2,4-ジクロロ-1-ニトロベンゼンのラットを用いた
経口投与による 2 週間毒性試験(混餌試験)報告書

試験番号：０４０５

APPENDIXES

APPENDIXES

APPENDIXES (CONTINUED)

APPENDIX A 1

CLINICAL OBSERVATION : SUMMARY, RAT : MALE

(2-WEEK STUDY)

STUDY NO. : 0405
ANIMAL : RAT F344/DuCrj
REPORT TYPE : A1 2

CLINICAL OBSERVATION (SUMMARY)
ALL ANIMALS

SEX : MALE

Clinical sign	Group Name	Administration Week-day 1-3	1-7	2-3	2-7
		1	1	1	1
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	1	1
	10000 ppm	0	2	2	1
YELLOW URINE	Control	0	0	0	0
	625 ppm	5	5	5	5
	1250 ppm	5	5	5	5
	2500 ppm	5	5	5	5
	5000 ppm	5	5	5	5
	10000 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
	10000 ppm	0	0	0	1
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
	10000 ppm	0	0	4	1

APPENDIX A 2

CLINICAL OBSERVATION : SUMMARY, RAT : FEMALE

(2-WEEK STUDY)

STUDY NO. : 0405
ANIMAL : RAT F344/DuCrj
REPORT TYPE : A1 2

CLINICAL OBSERVATION (SUMMARY)
ALL ANIMALS

SEX : FEMALE

Clinical sign	Group Name	Administration Week-day 1-3	1-7	2-3	2-7
		1	1	1	1
SOILED PERI GENITALIA	Control	0	0	0	0
	625 ppm	0	0	0	0
	1250 ppm	0	0	0	0
	2500 ppm	1	1	1	1
	5000 ppm	0	3	3	3
	10000 ppm	0	3	4	4
YELLOW URINE	Control	0	0	0	0
	625 ppm	5	5	5	5
	1250 ppm	5	5	5	5
	2500 ppm	5	5	5	5
	5000 ppm	5	5	5	5
	10000 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
	10000 ppm	0	0	2	2

APPENDIX B 1

BODY WEIGHT CHANGES :SUMMARY, RAT : MALE

(2-WEEK STUDY)

STUDY NO. : 0405
ANIMAL : RAT F344/DuCrj
UNIT : g
REPORT TYPE : A1 2
SEX : MALE

BODY WEIGHT CHANGES (SUMMARY)
ALL ANIMALS

Group Name	Administration week-day 0-0	1-3	1-7	2-3	2-7
Control	125± 3	138± 5	156± 5	169± 5	188± 7
625 ppm	125± 4	138± 5	156± 6	170± 8	189± 8
1250 ppm	125± 3	136± 1	152± 4	164± 4	180± 5
2500 ppm	125± 3	132± 6	149± 6	161± 8	177± 8*
5000 ppm	125± 5	119± 5**	128± 3**	133± 4**	145± 4**
10000 ppm	125± 4	104± 3**	97± 4**	91± 4**	86± 4**

Significant difference ; * : P ≦ 0.05 ** : P ≦ 0.01 Test of Dunnett

APPENDIX B 2

BODY WEIGHT CHANGES : SUMMARY, RAT : FEMALE

(2-WEEK STUDY)

STUDY NO. : 0405
ANIMAL : RAT 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	97± 3	102± 2	110± 4	117± 3	123± 2
625 ppm	97± 3	102± 4	110± 4	116± 4	122± 7
1250 ppm	97± 3	102± 3	110± 3	115± 6	123± 5
2500 ppm	97± 2	102± 2	110± 4	116± 4	122± 5
5000 ppm	97± 3	94± 3**	97± 7**	103± 6**	111± 5**
10000 ppm	97± 3	83± 4**	77± 3**	74± 3**	70± 3**

Significant difference ; * : P ≦ 0.05 ** : P ≦ 0.01 Test of Dunnett

APPENDIX C 1

FOOD CONSUMPTION CHANGES : SUMMARY, RAT : MALE

(2-WEEK STUDY)

STUDY NO. : 0405
ANIMAL : RAT 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	12.5 ± 0.7	13.4 ± 0.7	14.3 ± 0.6	14.9 ± 0.7
625 ppm	12.3 ± 0.3	13.4 ± 0.5	14.7 ± 0.6	15.0 ± 0.9
1250 ppm	11.8 ± 0.4	13.2 ± 0.4	13.9 ± 0.3	14.1 ± 0.6
2500 ppm	10.9 ± 1.0 **	13.2 ± 1.0	14.3 ± 1.2	14.5 ± 0.9
5000 ppm	7.2 ± 0.5 **	11.2 ± 0.3 **	11.8 ± 1.1 **	12.6 ± 1.2 **
10000 ppm	3.3 ± 0.6 **	6.6 ± 0.5 **	5.8 ± 0.7 **	5.6 ± 0.9 **

Significant difference ; * : P≦ 0.05 ** : P≦0.01 Test of Dunnett

APPENDIX C 2

FOOD CONSUMPTION CHANGES : SUMMARY, RAT : FEMALE

(2-WEEK STUDY)

STUDY NO. : 0405
ANIMAL : RAT 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	9.8 ± 0.2	10.2 ± 0.3	10.4 ± 0.2	11.1 ± 0.8
625 ppm	8.9 ± 0.5	9.8 ± 0.3	9.9 ± 0.6	10.2 ± 0.8
1250 ppm	8.9 ± 0.5 *	9.8 ± 0.5	10.2 ± 0.6	10.6 ± 0.5
2500 ppm	8.7 ± 0.5 *	9.4 ± 0.4 **	10.0 ± 0.4	10.0 ± 0.5
5000 ppm	6.1 ± 0.8 **	8.0 ± 1.6 **	9.3 ± 1.1 *	10.0 ± 0.4 *
10000 ppm	3.1 ± 0.3 **	5.4 ± 0.3 **	5.4 ± 0.4 **	6.0 ± 0.7 **

Significant difference ; * : P≦ 0.05 ** : P≦0.01 Test of Dunnett

APPENDIX D 1

CHEMICAL INTAKE CHANGES : SUMMARY, RAT : MALE

(2-WEEK STUDY)

STUDY NO. : 0405
ANIMAL : RAT F344/DuCrj
UNIT : g/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	0.000 ± 0.000	0.000 ± 0.000	0.000 ± 0.000	0.000 ± 0.000
625 ppm	0.056 ± 0.002	0.054 ± 0.000	0.054 ± 0.001	0.050 ± 0.001
1250 ppm	0.109 ± 0.004	0.109 ± 0.003	0.106 ± 0.003	0.098 ± 0.004
2500 ppm	0.205 ± 0.011	0.221 ± 0.007	0.221 ± 0.009	0.204 ± 0.005
5000 ppm	0.300 ± 0.012	0.439 ± 0.017	0.442 ± 0.032	0.434 ± 0.032
10000 ppm	0.319 ± 0.057	0.673 ± 0.044	0.634 ± 0.054	0.647 ± 0.092

APPENDIX D 2

CHEMICAL INTAKE CHANGES : SUMMARY, RAT : FEMALE

(2-WEEK STUDY)

STUDY NO. : 0405
ANIMAL : RAT F344/DuCrj
UNIT : g/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	0.000 ± 0.000	0.000 ± 0.000	0.000 ± 0.000	0.000 ± 0.000
625 ppm	0.055 ± 0.002	0.056 ± 0.003	0.054 ± 0.002	0.052 ± 0.002
1250 ppm	0.109 ± 0.003	0.112 ± 0.003	0.110 ± 0.002	0.108 ± 0.001
2500 ppm	0.213 ± 0.017	0.212 ± 0.007	0.216 ± 0.003	0.205 ± 0.007
5000 ppm	0.325 ± 0.033	0.411 ± 0.056	0.447 ± 0.031	0.448 ± 0.016
10000 ppm	0.379 ± 0.041	0.695 ± 0.038	0.728 ± 0.077	0.863 ± 0.130

