塩化メチルのラット及びマウスを用いた
吸入によるがん原性試験報告書

APPENDIX

(D1～I 4)

試験番号：ラット/0210；マウス/0211

APPENDIXES (CONTINUED)

APPENDIXES (CONTINUED)

APPENDIX D 1

HEMATOLOGY : SUMMARY, RAT : MALE

(TOW-YERA STUDY)

STUDY NO. : 0210
ANIMAL : RAT F344
SAMPLING DATE : 105-1
SEX : MALE REPORT TYPE : A1

HEMATOLOGY (SUMMARY)
ALL ANIMALS (105)

Group Name	NO. of Animals	RED BLOOD CELL $10^6/\mu\ell$	HEMOGLOBIN g/dℓ	HEMATOCRIT %	MCV f ℓ	MCH p g	MCHC g/dℓ	PLATELET $10^3/\mu\ell$
Control	41	7.99± 1.76	14.2± 3.3	42.2± 8.3	54.1± 9.8	18.0± 2.5	33.3± 2.3	934± 218
50 ppm	40	7.99± 1.77	14.1± 3.3	42.3± 8.3	53.5± 5.5	17.6± 1.4	32.9± 2.4	936± 256
224 ppm	35	8.29± 1.20	14.7± 2.4	43.3± 6.0	52.3± 1.9	17.7± 1.1	33.8± 1.8	931± 237
1000 ppm	41	8.95± 1.64*	15.9± 2.7*	46.3± 7.3	52.2± 3.2	17.8± 1.0	34.2± 1.4*	805± 185*

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

STUDY NO. : 0210
ANIMAL : RAT F344
SAMPLING DATE : 105-1
SEX : MALE REPORT TYPE : A1

HEMATOLOGY (SUMMARY)
ALL ANIMALS (105)

Group Name	NO. of Animals	WBC $10^3/\mu\ell$	Differential WBC (%) N-BAND	N-SEG	EOSINO	BASO	MONO	LYMPHO	OTHERS
Control	41	6.82± 5.82	0± 1	55± 12	1± 1	0± 0	5± 2	34± 10	4± 12
50 ppm	40	16.41± 58.47	0± 1	52± 14	2± 1	0± 0	5± 2	34± 11	8± 19
224 ppm	35	6.20± 1.87	0± 1	56± 9	1± 1	0± 0	5± 2	35± 9	2± 2
1000 ppm	41	13.82± 50.09	1± 1	47± 12*	1± 1	0± 0	5± 2	40± 11*	6± 16

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

APPENDIX D 2

HEMATOLOGY : SUMMARY, RAT : FEMALE

(TOW-YERA STUDY)

STUDY NO. : 0210
ANIMAL : RAT F344
SAMPLING DATE : 105-1
SEX : FEMALE REPORT TYPE : A1

HEMATOLOGY (SUMMARY)
ALL ANIMALS (105)

Group Name	NO. of Animals	RED BLOOD CELL $10^6/\mu\ell$	HEMOGLOBIN g/dℓ	HEMATOCRIT %	MCV f ℓ	MCH p g	MCHC g/dℓ	PLATELET $10^3/\mu\ell$
Control	37	7.68± 0.81	14.3± 1.7	42.1± 4.0	55.0± 2.8	18.7± 1.0	34.0± 1.6	687± 143
50 ppm	36	7.41± 1.41	14.2± 2.2	41.5± 5.4	57.4± 8.7	19.4± 1.7	34.0± 1.7	654± 172
224 ppm	43	7.53± 1.27	14.3± 2.2	41.8± 5.2	56.3± 5.8	19.0± 0.8	34.0± 1.8	667± 209
1000 ppm	36	7.57± 1.47	14.3± 2.9	41.5± 6.8	55.5± 4.3	18.8± 1.2	33.9± 2.8	673± 85

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

STUDY NO. : 0210
ANIMAL : RAT F344
SAMPLING DATE : 105-1
SEX : FEMALE REPORT TYPE : A1

HEMATOLOGY (SUMMARY)
ALL ANIMALS (105)

Group Name	NO. of Animals	WBC $10^3/\mu\ell$	Differential WBC (%) N-BAND	N-SEG	EOSINO	BASO	MONO	LYMPHO	OTHERS
Control	37	3.01± 1.48	1± 2	50± 13	2± 1	0± 0	5± 2	39± 10	4± 8
50 ppm	36	3.03± 1.46	1± 2	52± 13	1± 1	0± 0	5± 2	36± 8	5± 10
224 ppm	43	6.76± 17.89	1± 1	46± 14	1± 1	0± 0	5± 2	39± 13	8± 19
1000 ppm	36	10.89± 49.32	1± 3	41± 12**	1± 1	0± 0	5± 2	47± 13**	5± 14

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

APPENDIX D 3

HEMATOLOGY : SUMMARY, MOSUE : MALE

(TOW-YERA STUDY)

STUDY NO. : 0211
ANIMAL : MOUSE BDF1
SAMPLING DATE : 105-4
SEX : MALE REPORT TYPE : A1

HEMATOLOGY (SUMMARY)
ALL ANIMALS (105)

Group Name	NO. of Animals	RED BLOOD CELL $10^6/\mu\ell$	HEMOGLOBIN g/dℓ	HEMATOCRIT %	MCV f ℓ	MCH p g	MCHC g/dℓ	PLATELET $10^3/\mu\ell$
Control	38	9.29± 1.19	13.5± 1.8	41.7± 5.2	45.0± 2.3	14.6± 0.7	32.3± 1.1	1850± 371
50 ppm	41	9.41± 1.14	13.6± 1.7	41.6± 4.8	44.4± 2.5	14.5± 0.8	32.7± 1.4	1831± 457
200 ppm	39	9.26± 1.10	13.8± 1.3	42.1± 3.9	45.7± 2.7	15.0± 1.0	32.8± 1.7	1973± 351
800 ppm	0	-	-	-	-	-	-	-

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

STUDY NO. : 0211
ANIMAL : MOUSE BDF1
SAMPLING DATE : 105-4
SEX : MALE REPORT TYPE : A1

HEMATOLOGY (SUMMARY)
ALL ANIMALS (105)

Group Name	NO. of Animals	WBC $10^3/\mu\ell$	Differential WBC (%) N-BAND	N-SEG	EOSINO	BASO	MONO	LYMPHO	OTHERS
Control	38	4.58± 7.60	1± 2	31± 14	1± 1	0± 0	3± 2	62± 15	2± 4
50 ppm	41	2.96± 1.41	1± 1	33± 14	1± 1	0± 0	3± 2	61± 15	1± 2
200 ppm	39	3.16± 1.82	1± 1	34± 17	1± 1	0± 0	3± 1	60± 17	1± 2
800 ppm	0	-	-	-	-	-	-	-	-

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

APPENDIX D 4

HEMATOLOGY : SUMMARY, MOSUE : FEMALE

(TOW-YERA STUDY)

STUDY NO. : 0211
ANIMAL : MOUSE BDF1
SAMPLING DATE : 105-4
SEX : FEMALE REPORT TYPE : A1

HEMATOLOGY (SUMMARY)
ALL ANIMALS (105)

Group Name	NO. of Animals	RED BLOOD CELL $10^6/\mu\ell$	HEMOGLOBIN g/dℓ	HEMATOCRIT %	MCV f ℓ	MCH p g	MCHC g/dℓ	PLATELET $10^3/\mu\ell$
Control	32	9.09± 1.69	13.3± 2.4	40.9± 6.9	45.7± 5.0	14.7± 0.9	32.4± 1.5	1070± 367
50 ppm	33	9.28± 1.06	13.8± 1.4	42.3± 3.9	45.8± 2.6	14.9± 0.6	32.6± 1.1	1054± 296
200 ppm	32	9.50± 1.19	14.2± 1.5	43.4± 4.2	46.0± 3.7	15.0± 0.6	32.6± 1.4	1131± 293
800 ppm	0	-	-	-	-	-	-	-

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

STUDY NO. : 0211
ANIMAL : MOUSE BDF1
SAMPLING DATE : 105-4
SEX : FEMALE REPORT TYPE : A1

HEMATOLOGY (SUMMARY)
ALL ANIMALS (105)

Group Name	NO. of Animals	WBC $10^3/\mu\ell$	Differential WBC (%) N-BAND	N-SEG	EOSINO	BASO	MONO	LYMPHO	OTHERS
Control	32	3.46± 3.84	1± 3	39± 20	1± 2	0± 0	4± 2	52± 22	3± 5
50 ppm	33	3.95± 7.51	1± 1	36± 16	1± 2	0± 0	4± 2	56± 16	2± 4
200 ppm	32	2.33± 3.40	0± 1	34± 17	1± 2	0± 0	4± 2	58± 17	2± 3
800 ppm	0	-	-	-	-	-	-	-	-

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

APPENDIX E 1

BIOCHEMISTRY : SUMMARY, RAT : MALE

(TOW-YERA STUDY)

STUDY NO. : 0210
ANIMAL : RAT F344
SAMPLING DATE : 105-2
SEX : MALE REPORT TYPE : A1

BIOCHEMISTRY (SUMMARY)
ALL ANIMALS (105)

