (0) (0) (0)	
	nuclear enlargement:proximal tubule	(-) (-) (-) (-)	1 0 0 0 (10) (0) (0) (0)	
[Endacrine	system]			•
thyroid	ultimibranchial body remanet	< 0> (-) (-) (-) (-)	2 0 0 0 (20) (0) (0) (0)	
Grade < a > b (c)	1: Slight 2: Moderate a: Number of animals examined at the b: Number of animals with lesion c: b / a * 100	3 : Marked 4 : Severe site		
(HPT150)				BA

HISTOLOGICAL FINDINGS : NON-NEOPLASTIC LESIONS (SUMMARY)

PAGE: 7

ANIMAL : RAT F344/DuCrj REPORT TYPE : A1

SEX : MALE

DEAD AND MORIBUND ANIMALS (0- 14W)

	Group Name 0 ppm No. of Animals on Study 0 Grade 1 2 3 4 (%) (%) (%) (%)	25 ppm 0 1 2 3 4 (%) (%) (%) (%)	1 2 3 4 (%) (%) (%) (%)	100 ppm 0 1 2 3 4 (%) (%) (%) (%)
system]				-
	< 0>	< 0>	< 0>	< 0>
germ cell necrasis	(-) (-) (-) (-)	(-) (-) (-) (-)	(-) (-) (-)	(-) (-) (-) (-)
	< 0>	< 0>	< 0>	< 0>
debris of spermatic elements	(-) (-) (-) (-)	(-) (-) (-) (-)	(-) (-) (-)	(-) (-) (-) (-)
	< 0>	< 0>	< 0>	< 0>
inflammation	(-) (-) (-)	(-) (-) (-) (-)	(-) (-) (-) (-)	(-) (-) (-) (-)
	system] germ cell necrosis debris of spermatic elements inflammation 1: Slight 2: Moderate 3 a: Number of animals examined at the s b: Number of animals with lesion	System	System	System S

HISTOLOGICAL FINDINGS : NON-NEOPLASTIC LESIONS (SUMMARY) DEAD AND MORIBUND ANIMALS (0- 14W)

ANIMAL : RAT F344/DuCrj REPORT TYPE : A1

: MALE SEX

Organ		P. Name 200 ppm of Animals on Study 0 1 2 3 4 (%) (%) (%) (%)	400 ppm 10 1 2 3 4 (%) (%) (%) (%)	
[Reproductive	e system]			
testis	germ cell necrosis	(-) (-) (-) (-)	7 0 0 0 (70) (0) (0) (0)	
epididymis	debris of spermatic elements	< 0> (-) (-) (-) (-)	5 1 0 0 (50) (10) (0) (0)	
prostate	inflammation	< 0> (-) (-) (-) (-)	<10> 0 4 0 0 (0) (40) (0) (0)	
Grade <a>> b (c)	1: Slight 2: Moderate 3: Mai a: Number of animals examined at the site b: Number of animals with lesion c:b/a*100	rked 4 : Severe		
(HPT150)				BAI

APPENDIX J 2

HISTOLOGICAL FINDINGS: NON-NEOPLASTIC LESIONS: SUMMARY

RAT: MALE: SACRIFICED ANIMALS

(13 - WEEK STUDY)

HISTOLOGICAL FINDINGS : NON-NEOPLASTIC LESIONS (SUMMARY)

SACRIFICED ANIMALS (14W)

ANIMAL : RAT F344/DuCrj REPORT TYPE : A1

SEX : MALE

Organ	N	Toup Name 0 ppm 0. of Animals on Study 10 Tade 1 2 3 4 (%) (%) (%) (%)	25 ppm 10 1 2 3 4 (%) (%) (%) (%)	50 ppm 10 1 2 3 4 (%) (%) (%) (%)	100 ppm 10 1 2 3 4 (%) (%) (%) (%)
	r mangs		(N) (N) (N)	(10) (10) (10)	(10) (10) (10)
[Respirator)	v system]				
nasal cavit	eosinophilic change:olfactory epitheliu	0 0 0 0 0 0 0 0 0 0 0 0 0	1 0 0 0 (10) (0) (0) (0)	2 0 0 0 (20) (0) (0) (0)	2 0 0 0 (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)
lung	perivascular inflammation	<10> 0 0 0 0 (0) (0) (0) (0)	<10> 0 0 0 0 (0) (0) (0) (0)	<10> 0 0 0 0 (0) (0) (0) (0)	<10> 0 0 0 0 (0) (0) (0) (0)
	branchapneumania	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) (0)
	deposit of freign body	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)
[Hematopoie	tic system]				
thymus	congestion	<10> 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)	<10> 0 0 0 0 (0) (0) (0) (0)
Grade <a> b (c) Significant	1: Slight 2: Moderate 3: a: Number of animals examined at the sit b: Number of animals with lesion c: b / a * 100 difference; *: $P \le 0.05$ **: $P \le 0.05$				

: 0340

HISTOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY) SACRIFICED ANIMALS (14W)

ANIMAL : RAT F344/DuCrj REPORT TYPE : A1

SEX : MALE

Organ	Group Name No. of Anima Grade Findings	200 ppm ls an Study 10 1 2 3 4 (%) (%) (%) (%)	400 ppm 0 1 2 3 4 (%) (%) (%) (%)	,	
[Respirator)	y system]				
nasal cavit	eosinophilic change:olfactory epithelium	7 0 0 0 ** (70) (0) (0) (0)	(-) (-) (-) (-)		
	necrosis:olfactory epithelium	1 0 0 0 0 (10) (10) (10) (10)	(-) (-) (-) (-)		
lung	perivascular inflammation	1 0 0 0 (10) (0) (0) (0)	<pre></pre>		
	branchapneumania	0 2 0 0 (0) (20) (0)	(-) (-) (-)		
	deposit of freign body	1 0 0 0 (10) (0) (0) (0)	(-) (-) (-) (-)		
[Hematopoie	tic system]				
thymus	congestion	1 0 0 0 (10) (0) (0) (0)	(-) (-) (-) (-)		
Grade <a>> b (c)	1: Slight 2: Moderate 3: Marked a: Number of animals examined at the site b: Number of animals with losion c: b / a * 100 cdifference; *: P ≤ 0.05 **: P ≤ 0.01 Tes	4 : Severe	·		

ANIMAL : RAT F344/DuCrj

HISTOLOGICAL FINDINGS : NON-NEOPLASTIC LESIONS (SUMMARY) SACRIFICED ANIMALS (14W)

