メタリルクロライドのラットを用いた吸入によるがん原性試験報告書

試験番号:0269

APPENDIX

APPENDIXES

APPENDIX A 1	CLINICAL OBSERVATION: SUMMARY, RAT: MALE (2-YEAR STUDY)
APPENDIX A 2	CLINICAL OBSERVATION: SUMMARY, RAT: FEMALE (2-YEAR STUDY)
APPENDIX B 1	BODY WEIGHT CHANGES: SUMMARY, RAT: MALE (2-YEAR STUDY)
APPENDIX B 2	BODY WEIGHT CHANGES: SUMMARY, RAT: FEMALE (2-YEAR STUDY)
APPENDIX C 1	FOOD CONSUMPTION CHANGES: SUMMARY, RAT: MALE (2-YEAR STUDY)
APPENDIX C 2	FOOD CONSUMPTION CHANGES: SUMMARY, RAT: FEMALE (2-YEAR STUDY)
APPENDIX D 1	HEMATOLOGY: SUMMARY, RAT: MALE (2-YEAR STUDY)
APPENDIX D 2	HEMATOLOGY: SUMMARY, RAT: FEMALE (2-YEAR STUDY)
APPENDIX E 1	BIOCHEMISTRY: SUMMARY, RAT: MALE (2-YEAR STUDY)
APPENDIX E 2	BIOCHEMISTRY: SUMMARY, RAT: FEMALE (2-YEAR STUDY)
APPENDIX F 1	URINALYSIS: SUMMARY, RAT: MALE (2-YEAR STUDY)
APPENDIX F 2	URINALYSIS: SUMMARY, RAT: FEMALE (2-YEAR STUDY)
APPENDIX G 1	GROSS FINDINGS : SUMMARY, RAT : MALE : ALL ANIMALS (2-YEAR STUDY)
APPENDIX G 2	GROSS FINDINGS : SUMMARY, RAT : MALE : DEAD AND MORIBUND ANIMALS (2-YEAR STUDY)
APPENDIX G 3	GROSS FINDINGS : SUMMARY, RAT : MALE : SACRIFICED ANIMALS (2-YEAR STUDY)
APPENDIX G 4	GROSS FINDINGS : SUMMARY, RAT : FEMALE : ALL ANIMALS (2-YEAR STUDY)
APPENDIX G 5	GROSS FINDINGS : SUMMARY, RAT : FEMALE : DEAD AND MORIBUND ANIMALS (2-YEAR STUDY)
APPENDIX G 6	GROSS FINDINGS: SUMMARY, RAT: FEMALE: SACRIFICED ANIMALS (2-YEAR STUDY)

APPENDIXES (CONTINUED)

	APPENDIX H 1	ORGAN WEIGHT, ABSOLUTE: SUMMARY, RAT: MALE (2-YEAR STUDY)
	APPENDIX H 2	ORGAN WEIGHT, ABSOLUTE: SUMMARY, RAT: FEMALE (2-YEAR STUDY)
	APPENDIX I 1	ORGAN WEIGHT, RELATIVE : SUMMARY, RAT : MALE (2-YEAR STUDY)
	APPENDIX I 2	ORGAN WEIGHT, RELATIVE : SUMMARY, RAT : FEMALE (2-YEAR STUDY)
	APPENDIX J 1	HISTOLOGICAL FINDINGS: NON-NEOPLASTIC LESIONS: SUMMARY, RAT: MALE: ALL ANIMALS (2-YEAR STUDY)
	APPENDIX J 2	HISTOLOGICAL FINDINGS : NON-NEOPLASTIC LESIONS : SUMMARY, RAT : MALE : DEAD AND MORIBUND ANIMALS (2-YEAR STUDY)
)	APPENDIX J 3	HISTOLOGICAL FINDINGS: NON-NEOPLASTIC LESIONS: SUMMARY, RAT: MALE SACRIFICED ANIMALS (2-YEAR STUDY)
	APPENDIX J 4	HISTOLOGICAL FINDINGS: NON-NEOPLASTIC LESIONS: SUMMARY, RAT: FEMALE: ALL ANIMALS (2-YEAR STUDY)
	APPENDIX J 5	HISTOLOGICAL FINDINGS: NON-NEOPLASTIC LESIONS: SUMMARY, RAT: FEMALE: DEAD AND MORIBUND ANIMALS (2-YEAR STUDY)
	APPENDIX J 6	HISTOLOGICAL FINDINGS: NON-NEOPLASTIC LESIONS: SUMMARY, RAT: FEMALE: SACRIFICED ANIMALS (2-YEAR STUDY)
	APPENDIX K 1	NUMBER OF ANIMALS WITH TUMORS AND NUMBER OF TUMORS-TIME RELATED, RAT: MALE (2-YEAR STUDY)
)	APPENDIX K 2	NUMBER OF ANIMALS WITH TUMORS AND NUMBER OF TUMORS-TIME RELATED, RAT: FEMALE (2-YEAR STUDY)
	APPENDIX L 1	HISTOLOGICAL FINDINGS : NEOPLASTIC LESIONS : SUMMARY, RAT : MALE (2-YEAR STUDY)
	APPENDIX L 2	HISTOLOGICAL FINDINGS : NEOPLASTIC LESIONS : SUMMARY, RAT : FEMALE (2-YEAR STUDY)
	APPENDIX M 1	NEOPLASTIC LESIONS-INCIDENCE AND STATISTICAL ANALYSIS, RAT : MALE (2-YEAR STUDY)
	APPENDIX M 2	NEOPLASTIC LESIONS-INCIDENCE AND STATISTICAL ANALYSIS, RAT : FEMALE ($2\mbox{-YEAR}$ STUDY)

APPENDIXES (CONTINUED)

APPENDIX N 1	$\label{eq:histological} \mbox{HISTOLOGICAL FINDINGS: METASTASIS OF TUMOR: SUMMARY, RAT: MALE: \\ \mbox{ALL ANIMALS (2-YEAR STUDY)}$
APPENDIX N 2	$\label{eq:histological} HISTOLOGICAL\ FINDINGS: METASTASIS\ OF\ TUMOR: SUMMARY,\ RAT: MALE: DEAD\ AND\ MORIBUND\ ANIMALS\ (\ 2-YEAR\ STUDY\)$
APPENDIX N 3	$\label{eq:histological} HISTOLOGICAL\ FINDINGS: METASTASIS\ OF\ TUMOR: SUMMARY,\ RAT: MALE: SACRIFICED\ ANIMALS\ (\ 2-YEAR\ STUDY\)$
APPENDIX N 4	HISTOLOGICAL FINDINGS: METASTASIS OF TUMOR: SUMMARY, RAT: FEMALE: ALL ANIMALS (2-YEAR STUDY)
APPENDIX N 5	HISTOLOGICAL FINDINGS: METASTASIS OF TUMOR: SUMMARY, RAT: FEMALE: DEAD AND MORIBUND ANIMALS (2-YEAR STUDY)
APPENDIX N 6	HISTOLOGICAL FINDINGS: METASTASIS OF TUMOR: SUMMARY, RAT: FEMALE: SACRIFICED ANIMALS (2-YEAR STUDY)
APPENDIX O 1	IDENTITY OF 2-METHALLYL CHLORIDE IN THE 2-YEAR INHALATION STUDY
APPENDIX O 2	STABILITY OF 2-METHALLYL CHLORIDE IN THE 2-YEAR INHALATION STUDY
APPENDIX P 1	CONCENTRATION OF 2-METHALLYL CHLORIDE IN THE INHALATION CHAMBER OF THE 2-YEAR INHALATION STUDY
APPENDIX P 2	ENVIRONMENTAL CONDITIONS OF INHALATION CHAMBER IN THE 2-YEAR INHALATION STUDY OF 2-METHALLYL CHLORIDE
APPENDIX Q 1	METHODS FOR HEMATOLOGY, BIOCHEMISTRY AND URINALYSIS IN THE 2-YEAR INHALATION STUDY OF 2-METHALLYL CHLORIDE
APPENDIX Q 2	UNITS AND DECIMAL PLACE FOR HEMATOLOGY AND BIOCHEMISTRY IN THE 2-YEAR INHALATION STUDY OF 2-METHALLYL CHLORIDE

APPENDIX A 1

CLINICAL OBSERVATION: SUMMARY, RAT: MALE

(2-YEAR STUDY)

STUDY NO.: 0269

CLINICAL OBSERVATION (SUMMARY) ALL ANIMALS

ANIMAL : RAT F344/DuCrj REPORT TYPE : A1 104

SEX : MALE

Clinical sign	Group Name	Admini:	stration W	eek-day _											
		1-1	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
EATH .	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	50 ppm	0	0	Ö	Ö	0	Ö	0	0	Ô	Ö	Ô	Ŏ	Ö	0
	100 ppm	0	Ö	Ö	0	0	0	Ö	Ö	Ö	Ŏ	0	Ŏ	Ö	0
	200 ppm	Ö	ō	ő	Ö	Ö	Ö	Ö	Ö	Ö	ő	Ö	Ö	Ö	0
ORIBUND SACRIFICE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	50 ppm	0	Ô	0	0	Ö	0	Ō	0	0	Ö	0	0	0	0
	100 ppm	Ô	Ö	0	Ô	Ŏ	0	Õ	Ŏ	0	Ö	0	Ô	0	0
	200 ppm	o O	ő	ő	ő	0	0	Ö	ő	0	ŏ	Ö	ő	Ö	0
OCOMOTOR MOVEMENT DECR	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	50 ppm	0	0	0	0	0	Ô	0	0	0	0	Ö	0	Ö	ō
	100 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	200 ppm	0	0	0	0	0	0	0	0	Ö	0	Ö	Ö	Ö	0
RONE	Control	0	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	0
	100 ppm	0	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
ATERAL	Control	0	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	0
	100 ppm	0	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
UNCHBACK POSITION	Control	0	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	0
	100 ppm	0	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	Ō	0	0
ARALYTIC GAIT	Control	0	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	0
	100 ppm	0	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
ASTING	Control	0	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	0
	100 ppm	0	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

CLINICAL OBSERVATION (SUMMARY)

ALL ANIMALS

ANIMAL : RAT F344/DuCrj REPORT TYPE : A1 104

STUDY NO.: 0269

SEX : MALE

Clinical sign	Group Name	Admini	stration W	eek-day											
		14-7	15-7	16-7	17-7	18-7	19-7	20-7	21-7	22-7	23-7	24-7	25-7	26-7	27-7
DEATH	Control	0	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	0
	100 ppm	0	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
ORIBUND SACRIFICE	Control	0	0	0	1	1	1	1	1	1	1	1	1	1	1
	50 ppm	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	0
	200 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
OCOMOTOR MOVEMENT DECR	Control	0	0	0	1	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	0
	100 ppm	0	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
RONE	Control	0	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	0
	100 ppm	0	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
ATERAL	Control	0	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	0
	100 ppm	0	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
UNCHBACK POSITION	Control	0	0	0	1	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	0
	100 ppm	0	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
ARALYTIC GAIT	Control	0	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	0
	100 ppm	0	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	Ō	Ö	Ö	0
ASTING	Control	0	0	1	1	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	0
	100 ppm	0	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

ANIMAL : RAT F344/DuCrj ALL

STUDY NO.: 0269 ANIMAL: RAT F344/ REPORT TYPE: A1 104

SEX : MALE

linical sign	Group Name	Admini	stration W	eek-day											
		28-7	29-7	30-7	31-7	32-7	33-7	34-7	35-7	36-7	37-7	38-7	39-7	40-7	41-7
EATH	Control	0	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	0
	100 ppm	0	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
RIBUND SACRIFICE	Control	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	50 ppm	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	0
	200 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
OCOMOTOR MOVEMENT DECR	Control	0	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	0
	100 ppm	0	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
RONE	Control	0	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	0
	100 ppm	0	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
MTERAL	Control	0	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	0
	100 ppm	0	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
JNCHBACK POSITION	Control	0	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	0
	100 ppm	0	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
ARALYTIC GAIT	Control	0	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	0
	100 ppm	0	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
STING	Control	0	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	0
	100 ppm	0	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

CLINICAL OBSERVATION (SUMMARY)

ANIMAL : RAT F344/DuCrj ALL ANIMALS

REPORT TYPE : A1 104

STUDY NO.: 0269

SEX : MALE

linical sign	Group Name	Admini	stration W	eek-day											
		42-7	43-7	44-7	45-7	46-7	47-7	48-7	49-7	50-7	51-7	52-7	53-7	54-7	55-7
EATH	Control	0	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	0
	100 ppm	0	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
RIBUND SACRIFICE	Control	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	50 ppm	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	0
	200 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
COMOTOR NOVEMENT DECR	Control	0	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	0
	100 ppm	0	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
ONE	Control	0	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	0
	100 ppm	0	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
TERAL	Control	0	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	0
	100 ppm	0	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
NCHBACK POSITION	Control	0	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	0
	100 ppm	0	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
ARALYTIC GAIT	Control	0	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	0
	100 ppm	0	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
STING	Control	0	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	0
	100 ppm	0	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

ANIMAL : RAT F344/DuCrj REPORT TYPE : A1 104

STUDY NO.: 0269

SEX : MALE

Clinical sign	Group Name	Admini	stration W	eek-day _											
		56-7	57-7	58-7	59-7	60-7	61-7	62-7	63-7	64-7	65-7	66-7	67-7	68-7	69-7
EATH	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	50 ppm	0	0	0	1	1	1	I	1	1	1	1	1	1	1
	100 ppm	0	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
RIBUND SACRIFICE	Control	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	50 ppm	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	0
	200 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
OCOMOTOR MOVEMENT DECR	Control	0	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	0
	100 ppm	0	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
ONE	Control	0	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	0
	100 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	200 ppm	0	0	0	0	0	0	0	0	Ō	0	0	Ö	Ö	Ő
ATERAL	Control	0	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	0
	100 ppm	0	0	0	0	0	0	Ö	0	Ö	Ö	Ŏ	Ö	Ö	ő
	200 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NCHBACK POSITION	Control	0	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	0
	100 ppm	. 0	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	Ö	Ö	0
ARALYTIC GAIT	Control	0	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	0
	100 ppm	0	0	0	0	0	0	Ö	Ö	0	0	Õ	0	0	0
	200 ppm	0	0	0	Ö	0	Ö	Ö	Ö	Ö	Ö	ő	Ö	Ö	0
ASTING	Control	- 0	0	0	0	0	0	0	0	0	0	0	0	0	0
	50 ppm	Ō	0	0	Ö	Ö	0	ŏ	ő	0	0	0	0	0	0
	100 ppm	0	0	Ö	Ŏ	ŏ	ŏ	Ö	0	0	0	0	0	0	0
	200 ppm	ő	Ö	Ö	0	Ö	Ő	0	0	0	0	0	0	0	0

STUDY NO.: 0269

ANIMAL : RAT F344/DuCrj REPORT TYPE : A1 104

CLINICAL OBSERVATION (SUMMARY)
ALL ANIMALS

SEX : MALE

linical sign	Group Name	Admini	istration W	eek-day											
	or war same	70-7	71-7	72-7	73-7	74-7	75-7	76-7	77-7	78-7	79-7	80-7	81-7	82-7	83-7
				,											
ATII	Control	0	1	1	1	1	1	1	1	1	1	2	2	2	2
	50 ppm	1	1	1	1	1	1	1	1	1	1	1	1	ī	1
	100 ppm	0	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	Ö	1	1
RIBUND SACRIFICE	Control	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	50 ppm	0	0	0	0	0	0	1	1	1	1	1	1	1	1
	100 ppm	0	0	0	0	0	0	0	0	0	0	0	Õ	Ō	1
	200 ppm	0	0	0	0	0	0	0	0	0	Ō	0	Ŏ	Ö	1
COMOTOR MOVEMENT DECR	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	50 ppm	0	0	0	0	0	0	1	0	0	0	0	0	0	0
	100 ppm	0	0	0	0	0	Ö	Ô	Ŏ	0	Ö	Ö	1	1	0
	200 ppm	0	0	0	0	0	Ō	0	Ö	Ö	Ö	0	Ō	0	0
ONE	Control	0	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	0
	100 ppm	0	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	Ö	Ö	Ö	0
TERAL	Control	0	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	0
	100 ppm	0	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
CHBACK POSITION	Control	0	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	0
	100 ppm	0	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
RALYTIC GAIT	Control	0	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	0
	100 ppm	0	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	Ō	0	0	0
STING	Control	0	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	Ō	Ö	ő
	100 ppm	0	0	0	0	0	0	0	0	Ô	Ö	0	Ö	0	ő
	200 ppm	0	0	0	0	0	Ö	Ŏ	0	Ö	Ö	0	o O	Ö	0

ANIMAL : RAT F344/DuCrj

REPORT TYPE : A1 104

STUDY NO.: 0269

SEX : MALE

linical sign	Group Name	Admini	stration W	eek-day _											
	The same state of the same sta	847	85-7	86-7	87-7	88-7	89-7	90-7	91-7	92-7	93-7	94-7	95-7	96-7	97-7
EATH .	Control	2	2	2	2	2	2	2	2	. 2	2	2	2	2	0
En I (i	50 ppm	1	2	2	3	3	3	3	3	3	3	3	3	3	2 5
	100 ppm	0	0	0	0	0	0	0	0	ა 0	0				
	200 ppm	1	2	3	3	3	5	5	6	6	6	1 6	1 7	2 7	2
	ZVV PPIII	1	2	3	3	3	อ	ð	0	0	б	b	′	1	8
ORIBUND SACRIFICE	Control	1	1	1	1	1	1	1	1	2	2	2	2	2	2
	50 ppm	1	1	1	1	1	2	2	2	3	3	3	3	3	3
	100 ppm	1	1	1	1	1	1	1	2	3	3	5	5	5	5
	200 ppm	1	1	1	1	1	1	1	3	3	3	3	3	3	3
OCOMOTOR MOVEMENT DECR	Control	0	0	0	0	0	0	0	0	1	0	0	0	0	0
	50 ppm	Ŏ	0	0	0	0	0	0	0	1	0	0	0	0	0
	100 ppm	0	0	0	0	0	0	0	1	1	0	0	0	0	0
	200 ppm	Ŏ	0	0	0	0	0	0	0	0	0	0	0	0	0
	200 ppm	v	Ū	·	v	v	v	v	v	V	v	V	V	V	v
RONE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	50 ppm	0	0	0	0	0	0	0	0	1	0	0	0	0	0
	100 ppm	0	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
ATERAL	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
-	50 ppm	Ö	Ö	Ö	ŏ	Ŏ	ő	Ö	ő	0	0	Ö	0	0	0
	100 ppm	Ô	0	0	0	0	0	0	1	0	0	0	0	0	0
	200 ppm	0	Ö	0	ő	ő	0	Ö	0	0	0	0	0	0	0
incipion boctaton	a	•	•				_								
IUNCHBACK POSITION	Control	0	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	0
	100 ppm	Ü	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
ARALYTIC GAIT	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	50 ppm	0	0	0	0	Ö	Ŏ	Ö	Ö	Ŏ	0	0	0	0	0
	100 ppm	0	0	Ö	0	ő	0	0	0	0	0	0	0	ő	0
	200 ppm	Ö	Ŏ	1	1	1	1	1	0	0	0	0	0	0	0
											•	-	-	-	•
ASTING	Control	0	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	0
	100 ppm	0	0	0	0	0	0	0	0	0	0	0	0 -	0	0
	200 ppm	0	0	0	0	1	1	1	1	1	1	1	1	1	1

STUDY NO. : 0269

ANIMAL : RAT F344/DuCrj

REPORT TYPE : A1 104

CLINICAL OBSERVATION (SUMMARY)
ALL ANIMALS

SEX : MALE

Clinical sign	Group Name	Admini	stration	Week-day				
		98-7	99-7	100-7	101-7	102-7	103-7	104-7
<u> </u>						·		
DEATH	Control	2	3	4	4	5	5	6
	50 ppm	5	6	8	8	8	9	9
	100 ppm	2	3	4	4	7	8	8
		9	10	11	12	13	14	
	200 ppm	9	10	11	12	13	14	15
MORIBUND SACRIFICE	Control	3	3	4	4	4	5	5
	50 ppm	3	4	4	4	4	5	6
	100 ppm	5	5	5	5	6	8	9
	200 ppm	3	3	4	5	5	5	5
1 OCOMOTOD MOMENTANT DECR	Ct1	4	0	,	•	0		•
LOCOMOTOR MOVEMENT DECR	Control	1	0	1	0	0	1	0
	50 ppm	0	1	0	0	0	1	1
	100 ppm	0	0	0	0	0	2	0
	200 ppm	0	0	0	1	0	0	0
PRONE	Control	0	0	0	0	0	0	0
• 1101-12	50 ppm	0	0	0	0	0	0	0
				-				
	100 ppm	0	0	0	0	0	0	0
	200 ppm	0	0	0	0	0	0	0
LATERAL	Control	0	0	0	0	0	0	0
	50 ppm	0	Ö	0	Ö	0	0	0
	100 ppm	0	0	0	0	0	0	0
	200 ppm	0	0	0	0	0	0	0
	ZVV PPIII	V	V	V	v	U	V	U
HUNCHBACK POSITION	Control	0	0	0	0	0	0	0
	50 ppm	0	0	0	0	0	0	0
	100 ppm	0	0	0	0	0	0	0
	200 ppm	Ō	0	0	Ō	0	Ö	0
PARALYTIC GAIT	Control	0	1	1	1	۸	۸	٨
I MADITIO GATI			1	1	1	0	0	0
	50 ppm	0	0	0	0	0	0	0
	100 ppm	0	0	0	0	0	0	0
	200 ppm	0	0	0	1	0	0	0
WASTING	Control	0	0	0	0	0	1	0
	50 ppm	0	0	0	0	0	0	0
	100 ppm	0	0	0				
					0	1	0	0
	200 ppm	1	1	1	2	1	1	1

STUDY NO.: 0269

ANIMAL : RAT F344/DuCrj REPORT TYPE : A1 104

CLINICAL OBSERVATION (SUMMARY) ALL ANIMALS

SEX : MALE

Clinical sign	Group Name	Admini	stration We	ek-day											
		1-1	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
OILED	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	50 ppm	0	0	0	0	0	0	0	0	0	Ó	0	0	0	0
	100 ppm	0	0	0	0	0	0	0	0	0	0	0	Ů.	0	ő
	200 ppm	0	0	0	0	0	0	0	0	0	0	0	Ö	Ō	0
LOERECTION	Control	0	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	0
	100 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	200 ppm	0	0	0	0	0	0	0	0	0	ō	0	Ö	Ö	Ö
ROG BELLY	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	50 ppm	0	0	0	0	0	0	0	Ō	0	0	Ŏ	Ö	0	0
	100 ppm	0	Ŏ	Ö	Ö	0	Õ	0	Ö	Ö	Ö	Ö	Ö	0	0
	200 ppm	0	Ö	Ō	Ö	Ö	0	0	0	Ö	ŏ	ő	Ö	Ö	0
DILED PERI GENITALIA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	50 ppm	0	0	0	0	0	0	0	0	Ō	Ô	0	0	0	ő
	100 ppm	0	0	0	0	0	0	0	0	0	Ö	0	0	0	0
	200 ppm	Ö	0	0	0	Ö	0	Ö	Ö	Ö	Ö	Ö	0	0	0
COPHTHALMOS	Control	0	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	0
	100 ppm	0	0	0	0	Ö	0	0	0	0	0	ŏ	0	0	ő
	200 ppm	0	0	0	0	Ö	0	0	0 -	Ö	ő	Ö	0	Ö	0
YE OPACITY	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	50 ppm	0	0	0	0	0	Ö	0	Ŏ	Ö	0	Ö	Ö	Ö	0
	100 ppm	0	0	0	0	Ö	Ö	0	0	Ö	Ö	Ö	Ö	0	0
	200 ppm	0	Ŏ	0	0	Ö	0	Ö	ő	Ö	Ö	Ö	0	0	0
NTARACT	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	50 ppm	0	0	0	0	0	0	0	0	Õ	0	0	0	0	Ö
	100 ppm	0	Ö	0	Ö	Ö	ŏ	Ö	Ö	0	Ŏ	0	0	0	0
	200 ppm	ő	ő	ő	ő	ŏ	ő	0	0	0	0	0	0	Ö	0
DRNEAL OPACITY	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	50 ppm	Ö	Ö	0	Ŏ	0	Ö	0	0	0	0	0	0	0	0
	100 ppm	Ö	Ö	Ö	0	0	0	0	0	0	0	0	0	0	0
	200 ppm	Ö	Ů	0	0	0	0	0	0	0	0	0	0	0	0

ANIMAL : RAT F344/DuCrj

REPORT TYPE : A1 104

STUDY NO. : 0269

SEX: MALE

Clinical sign	Group Name	Admini	stration W	eek-day											
		14-7	15-7	16-7	17-7	18-7	19-7	20-7	21-7	22-7	23-7	24-7	25-7	26-7	27-7
OILED	Contral	0	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	0
	100 ppm	0	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
LOERECTION	Control	0	0	1	1	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	0
	100 ppm	0	0	0	0	0	0	0	0	0	. 0	0	0	0	0
	200 ppm	0	0	0	0	0	0	0	0	Ō	0	0	0	0	Ö
ROG BELLY	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	50 ppm	0	0	0	0	0	0	0	0	0	Ö	0	0	Ö	0
	100 ppm	0	0	0	0	0	0	0	Ó	0	Ö	0	0	0	0
	200 ppm	0	0	0	0	0	0	0	Ō	0	Ō	Ö	Ö	Ö	0
DILED PERI GENITALIA	Control	0	0	0	1	0	0	0	0	0	0	0	0	0	0
	50 ppm	0	0	0	0	0	0	0	0	Ō	Ô	Õ	0	Ô	0
	100 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	200 ppm	0	0	0	0	Ö	Ö	0	Ö	0	0	Ö	Ö	Ö	0
XOPHTHALMOS	Control	0	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	0
	100 ppm	0	0	0	0	0	0	0	0	0	0	0	Ö	Ŏ	0
	200 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
YE OPACITY	Control	0	0	0	0	0	0	0	0	0	0	1	1	0	0
	50 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	100 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	200 ppm	0	0	0	0	0	0	0	ō	0	Ô	0	0	Ô	0
ATARACT	Control	0	0	. 0	0	0	0	0	0	0	0	0	0	0	0
	50 ppm	0	0	0	0	0	0	0	0	Ō	0	Ô	0	0	0
	100 ppm	1	1	1	1	i	1	1	1	1	1	1	1	1	1
	200 ppm	0	0	ō	ō	õ	ō	Ō	Õ	ō	Ô	0	0	Ō	0
ORNEAL OPACITY	Control	0	0	0	0	0	0	0	0	0	0	1	1	0	0
	50 ppm	0	0	0	0	0	0	0	0	Ö	Ö	Ô	Ô	0	0
	100 ppm	0	0	0	0	0	Ŏ	0	0	0	ő	Ö	ő	0	0
	200 ppm	0	0	Ö	Ö	0	0	Ö	0	0	0	Õ	Ő	0	0

(HAN190)

STUDY NO. : 0269 ANIMAL : RAT F344/DuCrj

REPORT TYPE : A1 104

SEX : MALE

linical sign	Group Name	Admini	stration We	ek-day											
		28-7	29-7	30-7	31-7	32-7	33-7	34-7	35-7	36-7	37-7	38-7	39-7	40-7	41-7
ILED	Contral	0	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	0
	100 ppm	0	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
OERECTION	Control	0	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	0
	100 ppm	0	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
OG BELLY	Control	0	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	0
	100 ppm	0	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
LED PERI GENITALIA	Control	0	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	0
	100 ppm	0	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
OPHTHALMOS	Control	0	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	0
	100 ppm	0	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
E OPACITY	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	50 ppm	0	0	0	0	0	0	0	Ö	Õ	Ŏ	0	Ŏ	Ö	0
	100 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	200 ppm	0	0	0	0	0	0	0	0	0	0	ō	Ô	Õ	0
TARACT	Control	0	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	Ö
	100 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	200 ppm	0	0	0	0	0	0	0	Õ	0	ō	ô	ō	0	0
RNEAL OPACITY	Control	0	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	Ō	0	Ö
	100 ppm	0	0	0	0	0	0	0	0	0	0	0	Ö	0	0
	200 ppm	0	0	0	0	0	0	Ö	Ö	Ö	0	Ö	0	0	0

STUDY NO.: 0269

ANIMAL : RAT F344/DuCrj REPORT TYPE : A1 104 CLINICAL OBSERVATION (SUMMARY)
ALL ANIMALS

SEX : MALE

Clinical sign	Group Name	Admini	stration W	eek-day											
		42-7	43-7	44-7	45-7	46-7	477	48-7	49-7	50-7	51-7	52-7	53-7	54-7	55-7
													• • •		
OILED	Control	0	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	0
	100 ppm	0	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
LOERECTION	Control	0	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	0
	100 ppm	0	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	Ö	Ö	0
ROG BELLY	Control	0	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	Ō	0
	100 ppm	0	0	0	0	0	0	0	0	0	Ö	Ŏ	0	ő	0
	200 ppm	0	0	0	0	0	0	0	Ō	Ö	0	0	Ö	0	0
DILED PERI GENITALIA	Control	0	0	0	0	Ö	0	0	0	0	0	0	0	0	0
	50 ppm	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	0
	200 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
XOPHTHALMOS	Control	0	0	0	0	0	0	0	0	0	0	0	1	1	1
	50 ppm	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	0
	200 ppm	0	0	0	0	0	0	0	0	0	0	0	. 0	0	0
YE OPACITY	Control	0	0	0	0	0	0	0	0	0	0	0	1	1	1
	50 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	100 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	200 ppm	0	0	0	0	0	0	0	0	0	ō	ō	0	Ô	. 0
ATARACT	Control	0	0	0	0	0	0	0	0	0	0	0	1	1	1
	50 ppm	0	0	0	0	0	0	0	0	0	0	0	Ô	0	0
	100 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	200 ppm	0	0	0	0	0	ō	ō	Ō	Ô	Ô	Ō	0	0	0
ORNEAL OPACITY	Control	0	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	Ö	0
	100 ppm	0	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	Ŏ	0	0	0

STUDY NO.: 0269

REPORT TYPE: A1 104

ANIMAL : RAT F344/DuCrj

CLINICAL OBSERVATION (SUMMARY)
ALL ANIMALS

SEX : MALE

Clinical sign	Group Name	Admini	stration W	ek-day											
		56-7	57-7	58-7	59-7	60-7	61-7	62-7	63-7	64-7	65-7	66-7	67-7	68-7	69-7
OILED	Control	0	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	0
	100 ppm	0	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
ILOERECTION	Control	0	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	0
	100 ppm	0	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
ROG BELLY	Control	0	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	0
	100 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	Ŏ
	200 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
OILED PERI GENITALIA	Control	0	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	0
	100 ppm	0	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	Ō	0
XOPHTHALMOS	Control	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	50 ppm	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	Ö	0	0	0
	200 ppm	0	0	0	0	0	0	0	0	0	0	0	0	Ö	0
YE OPACITY	Control	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	50 ppm	0	0	1	1	1	1	1	1	1	1	1	1	ī	ī
	100 ppm	1	1	1	1	1	1	1	1	1	1	1	ī	ī	1
	200 ppm	0	0	0	0	0	0	0	0	0	Ō	0	Ô	Ō	0
ATARACT	Control	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	50 ppm	0	0	1	1	1	1	1	1	1	1	î	1	1	1
	100 ppm	1	1	1	1	1	1	ī	1	1	î	1	1	1	1
	200 ppm	0	0	0	ō	ō	Ō	Ō	Ō	Ō	0	0	0	Ô	ō
ORNEAL OPACITY	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	50 ppm	0	0	0	0	0	0	0	0	Ö	ő	Ô	Ö	0	0
	100 ppm	0	0	0	0	0	0	Õ	0	Ŏ	Ö	0	0	0	Ö
	200 ppm	0	0	0	Ö	Ö	Ö	0	Ô	Ö	0	0	0	0	0