Group Name	NO. of Animals	TOTAL PROTEIN g/dℓ	ALBUMIN g/dℓ	A/G RATIO	T-BILIRUBIN mg/dℓ	GLUCOSE mg/dℓ	T-CHOLESTEROL mg/dℓ	TRIGLYCERIDE mg/dℓ
Control	41	6.6± 0.3	3.2± 0.2	0.9± 0.1	0.24± 0.21	151± 27	204± 54	205± 120
50 ppm	40	6.5± 0.4	3.2± 0.2	1.0± 0.1	0.21± 0.04	156± 19	217± 67	206± 128
224 ppm	35	6.6± 0.4	3.1± 0.3	0.9± 0.1	0.23± 0.05	151± 21	251± 93	280± 187
1000 ppm	41	6.6± 0.4	3.3± 0.2**	1.0± 0.1**	0.37± 0.72	144± 28	192± 72	180± 148

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

STUDY NO. : 0210
ANIMAL : RAT F344
SAMPLING DATE : 105-2
SEX : MALE REPORT TYPE : A1

BIOCHEMISTRY (SUMMARY)
ALL ANIMALS (105)

Group Name	NO. of Animals	PHOSPHOLIPID mg/dℓ	GOT IU/ℓ	GPT IU/ℓ	LDH IU/ℓ	ALP IU/ℓ	G-GTP IU/ℓ	CPK IU/ℓ
Control	41	288± 67	79± 92	39± 28	167± 99	181± 85	7± 6	79± 24
50 ppm	40	304± 88	103± 172	54± 99	195± 251	167± 50	7± 3	92± 81
224 ppm	35	347± 126	64± 31	34± 14	162± 49	148± 53*	7± 4	75± 13
1000 ppm	41	270± 114	134± 296	63± 111**	190± 245	189± 176	9± 7	181± 675

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

STUDY NO. : 0210
ANIMAL : RAT F344
SAMPLING DATE : 105-2
SEX : MALE REPORT TYPE : A1

BIOCHEMISTRY (SUMMARY)
ALL ANIMALS (105)

Group Name	NO. of Animals	UREA NITROGEN mg/dℓ	CREATININE mg/dℓ	SODIUM mEq/ℓ	POTASSIUM mEq/ℓ	CHLORIDE mEq/ℓ	CALCIUM mg/dℓ	INORGANIC PHOSPHORUS mg/dℓ
Control	41	25.3± 6.8	0.8± 0.2	144± 2	3.6± 0.3	108± 2	10.9± 0.4	4.6± 0.8
50 ppm	40	28.5± 18.5	0.8± 0.4	143± 2	3.6± 0.3	108± 2	11.0± 0.6	4.9± 2.2
224 ppm	35	25.4± 7.8	0.8± 0.3	143± 2	3.6± 0.3	107± 2	11.1± 0.5	4.6± 1.2
1000 ppm	41	20.2± 5.8**	0.6± 0.1**	144± 3	3.6± 0.4	108± 2	10.8± 0.4	4.4± 0.7

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

APPENDIX E 2

BIOCHEMISTRY : SUMMARY, RAT : FEMALE

(TOW-YERA STUDY)

STUDY NO. : 0210
ANIMAL : RAT F344
SAMPLING DATE : 105-2
SEX : FEMALE REPORT TYPE : A1

BIOCHEMISTRY (SUMMARY)
ALL ANIMALS (105)

Group Name	NO. of Animals	TOTAL PROTEIN g/dl	ALBUMIN g/dl	A/G RATIO	T-BILIRUBIN mg/dl	GLUCOSE mg/dl	T-CHOLESTEROL mg/dl	TRIGLYCERIDE mg/dl
Control	37	6.8± 0.6	3.7± 0.4	1.2± 0.2	0.19± 0.03	143± 21	157± 44	109± 109
50 ppm	36	6.9± 0.4	3.7± 0.2	1.2± 0.1	0.24± 0.18	154± 21	159± 48	140± 107
224 ppm	43	7.0± 0.4	3.8± 0.3	1.2± 0.1	0.22± 0.08	144± 22	162± 54	124± 101
1000 ppm	36	6.9± 0.4	3.8± 0.3	1.2± 0.1	0.19± 0.03	143± 15	150± 41	98± 60

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

STUDY NO. : 0210
ANIMAL : RAT F344
SAMPLING DATE : 105-2
SEX : FEMALE REPORT TYPE : A1

BIOCHEMISTRY (SUMMARY)
ALL ANIMALS (105)

Group Name	NO. of Animals	PHOSPHOLIPID mg/dℓ	GOT IU/ℓ	GPT IU/ℓ	LDH IU/ℓ	ALP IU/ℓ	G-GTP IU/ℓ	CPK IU/ℓ
Control	37	273± 72	100± 49	62± 39	149± 51	118± 44	5± 7	83± 49
50 ppm	36	277± 80	119± 104	64± 44	163± 53	132± 47	4± 3	74± 19
224 ppm	43	277± 79	129± 103	65± 32	206± 201	135± 64	4± 4	149± 460
1000 ppm	36	260± 65	102± 74	59± 28	169± 159	127± 83	4± 4	75± 48*

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

STUDY NO. : 0210
ANIMAL : RAT F344
SAMPLING DATE : 105-2
SEX : FEMALE REPORT TYPE : A1

BIOCHEMISTRY (SUMMARY)
ALL ANIMALS (105)

Group Name	NO. of Animals	UREA NITROGEN mg/dℓ	CREATININE mg/dℓ	SODIUM mEq/ℓ	POTASSIUM mEq/ℓ	CHLORIDE mEq/ℓ	CALCIUM mg/dℓ	INORGANIC PHOSPHORUS mg/dℓ
Control	37	19.6± 14.6	0.6± 0.5	142± 3	3.4± 0.5	106± 3	10.9± 0.5	4.2± 1.0
50 ppm	36	17.2± 3.4	0.5± 0.1	142± 2	3.3± 0.3	106± 2	10.7± 0.4	3.6± 1.0
224 ppm	43	16.4± 3.0	0.5± 0.1	142± 3	3.4± 0.5	106± 2	10.8± 0.5	3.9± 1.0
1000 ppm	36	17.2± 2.2	0.5± 0.0	143± 2	3.3± 0.4	106± 2	10.6± 0.4	3.8± 1.0

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

APPENDIX E 3

BIOCHEMISTRY : SUMMARY, MOSUE : MALE

(TOW-YERA STUDY)

STUDY NO. : 0211
ANIMAL : MOUSE BDF1
SAMPLING DATE : 105-5
SEX : MALE REPORT TYPE : A1

BIOCHEMISTRY (SUMMARY)
ALL ANIMALS (105)

Group Name	NO. of Animals	TOTAL PROTEIN g/dℓ	ALBUMIN g/dℓ	A/G RATIO	T-BILIRUBIN mg/dℓ	GLUCOSE mg/dℓ	T-CHOLESTEROL mg/dℓ	TRIGLYCERIDE mg/dℓ
Control	38	5.4± 0.7	2.9± 0.5	1.2± 0.2	0.19± 0.05	171± 42	108± 46	38± 15
50 ppm	41	5.6± 0.9	3.0± 0.5	1.2± 0.2	0.19± 0.05	178± 34	128± 122	36± 15
200 ppm	39	5.5± 0.6	3.1± 0.4	1.3± 0.1	0.18± 0.02	179± 27	116± 38	35± 12
800 ppm	0	-	-	-	-	-	-	-

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

STUDY NO. : 0211
ANIMAL : MOUSE BDF1
SAMPLING DATE : 105-5
SEX : MALE REPORT TYPE : A1

BIOCHEMISTRY (SUMMARY)
ALL ANIMALS (105)

Group Name	NO. of Animals	GOT IU/ℓ	GPT IU/ℓ	LDH IU/ℓ	ALP IU/ℓ	CPK IU/ℓ	UREA NITROGEN mg/dℓ	SODIUM mEq/ℓ
Control	38	97± 65	57± 70	345± 232	161± 113	60± 44	24.3± 9.5	156± 2
50 ppm	41	177± 346	79± 137	425± 485	161± 67	56± 46	25.5± 20.9	156± 2
200 ppm	39	79± 41	48± 64	354± 292	160± 84	51± 19	23.1± 3.0	157± 2
800 ppm	0	-	-	-	-	-	-	-

Significant defference : * : P ≦ 0.05 ** : P ≦ 0.01 Test of Dunnett

STUDY NO. : 0211
ANIMAL : MOUSE BDF1
SAMPLING DATE : 105-5
SEX : MALE REPORT TYPE : A1

BIOCHEMISTRY (SUMMARY)
ALL ANIMALS (105)

Group Name	NO. of Animals	POTASSIUM mEq/ℓ		CHLORIDE mEq/ℓ		CALCIUM mg/dℓ		INORGANIC PHOSPHORUS mg/dℓ	
Control	38	4.1±	0.4	123±	3	9.1±	0.5	6.6±	0.7
50 ppm	41	4.2±	0.4	124±	3	9.2±	0.6	6.6±	1.1
200 ppm	39	4.4±	0.4*	125±	2	9.1±	0.5	6.8±	0.7
800 ppm	0	-		-		-		-	

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

APPENDIX E 4

BIOCHEMISTRY : SUMMARY, MOSUE : FEMALE

(TOW-YERA STUDY)

STUDY NO. : 0211
ANIMAL : MOUSE BDF1
SAMPLING DATE : 105-5
SEX : FEMALE REPORT TYPE : A1

BIOCHEMISTRY (SUMMARY)
ALL ANIMALS (105)