APPENDIX E 1

HEMATOLOGY : SUMMARY, RAT : MALE

(2-WEEK STUDY)

STUDY NO. : 0405
ANIMAL : RAT F344/DuCrj
MEASURE. TIME : 1
SEX : MALE REPORT TYPE : A1

HEMATOLOGY (SUMMARY)
ALL ANIMALS (2W)

Group Name	NO. of Animals	RED BLOOD CELL $10^6/\mu\ell$		HEMOGLOBIN g/dℓ		HEMATOCRIT %		MCV fℓ		MCH pg		MCHC g/dℓ		PLATELET $10^3/\mu\ell$	
Control	5	7.86±	0.13	14.7±	0.4	43.2±	1.0	55.0±	0.7	18.7±	0.1	34.0±	0.4	885±	65
625 ppm	5	7.92±	0.26	14.7±	0.4	43.5±	1.5	54.9±	0.8	18.5±	0.2	33.8±	0.4	966±	55
1250 ppm	5	7.88±	0.31	14.5±	0.5	43.3±	1.7	55.0±	0.5	18.4±	0.2	33.4±	0.1	927±	29
2500 ppm	5	7.92±	0.28	14.4±	0.5	43.3±	1.8	54.7±	0.8	18.2±	0.3**	33.2±	0.2*	893±	49
5000 ppm	5	8.13±	0.32	14.3±	0.6	43.1±	1.7	53.0±	0.2**	17.6±	0.2**	33.2±	0.3*	804±	63
10000 ppm	5	8.92±	0.37**	15.5±	0.7	46.8±	2.1*	52.4±	0.4**	17.4±	0.1**	33.1±	0.1**	638±	52**

Significant difference ; * : P ≦ 0.05 ** : P ≦ 0.01 Test of Dunnett

STUDY NO. : 0405
ANIMAL : RAT F344/DuCrj
MEASURE. TIME : 1
SEX : MALE REPORT TYPE : A1

HEMATOLOGY (SUMMARY)
ALL ANIMALS (2W)

Group Name	NO. of Animals	RETICULOCYTE ‰	METHEMOGLOBIN %	PROTHROMBIN TIME sec	APTT sec
Control	5	27± 5	0.3± 0.1	13.0± 0.4	21.1± 1.7
625 ppm	5	38± 13	0.3± 0.1	13.0± 0.2	21.1± 1.2
1250 ppm	5	35± 8	0.4± 0.3	13.3± 0.3	22.1± 0.9
2500 ppm	5	43± 5*	0.3± 0.1	13.1± 0.2	23.8± 2.3
5000 ppm	5	32± 6	0.6± 0.3	13.5± 0.3	21.9± 1.4
10000 ppm	5	13± 8	1.7± 0.6**	15.5± 0.4**	19.9± 1.6

Significant difference ; * : P ≦ 0.05 ** : P ≦ 0.01 Test of Dunnett

STUDY NO. : 0405
ANIMAL : RAT F344/DuCrj
MEASURE. TIME : 1
SEX : MALE REPORT TYPE : A1

HEMATOLOGY (SUMMARY)
ALL ANIMALS (2W)

Group Name	NO. of Animals	WBC $10^3/\mu\ell$		Differential WBC (%) N-BAND		N-SEG		EOSINO		BASO		MONO		LYMPHO		OTHER	
Control	5	3.76±	2.21	0±	1	16±	5	0±	1	0±	0	5±	3	79±	4	0±	0
625 ppm	5	4.04±	1.77	0±	0	14±	3	0±	0	0±	0	2±	1	83±	4	0±	0
1250 ppm	5	3.75±	1.18	0±	0	13±	3	0±	0	0±	0	3±	1	84±	3	0±	0
2500 ppm	5	4.24±	1.63	0±	1	14±	2	0±	1	0±	0	3±	1	83±	3	0±	0
5000 ppm	5	4.59±	1.70	0±	0	19±	4	1±	0	0±	0	3±	1	77±	5	0±	0
10000 ppm	5	5.32±	2.32	1±	1	26±	9*	0±	0	0±	0	2±	1	71±	10	0±	0

Significant difference ; * : P ≦ 0.05 ** : P ≦ 0.01 Test of Dunnett

APPENDIX E 2

HEMATOLOGY : SUMMARY, RAT : FEMALE

(2-WEEK STUDY)

STUDY NO. : 0405
ANIMAL : RAT F344/DuCrj
MEASURE. TIME : 1
SEX : FEMALE REPORT TYPE : A1

HEMATOLOGY (SUMMARY)
ALL ANIMALS (2W)

Group Name	NO. of Animals	RED BLOOD CELL $10^6/\mu\ell$		HEMOGLOBIN g/dℓ		HEMATOCRIT %		MCV fℓ		MCH pg		MCHC g/dℓ		PLATELET $10^3/\mu\ell$	
Control	5	8.30±	0.19	15.8±	0.3	44.9±	0.9	54.1±	0.2	19.0±	0.2	35.1±	0.3	857±	42
625 ppm	4	8.22±	0.45	15.4±	0.8	44.0±	2.4	53.5±	0.4	18.7±	0.1	35.0±	0.2	869±	74
1250 ppm	5	8.08±	0.25	15.1±	0.5	43.3±	1.3	53.6±	0.3	18.7±	0.1	34.8±	0.3	840±	19
2500 ppm	5	8.25±	0.28	15.2±	0.5	44.4±	1.0	53.8±	0.6	18.4±	0.3**	34.2±	0.4**	846±	60
5000 ppm	5	8.17±	0.20	14.5±	0.3**	43.5±	1.0	53.3±	0.3*	17.8±	0.2**	33.3±	0.4**	710±	31**
10000 ppm	5	8.92±	0.21**	15.4±	0.6	46.8±	1.2	52.5±	0.5**	17.3±	0.4**	33.0±	0.5**	628±	45**

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

STUDY NO. : 0405
ANIMAL : RAT F344/DuCrj
MEASURE. TIME : 1
SEX : FEMALE REPORT TYPE : A1

HEMATOLOGY (SUMMARY)
ALL ANIMALS (2W)

Group Name	NO. of Animals	RETICULOCYTE ‰	METHEMOGLOBIN %	PROTHROMBIN TIME sec	APTT sec
Control	5	20± 7	0.2± 0.1	13.6± 0.4	20.7± 1.0
625 ppm	4	23± 7	0.3± 0.1	13.7± 0.4	20.0± 1.3
1250 ppm	5	22± 6	0.2± 0.1	13.5± 0.3	20.4± 0.9
2500 ppm	5	25± 6	0.3± 0.1	13.7± 0.2	20.3± 0.3
5000 ppm	5	24± 5	0.8± 0.2*	14.0± 0.2	20.9± 2.3
10000 ppm	5	14± 5	1.5± 0.5**	15.5± 1.0*	20.8± 1.9

Significant difference ; * : P ≦ 0.05 ** : P ≦ 0.01 Test of Dunnett

STUDY NO. : 0405
ANIMAL : RAT F344/DuCrj
MEASURE. TIME : 1
SEX : FEMALE REPORT TYPE : A1

HEMATOLOGY (SUMMARY)
ALL ANIMALS (2W)

Group Name	NO. of Animals	WBC $10^3/\mu\ell$		Differential WBC (%) N-BAND		N-SEG		EOSINO		BASO		MONO		LYMPHO		OTHER	
Control	5	4.70±	1.14	1±	1	13±	3	0±	0	0±	0	3±	1	83±	3	0±	0
625 ppm	4	6.09±	3.50	0±	0	13±	2	1±	1	0±	0	3±	2	83±	3	0±	0
1250 ppm	5	4.20±	1.36	0±	0	13±	2	1±	1	0±	0	3±	1	83±	2	0±	0
2500 ppm	5	4.21±	2.26	0±	0	13±	3	1±	1	0±	0	3±	1	82±	4	0±	0
5000 ppm	5	4.54±	1.74	0±	1	16±	2	1±	1	0±	0	2±	1	81±	3	0±	0
10000 ppm	5	3.43±	0.77	1±	1	31±	9*	0±	1	0±	0	2±	1	66±	8**	0±	0