ANIMAL : RAT F344/DuCrj

REPORT TYPE : A1 104

STUDY NO.: 0269

SEX : MALE

Clinical sign	Group Name	Admini	stration W	eek-day											
		70-7	71-7	72-7	73-7	74-7	75-7	76-7	77-7	78-7	79-7	80-7	81-7	82-7	83-7
AH ED	Control	0	0	^	٥	•	0	^	^	^	٥	0	٥	٥	^
OILED	Control	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	0
	100 ppm	0	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
LOERECTION	Control	0	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	0
	100 ppm	0	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
ROG BELLY	Control	0	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	0
	100 ppm	0	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
DILED PERI GENITALIA	Control	0	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	0
	100 ppm	0	0	0	0	0	0	0	0	0	0	0	1	1	0
	200 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
XOPHTHALMOS	Control	1	1	1	1	1	1	1	1	1	1	0	0	0	0
	50 ppm	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	0
	200 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
YE OPACITY	Control	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	50 ppm	1	1	1	1	ī	1	1	1	î	ī	1	î	î	ī
	100 ppm	1	1	1	1	1	1	1	1	ĩ	1	1	î	1	1
	200 ppm	0	0	0	0	ō	ō	0	ō	Ô	ō	Ô	Ô	Ô	0
ATARACT	Control	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	50 ppm	1	1	ī	1	1	î	ī	1	î	î	1	1	î	1
	100 ppm	1	1	1	1	1	1	1	î	î	1	î	1	1	1
	200 ppm	ô	Ô	Ō	Ô	Ô	Ō	Ô	ō	Ō	Ô	0	0	0	Ô
ORNEAL OPACITY	Contral	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	50 ppm	Ö	Õ	0	Ö	0	0	Ö	Ö	Ö	0	0	0	0	0
	100 ppm	Ō	Ō	Ö	ō	Ö	Ö	Ŏ	Ö	0	Ô	ő	ő	0	0
	200 ppm	Ö	Õ	Ö	ő	0	0	0	0	0	0	0	0	0	0

STUDY NO. : 0269

ANIMAL : RAT F344/DuCrj

REPORT TYPE: A1 104

CLINICAL OBSERVATION (SUMMARY)
ALL ANIMALS

SEX : MALE

a 11														
Group Name				07.7		00.7	00.5	01.5	^^ =				~~ =	
	84-7	85~7	86-7	87-7	88-7	89-7 	90-7	91-7	92-7	93-7	94-7	95-7	96-7	97-7
			•									_		
	•	-	-		-					•	-			0
	=	•						_	_	-			-	0
										-				0
200 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Control	0	0	0	0	0	0	0	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	0	0
200 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Control	0	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	0
100 ppm	0	0	0	0	1	1	1	1	1	1	0	0	0	0
200 ppm	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Control	0	0	0	0	0	0	0	0	1	0	0	0	0	0
50 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
100 ppm	0	0	0	0	0	0	0	1	1	1	0	0	0	0
200 ppm	0	0	0	0	1	1	0	0	0	0	0	0	0	0
Control	0	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	0
100 ppm	0	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	Ō
Control	1	1	1	1	1	1	1	1	1	1	1	1	1	1
50 ppm	1	1	1	1	1		1		1	1	ĩ	1	î	î
	1	1	1	1								_	ī	1
200 ppm	0	0	0	0	Õ	0	Ō	ō	Ô	0	Ô	0	Ô	0
Control	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	_	1					_	-				1	1	1
												-	1	1
200 ppm	0	Ô	0	0	0	0	0	0	0	0	0	0	0	0
Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	-		-						•	-			0
	Õ	-						_		•	-	-		
200 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Control 50 ppm 100 ppm 200 ppm 200 ppm Control 50 ppm 100 ppm Control 50 ppm 100 ppm Control 50 ppm 100 ppm	Cantrol 0 50 ppm 0 100 ppm 0 200 ppm 200 ppm 200 ppm	S4-7 S5-7	S4-7 S5-7 S6-7	S4-7 S5-7 S6-7 S7-7	S4-7 S5-7 S6-7 S7-7 S8-7	S4-7 S5-7 S6-7 S7-7 S8-7 S9-7	S4-7 S5-7 S6-7 S7-7 S8-7 S8-7 S9-7 S9-7	Cantrol 0	S4-7 S5-7 S6-7 S7-7 S8-7 S9-7 S9-7 S1-7 S2-7	S4-7 S5-7 S6-7 S7-7 S8-7 S8-7 S9-7 S9-7	Control 0	S4-7 S5-7 S6-7 S8-7 S8-7 S8-7 S8-7 S9-7 S1-7 S2-7 S3-7 S4-7 S5-7 S5-7	S4-7 S5-7 S6-7 S8-7 S8-7 S8-7 S8-7 S9-7 S9-7 S2-7 S2-7 S2-7 S2-7 S2-7 S3-7 S4-7 S5-7 S9-7 S9-7

STUDY NO.: 0269

ANIMAL : RAT F344/DuCrj

REPORT TYPE: A1 104

CLINICAL OBSERVATION (SUMMARY)
ALL ANIMALS

SEX : MALE

Clinical sign	Group Name	Admini	stration	Week-day _				
-		98-7	99-7	100-7	101-7	102-7	103-7	104-7
SOILED	Control	2	0	0	0	0	0	0
	50 ppm	0	1	0	0	0	0	Ö
	100 ppm	Ö	0	ŏ	Ö	0	Ö	ő
	200 ppm	ő	0	0	Ö	0	0	0
		Ť	•	•	•	·	·	·
PILOERECTION	Control	0	0	0	0	0	0	0
	50 ppm	0	0	0	0	0	0	0
	100 ppm	0	0	0	0	0	0	0
	200 ppm	1	1	2	1	1	1	1
	,,					•	-	-
FROG BELLY	Control	0	0	0	0	0	0	0
	50 ppm	0	0	0	0	0	0	0
	100 ppm	0	0	0	0	0	0	0
	200 ppm	0	0	0	0	1	1	1
	•••					_	_	_
SOILED PERI GENITALIA	Control	0	0	0	0	0	0	0
	50 ppm	0	0	0	0	0	Ö	1
	100 ppm	0	0	0	1	0	1	ō
	200 ppm	ŏ	0	1	0	0	0	0
	m x x (r)rm	ŭ	•	•	·	v	v	v
EXOPHTHALMOS	Control	0	0	0	0	0	0	0
	50 ppm	0	0	0	0	0	0	0
	100 ppm	0	0	0	0	0	0	0
	200 ppm	0	0	0	0	0	0	0
							•	
EYE OPACITY	Control	1	2	2	2	1	1	1
	50 ppm	1	1	1	1	Ī	1	1
	100 ppm	1	1	1	1	2	2	1
	200 ppm	0	0	0	0	1	0	0
CATARACT	Control	1	1	1	1	1	1	1
	50 ppm	1	1	1	1	1	1	1
	100 ppm	1	1	1	1	1	1	1
	200 ppm	0	0	0	Ō	0	Õ	ō
CORNEAL OPACITY	Control	0	0	0	0	0	0	0
	50 ppm	0	0	0	0	0	Ō	0
	100 ppm	0	0	0	0	0	0	0
	200 ppm	0	0	0	0	i	Ö	0
	• • • • •					_	-	-

STUDY NO.: 0269

ANIMAL : RAT F344/DuCrj

REPORT TYPE : A1 104

SEX : MALE

linical sign	Group Name	Admini	stration W	ek-day _								<u>. </u>			
		1-1	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
KTERNAL MASS	Control	0	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	0
	100 ppm	0	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
TERNAL MASS	Control	0	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	0
	100 ppm	0	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
NOSE	Control	0	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	0
	100 ppm	0	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
EYE	Control	0	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	0
	100 ppm	0	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
PERI MOUTH	Control	0	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	0
	100 ppm	0	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
MANDIBULAR	Control	0	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	0
	100 ppm	0	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
EAR	Control	0	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	0
	100 ppm	0	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
PERI EAR	Control	0	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	0
	100 ppm	0	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

STUDY NO. : 0269

ANIMAL : RAT F344/DuCrj

REPORT TYPE : A1 104

SEX : MALE

PAGE: 18

Clinical sign	Group Name	Admini	istration W	leek-day											*
		14-7	15-7	16-7	17-7	18-7	19-7	20-7	21-7	22-7	23-7	24-7	25-7	26-7	27-7
XTERNAL MASS	Control	0	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	1	1
	100 ppm	0	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
NTERNAL MASS	Control	0	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	0
	100 ppm	0	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
1.NOSE	Control	0	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	0
	100 ppm	0	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
I.EYE	Control	0	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	0
	100 ppm	0	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
1.PERI MOUTH	Contral.	0	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	0
	100 ppm	0	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
M.MANDIBULAR	Control	0	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	0
	100 ppm	0	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
M.EAR	Control	0	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	0
	100 ppm	0	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
M.PERI EAR	Control	0	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	0
	100 ppm	0	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

(HAN190)

STUDY NO. : 0269

ANIMAL : RAT F344/DuCrj

REPORT TYPE : A1 104

CLINICAL OBSERVATION (SUMMARY)
ALL ANIMALS

SEX : MALE

linical sign	Group Name	Admini	stration W	eek-day											
		28-7	29-7	30-7	31-7	32-7	33-7	34-7	35-7	36-7	37-7	38-7	39-7	40-7	41-7
TERNAL MASS	Control	0	0	0	0	0	0	0	0	0	0	0	0	1	2
	50 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	100 ppm	0	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
ERNAL MASS	Contral	0	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	0
	100 ppm	0	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
IOSE	Control	0	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	0
	100 ppm	0	0	0	0	0	0	0	0	0	0	0	0	Ô	0
	200 ppm	0	0	0	0	0	0	0	0	0	Ö	0	Ö	Ö	0
YE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	50 ppm	0	0	0	0	0	0	0	Ö	Ō	Ô	Ô	0	0	0
	100 ppm	0	0	0	0	Ō	0	0	Ô	0	0	Ö	Ö	Ö	0
	200 ppm	Ö	0	Ö	Ö	Ö	Ö	Ö	Ö	Ö	0	Ö	0	0	0
PERI MOUTH	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	50 ppm	0	0	0	0	0	0	0	0	0	0	Ŏ	Ö	Ö	Ô
	100 ppm	0	0	0	0	0	0	0	ŏ	ŏ	Ö	Ö	0	0	Ö
	200 ppm	ő	Ö	Ö	Ö	0	Ö	0	Ö	0	Ö	ő	0	0	0
ANDIBULAR	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	50 ppm	0	0	0	0	Ö	Ö	0	0	0	0	0	0	0	0
	100 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	200 ppm	ŏ	Ö	Ö	Ö	Ö	0	0	ő	0	0	0	0	0	0
EAR	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	50 ppm	0	Ö	0	Ö	Ŏ	ő	0	0	0	0	0	0	0	0
	100 ppm	Ö	0	Ö	0	Ő	0	0	0	0	0	0	0	0	0
	200 ppm	ő	ő	Ŏ	0	0	0	0	0	0	0	0	0	0	0
ERI EAR	Control	0	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	0
	100 ppm	o o	0	0	0	Ŏ	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
	FOO PPIII	v	v	v	v	v	v	v	v	V	U	v	V	U	U

STUDY NO. : 0269

ANIMAL : RAT F344/DuCrj REPORT TYPE : A1 104 CLINICAL OBSERVATION (SUMMARY) ALL ANIMALS

SEX : MALE

Clinical sign	Group Name	Admini	stration W	eek-day											
_		42-7	43-7	44-7	45-7	46-7	47-7	48-7	49-7	50-7	51-7	52-7	53-7	54-7	55-7
EXTERNAL MASS	Control	1	1	1	2	2	2	1	1	2	2	2	1	1	1
	50 ppm	1	1	1	2	2	2	2	2	2	2	2	2	2	2
	100 ppm	0	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
NTERNAL MASS	Control	0	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	0
	100 ppm	0	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
.NOSE	Control	0	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	0
	100 ppm	0	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
.EYE	Contral	0	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	0
	100 ppm	0	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
.PERI MOUTH	Control	0	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	0
	100 ppm	0	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
.MANDIBULAR	Control	0	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	0
	100 ppm	0	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
.EAR	Control	0	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	0
	100 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	Ö
	200 ppm	0	0	0	0	0	0	Ö	Ŏ	Ö	Ö	ő	Ö	ő	0
.PERI EAR	Control	0	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	0
	100 ppm	0	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

ANIMAL : RAT F344/DuCrj

REPORT TYPE : A1 104

STUDY NO.: 0269

SEX : MALE

Clinical sign	Group Name	Admin	istration W	eek-day											
		56-7	57-7	58-7	59-7	60-7	61-7	62-7	63-7	64-7	65-7	66-7	67-7	68-7	69-7
VTEDNIL NICC	Control	•	,	,	,	,	0	0	0		,	0	0	0	0
EXTERNAL MASS	Control	1	1	1	1	1	2	2	2	2	1	2	2	2	2
	50 ppm	2	3	3	2	2	2	2	1	2	2	2	2	2	2
	100 ppm	0	0	0	0	0	1	1	1	1	0	0	0	0	0
	200 ppm	0	1	1	1	1	1	1	1	1	1	1	1	1	1
NTERNAL MASS	Control	0	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	0
	100 ppm	0	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
M.NOSE	Control	0	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	0
	100 ppm	0	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
M.EYE	Control	0	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	0
	100 ppm	0	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
M.PERI MOUTH	Control	0	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	0
	100 ppm	0	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
M.MANDIBULAR	Control	0	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	0
	100 ppm	0	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
M.EAR	Control	0	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	0
	100 ppm	0	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
M.PERI EAR	Contral	0	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	0
	100 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	200 ppm	0	Ô	0	Ö	0	0	0	0	Ô	Ô	Ö	Ö	0	0

STUDY NO.: 0269 ANIMAL: RAT F344/DuCrj

REPORT TYPE : A1 104

CLINICAL OBSERVATION (SUMMARY) ALL ANIMALS

SEX : MALE

Clinical sign	Group Name	Admini	stration W	eek-day											
		70-7	71-7	72-7	73-7	74-7	75-7	76-7	77-7	78-7	79-7	80-7	81-7	82-7	83-7
XTERNAL MASS	Control	2	2	2	2	2	2	2	2	2	3	2	2	2	2
	50 ppm	2	2	2	2	2	2	2	1	1	1	1	1	1	1
	100 ppm	0	0	0	1	1	1	2	2	2	2	2	2	2	3
	200 ppm	1	1	1	1	1	1	2	2	2	3	3	3	4	4
ITERNAL MASS	Control	0	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	0
	100 ppm	0	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	2	2
.NOSE	Control	0	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	0
	100 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	200 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	Õ
.EYE	Control	0	0	0	0	0	0	0	0	0	0	1	1	1	1
	50 ppm	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	0
	200 ppm	0	0	0	0	0	0	0	0	0	0	0	0	Ö	Ö
.PERI MOUTH	Control	0	0	0	0	0	0	0	0	0	1	0	0	0	0
	50 ppm	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	Ö
	200 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	Ō
.MANDIBULAR	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	mqq 03	0	0	0	0	0	0	0	0	0	0	Ô	0	Õ	0
	100 ppm	0	0	0	0	0	0	Ŏ	Ö	Ö	Ö	Ô	Ŏ	0	ő
	200 ppm	0	0	0	0	Ō	Ö	1	1	1	1	1	1	1	1
.EAR	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	50 ppm	0	0	Ô	0	0	0	Ō	0	Ö	Ö	0	Ő	0	0
	100 ppm	0	Ô	Ö	1	1	1	1	1	1	1	1	1	1	1
	200 ppm	Ö	ő	ő	Ô	Ō	ō	Ô	0	Ô	0	0	0	0	0
.PERI EAR	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	50 ppm	0	0	0	0	0	0	Ō	Ö	0	0	0	0	0	0
	100 ppm	Ō	0	Ö	0	Ŏ	Ö	Ö	ő	Ö	0	0	0	0	0
	200 ppm	0	0	Ŏ	Ö	Ŏ	Ö	0	0	0	1	1	1	1	0

STUDY NO.: 0269

ANIMAL : RAT F344/DuCrj

REPORT TYPE : A1 104

CLINICAL OBSERVATION (SUMMARY)
ALL ANIMALS

SEX : MALE

Clinical sign	Group Name	Admini	istration W	ek-day											
		84-7	85-7	86-7	87-7	88-7	89-7	90-7	91-7	92-7	93-7	94-7	95-7	96-7	97-7
EXTERNAL MASS	Contral	2	2	2	2	1	1	1	1	1	1	1	2	2	2
	50 ppm	1	2	2	1	1	1	1	2	3	4	4	4	4	2
	100 ppm	3	4	5	6	6	6	6	7	8	7	6	6	6	7
	200 ppm	4	4	4	4	5	5	6	6	6	7	7	7	7	8
NTERNAL MASS	Control	0	0	0	0	0	0	0	1	1	0	0	0	0	0
	50 ppm	0	0	0	0	0	1	0	0	0	0	0	0	0	0
	100 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	200 ppm	2	2	2	2	2	2	2	1	1	1	2	2	2	2
1.NOSE	Control	0	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	0
	100 ppm	1	1	1	1	0	0	0	0	0	0	1	1	1	1
	200 ppm	0	0	0	0	0	0	1	1	1	1	1	1	1	1
.EYE	Control	1	1	1	1	0	0	0	0	0	0	0	0	0	0
	50 ppm	0	0	0	0	0	0	0	0	0	0	Ō	Ö	Ö	Ŏ
	100 ppm	0	0	0	0	1	1	1	1	1	1	1	1	1	1
	200 ppm	0	0	0	0	0	0	0	0	0	0	Õ	Ō	Õ	Ô
.PERI MOUTH	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	50 ppm	0	0	0	0	0	0	0	0	0	1	1	1	0	0
	100 ppm	0	0	0	0	0	0	0	0	0	0	0	Ô	0	0
	200 ppm	0	0	0	0	1	1	1	1	1	1	1	1	1	1
.MANDIBULAR	Control	0	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	Ö	Ö
	100 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	Ö
	200 ppm	1	1	1.	1	1	1	1	1	1	1	1	0	Ö	0
I.EAR	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	50 ppm	0	0	0	0	0	0	0	0	0	Ö	Ö	0	0	0
	100 ppm	1	i	1	1	1	1	1	1	1	1	1	1	1	1
	200 ppm	0	0	ō	Ō	ō	Ô	Ô	Ō	Ô	0	0	0	0	0
.PERI EAR	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	50 ppm	0	0	0	Ö	0	ŏ	0	0	0	0	0	0	0	0
	100 ppm	0	0	1	1	1	1	1	1	2	2	1	1	1	1
	200 ppm	Ö	Ö	Ô	0	0	Ô	0	0	0	0	0	0	0	0
		•	•	·	•	v	v	v	v	v	V	V	v	v	V

STUDY NO.: 0269

ANIMAL : RAT F344/DuCrj

REPORT TYPE: A1 104

SEX : MALE

Clinical sign Group Name Administration Week-day 98-7 99-7 101-7 102-7 103-7 104-7 100-7 EXTERNAL MASS Control 50 ppm 100 ppm 200 ppm INTERNAL MASS Control 50 ppm 100 ppm 200 ppm M.NOSE Control 50 ppm 100 ppm 200 ppm M.EYE Control 50 ppm 100 ppm 200 ppm M.PERI MOUTH Control 50 ppm 100 ppm 200 ppm M.MANDIBULAR Control 50 ppm 100 ppm 200 ppm M.EAR Control 50 ppm 100 ppm 200 ppm M.PERI EAR Control

(HAN190)

50 ppm

100 ppm

200 ppm

CLINICAL OBSERVATION (SUMMARY)

ANIMAL : RAT F344/DuCrj ALL ANIMALS

REPORT TYPE : A1 104

STUDY NO.: 0269

SEX : MALE

Clinical sign	Group Name	Admini:	stration W	eek-day											
		1-1	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
I.NECK	Control	0	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	0
	100 ppm	0	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
1.BREAST	Control	0	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	0
	100 ppm	0	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
M. ABDOMEN	Control	0	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	0
	100 ppm	0	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
1.ANTERIOR.DORSUM	Control	0	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	0
	100 ppm	0	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
M.POSTERIOR DORSUM	Control	0	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	0
	100 ppm	0	0	0	0	0	0	0	Ó	0	0	0	0	0	Ō
	200 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M.HINDLIMB	Control	0	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	0
	100 ppm	0	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	Ŏ	Ö
M.GENITALIA	Control	0	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	Ŏ	0	0
	100 ppm	0	0	Ö	0	0	Ö	Ŏ	Ö	0	0	0	0	0	0
	200 ppm	Ö	Ö	Ö	Ö	Ö	ŏ	ő	ŏ	ő	ő	ő	Ö	ő	Ö
M.SCROTUM	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	50 ppm	ō	0	0	Ö	Ö	Ö	0	Ö	0	0	0	0	0	0
	100 ppm	Ö	0	0	0	0	ő	ŏ	0	Ö	0	0	0	0	0
	200 ppm	ő	Ö	ő	0	0	Ŏ	0	0	Ö	ő	0	0	0	0

STUDY NO.: 0269

ANIMAL : RAT F344/DuCrj

REPORT TYPE : A1 104

SEX : MALE

linical sign	Group Name	AUMITTI	stration W	eer-uay											
		14-7	15-7	16-7	17-7	18-7	19–7	20-7	21-7	22-7	23-7	24-7	25-7	26-7	27-7
. NECK	Control	0	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	0
	100 ppm	0	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
BREAST	Control	0	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	0
	100 ppm	0	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
ABDOMEN	Control	0	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	1	1
	100 ppm	0	0	0	0	0	0	0	Ö	Ö	0	Ŏ	Ö	0	Ô
	200 ppm	0	0	0	0	Ö	Ö	Ö	0	0	Ö	Ö	Ö	Ö	0
ANTERIOR. DORSUM	Control	0	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	0
	100 ppm	0	0	0	0	0	0	0	Ö	Ŏ	Ö	Ŏ	Ŏ	0	ő
	200 ppm	0	0	Ō	0	0	Ö	Ö	Ö	Ö	0	0	Ö	Ö	0
POSTERIOR DORSUM	Control	0	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	0
	100 ppm	0	0	0	0	0	0	0	0	0	0	0	Ō	Ō	Ö
	200 ppm	0	0	0	0	0	0	0	0	0	0	0	Ŏ	0	0
HINDLIMB	Control	0	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	0
	100 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	200 ppm	0	0	0	0	0	0	0	0	0	Ö	Ō	Ō	0	0
GENITALIA	Control	0	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	Ö
	100 ppm	0	0	0	0	0	Ō	Ö	0	0	Ö	0	0	0	0
	200 ppm	0	Ō	Ö	Ō	Ŏ	Ŏ	0	ő	ŏ	ŏ	ŏ	ő	ŏ	0
SCROTUM	Control	0	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	Ö	0	0
	100 ppm	0	0	0	0	Ō	0	Ö	0	Ö	Ö	0	0	0	0
															0
	200 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	

STUDY NO.: 0269

ANIMAL : RAT F344/DuCrj REPORT TYPE : A1 104

SEX : MALE PAGE: 27

Clinical sign	Group Name	Admini	stration W	leek-day											
		28-7	29-7	30-7	31-7	32-7	33-7	34-7	35-7	36-7	37-7	38-7	39-7	40-7	41-7
I.NECK	Control	0	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	0
	100 ppm	0	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
BREAST	Control	0	0	0	0	0	0	0	0	0	0	0	0	1	1
	50 ppm	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	0
	200 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. ABDOMEN	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	50 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	100 ppm	0	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
M.ANTERIOR.DORSUM	Control	0	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	0
	100 ppm	0	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
1.POSTERIOR DORSUM	Control	0	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	0
	100 ppm	0	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
M.HINDLIMB	Control	0	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	0
	100 ppm	0	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
M.GENITALIA	Control	0	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	0
	100 ppm	0	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
.SCROTUM	Control	0	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	0
	100 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	200 ppm	0	0	0	0	0	Ö	0	0	0	Ô	Õ	.0	0	Ö

(HAN190)

ANIMAL : RAT F344/DuCrj

REPORT TYPE: A1 104

STUDY NO.: 0269

SEX : MALE

linical sign	Group Name	Admini	stration W	leek-day _		<u> </u>									
		42-7	43-7	44-7	45-7	46-7	47-7	48-7	49-7	50-7	51-7	52-7	53-7	54-7	55-7
. NECK	Contral	0	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	0
	100 ppm	0	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
BREAST	Control	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	50 ppm	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	0
	200 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
. ABDOMEN	Control	0	0	0	1	1	1	0	0	1	1	1	0	0	0
	50 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	100 ppm	0	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
.ANTERIOR.DORSUM	Control	0	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	0
	100 ppm	0	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
.POSTERIOR DORSUM	Control	0	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	0
	100 ppm	0	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
1.HINDLIMB	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	mqq 03	0	0	0	1	1	1	1	1	1	1	1	1	1	1
	100 ppm	0	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
.GENITALIA	Control	0	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	0
	100 ppm	0	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
.SCROTUM	Control	0	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	0
	100 ppm	0	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

ANIMAL : RAT F344/DuGrj AL

REPORT TYPE : A1 104

STUDY NO.: 0269

SEX : MALE

Clinical sign	Group Name	Admini	stration W	eek-day											
		56-7	57-7	58-7	59-7	60-7	61-7	62-7	63-7	64-7	65-7	66-7	67-7	68-7	69-7
. NECK	Contral	0	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	0
	100 ppm	0	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
BREAST	Control	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	50 ppm	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	0
	200 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
. ABDOMEN	Control	0	0	0	0	0	1	1	1	1	0	0	0	0	0
	50 ppm	1	1	1	1	1	1	1	1	2	2	2 .	2	2	2
	100 ppm	0	0	0	0	0	1	1	1	1	0	0	0	0	0
	200 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ANTERIOR.DORSUM	Control	0	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	0
	100 ppm	0	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
POSTERIOR DORSUM	Control	0	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	0
	100 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	200 ppm	0	1	1	1	1	1	1	1	1	1	1	1	1	1
HINDLIMB	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	50 ppm	1	1	1	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	0
	200 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
GENITALIA	Control	0	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	0
	100 ppm	0	0	0	0	0	0	0	0	0	0 -	0	Ô	0	0
	200 ppm	0	0	0	0	0	0	0	0	0	0	Ö	Ö	Ö	0
SCROTUM	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	50 ppm	0	0	0	0	0	0	Ö	0	0	0	Ö	Ö	Ö	0
	100 ppm	0	0	0	0	0	0	0	Ö	0	0	0	ő	Ŏ	0
	200 ppm	Ō	0	0	0	0	0	Ő	Ö	Ő	0	Ö	0	ő	0

STUDY NO. : 0269

ANIMAL : RAT F344/DuCrj

REPORT TYPE : A1 104

CLINICAL OBSERVATION (SUMMARY)
ALL ANIMALS

SEX : MALE

Clinical sign	Group Name	Admini	stration W	eek-day											
		70-7	71-7	72-7	73-7	74-7	75-7	76-7	77-7	78-7	79-7	80-7	81-7	82-7	83-7
. NECK	Control	0	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	0
	100 ppm	0	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
BREAST	Control	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	50 ppm	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	0
	200 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
. ABDOMEN	Contral	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	50 ppm	2	2	2	2	2	2	2	1	1	1	1	1	1	1
	100 ppm	0	0	0	0	0	0	1	1	1	1	1	1	1	1
	200 ppm	0	0	0	0	0	0	0	0	0	0	0	0	1	1
.ANTERIOR.DORSUM	Control	0	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	0
	100 ppm	0	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	1
.POSTERIOR DORSUM	Control	0	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	0
	100 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	200 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
.HINDLIMB	Control	0	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	0
	100 ppm	0	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
.GENITALIA	Control	0	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	0
	100 ppm	0	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
.SCROTUM	Control	0	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	0
	100 ppm	0	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

ANIMAL : RAT F344/DuCrj

STUDY NO. : 0269

REPORT TYPE : A1 104

SEX : MALE

linical sign	Group Name	Admini	istration W	eek-day											
		84-7	85-7	86-7	87-7	88-7	89-7	90-7	91-7	92-7	93-7	94-7	95-7	96-7	97-7
NECK	Control	0	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	0
	100 ppm	0	0	0	1	1	1	1	2	2	2	1	1	1	1
	200 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	1
BREAST	Control	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	50 ppm	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	0
	200 ppm	0	0	0	0	0	0	0	0	0	1	1	1	1	1
ABDOMEN	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	50 ppm	1	1	1	1	1	1	1	1	2	2	2	2	3	2
	100 ppm	1	1	1	1	1	1	1	1	1	0	0	0	0	0
	200 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
ANTERIOR.DORSUM	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	50 ppm	0	1	1	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	0
	200 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
POSTERIOR DORSUM	Control	0	0	0	0	0	0	0	0	0	0	0	1	1	1
	50 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	Ō
	100 ppm	0	0	0	0	Ö	0	Ö	Ö	0	0	0	Ö	0	1
	200 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
HINDLIMB	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	50 ppm	0	0	0	0	0	0	0	1	1	1	1	1	1	0
	100 ppm	0	0	0	Õ	Ō	ŏ	Ŏ	Ô	Ô	Ô	0	0	0	0
	200 ppm	0	0	Ö	Ö	0	Ö	Ö	0	Ö	Ö	Ö	0	0	0
GENITALIA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	50 ppm	0	0	0	Ö	Ö	Ŏ	Ö	Ŏ	0	0	0	0	0	0
	100 ppm	0	1	1	ĭ	i	1	1	1	1	1	1	1	1	1
	200 ppm	0	Ō	Ô	0	Ô	0	0.	0	0	0	0	î	1	1
SCROTUM	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	50 ppm	0	Ō	o O	Ö	Ŏ	Ö	0	0	. 0	0	0	0	0	Ö
	100 ppm	Ö	Ö	Ö	Ö	ő	0	Ö	0	0	0	0	0	0	0
	200 ppm	. 0	Ö	0	Ŏ	Ő	0	Ö	0	0	0	0	0	0	0
		•	v	•	v	v	v	v	v	v	v	V	U	U	U