REPORT TYPE : A1

SEX : MALE

0rgan	Group No. of Grade Findings	Name 0 ppm F Animals on Study 10 1 2 3 4 (%) (%) (%) (%)	25 ppm 10 1 2 3 4 (%) (%) (%) (%)	50 ppm 10 1 2 3 4 (%) (%) (%) (%)	100 ppm 10 1 2 3 4 (%) (%) (%) (%)
[Hematopoie	tic system]				
spleen	extramedullary hematopoiesis	<10> 0 0 0 0 (0) (0) (0) (0)	\(\lambda 10 \) \(\begin{array}{ccccc} 1 & 0 & 0 & 0 \\ (10) & (0) & (0) & (0) \end{array} \)	(10) 0 0 0 0 (0) (0) (0) (0)	(10) 0 0 0 0 (0) (0) (0) (0)
[Circulator	y system]				
heart	inflammatory cell nest	2 0 0 0 (20) (0) (0) (0)	(10) 0 0 0 0 (0) (0) (0) (0)	2 0 0 0 (20) (0) (0) (0)	(10) 0 0 0 0 (0) (0) (0) (0)
[Digestive	system]				
liver	herniation	3 0 0 0 (30) (0) (0) (0)	(10) 1 0 0 0 (10) (0) (0) (0)	<10> 0 0 0 0 (0) (0) (0) (0)	<pre></pre>
	granulation	0 0 0 0 0 (0) (0)	0 0 0 0 0 (0) (0)	0 0 0 0 0 (0) (0)	1 0 0 0 0 (10) (10) (10)
	perivascular inflammation	2 0 0 0 0 (20) (0) (0) (0)	1 0 0 0 0 (10) (10) (10)	2 0 0 0 0 (20) (0) (0) (0)	1 0 0 0 0 (10) (10) (10)
Grade (a) b (c)	1: Slight 2: Moderate 3: Mar a: Number of animals examined at the site b: Number of animals with lesion c: b / a * 100 t difference; *: P ≤ 0.05 **: P ≤ 0.01				

(HPT150)

ANIMAL : RAT F344/DuCrj

HISTOLOGICAL FINDINGS : NON-NEOPLASTIC LESIONS (SUMMARY)

SACRIFICED ANIMALS (14W)

REPORT TYPE : A1 : MALE

400 ppm Group Name 200 ppm No. of Animals on Study 0 10 2 3 Grade (%) (%) (%) (%) (%) Findings_ [Hematopoietic system] <10> spleen 0 0 0 0 extramedullary hematopoiesis (-) (-) (-) (-) (0)(0)(0)(0) [Circulatory system] heart 0 0 0 0 inflammatory cell nest (-) (-) (-) (0)(0)(0)(0) [Digestive system] <10> liver 1 0 0 0 herniation (-) (-) (-) (10) (0) (0) (0) 1 0 0 0 granulation (-) (-) (-) (-) (10) (0) (0) (0) perivascular inflammation (-) (-) (-) (30) (0) (0) (0) 2 : Moderate 3 : Marked 4 : Severe Grade 1 : Slight <a>> a: Number of animals examined at the site b b: Number of animals with lesion c : b / a * 100Significant difference; *: $P \le 0.05$ **: $P \le 0.01$ Test of Chi Square

BAIS3

ANIMAL

(HPT150)

HISTOLOGICAL FINDINGS : NON-NEOPLASTIC LESIONS (SUMMARY)

: RAT F344/DuCri

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

REPORT TYPE : A1 SEX : MALE SACRIFICED ANIMALS (14W)

PAGE: 5 100 ppm 50 ppm 25 ppm Group Name 0 ppm 10 10 No. of Animals on Study 10 10 3 Grade (%) (%) (%) (%) (%) (%) (%) Findings_ [Urinary system] <10> <10> <10> kidney 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 cyst (0)(0)(0)(0) (0)(0)(0)(0) (10) (0) (0) (0) (0)(0)(0)(0) 2 0 0 0 3 0 0 0 0 0 0 0 basophilic change (30) (0) (0) (0) (20) (0) (0) (0) (10) (0) (0) (0) (0)(0)(0)(0) 0 1 9 0 ** 1 0 0 9 easinophilic bady (0)(90)(10)(0) (0)(10)(90)(0) (20) (80) (0) (0) (30) (70) (0) (0) 0 0 0 0 1 0 0 0 mineralization:papilla (0)(0)(0)(0) (10) (0) (0) (0) (0)(0)(0)(0) (10) (0) (0) (0) 0 0 0 0 0 0 0 0 4 0 0 0 nuclear enlargement:proximal tubule 0 0 0 0 (0)(0)(0)(0) (0)(0)(0)(0) (40) (0) (0) (0) (0)(0)(0)(0) 腫大 [Endocrine system] <10> <10> <10> <10> pituitary 0 0 0 0 0 0 0 0 1 0 0 0 0 0 0 cyst (10) (0) (0) (0) (0)(0)(0)(0) (10) (0) (0) (0) (0)(0)(0)(0) 1 0 0 0 0 0 0 0 Rathke pouch (10) (0) (0) (0) (0)(0)(0)(0) (0) (0) (0) (0) (0)(0)(0)(0) 3 : Marked 4 : Severe 1: Slight 2 : Moderate Grade <a>> a: Number of animals examined at the site b: Number of animals with lesion b c:b/a*100(c)

ANIMAL : RAT F344/DuCrj

HISTOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY) SACRIFICED ANIMALS (14W)

REPORT TYPE : A1
SEX : MALE

Organ	1	Group Name 200 ppm No. of Animals on Study 10 Grade 1 2 3 4 (%) (%) (%) (%)	400 ppm 0 1 2 3 4 (%) (%) (%)	
Fer -				
[Urinary syst	cyst	<10> 0 0 0 0 (0) (0) (0) (0)	< 0> (-) (-) (-) (-)	
	basophilic change	3 0 0 0 (30) (0) (0) (0)	(-) (-) (-)	
	eosinophilic body	0 0 10 0 ** (0) (0) (100) (0)	(-) (-) (-)	
	mineralization:papilla	5 0 0 0 (50) (0) (0) (0)	(-) (-) (-)	
	nuclear enlargement:proximal tubule	7 0 0 0 *** (70) (0) (0) (0)	(-) (-) (-)	
[Endocrine s	system]			
pituitary	cyst	(10) 1 0 0 0 (10) (0) (0) (0)	< 0> (-) (-) (-) (-)	
	Rathke pouch	1 0 0 0 (10) (10) (10)	(-) (-) (-)	
Grade <a>> b (c)	1: Slight 2: Moderate 3 a: Number of animals examined at the s b: Number of animals with lesion c: b / a * 100 difference; *: P ≤ 0.05 **: P ≤			

HISTOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY) SACRIFICED ANIMALS (14W)