Group Name	NO. of Animals	TOTAL PROTEIN g/dl	ALBUMIN g/dl	A/G RATIO	T-BILIRUBIN mg/dl	GLUCOSE mg/dl	T-CHOLESTEROL mg/dl	TRIGLYCERIDE mg/dl
Control	34	5.3± 1.0	2.8± 0.4	1.2± 0.3	0.53± 1.95	132± 34	85± 33	36± 21
50 ppm	33	5.1± 0.5	2.9± 0.3	1.4± 0.2*	0.21± 0.11	139± 29	85± 56	35± 22
200 ppm	32	5.2± 0.5	3.0± 0.2	1.4± 0.2*	0.20± 0.05	140± 26	73± 14	28± 13
800 ppm	0	-	-	-	-	-	-	-

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

STUDY NO. : 0211
ANIMAL : MOUSE BDF1
SAMPLING DATE : 105-5
SEX : FEMALE REPORT TYPE : A1

BIOCHEMISTRY (SUMMARY)
ALL ANIMALS (105)

Group Name	NO. of Animals	GOT IU/ℓ	GPT IU/ℓ	LDH IU/ℓ	ALP IU/ℓ	CPK IU/ℓ	UREA NITROGEN mg/dℓ	SODIUM mEq/ℓ
Control	34	185± 276	94± 201	679± 900	223± 120	121± 206	17.9± 8.7	156± 4
50 ppm	33	98± 39	42± 23	303± 159**	224± 85	68± 48	16.7± 6.4	154± 2
200 ppm	32	104± 50	39± 25	373± 323*	235± 110	90± 111	16.8± 3.2	155± 2
800 ppm	0	-	-	-	-	-	-	-

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

STUDY NO. : 0211
ANIMAL : MOUSE BDF1
SAMPLING DATE : 105-5
SEX : FEMALE REPORT TYPE : A1

BIOCHEMISTRY (SUMMARY)
ALL ANIMALS (105)

Group Name	NO. of Animals	POTASSIUM mEq/ℓ	CHLORIDE mEq/ℓ	CALCIUM mg/dℓ	INORGANIC PHOSPHORUS mg/dℓ
Control	34	4.2± 0.6	124± 5	9.4± 0.5	6.2± 1.2
50 ppm	33	4.1± 0.6	124± 2	9.2± 0.6	6.2± 1.1
200 ppm	32	4.1± 0.4	124± 3	9.1± 0.4	6.4± 1.2
800 ppm	0	-	-	-	-

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

APPENDIX F 1

URINALYSIS : SUMMARY, RAT : MALE

(TOW-YERA STUDY)

STUDY NO. : 0210
ANIMAL : RAT F344
SAMPLING DATE : 104-4
SEX : MALE REPORT TYPE : A1

URINALYSIS

Group Name	NO. of Animals	pH 5.0	6.0	6.5	7.0	7.5	8.0	8.5	CHI	Protein −	±	+	2+	3+	4+	CHI	Glucose −	±	+	2+	3+	4+	CHI	Ketone body −	±	+	2+	3+	4+	CHI	Bilirubin −	+	2+	3+	CHI
Control	42	0	0	4	3	14	21	0		0	0	0	3	27	12		42	0	0	0	0	0		42	0	0	0	0	0		42	0	0	0	
50 ppm	41	0	1	10	7	9	14	0		0	0	0	2	26	13		41	0	0	0	0	0		41	0	0	0	0	0		41	0	0	0	
224 ppm	38	0	2	6	11	10	9	0	*	0	0	0	1	29	8		38	0	0	0	0	0		38	0	0	0	0	0		38	0	0	0	
1000 ppm	42	0	0	4	16	15	6	1	**	0	0	0	2	30	10		42	0	0	0	0	0		42	0	0	0	0	0		42	0	0	0	

Significant difference ; * : P ≦ 0.05 ** : P ≦ 0.01 Test of CHI SQUARE

STUDY NO. : 0210 URINALYSIS
ANIMAL : RAT F344
SAMPLING DATE : 104-4
SEX : MALE REPORT TYPE : A1

Group Name	NO. of Animals	Occult blood −	±	+	2+	3+	CHI	Urobilinogen ±	+	2+	3+	4+	CHI
Control	42	39	2	1	0	0		42	0	0	0	0	
50 ppm	41	37	2	1	1	0		41	0	0	0	0	
224 ppm	38	37	0	0	0	1		38	0	0	0	0	
1000 ppm	42	42	0	0	0	0		42	0	0	0	0	

Significant difference ; * : P ≦ 0.05 ** : P ≦ 0.01 Test of CHI SQUARE

APPENDIX F 2

URINALYSIS : SUMMARY, RAT : FEMALE

(TOW-YERA STUDY)

STUDY NO. : 0210
ANIMAL : RAT F344
SAMPLING DATE : 104-4
SEX : FEMALE REPORT TYPE : A1

URINALYSIS

Group Name	NO. of Animals	pH 5.0	6.0	6.5	7.0	7.5	8.0	8.5	CHI	Protein −	±	+	2+	3+	4+	CHI	Glucose −	±	+	2+	3+	4+	CHI	Ketone body −	±	+	2+	3+	4+	CHI	Bilirubin −	+	2+	3+	CHI
Control	37	0	2	1	9	12	11	2		0	0	1	6	12	18		37	0	0	0	0	0		30	7	0	0	0	0		37	0	0	0	
50 ppm	37	0	0	3	9	6	18	1		0	0	5	4	10	18		37	0	0	0	0	0		31	6	0	0	0	0		37	0	0	0	
224 ppm	46	0	2	8	11	13	10	2		0	1	1	11	10	23		46	0	0	0	0	0		35	11	0	0	0	0		45	0	0	1	
1000 ppm	41	0	2	3	8	10	15	3		0	0	3	13	17	8	*	41	0	0	0	0	0		33	7	1	0	0	0		41	0	0	0	

Significant difference ; * : P ≦ 0.05 ** : P ≦ 0.01 Test of CHI SQUARE

STUDY NO. : 0210 URINALYSIS
ANIMAL : RAT F344
SAMPLING DATE : 104-4
SEX : FEMALE REPORT TYPE : A1

Group Name	NO. of Animals	Occult blood −	±	+	2+	3+	CHI	Urobilinogen ±	+	2+	3+	4+	CHI
Control	37	37	0	0	0	0		37	0	0	0	0	
50 ppm	37	37	0	0	0	0		37	0	0	0	0	
224 ppm	46	44	1	0	0	1		46	0	0	0	0	
1000 ppm	41	40	0	0	0	1		41	0	0	0	0	

Significant difference ; * : P ≦ 0.05 ** : P ≦ 0.01 Test of CHI SQUARE

APPENDIX F 3

URINALYSIS : SUMMARY, MOSUE : MALE

(TOW-YERA STUDY)

STUDY NO. : 0211 URINALYSIS
ANIMAL : MOUSE BDF1
SAMPLING DATE : 103-7
SEX : MALE REPORT TYPE : A1

Group Name	NO. of Animals	pH 5.0	6.0	6.5	7.0	7.5	8.0	8.5	CHI	Protein −	±	+	2+	3+	4+	CHI	Glucose −	±	+	2+	3+	4+	CHI	Ketone body −	±	+	2+	3+	4+	CHI	Occult blood −	±	+	2+	3+	CHI
Control	38	0	0	6	16	5	10	1		0	3	24	11	0	0		38	0	0	0	0	0		8	24	6	0	0	0		35	1	0	1	1	
50 ppm	42	0	2	6	10	14	10	0		0	3	22	14	3	0		42	0	0	0	0	0		10	25	6	1	0	0		38	2	0	1	1	
200 ppm	41	0	0	3	7	15	15	1	*	0	1	23	17	0	0		41	0	0	0	0	0		5	32	2	2	0	0		38	1	0	1	1	
800 ppm	0	-	-	-	-	-	-	-		-	-	-	-	-	-		-	-	-	-	-	-		-	-	-	-	-	-		-	-	-	-	-	

Significant difference ; * : P ≦ 0.05 ** : P ≦ 0.01 Test of CHI SQUARE

STUDY NO. : 0211 URINALYSIS
ANIMAL : MOUSE BDF1
SAMPLING DATE : 103-7
SEX : MALE REPORT TYPE : A1

Group Name	NO. of Animals	Urobilinogen ±	+	2+	3+	4+	CHI
Control	38	38	0	0	0	0	
50 ppm	42	42	0	0	0	0	
200 ppm	41	41	0	0	0	0	
800 ppm	0	-	-	-	-	-	

Significant difference ; * : P ≦ 0.05 ** : P ≦ 0.01 Test of CHI SQUARE

APPENDIX F 4

URINALYSIS : SUMMARY, MOSUE : FEMALE

(TOW-YERA STUDY)

STUDY NO. : 0211
ANIMAL : MOUSE BDF1
SAMPLING DATE : 103-7
SEX : FEMALE REPORT TYPE : A1

URINALYSIS

Group Name	NO. of Animals	pH 5.0	6.0	6.5	7.0	7.5	8.0	8.5	CHI	Protein −	±	+	2+	3+	4+	CHI	Glucose −	±	+	2+	3+	4+	CHI	Ketone body −	±	+	2+	3+	4+	CHI	Occult blood −	±	+	2+	3+	CHI
Control	36	0	1	2	8	12	11	2		0	4	19	11	2	0		36	0	0	0	0	0		21	12	3	0	0	0		35	1	0	0	0	
50 ppm	37	0	0	2	7	12	15	1		0	2	22	12	1	0		37	0	0	0	0	0		17	19	1	0	0	0		30	3	3	0	1	
200 ppm	34	0	1	3	4	9	15	2		0	3	16	15	0	0		34	0	0	0	0	0		15	15	4	0	0	0		33	1	0	0	0	
800 ppm	0	-	-	-	-	-	-	-		-	-	-	-	-	-		-	-	-	-	-	-		-	-	-	-	-	-		-	-	-	-	-	