Significant difference ; * : P ≦ 0.05 ** : P ≦ 0.01 Test of Dunnett

APPENDIX F 1

BIOCHEMISTRY : SUMMARY, RAT : MALE

(2-WEEK STUDY)

STUDY NO. : 0405
ANIMAL : RAT 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± 0.1	3.6± 0.1	1.7± 0.1	0.11± 0.02	184± 8	65± 2	134± 14
625 ppm	5	5.9± 0.1	3.7± 0.1	1.7± 0.1	0.11± 0.01	187± 14	69± 5	142± 9
1250 ppm	5	5.9± 0.2*	3.8± 0.1*	1.7± 0.1	0.11± 0.02	183± 14	70± 6	141± 8
2500 ppm	5	5.8± 0.2	3.6± 0.2	1.7± 0.1	0.12± 0.01	180± 20	72± 7	146± 9
5000 ppm	5	5.6± 0.1	3.4± 0.1	1.6± 0.1	0.15± 0.01*	156± 4**	85± 9**	160± 17*
10000 ppm	5	5.1± 0.2**	3.1± 0.1**	1.5± 0.1*	0.26± 0.04**	122± 7**	80± 9**	152± 15

Significant difference ; * : P ≦ 0.05 ** : P ≦ 0.01 Test of Dunnett

STUDY NO. : 0405
ANIMAL : RAT F344/DuCrj
MEASURE. TIME : 1
SEX : MALE REPORT TYPE : A1

BIOCHEMISTRY (SUMMARY)
ALL ANIMALS (2W)

Group Name	NO. of Animals	GOT IU/ℓ		GPT IU/ℓ		LDH IU/ℓ		G-GTP IU/ℓ		CPK IU/ℓ		UREA NITROGEN mg/dℓ		CREATININE mg/dℓ	
Control	5	54±	4	29±	2	207±	29	2±	0	178±	13	16.7±	2.6	0.4±	0.0
625 ppm	5	51±	5	27±	1	194±	62	2±	1	153±	16	17.4±	1.8	0.4±	0.0
1250 ppm	5	54±	7	29±	4	224±	52	2±	1	171±	30	17.4±	2.7	0.4±	0.0
2500 ppm	5	43±	5	29±	2	196±	38	2±	1	147±	12*	18.3±	2.0	0.4±	0.0
5000 ppm	5	51±	15	41±	7	245±	55	4±	1	163±	18	20.2±	1.7	0.4±	0.0
10000 ppm	5	92±	8**	65±	17*	403±	107**	11±	1**	190±	10	21.9±	2.7**	0.4±	0.0

Significant difference ; * : P ≦ 0.05 ** : P ≦ 0.01 Test of Dunnett

STUDY NO. : 0405
ANIMAL : RAT 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	139±	1	4.8±	0.4	102±	1	10.9±	0.2	7.8±	0.9
625 ppm	5	139±	1	4.5±	0.2	102±	2	11.1±	0.2	7.5±	1.5
1250 ppm	5	139±	1	4.4±	0.4	103±	1	10.9±	0.0	7.5±	0.8
2500 ppm	5	139±	2	4.6±	0.2	103±	2	11.0±	0.3	7.3±	1.1
5000 ppm	5	139±	2	5.0±	0.2	104±	4	10.7±	0.2	6.7±	0.9
10000 ppm	5	141±	2	4.5±	0.4	110±	2**	9.6±	0.1**	6.5±	0.9

Significant difference ; * : P ≦ 0.05 ** : P ≦ 0.01 Test of Dunnett

APPENDIX F 2

BIOCHEMISTRY : SUMMARY, RAT : FEMALE

(2-WEEK STUDY)

STUDY NO. : 0405
ANIMAL : RAT F344/DuCrj
MEASURE. TIME : 1
SEX : FEMALE 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	5.6±	0.2	3.6±	0.1	1.8±	0.1	0.12±	0.01	174±	7	75±	3	145±	8
625 ppm	4	5.7±	0.1	3.6±	0.1	1.8±	0.1	0.11±	0.01	173±	6	85±	6	160±	13
1250 ppm	5	5.7±	0.2	3.6±	0.1	1.8±	0.1	0.12±	0.02	179±	7	87±	1*	162±	5
2500 ppm	5	5.9±	0.2	3.7±	0.1	1.7±	0.1	0.13±	0.02	177±	11	91±	6**	164±	9
5000 ppm	5	5.8±	0.1	3.6±	0.1	1.7±	0.1	0.16±	0.02	165±	9	93±	11**	172±	22**
10000 ppm	5	5.3±	0.2*	3.2±	0.2	1.5±	0.1**	0.30±	0.07**	127±	5**	81±	5	164±	7

Significant difference ; * : P ≦ 0.05 ** : P ≦ 0.01 Test of Dunnett

STUDY NO. : 0405
ANIMAL : RAT F344/DuCrj
MEASURE. TIME : 1
SEX : FEMALE REPORT TYPE : A1

BIOCHEMISTRY (SUMMARY)
ALL ANIMALS (2W)

Group Name	NO. of Animals	GOT IU/ℓ		GPT IU/ℓ		LDH IU/ℓ		G-GTP IU/ℓ		CPK IU/ℓ		UREA NITROGEN mg/dℓ		CREATININE mg/dℓ	
Control	5	56±	7	27±	3	339±	126	2±	0	212±	38	19.6±	3.5	0.4±	0.0
625 ppm	4	56±	5	27±	2	303±	116	2±	1	191±	24	15.4±	2.4	0.4±	0.1
1250 ppm	5	53±	11	25±	3	409±	247	2±	1	220±	102	18.2±	3.9	0.4±	0.0
2500 ppm	5	55±	2	26±	4	422±	202	3±	2	231±	81	17.7±	4.4	0.4±	0.0
5000 ppm	5	68±	10	30±	4	618±	327	5±	1	325±	139	20.6±	3.3	0.4±	0.0
10000 ppm	5	111±	10**	63±	7**	608±	249	28±	4**	256±	85	23.3±	4.1	0.4±	0.0

Significant difference ; * : P ≦ 0.05 ** : P ≦ 0.01 Test of Dunnett

STUDY NO. : 0405
ANIMAL : RAT 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	138±	2	4.4±	0.2	105±	2	10.6±	0.1	6.8±	1.0
625 ppm	4	138±	2	4.3±	0.2	105±	3	10.6±	0.1	6.7±	1.2
1250 ppm	5	139±	2	4.2±	0.3	106±	3	10.5±	0.2	6.2±	1.6
2500 ppm	5	139±	2	4.2±	0.2	107±	3	10.6±	0.2	6.2±	1.6
5000 ppm	5	140±	3	4.5±	0.3	107±	3	10.7±	0.1	6.3±	0.8
10000 ppm	5	142±	2	4.1±	0.4	112±	2**	9.9±	0.2**	6.4±	0.9

Significant difference ; * : P ≦ 0.05 ** : P ≦ 0.01 Test of Dunnett

APPENDIX G 1

GROSS FINDINGS : SUMMARY, RAT : MALE ALL ANIMALS

(2-WEEK STUDY)

STUDY NO. : 0405
ANIMAL : RAT F344/DuCrj
REPORT TYPE : A1
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 (%)
thymus	atrophic		0 (0)	0 (0)	0 (0)	0 (0)

STUDY NO. : 0405
ANIMAL : RAT F344/DuCrj
REPORT TYPE : A1
SEX : MALE

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

Organ	Findings	Group Name NO. of Animals	5000 ppm 5 (%)	10000 ppm 5 (%)
thymus	atrophic		0 (0)	5 (100)

APPENDIX G 2

GROSS FINDINGS : SUMMARY, RAT : FEMALE ALL ANIMALS

(2-WEEK STUDY)