ANIMAL : RAT F344/DuCrj

REPORT TYPE : A1 SEX : MALE

0rgan	Group Name No. of Ani Grade Findings	0 ppm imals on Study 10 1 2 3 4 (%) (%) (%) (%)	25 ppm 10 1 2 3 4 (%) (%) (%) (%)	50 ppm 10 1 2 3 4 (%) (%) (%) (%)	100 ppm 10 1 2 3 4 (%) (%) (%) (%)
[Endocrine s	ystem]				
thyroid	ultimibranchial body remanet	1 0 0 0 (10) (0) (0) (0)	1 0 0 0 (10) (0) (0) (0)	(10) 1 0 0 0 (10) (0) (0) (0)	(10) 0 0 0 0 (0) (0) (0) (0)
[Special sen	se organs/appandage}				
Harder gl	lymphocytic infiltration	2 0 0 0 (20) (0) (0) (0)	2 0 0 0 (20) (0) (0) (0)	(10) 0 0 0 0 (0) (0) (0) (0)	(10) 1 0 0 0 (10) (0) (0) (0)
Grade <a>> b (c) Significant	1: Slight 2: Moderate 3: Marked a: Number of animals examined at the site b: Number of animals with lesion c: b / a * 100 difference; *: P ≤ 0.05 **: P ≤ 0.01	4 : Severe Test of Chi Square			

HISTOLOGICAL FINDINGS : NON-NEOPLASTIC LESIONS (SUMMARY)

STUDY NO. : 0340 ANIMAL : RAT F344/DuCrj

SACRIFICED ANIMALS (14W)

REPORT TYPE : A1 SEX : MALE

Organ	Group Name No. of Ani Grade Findings	200 ppm mals on Study 10 1 2 3 4 (%) (%) (%) (%)	400 ppm 0 1 2 3 4 (%) (%) (%) (%)	
[Endocrine s	ystem]			
thyroid	ultimibranchial body remanet	<10> 0 0 0 0 (0) (0) (0) (0)	(-) (-) (-) (-)	
[Special sen	se organs/appandage]			
Harder gl	lymphocytic infiltration	2 0 0 0 (20) (0) (0) (0)	(o>	
Grade <a>> b (c) Significant	1: Slight 2: Moderate 3: Marked a: Number of animals examined at the site b: Number of animals with lesion c: b / a * 100 difference; *: P ≤ 0.05 **: P ≤ 0.01	4 : Severe Test of Chi Square		
(HPT150)				BAIS3

APPENDIX J 3

HISTOLOGICAL FINDINGS: NON-NEOPLASTIC LESIONS: SUMMARY

RAT: FEMALE: DEAD AND MORIBUND ANIMALS

(13 - WEEK STUDY)

HISTOLOGICAL FINDINGS : NON-NEOPLASTIC LESIONS (SUMMARY)

PAGE: 9

BAIS3

DEAD AND MORIBUND ANIMALS (0- 14W)

STUDY NO. : 0340 ANIMAL : RAT F344/DuCrj REPORT TYPE : A1

SEX : FEMALE

(HPT150)

0 ppm 25 ppm 50 ppm 100 ppm Group Name 0 0 No. of Animals on Study 0 0 (%) (%) (%) Findings_ [Respiratory system] nasal cavit thrombus (-) (-) (-) (-) (-) (-) (-) (-) exudate:neutrophil leukocyte (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) goblet cell hyperplasia (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) necrosis:olfactory epithelium (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) necrosis:respiratory epithelium (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) deposit of freign body (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) < 0> Larynx hyperplasia:epithelium (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) trachea hyperplasia:epithelium (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) (-) 3 : Marked 4 : Severe 2 : Moderate Grade 1 : Slight a: Number of animals examined at the site <a>> b: Number of animals with lesion b (c) c:b/a * 100

ANIMAL : RAT F344/DuCrj

HISTOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY) DEAD AND MORIBUND ANIMALS (0- 14W)

SEX

REPORT TYPE : A1 : FEMALE

)rgan	Findings	No. of Animals on Study	400 ppm 10 1 2 3 4 (%) (%) (%) (%)	
Respiratory	system]			
asal cavit	thrombus 血栓	< 0> (-) (-) (-) (-)	<10> 0 2 4 0 0 0 (20) (40) (0)	
	exudate:neutrophil leukocyte 演出物 分中球	(-) (-) (-) (-)	0 1 9 0 (0) (10) (90) (0)	
	goblet cell hyperplasia	(-) (-) (-) (-)	3 0 0 0 (30) (0) (0) (0)	
	necrosis:alfactory epithelium		1 8 1 0 (10) (80) (10) (0)	
	necrosis:respiratory epithelium	(-) (-) (-) (-)	8 1 0 0 (80) (10) (0) (0)	
	deposit of freign body	(-) (-) (-) (-)	8 0 0 0 (80) (0) (0) (0)	
.arynx U侯獎	hyperplasia:epithelium	< 0> (-) (-) (-) (-)	<10> 8 0 0 0 (80) (0) (0) (0)	
trachea	hyperplasia:epithelium	< 0> (-) (-) (-) (-)	6 0 0 0 (60) (0) (0) (0)	

HISTOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)
DEAD AND MORIBUND ANIMALS (0- 14W)

ANIMAL : RAT F344/DuCrj REPORT TYPE : A1

SEX : FEMALE

Organ		o Name 0 ppm of Animals on Study 0 e 1 2 3 4 (%) (%) (%) (%)	25 ppm 0 1 2 3 4 (%) (%) (%)	50 ppm 0 1 2 3 4 (%) (%) (%)	100 ppm 0 1 2 3 4 (%) (%) (%) (%)
[Respirator	y system]				
lung	bacteria	(-) (-) (-) (-)	(-) (-) (-) (-)	(-) (-) (-) (-)	(-) (-) (-) (-)
	branchapneuman i a	(-) (-) (-) (-)	(-) (-) (-)	(-) (-) (-) (-)	(-) (-) (-) (-)
	deposit of freign body	(-) (-) (-)	(-) (-) (-)	(-) (-) (-)	(-) (-) (-) (-)
[Hematopoie	tic system]				
hymus	atrophy	< 0> (-) (-) (-) (-)	(-) (-) (-) (-)	(-) (-) (-) (-)	(-) (-) (-) (-)
	karyorrhexis	(-) (-) (-) (-)	() () ()	(-) (-) (-) (-)	(-) (-) (-) (-)
pleen	extramedullary hematopoiesis	< 0>	< 0>	< 0>	< 0>
	סגנו מווטענננמ צ ווטוומנטפטוססוס	(-) (-) (-) (-)	(-) (-) (-) (-)	(-) (-) (-) (-)	(-) (-) (-) (-)
Grade (a > b (c)	1: Slight 2: Moderate 3: Mal a: Number of animals examined at the site b: Number of animals with lesion c: b/a * 100	rked 4: Severe			

ANIMAL : RAT F344/DuCrj

HISTOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)
DEAD AND MORIBUND ANIMALS (0- 14W)