Significant difference ; * : P ≦ 0.05 ** : P ≦ 0.01 Test of CHI SQUARE

STUDY NO. : 0211
ANIMAL : MOUSE BDF1
SAMPLING DATE : 103-7
SEX : FEMALE REPORT TYPE : A1

URINALYSIS

Group Name	NO. of Animals	Urobilinogen ±	+	2+	3+	4+	CHI
Control	36	36	0	0	0	0	
50 ppm	37	37	0	0	0	0	
200 ppm	34	34	0	0	0	0	
800 ppm	0	-	-	-	-	-	

Significant difference : * : P ≦ 0.05 ** : P ≦ 0.01 Test of CHI SQUARE

APPENDIX G 1

GROSS FINDINGS : SUMMARY, RAT : MALE : DEAD AND MORIBUND ANIMALS

(TOW-YERA STUDY)

STUDY NO. : 0210
ANIMAL : RAT F344
REPORT TYPE : A1
SEX : MALE

GROSS FINDINGS (SUMMARY)
DEAD AND MORIBUND ANIMALS (0-105W)

Organ	Findings	Group Name NO. of Animals	Control 8 (%)	50 ppm 9 (%)	224 ppm 14 (%)	1000 ppm 9 (%)
skin/app	nodule		1 (13)	0 (0)	0 (0)	0 (0)
subcutis	jaundice		0 (0)	1 (11)	1 (7)	1 (11)
	nodule		0 (0)	0 (0)	1 (7)	0 (0)
	mass		2 (25)	2 (22)	4 (29)	0 (0)
lung	red		0 (0)	1 (11)	0 (0)	0 (0)
	voluminus		0 (0)	0 (0)	1 (7)	0 (0)
lymph node	enlarged		0 (0)	1 (11)	1 (7)	0 (0)
thymus	atrophic		0 (0)	0 (0)	1 (7)	0 (0)
	red		0 (0)	0 (0)	0 (0)	1 (11)
spleen	enlarged		2 (25)	3 (33)	7 (50)	3 (33)
heart	white		0 (0)	1 (11)	0 (0)	0 (0)
artery/aort	induration		0 (0)	0 (0)	0 (0)	1 (11)
tongue	nodule		0 (0)	0 (0)	0 (0)	1 (11)
forestomach	ulcer		0 (0)	1 (11)	0 (0)	1 (11)
gl stomach	black zone		1 (13)	0 (0)	0 (0)	0 (0)
	ulcer		0 (0)	0 (0)	1 (7)	0 (0)
	thick		0 (0)	0 (0)	1 (7)	0 (0)
liver	enlarged		1 (13)	0 (0)	2 (14)	0 (0)
	pale		0 (0)	0 (0)	1 (7)	0 (0)
	rough		0 (0)	1 (11)	2 (14)	1 (11)
	herniation		0 (0)	1 (11)	0 (0)	0 (0)
pancreas	nodule		0 (0)	0 (0)	1 (7)	0 (0)

STUDY NO. : 0210
ANIMAL : RAT F344
REPORT TYPE : A1
SEX : MALE

GROSS FINDINGS (SUMMARY)
DEAD AND MORIBUND ANIMALS (0-105W)

Organ	Findings	Group Name NO. of Animals	Control 8 (%)	50 ppm 9 (%)	224 ppm 14 (%)	1000 ppm 9 (%)
kidney	granular		2 (25)	3 (33)	5 (36)	2 (22)
urin bladd	red zone		0 (0)	0 (0)	1 (7)	0 (0)
	urine:marked retention		0 (0)	0 (0)	1 (7)	0 (0)
pituitary	enlarged		0 (0)	4 (44)	1 (7)	1 (11)
	red zone		1 (13)	0 (0)	0 (0)	0 (0)
	nodule		0 (0)	1 (11)	0 (0)	0 (0)
thyroid	enlarged		0 (0)	0 (0)	0 (0)	1 (11)
adrenal	enlarged		2 (25)	0 (0)	1 (7)	0 (0)
testis	enlarged		1 (13)	0 (0)	0 (0)	0 (0)
	atrophic		0 (0)	1 (11)	1 (7)	1 (11)
	nodule		4 (50)	3 (33)	10 (71)	5 (56)
epididymis	nodule		0 (0)	0 (0)	0 (0)	1 (11)
brain	red zone		0 (0)	1 (11)	2 (14)	1 (11)
spinal cord	nodule		1 (13)	0 (0)	0 (0)	0 (0)
pleura	nodule		0 (0)	1 (11)	0 (0)	0 (0)
peritoneum	nodule		1 (13)	0 (0)	2 (14)	2 (22)
retroperit	mass		0 (0)	0 (0)	0 (0)	2 (22)
abdominal c	ascites		1 (13)	0 (0)	3 (21)	1 (11)
thoracic ca	hemorrhage		0 (0)	1 (11)	0 (0)	0 (0)
	mass		0 (0)	0 (0)	0 (0)	1 (11)
	pleural fluid		0 (0)	2 (22)	2 (14)	0 (0)
	ascites		0 (0)	0 (0)	0 (0)	1 (11)

STUDY NO. : 0210
ANIMAL : RAT F344
REPORT TYPE : A1
SEX : MALE

GROSS FINDINGS (SUMMARY)
DEAD AND MORIBUND ANIMALS (0-105W)

Organ	Findings	Group Name NO. of Animals	Control 8 (%)	50 ppm 9 (%)	224 ppm 14 (%)	1000 ppm 9 (%)
other	black		0 (0)	0 (0)	1 (7)	0 (0)
	fluid		0 (0)	1 (11)	0 (0)	0 (0)
	tail:nodule		0 (0)	0 (0)	0 (0)	1 (11)
whole body	anemic		2 (25)	0 (0)	2 (14)	0 (0)

APPENDIX G 2

GROSS FINDINGS : SUMMARY, RAT : FEMALE : DEAD AND MORIBUND ANIMALS

(TOW-YERA STUDY)

STUDY NO. : 0210
ANIMAL : RAT F344
REPORT TYPE : A1
SEX : FEMALE

GROSS FINDINGS (SUMMARY)
DEAD AND MORIBUND ANIMALS (0-105W)

Organ	Findings	Group Name NO. of Animals	Control 12 (%)	50 ppm 13 (%)	224 ppm 5 (%)	1000 ppm 9 (%)
subcutis	jaundice		1 (8)	2 (15)	0 (0)	2 (22)
	mass		2 (17)	1 (8)	2 (40)	1 (11)
lung	red		0 (0)	1 (8)	0 (0)	0 (0)
	white zone		1 (8)	0 (0)	0 (0)	0 (0)
	yellow zone		1 (8)	0 (0)	0 (0)	0 (0)
	nodule		0 (0)	1 (8)	0 (0)	0 (0)
lymph node	enlarged		1 (8)	1 (8)	0 (0)	0 (0)
	red		0 (0)	0 (0)	0 (0)	1 (11)
spleen	enlarged		3 (25)	4 (31)	0 (0)	3 (33)
heart	white zone		0 (0)	0 (0)	0 (0)	1 (11)
	nodule		0 (0)	0 (0)	0 (0)	1 (11)
forestomach	ulcer		2 (17)	0 (0)	0 (0)	1 (11)
small intes	red zone		0 (0)	1 (8)	0 (0)	0 (0)
large intes	red zone		0 (0)	1 (8)	0 (0)	0 (0)
liver	pale		0 (0)	0 (0)	0 (0)	1 (11)
	red zone		0 (0)	1 (8)	0 (0)	0 (0)
	nodule		1 (8)	0 (0)	0 (0)	0 (0)
	rough		2 (17)	5 (38)	0 (0)	2 (22)
	adhesion		0 (0)	0 (0)	0 (0)	1 (11)
	herniation		2 (17)	1 (8)	0 (0)	0 (0)
pancreas	nodule		0 (0)	0 (0)	0 (0)	1 (11)
kidney	granular		0 (0)	0 (0)	0 (0)	1 (11)

Organ	Findings	Group Name NO. of Animals	Control 12 (%)	50 ppm 13 (%)	224 ppm 5 (%)	1000 ppm 9 (%)
urin bladd	red zone		0 (0)	0 (0)	1 (20)	0 (0)
	mass		0 (0)	0 (0)	1 (20)	0 (0)
	urine:marked retention		0 (0)	0 (0)	1 (20)	0 (0)
pituitary	enlarged		4 (33)	5 (38)	1 (20)	3 (33)
	red		0 (0)	1 (8)	0 (0)	0 (0)
	red zone		0 (0)	1 (8)	0 (0)	1 (11)
thyroid	enlarged		0 (0)	1 (8)	0 (0)	0 (0)
adrenal	enlarged		0 (0)	1 (8)	0 (0)	0 (0)
ovary	enlarged		1 (8)	0 (0)	0 (0)	0 (0)
	cyst		0 (0)	1 (8)	0 (0)	0 (0)
uterus	nodule		0 (0)	4 (31)	1 (20)	1 (11)
brain	red zone		1 (8)	0 (0)	0 (0)	0 (0)
	hemorrhage		0 (0)	1 (8)	0 (0)	0 (0)
	fluid:transparent		0 (0)	0 (0)	0 (0)	1 (11)
spinal cord	black zone		0 (0)	0 (0)	0 (0)	1 (11)
eye	white		0 (0)	1 (8)	0 (0)	1 (11)
mediastinum	abscess		0 (0)	1 (8)	0 (0)	0 (0)
peritoneum	nodule		0 (0)	0 (0)	1 (20)	0 (0)
thoracic ca	pleural fluid		1 (8)	2 (15)	0 (0)	2 (22)
whole body	anemic		0 (0)	0 (0)	0 (0)	1 (11)