STUDY NO. : 0405
ANIMAL : RAT F344/DuCrj
REPORT TYPE : A1
SEX : FEMALE

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 (%)
thymus	atrophic		0 (0)	0 (0)	0 (0)	0 (0)
liver	herniation		1 (20)	1 (20)	0 (0)	0 (0)

Organ	Findings	Group Name NO. of Animals	5000 ppm 5 (%)	10000 ppm 5 (%)
thymus	atrophic		0 (0)	5 (100)
liver	herniation		0 (0)	2 (40)

APPENDIX H 1

ORGAN WEIGHT, ABSOLUTE : SUMMARY, RAT : MALE

(2-WEEK STUDY)

STUDY NO. : 0405
ANIMAL : RAT 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	188± 7	0.347± 0.043	0.036± 0.001	2.419± 0.122	0.661± 0.011	0.787± 0.022
625 ppm	5	189± 8	0.339± 0.018	0.036± 0.003	2.397± 0.124	0.642± 0.031	0.813± 0.035
1250 ppm	5	180± 5	0.337± 0.016	0.035± 0.004	2.048± 0.827	0.626± 0.034	0.761± 0.023
2500 ppm	5	177± 8*	0.331± 0.038	0.036± 0.005	2.356± 0.053	0.622± 0.031	0.780± 0.027
5000 ppm	5	145± 4**	0.252± 0.016*	0.032± 0.001	2.208± 0.210	0.522± 0.023**	0.664± 0.033**
10000 ppm	5	86± 4**	0.063± 0.007**	0.026± 0.002**	1.261± 0.428*	0.351± 0.022**	0.522± 0.021**

Significant difference ; * : P ≦ 0.05 ** : P ≦ 0.01 Test of Dunnett

STUDY NO. : 0405
ANIMAL : RAT 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
Control	5	1.454± 0.054	0.451± 0.021	7.368± 0.693	1.734± 0.018
625 ppm	5	1.585± 0.067**	0.444± 0.029	8.678± 0.686**	1.749± 0.019
1250 ppm	5	1.542± 0.062	0.427± 0.016	8.736± 0.282**	1.717± 0.081
2500 ppm	5	1.581± 0.061*	0.421± 0.038	8.869± 0.470**	1.693± 0.030
5000 ppm	5	1.376± 0.056	0.344± 0.016**	7.963± 0.373	1.679± 0.041
10000 ppm	5	1.079± 0.060**	0.211± 0.012**	5.040± 0.294**	1.609± 0.024*

Significant difference ; * : P ≦ 0.05 ** : P ≦ 0.01 Test of Dunnett

APPENDIX H 2

ORGAN WEIGHT, ABSOLUTE : SUMMARY, RAT : FEMALE

(2-WEEK STUDY)

STUDY NO. : 0405
ANIMAL : RAT 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	123± 2	0.296± 0.011	0.041± 0.002	0.098± 0.013	0.458± 0.028	0.626± 0.022
625 ppm	5	122± 7	0.274± 0.015	0.042± 0.004	0.087± 0.008	0.470± 0.035	0.665± 0.052
1250 ppm	5	123± 5	0.282± 0.024	0.041± 0.004	0.077± 0.008**	0.495± 0.047	0.632± 0.023
2500 ppm	5	122± 5	0.300± 0.030	0.040± 0.006	0.077± 0.004**	0.484± 0.021	0.614± 0.030
5000 ppm	5	111± 5**	0.262± 0.021	0.034± 0.006	0.061± 0.007**	0.426± 0.032	0.570± 0.038
10000 ppm	5	70± 3**	0.060± 0.016**	0.026± 0.002**	0.041± 0.007**	0.305± 0.017**	0.470± 0.037**

Significant difference ; * : P ≦ 0.05 ** : P ≦ 0.01 Test of Dunnett

STUDY NO. : 0405
ANIMAL : RAT 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
Control	5	0.974± 0.043	0.312± 0.021	4.585± 0.283	1.575± 0.023
625 ppm	5	1.124± 0.075**	0.314± 0.024	5.295± 0.513**	1.620± 0.051
1250 ppm	5	1.065± 0.040*	0.313± 0.005	5.560± 0.165**	1.628± 0.028
2500 ppm	5	1.075± 0.056*	0.317± 0.024	5.935± 0.142**	1.634± 0.045*
5000 ppm	5	1.093± 0.042**	0.283± 0.007	5.921± 0.234**	1.597± 0.018
10000 ppm	5	0.844± 0.051**	0.164± 0.008**	4.331± 0.171	1.511± 0.025*

Significant difference ; * : P ≦ 0.05 ** : P ≦ 0.01 Test of Dunnett

APPENDIX I 1

ORGAN WEIGHT, RELATIVE : SUMMARY, RAT : MALE

(2-WEEK STUDY)

STUDY NO. : 0405
ANIMAL : RAT 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	188± 7	0.185± 0.028	0.019± 0.001	1.288± 0.040	0.352± 0.011	0.419± 0.007
625 ppm	5	189± 8	0.179± 0.006	0.019± 0.002	1.269± 0.086	0.340± 0.019	0.430± 0.016
1250 ppm	5	180± 5	0.188± 0.007	0.019± 0.003	1.137± 0.453	0.349± 0.016	0.424± 0.006
2500 ppm	5	177± 8*	0.186± 0.014	0.020± 0.003	1.332± 0.063	0.351± 0.006	0.440± 0.008
5000 ppm	5	145± 4**	0.174± 0.008	0.022± 0.001	1.521± 0.122	0.360± 0.014	0.458± 0.028
10000 ppm	5	86± 4**	0.074± 0.007*	0.030± 0.003**	1.456± 0.462	0.409± 0.017**	0.610± 0.031**

Significant difference ; * : P ≦ 0.05 ** : P ≦ 0.01 Test of Dunnett

STUDY NO. : 0405
ANIMAL : RAT F344/DuCrj
REPORT TYPE : A1
SEX : MALE
UNIT: %

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

Group Name	NO. of Animals	KIDNEYS	SPLEEN	LIVER	BRAIN
Control	5	0.774± 0.014	0.240± 0.008	3.919± 0.293	0.925± 0.036
625 ppm	5	0.838± 0.009**	0.235± 0.008	4.582± 0.219**	0.926± 0.037
1250 ppm	5	0.858± 0.027**	0.238± 0.010	4.865± 0.160**	0.956± 0.045
2500 ppm	5	0.892± 0.019**	0.237± 0.012	5.004± 0.113**	0.957± 0.048
5000 ppm	5	0.949± 0.024**	0.237± 0.009	5.490± 0.129**	1.159± 0.051**
10000 ppm	5	1.257± 0.032**	0.247± 0.019	5.880± 0.350**	1.878± 0.066**

Significant difference ; * : P ≦ 0.05 ** : P ≦ 0.01 Test of Dunnett

APPENDIX I 2

ORGAN WEIGHT, RELATIVE : SUMMARY, RAT : FEMALE

(2-WEEK STUDY)

STUDY NO. : 0405
ANIMAL : RAT 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	123± 2	0.241± 0.007	0.033± 0.002	0.079± 0.011	0.372± 0.018	0.508± 0.019
625 ppm	5	122± 7	0.224± 0.012	0.034± 0.004	0.071± 0.006	0.384± 0.024	0.544± 0.039
1250 ppm	5	123± 5	0.230± 0.025	0.034± 0.003	0.062± 0.005**	0.401± 0.023	0.512± 0.014
2500 ppm	5	122± 5	0.245± 0.019	0.033± 0.004	0.063± 0.004**	0.397± 0.023	0.503± 0.016
5000 ppm	5	111± 5**	0.236± 0.011	0.031± 0.005	0.055± 0.007**	0.383± 0.023	0.513± 0.020
10000 ppm	5	70± 3**	0.086± 0.020**	0.038± 0.004	0.059± 0.008**	0.439± 0.037**	0.675± 0.047**