REPORT TYPE : A1

SEX : FEMALE

Organ	Group No. of Grade Findings	Name 200 ppm Animals on Study 0 1 2 3 4 (%) (%) (%) (%) (%)	400 ppm 10 1 2 3 4 (%) (%) (%) (%)	
[Respirator	y system]		40	
lung .	bacteria	< 0> (-) (-) (-) (-)	<10> 4 0 0 0 (40) (0) (0) (0)	
	bronchopneumonia 复管支肺炎	(-) (-) (-) (-)	0 0 2 8 (0) (0) (20) (80)	
	deposit of freign body 実物	(-) (-) (-) (-)	8 0 0 0	
[Hematopoie	etic system]			
thymus	atrophy	(-) (-) (-) (-)	<pre></pre>	
	karyorrhexis 核崩壞	(-) (-) (-) (-)	0 0 2 0 (0) (29) (0)	
spleen	extramedullary hematopoiesis 磁外並血	< 0> (-) (-) (-) (-)	(10) 1 0 0 0 (10) (0) (0) (0)	
Grade <a>> b (c)	1: Slight 2: Moderate 3: Mark a: Number of animals examined at the site b: Number of animals with lesion c: b/a * 100	ked 4 : Severe		
(HPT150)				I

ANIMAL : RAT F344/DuCrj

HISTOLOGICAL FINDINGS : NON-NEOPLASTIC LESIONS (SUMMARY) DEAD AND MORIBUND ANIMALS (0- 14W)

PAGE: 13

REPORT TYPE : A1

SEX : FEMALE

0rgan	Group Ne No. of A Grade Findings	ime 0 ppm inimals on Study 0 1 2 3 4 (%) (%) (%) (%)	25 ppm 0 1 2 3 4 (%) (%) (%) (%)	50 ppm 0 1 2 3 4 (%) (%) (%) (%)	100 ppm 0 1 2 3 4 (%) (%) (%) (%)
[Digestive s	vstem]				
liver	herniation	(-) (-) (-) (-)	(-) (-) (-) (-)	(-) (-) (-) (-)	(-) (-) (-) (-)
	congestion 7 ₇ 征	(-) (-) (-)	(-) (-) (-)	(-) (-) (-) (-)	(-) (-) (-) (-)
[Urinary sys	tem]				
kidney	tubular necrosis	< 0> (-) (-) (-) (-)	< 0> (-) (-) (-) (-)	(-) (-) (-) (-)	< 0> (-) (-) (-) (-)
	mineralization:cortico-medullary junction	(-) (-) (-) (-)	(-) (-) (-)	(-) (-) (-) (-)	(-) (-) (-) (-)
	mineralization:papilla	(-) (-) (-) (-)	(-) (-) (-) (-)	(-) (-) (-) (-)	(-) (-) (-) (-)
[Nervous sys	rtem]				
brain	bacteria	< 0> (-) (-) (-) (-)	< 0> (-) (-) (-) (-)	< 0> (-) (-) (-) (-)	< 0> (-) (-) (-) (-)
Grade <a>> b (c)	1: Slight 2: Moderate 3: Marke a: Number of animals examined at the site b: Number of animals with lesion c: b/a * 100	d 4 : Severe	·		

ANIMAL : RAT F344/DuCrj

HISTOLOGICAL FINDINGS : NON-NEOPLASTIC LESIONS (SUMMARY)

REPORT TYPE : A1

(HPT150)

SEX : FEMALE

DEAD AND MORIBUND ANIMALS (0- 14W)

Organ	Group Name No. of Anima Grade Findings	200 ppm 1.s on Study 0 1 2 3 4 (%) (%) (%) (%)	400 ppm 10 1 2 3 4 (%) (%) (%) (%)	
	-			
[Digestive	system]			
liver	herniation	(-) (-) (-) (-)	2 0 0 0 (20) (0) (0) (0)	
	congestion). <u>f</u> 2	(-) (-) (-) (-)	5 5 0 0 (50) (50) (0) (0)	
[Urinary s	ystem]			
kidney	tubular necrosis	(-) (-) (-) (-)	(10) 0 1 0 0 (0) (10) (0) (0)	
	mineralization:cortico-medullary junction 金瓜货沈煮 皮膏透烧 累特	(-) (-) (-) (-)	1 0 0 0 0 (10) (10) (10)	
	mineralization:papilla 美し 類	(-) (-) (-) (-)	2 0 0 0 (20) (0) (0) (0)	
[Nervous s	eystem]			
brain	bacteria	(-) (-) (-) (-)	(10) 1 0 0 0 (10) (0) (0) (0)	
Grade <a>> b (c)	1: Slight 2: Moderate 3: Marked a: Number of animals examined at the site b: Number of animals with lesion c: b / a * 100	4: Severe		

BAIS3

ANIMAL : RAT F344/DuCrj

HISTOLOGICAL FINDINGS : NON-NEOPLASTIC LESIONS (SUMMARY) DEAD AND MORIBUND ANIMALS (0- 14W)

REPORT TYPE : A1

SEX : FEMALE

Organ		Name 0 ppm f Animals on Study 0 1 2 3 4 (%) (%) (%) (%)	25 ppm 0 1 2 3 4 (%) (%) (%) (%)	50 ppm 0 1 2 3 4 (%) (%) (%) (%)	100 ppm 0 1 2 3 4 (%) (%) (%) (%)
(Nervous s	ystem]				
brain	necrosis:focal	< 0>	< 0>	< 0>	< 0>
		(-) (-) (-)	(-) (-) (-) (-)	(-) (-) (-) (-)	(-) (-) (-) (-)
Grade <a> b (c)	1: Slight 2: Moderate 3: Mar a: Number of animals examined at the site b: Number of animals with lesion c: b/a * 100	ked 4 : Severe			
(HPT150)					BAI

ANIMAL : RAT F344/DuCrj

HISTOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)

REPORT TYPE : A1 SEX : FEMALE DEAD AND MORIBUND ANIMALS (0- 14W)

0rgan	Findings	Group Name No. of Animals on Study Grade 1 (%)	200 ppm 0 2 3 4 (%) (%) (%)	400 ppm 10 1 2 3 4 (%) (%) (%) (%)	
[Nervous s brain	ystem] necrasis:facal	-	< 0>	<10> 0 1 0 0	
Grade		3: Marked 4: Severe	(-) (-) (-)	(0) (10) (0) (0)	
b (c)	b: Number of animals with lesion c: b/a * 100				BA

(HPT150)

APPENDIX J 4

HISTOLOGICAL FINDINGS: NON-NEOPLASTIC LESIONS: SUMMARY

RAT: FEMALE: SACRIFICED ANIMALS

(13 - WEEK STUDY)

STUDY NO. : 0340 ANIMAL : RAT F344/DuCrj

HISTOLOGICAL FINDINGS : NON-NEOPLASTIC LESIONS (SUMMARY)

SACRIFICED ANIMALS (14W)

REPORT TYPE : A1
SEX : FEMALE

(HPT150)