ANIMAL : RAT F344/DuCrj

REPORT TYPE : A1 104

CLINICAL OBSERVATION (SUMMARY)
ALL ANIMALS

SEX : MALE

SO ppm
M.NECK Control 50 ppm 0 0 0 0 0 0 0 0 0 0 0 0 0
SO ppm
SO ppm
SO ppm
100 ppm
N.BREAST Control 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
M.BREAST Control 50 ppm 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
The state of the
100 ppm
100 ppm
M.ABDOMEN Control Do ppm Do Do Do
M.ABDOMEN Control 50 ppm 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
S0 ppm 2 2 2 2 2 2 2 2 2
100 ppm
100 ppm 2 2 2 2 3 3 3 3 200 ppm 1 1 1 1 1 1 1 1 1
M.ANTERIOR.DORSUM
M.ANTERIOR.DORSUM Control 50 ppm 0 0 0 0 0 0 0 0 100 ppm 0 0 0 0 0 0 1 1 200 ppm 1 1 1 1 1 2 2 1
50 ppm 0 0 0 0 0 0 0 0 0 1 1 1 200 ppm 1 1 1 1 1 1 2 2 1
50 ppm 0 0 0 0 0 0 0 0 0 101 1 1 200 ppm 1 1 1 1 1 1 2 2 1
100 ppm 0 0 0 0 0 1 1 2 2 1 2 1
200 ppm 1 1 1 1 2 2 1
M_POSTERIOR_DORSUM Control 1 1 1 1 1 1 1
50 ppm 1 1 1 1 1 1
100 ppm 1 1 1 1 1 1 2
200 ppm 1 1 1 1 1 1 1 1
M.HINDLIMB Control 0 0 0 0 0
50 ppm 0 0 0 0 0 0
100 ppm 0 0 0 0 0 0 0
200 ppm 0 0 0 0 0 0
W CENITALIA Control 0 0 0 0 0 0 0
M.GENITALIA Control 0 0 0 0 0 0
50 ppm 0 0 0 0 0 0
$100 { m ppm} \qquad 1 \qquad 2 \qquad \qquad 2 \qquad \qquad$
200 ppm 1 1 1 1 1 1 0
M.SCROTUM Control 0 0 0 0 0 0
50 ppm 0 0 0 0 0 0 0
100 ppm 0 0 0 0 0 0
200 ppm 1 1 1 1 1 1 1

ANIMAL : RAT F344/DuCrj

REPORT TYPE : A1 104

CLINICAL OBSERVATION (SUMMARY)
ALL ANIMALS

SEX : MALE

N.TAIL Control 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	linical sign	Group Name	AGM1D1:	stration We	эөк-аау <u></u>											
SO perm			1-1	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
SO CORN O O O O O O O O O	TA 11	Carabase	•	•	•	•	•	•	•	•						
100 perm 0	. INIL														0	0
NERIA Control O O O O O O O O O O O O O			-					-							0	0
NEMIA Control 0 0 0 0 0 0 0 0 0 0 0 0 0			-									-			0	0
SO SCH SO SCH SO SO SO SO SO SO SO S		200 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
100 ppm	ENIA		0	0	0	0	0	0	0	0	0	0	0	0	0	0
200 ppm		50 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EMORNHAGE Control 0		100 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
50 ppm		200 ppm	0	0	0 .	0	0	0	0	0	0	0	0	0	0	0
Toppin	MORRHAGE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
REGULAR BREATHING Control O O O O O O O O O O O O O				-											0	0
REGULAR BREATHING Control O O O O O O O O O O O O O			•	-				_		-				-	0	•
REGULAR BREATHING Control 50 ppm 0 0 0 0 0 0 0 0 0 0 0 0 0			v	-											0	0
TO Pixel Control C		ZVV ppili	U	V	U	U	V	U	U	U	U	U	U	U	U	0
100 ppm	REGULAR BREATHING		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
NORMAL RESPIRATION Control 50 ppm 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	0
SO PDM		200 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SO	NORMAL RESPIRATION	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
100 ppm		50 ppm	0	0	0	0	0	0				0	=		Ŏ	0
CCHYPNEA Control 0				0				-				•	_		0	ő
SO ppm			0						-						0	0
SO ppm	CHYPNFA	Control	0	٥	0	٥	0	٥	۸	٥	0	٥	0	0	0	٨
100 ppm	······		-									•	-		0	0
ZADYPNEA Control 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0			-					-	•		-	•	•		0	
ADYPNEA Control 0 0 0 0 0 0 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 0 0 0 0		200 PPIII	U	v	U	U	υ	U	U	U	U	U	U	Ü	0	0
100 ppm 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	ADYPNEA		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			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			•			0	0	0	0	0	0	0	0	0	0	0
50 ppm 0 0 0 0 0 0 0 0 0 0		200 ppm	0	0	0	0	0	0	0	0					0	0
50 ppm 0 0 0 0 0 0 0 0 0 0	EP BREATHING	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			0		_								-	-	0	0
		100 ppm	0	Ö	ŏ	Ö	Ö						-		0	0
200 ppm 0 0 0 0 0 0 0 0 0 0 0			•											-	0	0

ANIMAL : RAT F344/DuCrj

REPORT TYPE : A1 104

STUDY NO. : 0269

SEX : MALE

linical sign	Group Name	Admini	stration W	eek-day _											
		14-7	15-7	16-7	17-7	18-7	19-7	20-7	21-7	22-7	23-7	24-7	25-7	26-7	27-7
Til	Control	٥	0		•	^	0	^	٥	^	٥	^	0		٥
.TAIL	Control	0	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	0
	100 ppm	0	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
NEMIA	Control	0	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	0
	100 ppm	0	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
EMORRHAGE	Control	0	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	0
	100 ppm	0	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
RREGULAR BREATHING	Control	0	0	0	1	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	0
	100 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	200 ppm	0	0	0	0	0	0	Ō	0	Ō	0	0	0	0	0
BNORMAL RESPIRATION	Control	0	0	0	1	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	0
	100 ppm	0	0	0	0	0	0	0	0	. 0	0	0	0	0	0
	200 ppm	0	0	0	0	0	Ö	0	0	0	0	0	Ō	Ō	Ō
TACHYPNEA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
·	50 ppm	o o	0	0	0	0	0	Ō	0	Ö	0	o o	0	0	0
	100 ppm	ő	Ŏ	Ö	Ŏ	ŏ	Ö	ŏ	ŏ	Ŏ	0	0	0	Ő	Ő
	200 ppm	0	0	Ô	Ő	Ŏ	Ö	0	0	Ő	0	0	0	0	0
			•	•	v	-		-			-	-	V	Ť	V
RADYPNEA	Control	0	0	0	1	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	0
	100 ppm	0	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
EEP BREATHING	Control	0	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	0
	100 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	200 ppm	0	0	0	0	0	0	0	. 0	Ō	0	0	0	0	0

ANIMAL : RAT F344/DuCrj

CLINICAL OBSERVATION (SUMMARY) ALL ANIMALS

REPORT TYPE : A1 104

SEX : MALE

Clinical sign	Group Name	Admini	stration W	eek-day											
		28-7	29-7	30-7	31-7	32-7	33-7	34-7	35-7	36-7	37-7	38-7	39-7	40-7	41-7
.TAIL	Control	0	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	0
	100 ppm	0	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
NEM I A	Control	0	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	0
	100 ppm	0	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
IEMORRHAGE	Control	0	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	0
	100 ppm	0	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
RREGULAR BREATHING	Control	0	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	0
	100 ppm	0	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
BNORMAL RESPIRATION	Control	0	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	0
	100 ppm	0	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
ACHYPNEA	Control	0	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	0
	100 ppm	0	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
RADYPNEA	Control	0	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	0
	100 ppm	0	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	Ō	Ö	Ö	0
EEP BREATHING	Control	0	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	0
	100 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	200 ppm	0	0	0	0	0	0	0	0	Ö	Ö	0	Ô	Ŏ	Ö

ANIMAL : RAT F344/DuCrj

REPORT TYPE : A1 104

CLINICAL OBSERVATION (SUMMARY)
ALL ANIMALS

SEX : MALE

Clinical sign	Group Name	Admini	stration W	eek-dav											
_		42-7	43-7	44-7	45-7	467	47-7	48-7	49-7	50-7	51-7	52-7	53-7	54-7	55-7
.TAIL	Control	0	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	0
	100 ppm	0	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
NEMIA	Control	0	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	0
	100 ppm	0	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
EMORRHAGE	Control	0	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	0
	100 ppm	0	0	0	0	0	0	0	0	0	0	0	0	Ö	0
	200 ppm	0	0	0	0	0	0	0	0	0	0	0	0	Ö	0
RREGULAR BREATHING	Control	0	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	0
	100 ppm	0	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	Ö	0
BNORMAL RESPIRATION	Control	0	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	0
	100 ppm	0	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
ACHYPNEA	Control	0	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	0
	100 ppm	0	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
RADYPNEA	Control	0	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	Ö	0	0
	100 ppm	0	0	0	0	0	0	0	0	0	0	0	Ö	0	0
	200 ppm	0	0	0	0	Ö	0	0	Ö	ŏ	ŏ	Ö	ŏ	Ö	0
EEP BREATHING	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	50 ppm	0	0	0	0	0	0	0	0	0	Ö	Õ	0	ő	ő
	100 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	ő
	200 ppm	0	0	0	0	Ö	Ö	0	0	0	0	Ŏ	0	0	0

ANIMAL : RAT F344/DuCrj

REPORT TYPE : A1 104

STUDY NO.: 0269

SEX : MALE

Clinical sign	Group Name	Admini	stration W	ek-day											
		56-7	57-7	58-7	59-7	60-7	61-7	62-7	63-7	64-7	65-7	66-7	67-7	68-7	69-7
TAIL.	Control	0	0	0	0	0	0	0	0	0	0	1	1	1	1
	50 ppm	0	1	1	1	1	1	1	0	0	0	0	0	0	0
	100 ppm	0	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
EMIA	Control	0	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	1
	100 ppm	0	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
EMORRHAGE	Control	0	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	0
	100 ppm	0	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
REGULAR BREATHING	Control	0	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	0
	100 ppm	0	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
NORMAL RESPIRATION	Control	0	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	0
	100 ppm	0	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
CHYPNEA	Control	0	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	0
	100 ppm	0	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
ADYPNEA	Control	0	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	. 0
	100 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	.0
	200 ppm	0	0	0	0	0	0	0	0	0	Ö	0	Ö	Ö	Ö
EP BREATHING	Control	0	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	Ö	0	ů	0
	100 ppm	0	0	0	0	0	0	0	Ö	Ŏ	0	Ö	0	0	0
	200 ppm	0	0	0	Ö	Ō	Ö	0	Ö	Ö	ő	0	0	0	0

ANIMAL : RAT F344/DuCrj REPORT TYPE : A1 104

CLINICAL OBSERVATION (SUMMARY) ALL ANIMALS

SEX : MALE

linical sign	Group Name	Admini	stration W	leek-day											
-		70-7	71-7	72-7	73-7	74-7	75-7	76-7	77-7	78-7	79-7	80-7	81-7	82-7	83-7
.TAIL	Control	1	1	1	1	1	1	1	1	1	1	0	0	0	0
	50 ppm	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	0
	200 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EMIA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	50 ppm	1	1	1	1	1	1	1	0	0	0	0	0	0	0
	100 ppm	0	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
MORRHAGE	Control	0	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	0
	100 ppm	0	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
REGULAR BREATHING	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	50 ppm	0	0	0	0	0	0	0	0	Ō	0	0	Ö	Õ	0
	100 ppm	0	0	0	0	0	0	0	0	0	Ö	0	Ö	Ŏ	0
	200 ppm	0	0	0	0	0	0	0	0	0	0	Ö	0	0	Ŏ
NORMAL RESPIRATION	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	50 ppm	0	0	0	0	0	0	1	0	0	0	0	0	0	0
	100 ppm	0	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	1	1	0	0
CHYPNEA	Control	0	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	0
	100 ppm	0	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	1	0	Ö	0
ADYPNEA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	50 ppm	0	0	0	0	0	0	1	0	0	0	0	0	0	0
	100 ppm	0	0	0	0	0	0	0	0	Ŏ	Ö	0	0	0	0
	200 ppm	0	0	0	0	0	0	0	Ö	0	Ö	ő	ő	ŏ	0
EP BREATHING	Control	0	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	0
	100 ppm	0	0	0	0	0	Ö	Ö	0	Ŏ	ő	0	0	Ö	ő
	200 ppm	0	0	0	Ö	Ö	0	0	0	0	Ö	0	1	0	0

STUDY NO.: 0269 ANIMAL: RAT F344/DuCrj

REPORT TYPE: A1 104

SEX : MALE

Clinical sign	Group Name	Admini	stration W	eek-day											
		84-7	85-7	86-7	87-7	88-7	89-7	90-7	91-7	92-7	93-7	94-7	95-7	96-7	97-1
.TAIL	Control	0	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	0
	100 ppm	0	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
NEMIA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	ó
	50 ppm	0	0	0	0	0	0	0	0	0	0	0	1	0	0
	100 ppm	0	0	0	0	0	0	0	2	1	1	0	0	0	1
	200 ppm	0	0	0	0	0	1	1	1	0	0	0	0	0	0
IEMORRHAGE	Control	0	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	0
	100 ppm	0	0	0	0	0	0	1	0	0	0	0	0	0	0
	200 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RREGULAR BREATHING	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	50 ppm	0	0	0	0	0	0	0	0 .	1	0	0	0	0	0
	100 ppm	0	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
BNORMAL RESPIRATION	Control	0	0	0	0	0	0	0	0	1	0	0	0	0	0
	50 ppm	0	0	0	0	0	1	0	0	1	0	0	0	0	0
	100 ppm	0	0	0	0	0	0	0	1	0	0	0	0	0	0
	200 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	1
CACHYPNEA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	50 ppm	0	0	0	0	0	1	0	0	0	0	0	0	0	0
	100 ppm	0	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
BRADYPNEA	Control	0	0	0	0	0	0	0	0	1	0	0	0	0	0
	50 ppm	0	0	0	0	0	0	0	0	1	0	0	0	0	0
	100 ppm	0	0	0	0	0	0	0	1	0	0	0	0	0	0
	200 ppm	0	0	0	0	0	0	0	0	0	0	0	0	Ö	1
DEEP BREATHING	Control	0	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	Ċ
	100 ppm	0	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

ANIMAL : RAT F344/DuCrj

REPORT TYPE : A1 104

CLINICAL OBSERVATION (SUMMARY)
ALL ANIMALS

SEX : MALE

Clinical sign	Group Name	Admini	stration	Week-day				
		98-7	99-7	100-7	101-7	102-7	103-7	104-7
		_						
M.TAIL	Control	0	0	0	0	0	0	0
	50 ppm	0	0	0	0	0	0	0
	100 ppm	0	0	0	0	0	0	0
	200 ppm	0	0	0	0	0	0	0
ANEMIA	Control	1	0	1	^	^	^	^
ANEITA		1	2	1	0	0	0	0
	50 ppm	1	1	0	0	0	0	0
	100 ppm	1	1	1	2	1	2	0
	200 ppm	0	0	0	1	0	0	0
HEMORRHAGE	Control	0	0	0	0	0	0	0
	50 ppm	0	0	0				
					0	0	0	0
	100 ppm	0	0	0	0	0	0	0
	200 ppm	0	0	0	0	0	0	0
IRREGULAR BREATHING	Control	0	0	0	0	0	0	0
	50 ppm	0	1	0	0	0	0	1
		-	0					
	100 ppm	0		0	0	0	1	0
	200 ppm	0	0	0	1	0	0	0
ABNORMAL RESPIRATION	Control	1	0	0	0	0	1	1
	50 ppm	ī	i	Ö	0	0	0	i
	100 ppm	Ô	0	0	0	0	2	0
	200 ppm	1	0	0	1	0	0	0
	ZVV PPIII	į	U	U	1	v	U	U
TACHYPNEA	Control	0	0	0	0	0	0	0
	50 ppm	0	0	0	Ö	Ö	Õ	Ŏ
	100 ppm	0	0	0	0	0	0	0
	200 ppm	0	0	0				
	200 PHIII	v	U	U	0	0	0	0
BRADYPNEA	Control	1	0	0	0	0	0	0
	50 ppm	1	1	0	Ö	Õ	Ö	1
	100 ppm	0	0	0	Ö	0		0
	200 ppm	1	0	0			2	
	ZUU PPM	1	U	U	1	0	0	0
DEEP BREATHING	Control	0	0	0	0	0	1	1
	50 ppm	0	Ö	Ŏ	Ö	Ö	0	Ô
	100 ppm	0	Ö	0	0	0	0	0
	200 ppm	0	0	0	0	0	0	0
	ZVV PPIII	v	U	U	U	U	U	U

ANIMAL : RAT F344/DuCrj

REPORT TYPE : A1 104

CLINICAL OBSERVATION (SUMMARY)
ALL ANIMALS

SEX : MALE

PAGE: 41

Clinical sign	Group Name	Admini	stration W	eek-day											
		1-1	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
BNORMAL RESPIRA.SOUND	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	50 ppm	Ō	Ö	Ö	Ö	Ō	Ö	Ö	Ő	Ŏ	Ö	Ŏ	Ö	Ö	0
	100 ppm	0	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
JBNORMAL TEMP	Control	0	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	0
	100 ppm	0	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

(HAN190)

ANIMAL : RAT F344/DuCrj

REPORT TYPE : A1 104

CLINICAL OBSERVATION (SUMMARY)

ALL ANIMALS

SEX : MALE

PAGE: 42

Clinical sign	Group Name	Admini	stration W	eek-day _	·										
		14-7	15-7	16-7	17-7	18-7	19-7	20-7	21-7	22-7	23-7	24-7	25-7	26-7	27-7
ABNORMAL RESPIRA.SOUND	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	٥
ionomino neori imiterono	50 ppm	ő	0	0	0	0	Ô	0	0	0	0	0	0	0	0
	100 ppm	Ō	0	0	0	0	0	Ō	Ŏ	Ŏ	Ö	Ö	Ö	Ö	ő
	200 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SUBNORMAL TEMP	Control	0	0	0	1	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	0
	100 ppm	0	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

(HAN190)

ANIMAL : RAT F344/DuCrj REPORT TYPE : A1 104

CLINICAL OBSERVATION (SUMMARY)
ALL ANIMALS

SEX : MALE

PAGE: 43

Clinical sign	Group Name	Admini	stration W	eek-day											
		28-7	29-7	30-7	31-7	32-7	33-7	34-7	35-7	36-7	37-7	38-7	39-7	40-7	41-7
BNORMAL RESPIRA.SOUND	Control	0	0	0	0	0	0	0	0	0	0	0	0	. 0	٥
	50 ppm	Ō	0	Ö	Ö	0	Ŏ	0	0	0	0	0	0	0	0
	100 ppm	0	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
UBNORMAL TEMP	Control	0	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	0
	100 ppm	0	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

(HAN190)

ANIMAL : RAT F344/DuCrj

REPORT TYPE : A1 104

CLINICAL OBSERVATION (SUMMARY)

ALL ANIMALS

SEX : MALE

PAGE: 44

linical sign	Group Name	Admini	stration W	leek-day											
		42-7	43-7	44-7	45-7	46-7	47-7	48-7	49-7	50-7	51-7	52-7	53-7	54-7	55-7
BNORMAL RESPIRA.SOUND	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	50 ppm	Ö	Ö	Ö	Ö	Ö	Ö	0	Ö	0	Ŏ	0	0	0	0
	100 ppm	0	0	0	0	0	0	0	0	Ö	0	Õ	Ö	0	Ő
	200 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JBNORMAL TEMP	Control	0	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	0
	100 ppm	0	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

(HAN190)

ANIMAL : RAT F344/DuCrj

REPORT TYPE : A1 104

CLINICAL OBSERVATION (SUMMARY)
ALL ANIMALS

SEX : MALE

PAGE: 45

Clinical sign	Group Name	Admini	stration W	eek-day											
		56-7	57-7	58-7	59-7	60-7	61-7	62-7	63-7	64-7	65-7	66-7	67-7	68-7	69-7
ABNORMAL RESPIRA.SOUND	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	٥
	50 ppm	0	0	0	0	Ö	Ö	Õ	Ŏ	0	0	0	0	0	0
	100 ppm	0	0	0	0	0	0	0	0	Ö	Ö	Ö	0	ŏ	0
	200 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
UBNORMAL TEMP	Control	0	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	0
	100 ppm	0	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

(HAN190)

ANIMAL : RAT F344/DuCrj REPORT TYPE : A1 104

CLINICAL OBSERVATION (SUMMARY)
ALL ANIMALS

SEX : MALE

PAGE: 46

Clinical sign	Group Name	Admini	stration W	leek-day											
		70-7	71-7	72-7	73-7	74-7	75-7	76-7	77-7	78-7	79-7	80-7	81-7	82-7	83-7
BNORMAL RESPIRA.SOUND	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	٥
	50 ppm	0	0	0	0	Ö	0	Ö	0	Õ	0	0	0	0	0
	100 ppm	0	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
SUBNORMAL TEMP	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	50 ppm	0	0	0	0	0	0	1	0	0	0	0	0	0	0
	100 ppm	0	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

(HAN190)

ANIMAL : RAT F344/DuCrj REPORT TYPE : A1 104 CLINICAL OBSERVATION (SUMMARY)
ALL ANIMALS

SEX : MALE

PAGE: 47

Clinical sign	Group Name	Admini	stration W	eek-day											
		84-7	85-7	86-7	87-7	88-7	89-7	90-7	91-7	92-7	93-7	94-7	95-7	96-7	97-7
BNORMAL RESPIRA.SOUND	Control	0	0	0	0	1	1	0	0	0	0	n	0	0	0
	50 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	100 ppm	0	0	0	0	0	Ö	Ŏ	0	Ö	Ô	0	0	0	0
	200 ppm	0	0	0	0	0	0	0	0	0	0	1	i	1	1
JBNORMAL TEMP	Control	0	0	0	0	0	0	0	0	1	0	0	0	0	0
	50 ppm	0	0	0	0	0	0	0	0	1	0	0	0	. 0	Ô
	100 ppm	0	0	0	0	0	0	0	1	1	0	0	Ô	0	0
	200 ppm	0	0	0	0	0	0	0	0	Õ	0	Ô	0	0	0

(HAN190)

ANIMAL : RAT F344/DuCrj

REPORT TYPE : A1 104

CLINICAL OBSERVATION (SUMMARY)
ALL ANIMALS

SEX : MALE

PAGE: 48

Clinical sign	Group Name	Admin	stration	Week-day				
		98-7	99-7	100-7	101-7	102-7	103-7	104-7
TONODATA BEGDINA COMA	2							
ABNORMAL RESPIRA.SOUND	Control	0	0	0	0	1	1	1
	50 ppm	0	0	0	0	0	0	1
	100 ppm	0	0	0	0	0	0	0
	200 ppm	1	0	0	0	0	0	0
SUBNORMAL TEMP	Control	1	0	1	0	0	0	0
	50 ppm	0	1	0	0	0	0	1
	100 ppm	0	0	0	0	0	2	0
₩	200 ppm	0	0	0	1	0	0	0

(HAN190)

APPENDIX A 2

CLINICAL OBSERVATION: SUMMARY, RAT: FEMALE

(2-YEAR STUDY)

STUDY NO. : 0269

ANIMAL : RAT F344/DuCrj

REPORT TYPE : A1 104

SEX: FEMALE

Clinical sign	Group Name	Adminis	stration We	ek-day											
		1-1	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
EATH	Control	0	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	0
	100 ppm	0	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
ORIBUND SACRIFICE	Control	0	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	0
	100 ppm	0	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
OCOMOTOR MOVEMENT DECR	Control	0	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	0
	100 ppm	0	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
ARALYTIC GAIT	Control	0	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	0
	100 ppm	0	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
ASTING	Control	0	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	0
	100 ppm	0	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
ILOERECTION	Control	0	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	0
	100 ppm	0	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
ROG BELLY	Control	0	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	0
	100 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	200 ppm	0	0	0	0	0	0	0	Ō	0	0	0	0	0	0
DILED PERI GENITALIA	Control	0	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	0
	100 ppm	0	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

ANIMAL : RAT F344/DuCrj

STUDY NO.: 0269

REPORT TYPE : A1 104

SEX : FEMALE

PAGE: 50

Clinical sign	Group Name	Admini	stration W	eek-day _											
		14-7	15-7	16-7	17-7	18-7	19-7	20-7	21-7	22-7	23-7	24-7	25-7	26-7	27-7
2.500		•	•		•	•	•	•	•	•	•	•	•	•	2
EATH	Control	0	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	0
	100 ppm	0	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
ORIBUND SACRIFICE	Control	0	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	0
	100 ppm	0	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
OCOMOTOR MOVEMENT DECR	Control	0	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	0
	100 ppm	0	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
ARALYTIC GAIT	Control	0	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	0
	100 ppm	0	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
ASTING	Control	0	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	0
	100 ppm	0	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
ILOERECTION	Control	0	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	0
	100 ppm	0	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	Ö	0	0	0
ROG BELLY	Control	0	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	0
	100 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	200 ppm	Ö	Ö	Ö	Ö	Ö	Ŏ	Ŏ	Ö	ő	Ö	Ö	Ö	0	0
OILED PERI GENITALIA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	50 ppm	0	0	0	0	0	0	0	Ö	0	Ô	0	0	0	0
	100 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	200 ppm	Ö	Õ	Ö	Ŏ	0	Ö	Ŏ	Ő	Ö	ő	ő	ő	Ö	ő

(HAN190)

CLINICAL OBSERVATION (SUMMARY)
ALL ANIMALS

ANIMAL : RAT F344/DuCrj

REPORT TYPE : A1 104

SEX : FEMALE

linical sign	Group Name	Admini	stration W	eek-day											
		28-7	29-7	30-7	31-7	32-7	33-7	34-7	35-7	36-7	37-7	38-7	39-7	40-7	41-7
		***************************************		-										·	
EATH	Control	0	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	0
	100 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	Ō
	200 ppm	0	0	0	1	1	1	1	1	1	1	1	1	ĺ	1
RIBUND SACRIFICE	Control	0	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	0
	100 ppm	0	0	0	0	0	0	Ō	Ö	0	0	0	0	0	Ô
	200 ppm	0	Ō	0	ō	Ö	0	0	Ö	Ö	Ö	0	Ö	Ö	0
COMOTOR MOVEMENT DECR	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	50 ppm	0	0	Ŏ	Ö	Ŏ	Ŏ	0	0	0	0	Ô	Ö	0	0
	100 ppm	Ö	Ö	ŏ	ő	Ö	Ö	0	Ö	0	0	Ő	0	0	0
	200 ppm	ő	0	0	0	0	0	0	0	0	0	0	0	0	0
	200 ppiii	V	V	v	V	v	v	V	V	V	V	V	V	U	U
RALYTIC GAIT	Control	0	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	0
	100 ppm	0	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
STING	Control	0	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	0
	100 ppm	0	0	Ö	Ô	Ŏ	Ö	Ö	Ö	ŏ	Ö	ŏ	Ŏ	Ö	Ö
	200 ppm	0	0	0	Õ	0	Ő	Ö	0	Ö	ő	ő	ő	ő	0
LOERECTION	Control.	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	50 ppm	0	Ö	Ö	0	Ö	Ŏ	Ŏ	Ŏ	Ŏ	0	Ö	0	Ö	Ö
	100 ppm	0	0	Ŏ	Ö	Ö	Ö	ő	Ö	Ö	0	0	0	0	0
	200 ppm	Ö	Ô	Ô	0	Ŏ	0	0	0	0	0	0	0	0	0
		·	-	·	-		V	•	V	v	v	v	V	v	U
OG BELLY	Control	0	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	0
	100 ppm	0	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
ILED PERI GENITALIA	Control	0	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	0
	100 ppm	0	0	0	0	0	0	0	0	Ö	Ö	0	0	Ö	0
	200 ppm	Ō	0	ŏ	Ö	0	Ö	0	0	0	0	Ö	0	Ő	0
		v	v	v	v	v	v	v	V	V	v	V	v	v	U

STUDY NO.: 0269

ANIMAL : RAT F344/DuCrj

REPORT TYPE : A1 104

SEX: FEMALE

PAGE: 52

Clinical sign	Group Name	Admini	stration W	eek-day											
		42-7	43-7	447	45-7	46-7	47-7	48-7	49-7	50-7	51-7	52-7	53-7	54-7	55-7
DEATH	Control	0	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	0
	100 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	200 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
DRIBUND SACRIFICE	Control	0	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	0
	100 ppm	0	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
OCOMOTOR MOVEMENT DECR	Control	0	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	0
	100 ppm	0	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
ARALYTIC GAIT	Control	0	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	0
	100 ppm	0	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
ASTING	Control	0	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	0
	100 ppm	0	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
ILOERECTION	Control	0	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	0
	100 ppm	0	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
ROG BELLY	Control	0	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	0
	100 ppm	0	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
OILED PERI GENITALIA	Control	0	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	0
	100 ppm	0	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

(HAN190)

STUDY NO.: 0269

ANIMAL : RAT F344/DuCrj

REPORT TYPE : A1 104

SEX : FEMALE

PAGE: 53

Clinical sign	Group Name	Admini	stration W	ek-day											
		56-7	57-7	58-7	59-7	60-7	61-7	62-7	63-7	64-7	65-7	66-7	67-7	68-7	69-7
Digw															
EATH	Control	0	0	0	0	0	1	1	1	1	1	1	1	1	1
	50 ppm	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	0
	200 ppm	1	1	2	2	2	2	2	2	2	2	2	2	2	2
ORIBUND SACRIFICE	Contral	0	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	1	1
	100 ppm	0	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
LOCOMOTOR MOVEMENT DECR	Control	0	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	1	0
	100 ppm	0	0	0	0	0	0	Ô	0	Ö	0	0	0	0	Ö
	200 ppm	Ō	Ō	0	Ö	0	Ō	Ö	0	0	Ö	0	0	0	0
PARALYTIC GAIT	Control	0	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	Ô	0
	100 ppm	0	0	0	0	0	0	0	0	0	0	0	Ō	Ō	Ō
	200 ppm	0	0	0	Ō	Ô	Ö	0	0	Ö	Ö	0	0	Ö	Ö
WASTING	Control	0	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	0
	100 ppm	0	0	Ō	0	0	0	Ö	0	0	0	Ŏ	Ŏ	Ŏ	Ŏ
	200 ppm	0	0	0	0	Ō	0	0	0	0	Ö	0	0	Ö	Ő
PILOERECTION	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	50 ppm	0	0	Ö	Ō	0	Ö	Ö	0	Ŏ	ő	Ô	i	1	ŏ
	100 ppm	0	0	Ŏ	Ö	0	Ö	Ö	0	0	0	0	0	Ô	0
	200 ppm	Ö	Ö	ő	ő	ő	ő	ő	0	0	0	ő	0	0	0
FROG BELLY	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	50 ppm	0	0	Ŏ	0	0	Õ	0	0	0	0	0	0	0	0
	100 ppm	0	0	0	Ö	0	0	0	0	0	0	0	0	0	0
	200 ppm	0	0	Ö	0	0	0	Ö	0	0	0	0	0	0	0
SOILED PERI GENITALIA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	50 ppm	Õ	0	Ő	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	0
	200 ppm	0	0	0	0	0	0	0	0	0					
	ZVV ppm	U	U	U	U	U	U	U	U	U	0	0	0	0	0

(HAN190)