Significant difference ; * : P ≦ 0.05 ** : P ≦ 0.01 Test of Dunnett

STUDY NO. : 0405
ANIMAL : RAT F344/DuCrj
REPORT TYPE : A1
SEX : FEMALE
UNIT: %

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

Group Name	NO. of Animals	KIDNEYS	SPLEEN	LIVER	BRAIN
Control	5	0.791± 0.032	0.253± 0.019	3.722± 0.221	1.279± 0.038
625 ppm	5	0.919± 0.056**	0.257± 0.012	4.325± 0.332**	1.326± 0.056
1250 ppm	5	0.864± 0.046	0.254± 0.009	4.510± 0.178**	1.321± 0.063
2500 ppm	5	0.880± 0.041	0.259± 0.011	4.861± 0.175**	1.338± 0.052
5000 ppm	5	0.985± 0.052**	0.254± 0.012	5.326± 0.101**	1.438± 0.058**
10000 ppm	5	1.214± 0.081**	0.235± 0.011	6.224± 0.107**	2.173± 0.059**

Significant difference ; * : P ≦ 0.05 ** : P ≦ 0.01 Test of Dunnett

APPENDIX J 1

HISTOLOGICAL FINDINGS : NON-NEOPLASTIC LESIONS : SUMMARY

RAT : MALE : ALL ANIMALS

(2-WEEK STUDY)

STUDY NO. : 0405
ANIMAL : RAT F344/DuCrj
REPORT TYPE : A1
SEX : MALE

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

Organ	Findings	Group Name / No. of Animals on Study / Grade	Control 5 1 (%)	Control 5 2 (%)	Control 5 3 (%)	Control 5 4 (%)	625 ppm 5 1 (%)	625 ppm 5 2 (%)	625 ppm 5 3 (%)	625 ppm 5 4 (%)	1250 ppm 5 1 (%)	1250 ppm 5 2 (%)	1250 ppm 5 3 (%)	1250 ppm 5 4 (%)	2500 ppm 5 1 (%)	2500 ppm 5 2 (%)	2500 ppm 5 3 (%)	2500 ppm 5 4 (%)
{Respiratory system}																		
nasal cavit			< 5>				< 5>				< 5>				< 5>			
	atrophy:olfactory gland		0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
	duct ectasia:olfactory gland		0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
	necrosis:olfactory epithelium		0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
{Hematopoietic system}																		
bone marrow			< 5>				< 5>				< 5>				< 5>			
	decreased hematopoiesis		0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
thymus			< 5>				< 5>				< 5>				< 5>			
	atrophy		0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
spleen			< 5>				< 5>				< 5>				< 5>			
	deposit of hemosiderin		0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)

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

Organ	Findings	Group Name	5000 ppm				10000 ppm			
		No. of Animals on Study	5				5			
		Grade	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Respiratory system}										
nasal cavit			< 5>				< 5>			
	atrophy:olfactory gland		2	0	0	0	0	5	0	0
			(40)	(0)	(0)	(0)	(0)	(100)	(0)	(0)
	duct ectasia:olfactory gland		0	0	0	0	4	0	0	0
			(0)	(0)	(0)	(0)	(80)	(0)	(0)	(0)
	necrosis:olfactory epithelium		0	0	0	0	5	0	0	0
			(0)	(0)	(0)	(0)	(100)	(0)	(0)	(0)
{Hematopoietic system}										
bone marrow			< 5>				< 5>			
	decreased hematopoiesis		4	0	0	0	0	5	0	0
			(80)	(0)	(0)	(0)	(0)	(100)	(0)	(0)
thymus			< 5>				< 5>			
	atrophy		0	0	0	0	5	0	0	0
			(0)	(0)	(0)	(0)	(100)	(0)	(0)	(0)
spleen			< 5>				< 5>			
	deposit of hemosiderin		0	0	0	0	5	0	0	0
			(0)	(0)	(0)	(0)	(100)	(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

Organ	Findings	Group Name	Control				625 ppm				1250 ppm				2500 ppm			
		No. of Animals on Study	5				5				5				5			
		Grade	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Hematopoietic system}																		
spleen			< 5>				< 5>				< 5>				< 5>			
	engorgement of erythrocyte		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
{Digestive system}																		
liver			< 5>				< 5>				< 5>				< 5>			
	degeneration:central		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
{Urinary system}																		
kidney			< 5>				< 5>				< 5>				< 5>			
	basophilic change		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	eosinophilic body		2	0	0	0	0	0	5	0	0	1	4	0	0	1	4	0
			(40)	(0)	(0)	(0)	(0)	(0)	(100)	(0)	(0)	(20)	(80)	(0)	(0)	(20)	(80)	(0)
	tubular necrosis:proximale tubule		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)

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

Organ	Findings	Group Name	5000 ppm				10000 ppm			
		No. of Animals on Study	5				5			
		Grade	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Hematopoietic system}										
spleen			< 5>				< 5>			
	engorgement of erythrocyte		5	0	0	0	0	5	0	0
			(100)	(0)	(0)	(0)	(0)	(100)	(0)	(0)
{Digestive system}										
liver			< 5>				< 5>			
	degeneration:central		0	4	1	0	0	0	5	0
			(0)	(80)	(20)	(0)	(0)	(0)	(100)	(0)
{Urinary system}										
kidney			< 5>				< 5>			
	basophilic change		0	0	0	0	2	2	0	0
			(0)	(0)	(0)	(0)	(40)	(40)	(0)	(0)
	eosinophilic body		1	0	0	0	0	0	0	0
			(20)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	tubular necrosis:proximale tubule		0	0	0	0	1	3	0	0
			(0)	(0)	(0)	(0)	(20)	(60)	(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

Organ	Findings	Group Name / No. of Animals on Study / Grade	Control 5 1 (%)	Control 5 2 (%)	Control 5 3 (%)	Control 5 4 (%)	625 ppm 5 1 (%)	625 ppm 5 2 (%)	625 ppm 5 3 (%)	625 ppm 5 4 (%)	1250 ppm 5 1 (%)	1250 ppm 5 2 (%)	1250 ppm 5 3 (%)	1250 ppm 5 4 (%)	2500 ppm 5 1 (%)	2500 ppm 5 2 (%)	2500 ppm 5 3 (%)	2500 ppm 5 4 (%)
{Urinary system}																		
urin bladd		< 5>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	hemorrhage		(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
{Endocrine system}																		
thyroid		< 5>	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0
	ultimibranchial body remanet		(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(20)	(0)	(0)	(0)	(20)	(0)	(0)	(0)
{Reproductive system}																		
testis		< 5>	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
	germ cell necrosis		(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(20)	(0)	(0)	(0)	(0)	(0)
epididymis		< 5>	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
	decreased:sperma		(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(20)	(0)	(0)	(0)	(0)	(0)
	debris of spermatic elements		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)

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

Organ	Findings	Group Name	5000 ppm				10000 ppm			
		No. of Animals on Study	5				5			
		Grade	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Urinary system}										
urin bladd			< 5>				< 5>			
	hemorrhage		0	0	0	0	0	1	0	0
			(0)	(0)	(0)	(0)	(0)	(20)	(0)	(0)
{Endocrine system}										
thyroid			< 5>				< 5>			
	ultimibranchial body remanet		0	0	0	0	0	0	0	0
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
{Reproductive system}										
testis			< 5>				< 5>			
	germ cell necrosis		0	0	0	0	0	0	1	0
			(0)	(0)	(0)	(0)	(0)	(0)	(20)	(0)
epididymis			< 5>				< 5>			
	decreased:sperma		0	0	0	0	0	0	1	0
			(0)	(0)	(0)	(0)	(0)	(0)	(20)	(0)
	debris of spermatic elements		0	0	0	0	1	4	0	0
			(0)	(0)	(0)	(0)	(20)	(80)	(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. : 0405
ANIMAL : RAT F344/DuCrj
REPORT TYPE : A1
SEX : MALE

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

Organ	Findings	Group Name	Control				625 ppm				1250 ppm				2500 ppm			
		No. of Animals on Study	5				5				5				5			
		Grade	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
(Nervous system)																		
brain			< 5>				< 5>				< 5>				< 5>			
	degeneration:granular cell		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)