APPENDIX G 3

GROSS FINDINGS : SUMMARY, RAT : MALE : SACRIFICED ANIMALS

(TOW-YERA STUDY)

STUDY NO. : 0210
ANIMAL : RAT F344
REPORT TYPE : A1
SEX : MALE

GROSS FINDINGS (SUMMARY)
SACRIFICED ANIMALS (105W)

Organ	Findings	Group Name NO. of Animals	Control 42 (%)	50 ppm 41 (%)	224 ppm 36 (%)	1000 ppm 41 (%)
skin/app	nodule		3 (7)	2 (5)	4 (11)	0 (0)
subcutis	nodule		1 (2)	0 (0)	0 (0)	0 (0)
	mass		6 (14)	7 (17)	7 (19)	5 (12)
lung	red zone		0 (0)	0 (0)	0 (0)	1 (2)
	nodule		2 (5)	0 (0)	3 (8)	3 (7)
thymus	cyst		1 (2)	0 (0)	0 (0)	0 (0)
spleen	enlarged		1 (2)	2 (5)	2 (6)	3 (7)
	white zone		0 (0)	1 (2)	0 (0)	0 (0)
	brown zone		0 (0)	0 (0)	1 (3)	0 (0)
	nodule		0 (0)	1 (2)	2 (6)	0 (0)
	deformed		1 (2)	1 (2)	0 (0)	0 (0)
	adhesion		0 (0)	1 (2)	0 (0)	0 (0)
heart	white zone		0 (0)	0 (0)	1 (3)	0 (0)
tongue	nodule		1 (2)	0 (0)	0 (0)	0 (0)
forestomach	ulcer		1 (2)	0 (0)	0 (0)	0 (0)
small intes	nodule		0 (0)	0 (0)	1 (3)	0 (0)
liver	white zone		0 (0)	1 (2)	0 (0)	0 (0)
	nodule		1 (2)	1 (2)	2 (6)	1 (2)
	rough		0 (0)	2 (5)	2 (6)	3 (7)
	herniation		1 (2)	3 (7)	0 (0)	0 (0)
pancreas	nodule		0 (0)	1 (2)	0 (0)	0 (0)
kidney	pale		0 (0)	1 (2)	0 (0)	0 (0)

STUDY NO. : 0210
ANIMAL : RAT F344
REPORT TYPE : A1
SEX : MALE

GROSS FINDINGS (SUMMARY)
SACRIFICED ANIMALS (105W)

Organ	Findings	Group Name / NO. of Animals	Control 42 (%)	50 ppm 41 (%)	224 ppm 36 (%)	1000 ppm 41 (%)
kidney	granular		37 (88)	36 (88)	35 (97)	32 (78)
pituitary	enlarged		0 (0)	0 (0)	2 (6)	4 (10)
	red zone		1 (2)	4 (10)	2 (6)	5 (12)
	black zone		0 (0)	1 (2)	1 (3)	0 (0)
	nodule		3 (7)	3 (7)	2 (6)	2 (5)
thyroid	enlarged		3 (7)	4 (10)	3 (8)	5 (12)
	nodule		2 (5)	1 (2)	2 (6)	1 (2)
adrenal	enlarged		0 (0)	1 (2)	0 (0)	0 (0)
testis	atrophic		1 (2)	0 (0)	0 (0)	0 (0)
	nodule		42 (100)	41 (100)	34 (94)	38 (93)
spinal cord	red zone		0 (0)	1 (2)	0 (0)	0 (0)
eye	turbid		0 (0)	1 (2)	0 (0)	0 (0)
	white		3 (7)	2 (5)	0 (0)	2 (5)
	red		0 (0)	0 (0)	0 (0)	1 (2)
	exophthalmos		0 (0)	0 (0)	0 (0)	1 (2)
Zymbal gl	nodule		0 (0)	0 (0)	0 (0)	1 (2)
peritoneum	nodule		0 (0)	2 (5)	0 (0)	0 (0)
retroperit	mass		1 (2)	0 (0)	0 (0)	0 (0)
abdominal c	ascites		0 (0)	1 (2)	0 (0)	0 (0)
thoracic ca	pleural fluid		1 (2)	1 (2)	1 (3)	1 (2)
other	nodule		0 (0)	0 (0)	1 (3)	0 (0)
	tail:nodule		1 (2)	0 (0)	0 (0)	0 (0)

Organ	Findings	Group Name NO. of Animals	Control 42 (%)	50 ppm 41 (%)	224 ppm 36 (%)	1000 ppm 41 (%)
other	ear:nodule		1 (2)	0 (0)	1 (3)	0 (0)
whole body	anemic		1 (2)	0 (0)	0 (0)	0 (0)

APPENDIX G 4

GROSS FINDINGS : SUMMARY, RAT : FEMALE : SACRIFICED ANIMALS

(TOW-YERA STUDY)

STUDY NO. : 0210
ANIMAL : RAT F344
REPORT TYPE : A1
SEX : FEMALE

GROSS FINDINGS (SUMMARY)
SACRIFICED ANIMALS (105W)

Organ	Findings	Group Name NO. of Animals	Control 37 (%)	50 ppm 37 (%)	224 ppm 45 (%)	1000 ppm 41 (%)
skin/app	nodule		0 (0)	0 (0)	2 (4)	0 (0)
	scab		1 (3)	0 (0)	0 (0)	0 (0)
subcutis	mass		8 (22)	10 (27)	11 (24)	8 (20)
lung	white zone		1 (3)	0 (0)	0 (0)	0 (0)
	red zone		0 (0)	0 (0)	1 (2)	0 (0)
	brown zone		1 (3)	0 (0)	0 (0)	0 (0)
	nodule		3 (8)	1 (3)	0 (0)	0 (0)
thymus	nodule		1 (3)	0 (0)	1 (2)	1 (2)
spleen	enlarged		0 (0)	3 (8)	5 (11)	1 (2)
	nodule		0 (0)	0 (0)	1 (2)	0 (0)
salivary gl	nodule		0 (0)	0 (0)	1 (2)	0 (0)
forestomach	nodule		0 (0)	1 (3)	0 (0)	0 (0)
	ulcer		0 (0)	0 (0)	1 (2)	0 (0)
small intes	nodule		0 (0)	0 (0)	0 (0)	1 (2)
liver	nodule		3 (8)	1 (3)	0 (0)	0 (0)
	rough		1 (3)	1 (3)	5 (11)	1 (2)
	nodular		0 (0)	2 (5)	1 (2)	0 (0)
	herniation		1 (3)	2 (5)	2 (4)	1 (2)
pancreas	nodule		0 (0)	0 (0)	1 (2)	0 (0)
kidney	granular		16 (43)	11 (30)	14 (31)	9 (22)
pituitary	enlarged		8 (22)	3 (8)	8 (18)	5 (12)
	red zone		7 (19)	14 (38)	7 (16)	8 (20)

Organ	Findings	Group Name NO. of Animals	Control 37 (%)	50 ppm 37 (%)	224 ppm 45 (%)	1000 ppm 41 (%)
pituitary	black zone		1 (3)	5 (14)	2 (4)	2 (5)
	nodule		5 (14)	1 (3)	4 (9)	1 (2)
	cyst		0 (0)	0 (0)	0 (0)	1 (2)
thyroid	enlarged		1 (3)	1 (3)	1 (2)	1 (2)
	nodule		2 (5)	1 (3)	3 (7)	0 (0)
adrenal	enlarged		1 (3)	0 (0)	0 (0)	0 (0)
	red		0 (0)	0 (0)	0 (0)	1 (2)
ovary	enlarged		0 (0)	0 (0)	0 (0)	1 (2)
	cyst		0 (0)	1 (3)	4 (9)	1 (2)
uterus	nodule		4 (11)	3 (8)	2 (4)	5 (12)
	dilated		0 (0)	0 (0)	0 (0)	1 (2)
periph nerv	nodule		1 (3)	0 (0)	0 (0)	0 (0)
eye	turbid		1 (3)	0 (0)	1 (2)	0 (0)
	white		2 (5)	4 (11)	2 (4)	2 (5)
Zymbal gl	nodule		0 (0)	0 (0)	1 (2)	0 (0)
abdominal c	ascites		0 (0)	0 (0)	1 (2)	0 (0)
other	tail:nodule		0 (0)	1 (3)	1 (2)	0 (0)
whole body	anemic		0 (0)	1 (3)	0 (0)	1 (2)

APPENDIX G 5

GROSS FINDINGS : SUMMARY, MOSUE : MALE : DEAD AND MORIBUND ANIMALS

(TOW-YERA STUDY)

STUDY NO. : 0211
ANIMAL : MOUSE BDF1
REPORT TYPE : A1
SEX : MALE

GROSS FINDINGS (SUMMARY)
DEAD AND MORIBUND ANIMALS (0-105W)