STUDY NO.: 0269 CLINICAL OBSERVATION (SUMMARY) ALL ANIMALS

ANIMAL : RAT F344/DuCrj

REPORT TYPE : A1 104

SEX : FEMALE

Clinical sign	Group Name	Admin	stration W	eek-day											
		70-7	71-7	72-7	73-7	74-7	75-7	76-7	77-7	78-7	79-7	80-7	81-7	82-7	83-7
EATH	Control	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	50 ppm	0	1	1	1	1	1	1	1	1	1	1	1	1	1
	100 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	200 ppm	2	2	2	2	2	2	2	2	2	2	2	2	2	2
DRIBUND SACRIFICE	Control	0	0	0	0	0	0	1	1	1	1	1	1	1	2
	50 ppm	1	2	2	2	2	2	2	2	2	2	2	2	2	2
	100 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	200 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
OCOMOTOR MOVEMENT DECR	Control.	0	0	0	0	0	0	1	0	0	0	0	0	0	1
	50 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	Ô
	100 ppm	0	0	0	0	0	0	0	ō	Ö	Ö	Ŏ	0	Ô	0
	200 ppm	0	0	0	0	0	0	Ō	0	Ŏ	Ö	0	Ö	Ö	0
ARALYTIC GAIT	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	50 ppm	0	0	0	0	0	Ô	0	Ô	0	0	0	Ő	Ö	0
	100 ppm	0	0	0	0	0	0	0	0	0	0	0	Ŏ	0	0
	200 ppm	0	0	0	0	0	0	0	0	0	Ö	0	Ő	0	0
ASTING	Control	0	0	0	0	0	0	1	0	0	0	0	0	0	1
	50 ppm	0	0	0	0	0	0	0	0	0	0	0	0	Ö	Ō
	100 ppm	0	0	0	0	0	Õ	Ö	ŏ	Ö	Ö	Ŏ	0	0	0
	200 ppm	0	0	0	0	0	0	0	0	Ö	Ö	Ö	ő	0	0
ILOERECTION	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	50 ppm	0	0	Ō	Ö	Ô	Ö	Ö	Ŏ	0	0	0	0	0	0
	100 ppm	0	0	0	0	Ö	0	ŏ	Ŏ	Ö	0	0	0	0	0
	200 ppm	0	Ō	ō	0	Ö	Ö	Ö	Ö	Ö	0	0	0	0	0
ROG BELLY	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	50 ppm	0	0	Ŏ	Ö	Ö	0	0	0	0	0	0	0	0	0
	100 ppm	Ö	Ŏ	0	Ö	Ö	0	0	0	0	0	0	0	0	0
	200 ppm	Ō	ő	ŏ	Ö	ŏ	Ö	ő	ő	Ö	0	0	0	0	0
DILED PERI GENITALIA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	50 ppm	0	Ö	0	0	Ö	ő	ő	0	0	0	0	0	0	0
	100 ppm	0	0	0	0	0	Ö	Ö	ő	Ŏ	0	0	0	0	0
	200 ppm	ő	0	Ö	0	0	ŏ	0	0	0	0	0	0	0	0

ANIMAL : RAT F344/DuCrj

REPORT TYPE : A1 104

STUDY NO. : 0269

SEX : FEMALE

Clinical sign	Group Name	Admin	stration W	eek-day											
	·	84-7	85-7	86-7	877	88-7	89-7	90-7	91-7	92-7	93-7	94-7	95-7	96-7	97-7
										.,					
EATH	Control	2	2	2	2	2	2	2	2	3	3	3	3	4	4
	50 ppm	1	1	1	1	1	2	2	2	2	2	2	2	2	2
	100 ppm	0	0	0	0	0	0	0	0	1	1	1	1	1	1
	200 ppm	2	2	2	2	2	2	2	2	2	2	3	3	3	3
ORIBUND SACRIFICE	Control	3	3	3	3	3	3	3	4	4	4	6	7	7	7
	50 ppm	2	2	2	2	2	2	3	3	3	3	3	3	3	3
	100 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	200 ppm	0	0	0	0	0	0	1	1	1	1	ī	1	1	ī
OCOMOTOR MOVEMENT DECR	Control	0	0	0	0	0	0	0	1	0	0	2	0	0	0
	50 ppm	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	Ö	0
	200 ppm	0	0	0	0	0	0	1	0	0	0	0	0	0	Ŏ
ARALYTIC GAIT	Control	0	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	0
	100 ppm	0	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
ASTING	Control	0	0	0	0	0	0	0	0	1	1	2	1	0	0
	50 ppm	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	0
	200 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ILOERECTION	Control	0	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	0
	100 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	200 ppm	0	0	0	0	0	0	Ö	Ö	0	0	ő	0	ő	0
ROG BELLY	Control	0	0	0	0	0	0	0	1	0	0	0	0	0	0
	50 ppm	0	0	0	0	0	0	0	0	0	o O	Ô	0	0	Ŏ
	100 ppm	0	Ō	0	0	0	0	Ŏ	Ö	Ö	0	0	0	Ö	0
	200 ppm	Ö	Ö	Ö	Ö	ŏ	ő	0	Ö	Ö	ő	Ŏ	Ö	0	0
OILED PERI GENITALIA	Control	0	0	0	0	0	0	0	0	0	0	0	1	0	0
	50 ppm	Ō	Ö	0	Ö	Ö	0	Ö	Ö	0	0	0	Ô	0	0
	100 ppm	Ö	0	0	0	0	Ö	Ö	Ö	0	0	0	0	0	0
	200 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	200 (-	v	v	٠	v	v	v	v	v	v	v	v	v	V	v

ANIMAL : RAT F344/DuCrj

REPORT TYPE : A1 104

CLINICAL OBSERVATION (SUMMARY)
ALL ANIMALS

SEX : FEMALE

Clinical sign	Group Name	Admini	stration	Week-day		·····		
		98-7	99-7	100-7	101-7	102-7	103-7	104-7
								
DEATH	Control	4	4	4	4	4	4	4
	50 ppm	2	3	3	4	4	4	4
	100 ppm	1	2	2	2	2	2	2
	200 ppm	3	3	3	3	4	4	4
MORIBUND SACRIFICE	Control	7	8	8	8	8	8	8
	50 ppm	4	5	5	5	6	6	6
	100 ppm	1	1	1	1	1	2	3
	200 ppm	1	1	1	2	2	2	2
LOCOMOTOR MOVEMENT DECR	Control	0	1	0	0	0	0	0
	50 ppm	1	1	0	0	1	Ö	Ö
	100 ppm	0	ō	Ö	Ö	ō	1	ŏ
	200 ppm	0	Ō	Ō	1	Ö	Ô	Ö
PARALYTIC GAIT	Control	0	0	0	0	0	0	0
	50 ppm	ő	1	1	1	1	1	1
	100 ppm	Ö	0	0	0	0	0	0
	200 ppm	0	0	0	0	0		
	zoo ppiii	V	U	U	U	U	0	0
WASTING	Control	0	0	0	0	0	0	1
	50 ppm	0	0	0	0	0	0	ō
	100 ppm	0	0	0	Ö	ŏ	Ŏ	ŏ
	200 ppm	0	0	0	0	Ö	0	Ö
PILOERECTION	Control	0	0	0	0	0	0	0
	50 ppm	ő	0	ő	Ö	0	0	0
	100 ppm	0	0	0	0	0	0	0
	200 ppm	0	0	0	0	0	0	0
FROG BELLY	Control	0	0	0	0	0	0	0
THOS DEBEI	50 ppm	-	0					
		0		0	0	0	0	0
	100 ppm	0	0	0	0	0	0	0
	200 ppm	0	0	0	0	0	0	0
SOILED PERI GENITALIA	Control	0	1	0	0	0	0	0
	50 ppm	0	0	0	1	1	0	0
	100 ppm	0	0	0	0	0	Ō	Ŏ
	200 ppm	0	0	0	0	Ö	0	0
7111100								

STUDY NO.: 0269

ANIMAL : RAT F344/DuCrj

REPORT TYPE : A1 104

SEX : FEMALE

Clinical sign	Group Name	Adminis	stration We	eek-day											
		1-1	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
XOPHTHALMOS	Control	0	0	0	1	1	1	1	1	1	1	1	1	0	0
	50 ppm	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	0
	200 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
YE OPACITY	Control	0	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	0
	100 ppm	0	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
ATARACT	Control	0	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	0
	100 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	Ŏ
	200 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	Ö
ORNEAL OPACITY	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	50 ppm	0	0	0	0	0	0	Ö	0	0	0	0	0	0	ő
	100 ppm	0	0	0	0	0	Ö	0	Ö	Ö	Ö	0	0	Ô	0
	200 ppm	0	0	0	0	0	0	0	0	0	Ö	0	Ö	Ö	0
XTERNAL MASS	Control	0	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	Ŏ
	100 ppm	0	0	0	0	0	0	0	0	Ŏ	Ö	Ö	0	Õ	Ŏ
	200 ppm	0	0	0	0	0	0	0	0	0	Ō	0	0	0	0
NTERNAL MASS	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	50 ppm	0	0	0	0	0	0	Ö	Ö	0	0	0	Ô	ő	Ő
	100 ppm	0	0	0	0	Ö	Ŏ	Ö	Ö	Ö	Õ	0	0	0	0
	200 ppm	0	0	0	0	0	Ö	Ö	0	0	ő	0	0	Ö	Ö
.PERI MOUTH	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	50 ppm	ō	ő	0	ŏ	ő	0	0	0	0	0	. 0	0	0	0
	100 ppm	ő	ő	0	Ő	0	0	0	0	0	0	0	0	0	0
	200 ppm	Ő	ŏ	ő	ő	Ö	0	0	0	0	0	0	0	0	0
ORAL CAVITY	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	50 ppm	0	Ö	0	Ö	0	0	0	0	0	0	0	0	0	0
	100 ppm	0	ő	0	Ő	0	0	0	0	0	0	0	0	0	
	200 ppm	0	0	0	0	0	0	0	0	0	0	0	0		0
	200 Pplit	v	v	v	v	V	v	v	U	v	V	V	U	0	0

ANIMAL : RAT F344/DuCrj

REPORT TYPE : A1 104

CLINICAL OBSERVATION (SUMMARY)
ALL ANIMALS

SEX : FEMALE

Clinical sign	Group Name	Admini	stration W	eek-day											
		14-7	15-7	16-7	17-7	18-7	19-7	20-7	21-7	22-7	23-7	24-7	25-7	26-7	27-7
EXOPHTHALMOS	Contral	0	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	0
	100 ppm	0	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
YE OPACITY	Control	0	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	0
	100 ppm	0	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
ATARACT	Control	0	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	0
	100 ppm	0	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
DRNEAL OPACITY	Control	0	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	Ö	0	o O
	100 ppm	0	0	0	0	0	0	0	0	0	0	Ō	0	0	0
	200 ppm	0	0	0	0	0	0	0	0	0	0	0	Ö	Ö	0
XTERNAL MASS	Control	0	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	0
	100 ppm	0	0	0	0	0	0	0	0	Ö	Ō	Ö	Ö	0	ő
	200 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
VTERNAL MASS	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	50 ppm	0	0	0	0	0	0	0	Ö	Ö	0	Õ	Ŏ	Ö	ő
	100 ppm	0	0	0	0	0	0	Ō	Ö	ŏ	0	Ö	Ö	0	0
	200 ppm	0	0	0	Ō	0	0	0	Ö	0	Ö	ő	Ö	0	0
PERI MOUTH	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	50 ppm	0	0	0	0	0	0	0	Ô	Ō	0	0	o o	Ö	ő
	100 ppm	0	0	0	0	0	Ö	Ö	Ö	Ŏ	0	0	ő	Ŏ	0
	200 ppm	0	0	0	Ö	0	0	Ö	ŏ	0	Ö	ŏ	Ö	ŏ	0
ORAL CAVITY	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	50 ppm	0	0	0	0	0	0	0	0	Ō	0	o O	Ö	0	0
	100 ppm	0	0	0	0	0	0	0	0	Ö	ő	0	0	0	0
	200 ppm	0	0	0	0	0	0	Ö	0	0	0	0	0	0	0

STUDY NO.: 0269

ANIMAL : RAT F344/DuCrj

REPORT TYPE : A1 104

SEX : FEMALE

Clinical sign	Group Name	Admini	istration W	leek-day											
		28-7	29-7	30-7	31-7	32-7	33-7	34-7	35-7	36-7	37-7	38-7	39-7	40-7	41-7
VODUTULI VOC	0	٥	•	^	•	•					_				
XOPHTHALMOS	Control	0	0	0	0	0	1	1	1	1	1	1	1	1	1
	50 ppm	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	0
	200 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
YE OPACITY	Control	0	0	0	0	0	1	1	1	1	1	1	1	1	1
	50 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	100 ppm	0	0	0	1	1	1	1	1	1	1	1	1	1	1
	200 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ATARACT	Control	0	0	0	0	0	0	1	1	1	1	1	1	1	1
	50 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	100 ppm	0	0	0	1	1	1	1	1	1	1	1	1	1	1
	200 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ORNEAL OPACITY	Control	0	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	0
	100 ppm	0	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
XTERNAL MASS	Control	0	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	0
	100 ppm	0	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
NTERNAL MASS	Control	0	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	0
	100 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	200 ppm	0	0	1	0	0	0	0	0	0	0	0	0	0	0
PERI MOUTH	Control	0	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	0
	100 ppm	0	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	Ö	0
ORAL CAVITY	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	50 ppm	0	0	Ō	Ō	Ö	Ö	0	0	Ŏ	0	0	0	0	0
	100 ppm	0	0	0	0	Ŏ	Ö	0	0	Ö	0	Ö	0	0	0
	200 ppm	Ŏ	Ô	Ö	ő	ő	0	0	0	Ö	0	0	0	0	0

STUDY NO. : 0269 ANIMAL : RAT F344/DuCrj

REPORT TYPE : A1 104

SEX : FEMALE

linical sign	Group Name	Admini	stration We	ek-day											
		42-7	43-7	44-7	45-7	46-7	47-7	48-7	49-7	50-7	51-7	52-7	53-7	54-7	55-7
OPHTHALMOS	Control	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	50 ppm	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	0
	200 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	1
E OPACITY	Control	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	50 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	100 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	200 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	1
TARACT	Control	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	50 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	100 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	200 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RNEAL OPACITY	Control	0	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	0
	100 ppm	0	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
TERNAL MASS	Control	0	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	0
	100 ppm	0	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
TERNAL MASS	Control	0	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	Ô
	100 ppm	0	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
PERI MOUTH	Control	0	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	0
	100 ppm	0	0	0	0	0	0	0	0	0	0	0	Ō	0	0
	200 ppm	0	0	0	0	0	0	0	0	0	Ö	Ö	Ŏ	ŏ	ő
ORAL CAVITY	Control	0	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	o o	0	Ö	ő
	100 ppm	0	0	Ô	0	Ö	Õ	Ŏ	Ŏ	Ö	0	Ö	0	0	0
	200 ppm	0	Ö	0	0	0	Ö	Ŏ	0	0	Ö	Ô	0	Ö	0

STUDY NO.: 0269 CLINICAL OBSERVATION (SUMMARY)
ANIMAL: RAT F344/DuC-j ALL ANIMALS

REPORT TYPE : A1 104

SEX : FEMALE PAGE : 61

Clinical sign	Group Name	Admini	stration W	eek-day											
		56-7	57-7	58-7	59-7	60-7	61-7	62-7	63-7	64-7	65-7	66-7	67-7	68-7	69-7
		·													
XOPHTHALMOS	Control	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	50 ppm	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	0
	200 ppm	1	1	0	0	0	0	0	0	0	0	0	0	0	0
YE OPACITY	Control	1	1	1	2	2	2	2	2	2	2	2	2	2	2
	50 ppm	0	0	1	1	1	1	1	1	1	2	2	2	2	2
	100 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	200 ppm	1	1	Õ	0	0	ō	0	0	Ô	Ô	Ô	0	0	0
ATARACT	Control	1	1	1	2	2	2	2	2	2	2	2	2	2	2
	50 ppm	0	Õ	1	1	1	1	1	1	1	2	2	2	2	2
	100 ppm	1	1	1	î	ī	1	î	1	1	1	1	1	1	1
	200 ppm	Ô	ō	ō	Ô	0	0	ō	0	0	Ô	0	0	0	Ô
RNEAL OPACITY	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	50 ppm	0	0	0	0	Ö	Ö	Ŏ	Ŏ	ŏ	Ô	0	Ö	0	0
	100 ppm	0	0	0	Ö	Ô	Ö	Ö	Õ	ŏ	Ö	Ö	Ö	0	0
	200 ppm	Ô	Ö	Ö	Ö	Ö	Ö	0	Ö	0	Ö	0	0	0	0
TERNAL MASS	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	50 ppm	0	0	0	0	0	0	0	0	1	2	2	1	1	0
	100 ppm	0	0	0	0	0	0	0	0	ō	0	0	0	î	1
	200 ppm	0	0	0	0	0	0	0	0	0	0	Ö	0	Ô	0
VTERNAL MASS	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	50 ppm	0	0	0	Ö	Ö	Ö	Ŏ	Ö	Ŏ	i	1	1	1	1
	100 ppm	0	0	Ō	Ö	Õ	ŏ	Ŏ	ő	ő	0	0	0	Ô	0
	200 ppm	0	0	Ô	0	ŏ	0	Ö	ő	Ö	Ö	0	Ö	0	0
PERI MOUTH	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	50 ppm	0	0	0	0	0	Ŏ	Ŏ	Ö	Ö	0	0	0	0	0
	100 ppm	Õ	Ö	ŏ	Ö	Ő	0	0	0	0	0	0	0	0	0
	200 ppm	Ö	0	0	0	0	0	0	0	0	0	0	0	0	0
ORAL CAVITY	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	50 ppm	Ô	0	ŏ	0	0	0	0	0	1	1	1	0	0	0
	100 ppm	o o	Ö	Ö	Ö	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

(HAN190)

CLINICAL OBSERVATION (SUMMARY)

ANIMAL : RAT F344/DuCrj ALL ANIMALS

REPORT TYPE : A1 104

STUDY NO.: 0269

SEX : FEMALE

Clinical sign	Group Name	Admini	stration We	ek-day _											
		70-7	71-7	72-7	73-7	74-7	75-7	76-7	77-7	78-7	79-7	80-7	81-7	82-7	83-7
KOPHTHALMOS	Control	0	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	0
	100 ppm	0	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
E OPACITY	Control	1	1	1	1	1	1	1	1	2	2	2	2	2	2
	50 ppm	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	100 ppm	1	1	1	1	1	1	1	1	1	1	2	2	2	2
	200 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TARACT	Control	1	1	1	1	1	1	1	1	2	2	2	2	2	2
	50 ppm	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	100 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	2
	200 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RNEAL OPACITY	Control	0	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	0
	100 ppm	0	0	0	0	0	0	0	0	0	0	1	1	1	0
	200 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TERNAL MASS	Control	0	0	0	0	0	0	1	1	1	0	1	1	2	2
	50 ppm	0	0	0	0	0	0	0	0	0	0	1	1	1	1
	100 ppm	1	1	1	1	1	1	1	1	1	1	2	2	2	2
	200 ppm	0	0	0	1	1	1	1	1	1	1	1	1	1	1
TERNAL MASS	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	50 ppm	1	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	0
	200 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PERI MOUTH	Control	0	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	0
	100 ppm	0	Ó	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
ORAL CAVITY	Control	0	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	0
	100 ppm	0	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

ANIMAL : RAT F344/DuCrj

REPORT TYPE : A1 104

STUDY NO. : 0269

SEX : FEMALE

PAGE: 63

Clinical sign	Group Name	Admini	stration W	eek-day											
		84-7	85-7	86-7	87-7	88-7	89-7	90-7	91-7	92-7	93-7	94-7	95-7	96-7	97-7
XOPHTHALMOS	Control	0	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	0
	100 ppm	0	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
YE OPACITY	Control	2	2	2	2	2	2	2	2	2	2	2	3	3	3
	50 ppm	2	2	2	2	2	2	2	2	2	2	2	2	2	2 .
	100 ppm	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	200 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ATARACT	Control	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	50 ppm	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	100 ppm	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	200 ppm	0	ō	0	0	0	0	ō	0	0	0	0	0	0	0
ORNEAL OPACITY	Control	0	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	0
	100 ppm	0	0	0	0	0	0	0	Ö	0	0	Ŏ	0	0	0
	200 ppm	0	Ō	0	Ō	0	0	Ö	Ö	0	Ö	Ö	0	0	ő
XTERNAL MASS	Control	2	3	3	3	3	3	3	3	2	2	2	1	2	2
	50 ppm	1	2	2	2	2	2	2	4	4	4	4	4	4	4
	100 ppm	2	2	2	2	2	2	3	3	3	3	3	3	4	5
	200 ppm	1	1	3	3	3	3	3	2	2	2	2	2	3	4
NTERNAL MASS	Control	1	0	0	0	0	1	1	2	1	2	2	1	1	1
	50 ppm	0	0	0	0	0	Õ	Ō	1	Ō	1	1	î	1	1
	100 ppm	0	Ö	0	Ŏ	0	0	0	Ô	0	Ô	0	0	0	1
	200 ppm	Ö	Ō	ŏ	Ö	1	1	1	1	1	1	1	1	1	1
.PERI MOUTH	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	50 ppm	Ō	0	Õ	Ö	Ŏ	Ŏ	0	0	0	0	Ŏ	Ő	0	0
	100 ppm	Ö	Ö	Ö	0	ő	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
ORAL CAVITY	Control	0	0	0	0	0	0	0	0 .	0	0	0	0	0	0
	50 ppm	ñ	Ö	Ö	0	0	0	0	0	0	0	0	0	0	0
	100 ppm	0	0	0	0	0	0	0	0	0		=			
	200 ppm	0	0	0	0	0	0				0	0	0	0	0
	mid nos	U	U	U	U	U	U	0	0	0	0	0	0	0	0

(HAN190)

ANIMAL : RAT F344/DuCrj

REPORT TYPE : A1 104

CLINICAL OBSERVATION (SUMMARY)
ALL ANIMALS

SEX : FEMALE

Clinical sign	Group Name	Admini	stration	Waak-day		·····		
othinoat orgi	di bap tranie	98-7	99-7	100-7	101-7	102-7	103-7	104-7
EXOPHTHALMOS	Control	0	0	0	0	0	0	0
	50 ppm	0	0	0	0	0	0	0
	100 ppm	0	0	0	0	0	0	0
	200 ppm	0	0	0	0	0	0	0
EYE OPACITY	Control	3	2	2	2	2	2	3
	50 ppm	2	2	2	2	2	2	2
	100 ppm	2	2	2	2	3	3	3
	200 ppm	0	0	0	0	0	0	0
CATARACT	Control	2	2	2	2	2	2	2
	50 ppm	2	2	2	2	2	2	2
	100 ppm	2	2	2	2	2	2	2
	200 ppm	0	0	0	0	0	0	0
	AVV PPIII	V	v	V	v	V	V	V
CORNEAL OPACITY	Control	0	0	0	0	0	0	1
	50 ppm	0	0	0	0	0	0	0
	100 ppm	0	0	0	0	1	1	1
	200 ppm	0	0	0	0	0	0	ō
DVIII V. 66	.							
EXTERNAL MASS	Control	3	3	3	3	3	4	6
	50 ppm	4	3	5	5	5	5	5
	100 ppm	6	7	7	7	10	10	12
	200 ppm	4	4	4	4	5	5	6
INTERNAL MASS	Control	1	1	0	0	0	0	0
	50 ppm	1	2	1	1	1	1	1
	100 ppm	ī	1	î	1	1	î	0
	200 ppm	1	1	î	2	1	Î	2
M.PERI MOUTH	Cantural	1	1	^	^	^	^	0
M.FEMI MOUIN	Control	1	1	0	0	0	0	0
	50 ppm	0	0	0	0	0	1	0
	100 ppm	0	0	0	0	1	0	1
	200 ppm	0	0	0	0	0	0	0
M.ORAL CAVITY	Control	0	0	0	0	0	0	0
	50 ppm	0	0	0	0	0	0	Ō
	100 ppm	0	0	0	0	0	0	Ō
	200 ppm	Ö	Ŏ	Ŏ	0	Ŏ	0	ő
	200 FF.	•	•	•	v	v	v	V
(*********			-00					

ANIMAL : RAT F344/DuCrj

REPORT TYPE: A1 104

CLINICAL OBSERVATION (SUMMARY)
ALL ANIMALS

SEX : FEMALE

linical sign	Group Name	Admini	stration We	ek-day											
		1-1	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
PERI EAR	Control	0	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	0
	100 ppm	0	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
NECK	Control	0	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	0
	100 ppm	0	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
FORLIMB	Control	0	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	0
	100 ppm	0	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
BREAST	Control	0	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	0
	100 ppm	0	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	Ō	Ō	0	Ô
ABDOMEN	Control	0	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	0
	100 ppm	0	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	Ō	Ō	0	0
ANTERIOR.DORSUM	Control	0	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	Ö	ő
	100 ppm	0	0	0	0	0	0	0	0	0	0	0	Ô	0	0
	200 ppm	0	0	0	0	0	0	0	0	0	Ö	0	0	Ö	0
HINDLIMB	Control	0	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	Ö	0	Ŏ	Ö
	100 ppm	0	0	0	0	Ō	Ö	Ö	Ö	Ö	ŏ	0	0	0	0
	200 ppm	0	Ō	Ö	0	0	0	Ö	Ö	Ö	ő	Ö	Ö	ő	0
GENITALIA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	50 ppm	0	0	0	0	0	Ö	0	Ö	Ö	Ö	0	Ö	0	0
	100 ppm	Ō	0	Ö	Ö	Ö	Ö	Ö	Ö	0	0	0	0	0	0
	200 ppm	ŏ	Ö	ŏ	ő	Ö	0	0	0	0	0	0	0	0	0
	man telu	•	•	v	v	v	v	v	v	v	V	v	V	V	U

STUDY NO. : 0269

ANIMAL : RAT F344/DuCrj

REPORT TYPE : A1 104

SEX : FEMALE

PAGE: 66

linical sign	Group Name	Admini	stration W	eek-day											
		14-7	15-7	16-7	17-7	18-7	19-7	20-7	21-7	22-7	23-7	24-7	25-7	26-7	27-7
.PERI EAR	Control	0	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	0
	100 ppm	0	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
NECK	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	mag 03	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	0
	200 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FORLIMB	Control	0	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	0
	100 ppm	0	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
BREAST	Control	0	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	0
	100 ppm	0	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
ABDONEN	Control	0	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	0
	100 ppm	0	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
ANTERIOR. DORSUM	Control	0	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	0
	100 ppm	0	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
HINDLIMB	Control	0	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	0
	100 ppm	0	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
GENITALIA	Control	0	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	0
	100 ppm	0	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

(HAN190)

ANIMAL : RAT F344/DuCrj

REPORT TYPE : A1 104

CLINICAL OBSERVATION (SUMMARY)
ALL ANIMALS

SEX : FEMALE

M.PERI EAR	Control 50 ppm 100 ppm 200 ppm Control	0 0 0 0	stration We 29-7 0 0 0	0 0	31-7	32-7	33-7	34-7	35-7	36-7	37-7	38-7	39-7	40-7	41-7
	50 ppm 100 ppm 200 ppm	0	0			٥									
	50 ppm 100 ppm 200 ppm	0	0			^									
. NECK	100 ppm 200 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0
. NECK	200 ppm	•			0	0	0	0	0	0	0	0	0	0	0
. NECK		0		0	0	0	0	0	0	0	0	0	0	0	0
. NECK	Control		0	0	0	0	0	0	0	0	0	0	0	0	0
		0	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	0
	100 ppm	0	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
FORLIMB	Control	0	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	0
	100 ppm	0	Q.	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
BREAST	Control	0	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	0
	100 ppm	0	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	Ō	Ō	0	0
ABDOMEN	Control	0	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	0
	100 ppm	0	0	0	0	0	0	0	0	0	0	0	Ō	Ō	ō
	200 ppm	0	0	0	0	0	0	0	0	0	0	0	Ō	0	0
ANTERIOR. DORSUM	Control	0	ď	0	0	0	0	0	0	0	0	0	0	0	0
	50 ppm	0	0	0	0	0	0	0	Ö	Ŏ	Ö	Ŏ	Ŏ	Ŏ	Ö
	100 ppm	0	0	0	0	0	0	0	0	0	0	Ô	Ô	0	0
	200 ppm	0	0	0	0	0	0	Ö	Ö	Ö	ő	Ö	Ö	0	0
HINDLIMB	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	50 ppm	0	0	0	0	0	Ō	0	0	0	Ô	0	Q.	0	0
	100 ppm	0	Ō	Ö	Ö	0	Ö	0	0	Ö	Ö	0	0	0	0
	200 ppm	0	0	Ö	Ö	ŏ	ő	Ö	ő	ő	ő	ő	0	0	0
GENITALIA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	50 ppm	0	0	Ö	Ö	0	0	Ö	Ö	0	0	Ô	0	0	0
	100 ppm	0	0	Ö	0	Ö	Ö	Ö	ő	0	0	0	0	0	0
	200 ppm	o o	Ö	0	ő	0	0	ő	Ŏ	0	0	0	0	0	0

ANIMAL : RAT F344/DuCrj

REPORT TYPE : A1 104

CLINICAL OBSERVATION (SUMMARY)
ALL ANIMALS

SEX: FEMALE

Clinical sign	Group Name	Admini	stration W	ek-day											
		42-7	43-7	44-7	45-7	46-7	47-7	48-7	49-7	50-7	51-7	52-7	53-7	54-7	55-7
									•						
I.PERI EAR	Control	0	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	0
	100 ppm	0	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	Ö
. NECK	Control	0	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	0
	100 ppm	0	0	0	Ö	0	0	Ö	Ö	Ö	0	0	0	0	0
	200 ppm	0	0	Ö	ŏ	Ö	Ö	Ö	0	0	0	0	0	0	0
I.FORLIMB	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	50 ppm	ő	ŏ	Ö	Ö	0	0	0	0	0	0	0	0	0	0
	100 ppm	ŏ	ő	0	0	0	0	0	0	0	0	0	0	0	0
	200 ppm	ő	0	Ö	ő	0	0	0	0	0	0	0	0	0	0
BREAST	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	50 ppm	ő	Ô	Ö	0	0	0	0	0	0	0	0	0	0	0
	100 ppm	Ö	Õ	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
I. ABDOMEN	Control	0	0	0	0	0	0	0	0	0	0	0	0	.0	0
	50 ppm	0	0	0	Ö	0	Ö	0	Ö	0	0	0	0	0	0
	100 ppm	Ö	ő	0	0	0	0	0	0	0	0	0	0	0	0
	200 ppm	Ö	ő	Ö	Ö	0	0	0	0	0	0	0	0	0	0
.ANTERIOR.DORSUM	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	50 ppm	0	Ö	0	Ö	ő	0	0	ő	0	o o	0	0	0	0
	100 ppm	0	Ŏ	ő	Ö	0	0	0	0	0	0	0	0	0	0
	200 ppm	ő	ő	ő	Ö	Ö	0	0	0	0	0	0	0	0	0
I.HINDLIMB	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	50 ppm	0	0	Ö	0	ő	0	0	0	0	0	0	0	0	0
	100 ppm	Ö	ŏ	Ö	0	0	0	0	0	0	0	0	0	0	0
	200 ppm	ő	ő	0	0	0	Ö	0	0	0	0	0	0	0	0
.GENITALIA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	50 ppm	Ö	Ö	0	ŏ	0	0	0	0	0	0	0	0	0	0
	100 ppm	ő	ŏ	0	0	0	0	0	0	0	0	0	0	0	
	200 ppm	0	0	0	0	0	0	0	0	0					0
	ZOO PPIN	v	v	v	v	v	U	U	U	U	0	0	0	0	0