0rgan	No	Toup Name o. of Animals on Study rade $\frac{1}{(\%)}$	0 ppm 10 2 3 4 (%) (%) (%)	25 ppm 10 1 2 3 4 (%) (%) (%) (%)	50 ppm 10 1 2 3 4 (%) (%) (%) (%)	100 ppm 10 10 1 2 3 4 (%) (%) (%)
[Respiratory s	system]					
nasal cavit	eosinophilic change:olfactory epithelium		<10> 0 0 0 0) (0) (0)	<10> 5 0 0 0 * (50) (0) (0) (0)	5 0 0 0 * (50) (0) (0) (0)	4 0 0 0 (40) (0) (0) (0)
	inflammation:respiratory epithelium	(0) (0 0 0 0	0 0 0 0 0 (0) (0)	1 0 0 0 0 (10) (0) (0)	0 0 0 0 0 (0)
lung	perivascular inflammation	0 (0) (<10> 0 0 0 0 0 (0)	(10) 0 0 0 0 (0) (0) (0) (0)	(10) 0 0 0 0 (0) (0) (0) (0)	1 0 0 0 (10) (0) (0) (0)
	branchopneumonia	(0) (0 0 0 0	0 0 0 0 0 (0) (0) (0)	0 0 0 0 0 (0) (0)	0 0 0 0 0 (0) (0) (0)
	deposit of freign body	(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)
[Hematopoieti	c system]					
bone marrow	granulation	3 (30)	(10) 1 0 0 (10) (0) (0)	4 1 0 0 (40) (10) (0) (0)	3 0 0 0 (30) (0) (0) (0)	0 1 0 0 (0) (10) (0) (0)
Grade < a > b (c)	1: Slight 2: Moderate 3: a: Number of animals examined at the sit b: Number of animals with lesion c: b / a * 100 Hifference; / *: P ≤ 0.05 **: P ≤					

ANIMAL : RAT F344/DuCrj

HISTOLOGICAL FINDINGS : NON-NEOPLASTIC LESIONS (SUMMARY) SACRIFICED ANIMALS (14W)

PAGE: 10

BAIS3

REPORT TYPE : A1

SEX : FEMALE

(HPT150)

0rgan	No	pup Name 200 ppm of Animals on Study 10 de 1 2 3 4 (%) (%) (%) (%)	400 ppm 0 1 2 3 4 (%) (%) (%)	
[Respiratory s	system]			
nasal cavit	eosinophilic change:olfactory epithelium	<10> 9 0 0 0 ** (90) (0) (0) (0)	< 0> (-) (-) (-) (-)	
	inflammation:respiratory epithelium	0 1 0 0 (0) (0) (0)	(-) (-) (-) (-)	
lung	perivascular inflammation	<10> 0 0 0 0 (0) (0) (0) (0)	< 0> 	
	bronchapneumonia	0 2 0 0 (0) (20) (0) (0)	(-) (-) (-)	
	deposit of freign body	1 0 0 0 0 (10) (10) (10)	(-) (-) (-) (-)	
[Hematopoieti	c system]			
bone marriow	granulation	3 0 0 0 (30) (0) (0) (0)	< 0> (-) (-) (-) (-)	
(a) b (c)	1: Slight 2: Moderate 3: a: Number of animals examined at the site b: Number of animals with lesion c: b / a * 100 lifference; $*: P \le 0.05$ **: $P \le 0$			

STUDY NO. : 0340 ANIMAL : RAT F344/DuCrj

HISTOLOGICAL FINDINGS : NON-NEOPLASTIC LESIONS (SUMMARY) SACRIFICED ANIMALS (14W)

REPORT TYPE : A1 SEX : FEMALE

0rgan	No	cup Name 0 ppm of Animals on Study 10 ade 1 2 3 4 (%) (%) (%) (%)	25 ppm 10 1 2 3 4 (%) (%) (%) (%)	50 ppm 10 1 2 3 4 (%) (%) (%) (%)	100 ppm 10 1 2 3 4 (%) (%) (%) (%)
[Circulator	y system]				
heart	inflammatory cell nest	1 0 0 0 (10) (0) (0) (0)	(10) 0 1 0 0 (0) (10) (0) (0)	(10) 0 0 0 0 (0) (0) (0) (0)	(10) 0 0 0 0 (0) (0) (0) (0)
[Digestive	system]				
liver	herniation	2 0 0 0 (20) (0) (0) (0)	2 0 0 0 (20) (0) (0) (0)	(10) 1 0 0 0 (10) (0) (0) (0)	(10) 1 0 0 0 (10) (0) (0) (0)
	granulation	1 0 0 0 (10) (0) (0) (0)	0 0 0 0 0 (0) (0)	i 0 0 0 (10) (0) (0) (0)	1 0 0 0 (10) (0) (0) (0)
	perivascular inflammation	2 0 0 0 0 (20) (0) (0)	3 0 0 0 0 (30) (0) (0) (0)	2 0 0 0 0 (20) (0) (0) (0)	0 0 0 0 0 (0) (0)
[Urinary s	ystem]				
kidney	basophilic change	<10> 0 0 0 0 (0) (0) (0) (0)	(10) 0 0 0 0 (0) (0) (0) (0)	(10) 1 0 0 0 (10) (0) (0) (0)	(10) 1 0 0 0 (10) (0) (0) (0)
Grade (a) b (c)	1: Slight 2: Moderate 3: a: Number of animals examined at the site b: Number of animals with lesion c: b / a * 100 t difference; *: P ≤ 0.05 **: P ≤ 0.05				

(HPT150)

: RAT F344/DuCrj

ANIMAL REPORT TYPE : A1

HISTOLOGICAL FINDINGS : NON-NEOPLASTIC LESIONS (SUMMARY) SACRIFICED ANIMALS (14W)

PAGE: 12 SEX : FEMALE 200 ppm 400 ppm Group Name 0 10 No. of Animals on Study Grade (%) (%) Findings_ [Circulatory system] <10> heart 0 0 0 0 inflammatory cell nest (-) (-) (-) (-) (0)(0)(0)(0) [Digestive system] <10> Liver 1 0 0 0 herniation (-) (-) (-) (10) (0) (0) (0) granulation (-) (-) (-) (-) (0)(0)(0)(0) 2 0 0 0 perivascular inflammation (-) (-) (-) (-) (20) (0) (0) (0) [Urinary system] <10> kidney 0 0 0 0 basophilic change (0)(0)(0)(0) (-) (-) (-) 3 : Marked 4 : Severe 1: Slight 2 : Moderate Grade < a > a: Number of animals examined at the site b: Number of animals with lesion b c : b / a * 100(c) Significant difference ; * : $P \le 0.05$ ** : $P \le 0.01$ Test of Chi Square

BAIS3

HISTOLOGICAL FINDINGS : NON-NEOPLASTIC LESIONS (SUMMARY) SACRIFICED ANIMALS (14W)