Organ	Findings	Group Name NO. of Animals	Control 12 (%)	50 ppm 8 (%)	200 ppm 9 (%)	800 ppm 48 (%)
skin/app	nodule		0 (0)	1 (13)	0 (0)	0 (0)
subcutis	edema		1 (8)	2 (25)	0 (0)	0 (0)
	mass		1 (8)	0 (0)	1 (11)	0 (0)
lung	nodule		3 (25)	0 (0)	1 (11)	1 (2)
lymph node	enlarged		1 (8)	3 (38)	1 (11)	2 (4)
spleen	enlarged		0 (0)	3 (38)	1 (11)	1 (2)
	black zone		1 (8)	0 (0)	1 (11)	1 (2)
	nodule		1 (8)	0 (0)	0 (0)	0 (0)
heart	nodule		0 (0)	0 (0)	1 (11)	0 (0)
stomach	hemorrhage		1 (8)	0 (0)	0 (0)	0 (0)
duodenum	red zone		0 (0)	0 (0)	1 (11)	0 (0)
small intes	hemorrhage		1 (8)	0 (0)	0 (0)	0 (0)
large intes	dilated		0 (0)	1 (13)	0 (0)	0 (0)
liver	enlarged		0 (0)	1 (13)	1 (11)	0 (0)
	pale		0 (0)	1 (13)	0 (0)	0 (0)
	white zone		0 (0)	3 (38)	1 (11)	0 (0)
	red zone		0 (0)	1 (13)	0 (0)	0 (0)
	nodule		4 (33)	2 (25)	3 (33)	3 (6)
pancreas	white zone		0 (0)	0 (0)	0 (0)	1 (2)
	adhesion		0 (0)	0 (0)	1 (11)	0 (0)
kidney	nodule		0 (0)	0 (0)	0 (0)	2 (4)
	hydronephrosis		0 (0)	1 (13)	0 (0)	0 (0)

Organ	Findings	Group Name NO. of Animals	Control 12 (%)	50 ppm 8 (%)	200 ppm 9 (%)	800 ppm 48 (%)
urin bladd	urine:marked retention		2 (17)	0 (0)	1 (11)	0 (0)
testis	atrophic		0 (0)	0 (0)	0 (0)	1 (2)
epididymis	nodule		1 (8)	0 (0)	0 (0)	0 (0)
brain	red zone		0 (0)	0 (0)	1 (11)	0 (0)
	nodule		1 (8)	0 (0)	0 (0)	0 (0)
	adhesion		1 (8)	0 (0)	0 (0)	0 (0)
Harder gl	enlarged		0 (0)	0 (0)	0 (0)	1 (2)
muscle	nodule		1 (8)	0 (0)	1 (11)	0 (0)
pleura	nodule		0 (0)	0 (0)	1 (11)	0 (0)
mediastinum	mass		1 (8)	0 (0)	1 (11)	0 (0)
retroperit	mass		0 (0)	0 (0)	1 (11)	0 (0)
abdominal c	hemorrhage		0 (0)	1 (13)	1 (11)	0 (0)
	ascites		0 (0)	1 (13)	1 (11)	0 (0)
mesenterium	nodule		0 (0)	0 (0)	1 (11)	0 (0)
thoracic ca	hemorrhage		0 (0)	0 (0)	1 (11)	0 (0)
	pleural fluid		1 (8)	3 (38)	1 (11)	0 (0)
whole body	anemic		0 (0)	0 (0)	1 (11)	0 (0)

APPENDIX G 6

GROSS FINDINGS : SUMMARY, MOSUE : FEMALE : DEAD AND MORIBUND ANIMALS

(TOW-YERA STUDY)

STUDY NO. : 0211
ANIMAL : MOUSE BDF1
REPORT TYPE : A1
SEX : FEMALE

GROSS FINDINGS (SUMMARY)
DEAD AND MORIBUND ANIMALS (0-105W)

Organ	Findings	Group Name NO. of Animals	Control 15 (%)	50 ppm 15 (%)	200 ppm 15 (%)	800 ppm 49 (%)
subcutis	edema		1 (7)	2 (13)	3 (20)	1 (2)
	mass		2 (13)	1 (7)	1 (7)	1 (2)
lung	red		1 (7)	1 (7)	1 (7)	1 (2)
	white zone		0 (0)	0 (0)	0 (0)	1 (2)
	nodule		0 (0)	3 (20)	1 (7)	2 (4)
lymph node	enlarged		5 (33)	4 (27)	5 (33)	2 (4)
spleen	enlarged		5 (33)	3 (20)	4 (27)	2 (4)
	nodule		1 (7)	1 (7)	0 (0)	0 (0)
heart	red zone		1 (7)	0 (0)	0 (0)	0 (0)
salivary gl	enlarged		0 (0)	1 (7)	0 (0)	0 (0)
forestomach	nodule		1 (7)	1 (7)	0 (0)	0 (0)
small intes	nodule		1 (7)	0 (0)	0 (0)	0 (0)
large intes	dilated		0 (0)	1 (7)	0 (0)	0 (0)
liver	reticular		0 (0)	1 (7)	0 (0)	0 (0)
	enlarged		2 (13)	0 (0)	4 (27)	0 (0)
	white zone		3 (20)	0 (0)	4 (27)	3 (6)
	red zone		0 (0)	1 (7)	0 (0)	2 (4)
	nodule		1 (7)	2 (13)	1 (7)	0 (0)
	cyst		1 (7)	0 (0)	1 (7)	0 (0)
	rough		1 (7)	0 (0)	0 (0)	0 (0)
	nodular		0 (0)	0 (0)	1 (7)	0 (0)
kidney	enlarged		2 (13)	1 (7)	0 (0)	0 (0)

STUDY NO. : 0211
ANIMAL : MOUSE BDF1
REPORT TYPE : A1
SEX : FEMALE

GROSS FINDINGS (SUMMARY)
DEAD AND MORIBUND ANIMALS (0-105W)

Organ	Findings	Group Name NO. of Animals	Control 15 (%)	50 ppm 15 (%)	200 ppm 15 (%)	800 ppm 49 (%)
kidney	white zone		1 (7)	0 (0)	0 (0)	0 (0)
	hydronephrosis		1 (7)	3 (20)	0 (0)	1 (2)
pituitary	red		0 (0)	1 (7)	0 (0)	1 (2)
	red zone		0 (0)	0 (0)	1 (7)	0 (0)
	nodule		0 (0)	1 (7)	1 (7)	0 (0)
adrenal	enlarged		0 (0)	0 (0)	1 (7)	0 (0)
ovary	enlarged		1 (7)	4 (27)	0 (0)	1 (2)
	nodule		1 (7)	0 (0)	1 (7)	1 (2)
	cyst		1 (7)	2 (13)	0 (0)	4 (8)
uterus	nodule		3 (20)	3 (20)	6 (40)	4 (8)
	dilated lumen		0 (0)	0 (0)	0 (0)	1 (2)
brain	red zone		0 (0)	0 (0)	1 (7)	0 (0)
mediastinum	mass		2 (13)	1 (7)	1 (7)	0 (0)
peritoneum	yellow		0 (0)	0 (0)	0 (0)	1 (2)
	nodule		1 (7)	1 (7)	0 (0)	0 (0)
	mass		0 (0)	1 (7)	0 (0)	0 (0)
abdominal c	hemorrhage		0 (0)	2 (13)	1 (7)	0 (0)
	ascites		6 (40)	4 (27)	6 (40)	2 (4)
thoracic ca	hemorrhage		1 (7)	0 (0)	0 (0)	0 (0)
	pleural fluid		10 (67)	7 (47)	8 (53)	3 (6)
other	absence		1 (7)	0 (0)	0 (0)	0 (0)
whole body	anemic		0 (0)	1 (7)	0 (0)	1 (2)

APPENDIX G 7

GROSS FINDINGS : SUMMARY, MOSUE : MALE : SACRIFICED ANIMALS

(TOW-YERA STUDY)

STUDY NO. : 0211
ANIMAL : MOUSE BDF1
REPORT TYPE : A1
SEX : MALE

GROSS FINDINGS (SUMMARY)
SACRIFICED ANIMALS (105W)

Organ	Findings	Group Name NO. of Animals	Control 38 (%)	50 ppm 42 (%)	200 ppm 41 (%)	800 ppm 0 (%)
skin/app	nodule		1 (3)	0 (0)	0 (0)	- (-)
	erosion		1 (3)	1 (2)	0 (0)	- (-)
	scab		2 (5)	0 (0)	1 (2)	- (-)
subcutis	mass		1 (3)	0 (0)	0 (0)	- (-)
lung	nodule		10 (26)	10 (24)	8 (20)	- (-)
lymph node	enlarged		3 (8)	3 (7)	3 (7)	- (-)
spleen	enlarged		2 (5)	1 (2)	1 (2)	- (-)
	black zone		2 (5)	0 (0)	1 (2)	- (-)
	nodule		0 (0)	2 (5)	2 (5)	- (-)
	accentuation of white pulp		3 (8)	1 (2)	3 (7)	- (-)
lymph vess	enlarged		0 (0)	1 (2)	0 (0)	- (-)
small intes	nodule		0 (0)	0 (0)	1 (2)	- (-)
liver	enlarged		0 (0)	1 (2)	0 (0)	- (-)
	white zone		1 (3)	0 (0)	0 (0)	- (-)
	red zone		0 (0)	1 (2)	0 (0)	- (-)
	nodule		12 (32)	18 (43)	11 (27)	- (-)
kidney	white zone		1 (3)	2 (5)	0 (0)	- (-)
	nodule		0 (0)	0 (0)	1 (2)	- (-)
	cyst		0 (0)	0 (0)	1 (2)	- (-)
	hydronephrosis		0 (0)	2 (5)	0 (0)	- (-)
urin bladd	nodule		1 (3)	0 (0)	0 (0)	- (-)
	urine:marked retention		1 (3)	0 (0)	0 (0)	- (-)