ANIMAL : RAT F344/DuCrj

REPORT TYPE : A1 104

SEX : FEMALE

PAGE: 69

linical sign	Group Name	Admini	istration ₩	eek-day											
		56-7	57-7	58-7	59-7	60-7	61-7	62-7	63-7	64-7	65-7	66-7	67-7	68-7	69-7
.PERI EAR	Control	0	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	0
	100 ppm	0	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
NECK	Contral	0	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	0
	100 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	200 ppm	0	0	0	0	0	0	0	0	0	Ō	0	Ö	Ö	Ő
FORLIMB	Control	0	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	Ŏ	Ő	ő
	100 ppm	0	0	0	Ö	Ö	Ö	0	Ŏ	Ö	Ö	0	0	0	0
	200 ppm	0	0	0	ō	0	0	Ö	0	0	0	ŏ	ő	0	0
BREAST	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	50 ppm	0	0	Ô	Ŏ	Ö	ŏ	Ö	Ŏ	0	0	Õ	Ö	0	0
	100 ppm	0	0	0	0	0	0	0	Ö	ő	0	0	Ő	0	0
	200 ppm	0	Ō	0	ō	Ö	Ö	Ö	Ö	Ö	Ö	0	Ö	0	0
ABDOMEN	Control	0	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	Ö	0	Ő	0
	100 ppm	0	0	0	Ö	0	0	0	Ŏ	Ŏ	0	ő	Ö	0	0
	200 ppm	0	Ō	0	Ö	0	0	Ö	0	ő	Ö	Ö	Ö	Ö	0
ANTERIOR. DORSUM	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	50 ppm	0	0	Ö	Ŏ	Ö	Ŏ	0	ŏ	Ŏ	1	1	1	1	0
	100 ppm	0	0	0	Õ	Ö	0	0	Ŏ	0	0	Ô	0	0	0
	200 ppm	0	0	Ō	Ö	Ö	0	ő	0	Ö	0	ő	0	Ô	0
HINDLIMB	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	50 ppm	0	0	0	0	0	0	0	Ŏ	0	0	Õ	ő	0	ő
	100 ppm	0	0	0	Ö	Ŏ	0	ŏ	0	0	0	0	0	0	0
	200 ppm	0	Ö	Ö	ŏ	ő	Ö	Ö	Ö	0	0	0	0	0	0
GENITALIA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	50 ppm	0	Ō	Ō	0	0	ő	Ö	0	0	0	0	0	0	0
	100 ppm	Ō	Ö	0	Ö	0	0	0	0	0	0	0			1
															0
	200 ppm	0	0	0	0	0	0	0	0	0	0	0	0	1 0	

CLINICAL OBSERVATION (SUMMARY)

ALL ANIMALS

ANIMAL : RAT F344/DuCrj REPORT TYPE : A1 104 CLINICAL OBSERVATION (SUMMARY)
ALL ANIMALS

SEX : FEMALE

Clinical sign	Group Name	Admini	stration W	leek-day											
	a. Cap Namo	70-7	71-7	72-7	73-7	74-7	75-7	76-7	77-7	78-7	79-7	80-7	81-7	82-7	83-7
.PERI EAR	Control	0	0	0	0	0	0	0	0	0	0	0	0	1	1
	50 ppm	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	0
	200 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NECK	Control	0	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	0
	100 ppm	0	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
FORLIMB	Control	0	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	0
	100 ppm	0	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
BREAST	Control	0	0	0	0	0	0	1	1	1	0	1	1	1	1
	50 ppm	0	0	0	0	0	0	0	0	0	0	1	1	1	1
	100 ppm	0	0	0	0	0	0	0	0	0	0	1	1	1	1
	200 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ABDOMEN	Control	0	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	0
	100 ppm	0	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
ANTERIOR. DORSUM	Control	0	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	0
	100 ppm	0	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
.HINDLIMB	Control	0	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	0
	100 ppm	0	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
GENITALIA	Control	0	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	0
	100 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	200 ppm	0	0	0	1	1	1	1	1	1	1	1	1	1	1

CLINICAL OBSERVATION (SUMMARY) STUDY NO.: 0269 ALL ANIMALS

ANIMAL : RAT F344/DuCrj

REPORT TYPE : A1 104

SEX : FEMALE

Clinical sign	Group Name	Admini	stration W	eek-day											
		84-7	85-7	86-7	87-7	88-7	89-7	90-7	91-7	92-7	93-7	94-7	95-7	96-7	97-7
								·							
.PERI EAR	Control	1	1	1	1	1	1	1	1	1	1	1	0	0	0
	50 ppm	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	0
	200 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NECK	Control	0	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	0
	100 ppm	0	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	1
.FORLIMB	Control	0	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	0
	100 ppm	0	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
BREAST	Contral	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	50 ppm	1	2	2	2	2	2	2	2	2	2	2	2	2	2
	100 ppm	1	1	1	1	1	1	1	1	0	0	0	0	1	1
	200 ppm	0	0	1	1	1	1	1	1	ĺ	1	1	1	1	1
ABDOMEN	Control	0	0	0	0	0	0	0	0	0	0	0	0	1	1
	50 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	100 ppm	0	0	0	0	0	0	0	Ō	0	Ö	Ö	0	0	0
	200 ppm	0	0	1	ĺ	1	1	1	Ö	Ö	Ö	0	Ö	Ö	0
ANTERIOR. DORSUM	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	50 ppm	0	0	0	0	0	0	0	0	Ö	Ŏ	Ŏ	0	Õ	0
	100 ppm	0	0	0	0	0	0	Ŏ	0	0	0	Ö	0	0	0
	200 ppm	0	0	0	0	0	0	Ö	0	Ö	Ö	Ö	0	1	1
.HINDLIMB	Control	0	1	1	1	1	1	1	1	0	0	0	0	0	0
	50 ppm	0	0	0	0	0	0	0	ō	Ö	0	0	Õ	0	0
	100 ppm	0	0	Ō	Ö	Ö	Ö	Ŏ	0	0	ő	Ő	0	0	0
	200 ppm	Ö	Ö	Ö	Ö	ŏ	ő	0	ő	ő	Ö	0	0	0	0
GENITALIA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	50 ppm	0	0	0	Ö	0	Õ	Ŏ	2	2	2	2	2	2	2
	100 ppm	1	1	1	1	1	1	2	2	3	3	3	. 3	3	4
	200 ppm	1	1.	1	1	î	1	1	1	1	1	1	. 0	1	1

STUDY NO. : 0269 ANIMAL : RAT F344/DuCrj REPORT TYPE : A1 104

SEX : FEMALE

Clinical sign	Group Name	Adminis	stration	Week-day					
		98-7	99-7	100-7	101-7	102-7	103-7	104-7	
									
M.PERI EAR	Control	0	0	0	0	0	0	0	
	50 ppm	0	0	Ō	0	Ö	0	Ō	
	100 ppm	Ö	0	0	Ö	Ö	Ö	Ö	
	200 ppm	Ö	0	Ô	Ö	Ŏ	0	Ö	
	ZVV ppili	V	V	V	V	V	V	V	
M.NECK	Control	0	0	0	0	0	0	0	
	50 ppm	0	0	0	0	0	0	0	
	100 ppm	0	0	0	0	0	0	0	
	200 ppm	1	1	1	1	1	1	1	
M.FORLIMB	Control	0	0	0	0	0	0	0	
	50 ppm	0	0	0	0	0	0	0	
	100 ppm	0	0	0	0	0	0	1	
	200 ppm	0	0	0	0	0	0	0	
V DDD10T									
M.BREAST	Control	1	1	1	1	1	1	1	
	50 ppm	2	1	1	1	1	2	2	
	100 ppm	2	3	3	3	3	3	5	
	200 ppm	1	1	1	1	3	3	4	
M. ABDOMEN	Control	1	1	2	2	2	2	4	
······································	50 ppm	0	0	1	I	1	1		
		0	0					1	
	100 ppm			0	0	3	3	3	
	200 ppm	. 0	0	0	0	0	0	0	
M.ANTERIOR.DORSUM	Control	0	0	0	0	0	0	0	
	50 ppm	ŏ	Ö	Ö	Ŏ	0	0	Ö	
	100 ppm	0	0	0	0	0	0	0	
	200 ppm	1	1	1	1	1	1		
	ZUV PPM	1	1	1	1	1	1	1	
M.HINDLIMB	Control	0	0	0	0	0	0	0	
	50 ppm	ō	0	Ŏ	Ö	Ö	0	0	
	100 ppm	ŏ	ő	Ö	0	0	0	0	
	200 ppm	Ö	0	0	0	0	0	0	
	200 PPIII	v	v	v	v	V	V	V	
M.GENITALIA	Control	0	0	0	0	0	1	1	
	50 ppm	2	2	3	3	3	3	3	
	100 ppm	4	4	4	4	5	5	4	
	200 ppm	1	1	i	i	0	0	ō	
	200 PPIII		-		-	v	v	v	

ANIMAL : RAT F344/DuCrj

STUDY NO.: 0269

REPORT TYPE : A1 104

SEX : FEMALE `

Clinical sign	Group Name	Admini	stration We	eek-day											
		1-1	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
NEMIA	Control	0	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	0
	100 ppm	0	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
RREGULAR BREATHING	Control	0	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	0
	100 ppm	0	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
BNORMAL RESPIRATION	Control	0	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	0
	100 ppm	0	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
RADYPNEA	Control	0	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	0
	100 ppm	0	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
EEP BREATHING	Control	0	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	0
	100 ppm	0	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
HALLOW BREATHING	Control	0	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	0
	100 ppm	0	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
BNORMAL RESPIRA.SOUND	Control	0	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	0
	100 ppm	0	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	Ō	0
UBNORMAL TEMP	Control	0	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	0
	100 ppm	0	0	0	0	0	0	0	0	0	Ö	0	0	0	Ö
	200 ppm	0	0	0	0	0	0	0	0	0	Ŏ	0	0	Ô	Ö

ANIMAL : RAT F344/DuCrj

REPORT TYPE : A1 104

STUDY NO. : 0269

SEX : FEMALE

Clinical sign	Group Name	Admini	stration Wo	ek-day											
		14-7	15-7	16-7	17-7	18-7	19-7	20-7	21-7	22-7	23-7	24-7	25-7	26-7	27-7
NEM I A	Control	0	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	0
	100 ppm	0	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
REGULAR BREATHING	Control	0	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	0
	100 ppm	0	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
BNORMAL RESPIRATION	Control	0	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	0
	100 ppm	0	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
RADYPNEA	Control	0	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	0
	100 ppm	0	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
EEP BREATHING	Control	0	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	0
	100 ppm	0	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
HALLOW BREATHING	Control	0	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	0
	100 ppm	0	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
BNORMAL RESPIRA.SOUND	Control	0	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	0
	100 ppm	0	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
UBNORMAL TEMP	Control	0	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	0
	100 ppm	0	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

ANIMAL : RAT F344/DuCrj

REPORT TYPE : A1 104

CLINICAL OBSERVATION (SUMMARY) ALL ANIMALS

SEX : FEMALE

linical sign	Group Name	Admini	stration W	eek-day											
		28-7	29-7	30-7	31-7	32-7	33-7	34-7	35-7	36-7	37-7	38-7	39-7	40-7	41-7
NEMIA	Control	0	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	0
	100 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	200 ppm	0	1	1	0	0	0	0	0	0	0	0	0	0	0
REGULAR BREATHING	Control	0	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	0
	100 ppm	0	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
NORMAL RESPIRATION	Control	0	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	0
	100 ppm	0	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
RADYPNEA	Control	0	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	0
	100 ppm	0	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
EEP BREATHING	Control	0	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	0
	100 ppm	0	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
ALLOW BREATHING	Control	0	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	0
	100 ppm	0	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	Ö	0
NORMAL RESPIRA.SOUND	Control	0	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	Ô	0	Ö	Ö
	100 ppm	0	0	0	0	0	0	0	0	0	0	0	Ö	Õ	0
	200 ppm	0	0	0	0	0	0	0	0	0	Ö	Ö	Ö	Ö	0
BNORMAL TEMP	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	50 ppm	0	0	0	0	0	Ŏ	0	Ŏ	Ö	Ô	Ô	0	0	0
	100 ppm	0	0	0	0	0	Ö	Ö	Ŏ	Ö	0	Ö	0	0	0
	200 ppm	Ô	0	Ŏ	0	Ö	Ö	0	ő	0	0	0	0	0	0

ANIMAL : RAT F344/DuCrj

REPORT TYPE : A1 104

CLINICAL OBSERVATION (SUMMARY) ALL ANIMALS

SEX: FEMALE

Clinical sign INEMIA RREGULAR BREATHING	Control 50 ppm 100 ppm 200 ppm	0 0 0	stration W 43-7 0 0	44-7	45-7	46-7	477	48-7	49-7	50-7	51-7	52-7	53-7	54-7	55-7
	50 ppm 100 ppm	0		0											
	50 ppm 100 ppm	0		0											
RREGULAR BREATHING	100 ppm	-	Λ		0	0	0	0	0	0	0	0	0	0	0
RREGULAR BREATHING		0	U	0	0	0	0	0	0	0	0	0	0	0	0
RREGULAR BREATHING	200 ppm	•	0	0	0	0	0	0	0	0	0	0	0	0	0
REGULAR BREATHING		0	0	0	0	0	0	0	0	0	0	0	0	0	0
induction official trans	Control	0	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	0
	100 ppm	0	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
BNORMAL RESPIRATION	Control	0	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	0
	100 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	ō
	200 ppm	0	0	0	0	0	0	0	0	0	0	0	0	Ō	Ō
ADYPNEA	Control	0	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	Ö	Ô	0
	100 ppm	0	0	0	0	0	0	0	0	Ō	Ö	0	0	0	0
	200 ppm	0	0	0	0	0	0	0	0	0	Ö	0	Ö	Ö	0
EP BREATHING	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	50 ppm	0	0	0	0	0	0	0	0	Ō	0	0	0	Ö	0
	100 ppm	0	0	0	0	0	0	0	Ô	Ö	Ö	0	0	0	0
	200 ppm	0	0	0	0	0	0	Ö	Ō	Ō	Ö	Ö	0	ő	0
ALLOW BREATHING	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	50 ppm	0	0	0	0	0	0	0	Ô	0	Õ	Ŏ	Ô	0	0
	100 ppm	0	0	0	0	0	0	0	0	Ŏ	Ô	Ŏ	Ô	0	0
	200 ppm	0	0	0	0	0	0	0	Ö	Ö	Ö	Ö	Ö	Ö	Ő
NORMAL RESPIRA.SOUND	Control	0	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	Ö	0	0	0
	100 ppm	0	0	0	0	0	Ō	0	0	Ŏ	0	0	0	0	0
	200 ppm	0	0	0	0	Ö	0	ŏ	Ö	Ö	Ö	Ö	Ö	0	0
BNORMAL TEMP	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	50 ppm	0	0	0	0	0	0	0	Ô	Ö	Ö	0	Ö	0	0
	100 ppm	0	0	0	0	Ŏ	Ö	0	Ö	0	Ö	ő	0	0	0
	200 ppm	0	0	0	Ö	0	Ŏ	0	0	0	0	0	0	0	0

ANIMAL : RAT F344/DuCrj

REPORT TYPE : A1 104

CLINICAL OBSERVATION (SUMMARY)
ALL ANIMALS

SEX : FEMALE

Clinical sign	Group Name	Admini	stration W	eek-day											
		56-7	57-7	58-7	59-7	60-7	61-7	62-7	63-7	64-7	65-7	66-7	67-7	68-7	69-7
ANEM I A	Control	0	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	1	1	1
	100 ppm	0	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
RREGULAR BREATHING	Control	0	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	0
	100 ppm	0	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
ABNORMAL RESPIRATION	Control	0	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	i	0
	100 ppm	0	0	0	0	0	0	0	0	0	0	0	0	Ô	0
	200 ppm	0	0	0	0	0	0	0	0	0	0	0	0	Ö	0
RADYPNEA	Control	0	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	0
	100 ppm	0	0	0	0	0	0	0	0	0	0	0	Ö	0	ő
	200 ppm	0	0	0	0	0	0	0	0	0	Ö	Ö	0	Ö	0
EEP BREATHING	Control	0	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	Õ	0	0
	100 ppm	0	0	0	0	0	Ö	0	0	Ö	Ö	0	0	0	0
	200 ppm	0	0	0	0	0	Ō	Ō	0	Ö	Ö	0	0	0	0
HALLOW BREATHING	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	50 ppm	Ō	Ö	Ö	Ö	Ŏ	Ö	0	0	0	0	0	0	1	0
	100 ppm	0	0	Õ	Ö	Ö	Ö	Ö	0	Ö	0	0	0	0	0
	200 ppm	0	0	0	Ö	0	Ö	0	Ö	0	0	0	0	0	0
BNORMAL RESPIRA.SOUND	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	50 ppm	0	0	0	0	ŏ	Ŏ	0	0	0	0	0	0	0	0
	100 ppm	0	Ŏ	Ŏ	Ö	0	0	0	0	0	0	0	0	0	0
	200 ppm	ő	ő	ő	ő	Ö	0	0	0	0	0	0	0	0	0
UBNORMAL TEMP	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	50 ppm	ő	0	0	0	0	0	0	0	0	0	0	0	1	0
	100 ppm	ŏ	Ö	Ö	0	0	0	0	0	0	0	0	0	_	
	200 ppm	ő	0	Ő	0	0	0	0	0	0	0	0	0	0	0

STUDY NO. : 0269

ANIMAL : RAT F344/DuCtj REPORT TYPE : A1 104

SEX: FEMALE

Clinical sign	Group Name	Admini	istration W	eek-day											
		70-7	71-7	72-7	73–7	74-7	75-7	76-7	77-7	78-7	79-7	80-7	81-7	82-7	83-7
JEM I A	Control	٥	0		0	•	•	•	^				•		
MENTA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	50 ppm	1	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	0
	200 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	1
RREGULAR BREATHING	Control	0	0	0	0	0	0	1	0	0	0	0	0	0	0
	50 ppm	0	0	0	0	0	0	0	0	0	0	0	0	1	1
	100 ppm	0	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
BNORMAL RESPIRATION	Control	0	0	0	0	0	0	1	0	0	0	0	0	0	1
	50 ppm	0	0	0	0	0	0	0	0	0	0	0	0	1	1
	100 ppm	0	0	0	0	0	Õ	0	Ŏ	Ö	0	Ő	Ö	Ô	Ô
	200 ppm	0	0	0	0	0	0	Ö	Ö	ŏ	Ö	0	ő	Ö	0
RADYPNEA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	50 ppm	0	0	0	0	0	0	Ō	0	Ô	Ö	0	0	0	0
	100 ppm	0	0	Ö	Ö	0	ŏ	Ŏ	ő	0	Ő	0	0	0	0
	200 ppm	0	Ö	ŏ	Ö	Ö	Ö	Ö	Ö	0	0	0	0	0	0
EEP BREATHING	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	50 ppm	0	0	0	Ö	0	Ŏ	Ŏ	0	Ö	0	0	0	1	1
	100 ppm	0	0	Ö	Ô	0	0	0	0	0	0	0	0	0	1
	200 ppm	Ô	Ö	Ö	Ö	0	0	0	0	0	0	0	0	0	0 0
HALLOW BREATHING	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	^
	50 ppm	Ô	0	0	0	0	0	0	0	0	0	0	0	0	0 0
	100 ppm	Ô	0	0	0	0	0	0	0	0	0	0	-	-	
	200 ppm	0	0	0	0	0	0	0	0	0		-	0	0	0
	av ppiii	v	v	U	v	U	U	V	U	U	0	0	0	0	0
BNORMAL RESPIRA.SOUND	Control	0	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	Ö	0
	100 ppm	0	0	0	0	0	0	0	0	0	Ō	0	Ô	0	0
	200 ppm	0	0	0	0	0	0	0	0	Ō	Ö	0	Ö	Ö	0
UBNORMAL TEMP	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	50 ppm	0	0	0	0	0	Ö	Ŏ	Ö	0	ŏ	0	ő	0	0
	100 ppm	0	Ö	0	Ö	0	0	0	0	Ő	0	0	0	0	0
	200 ppm	0	Ŏ	0	Ö	ő	0	0	0	0	0	0	0	0	0

ANIMAL : RAT F344/DuCrj

REPORT TYPE : A1 104

STUDY NO.: 0269

SEX : FEMALE

linical sign	Group Name	Admini	stration W	eek-day											
		84-7	85-7	86-7	87-7	88-7	89-7	90-7	91-7	92-7	93-7	94-7	95-7	96-7	97-7
NEMIA	Control	0	0	0	0	. 0	0	0	0	1	1	1	0	0	0
	50 ppm	0	0	0	0	0	0	0	0	0	0	0	1	1	1
	100 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	200 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
REGULAR BREATHING	Control	0	0	0	0	0	0	0	0	0	0	2	1	0	0
	50 ppm	1	1	1	1	1	0	0	0	0	0	0	0	0	0
	100 ppm	0	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	Ō	0
NORMAL RESPIRATION	Control	0	0	0	0	0	0	0	0	0	0	2	1	0	0
	50 ppm	1	1	1	1	1	0	0	0	0	Ô	0	Ô	0	ő
	100 ppm	0	0	0	0	ō	Ō	0	0	0	ŏ	0	0	0	0
	200 ppm	0	0	0	0	0	Ô	Ö	Ö	Ö	ő	0	ő	ő	0
ADYPNEA	Control	0	0	0	0	0	0	0	0	0	0	2	0	0	0
	50 ppm	0	0	0	Ö	0	Ö	Õ	0	Ô	0	0	0	0	0
	100 ppm	0	0	Õ	Ö	Ŏ	0	0	0	0	0	0	0	0	0
	200 ppm	Ö	Ö	Ö	0	0	0	0	0	0	0	0	0	0	0
EP BREATHING	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	50 ppm	1	1	1	1	1	Ö	Ö	0	0	0	0	0	0	0
	100 ppm	0	Ô	0	ō	Ô	ő	0	0	Ŏ	0	0	0	0	0
	200 ppm	0	0	Ö	Ő	0	Ö	0	0	0	0	0	0	0	0
ALLOW BREATHING	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	50 ppm	0	Ŏ	Ö	0	ő	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
NORMAL RESPIRA.SOUND	Control	0	0	0	0	0	0	0	0	0	1	1	0	0	0
_	50 ppm	0	Ô	Ŏ	Ö	Ö	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	Ö	0	0	0	0	0	0	0	0	0	0	0	0 0
BNORMAL TEMP	Control	0	0	0	0	0	0	0	1	0	0	1	0	0	0
	50 ppm	o o	0	0	Ŏ	0	0	0	0	0	0	0	0	0	0
	100 ppm	0	Ö	0	0	0	Ő	0	0	0	0	0	0		
	200 ppm	0	0	0	0	0	0	0						0	0
	PAA hhiii	U	v	U	U	U	U	U	0	0	0	0	0	0	0

ANIMAL : RAT F344/DuCrj

REPORT TYPE : A1 104

CLINICAL OBSERVATION (SUMMARY)
ALL ANIMALS

SEX : FEMALE

MERITA Control 1 1 1 0 0 0 0 0 0 100 ppm 0 0 1 1 1 1 1 10 0 0 0 0 0 0 10 1 1 1 1					eek-day	u alion w	AUMITITIE	Group Name	Clinical sign
SO CEM	 104-7	1	102-7	101-7					
SO CEME 1 1 0 0 0 0 0 0 0 0		 		· · · · · · · · · · · · · · · · · · ·				· · · · · · · · · · · · · · · · · · ·	
SO DOM	0		0	0	0	1	1	Control	NEMIA
100 pcm 0						1			
REGULAR BREATHING							0	100 ppm	
SO POIM 1									
SO DOM	0		0	0	0	1	0	Control	RREGULAR BREATHING
100 pcm									
BNORMAL RESPIRATION Control									
50 ppm									
50 ppm	0		0	0	0	1	0	Control	BNORMAL RESPIRATION
100 ppm									
RADYPNEA RADYPNEA Control Do pem Control Co					-				
RADYPNEA Control 0									
SO ppm 1	V		U	1	V	V	v	avo ppiii	
50 ppm	0		0	0	0	1	0	Control	RADYPNEA
100 ppm					0	1	1	50 ppm	
200 ppm 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0						0			
SO Express SO									
SO Express SO	٥		0	0	۵	0	0	Control	EEP BREATHING
100 ppm									
ALLOW BREATHING Control 0 0 0 0 0 0 0 0 0							•		
HALLOW BREATHING Control Do ppm Do D									
SO ppin	U		U	U	U	U	v	200 PPIII	
50 ppm	0		0	0	0	0	0		HALLOW BREATHING
100 ppm					0	0	0	50 ppm	
BNORMAL RESPIRA.SOUND Control 0							0		
50 ppm									
50 ppm	0		0	0	0	0	0	Control	BNORMAL RESPIRA.SOUND
100 ppm 0 0 0 0 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									
UBNORMAL TEMP Control 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0									
50 ppm 1 1 0 0 0 0 0 0 1 100 ppm 0 0 0 0 0 1 0	V		v	v	V	v	v	200 Phili	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	0		0	0	0	1	0		UBNORMAL TEMP
100 ppm 0 0 0 0 0 1 0					0	1	1	50 ppm	
					0	0	0	100 ppm	
	0		Ö	1	0	0	0	200 ppm	

APPENDIX B 1

BODY WEIGHT CHANGES: SUMMARY, RAT: MALE

(2-YEAR STUDY)

ANIMAL : RAT F344/DuCrj UNIT : g REPORT TYPE : A1 104

SEX : MALE

BODY WEIGHT CHANGES ALL ANIMALS

(SUMMARY)

roup Name	Admin	stration	n week											
	0		1		1		2	····	3		4		5	
Control	119±	4	122±	5	149±	8	183±	10	209±	12	229±	13	246±	14
50 ppm	118±	5	122±	5	149±	7	184±	9	211±	10	234±	11	252±	11
100 ppm	119±	4	123±	5	151±	8	185±	11	211±	12	231±	13	246±	15
200 ppm	119±	4	123±	4	146土	7	177±	9**	200±	11**	216±	11**	230±	12**
							· · · · · · · · · · · · · · · · · · ·							
Significant differ	ence; *: P ≦ (0.05	**: P ≤ 0.0	1			Test of Du	nnett						
HAN260)		·				-								

ANIMAL : RAT F344/DuCrj

UNIT : g

REPORT TYPE: A1 104

SEX : MALE

BODY WEIGHT CHANGES

(SUMMARY)

ALL ANIMALS

roup Name	Admin	stration	ı week							,				
	6		7		8		9		10		11		12	
Control	264±	14	280±	13	291±	14	304±	15	314±	16	322±	17	328±	19
50 ppm	267±	12	282±	12	295±	12	306±	13	313±	14	321±	15	328±	16
100 ppm	261±	15	275±	15	287±	16	299±	15	305±	15*	313±	15*	320±	15*
200 ppm	243±	12**	257±	12**	267±	13**	278±	12**	287±	13**	295±	14**	301±	14**
							-							
Significant difference	ce; *:P≦(0.05	**: P ≤ 0.0)1			Test of Du	unnett						
HAN260)														

ANIMAL : RAT F344/DuCrj

UNIT : g
REPORT TYPE : A1 104

SEX : MALE

BODY WEIGHT CHANGES (SUMMARY)

ALL ANIMALS

PAGE: 3

Group Name	Admin	istration	week_											
	13		14		18		22		26		30		34	
Control	337±	21	344±	22	372±	18	389±	20	398±	18	403±	19	420±	22
50 ppm	338±	17	345±	18	372±	18	388±	20	397±	20	403±	22	419±	24
100 ppm	329±	16	336±	18	362±	20*	379±	19*	385±	17**	391±	19**	404±	19**
200 ppm	310±	15**	317±	15**	337±	18**	348±	18**	357±	18**	365±	20**	381±	21**
Significant differen	ce; *:P≦	0.05	**: P ≤ 0.0	1			Test of Du	nnett						
(HAN260)														

ANIMAL : RAT F344/DuCrj UNIT : g

REPORT TYPE : A1 104

SEX : MALE

BODY WEIGHT CHANGES

ALL ANIMALS

(SUMMARY)

oup Name	Admin	istration	n week											
	38		42		46		50		54		58		62	
Control	436±	22	444±	23	450±	22	454±	22	463±	23	470±	24	469±	24
50 ppm	438±	23	446±	24	449±	23	458±	24	466±	25	471±	26	474±	27
00 ppm	420±	20**	429±	19**	433±	19**	440±	19**	445±	20**	451±	21**	452±	21**
200 ppm	394±	20**	402±	20**	403±	20**	412±	21**	418±	22**	420±	21**	423±	22**
Cimificant difference	D <	0.05		01			T							
Significant difference	; *:P≦	0.05	** : P ≦ 0.	01			Test of Du	nnett						

(HAN260)

BAIS3

ANIMAL : RAT F344/DuCrj UNIT : g REPORT TYPE : A1 104

SEX : MALE

BODY WEIGHT CHANGES (SUMMARY)

ALL ANIMALS

PAGE: 5

Toup Name	Admin	istration	week											
	66		70		74		78		82		. 86		90	
Control	469±	25	470±	27	471±	25	471±	26	466±	25	464±	26	457±	28
50 ppm	476±	28	476±	31	477±	32	474±	30	474±	31	472±	29	471±	30
100 ppm	452±	20**	454±	22**	455±	22*	452±	23**	452±	42	458±	29	460±	54
200 ppm	422±	22**	425±	23**	425±	24**	424±	25**	424±	38**	428±	36**	427±	41**
Significant differen	ce; *:P≦	0.05 *	*: P ≤ 0.()1			Test of D	unnett						

(HAN260)

ANIMAL : RAT F344/DuCrj

UNIT : g
REPORT TYPE : A1 104

SEX : MALE

BODY WEIGHT CHANGES

ALL ANIMALS

(SUMMARY)

roup Name	Admin	istration	week							 	
	94		98		102		104				
Control	446±	32	432±	44	430±	37	423±	33			
50 ppm	459±	32	450±	37	441±	34	430±	41			
100 ppm	444±	31	436±	39	420±	42	417±	29			
200 ppm	421±	40**	408±	47*	405±	44*	402±	51			
		****				····				 	
Significant differen	nce; *:P≦(0.05	** : P ≦ 0.01	L			Test of D	unnett			
HAN260)									-,	 	

APPENDIX B 2

BODY WEIGHT CHANGES: SUMMARY, RAT: FEMALE

(2-YEAR STUDY)

ANIMAL : RAT F344/DuCrj

UNIT : g

REPORT TYPE : A1 104

SEX : FEMALE

BODY WEIGHT CHANGES

(SUMMARY)

ALL ANIMALS

PAGE: 7 Group Name Administration week_ 0 1 2 4 5 115± 6 Control 97± 4 99± 4 129± 6 139± 7 146± 7 154± 8 50 ppm 97± 4 99± 4 113± 6 129± 6 140土 7 148± 8 156± 9 100 ppm 97± 4 100± 4 115± 6 130± 7 141± 7 149± 7 156± 7 200 ppm 97± 4 100± 4 112± 6 126± 6 136± 6 142± 7** 148± 8** Significant difference : $*: P \leq 0.05$ $**: P \leq 0.01$ Test of Dunnett (HAN260)