ANIMAL : RAT F344/DuCrj REPORT TYPE : A1
SEX : FEMALE

(HPT150)

0rgan	Findings	Group Name 0 ppm No. of Animals on Study 10 Grade 1 2 3 4 (%) (%)	25 ppm 10 1 2 3 4 (%) (%) (%) (%)	50 ppm 10 1 2 3 4 (%) (%) (%) (%)	100 ppm 100 ppm 100 (%) (%) (%) (%)
[Urinary sys	stem]				
kidney	mineralization:cortico-medullary jun	ction 3 0 0 0 (30) (0) (0) (0)	3 0 0 0 (30) (0) (0) (0)	5 0 0 0 (50) (0) (0) (0)	<10> 2 0 0 0 (20) (0) (0) (0)
	mineralization:papilla	3 0 0 0 0 (30) (30) (0) (0)	1 0 0 0 (10) (0) (0) (0)	0 0 0 0 0 (0) (0)	4 0 0 0 0 (40) (40) (60)
	nuclear enlargement:proximal tubule	0 0 0 0 0 (0) (0)	0 0 0 0 0 (0) (0)	0 0 0 0 0 (0) (0) (0)	7 0 0 0 ** (70) (0) (0) (0)
	eosinophilic droplet:proximal tubule	0 0 0 0 0 (0) (0) (0)	4 0 0 0 (40) (0) (0) (0)	10 0 0 0 *** (100) (0) (0) (0)	10 0 0 0 *** (100) (0) (0) (0)
[Endocrine s	system]				
thyraid	ultimibranchial body remanet	0 0 0 0 (0) (0) (0) (0)	1 0 0 0 (10) (0) (0) (0)	<10> 0 0 0 0 (0) (0) (0) (0)	<10> 0 0 0 0 (0) (0) (0) (0)
[Special se	nse organs/appandage]				
Harder gl	lymphocytic infiltration	1 0 0 0 (10) (0) (0) (0)	3 0 0 0 (30) (0) (0) (0)	<10> 0 0 0 0 (0) (0) (0) (0)	<10> 1 0 0 0 (10) (0) (0) (0)
Grade <a>> b (c) Significant	a: Number of animals examined at the b: Number of animals with lesion c:b/a*100	3 : Marked 4 : Severe site ≤ 0.01 Test of Chi Square			

HISTOLOGICAL FINDINGS : NON-NEOPLASTIC LESIONS (SUMMARY)

SACRIFICED ANIMALS (14W)

ANIMAL : RAT F344/DuCrj REPORT TYPE : A1

SEX : FEMALE

Group Name 200 ppm 400 ppm No. of Animals on Study 10 0

Grade 1 2 3 4 1 2 3 4

Organ Findings (%) (%) (%) (%) (%) (%) (%) (%) (%)

[Urinary system]

mineralization:papilla 0 0 0 0 - - - - - (0)(0)(0)(0)(0)(-)(-)(-)(-)(-)

nuclear enlargement:proximal tubule 8 0 0 0 ** - - - - - (80) (0) (0) (0) (-) (-) (-) (-)

eosinophilic droplet:proximal tubule 10 0 0 0 ** - - - - - (100) (0) (0) (0) (-) (-) (-) (-)

[Endocrine system]

[Special sense organs/appandage]

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; $*:P \le 0.05$ **: $P \le 0.01$ Test of Chi Square

(HPT150)

BAIS3

APPENDIX K 1

IDENTITY OF ALLYL CHLORIDE IN THE 13 - WEEK INHALATION STUDY

IDENTITY OF ALLYL CHLORIDE IN THE 13-WEEK INHALATION STUDY

Test Substance : Allyl chloride(Wako Pure Chemical Industries,LTD.)

A:Lot No. : SKL4453

1. Spectral data

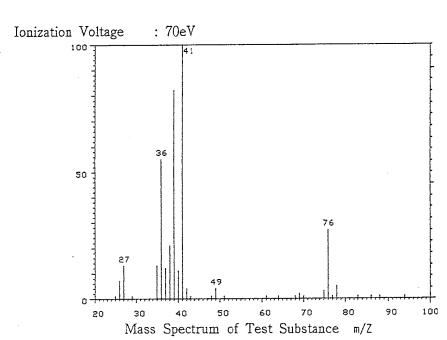
Mass Spectrometry

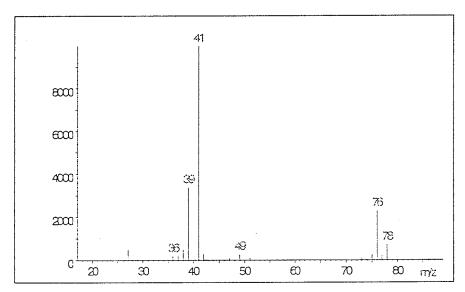
Instrument

: Hitachi M-80B Mass Spectrometer

Ionization

: EI(Electron Ionization)





Mass Spectrum of Allyl chloride(Literature data*)

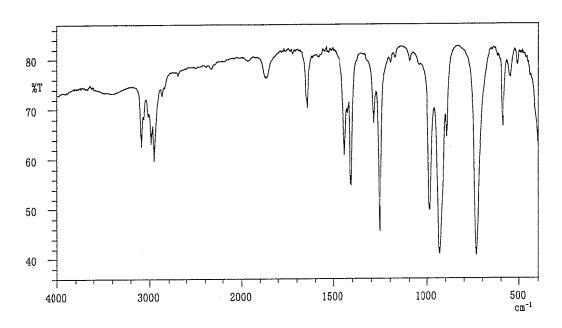
Results: The mass spectrum was consistent with literature spectrum.

*Wiley 138K Mass Spectral Data Base Entry Number 1989(1990) John Wiley and Sons Inc., U.K.

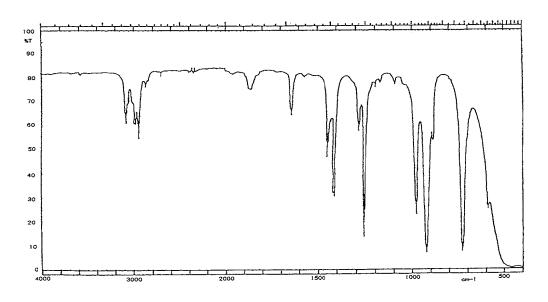
Infrared Spectrometry

Instrument : Shimazdu FT-IR 8200PC Infrared Spectrometer

Cell : KBr



Infrared Spectrum of Test Substance



Infrared Spectrum of Allyl chloride(Literature data*)

*Performed by Wako Pure Chemical Industries, LTD.

Results: The infrared spectrum was consistent with literature spectrum.

2. Conclusions: The test substance was identified as Allyl chloride, by the mass spectrum and the infrared spectrum.

B:Lot No.