STUDY NO. : 0211
ANIMAL : MOUSE BDF1
REPORT TYPE : A1
SEX : MALE

GROSS FINDINGS (SUMMARY)
SACRIFICED ANIMALS (105W)

Organ	Findings	Group Name NO. of Animals	Control 38 (%)	50 ppm 42 (%)	200 ppm 41 (%)	800 ppm 0 (%)
pituitary	enlarged		1 (3)	0 (0)	0 (0)	- (-)
testis	atrophic		1 (3)	1 (2)	0 (0)	- (-)
epididymis	nodule		1 (3)	1 (2)	0 (0)	- (-)
eye	turbid		0 (0)	0 (0)	1 (2)	- (-)
Harder gl	nodule		0 (0)	0 (0)	1 (2)	- (-)
peritoneum	adhesion		1 (3)	0 (0)	0 (0)	- (-)
abdominal c	ascites		0 (0)	1 (2)	0 (0)	- (-)
mesenterium	nodule		1 (3)	5 (12)	0 (0)	- (-)
adipose	nodule		1 (3)	0 (0)	0 (0)	- (-)
thoracic ca	pleural fluid		0 (0)	1 (2)	0 (0)	- (-)
other	nodule		0 (0)	0 (0)	1 (2)	- (-)
	mass		0 (0)	1 (2)	0 (0)	- (-)
	tail:nodule		0 (0)	0 (0)	1 (2)	- (-)

APPENDIX G 8

GROSS FINDINGS : SUMMARY, MOSUE : FEMALE : SACRIFICED ANIMALS

(TOW-YERA STUDY)

Organ	Findings	Group Name NO. of Animals	Control 35 (%)	50 ppm 35 (%)	200 ppm 34 (%)	800 ppm 0 (%)
subcutis	mass		1 (3)	2 (6)	0 (0)	- (-)
lung	nodule		4 (11)	2 (6)	8 (24)	- (-)
lymph node	enlarged		7 (20)	4 (11)	1 (3)	- (-)
spleen	enlarged		8 (23)	2 (6)	4 (12)	- (-)
	white zone		0 (0)	1 (3)	0 (0)	- (-)
	nodule		1 (3)	0 (0)	0 (0)	- (-)
	accentuation of white pulp		2 (6)	0 (0)	0 (0)	- (-)
forestomach	nodule		0 (0)	0 (0)	1 (3)	- (-)
small intes	nodule		1 (3)	0 (0)	0 (0)	- (-)
liver	pale		1 (3)	0 (0)	0 (0)	- (-)
	white zone		1 (3)	1 (3)	0 (0)	- (-)
	red zone		5 (14)	3 (9)	4 (12)	- (-)
	nodule		9 (26)	4 (11)	3 (9)	- (-)
	cyst		0 (0)	1 (3)	0 (0)	- (-)
	rough		1 (3)	0 (0)	1 (3)	- (-)
kidney	nodule		1 (3)	0 (0)	0 (0)	- (-)
pituitary	enlarged		2 (6)	3 (9)	3 (9)	- (-)
	red zone		1 (3)	2 (6)	1 (3)	- (-)
	black zone		1 (3)	0 (0)	0 (0)	- (-)
	nodule		5 (14)	6 (17)	6 (18)	- (-)
ovary	enlarged		1 (3)	1 (3)	2 (6)	- (-)
	red		0 (0)	1 (3)	0 (0)	- (-)

STUDY NO. : 0211
ANIMAL : MOUSE BDF1
REPORT TYPE : A1
SEX : FEMALE

GROSS FINDINGS (SUMMARY)
SACRIFICED ANIMALS (105W)

Organ	Findings	Group Name NO. of Animals	Control 35 (%)	50 ppm 35 (%)	200 ppm 34 (%)	800 ppm 0 (%)
ovary	nodule		0 (0)	0 (0)	2 (6)	- (-)
	cyst		6 (17)	10 (29)	9 (26)	- (-)
uterus	nodule		7 (20)	7 (20)	4 (12)	- (-)
vagina	nodule		1 (3)	0 (0)	0 (0)	- (-)
eye	turbid		0 (0)	1 (3)	0 (0)	- (-)
	white		0 (0)	1 (3)	0 (0)	- (-)
Harder gl	nodule		0 (0)	3 (9)	0 (0)	- (-)
mediastinum	nodule		1 (3)	0 (0)	0 (0)	- (-)
abdominal c	ascites		5 (14)	1 (3)	1 (3)	- (-)
mesenterium	nodule		2 (6)	0 (0)	0 (0)	- (-)
thoracic ca	pleural fluid		1 (3)	0 (0)	1 (3)	- (-)

APPENDIX H 1

ORGAN WEIGHT, ABSOLUTE : SUMMARY, RAT : MALE

(TOW-YERA STUDY)

STUDY NO. : 0210
ANIMAL : RAT F344
REPORT TYPE : A1
SEX : MALE
UNIT: g

ORGAN WEIGHT:ABSOLUTE (SUMMARY)
SURVIVAL ANIMALS (105)

Group Name	NO. of Animals	Body Weight	ADRENALS	TESTES	HEART	LUNGS	KIDNEYS
Control	42	412± 41	0.082± 0.011	5.252± 1.946	1.352± 0.137	1.529± 0.258	2.969± 0.370
50 ppm	41	402± 37	0.086± 0.030	5.695± 2.252	1.362± 0.216	1.571± 0.348	3.041± 0.432
224 ppm	36	416± 35	0.085± 0.025	4.659± 1.464	1.355± 0.200	1.609± 0.520	3.016± 0.283
1000 ppm	41	347± 37**	0.068± 0.012**	4.473± 1.711	1.222± 0.125**	1.520± 0.256	2.692± 0.325**

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

STUDY NO. : 0210
ANIMAL : RAT F344
REPORT TYPE : A1
SEX : MALE
UNIT: g

ORGAN WEIGHT:ABSOLUTE (SUMMARY)
SURVIVAL ANIMALS (105)

Group Name	NO. of Animals	SPLEEN		LIVER		BRAIN	
Control	42	1.240±	0.469	12.656±	1.923	2.058±	0.046
50 ppm	41	1.813±	2.199	13.320±	2.339	2.066±	0.044
224 ppm	36	1.477±	1.405	13.506±	2.864	2.056±	0.040
1000 ppm	41	1.293±	1.222*	11.055±	2.298**	1.956±	0.052**

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

APPENDIX H 2

ORGAN WEIGHT, ABSOLUTE : SUMMARY, RAT : FEMALE

(TOW-YERA STUDY)

STUDY NO. : 0210
ANIMAL : RAT F344
REPORT TYPE : A1
SEX : FEMALE
UNIT: g

ORGAN WEIGHT:ABSOLUTE (SUMMARY)
SURVIVAL ANIMALS (105)

Group Name	NO. of Animals	Body Weight	ADRENALS	OVARIES	HEART	LUNGS	KIDNEYS
Control	37	284± 40	0.088± 0.039	0.127± 0.025	1.001± 0.107	1.063± 0.076	1.969± 0.200
50 ppm	37	292± 34	0.082± 0.022	0.128± 0.029	1.002± 0.123	1.078± 0.122	1.962± 0.197
224 ppm	45	280± 32	0.078± 0.017	0.138± 0.034	0.969± 0.116	1.133± 0.355	1.895± 0.198
1000 ppm	41	249± 26**	0.079± 0.015	0.161± 0.175	0.995± 0.126	1.052± 0.118	1.798± 0.115**

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

STUDY NO. : 0210
ANIMAL : RAT F344
REPORT TYPE : A1
SEX : FEMALE
UNIT: g

ORGAN WEIGHT:ABSOLUTE (SUMMARY)
SURVIVAL ANIMALS (105)

Group Name	NO. of Animals	SPLEEN	LIVER	BRAIN
Control	37	0.614± 0.292	7.545± 1.047	1.847± 0.056
50 ppm	37	0.999± 1.706	7.593± 1.231	1.851± 0.052
224 ppm	45	1.702± 3.744	7.484± 1.400	1.826± 0.055
1000 ppm	41	0.719± 0.953	6.804± 0.718**	1.767± 0.050**

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

APPENDIX H 3

ORGAN WEIGHT, ABSOLUTE : SUMMARY, MOSUE : MALE

(TOW-YERA STUDY)

STUDY NO. : 0211
ANIMAL : MOUSE BDF1
REPORT TYPE : A1
SEX : MALE
UNIT: g

ORGAN WEIGHT:ABSOLUTE (SUMMARY)
SURVIVAL ANIMALS (105)

Group Name	NO. of Animals	Body Weight	ADRENALS	TESTES	HEART	LUNGS	KIDNEYS
Control	38	43.4± 7.9	0.011± 0.004	0.206± 0.050	0.210± 0.018	0.221± 0.102	0.645± 0.046
50 ppm	42	43.8± 7.3	0.012± 0.004	0.193± 0.040	0.205± 0.023	0.207± 0.044	0.709± 0.417
200 ppm	41	41.5± 7.2	0.011± 0.005	0.190± 0.036	0.208± 0.040	0.209± 0.056	0.653± 0.216
800 ppm	0	-	-	-	-	-	-