ANIMAL : RAT F344/DuCrj UNIT : g REPORT TYPE : AI 104

SEX : FEMALE

BODY WEIGHT CHANGES

(SUMMARY)

ALL ANIMALS

oup Name	Admini	stration	week											
	6		7		8		9		10		11	,	12	
Control	163±	9	170±	9	176±	10	180±	10	184±	10	188±	10	190±	10
50 ppm	162±	10	170±	10	175±	10	179±	10	183±	10	188±	11	190±	10
100 ppm	162±	8	169±	8	173±	8	177±	8	180±	9	184±	9	187±	10
200 ppm	154±	8**	162±	9**	167±	9**	170±	10**	174±	10**	178±	10**	181±	10**
Significant difference ;	*: P ≤ (), 05	**: P ≤ 0.0)1			Test of D	mett						

ANIMAL : RAT F344/DuCrj

UNIT : g

REPORT TYPE: Al 104

SEX : FEMALE

BODY WEIGHT CHANGES ALL ANIMALS

(SUMMARY)

Group Name Administration week_ 18 22 13 14 26 30 34 Control 194± 11 195± 11 203± 12 211± 14 223± 12 229± 13 237± 14 50 ppm 194± 11 195± 12 204± 13 210± 13 223± 12 231 ± 13 238± 14 100 ppm 191± 10 193± 10 200± 13 207± 14 219± 13 225 ± 14 232 ± 15 200 ppm 184± 10** 184士 10** 193± 12** 200士 12** 225± 12** Significant difference; $*: P \leq 0.05$ ** : $P \le 0.01$ Test of Dunnett (HAN260)

BAIS3

ANIMAL : RAT F344/DuC-j UNIT : g REPORT TYPE : A1 104

SEX : FEMALE

BODY WEIGHT CHANGES ALL ANIMALS

(SUMMARY)

PAGE: 10

roup Name	Admin	istration	week											
	38		42	-, - , , , , , , , , , , , , , , , , , 	46		50		54		58		62	
Control	243±	14	247±	15	251±	15	259±	18	265±	19	271±	20	278±	23
50 ppm	248±	14	251±	14	257±	15	266±	16	272±	18	280±	18*	285±	18
100 ppm	238±	16	242±	16	247±	18	253±	18	259±	20	265±	23	270±	23
200 ppm	230±	12**	233±	13**	238±	12**	242±	13**	249±	17**	253±	16**	259±	18**
		5.j	* *************************************											
Significant differenc	ce; *:P≦	0.05	**: P ≤ 0.0)1			Test of Du	nnett						
IAN260)								*****						

(HANZ60)

ANIMAL : RAT F344/DuCrj

UNIT : g
REPORT TYPE : A1 104

SEX : FEMALE

BODY WEIGHT CHANGES

(SUMMARY)

ALL ANIMALS

roup Name	Admin	istration	week											
	66		70		74		78		82		86		90	
Control	285±	24	290±	25	291±	25	297±	27	300±	31	307±	30	306±	35
50 ppm	292±	20	298±	26	306±	23**	306±	22	312±	24	316±	27	322±	24*
100 ppm	276±	23	282±	24	287±	25	290±	26	294±	30	303±	24	308±	26
200 ppm	265±	18**	270±	18**	275±	18**	279±	18**	286±	20**	292±	21*	290±	27*
Significant differe	ence; *:P≦	0.05	**: P ≤ 0.0	01			Test of Du	unnett						
HAN260)					**									

ANIMAL : RAT F344/DuCrj UNIT : g

REPORT TYPE : A1 104

SEX : FEMALE

BODY WEIGHT CHANGES

(SUMMARY)

ALL ANIMALS

roup Name	Administr	ation week				
	94	98	102	104		
				······································		
Control	306± 42	311± 32	312± 33	309±	43	
50 ppm	2024 0) 000 L 07	0041 00	, , , , , , , , , , , , , , , , , , , ,	••	
	323± 29	322± 37	324± 32	322±	33	
100 ppm	310± 20	312± 29	311± 32	311±	32	
200 ppm	296士 25	5* 295± 27	299± 29	297±	31	
Significant difference	$*: P \leq 0.09$	$**: P \leq 0.01$		Test of D	unnett	
HAN260)						

APPENDIX C1

FOOD CONSUMPTION CHANGES: SUMMARY, RAT: MALE

(2-YEAR STUDY)

ANIMAL : RAT F344/DuCrj

UNIT : g REPORT TYPE : A1 104

SEX : MALE

FOOD CONSUMPTION CHANGES (SUMMARY)

ALL ANIMALS

roup Name	Administration	n week					
	1	2	3	4	5	6	7
Control	16.0± 0.9	17.2± 1.2	17.8± 1.1	17.5± 1.3	18.1± 1.2	18.6± 1.3	18.8± 1.3
50 ppm	16.2± 1.0	17.6± 1.2	18.6± 1.2**	18.5± 1.4**	18.4± 1.0	18.4± 1.2	18.7± 1.4
Mag 001	15.8± 0.9	17.9± 1.3*	18.4± 1.3*	18.0± 1.5	17.9± 1.1	17.7± 1.1**	18.2± 1.2
200 ppm	14.5± 0.8**	17.2± 1.0	17.1± 1.1**	16.5± 1.1**	16.8± 1.2**	17.2± 1.3**	17.5± 0.9**

Significant difference;	*: P ≤ 0.05	**: P ≤ 0.01		Test of Dunnett			
AN260)			****				*

ANIMAL : RAT F344/DuCrj UNIT : g REPORT TYPE : A1 104

SEX : MALE

FOOD CONSUMPTION CHANGES (SUMMARY) ALL ANIMALS

Group Name	Administration	week_					
	8	9	10	11	12	13	14
Control	18.4± 1.1	18.3± 1.3	18.8± 1.3	18.2± 1.3	17.6± 1.3	18.5± 1.3	17.7± 1.4
50 ppm	18.8± 1.2	18.4± 1.1	18.2± 1.5*	18.0± 1.4	18.0± 1.3	18.9± 1.3	18.3± 1.3
100 ppm	18.3± 1.4	18.2± 1.2	18.0± 1.2**	18.1± 1.3	17.8± 1.3	18.6± 1,2	18.3± 1.4
200 ppm	17.1± 1.3**	17.2± 1.3**	17.7± 1.1**	17.7± 1.2	17.3± 1.0	17.9± 1.1	17.2± 1.1
Significant differe	ence; *: P ≤ 0.05	**: P ≤ 0.01		Test of Dunnett			
(HAN260)							

ANIMAL : RAT F344/DuCrj UNIT : g

REPORT TYPE : A1 104

SEX : MALE

FOOD CONSUMPTION CHANGES (SUMMARY) ALL ANIMALS

PAGE: 3

TOUP Name	Administration	week					
	18	22	26	30	34	38	42
Control	17.9± 1.1	18.0± 1.1	18.0± 1.1	18.4± 1.2	18.2± 1.2	18.5± 1.1	18.8± 1.1
50 ppm	17.8± 1.3	17.8± 1.0	18.1± 1.2	18.0± 1.1	17.9± 1.2	18.0± 1.0*	18.0± 1.0**
100 ppm	17.7± 1.3	17.8± 1.0	17.8± 1.2	18.8± 1.3	17.8± 1.4	18.0± 1.2	18.3± 0.9*
200 ppm	16.8± 1.1**	17.0± 1.2**	17.3± 1.1**	18.5± 1.3	17.8± 1.1	17.4± 1.0**	18.0± 1.0**
Significant difference :	*: P ≤ 0.05	** : P ≤ 0.01		Test of Dunnett			

(HAN260)

ANIMAL : RAT F344/DuCrj

UNIT : g
REPORT TYPE : A1 104

SEX : MALE

FOOD CONSUMPTION CHANGES (SUMMARY)

ALL ANIMALS

PAGE: 4

roup Name	Administration	week					
	46	50	54	58	62	66	70
Control	18.5± 0.9	18.8± 0.9	18.7± 1.1	18.4± 1.0	18.4± 1.0	18.6± 1.0	18.7± 1.8
50 ppm	18.0± 1.0*	18.8± 1.1	18.2± 1.1	18.2± 1.2	18.5± 1.1	18.5± 1.4	18.8± 1.5
100 ppm	18.5± 0.8	18.8± 1.0	18.0± 1.0*	18.5± 1.0	18.3± 1.0	18.2± 1.0	18.9± 1.2
200 ppm	17.6± 1.0**	18.2± 1.1**	17.9± 1.1**	17.8± 1.0*	17.9± 1.0	17.9± 1.2**	18.6± 1.4
Significant difference ;	*: P ≤ 0.05	** : P ≤ 0.01		Test of Dunnett			

(HAN260)

ANIMAL : RAT F344/DuCrj

UNIT : g

REPORT TYPE: A1 104

SEX : MALE

FOOD CONSUMPTION CHANGES (SUMMARY)

ALL ANIMALS

PAGE: 5 Group Name Administration week_ 74 78 82 86 90 94 98 Control 18.7± 1.0 19.5± 1.4 18.9± 1.2 19.3± 1.3 19.4± 1.9 18.7± 1.7 18.9± 3.9 50 ppm 18.6± 1.3 19.1± 1.3 18.6± 1.5 18.6 ± 2.0 19.5± 1.8 18.4 ± 1.8 19.5± 2.1 100 ppm 19.1± 1.2 18.9± 2.0 18.9 ± 3.0 19.3± 2.1 19.5± 3.2 18.9± 2.0 19.8± 3.3 200 ppm 18.4± 1.3 18.7± 2.2 18.7± 3.1 18.9± 2.7 19.1± 3.2 19.4± 2.5 19.0± 2.7 Significant difference; $*:P \leq 0.05$ ** : $P \le 0.01$ Test of Dunnett

(HAN260)

ANIMAL : RAT F344/DuCrj UNIT : g REPORT TYPE : A1 104

SEX : MALE

FOOD CONSUMPTION CHANGES (SUMMARY)

ALL ANIMALS

SEX : MALE				PAGE: 6
Group Name	Administrati			
	102	104		
Control	19.0± 2.2	18.5± 2.8		
50 ppm	18.0± 2.8	17.7± 3.7		
100 ppm	18.6± 4.2	18.9± 2.3		
200 ppm	18.2± 3.9	18.5± 3.5		
Significant difference ;	*: P ≤ 0.05	** : P ≤ 0.01	Test of Dunnett	
(HAN260)				BAIS 3

APPENDIX C 2

FOOD CONSUMPTION CHANGES: SUMMARY, RAT: FEMALE

(2-YEAR STUDY)

ANIMAL : RAT F344/DuCrj UNIT : g

REPORT TYPE : A1 104

SEX : FEMALE

FOOD CONSUMPTION CHANGES (SUMMARY) ALL ANIMALS

PAGE: 7

oup Name	Administration	week					
	1	2	3	4	5	6	7
Cantrol	13.0± 1.0	12.9± 0.9	12.3± 1.0	12.2± 1.0	12.8± 1.0	12.9± 1.1	12.8± 1.2
50 ppm	12.5± 0.8*	13.0± 0.8	13.0± 1.2**	12.3± 1.1	12.6± 1.0	12.5± 1.0	12.8± 1.2
100 ppm	12.8± 1.0	13.7± 1.1**	13.3± 1.1**	12.5± 0.8	12.5± 1.0	12.2± 1.0**	12.5± 0.9
200 ppm	11.7± 0.8**	13.3± 0.7	12.5± 0.7	11.8± 1.0	11.8± 1.0**	12.0± 1.0**	12.7± 1.2
Significant difference	: *: P ≤ 0.05	** : $P \le 0.01$		Test of Dunnett			

(HAN260)

ANIMAL : RAT F344/DuCrj

UNIT : g
REPORT TYPE : A1 104

SEX : FEMALE

FOOD CONSUMPTION CHANGES (SUMMARY)

ALL ANIMALS

Group Name Administration week

Group Name	Administration	week						
	8	9	10	11	12	13	14	
Control	12.8± 1.0	12.6± 1.1	12.4± 1.1	12.5± 1.2	12.2± 1.1	12.7± 0.9	11.6± 1.1	
50 ppm	12.8± 1.2	11.9± 1.0**	12.2± 0.9	12.6± 1.2	12.4± 1.2	12.4± 1.1	11.7± 1.1	
100 ppm	12.2± 1.0*	11.8± 1.0**	12.0± 1.0	12.5± 1.1	12.2± 1.0	12.9± 1.1	11.8± 1.2	
200 ppm	12.6± 1.1	12.3± 1.4	12.3± 1.1	12.7± 1,2	12.1± 1.0	12.6± 1.2	11.7± 1.1	

PAGE: 8

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

(HAN260) BAIS 3

ANIMAL : RAT F344/DuCrj UNIT : g

REPORT TYPE: A1 104

SEX : FEMALE

FOOD CONSUMPTION CHANGES (SUMMARY)

ALL ANIMALS

PAGE: 9

DUP Name	Administration	week		······································	·		
	18	22	26	30	34	38	42
Control	12.0± 1.0	12.2± 0.9	13.7± 1.2	13.4± 1.2	13.1± 0.9	12.2± 0.9	13.0± 0.9
50 ppm	11.8± 1.1	11.8± 0.9*	13.6± 1.3	13.0± 1.0	12.7± 1.0	12.5± 0.8	12.6± 0.7
100 ppm	12.1± 1.3	12.1± 1.1	13.8± 1.7	13.1± 1.2	13.1± 1.0	12.2± 1.1	12.5± 1.1*
200 ppm	12.2± 1.1	12.7± 1.2	14.0± 1.7	13.6± 2.0	13.4± 1.2	12.4± 0.9	13.1± 1.0
Significant difference;	*: P ≤ 0.05	**: P ≤ 0.01		Test of Dunnett			
AN260)							

(HAN260)

ANIMAL : RAT F344/DuCrj UNIT : g

REPORT TYPE : A1 104

SEX : FEMALE

FOOD CONSUMPTION CHANGES (SUMMARY)

ALL ANIMALS

PAGE: 10

roup Name	Administration	week					
	46	50	54	58	62	66	70
Control	13.1± 0.9	14.1± 1.2	13.1± 0.9	13.2± 1.1	13.8± 1.1	14.0± 1.2	14.4± 1.2
50 ppm	13.0± 0.9	13.7± 1.2	13.0± 1.1	13.3± 0.9	13.0± 1.0**	13.5± 1.5	13.8± 2.0
100 ppm	13.1± 1.1	13.2± 1.2**	12.9± 1.2	13.0± 1.2	13.1± 1.1**	13.5± 1.0	13.9± 1.3*
200 ppm	13.2± 0.8	13.1± 0.8**	12.9± 1.9	12.9± 1.1	13.4± 1.1	13.3± 1.0**	13.9± 0.9
Significant differen	nce; *: P ≤ 0.05	**: P ≤ 0.01		Test of Dunnett			
IAN260)							

(HAN260)

ANIMAL : RAT F344/DuCrj UNIT : g

REPORT TYPE : A1 104

SEX : FEMALE

FOOD CONSUMPTION CHANGES (SUMMARY) ALL ANIMALS

PAGE: 11

Control 13.6 \pm 1.6 14.4 \pm 1.3 14.2 \pm 2.0 14.5 \pm 1.5 14.3 \pm 2.2 14.4 \pm 1.7 14.7 \pm 2.6 50 ppm 14.1 \pm 1.1 13.7 \pm 0.9 13.9 \pm 1.5 14.1 \pm 1.8 14.4 \pm 1.4 14.1 \pm 1.8 14.7 \pm 2.2 100 ppm 13.9 \pm 1.3 13.9 \pm 1.4 13.8 \pm 1.6 14.4 \pm 1.2 14.4 \pm 1.5 13.8 \pm 1.3 14.7 \pm 2.0 200 ppm 14.0 \pm 1.2 14.0 \pm 1.2 14.3 \pm 1.1 14.4 \pm 1.2 13.7 \pm 2.2 14.5 \pm 1.5 14.4 \pm 1.5	oup Name	Administration	week					
50 ppm 14.1± 1.1 13.7± 0.9 13.9± 1.5 14.1± 1.8 14.4± 1.4 14.1± 1.8 14.7± 2.2 100 ppm 13.9± 1.3 13.9± 1.4 13.8± 1.6 14.4± 1.2 14.4± 1.5 13.8± 1.3 14.7± 2.0 200 ppm 14.0± 1.2 14.0± 1.2 14.0± 1.2 14.3± 1.1 14.4± 1.2 13.7± 2.2 14.5± 1.5 14.4± 1.5		74	78	82	86	90	94	98
100 ppm 13.9± 1.3 13.9± 1.4 13.8± 1.6 14.4± 1.2 14.4± 1.5 13.8± 1.3 14.7± 2.0 200 ppm 14.0± 1.2 14.0± 1.2 14.3± 1.1 14.4± 1.2 13.7± 2.2 14.5± 1.5 14.4± 1.5	Control	13.6± 1.6	14.4± 1.3	14.2± 2.0	14.5± 1.5	14.3± 2.2	14.4± 1.7	14.7± 2.6
200 ppm 14.0± 1.2 14.0± 1.2 14.3± 1.1 14.4± 1.2 13.7± 2.2 14.5± 1.5 14.4± 1.5	50 ppm	14.1± 1.1	13.7± 0.9	13.9± 1.5	14.1± 1.8	14.4± 1.4	14.1± 1.8	14.7± 2.2
	100 ppm	13.9± 1.3	13.9± 1.4	13.8± 1.6	14.4± 1.2	14.4± 1.5	13.8± 1.3	14.7± 2.0
Significant difference; *: P ≤ 0.05 **: P ≤ 0.01 Test of Dunnett	200 ppm	14.0± 1.2	14.0± 1.2	14.3± 1.1	14.4± 1.2	13.7± 2.2	14.5± 1.5	14.4± 1.5
Significant difference; $*:P \le 0.05$ $**:P \le 0.01$ Test of Dunnett				the same particular				
	Significant differe	ence; *: P ≤ 0.05	**: $P \le 0.01$		Test of Dunnett			

(HAN260)

ANIMAL : RAT F344/DuCrj UNIT : g

REPORT TYPE : A1 104

SEX : FEMALE

FOOD CONSUMPTION CHANGES (SUMMARY)

ALL ANIMALS

Group Name	Administrati	ion week		
	102	104		
Contral	14.7± 2.3	14.5± 2.7		
50 ppm	14.5± 2.4	14.1± 2.2		
100 ppm	13.7± 2.2	13.5± 2.5		
200				
200 ppm	14.0± 1.6	14.0± 1.9		
Significant difference;	*: P ≤ 0.05	** : P ≤ 0.01	Test of Dunnett	
(HAN260)				BAIS 3

APPENDIX D1

HEMATOLOGY: SUMMARY, RAT: MALE

SEX : MALE

ANIMAL : RAT F344/DuCrj

SAMPLING DATE: 105-1

REPORT TYPE : A1

HEMATOLOGY (SUMMARY) ALL ANIMALS (105W)

NO. of RED BLOOD CELL HEMOGLOBIN HEMATOCRIT MCV PLATELET Group Name MCH MCHC 103/µl Animals 1 06/µl g/dl % f Q g/dl рg 54.2± 8.4 Control 37 7.56 ± 1.58 13.2± 3.0 $40.3 \pm$ 7.3 17.6± 2.6 $32.5\pm$ 2.4 971± 277 50 ppm 34 7.82 ± 1.92 $13.8 \pm$ 3.6 41.2± 9.0 54.1± 10.3 $17.7 \pm$ 2.0 $33.0 \pm$ 3.1 918± 281 100 ppm 33 7.39± 1.71 $12.2 \pm$ 3.4 $37.6 \pm$ 9.1 50.9± 3.5* $16.5\pm$ 1.8 $32.3 \pm$ 2.2 1126士 330 200 ppm 29 8.92± 1.39** 15.4± 2.7* 45.8± 7.3* 51.4± 2.4* 17.2± 1.2 33.5± 1.5* 839± 224 Significant difference; $*:P \leq 0.05$ ** : $P \leq 0.01$ Test of Dunnett

(HCL070)

BAIS3

ANIMAL : RAT F344/DuCrj SAMPLING DATE: 105-1

SEX : MALE

REPORT TYPE : A1

HEMATOLOGY (SUMMARY) ALL ANIMALS (105W)

PAGE: 2

Group Name	NO. of Animals	WBC 1 O³∕µ£	Dit N-BAND	fferentia	at WBC (9 N-SEG	%)	EOSINO		BASO		MONO		LYMPHO		OTHERS	
Control	37	12.98± 36.74	1±	1	54±	12	1±	1	0±	0.	5±	2	34±	10	5±	15
50 ppm	34	11.71± 27.60	1±	1	54±	10	2±	1	0±	0	5±	2	34±	8	5±	10
100 ppm	33	8.31± 2.74	1±	1	59±	12	1±	1	0±	0	5±	2	30±	11	4±	3
200 ppm	29	7.93± 3.17	1±	2	56±	9	1±	1	0±	0	6±	2**	32±	10	3±	3
Significan	nt difference	; *: P ≦ 0.05	**: P ≦	0.01	***************************************		Test	of Dunr	nett			<u> </u>				
(HCL070)																BAIS3

APPENDIX D 2

HEMATOLOGY: SUMMARY, RAT: FEMALE

ANIMAL : RAT F344/DuCrj SAMPLING DATE : 105-1 SEX : FEMALE REPOR

REPORT TYPE : A1

HEMATOLOGY (SUMMARY) ALL ANIMALS (105W)

Group Name	NO. of Animals	RED BLOOD CELL 1 O / µl	HEMOGLOBIN g∕d%	HEMATOCRIT %	MCV f l	MCH pg	MCHC g∕dl	PLATELET 1 Ο³ / μℓ
Control	35	8.12± 0.69	15.2± 1.0	43.8± 2.8	54.0± 2.5	18.7± 1.0	34.7± 1.9	630± 109
50 ppm	38	8.01± 0.74	14.7± 1.8	43.1± 4.5	53.8± 3.3	18.3± 1.6	34.0± 2.1	636± 144
100 ppm	43	7.89± 1.22	14.8± 1.9	42.9± 5.1	55.2± 6.6	19.0± 2.3	34.4± 2.5	619± 108
200 ppm	44	8.03± 1.25	14.8± 2.0	43.3± 5.6	55.1± 8.0	18.8± 2.7	34.2± 1.5	632± 139

ANIMAL : RAT F344/DuCrj SAMPLING DATE : 105-1 SEX : FEMALE REPOR

REPORT TYPE : A1

HEMATOLOGY (SUMMARY) ALL ANIMALS (105W)

Group Name	NO. of Animals	WBC 1 O³∕μℓ	Dif N-BAND	fferentia	N-SEG	6)	EOSINO		BASO		MONO		LYMPHO		OTHERS	
Control	35	4.17± 2.16	1±	1	50±	11	1±	1	0±	0	5±	2	41±	11	2±	2
50 ppm	38	4.93± 5.71	1±	1	47±	12	1±	1	0±	0	5±	2	42±	11	4±	11
100 ppm	43	7.56± 22.75	2±	2	44±	12	1±	.1	0±	0	·5±	2	44±	13	4±	13
200 ppm	44	4.80± 6.72	1±	2	46±	9	2±	1	0±	0	5±	2	44±	10	3±	10
Significan	nt difference ;	* : P ≤ 0.05	** : P ≦	0.01			Test	of Dunr	nett							
(HCL070)							······································									BAIS 3

APPENDIX E1

BIOCHEMISTRY: SUMMARY, RAT: MALE

ANIMAL : RAT F344/DuCrj

SAMPLING DATE: 105-2 SEX: MALE

REPORT TYPE : A1

BIOCHEMISTRY (SUMMARY) ALL ANIMALS (105W)

PAGE: 1

Group Name	NO. of Animals	TOTAL F	PROTEIN	aLBUMIN g∕dl		A/G RAT	10	T-BILI mg/dl		GLUCOSE mg∕dl		T-CHOLES	STEROL	TRIGLYC mg/dl	ERIDE
Control	37	6.5±	0.3	3.2±	0.2	1.0±	0.1	0.20±	0.12	148±	23	213±	58	218±	109
50 ppm	34	6.5±	0.4	3.2±	0.3	1.0±	0.1	0.31±	0.58**	148±	22	258±	72*	382±	184**
100 ppm	33	6.5±	0.5	3.1±	0.3	0.9±	0.1*	0.21±	0.08	142士	25	258±	84*	383±	243**
200 ppm	29	6.5±	0.3	3,2±	0.2	1.0±	0.1	0,23±	0.07**	150±	17	266±	84*	394±	294*

(HCL074)

ANIMAL : RAT F344/DuCrj SAMPLING DATE : 105-2

SEX : MALE

REPORT TYPE : A1

BIOCHEMISTRY (SUMMARY) ALL ANIMALS (105W)

Group Name NO. of PHOSPHOLIPID GOT GPT LDH ALP G-GTP CPK Animals mg/dl IU/l IU/l IU/l IU/l IU/Q IU/l Control 37 306± 79 $69\pm$ 55 $37 \pm$ 21 194± 137 159± 64 8± 6 92± 24 50 ppm 34 368± 95* 90± 177 49± 67 344± 938 166± 105 11± 8* 94± 57 100 ppm 33 107* 364± $57\pm$ 20 39± 18 184士 29 172± 83 加士 12 89± 21 200 ppm 29 370± 108* 74± 28 44士 15* 196± 37** $158\pm$ 86 12± 7** 80土 13**

PAGE: 2

Significant defference; $*:P \le 0.05$ $**:P \le 0.01$ Test of Durnett

(HCL074) BAIS 3

ANIMAL : RAT F344/DuCrj

SAMPLING DATE : 105-2 SEX : MALE

REPORT TYPE : A1

BIOCHEMISTRY (SUMMARY) ALL ANIMALS (105W)

PAGE: 3

roup Name	NO. of Animals	UREA N	ITROGEN	CREATIN mg/dl	INE	SODIUM mEq/Q		POTASSI mEq/		CHLORIDE mEq/0		CALCIUM mg/dl		INORGAN mg∕dl	IC PHOSPHORUS
Control	37	24.2±	6.5	0.7±	0.3	141±	1	3.7±	0.3	104±	2	10.7±	0.4	4.3±	0.8
50 ppm	34	33.0±	14.4**	1.0±	0.3**	140±	2	3.8±	0.3	102±	2*	11.1±	0.6**	5.3±	1.4**
100 ppm	33	42.1±	33.6**	1.2±	1.0**	140±	2	4.0±	0.4**	102±	3**	11.5±	1.1**	6.6±	4.0**
200 ppm	29	34.8±	20.1**	0.9±	0.6	140±	2	3.9±	0.3	101±	2**	11.1±	0.7*	6.2±	2.3**

(HCL074)

APPENDIX E2

BIOCHEMISTRY: SUMMARY, RAT: FEMALE

ANIMAL : RAT F344/DuCrj

SAMPLING DATE: 105-2

SEX : FEMALE

REPORT TYPE : A1

BIOCHEMISTRY (SUMMARY) ALL ANIMALS (105W)

Group Name NO. of TOTAL PROTEIN ALBUMIN A/G RATIO T-BILIRUBIN GLUCOSE T-CHOLESTEROL TRIGLYCERIDE Animals g/dl g/dl mg/dl mg/dl mg/dl mg/dl Control 35 6.9± 0.5 3.9± 0.3 1.3± 0.2 0.23 ± 0.31 146士 20 $184 \pm$ 98 216± 437 50 ppm 38 7.0 ± 0.4 $4.1 \pm$ 0.3* 1.4± 0.1 0.19± 0.04 144士 22 164土 41 134± 107 100 ppm 43 $6.9 \pm$ 0.4 $4.1 \pm$ 0.2* $1.4\pm$ 0.1** 0.19± 0.09 $151 \pm$ 18 148土 30* $123\pm$ 169 200 ppm 44 6.9± 0.4 4.0± 0.3 1.4± 0.1* 0.24 ± 0.40 148± 20 153± 51 107士 92* Significant defference : $*: P \leq 0.05$ ** : $P \leq 0.01$ Test of Dunnett

(HCL074)

BAIS 3

ANIMAL : RAT F344/DuCrj

SAMPLING DATE: 105-2

SEX : FEMALE

REPORT TYPE : A1

BIOCHEMISTRY (SUMMARY) ALL ANIMALS (105W)

PAGE: 5 Group Name NO. of PHOSPHOLIPID GOT GPT LDH ALP G-GTP CPK Animals mg/dl IU/Q IU/Q IU/l IU/Q IU/l IU/Q Control 35 $307 \pm$ 128 $107 \pm$ 55 $68\pm$ 33 $211 \pm$ 80 $127 \pm$ 86 $7\pm$ 6 84± 17 50 ppm 38 279± 66 $133 \pm$ 121 $71\pm$ 57 $235 \pm$ 200 $123\pm$ 66 $7\pm$ 94± 66 100 ppm 43 $257 \pm$ 55* 113± 77 $63\pm$ 29 $287 \pm$ 625 146± 75 $7\pm$ 3 96± 86 200 ppm 44 263± 92* 119± 143 61± 39 195± 111 132± 68 $6\pm$ 3 79± 53** Significant defference; $*: P \leq 0.05$ **: $P \le 0.01$ Test of Dunnett

(HCL074)

ANIMAL : RAT F344/DuCrj

SAMPLING DATE: 105-2 SEX: FEMALE

REPORT TYPE : A1

BIOCHEMISTRY (SUMMARY) ALL ANIMALS (105W)

Group Name NO. of UREA NITROGEN CREATININE SODIUM POTASSIUM CHLORIDE INORGANIC PHOSPHORUS CALCIUM Animals mg/dl mg/dl mEq/2 mE_q/ℓ mEq∕£ mg/dl mg/dl Control 35 16.8± 3.3 0.5± 0.1 $139 \pm$ 2 3.4± 0.3 101± 3 $10.5 \pm$ 0.5 $3.5\pm$ 0.8 50 ppm 38 16.1± 2.0 0.5± 0.1 140± $3.5\pm$ 0.4 102± 2 10.6± 0.4 3.7± 0.9 100 ppm 43 $17.7 \pm$ 3.0 $0.5 \pm$ 0.1 140± 2 $3.5 \pm$ 0.3 102± 2 $10.5 \pm$ 0.3 $4.0 \pm$ 0.9* 200 ppm 44 17.3± 2.6 0.5± 0.1 139± 2 $3.5\pm$ 0.3 $101 \pm$ 10.5± 0.3 $4.2 \pm$ 0.9** Significant defference : $*: P \leq 0.05$ $** : P \leq 0.01$ Test of Dunnett

(HCL074)