: WTK5293

1. Spectral data

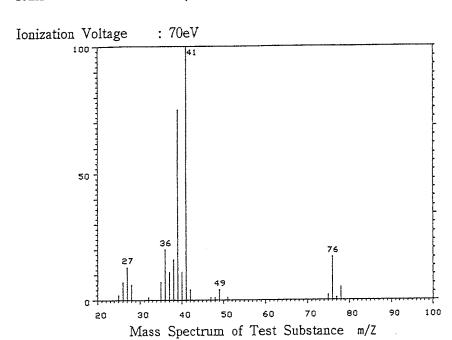
Mass Spectrometry

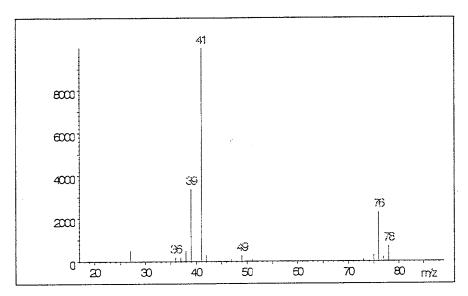
Instrument

: Hitachi M-80B Mass Spectrometer

Ionization

: EI(Electron Ionization)





Mass Spectrum of Allyl chloride(Literature data*)

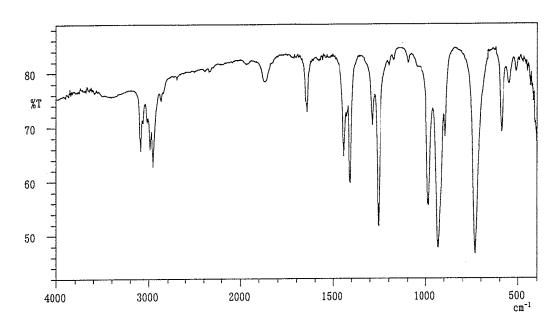
Results: The mass spectrum was consistent with literature spectrum.

*Wiley 138K Mass Spectral Data Base Entry Number 1989(1990) John Wiley and Sons Inc.,U.K.

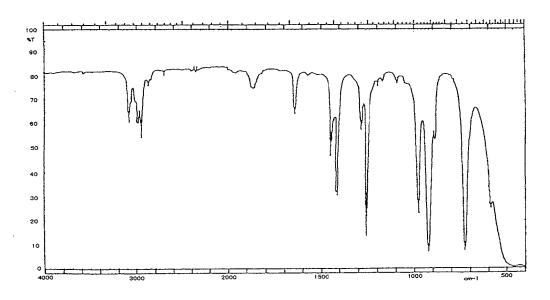
Infrared Spectrometry

Instrument : Shimazdu FT-IR 8200PC Infrared Spectrometer

Cell : KBr



Infrared Spectrum of Test Substance



Infrared Spectrum of Allyl chloride(Literature data*)

*Performed by Wako Pure Chemical Industries, LTD.

Results: The infrared spectrum was consistent with literature spectrum.

2. Conclusions: The test substance was identified as Allyl chloride, by the mass spectrum and the infrared spectrum.

APPENDIX K 2

STABILITY OF ALLYL CHLORIDE IN THE 13 - WEEK INHALATION STUDY

STABILITY OF ALLYL CHLORIDE IN THE 13-WEEK INHALATION STUDY

Test Substance : Allyl chloride(Wako Pure Chemical Industries,LTD.)

A:Lot No. : SKL4453

1.Sample: This lot was used from 1997.9.2 to 1997.9.12. Test substance was stored at room temperature .

2. Gas Chromatography

Instrument : Hewlett Packard 6890

Column : Hewlett Packard INNOWAX(0.53mm $\phi \times 60$ m)

Column Temperature : 50°C

Flow Rate : 10 ml/min

Detector : FID(Flame Ionization Detector)

Injection Volume : 1 μ l

Results: Gas chromatography indicated one major peak(peak No.3) and three impurities(peak No.1,2,4 < 2% of total area) analyzed at 1997.9.1 and one major peak(peak No.3) and three impurities(peak No.1,2,4 < 2% of total area) analyzed at 1997.9.12. It was identified only by comparing its gas chlomatograph with that of the 1-chloropropene(peak No.1) and 1,5-hexadiene(peak No.2) and 2-propanol(peak No.4) in the allyl chloride, the amount in the test substance were 0.14% and 0.39% and 0.005% at 1997.9.1. No new trace impurity peak in the test substance analyzed at 1997.9.12 was detected.

Date (date analyzed)	Peak No.	Retention Time(min)	AREA(%)
1997.09.01	1	2.621	0.606
	2	2.893	0.829
	3	3.225	98.553
	4	5.233	0.012
997.09.12	1	2.630	0.608
	2	2.903	0.866
	3	3.249	98.515
	4	5.254	0.011

3. Conclusions: The test substance was stable for about 2 weeks in the dark at room temperature.

B:Lot No.

: WTK5293

1.Sample: This lot was used from 1997.9.13 to 1997.12.1. Test substance was stored at room temperature.

2. Gas Chromatography

Instrument

: Hewlett Packard 6890

Column

: Hewlett Packard INNOWAX(0.53mm $\phi \times 60$ m)

Column Temperature

: 50°C

Flow Rate

: 10 ml/min

Detector

: FID(Flame Ionization Detector)

Injection Volume

 $: 1 \mu l$

Results : Gas chromatography indicated one major peak(peak No.3) and three impurities(peak No.1,2,4 < 2% of total area) analyzed at 1997.9.12 and one major peak(peak No.3) and three impurities(peak No.1,2,4 < 2% of total area) analyzed at 1997.12.19. It was identified only by comparing its gas chlomatograph with that of the 1-chloropropene(peak No.1) and 1,5-hexadiene(peak No.2) and 2-propanol(peak No.4) in the allyl chloride, the amount in the test substance were 0.12% and 0.25% and 0.004% at 1997.9.12. No new trace impurity peak in the test substance analyzed at 1997.12.19 was detected.

Date (date analyzed)	Peak No.	Retention Time(min)	AREA(%)
1997.09.12	1	2.629	0.519
	2	2.901	0.512
	3	3.249	98.961
	4	5.246	0.008
1997.12.19	1	2.626	0.525
	2	2.898	0.517
	3	3.224	98.952
	4	5.234	0.006

^{3.} Conclusions: The test substance was stable for about 3 months in the dark at room temperature.