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

Organ	Findings	Group Name	5000 ppm				10000 ppm			
		No. of Animals on Study	5				5			
		Grade	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
(Nervous system)										
brain			< 5>				< 5>			
	degeneration:granular cell		0	0	0	0	0	5	0	0
			(0)	(0)	(0)	(0)	(0)	(100)	(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

APPENDIX J 2

HISTOLOGICAL FINDINGS : NON-NEOPLASTIC LESIONS : SUMMARY

RAT : FEMALE: ALL ANIMALS

(2-WEEK STUDY)

Organ	Findings	Group Name	Control				625 ppm				1250 ppm				2500 ppm			
		No. of Animals on Study	5				5				5				5			
		Grade	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Respiratory system}																		
nasal cavit			< 5>				< 5>				< 5>				< 5>			
	atrophy:olfactory gland		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	duct ectasia:olfactory gland		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	necrosis:olfactory epithelium		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
{Hematopoietic system}																		
bone marrow			< 5>				< 5>				< 5>				< 5>			
	decreased hematopoiesis		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
thymus			< 5>				< 5>				< 5>				< 5>			
	atrophy		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
spleen			< 5>				< 5>				< 5>				< 5>			
	deposit of hemosiderin		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)

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

Organ	Findings	Group Name	5000 ppm				10000 ppm			
		No. of Animals on Study	5				5			
		Grade	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Respiratory system}										
nasal cavit			< 5>				< 5>			
	atrophy:olfactory gland		1	0	0	0	0	5	0	0
			(20)	(0)	(0)	(0)	(0)	(100)	(0)	(0)
	duct ectasia:olfactory gland		0	0	0	0	5	0	0	0
			(0)	(0)	(0)	(0)	(100)	(0)	(0)	(0)
	necrosis:olfactory epithelium		0	0	0	0	5	0	0	0
			(0)	(0)	(0)	(0)	(100)	(0)	(0)	(0)
{Hematopoietic system}										
bone marrow			< 5>				< 5>			
	decreased hematopoiesis		5	0	0	0	0	5	0	0
			(100)	(0)	(0)	(0)	(0)	(100)	(0)	(0)
thymus			< 5>				< 5>			
	atrophy		0	0	0	0	5	0	0	0
			(0)	(0)	(0)	(0)	(100)	(0)	(0)	(0)
spleen			< 5>				< 5>			
	deposit of hemosiderin		0	0	0	0	5	0	0	0
			(0)	(0)	(0)	(0)	(100)	(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

Organ	Findings	Group Name	Control				625 ppm				1250 ppm				2500 ppm			
		No. of Animals on Study	5				5				5				5			
		Grade	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Hematopoietic system}																		
spleen			< 5>				< 5>				< 5>				< 5>			
	engorgement of erythrocyte		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
{Digestive system}																		
liver			< 5>				< 5>				< 5>				< 5>			
	herniation		1	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0
			(20)	(0)	(0)	(0)	(20)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(20)	(0)	(0)	(0)
	degeneration:central		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
{Urinary system}																		
kidney			< 5>				< 5>				< 5>				< 5>			
	basophilic change		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	mineralization:cortico-medullary junction		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)

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

Organ	Findings	Group Name	5000 ppm				10000 ppm			
		No. of Animals on Study	5				5			
		Grade	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Hematopoietic system}										
spleen			< 5>				< 5>			
	engorgement of erythrocyte		3	0	0	0	0	5	0	0
			(60)	(0)	(0)	(0)	(0)	(100)	(0)	(0)
{Digestive system}										
liver			< 5>				< 5>			
	herniation		0	0	0	0	2	0	0	0
			(0)	(0)	(0)	(0)	(40)	(0)	(0)	(0)
	degeneration:central		3	2	0	0	0	1	4	0
			(60)	(40)	(0)	(0)	(0)	(20)	(80)	(0)
{Urinary system}										
kidney			< 5>				< 5>			
	basophilic change		1	3	0	0	4	0	0	0
			(20)	(60)	(0)	(0)	(80)	(0)	(0)	(0)
	mineralization:cortico-medullary junction		0	0	0	0	0	0	0	0
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)

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

Organ	Findings	Group Name	Control				625 ppm				1250 ppm				2500 ppm			
		No. of Animals on Study	5				5				5				5			
		Grade	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Urinary system}																		
kidney			< 5>				< 5>				< 5>				< 5>			
	tubular necrosis:proximale tubule		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
{Endocrine system}																		
thyroid			< 5>				< 5>				< 5>				< 5>			
	ultimibranchial body remanet		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)
{Nervous system}																		
brain			< 5>				< 5>				< 5>				< 5>			
	degeneration:granular cell		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)

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

Organ	Findings	Group Name	5000 ppm				10000 ppm			
		No. of Animals on Study	5				5			
		Grade	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Urinary system}										
kidney			< 5>				< 5>			
	tubular necrosis:proximale tubule		4	0	0	0	3	0	0	0
			(80)	(0)	(0)	(0)	(60)	(0)	(0)	(0)
{Endocrine system}										
thyroid			< 5>				< 5>			
	ultimibranchial body remanet		0	0	0	0	0	0	0	0
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
{Nervous system}										
brain			< 5>				< 5>			
	degeneration:granular cell		0	0	0	0	0	5	0	0
			(0)	(0)	(0)	(0)	(0)	(100)	(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

APPENDIX K 1

IDENTITY AND IMPURITY OF 2,4-DICHLORO-1-NITROBENZENE IN THE 2-WEEK FEED STUDY

IDENTITY AND IMPURITY OF 2,4-DICHLORO-1-NITROBENZENE IN THE 2-WEEK FEED STUDY

Test Substance : 2,4-Dichloro-1-nitrobenzene (Wako Pure Chemical Industries, Ltd.)