BAIS3

APPENDIX F 1

URINALYSIS: SUMMARY, RAT: MALE

URINALYSIS

ANIMAL : RAT F344/DuCrj

SAMPLING DATE: 106-5

SEX : MALE

REPORT TYPE : A1

roup Name	NO. of	_Hq								Prot	ein				Glu	cose	,				Ket	one	bady				Bi	liru	bin	············
	Animals	5.0	6.0	6.5	7.0	7.5	8.0	8.5	CHI	- :	± +	- 21	3+ 4+	CHI	_	± -	+ 2+	+ 3+	4+	CHI			+ 2+		4+	CHI			2+ 3-	CHI
Control	39	0	0	6	9	12	11	1		0	0	0 2	2 11 26		39	0	0 (0 0	0		38	1	0 0	0	0		39	0	0 ()
50 ppm	36	0	2	5	14	10	5	0		0	0	0 (9 27		36	0	0 (0	0		35	0	0 0	0	1		36	0	0 ()
100 ppm	33	0	1	7	14	7	4	0		0	0	0 (5 28		33	0	0 (0	0		33	0	0 0	0	0		33	0	0 ()
200 ppm	30	0	1	8	10	9	2	0		0	0	0 (8 22		30	0	0 (0	0		30	0	0 0	0	0		30	0	0 ()

PAGE: 1

(HCL101) BAIS3

URINALYSIS

ANIMAL : RAT F344/DuCrj SAMPLING DATE: 106-5

SEX : MALE

REPORT TYPE : A1

PAGE: 2 Group Name NO. of Occult blood Urobilinogen Animals $-\pm$ + 2+ 3+ CHI ± + 2+ 3+ 4+ CHI Control 39 39 0 0 0 0 39 0 0 0 0 50 ppm 36 36 0 0 0 0 36 0 0 0 0 100 ppm 33 29 4 0 0 0 * 33 0 0 0 0 200 ppm 30 30 0 0 0 0 30 0 0 0 0 Significant difference ; $*: P \leq 0.05$ ** : $P \leq 0.01$ Test of CHI SQUARE

(HCL101)

APPENDIX F 2

URINALYSIS: SUMMARY, RAT: FEMALE

URINALYSIS

ANIMAL : RAT F344/DuCrj SAMPLING DATE: 106-5

SEX : FEMALE

REPORT TYPE : A1

NO. of	pH_							Protein		Glucose	Ketone bady	Bilirubin
Animals	5,0	6.0	6.5	7.0	7.5	8.0	8.5 CHI	一 士 + 2+ 3+ 4+	CHI	- ± + 2+ 3+ 4+ CHI	- ± + 2+ 3+ 4+ CHI	- + 2+ 3+ CHI
38	0	4	5	11	13	5	0	0 0 1 2 12 23		38 0 0 0 0 0	37 1 0 0 0 0	38 0 0 0
40	0	2	3	8	21	6	0	0 1 3 9 8 19		40 0 0 0 0 0	40 0 0 0 0 0	40 0 0 0
45	0	3	6	9	14	12	1	0 7 15 9 8 6	**	45 0 0 0 0 0	45 0 0 0 0 0	45 0 0 0
44	0	5	6	12	14	6	1	0 15 12 9 7 1	**	44 0 0 0 0 0	44 0 0 0 0 0	44 0 0 0
difference	; *:	P ≦	0.08	 5	** :	: P ≦	0.01		Test o	of CHI SQUARE		
	38 40 45 44	38 0 40 0 45 0 44 0	38 0 4 40 0 2 45 0 3 44 0 5	38 0 4 5 40 0 2 3 45 0 3 6 44 0 5 6	38	Animals 5.0 6.0 6.5 7.0 7.5 38	38	Animals 5.0 6.0 6.5 7.0 7.5 8.0 8.5 CHI 38	Animals 5.0 6.0 6.5 7.0 7.5 8.0 8.5 CHI — ± + 2+ 3+ 4+ 38 0 4 5 11 13 5 0 0 0 1 2 12 23 40 0 2 3 8 21 6 0 0 1 3 9 8 19 45 0 3 6 9 14 12 1 0 7 15 9 8 6 44 0 5 6 12 14 6 1 0 15 12 9 7 1	Animals 5.0 6.0 6.5 7.0 7.5 8.0 8.5 CHI — ± + 2+ 3+ 4+ CHI 38 0 4 5 11 13 5 0 0 0 1 2 12 23 40 0 2 3 8 21 6 0 0 1 3 9 8 19 45 0 3 6 9 14 12 1 0 7 15 9 8 6 ** 44 0 5 6 12 14 6 1 0 15 12 9 7 1 **	Animals 5.0 6.0 6.5 7.0 7.5 8.0 8.5 CHI — ± + 2+ 3+ 4+ CHI — ± + 2+ 3+ 4+ CHI 38 0 4 5 11 13 5 0 0 0 1 2 12 23 38 0 0 0 0 0 0 40 0 2 3 8 21 6 0 0 1 3 9 8 19 40 0 0 0 0 0 45 0 3 6 9 14 12 1 0 7 15 9 8 6 ** 45 0 0 0 0 0 44 0 5 6 12 14 6 1 0 15 12 9 7 1 ** 44 0 0 0 0 0	Animals 5.0 6.0 6.5 7.0 7.5 8.0 8.5 CHI — ± + 2+ 3+ 4+ CHI — ± + 2+ 3+

URINALYSIS

ANIMAL : RAT F344/DuCrj

SAMPLING DATE: 106-5

SEX : FEMALE

REPORT TYPE : A1

SEX : FEMALE	REPORT	TYPE : A1			PAGE: 4
Group Name	NO. of Animals	0ccult blood - ± + 2+ 3+ CHI	Urobilinogen ± + 2+ 3+ 4+ CHI		
Control	38	37 1 0 0 0	38 0 0 0 0		
50 ppm	40	40 0 0 0 0	40 0 0 0 0		
100 ppm	45	45 0 0 0 0	45 0 0 0 0		
200 ppm	44	43 0 1 0 0	44 0 0 0 0		
Significant	difference	: *: P ≤ 0.05 **	: P ≤ 0.01	Test of CHI SQUARE	
(HCL101)		4		AND	BAIS 3

APPENDIX G1

GROSS FINDINGS: SUMMARY, RAT: MALE: ALL ANIMALS

ANIMAL : RAT F344/DuCrj REPORT TYPE : A1

SEX : MALE GROSS FINDINGS (SUMMARY) ALL ANIMALS (0-105W)

rgan	Findings	Group Name NO. of Animals	Cantrol 50 (%)	50 ppm 50 (%)	100 ppm 50 (%)	200 ppm 50 (%)
kin/app	nodule		1 (2)	2 (4)	7 (14)	3 (6)
ubcutis	mass		6 (12)	5 (10)	11 (22)	4 (8)
asal cavit	nodule		0 (0)	0 (0)	0 (0)	1 (2)
ung	red		0 (0)	1 (2)	1 (2)	1 (2)
	white zone		0 (0)	0 (0)	1 (2)	0 (0)
	brown zone		1 (2)	0 (0)	0 (0)	0 (0)
	hemorrhage		0 (0)	1 (2)	0 (0)	0 (0)
	nodule ,		0 (0)	3 (6)	5 (10)	2 (4)
	cyst		0 (0)	0 (0)	1 (2)	0 (0)
	voluminus		0 (0)	1 (2)	0 (0)	0 (0)
vmph node	enlarged		0 (0)	0 (0)	0 (0)	1 (2)
	nodule		0 (0)	0 (0)	1 (2)	0 (0)
hymus	enlarged		0 (0)	1 (2)	0 (0)	0 (0)
pleen	enlarged		4 (8)	3 (6)	2 (4)	3 (6)
	white zone		0 (0)	0 (0)	1 (2)	1 (2)
	nodule		0 (0)	1 (2)	1 (2)	0 (0)
	deformed		1 (2)	2 (4)	2 (4)	1 (2)
eart	turbid		0 (0)	0 (0)	1 (2)	0 (0)
	white zone		0 (0)	0 (0)	0 (0)	1 (2)
aliwary gl	nodule		0 (0)	0 (0)	0 (0)	1 (2)
prestomach	ulcer		1 (2)	2 (4)	0 (0)	1 (2)
stomach	ulcer		1 (2)	1 (2)	0 (0)	0 (0)

GROSS FINDINGS (SUMMARY) ALL ANIMALS (0-105W)

STUDY NO. : 0269
ANIMAL : RAT F344/DuCrj
REPORT TYPE : A1
SEX : MALE

Organ	Findings	Group Name NO. of Animals	Control 50 (%)	50 ppm 50 (%)	100 ppm 50 (%)	200 ppm 50 (%)
stomach	nodule		0 (0)	0 (0)	0 (0)	1 (2)
	ulcer		0 (0)	0 (0)	0 (0)	1 (2)
small intes	9aS		0 (0)	0 (0)	0 (0)	1 (2)
cecum	nodule		0 (0)	1 (2)	0 (0)	0 (0)
	cyst		0 (0)	0 (0)	0 (0)	1 (2)
large intes	nodule		0 (0)	0 (0)	1 (2)	0 (0)
liver	enlarged		0 (0)	1 (2)	0 (0)	0 (0)
	white patch		0 (0)	1 (2)	0 (0)	0 (0)
	white zone		0 (0)	0 (0)	0 (0)	1 (2)
	nodule		0 (0)	3 (6)	1 (2)	3 (6)
	cyst		0 (0)	0 (0)	1 (2)	0 (0)
	rough		1 (2)	0 (0)	1 (2)	0 (0)
	adhesion		0 (0)	0 (0)	0 (0)	1 (2)
	herniation		0 (0)	1 (2)	2 (4)	1 (2)
pancreas	nodule		2 (4)	0 (0)	0 (0)	1 (2)
kidney	nodule		0 (0)	2 (4)	0 (0)	0 (0)
	granular		39 (78)	40 (80)	41 (82)	38 (76)
	hydronephrosis		1 (2)	0 (0)	0 (0)	0 (0)
urin bladd	urine:marked retention		1 (2)	0 (0)	0 (0)	3 (6)
	urine:red		1 (2)	1 (2)	0 (0)	0 (0)
pituitary	enlarged		8 (16)	2 (4)	5 (10)	5 (10)
	white zone		0 (0)	0 (0)	1 (2)	0 (0)

STUDY NO. : 0269 ANIMAL : RAT F344/DuCrj

GROSS FINDINGS (SUMMARY) ALL ANIMALS (0-105W)

REPORT TYPE : A1 SEX : MALE

Organ	Findings	Group Name NO. of Animals	Control 50 (%)	50 ppm 50 (%)	100 ppm 50 (%)	200 ppm 50 (%)
pituitary	red zone		2 (4)	1 (2)	0 (0)	0 (0)
	nodule		8 (16)	4 (8)	5 (10)	3 (6)
	cyst		1 (2)	0 (0)	0 (0)	0 (0)
thyroid	enlarged		2 (4)	3 (6)	2 (4)	3 (6)
	nodule		0 (0)	0 (0)	0 (0)	1 (2)
adrenal	enlarged		0 (0)	3 (6)	1 (2)	3 (6)
testis	atrophic		3 (6)	3 (6)	4 (8)	2 (4)
	yellow		0 (0)	0 (0)	1 (2)	0 (0)
	nodule		40 (80)	44 (88)	44 (88)	43 (86)
semin ves	nodule		0 (0)	0 (0)	0 (0)	1 (2)
prostate	nodule		1 (2)	0 (0)	0 (0)	0 (0)
prep/cligl	nodule		0 (0)	0 (0)	2 (4)	1 (2)
brain	hemorrhage		1 (2)	0 (0)	0 (0)	0 (0)
	nodule		1 (2)	0 (0)	0 (0)	0 (0)
	adhesion		0 (0)	0 (0)	0 (0)	1 (2)
	soft		0 (0)	0 (0)	0 (0)	1 (2)
spinal cord	red zone		0 (0)	1 (2)	0 (0)	0 (0)
еуе	turbid		0 (0)	0 (0)	0 (0)	1 (2)
	white		2 (4)	1 (2)	1 (2)	0 (0)
Zymbalgl	nodule		1 (2)	1 (2)	3 (6)	2 (4)
muscle	nodule		1 (2)	1 (2)	0 (0)	1 (2)
pleura	nodule		0 (0)	1 (2)	0 (0)	0 (0)

ANIMAL : RAT F344/DuCrj

GROSS FINDINGS (SUMMARY) ALL ANIMALS (0-105W)

REPORT TYPE : A1

SEX : MALE

Organ	Findings	Group Name NO. of Animals	Control 50 (%)	50 ppm 50 (%)	100 ppm 50 (%)	200 ppm 50 (%)
mediastinum	nodule		0 (0)	0 (0)	0 (0)	1 (2)
	mass		0 (0)	1 (2)	0 (0)	0 (0)
peritoneum	nodule		1 (2)	2 (4)	1 (2)	3 (6)
retroperit	cyst		0 (0)	0 (0)	0 (0)	1 (2)
abdominal c	mass		0 (0)	0 (0)	0 (0)	1 (2)
	ascites		1 (2)	1 (2)	1 (2)	4 (8)
mesenterium	nodule		0 (0)	0 (0)	0 (0)	1 (2)
thoracic ca	transparent		0 (0)	0 (0)	1 (2)	0 (0)
	pleural fluid		0 (0)	3 (6)	2 (4)	2 (4)
other	hindlimb:nodule		1 (2)	1 (2)	0 (0)	0 (0)
	lower jaw:nodule		0 (0)	1 (2)	0 (0)	0 (0)
whole body	anemic		0 (0)	1 (2)	1 (2)	0 (0)

(HPT080)

APPENDIX G 2

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

GROSS FINDINGS (SUMMARY)

ANIMAL : RAT F344/DuCrj

DEAD AND MORIBUND ANIMALS (0-105W)

REPORT TYPE : A1 SEX : MALE

PAGE: 1

Group Name Control 50 ppm 100 ppm 200 ppm Organ_ Findings_ NO. of Animals 11 (%) 15 (%) 17 (%) 20 (%) skin/app nodule 1 (9) 1 (7) 1 (6) 0 (0) subcutis 0 (0) 2 (13) mass 4 (24) 2 (10) nasal cauit nodule 0 (0) 0 (0) 0 (0) 1 (5) lung red 0 (0) 1 (7) 1 (6) 1 (5) brown zone 1 (9) 0 (0) 0 (0) 0 (0) hemorrhage 0 (0) 1 (7) 0 (0) 0 (0) nodule 0 (0) 1 (7) 0 (0) 2 (10) voluminus 0 (0) 1 (7) 0 (0) 0 (0) lymph node enlarged 0 (0) 0 (0) 0 (0) 1 (5) nodule 0 (0) 0 (0) 1 (6) 0 (0) spleen entarged 2 (18) 2 (13) 2 (12) 3 (15) white zone 0 (0) 0 (0) 1 (6) 1 (5) nodule 0 (0) 1 (7) 0 (0) 0 (0) deformed 0 (0) 0 (0) 1 (6) 0 (0) turbid heart 0 (0) 0 (0) 1 (6) 0 (0) white zone 0 (0) 0 (0) 0 (0) 1 (5) salivary gl nodule 0 (0) 0 (0) 0 (0) 1 (5) forestomach ulcer 1 (9) 2 (13) 0 (0) 0 (0) gl stomach ulcer 1 (9) 1 (7) 0 (0) 0 (0) stomach ulcer 0 (0) 0 (0) 0 (0) 1 (5) small intes gas 0 (0) 0 (0) 0 (0) 1 (5) liver enlarged 0 (0) 1 (7) 0 (0) 0 (0)

ANIMAL : RAT F344/DuCrj

GROSS FINDINGS (SUMMARY)

DEAD AND MORIBUND ANIMALS (0-105W)

REPORT TYPE : A1 SEX : MALE

Organ	Findings	Group Name NO. of Animals	Control 11 (%)	50 ppm 15 (%)	100 ppm 17 (%)	200 ppm 20 (%)
liver	nodule		0 (0)	2 (13)	0 (0)	2 (10)
	adhesion		0 (0)	0 (0)	0 (0)	1 (5)
	herniation		0 (0)	0 (0)	1 (6)	1 (5)
pancreas	nodule		2 (18)	0 (0)	0 (0)	1 (5)
kidney	nodule		0 (0)	1 (7)	0 (0)	0 (0)
	granular		4 (36)	7 (47)	10 (59)	9 (45)
	hydronephrosis		1 (9)	0 (0)	0 (0)	0 (0)
urin bladd	urine:marked retention		1 (9)	0 (0)	0 (0)	3 (15)
	urine:red		1 (9)	1 (7)	0 (0)	0 (0)
pituitary	enlarged		2 (18)	0 (0)	3 (18)	4 (20)
	nodule		1 (9)	0 (0)	1 (6)	1 (5)
thyroid	enlarged		0 (0)	0 (0)	1 (6)	1 (5)
	nodule		0 (0)	0 (0)	0 (0)	1 (5)
adrenal	enlarged		0 (0)	3 (20)	0 (0)	1 (5)
testis	atrophic		1 (9)	1 (7)	2 (12)	1 (5)
	nodule		4 (36)	10 (67)	13 (76)	13 (65)
semin ves	nodule		0 (0)	0 (0)	0 (0)	1 (5)
prostate	nodule		1 (9)	0 (0)	0 (0)	0 (0)
brain	hemorrhage		1 (9)	0 (0)	0 (0)	0 (0)
	nodule		1 (9)	0 (0)	0 (0)	0 (0)
	adhesion		0 (0)	0 (0)	0 (0)	1 (5)
	soft		0 (0)	0 (0)	0 (0)	1 (5)

ANIMAL : RAT F344/DuCrj

GROSS FINDINGS (SUMMARY)

DEAD AND MORIBUND ANIMALS (0-105W)

REPORT TYPE : A1

SEX : MALE

rgan	Findings	Group Name NO. of Animals	Contral 11 (%)	50 ppm 15 (%)	100 ppm 17 (%)	200 ppm 20 (%)
pinal cord	red zone		0 (0)	1 (7)	0 (0)	0 (0)
е у е	turbid		0 (0)	0 (0)	0 (0)	1 (5)
	white		1 (9)	0 (0)	0 (0)	0 (0)
mbal gl	nodule		0 (0)	0 (0)	3 (18)	2 (10)
eura	nodule		0 (0)	1 (7)	0 (0)	0 (0)
diastinum	nodule		0 (0)	0 (0)	0 (0)	1 (5)
	mass		0 (0)	1 (7)	0 (0)	0 (0)
itoneum	nodute		1 (9)	2 (13)	1 (6)	2 (10)
lominal c	mass		0 (0)	0 (0)	0 (0)	1 (5)
	ascites		1 (9)	1 (7)	1 (6)	3 (15)
senterium	nodule		0 (0)	0 (0)	0 (0)	1 (5)
racic ca	transparent		0 (0)	0 (0)	1 (6)	0 (0)
	pleural fluid		0 (0)	2 (13)	2 (12)	2 (10)
ner	hindlimb:nodule		0 (0)	1 (7)	0 (0)	0 (0)
ole body	anemic		0 (0)	1 (7)	0 (0)	0 (0)

(HPT080)

APPENDIX G3

GROSS FINDINGS: SUMMARY, RAT: MALE: SACRIFICED ANIMALS

ANIMAL : RAT F344/DuCrj

REPORT TYPE : A1 SEX : MALE GROSS FINDINGS (SUMMARY) SACRIFICED ANIMALS (105W)

Group Name Control 50 ppm 100 ppm 200 ppm Findings_ 0rgan_ NO. of Animals 39 (%) 35 (%) 33 (%) 30 (%) skin/app nodule 0 (0) 1 (3) 6 (18) 3 (10) subcutis mass 6 (15) 3 (9) 7 (21) 2 (7) lung white zone 0 (0) 0 (0) 1 (3) 0 (0) nodule 0 (0) 2 (6) 5 (15) 0 (0) cyst 0 (0) 0 (0) 1 (3) 0 (0) thymus enlarged 0 (0) 1 (3) 0 (0) 0 (0) spleen enlarged 2 (5) 1 (3) 0 (0) 0 (0) nodule 0 (0) 0 (0) 1 (3) 0 (0) deformed 1 (3) 2 (6) 1 (3) 1 (3) forestomach ulcer 0 (0) 0 (0) 0 (0) 1 (3) stomach nodule 0 (0) 0 (0) 0 (0) 1 (3) Cecum nodule 0 (0) 1 (3) 0 (0) 0 (0) cyst 0 (0) 0 (0) 0 (0) 1 (3) large intes nodule 0 (0) 0 (0) 1 (3) 0 (0) liver white patch 0 (0) 1 (3) 0 (0) 0 (0) white zone 0 (0) 0 (0) 0 (0) 1 (3) nodule 0 (0) 1 (3) 1 (3) 1 (3) cyst 0 (0) 0 (0) 1 (3) 0 (0) rough 1 (3) 0 (0) 1 (3) 0 (0) herniation 0 (0) 1 (3) 1 (3) 0 (0) kidney nodule 0 (0) 1 (3) 0 (0) 0 (0) granular 35 (90) 33 (94) 31 (94) 29 (97)

ANIMAL : RAT F344/DuCrj REPORT TYPE : A1

GROSS FINDINGS (SUMMARY) SACRIFICED ANIMALS (105W)

SEX : MALE

0rgan	Findings	Group Name NO. of Animals	Control 39 (%)	50 ppm 35 (%)	100 ppm 33 (%)	200 ppm 30 (%)
pituitary	enlarged		6 (15)	2 (6)	2 (6)	1 (3)
	white zone		0 (0)	0 (0)	1 (3)	0 (0)
	red zone		2 (5)	1 (3)	0 (0)	0 (0)
	nodule		7 (18)	4 (11)	4 (12)	2 (7)
	cyst		1 (3)	0 (0)	0 (0)	0 (0)
thyroid	enlarged		2 (5)	3 (9)	1 (3)	2 (7)
adrena l	enlarged		0 (0)	0 (0)	1 (3)	2 (7)
testis	atrophic		2 (5)	2 (6)	2 (6)	1 (3)
	yellow		0 (0)	0 (0)	1 (3)	0 (0)
	nodule		36 (92)	34 (97)	31 (94)	30 (100)
prep/cli gl	nodule		0 (0)	0 (0)	2 (6)	1 (3)
eye	white		1 (3)	1 (3)	1 (3)	0 (0)
Zymbal gl	nodule		1 (3)	1 (3)	0 (0)	0 (0)
muscle	nodule		1 (3)	1 (3)	0 (0)	1 (3)
peritoneum	nodule		0 (0)	0 (0)	0 (0)	1 (3)
retroperit	cyst		0 (0)	0 (0)	0 (0)	1 (3)
abdominal c	ascites		0 (0)	0 (0)	0 (0)	1 (3)
thoracic ca	pleural fluid		0 (0)	1 (3)	0 (0)	0 (0)
other	hindlimb:nodule		1 (3)	0 (0)	0 (0)	0 (0)
	lower jaw:nodule		0 (0)	1 (3)	0 (0)	0 (0)
whole body	anemic		0 (0)	0 (0)	1 (3)	0 (0)

APPENDIX G4

GROSS FINDINGS: SUMMARY, RAT: FEMALE: ALL ANIMALS

STUDY NO. : 0269 ANIMAL : RAT F344/DuCrj REPORT TYPE : A1

GROSS FINDINGS (SUMMARY) ALL ANIMALS (0-105W)

SEX : FEMALE

Organ	Findings	Group Name NO. of Animals	Control 50 (%)	50 ppm 50 (%)	100 ppm 50 (%)	200 ppm 50 (%)
skin/app	nadule		0 (0)	0 (0)	1 (2)	0 (0)
subcutis	edema		0 (0)	1 (2)	0 (0)	0 (0)
	jaundice		1 (2)	0 (0)	1 (2)	0 (0)
	mass		9 (18)	10 (20)	12 (24)	8 (16)
lung	red		2 (4)	0 (0)	0 (0)	0 (0)
	red zone		0 (0)	1 (2)	0 (0)	0 (0)
	nodule		2 (4)	0 (0)	0 (0)	1 (2)
lymph node	enlarged		3 (6)	0 (0)	0 (0)	1 (2)
thymus	enlarged		0 (0)	1 (2)	0 (0)	0 (0)
spleen	enlarged		4 (8)	5 (10)	3 (6)	2 (4)
	deformed		0 (0)	1 (2)	0 (0)	0 (0)
forestomach	ulcer		1 (2)	0 (0)	0 (0)	1 (2)
liver	pale		0 (0)	0 (0)	0 (0)	1 (2)
	white zone		2 (4)	1 (2)	0 (0)	0 (0)
	red patch		0 (0)	0 (0)	0 (0)	1 (2)
	nodule		1 (2)	0 (0)	0 (0)	0 (0)
	rough		2 (4)	0 (0)	0 (0)	0 (0)
	granular		0 (0)	0 (0)	1 (2)	0 (0)
	nodular		0 (0)	0 (0)	1 (2)	0 (0)
	herniation		3 (6)	1 (2)	1 (2)	3 (6)
	accentuation of lobular structure		1 (2)	0 (0)	0 (0)	0 (0)
kidney	white zone		1 (2)	0 (0)	0 (0)	0 (0)

ANIMAL : RAT F344/DuCrj

GROSS FINDINGS (SUMMARY) ALL ANIMALS (0-105W)

REPORT TYPE : A1

SEX : FEMALE

rgan	Findings	Group Name NO. of Animals	Control 50 (%)	50 ppm 50 (%)	100 ppm 50 (%)	200 ppm 50 (%)
idney	nodule		0 (0)	0 (0)	0 (0)	1 (2)
	cyst		0 (0)	2 (4)	0 (0)	1 (2)
	deformed		1 (2)	0 (0)	0 (0)	0 (0)
	granular		17 (34)	16 (32)	8 (16)	4 (8)
rin bladd	urine:marked retention		0 (0)	1 (2)	0 (0)	0 (0)
ituitary	enlarged		10 (20)	10 (20)	9 (18)	7 (14)
	white zone		0 (0)	1 (2)	0 (0)	0 (0)
	red zone		5 (10)	2 (4)	3 (6)	1 (2)
	nodule		10 (20)	8 (16)	10 (20)	8 (16)
yroid	enlarged		1 (2)	0 (0)	1 (2)	0 (0)
	nodule		0 (0)	1 (2)	1 (2)	0 (0)
drena l	enlarged		1 (2)	0 (0)	0 (0)	1 (2)
Jary	enlarged		0 (0)	0 (0)	0 (0)	2 (4)
	cyst		0 (0)	2 (4)	0 (0)	0 (0)
terus	atrophic		0 (0)	1 (2)	0 (0)	0 (0)
	nodule		5 (10)	8 (16)	6 (12)	6 (12)
	cyst		2 (4)	0 (0)	0 (0)	0 (0)
agina	nadule		0 (0)	0 (0)	0 (0)	1 (2)
ep/cligl	nodute		0 (0)	0 (0)	2 (4)	0 (0)
ain	red zone		0 (0)	1 (2)	0 (0)	0 (0)
	black zone		1 (2)	0 (0)	0 (0)	0 (0)
	hemorrhage		0 (0)	0 (0)	0 (0)	1 (2)

ANIMAL : RAT F344/DuCrj

GROSS FINDINGS (SUMMARY) ALL ANIMALS (0-105W)

REPORT TYPE : A1

SEX : FEMALE

PAGE: 7

Organ	Findings_	Group Name Control NO. of Animals 50 (%)	50 ppm 50 (%)	100 ppm 50 (%)	200 ppm 50 (%)
spinal cord	red zone	0 (0)	1 (2)	0 (0)	0 (0)
еуе	white	3 (6)	2 (4)	3 (6)	1 (2)
eritoneum	nodule	0 (0)	0 (0)	1 (2)	0 (0)
etroperit	mass	2 (4)	0 (0)	0 (0)	0 (0)
xdominal c	hemorrhage	0 (0)	0 (0)	1 (2)	0 (0)
	ascites	1 (2)	0 (0)	0 (0)	1 (2)
oracic ca	pleural fluid	1 (2)	1 (2)	0 (0)	2 (4)
her	forelimb:nodule	0 (0)	0 (0)	1 (2)	0 (0)
	hindlimb:nodule	1 (2)	0 (0)	1 (2)	0 (0)
nale body	anemic	0 (0)	2 (4)	0 (0)	1 (2)

(HPT080)

BAIS 3

APPENDIX G 5

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

ANIMAL : RAT F344/DuCrj

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

REPORT TYPE : A1
SEX : FEMALE

rgan	Findings	Group Name Control NO. of Animals 12 (%)	50 ppm 10 (%)	100 ppm 5 (%)	200 ppm 6 (%)
kin/app	nodule	0 (0)	0 (0)	1 (20)	0 (0)
ubcutis	edema	0 (0)	1 (10)	0 (0)	0 (0)
	jaundice	1 (8)	0 (0)	1 (20)	0 (0)
	mass	1 (8)	3 (30)	1 (20)	2 (33)
ung	red	2 (17)	0 (0)	0 (0)	0 (0)
	red zone	0 (0)	1 (10)	0 (0)	0 (0)
	nodule	2 (17)	0 (0)	0 (0)	1 (17)
ymph nade	enlarged	3 (25)	0 (0)	0 (0)	1 (17)
nymus	enlarged	0 (0)	1 (10)	0 (0)	0 (0)
leen	enlarged	4 (33)	5 (50)	1 (20)	1 (17)
	deformed	0 (0)	1 (10)	0 (0)	0 (0)
orestomach	ulcer	1 (8)	0 (0)	0 (0)	1 (17)
iver	pale	0 (0)	0 (0)	0 (0)	1 (17)
	white zone	2 (17)	0 (0)	0 (0)	0 (0)
	red patch	0 (0)	0 (0)	0 (0)	1 (17)
	rough	2 (17)	0 (0)	0 (0)	0 (0)
	granular	0 (0)	0 (0)	1 (20)	0 (0)
	herniation	0 (0)	1 (10)	0 (0)	0 (0)
idney	white zone	1 (8)	0 (0)	0 (0)	0 (0)
	nodute	0 (0)	0 (0)	0 (0)	1 (17)
	deformed	1 (8)	0 (0)	0 (0)	0 (0)
	granular	0 (0)	0 (0)	2 (40)	0 (0)

ANIMAL : RAT F344/DuCrj GROSS FINDINGS (SUMMARY)

REPORT TYPE : A1 SEX

: FEMALE

DEAD AND MORIBUND ANIMALS (0-105W)

Group Name Control 50 ppm 100 ppm 200 ppm Findings_ 0rgan_ NO. of Animals 12 (%) 10 (%) 5 (%) 6 (%) urin bladd urine:marked retention 0 (0) 1 (10) 0 (0) 0 (0) pituitary enlarged 4 (33) 2 (20) 3 (60) 1 (17) red zone 1 (8) 1 (10) 1 (20) 0 (0) thyroid enlarged 1 (8) 0 (0) 0 (0) 0 (0) adrenal enlarged 1 (8) 0 (0) 0 (0) 0 (0) ovary enlarged 0 (0) 0 (0) 0 (0) 1 (17) uterus atrophic 0 (0) 1 (10) 0 (0) 0 (0) nodule 3 (25) 1 (10) 1 (20) 1 (17) vagina nodule 0 (0) 0 (0) 0 (0) 1 (17) brain red zone 0 (0) 1 (10) 0 (0) 0 (0) black zone 1 (8) 0 (0) 0 (0) 0 (0) hemorrhage 0 (0) 0 (0) 0 (0) 1 (17) spinal cord red zone 0 (0) 1 (10) 0 (0) 0 (0) еуе white 0 (0) 0 (0) 0 (0) 1 (17) peritoneum nodule 0 (0) 0 (0) 1 (20) 0 (0) retroperit mass 2 (17) 0 (0) 0 (0) 0 (0) abdominal c hemorrhage 0 (0) 0 (0) 1 (20) 0 (0) ascites 1 (8) 0 (0) 0 (0) 1 (17) thoracic ca pleural fluid 1 (8) 1 (10) 0 (0) 2 (33) other hindlimb:nodule 1 (8) 0 (0) 0 (0) 0 (0) whate body anemic 0 (0) 2 (20) 0 (0) 1 (17)