APPENDIX L 1

CONCENTRATION OF ALLYL CHLORIDE IN THE INHALATION CHAMBER OF THE 13-WEEK INHALATION STUDY

CONCENTRATION OF ALLYL CHLORIDE IN THE INHALATION CHAMBER OF THE 13-WEEK INHALATION STUDY

Group Name	Concentration(ppm) Mean \pm S.D.)
0ppm(Control)	$0.0 \pm 0.$	0
25ppm	$25.0 \pm 0.$	1 .
50ppm	$50.0 \pm 0.$	2
100ppm	$100.3 \pm 0.$	2
200ppm	199.9 \pm 0.	9
400ppm	$400.8 \pm 1.$	1

APPENDIX L 2

ENVIRONMENTAL CONDITIONS OF INHALATION CHAMBER IN THE 13 - WEEK INHALATION STUDY OF ALLYL CHLORIDE

ENVIRONMENTAL CONDITIONS OF INHALATION CHAMBER IN THE 13-WEEK INHALATION STUDY OF ALLYL CHLORIDE

Group Name	Temperature (°C') Mean \pm S.D.	Humidity(%) Mean \pm S.D.	Ventilation Rate(L/min) Mean ± S.D.	Air Change(time/h) Mean
0ppm(Control)	22.5 ± 0.1	54.2 ± 0.4	266.6 ± 0.3	15.1
25ppm	23.0 ± 0.2	56.5 ± 0.6	265.8 ± 0.4	15.0
50ppm	22.8 ± 0.1	54.6 ± 0.3	266.5 ± 0.2	15.1
100ppm	22.3 ± 0.1	52.1 ± 0.3	265.1 ± 0.7	15.0
200ppm	22.5 ± 0.1	53.3 ± 0.2	265.1 ± 0.8	15.0
400ppm	22.5 ± 0.7	52.9 ± 0.2	265.6 ± 0.9	15.0

APPENDIX M 1

METHODS FOR HEMATOLOGY, BIOCHEMISTRY AND URINALYSIS
IN THE 13 - WEEK INHALATION STUDY OF ALLYL CHLORIDE

METHODS FOR HEMATOLOGY, BIOCHEMISTRY AND URINALYSIS IN THE 13-WEEK INHALATION STUDY OF ALLYL CHLORIDE

Item	Method	
Hematology		
Red blood cell (RBC)	Light scattering method	
Hemoglobin (Hgb)	Cyanmethemoglobin method 1)	
Hematocrit (Hct)	Calculated as RBC × MCV/10 1)	
Mean corpuscular volume (MCV)	Light scattering method 1)	
Mean corpuscular hemoglobin (MCH)	Calculated as Hgb/RBC × 10	
Mean corpuscular hemoglobin concentration (MCHC)	Calculated as Hgb/Hct × 100	
Platelet	Light scattering method	
Reticulocyte	Pattern recognition method 3)	
	(New methyleneblue staining)	
Prothrombin time	Quick one stage method 2)	
Activated partial thromboplastin time (APTT)	Ellagic acid activaterd method 2)	
White blood cell (WBC)	Light scattering method 1)	
Differential WBC	Pattern recognition method 3)	
	(May-Grunwald-Giemsa staining)	
Biochemistry		
Total protein (TP)	Biuret method 4)	
Albumin (Alb)	BCG method 4)	
A/G ratio	Calculated as Alb/(TP - Alb)	
T-bilirubin	Alkaline azobilirubin method 4)	
Glucose	Enzymatic method (GLK·G-6-PDH)	
T-cholesterol	Enzymatic method (CE·COD·POD)	
Triglyceride	Enzymatic method (LPL·GK·GPO·POD)	
Phospholipid	Enzymatic method (PLD·COD·POD) 4)	
Glutamic oxaloacetic transaminase (GOT)	UV·Rate method 4)	
Glutamic pyruvic transaminase (GPT)	UV·Rate method 4)	
Lactate dehydrogenase (LDH)	UV·Rate method 4)	
Alkaline phosphatase (ALP)	p-Nitrophenylphosphate method 4)	
γ -Glutamyl transpeptidase (γ -GTP)	L-γ-Glutamyl-p-nitroanilide method 4)	
Creatine phosphokinase (CPK)	UV·Rate method 4)	
Urea nitrogen	Enzymatic method (Urease · GLDH)	
Creatinine	Jaffe method 4)	
Sodium	Ion selective electrode method	
Potassium	Ion selective electrode method	
Chloride	Ion selective electrode method 4)	
Calcium	OCPC method 4)	
Inorganic phosphorus	Enzymatic method (PNP·XOD·POD)	
Urinalysis	5)	
pH,Protein,Glucose,Ketone body,Bilirubin,Occult Blood,	Urinalysis reagent paper method	
Urobilinogen		

- 1) Automatic blood cell analyzer (Technicon H·1: Technicon Instruments Corporation, USA)
- 2) Automatic coagulometer (Sysmex CA-5000 : Toa Medical Electronics Co.,Ltd.,Japan)
- 3) Automatic blood cell differential analyzer (Hitachi 8200: Hitachi, Ltd., Japan)
- 4) Automatic analyzer (Hitachi 7070: Hitachi, Ltd., Japan)
- 5) Ames reagent strips for urinalysis (Multistix: Bayer-Sankyo Co.,Ltd.,Japan)

APPENDIX M 2

UNITS AND DECIMARL PLACE FOR HEMATOLOGY AND BIOCHEMISTRY IN THE 13 - WEEK INHALATION STUDY OF ALLYL CHLORIDE

UNITS AND DECIMAL PLACE FOR HEMATOLOGY AND BIOCHEMISTRY IN THE 13-WEEK INHALATION STUDY OF ALLYL CHLORIDE

Item	Unit	Decimal place
Hematology		
Red blood cell (RBC)	$\times 10^6/\mu L$	2
Hemoglobin	g/dL	1
Hematocrit	%	1
Mean corpuscular volume (MCV)	fL	1
Mean corpuscular hemoglobin (MCH)	pg	1
Mean corpuscular hemoglobin concentration (MCHC)	g/dL	1
Platelet	$\times 10^3/\mu L$	0
Reticulocyte	%	0
Prothrombin time	sec	1
Activated partial thromboplastin time (APTT)	sec	1
White blood cell (WBC)	$\times 10^3/\mu L$	2
Differential WBC	%	0
Biochemistry		
Total protein	g/dL	1
Albumin	g/dL	1
A/G ratio	_	1
T-bilirubin	mg/dL	2
Glucose	mg/dL	0
T-cholesterol	mg/dL	0
Triglyceride	mg/dL	0
Phospholipid	mg/dL	0
Glutamic oxaloacetic transaminase (GOT)	IU/L	0
Glutamic pyruvic transaminase (GPT)	IU/L	0
Lactate dehydrogenase (LDH)	IU/L	0
Alkaline phosphatase (ALP)	IU/L	0
γ -Glutamyl transpeptidase (γ -GTP)	IU/L	0
Creatine phosphokinase (CPK)	IU/L	0
Urea nitrogen	mg/dL	1
Creatinine	mg/dL	1
Sodium	mEq/L	0
Potassium	mEq/L	1
Chloride	mEq/L	0
Calcium	mg/dL	1
Inorganic phosphorus	mg/dL	1