Lot No. : CKK5596

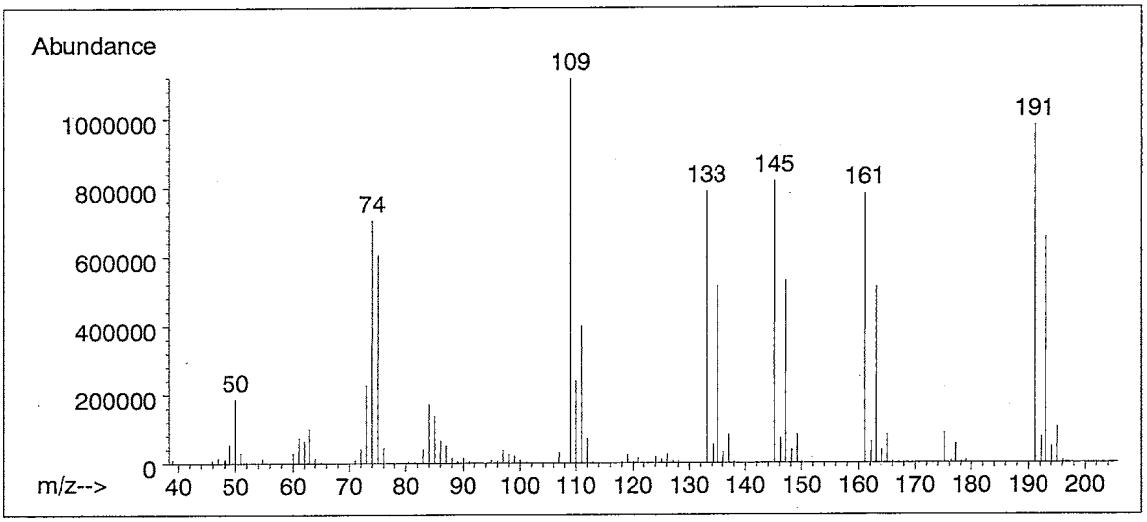
1. Spectral Data

Mass Spectrometry

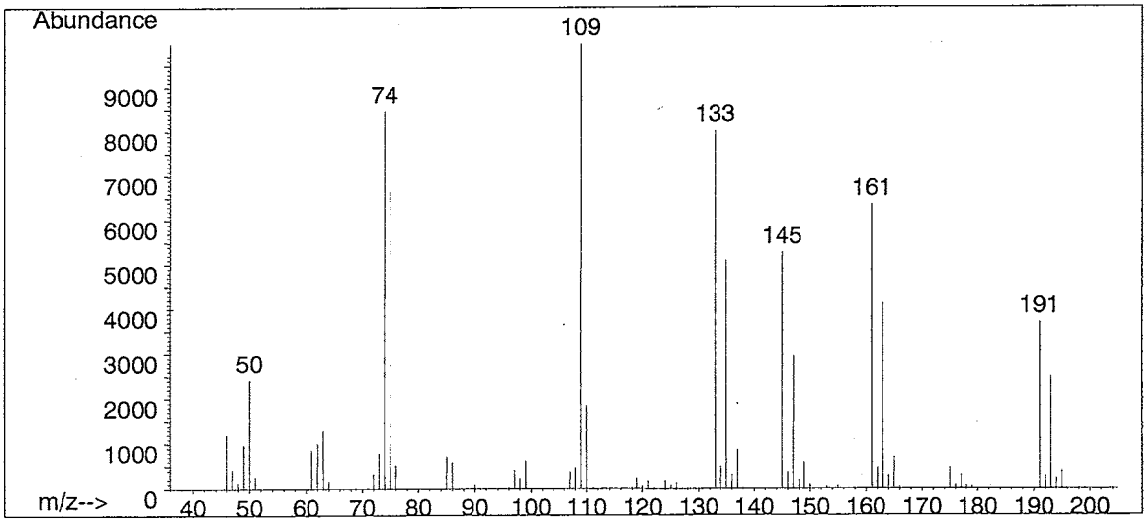
Instrument : Hewlett Packard 5989B Mass Spectrometer

Ionization : EI (Electron Ionization)

Ionization Voltage : 70eV



Mass Spectrum of Test Substance



Mass Spectrum of Literature Data*

Results: The mass spectrum was consistent with literature spectrum.

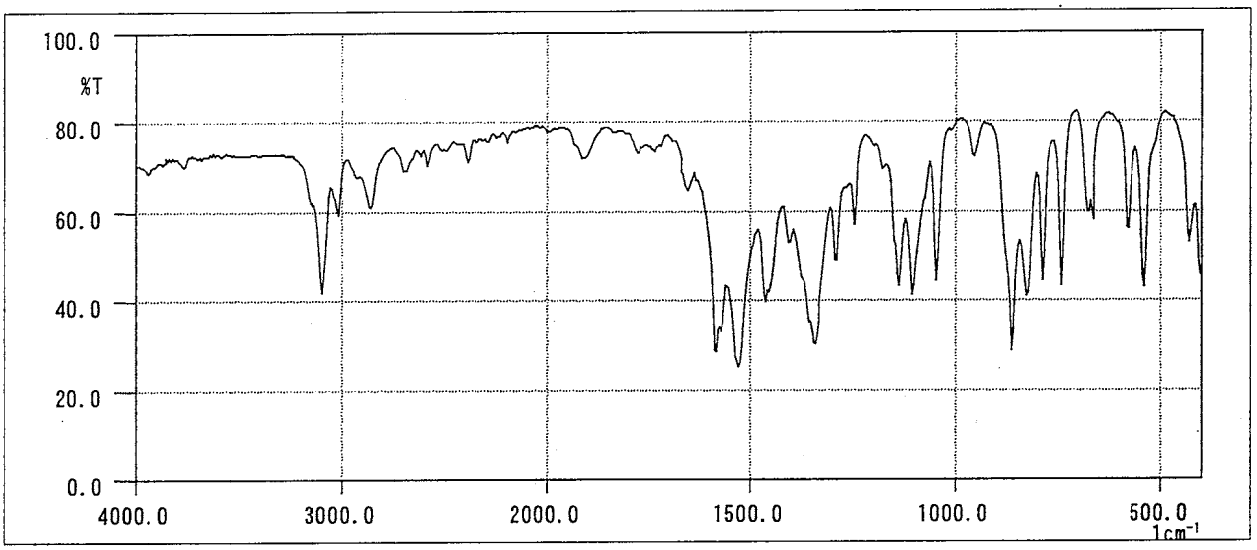
(*Fred W. McLafferty (1994) Wiley Registry of Mass Spectral Data, 6th edition. John Wiley and Sons, Inc. (U.S.), Entry Number 74218)

Infrared Spectrometry

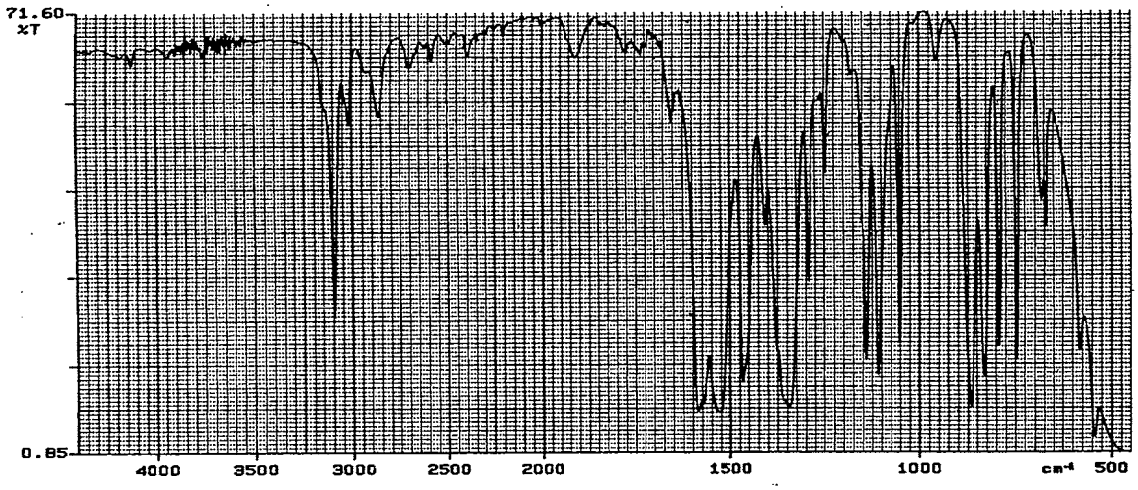
Instrument : Shimadzu FTIR-8200PC Infrared Spectrometer

Cell : KBr Liquid Cell

Resolution : 2 cm^{-1}



Infrared Spectrum of Test Substance



Infrared Spectrum of Literature Data*

Results: The infrared spectrum was consistent with literature spectrum.
(*Performed by Wako Pure Chemical Industries, Ltd.)

2. Impurity

Instrument : Hewlett Packard 6890 Gas Chromatograph

Column : Ultra1 (0.2 mmϕ × 50 m)

Column Temperature : 160 °C (5 min) → (20 °C/min) → 260 °C (5 min)

Flow Rate : 1 mL/min

Detector : FID (Flame Ionization Detector)

Injection Volume : 1 μL

Sample Name	Peak No.	Area (%)	Peak Name
Test Substance	1	99.91	2,4-Dichloro-1-nitrobenzene
	2	0.03	1,5-Dichloro-2,3-dinitrobenzene
	3	0.06	1,2-Dichloro-4,5-dinitrobenzene

Results: Gas chromatography indicated one major peak (peak No.1) and two impurities. It was identified only by comparing its gas chromatograph with that of 1,5-dichloro-2,3-dinitrobenzene (peak No.2) and 1,2-dichloro-4,5-dinitrobenzene (peak No.3) in the 2,4-dichloro-1-nitrobenzene, the amount in the test substance were 0.03% and 0.06%.

3. Conclusions: The test substance was identified as 2,4-dichloro-1-nitrobenzene by the mass spectrum and the infrared spectrum. Gas chromatography indicated one major peak (peak No.1) and two impurities. It was identified only by comparing its gas chromatograph with that of 1,5-dichloro-2,3-dinitrobenzene and 1,2-dichloro-4,5-dinitrobenzene, the amount in the test substance were 0.03% and 0.06%.