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

STUDY NO. : 0211
ANIMAL : MOUSE BDF1
REPORT TYPE : A1
SEX : MALE
UNIT: g

ORGAN WEIGHT:ABSOLUTE (SUMMARY)
SURVIVAL ANIMALS (105)

Group Name	NO. of Animals	SPLEEN	LIVER	BRAIN
Control	38	0.120± 0.129	1.702± 0.486	0.461± 0.018
50 ppm	42	0.096± 0.082	1.836± 0.844	0.461± 0.018
200 ppm	41	0.157± 0.327	1.686± 0.492	0.456± 0.015
800 ppm	0	-	-	-

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

APPENDIX H 4

ORGAN WEIGHT, ABSOLUTE : SUMMARY, MOSUE : FEMALE

(TOW-YERA STUDY)

STUDY NO. : 0211
ANIMAL : MOUSE BDF1
REPORT TYPE : A1
SEX : FEMALE
UNIT: g

ORGAN WEIGHT:ABSOLUTE (SUMMARY)
SURVIVAL ANIMALS (105)

Group Name	NO. of Animals	Body Weight	ADRENALS	OVARIES	HEART	LUNGS	KIDNEYS
Control	35	30.5± 4.4	0.014± 0.003	0.095± 0.365	0.171± 0.023	0.196± 0.030	0.474± 0.130
50 ppm	35	30.1± 4.0	0.013± 0.003	0.084± 0.252	0.170± 0.018	0.200± 0.034	0.453± 0.038
200 ppm	34	27.9± 3.1*	0.013± 0.003	0.329± 0.916	0.163± 0.022	0.237± 0.159	0.446± 0.041
800 ppm	0	-	-	-	-	-	-

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

STUDY NO. : 0211
ANIMAL : MOUSE BDF1
REPORT TYPE : A1
SEX : FEMALE
UNIT: g

ORGAN WEIGHT:ABSOLUTE (SUMMARY)
SURVIVAL ANIMALS (105)

Group Name	NO. of Animals	SPLEEN		LIVER		BRAIN	
Control	35	0.280±	0.343	1.709±	0.581	0.483±	0.017
50 ppm	35	0.177±	0.227	1.519±	0.342	0.491±	0.039
200 ppm	34	0.203±	0.435**	1.481±	0.403	0.480±	0.020
800 ppm	0	-		-		-	

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

APPENDIX I 1

ORGAN WEIGHT, RELATIVE : SUMMARY, RAT : MALE

(TOW-YERA STUDY)

STUDY NO. : 0210
ANIMAL : RAT F344
REPORT TYPE : A1
SEX : MALE
UNIT: %

ORGAN WEIGHT:RELATIVE (SUMMARY)
SURVIVAL ANIMALS (105)

Group Name	NO. of Animals	Body Weight (g)	ADRENALS	TESTES	HEART	LUNGS	KIDNEYS
Control	42	412± 41	0.020± 0.004	1.277± 0.486	0.333± 0.061	0.378± 0.092	0.728± 0.112
50 ppm	41	402± 37	0.022± 0.008	1.423± 0.619	0.343± 0.076	0.398± 0.126	0.768± 0.170
224 ppm	36	416± 35	0.021± 0.006	1.123± 0.356	0.328± 0.054	0.387± 0.119	0.732± 0.105
1000 ppm	41	347± 37**	0.020± 0.005	1.275± 0.469	0.355± 0.039**	0.443± 0.094*	0.784± 0.120*

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

STUDY NO. : 0210
ANIMAL : RAT F344
REPORT TYPE : A1
SEX : MALE
UNIT: %

ORGAN WEIGHT:RELATIVE (SUMMARY)
SURVIVAL ANIMALS (105)

Group Name	NO. of Animals	SPLEEN	LIVER	BRAIN
Control	42	0.303± 0.125	3.087± 0.472	0.506± 0.064
50 ppm	41	0.465± 0.587	3.356± 0.777	0.518± 0.053
224 ppm	36	0.355± 0.332	3.267± 0.733	0.498± 0.041
1000 ppm	41	0.380± 0.382	3.198± 0.635	0.572± 0.075**

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

APPENDIX I 2

ORGAN WEIGHT, RELATIVE : SUMMARY, RAT : FEMALE

(TOW-YERA STUDY)

STUDY NO. : 0210
ANIMAL : RAT F344
REPORT TYPE : A1
SEX : FEMALE
UNIT: %

ORGAN WEIGHT:RELATIVE (SUMMARY)
SURVIVAL ANIMALS (105)

Group Name	NO. of Animals	Body Weight (g)	ADRENALS	OVARIES	HEART	LUNGS	KIDNEYS
Control	37	284± 40	0.032± 0.013	0.045± 0.010	0.360± 0.075	0.383± 0.075	0.715± 0.207
50 ppm	37	292± 34	0.028± 0.008	0.044± 0.010	0.348± 0.060	0.375± 0.062	0.682± 0.115
224 ppm	45	280± 32	0.028± 0.006	0.050± 0.012	0.351± 0.058	0.414± 0.167	0.686± 0.101
1000 ppm	41	249± 26**	0.032± 0.007	0.065± 0.069**	0.403± 0.067*	0.427± 0.071**	0.727± 0.073*

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

STUDY NO. : 0210
ANIMAL : RAT F344
REPORT TYPE : A1
SEX : FEMALE
UNIT: %

ORGAN WEIGHT:RELATIVE (SUMMARY)
SURVIVAL ANIMALS (105)

Group Name	NO. of Animals	SPLEEN	LIVER	BRAIN
Control	37	0.221± 0.115	2.701± 0.515	0.665± 0.119
50 ppm	37	0.355± 0.609	2.638± 0.570	0.643± 0.077
224 ppm	45	0.662± 1.587	2.709± 0.592	0.663± 0.086
1000 ppm	41	0.303± 0.443	2.748± 0.365	0.716± 0.078**

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

APPENDIX I 3

ORGAN WEIGHT, RELATIVE : SUMMARY, MOSUE : MALE

(TOW-YERA STUDY)

STUDY NO. : 0211
ANIMAL : MOUSE BDF1
REPORT TYPE : A1
SEX : MALE
UNIT: %

ORGAN WEIGHT:RELATIVE (SUMMARY)
SURVIVAL ANIMALS (105)

Group Name	NO. of Animals	Body Weight (g)	ADRENALS	TESTES	HEART	LUNGS	KIDNEYS
Control	38	43.4± 7.9	0.026± 0.011	0.484± 0.109	0.498± 0.095	0.530± 0.285	1.534± 0.314
50 ppm	42	43.8± 7.3	0.028± 0.010	0.443± 0.104	0.480± 0.095	0.484± 0.124	1.669± 1.046
200 ppm	41	41.5± 7.2	0.028± 0.012	0.469± 0.107	0.510± 0.095	0.516± 0.168	1.640± 0.857
800 ppm	0	-	-	-	-	-	-

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

STUDY NO. : 0211
ANIMAL : MOUSE BDF1
REPORT TYPE : A1
SEX : MALE
UNIT: %

ORGAN WEIGHT:RELATIVE (SUMMARY)
SURVIVAL ANIMALS (105)

Group Name	NO. of Animals	SPLEEN	LIVER	BRAIN
Control	38	0.301± 0.385	4.136± 1.989	1.100± 0.233
50 ppm	42	0.223± 0.187	4.391± 2.739	1.083± 0.202
200 ppm	41	0.385± 0.819	4.147± 1.366	1.130± 0.190
800 ppm	0	-	-	-

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

APPENDIX I 4

ORGAN WEIGHT, RELATIVE : SUMMARY, MOSUE : FEMALE

(TOW-YERA STUDY)

STUDY NO. : 0211
ANIMAL : MOUSE BDF1
REPORT TYPE : A1
SEX : FEMALE
UNIT: %

ORGAN WEIGHT:RELATIVE (SUMMARY)
SURVIVAL ANIMALS (105)

Group Name	NO. of Animals	Body Weight (g)	ADRENALS	OVARIES	HEART	LUNGS	KIDNEYS
Control	35	30.5± 4.4	0.046± 0.010	0.334± 1.300	0.569± 0.101	0.655± 0.153	1.577± 0.494
50 ppm	35	30.1± 4.0	0.043± 0.009	0.286± 0.872	0.572± 0.090	0.685± 0.221	1.529± 0.225
200 ppm	34	27.9± 3.1*	0.048± 0.011	1.118± 2.974	0.586± 0.088	0.865± 0.614*	1.609± 0.182*
800 ppm	0	-	-	-	-	-	-

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

STUDY NO. : 0211
ANIMAL : MOUSE BDF1
REPORT TYPE : A1
SEX : FEMALE
UNIT: %

ORGAN WEIGHT:RELATIVE (SUMMARY)
SURVIVAL ANIMALS (105)

Group Name	NO. of Animals	SPLEEN	LIVER	BRAIN
Control	35	0.934± 1.164	5.709± 2.331	1.609± 0.211
50 ppm	35	0.592± 0.788	5.048± 0.846	1.668± 0.350
200 ppm	34	0.718± 1.512*	5.310± 1.337	1.736± 0.193*
800 ppm	0	-	-	-

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