APPENDIX K 2

STABILITY OF 2,4-DICHLORO-1-NITROBENZENE

IN THE 2-WEEK FEED STUDY

STABILITY OF 2,4-DICHLORO-1-NITROBENZENE IN THE 2-WEEK FEED STUDY

Test Substance : 2,4-Dichloro-1-nitrobenzene (Wako Pure Chemical Industries, Ltd.)

Lot No. : CKK5596

1. Sample : This lot was used from 1999.12.7 to 1999.12.21. Test substance was stored in a dark place at room temperature.

2. Gas Chromatography

Instrument : Hewlett Packard 6890 Gas Chromatograph

Column : Ultra1 (0.2 mmϕ × 50 m)

Column Temperature : 160 °C (5 min) → (20 °C/min) → 260 °C (5 min)

Flow Rate : 1 mL/min

Detector : FID (Flame Ionization Detector)

Injection Volume : 1 μL

Date (date analyzed)	Peak No.	Retention Time (min)	Area (%)
1999.09.17	1	5.255	99.91
	2	7.522	0.03
	3	7.684	0.06
1999.12.22	1	5.256	99.91
	2	7.519	0.03
	3	7.684	0.06

Results: Gas chromatography indicated one major peak (peak No.1) and two impurities (peak No. 2, 3 < 0.1% of total area) analyzed on 1999.9.17 and one major peak (peak No.1) and two impurities (peak No.2, 3 < 0.1% of total area) analyzed on 1999.12.22. No new trace impurity peak in the test substance analyzed on 1999.12.22 was detected.

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

APPENDIX K 3

CONCENTRATION OF 2,4-DICHLORO-1-NITROBENZENE IN FORMULATED DIETS IN THE 2-WEEK FEED STUDY

CONCENTRATION OF 2,4-DICHLORO-1-NITROBENZENE IN FORMULATED DIETS IN THE 2-WEEK FEED STUDY

	Target Concentration				
Date Analyzed	625[a]	1250	2500	5000	10000
1999.12.6	622 (99.5)[b]	1200 (96.1)	2390 (95.5)	4760 (95.1)	9720 (97.2)

[a] ppm
[b] %

Analytical method : The samples were analyzed by gas chromatography.

Instrument : Hewlett Packard 6890 Gas Chromatograph
Column : Ultra 1 (0.2 mmϕ $\times$ 50 m)
Column Temperature : 160 °C $\rightarrow$ (5 min) $\rightarrow$ (20 °C/min) $\rightarrow$ 260 °C (5 min)
Flow Rate : 1 mL/min
Detector : FID (Flame Ionization Detector)
Injection Volume : 1 µL

APPENDIX K 4

HOMOGENEITY OF 2,4-DICHLORO-1-NITROBENZENE

IN FORMULATED DIETSIN IN THE 2-WEEK FEED STUDY

HOMOGENEITY OF 2,4-DICHLORO-1-NITROBENZENE IN FORMULATED DIETS IN THE 2-WEEK FEED STUDY

	Target Concentration				
	625[a]	1250	2500	5000	10000
Coefficient Variation	2.33[b]	1.48	0.32	0.80	1.35

[a] ppm
[b] % (n=7)

Analytical method : The samples were analyzed by gas chromatography.

Instrument : Hewlett Packard 6890 Gas Chromatograph
Column : Ultra 1 (0.2 mmϕ × 50 m)
Column Temperature : 160 °C → (5 min) → (20 °C/min) → 260 °C (5 min)
Flow Rate : 1 mL/min
Detector : FID (Flame Ionization Detector)
Injection Volume : 1 µL

APPENDIX K 5

STABILITY OF 2,4-DICHLORO-1-NITROBENZENE

IN FORMULATED DIET IN THE 2-WEEK FEED STUDY

STABILITY OF 2,4-DICHLORO-1-NITROBENZENE IN FORMULATED DIETS IN THE 2-WEEK FEED STUDY

		Target Concentration	
Date Prepared	Date Analyzed	200[a]	10000
1999.06.09	1999.06.09	210 (100)[b]	9900 (100)
	1999.06.18[c]	184 (87.6)	8730 (88.2)
	1999.06.24[d]	219 (104)	9010 (91.0)

[a] ppm
[b] % (Percentage was based on the concentration on date of preparation.)
[c] Animal room samples
[d] Cold storage samples

Analytical method : The samples were analyzed by gas chromatography.

Instrument : Hewlett Packard 6890 Gas Chromatograph
Column : Ultra 1 (0.2 mmϕ × 50 m)
Column Temperature : 160 °C → (5 min) → (20 °C/min) → 260 °C (5 min)
Flow Rate : 1 mL/min
Detector : FID (Flame Ionization Detector)
Injection Volume : 1 µL

APPENDIX L 1

METHODS FOR HEMATOLOGY AND BIOCHEMISTRY IN THE 2-WEEK FEED STUDY OF 2,4-DICHLORO-1-NITROBENZENE

METHODS FOR HEMATOLOGY AND BIOCHEMISTRY IN THE 2-WEEK FEED STUDY OF 2,4-DICHLORO-1-NITROBENZENE

Item	Method
Hematology	
Red blood cell (RBC)	Light scattering method [1]
Hemoglobin (Hgb)	Cyanmethemoglobin method [1]
Methemoglobin	Multiple-wavelength Spectrophotometric method [5]
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 [1]
Mean corpuscular hemoglobin concentration (MCHC)	Calculated as Hgb/Hct×100 [1]
Platelet	Light scattering method [1]
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] (Wright staining)
Biochemistry	
Total protein (TP)	Biuret method [4]
Albumin (Alb)	BCG method [4]
A/G ratio	Calculated as Alb/(TP−Alb) [4]
T-bilirubin	Alkaline azobilirubin method [4]
Glucose	GlcK·G-6-PDH method [4]
T-cholesterol	CE·COD·POD method [4]
Phospholipid	PLD·ChOD·POD method [4]
Glutamic oxaloacetic transaminase (GOT)	JSCC method [4]
Glutamic pyruvic transaminase (GPT)	JSCC method [4]
Lactate dehydrogenase (LDH)	SFBC method [4]
γ-Glutamyl transpeptidase (γ-GTP)	L-γ-Glutamyl-p-nitroanilide method [4]
Creatine phosphokinase (CPK)	JSCC method [4]
Urea nitrogen	Urease·GLDH method [4]
Creatinine	Jaffe method [4]
Sodium	Ion selective electrode method [4]
Potassium	Ion selective electrode method [4]
Chloride	Ion selective electrode method [4]
Calcium	OCPC method [4]
Inorganic phosphorus	PNP·XOD·POD method [4]

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

2) Automatic coagulometer (Sysmex CA-5000 : Toa Medical Electronics Co.,Ltd.)

3) Automatic blood cell differential analyzer (MICROX HEG-120NA : OMRON Corporation)

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

5) CO-oximeter (CIBA·CORNING 270 : Ciba Corning Diagnostics Corp)

APPENDIX M 1

UNITS AND DECIMAL PLACE FOR HEMATOLOGY AND BIOCHEMISTRY IN THE 2-WEEK FEED STUDY OF 2,4-DICHLORO-1-NITROBENZENE

UNITS AND DECIMAL PLACE FOR HEMATOLOGY AND BIOCHEMISTRY IN THE 2-WEEK FEED STUDY OF 2,4-DICHLORO-1-NITROBENZENE

Item	Unit	Decimal Place
Hematology		
Red blood cell (RBC)	$\times 10^6/\mu L$	2
Hemoglobin	g/dL	1
Methemoglobin	%	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
Phospholipid	mg/dL	0
Glutamic oxaloacetic transaminase (GOT)	IU/L	0
Glutamic pyruvic transaminase (GPT)	IU/L	0
Lactate dehydrogenase (LDH)	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