APPENDIX G6

GROSS FINDINGS: SUMMARY, RAT: FEMALE: SACRIFICED ANIMALS

ANIMAL : RAT F344/DuCrj

REPORT TYPE : A1

SEX : FEMALE

GROSS FINDINGS (SUMMARY) SACRIFICED ANIMALS (105W)

rgan	Findings	Group Name NO. of Animals	Control 38 (%)	50 ppm 40 (%)	100 ppm 45 (%)	200 ppm 44 (%)
ubcutis	mass		8 (21)	7 (18)	11 (24)	6 (14)
pleen	enlarged		0 (0)	0 (0)	2 (4)	1 (2)
iver	white zone		0 (0)	1 (3)	0 (0)	0 (0)
	nadule		1 (3)	0 (0)	0 (0)	0 (0)
	nodular		0 (0)	0 (0)	1 (2)	0 (0)
	herniation		3 (8)	0 (0)	1 (2)	3 (7)
	accentuation of lobular structure		1 (3)	0 (0)	0 (0)	0 (0)
idney	cyst		0 (0)	2 (5)	0 (0)	1 (2)
	granular		17 (45)	16 (40)	6 (13)	4 (9)
ituitary	enlarged		6 (16)	8 (20)	6 (13)	6 (14)
	white zone		0 (0)	1 (3)	0 (0)	0 (0)
	red zone		4 (11)	1 (3)	2 (4)	1 (2)
	nodule		10 (26)	8 (20)	10 (22)	8 (18)
nyroid	enlarged		0 (0)	0 (0)	1 (2)	0 (0)
	nodule		0 (0)	1 (3)	1 (2)	0 (0)
drenal	enlarged		0 (0)	0 (0)	0 (0)	1 (2)
vary	enlarged		0 (0)	0 (0)	0 (0)	1 (2)
	cyst		0 (0)	2 (5)	0 (0)	0 (0)
terus	nodule		2 (5)	7 (18)	5 (11)	5 (11)
	cyst		2 (5)	0 (0)	0 (0)	0 (0)
ep/cligl	nodule		0 (0)	0 (0)	2 (4)	0 (0)
е	white		3 (8)	2 (5)	3 (7)	0 (0)

ANIMAL : RAT F344/DuCrj REPORT TYPE : A1

GROSS FINDINGS (SUMMARY) SACRIFICED ANIMALS (105W)

: FEMALE SEX

Organ	Findings_	Group Name NO. of Animals	Control 38 (%)	50 ppm 40 (%)	100 ppm 45 (%)	200 ppm 44 (%)
other	forelimb:nodule		0 (0)	0 (0)	1 (2)	0 (0)
	hindlimb:nodule		0 (0)	0 (0)	1 (2)	0 (0)
(HPT080)			· · · · · · · · · · · · · · · · · · ·			BAIS 3

APPENDIX H 1

ORGAN WEIGHT, ABSOLUTE: SUMMARY, RAT: MALE

ANIMAL : RAT F344/DuCrj REPORT TYPE : A1

SEX : MALE UNIT: g

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

PAGE: 1

										<u> </u>		
39	392±	34	0.082±	0.014	4.730±	2.001	1.340±	0.395	1.543±	0.360	3.004±	0.279
35	403±	32	0.089±	0.028	5.150±	2.230	1.307±	0.193	1.581±	0.384	3.220±	0.439
33	385±	31	0.091±	0.024	6.269±	3.664	1.354±	0.173	1.540±	0.172	3.365±	0.416**
30	377±	51	0.108±	0.087	6.200±	2.028**	1.290±	0.147	1.649±	0.541	3.172±	0.356
_	35 33	35 403± 33 385±	35 403± 32 33 385± 31	35 403± 32 0.089± 33 385± 31 0.091±	35 403± 32 0.089± 0.028 33 385± 31 0.091± 0.024	35 403± 32 0.089± 0.028 5.150± 33 385± 31 0.091± 0.024 6.269±	35 403± 32 0.089± 0.028 5.150± 2.230 33 385± 31 0.091± 0.024 6.269± 3.664	35 403± 32 0.089± 0.028 5.150± 2.230 1.307± 33 385± 31 0.091± 0.024 6.269± 3.664 1.354±	35 403± 32 0.089± 0.028 5.150± 2.230 1.307± 0.193 33 385± 31 0.091± 0.024 6.269± 3.664 1.354± 0.173	35 403± 32 0.089± 0.028 5.150± 2.230 1.307± 0.193 1.581± 33 385± 31 0.091± 0.024 6.269± 3.664 1.354± 0.173 1.540±	35 403± 32 0.089± 0.028 5.150± 2.230 1.307± 0.193 1.581± 0.384 33 385± 31 0.091± 0.024 6.269± 3.664 1.354± 0.173 1.540± 0.172	35

ANIMAL : RAT F344/DuCrj

REPORT TYPE : A1
SEX : MALE

SEX : MAL UNIT: g ORGAN WEIGHT: ABSOLUTE (SUMMARY) SURVIVAL ANIMALS (105W)

UNIT: g								PAGE: 2
Group Name	NO. of Animals	SPLEE	EN	LIVI	ER	BRA	I N	
Control	39	1.403±	1.868	12.744±	1.741	2.016±	0.061	
50 ppm	35	1.279± (0.882	13.940±	1.692**	1.994±	0.051	
100 ppm	33	1.143± (0.266	14.574±	1.623**	1.970±	0.059**	
200 ppm	30	1.082± (0.356	14.473±	3.532**	1.898±	0.176**	
Significar	nt difference;	*: P ≤ 0.05	i **	: P ≤ 0.01		<u> </u>	Test of Dunnett	
(HCL040)	·							BAIS 3

APPENDIX H 2

ORGAN WEIGHT, ABSOLUTE: SUMMARY, RAT: FEMALE

ANIMAL : RAT F344/DuCrj

REPORT TYPE : A1 SEX : FEMALE UNIT: g

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

PAGE: 3

roup Name	NO. of Animals	Body (Weight	ADRE	IALS	OVAR	IES	HEAR	[LUNG	S	K I DNI	EYS
Control	38	288±	43	0.076±	0.009	0.128±	0.020	0.937±	0.071	1.073±	0.132	2.075±	0.201
50 ppm	40	302±	34	0.078±	0.007	0.175±	0.253	0.929±	0.072	1.073±	0.087	2.026±	0.163
100 ppm	45	293±	31	0.074±	0.008	0.132±	0.023	0.943±	0.093	1.082±	0.161	1.912±	0.166**
200 ppm	44	279±	31	0.102±	0.179	0.809±	4.479	0.903±	0.072	1.101±	0,335	1.863±	0.155**

(HCL040)

BAIS 3

ANIMAL : RAT F344/DuCrj

REPORT TYPE : A1 SEX : FEMALE UNIT: g ORGAN WEIGHT: ABSOLUTE (SUMMARY)
SURVIVAL ANIMALS (105W)

roup Name	NO. of	SPLEEN	LIVER	BRAIN	
	Animals				
Control	38	0.589± 0.277	7.973± 1.604	1.810± 0.036	
50 ppm	40	0.638± 0.342	7.942± 1.381	1.807± 0.038	
100 ppm	45	0.752± 0.938	7.476± 1.265	1.820± 0.046	
200 ppm	44	0.732± 1.350	7.550± 1.172	1.779± 0.053**	
Significan	nt difference;	*: P ≤ 0.05 **	: P ≤ 0.01	Test of Dunnett	
ICL040)	· · · · · · · · · · · · · · · · · · ·		7777	·	BAIS

APPENDIX I1

ORGAN WEIGHT, RELATIVE: SUMMARY, RAT: MALE

ANIMAL : RAT F344/DuCrj

REPORT TYPE : A1 SEX : MALE UNIT: % ORGAN WEIGHT: RELATIVE (SUMMARY)
SURVIVAL ANIMALS (105W)

PAGE: 1

392± 34	0.021± 0.004	1.200± 0.479	0.343± 0.101	0.395± 0.093	0.000 0.100
400.1 00				0.000 I 0.000	0.772± 0.109
403± 32	0.022± 0.009	1.272± 0.534	0.328± 0.070	0.400± 0.139	0.807± 0.159
385± 31	0.024± 0.007	1.636± 1.033*	0.354± 0.057	0.403± 0.061	0.878± 0.127**
377± 51	0.031± 0.033	1.650± 0.510**	0.352± 0.088	0.458± 0.241	0.853± 0.123*
	377± 51	377± 51 0.031± 0.033	377± 51 0.031± 0.033 1.650± 0.510**	377± 51 0.031± 0.033 1.650± 0.510** 0.352± 0.088	377± 51 0.031± 0.033 1.650± 0.510** 0.352± 0.088 0.458± 0.241

(IICL042)

BAIS 3

STUDY NO. : 0269 ANIMAL : RAT F344/DuCrj

REPORT TYPE : A1 SEX : MALE UNIT: %

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

PAGE: 2

roup Name	NO. of Animals	SPLEEN	LIVER	BRAIN	
Control	39	0.354± 0.453	3.261± 0.429	0.518± 0.053	
50 ppm	35	0.323± 0.255	3.475± 0.466	0.498± 0.052	
100 ppm	33	0.297± 0.068*	3.791± 0.370**	0.514± 0.035	
200 ppm	30	0.286± 0.079	3.871± 0.896**	0.513± 0.089	

(HCL042)

BAIS 3

APPENDIX I 2

ORGAN WEIGHT, RELATIVE: SUMMARY, RAT: FEMALE

ANIMAL : RAT F344/DuC-j REPORT TYPE : A1

SEX: FEMALE UNIT: %

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

PAGE: 3

iroup Name	NO. of Animals	Body Wei (g		ADRENALS	OVARIES	HEART	LUNGS	KIDNEYS	
Control	38	288± 4	3	0.027± 0.008	0.046± 0.010	0.335± 0.086	0.388± 0.142	0.737± 0.152	
50 ppm	40	302± 3	34	0.026± 0.005	0.057± 0.075	0.310± 0.037	0.359± 0.048	0.677± 0.087*	
100 ppm	45	293± 3	31	0.025± 0.003	0.045± 0.008	0.324± 0.037	0.372± 0.071	0.655± 0.050**	
200 ppm	44	279± 3	31	0.039± 0.081	0.275± 1.502	0.327± 0.047	0.402± 0.168	0.674± 0.094**	
Significar	nt difference;	* : P ≤ 0.05	*	* : P ≤ 0.01	Tes	st of Dunnett			
HCL042)									BA

STUDY NO.: 0269 ANIMAL: RAT F344/DuCrj

REPORT TYPE : AI
SEX : FEMALE
UNIT: %

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

Group Name	NO. of Animals	SPLEEN	LIVER	BRAIN	
Control	38	0.206± 0.086	2.812± 0.681	0.644± 0.123	
50 ppm	40	0.214± 0.119	2.638± 0.424	0.606± 0.079*	
100 ppm	45	0.262± 0.340	2.552± 0.368*	0.627± 0.061	
200 ppm	44	0.283± 0.617	2.732± 0.554	0.644± 0.077	
Significan	t difference;	*: P ≤ 0.05 **:	P ≤ 0.01	Test of Dunnett	
(HCL042)					BAIS

APPENDIX J1

HISTOLOGICAL FINDINGS: NON-NEOPLASTIC LESIONS: SUMMARY, RAT: MALE: ALL ANIMALS (2-YEAR STUDY)

STUDY NO. : 0269 ANIMAL : RAT F344/DuCrj

HISTOLOGICAL FINDINGS : NON-NEOPLASTIC LESIONS (SUMMARY)

ALL ANIMALS (0-105W)

REPORT TYPE : A1

SEX : MALE

0rgan	Group Name No. of Ani Grade Findines	Control mals on Study 50 1 2 3 4 (%) (%) (%) (%)	50 ppm 50 1 2 3 4 (%) (%) (%) (%)	100 ppm 50 1 2 3 4 (%) (%) (%) (%)	200 ppm 50 1 2 3 4 (%) (%) (%) (%)
[Integumentar	y system/appandage]				
skin/app	cyst	<50> 0 0 0 0 (0) (0) (0) (0)	(50) 0 0 0 0 (0) (0) (0) (0)	(50) 0 0 0 0 (0) (0) (0) (0)	(50) 1 0 0 0 (2) (0) (0) (0)
	inflammation	1 0 0 0 0 (2) (0) (0) (0)	0 0 0 0 0 (0) (0)	1 0 0 0 0 (2) (0) (0) (0)	0 0 0 0 0 (0) (0)
	hyperplasia:epidermis	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 (2) (0) (0) (0)
	epidermal cyst	1 0 0 0 0 (2) (0) (0)	0 0 0 0 0 (0) (0)	0 0 0 0 0 (0) (0)	2 0 0 0 0 (4) (0) (0) (0)
subcutis	abscess	<50> 0 0 0 0 (0) (0) (0) (0)	(50) 0 0 0 0 (0) (0) (0) (0)	(50) 1 0 0 0 (2) (0) (0) (0)	(50) 0 0 0 0 (0) (0) (0) (0)
[Respiratory	system]				
nasal cavit	thrombus	<50> 1 2 0 0 (2) (4) (0) (0)	(50) 1 2 2 0 (2) (4) (4) (0)	(50) 1 0 1 0 (2) (0) (2) (0)	(50) 0 1 1 0 (0) (2) (2) (0)
Grade <a>\ a > b \ (c) Significant of	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; $*: P \le 0.05$ **: $P \le 0.01$	4 : Severe Lest of Chi Square			

(HPT150)

BAIS3

ANIMAL : RAT F344/DuCrj

HISTOLOGICAL FINDINGS : NON-NEOPLASTIC LESIONS (SUMMARY)

ALL ANIMALS (0-105W)

REPORT TYPE : A1 SEX : MALE

PAGE: 2

Organ		Out Name Control of Animals on Study 50 ide 1 2 3 4 (%) (%) (%) (%) (%)	50 ppm 50 1 2 3 4 (%) (%) (%) (%)	100 ppm 50 1 2 3 4 (%) (%) (%) (%)	200 ppm 50 1 2 3 4 (%) (%) (%) (%)
[Respiratory	system]				
nasal cavit	eosinophilic change:olfactory epithelium	\(\langle 50 \rangle \) 22 6 0 0 (44) (12) (0) (0)	<pre></pre>	<pre></pre>	<pre></pre>
	inflammation:foreign body	12 6 0 0 (24) (12) (0) (0)	21 1 0 0 * (42) (2) (0) (0)	18 3 1 0 (36) (6) (2) (0)	12 4 1 0 (24) (8) (2) (0)
	respiratory metaplasia:olfactory epithel	4 0 0 0 (8) (0) (0) (0)	4 0 0 0 0 (8) (0) (0) (0)	2 0 0 0 0 (4) (0) (0) (0)	4 0 0 0 0 (8) (0) (0) (0)
	necrosis:olfactory epithelium	0 0 0 0 0 (0) (0)	0 0 0 0 0 (0) (0)	2 0 0 0 0 (4) (0) (0) (0)	2 0 0 0 0 (4) (0) (0) (0)
lung	congestion	(50) 0 0 0 0 (0) (0) (0) (0)	\(\langle 50 \rangle \) \[1 0 0 \\ (2) (0) (0) (0) \]	<50> 1 0 0 0 (2) (0) (0) (0)	(50) 1 0 0 0 (2) (0) (0) (0)
	hemorrhage	0 0 0 0 0 (0) (0)	1 0 0 0 0 (2) (0) (0)	0 0 0 0 0 (0) (0)	0 0 0 0 0 (0) (0)
	inflammation	0 0 0 0 0 (0) (0)	1 0 0 0 (2) (0) (0) (0)	1 1 0 0 (2) (2) (0) (0)	1 0 0 0 0 (2) (0) (0) (0)
	bronchiolar-alveolar cell hyperplasia	2 0 0 0 0 (4) (0) (0) (0)	2 0 0 0 0 (4) (0) (0) (0)	3 1 0 0 (6) (2) (0) (0)	1 0 0 0 0 (2) (0) (0) (0)

< 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

ANIMAL : RAT F344/DuCrj

REPORT TYPE : A1 SEX : MALE

HISTOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY) ALL ANIMALS (0-105W)

PAGE: 3

0rgan	Findings	Group Name Control No. of Animals on Study 50 Grade 1 2 3 4 (%) (%) (%) (%)	50 ppm 50 1 2 3 4 (%) (%) (%) (%)	100 ppm 50 1 2 3 4 (%) (%) (%) (%)	200 ppm 50 1 2 3 4 (%) (%) (%) (%)
[Hematopoieti	c system]				
bone marrow	necrosis	(50) 0 0 0 0 (0) (0) (0) (0		<50> 0 0 0 0 (0) (0) (0) (0)	(50) 0 0 0 0 (0) (0) (0) (0)
	fibrosis	0 0 0 0 (0 0 0 0	1 0 0 0 (2) (0) (0) (0)	0 0 0 0 0 (0) (0)
	increased hematopoiesis	1 0 0 0 (0 0 0 0 0 (0) (0) (0)	5 0 0 0 (10) (0) (0) (0)
	granulopoiesis:increased	0 0 0 0 (1 0 0 0 (2) (0) (0) (0)	0 0 0 0 0 (0) (0)
lymph node	lymphadenitis	<50> 0 0 0 0 (0) (0) (0) (0		<50> 2 0 0 0 (4) (0) (0) (0)	<50> 0 0 0 0 (0) (0) (0) (0)
spleen	fibrosis	3 0 0 (6) (0) (0) (0		<pre></pre>	3 2 0 0 (6) (4) (0) (0)
	extramedullary hematopoiesis	5 0 1 ((10) (0) (2) (5 2 0 0 (10) (4) (0) (0)	1 4 1 0 (2) (8) (2) (0)

(HPT150)

(c)

c:b/a * 100

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

ANIMAL : RAT F344/DuCrj

HISTOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY) ALL ANIMALS (0-105W)

REPORT TYPE : A1 SEX

: MALE

PAGE: 4

0rgan	Group Nam No. of An Grade Findings	e Control imals on Study 50	50 ppm 50 1 2 3 4 (%) (%) (%) (%)	100 ppm 50 1 2 3 4 (%) (%) (%) (%)	200 ppm 50 1 2 3 4 (%) (%) (%) (%)
[Circulatory	system]				
heart	thrombus	<50> 0 0 0 0 (0) (0) (0) (0)	<50> 1 0 0 0 (2) (0) (0) (0)	<50> 1 0 0 0 (2) (0) (0) (0)	<50> 2 0 0 0 (4) (0) (0) (0)
	mineralization	1 0 0 0 0 (2) (0) (0) (0)	4 0 0 0 0 (8) (0) (0) (0)	3 0 0 0 0 (6) (6) (0) (0)	0 0 0 0 0 (0) (0)
	myocardial fibrosis	8 0 0 0 0 (16) (16) (16) (17)	9 0 0 0 0 (18) (0) (0) (0)	10 0 0 0 (20) (0) (0) (0)	11 0 0 0 (22) (0) (0) (0)
[Digestive sy	stem]				
oral cavity	abscess	<50> 0 0 0 0 (0) (0) (0) (0)	<50> 1 0 0 0 (2) (0) (0) (0)	<50> 0 0 0 0 (0) (0) (0) (0)	<50> 0 0 0 0 (0) (0) (0) (0)
tongue	arteritis	<50> 0 0 0 0 (0) (0) (0) (0)	<50> 0 0 0 0 (0) (0) (0) (0)	<50> 0 0 0 0 (0) (0) (0) (0)	<50> 2 0 0 0 (4) (0) (0) (0)
esophagus	inflammation	<50> 0 0 0 0 (0) (0) (0) (0)	<50> 0 0 0 0 (0) (0) (0) (0)	<50> 1 0 0 0 (2) (0) (0) (0)	<50> 0 0 0 0 (0) (0) (0) (0)
Grade <a>> b (c) Significant d	1: Slight 2: Moderate 3: Marked a: Number of animals examined at the site b: Number of animals with lesion c: b / a * 100 lifference; $*: P \le 0.05$ **: $P \le 0.01$	4 : Severe Test of Chi Square			

(HPT150)

STUDY NO. : 0269 ANIMAL : RAT F344/DuCrj HISTOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)

REPORT TYPE : A1

SEX : MALE

ALL ANIMALS (0-105W)

0rgan	Findings	Group Name Cont No. of Animals on Study Grade $\frac{1}{(\%)}$ $\frac{2}{(\%)}$	50 3 4	50 ppm 50 1 2 3 4 (%) (%) (%) (%)	100 ppm 50 1 2 3 4 (%) (%) (%) (%)	200 ppm 50 1 2 3 4 (%) (%) (%) (%)
Digestive s	system]					
stomach	mineralization	3 0	(50> 0 0 (0) (0)	5 2 0 0 (10) (4) (0) (0)	500 (10)(0)(0)(0)	3 0 0 0 (6) (0) (0) (0)
	basal cell hyperplasia	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 (2) (0) (0) (0)
	ulcer:forestomach	1 4 (2) (8)	0 0 (0) (0)	1 4 0 0 (2) (8) (0) (0)	1 4 0 0 (2) (8) (0) (0)	2 9 0 0 (4) (18) (0) (0)
	hyperplasia:forestomach	0 0	1 0 (2) (0)	1 0 1 0 (2) (3)	1 2 2 0 (2) (4) (4) (0)	0 3 0 0 (0) (6) (0) (0)
	edema:forestomach	1 0 (2) (0)	0 0 0	0 0 0 0 0 (0) (0)	4 0 0 0 0 (8) (0) (0) (0)	3 0 0 0 0 (6) (6) (0) (0)
	ulcer:glandular stomach	0 0	0 0 0	1 0 0 0 0 (2) (0) (0) (0)	0 0 0 0 0 (0) (0)	0 0 0 0 0 (0) (0)
liver	herniation	0 0	(50) 0 0 0 (0) (0)	<50> 1 0 0 0 (2) (0) (0) (0)	<50> 2 0 0 0 (4) (0) (0) (0)	<50> 1 0 0 0 (2) (0) (0) (0)
	angiectasis	0 0	0 0	0 0 0 0 0 (0) (0)	0 0 0 0 0 (0) (0) (0)	1 0 0 0 (2) (0) (0) (0)

(HPT150)

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

BAIS3

ANIMAL : RAT F344/DuCrj

Findings

clear cell focus

acidophilic cell focus

basophilic cell focus

spongiosis hepatis

bile duct hyperplasia

hyperplasia:acinar cell

atrophy

REPORT TYPE: A1 SEX : MALE

[Digestive system]

Liver

pancreas

[Urinary system]

kidney

HISTOLOGICAL FINDINGS : NON-NEOPLASTIC LESIONS (SUMMARY) ALL ANIMALS (0-105W)

<50>

(2) (6) (62) (24)

4 : Severe

3 : Marked

1 3 31 12

PAGE: 6 Group Name Control mag 03 100 ppm 200 ppm No. of Animals on Study 50 50 50 50 ⟨50⟩ **<50>** <50> **<50>** 3 0 0 0 0 0 0 0 0 0 2 1 0 0 0 (6)(0)(0)(0) (6)(0)(0)(0) (4)(0)(0)(0) (2)(0)(0)(0) (0)(0)(0)(0) (0)(0)(0)(0) (4)(0)(0)(0) (0)(0)(0)(0) 10 1 2 0 0 15 2 0 0 (28) (0) (0) (0) (20) (2) (0) (0) (34) (4) (0) (0) (30) (4) (0) (0) 0 0 0 0 0 0 0 0 1 0 0 0 (2) (0) (0) (0) (0)(0)(0)(0) (0) (0) (0) (0) (2)(0)(0)(0) 36 0 (86) (2) (2) (0) (76) (2) (0) (0) (72) (0) (0) (0) (78) (6) (0) (0) <50> <50> <50> <50> 5 0 0 0 0 1 0 6 0 0 0 5 0 0 0 (10) (0) (0) (0) (8)(0)(2)(0) (12) (0) (0) (0) (10) (0) (0) (0) 0 0 0 (0)(0)(0)(0) (0)(0)(0)(0) (0)(0)(0)(0) (2)(0)(0)(0)

<50>

(0)(2)(72)(20)

0 1 36 10

<50>

1 5 30 14

(2) (10) (60) (28)

<50>

2 2 31 12

(4)(4)(62)(24)

Grade	1:	Slight	2:	Moderate		
(a)	a :	Number of	animals	examined	at	t

chronic nephropathy

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

ANIMAL : RAT F344/DuCrj

REPORT TYPE : A1 SEX : MALE

HISTOLOGICAL FINDINGS : NON-NEOPLASTIC LESIONS (SUMMARY) ALL ANIMALS (0-105W)

PAGE: 7 Group Name 50 ppm Control 100 ppm 200 ppm No. of Animals on Study 50 50 50 50 Grade Findings [Urinary system] kidney <50> <50> <50> ⟨50⟩ hydronephrosis 0 0 0 0 0 0 0 0 0 (2) (0) (0) (0) (0)(0)(0)(0) (0)(0)(0)(0) (0)(0)(0)(0) [Endocrine system] pituitary <50> <50> hyperplasia 0 0 0 0 0 0 5 0 0 0 (8) (0) (0) (0) (10) (0) (0) (0) (14) (0) (0) (0) (10) (0) (0) (0) Rathke pouch 5 0 0 0 8 0 0 0 (6)(0)(0)(0) (10) (0) (0) (0) (16) (0) (0) (0) (8)(0)(0)(0) thyroid <50> ⟨50⟩ <50> C-cell hyperplasia 0 0 0 2 0 0 0 0 0 0 0 0 0 0 0 (0)(0)(0)(0) (4)(0)(0)(0) (0)(0)(0)(0) (0)(0)(0)(0) focal follicular cell hyperplasia 0 0 0 0 0 2 (2)(0)(0)(0) (8)(0)(0)(0) (4)(0)(0)(0) (8)(0)(0)(0) adrena! ⟨50⟩ <50> <50> fatty change 0 0 0 0 0 0 2 0 0 0 2 1 0 0 (4)(0)(0)(0) (6)(0)(0)(0) (4)(0)(0)(0) (4)(2)(0)(0) Grade 1: Slight 2 : Moderate 3 : Marked 4 : Severe <a>> a: Number of animals examined at the site b: Number of animals with lesion b

(HPT150)

(c)

c:b/a*100

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

BAIS3

NO. . V209

ANIMAL : RAT F344/DuCrj

REPORT TYPE : A1
SEX : MALE

HISTOLOGICAL FINDINGS : NON-NEOPLASTIC LESIONS (SUMMARY)

ALL ANIMALS (0-105W)

PAGE: 8 Group Name Control 50 ppm 100 ppm 200 ppm No. of Animals on Study 50 50 50 50 Grade (%) Findings. 0rgan_ (%) [Endocrine system] adrenal <50> <50> hyperplasia:medulla 0 0 1 0 0 0 0 0 0 (6)(2)(0)(0) (10) (0) (0) (0) (8) (0) (0) (0) (10) (0) (0) (0) [Reproductive system] testis <50> atrophy 0 0 5 0 0 0 0 0 0 (12) (0) (0) (0) (10) (0) (0) (0) (10) (0) (0) (0) (8)(0)(0)(0) epididymis <50> <50> <50> spermatogenic granuloma 0 0 0 0 (0)(2)(0)(0) (0)(0)(0)(0) (0)(0)(0)(0) (0)(0)(0)(0) semin ves <50> ⟨50⟩ ⟨50⟩ ⟨50⟩ inflammation 0 0 0 0 0 0 0 0 0 0 (2)(0)(0)(0) (0)(0)(0)(0) (0)(0)(0)(0) (0)(0)(0)(0) prostate <50> ⟨50⟩ ⟨50⟩ ⟨50⟩ 2 inflammation 15 1 0 0 18 1 0 0 17 9 0 0 0 (30) (2) (0) (0) (36) (2) (0) (0) (34) (4) (0) (0) (18) (0) (0) (0) hyperplasia 10 (10) (0) (0) (0) (8)(0)(0)(0) (20) (0) (0) (0) (18) (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

(HPT150)

(c)

c:b/a*100

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

BAIS3

ANIMAL : RAT F344/DuCrj

HISTOLOGICAL FINDINGS : NON-NEOPLASTIC LESIONS (SUMMARY)

REPORT TYPE : A1

SEX : MALE

ALL ANIMALS (0-105W)

0rgan		up Name Control of Animals on Study 50 de <u>1 2 3 4</u> (%) (%) (%) (%)	50 ppm 50 1 2 3 4 (%) (%) (%) (%)	100 ppm 50 1 2 3 4 (%) (%) (%) (%)	200 ppm 50 1 2 3 4 (%) (%) (%) (%)
[Reproductive	e system]				
mammary gl	galactocele	<50> 11 0 0 0 (22) (0) (0) (0)	(50) 11 0 0 0 (22) (0) (0) (0)	\(\langle 50 \rangle \) 11	5 0 0 0 (10)(0)(0)(0)
(Nervous syst	tem]				
brain	hemorrhage	<50> 0 0 0 0 (0) (0) (0) (0)	(50) 0 0 0 0 (0) (0) (0) (0)	(50) 0 0 0 0 (0) (0) (0) (0)	(50) 1 0 0 0 (2) (0) (0) (0)
[Special sens	se organs/appandage]				
вуе	cataract	<50> 2 0 0 0 (4) (0) (0) (0)	(50) 1 0 0 0 (2) (0) (0) (0)	(50) 1 0 0 0 (2) (0) (0) (0)	0 0 0 0 (0) (0) (0) (0)
	keratitis	0 0 0 0 0 (0) (0)	1 0 0 0 0 (2) (0) (0) (0)	5 0 0 0 (10) (0) (0) (0)	3 0 0 0 0 (6) (6) (0) (0)
Grade <a>> b (c) Significant o	1: Slight 2: Moderate 3: M a: Number of animals examined at the site b: Number of animals with lesion c: b/a * 100 difference; $*: P \le 0.05$ **: $P \le 0.05$				

(HPT150)

APPENDIX J 2

HISTOLOGICAL FINDINGS: NON-NEOPLASTIC LESIONS: SUMMARY, RAT: MALE: DEAD AND MORIBUND ANIMALS

ANIMAL : RAT F344/DuCrj

HISTOLOGICAL FINDINGS : NON-NEOPLASTIC LESIONS (SUMMARY) DEAD AND MORIBUND ANIMALS (0-105W)

REPORT TYPE : A1 SEX

: MALE

Organ	Group Nam No. of An Grade	e Control imals on Study 11	50 ppm 15 1 2 3 4 (%) (%) (%) (%)	100 ppm 17 1 2 3 4 (%) (%) (%) (%)	200 ppm 20 1 2 3 4 (%) (%) (%) (%)
[Integumentar	y system/appandage]				
skin/app	cyst	0 0 0 0 (0) (0) (0) (0)	(15) 0 0 0 0 (0) (0) (0) (0)	<17> 0 0 0 0 0 0 0 0 0 0 0 0	<20> 1 0 0 0 (5) (0) (0) (0)
	epidermal cyst	(0) (0) (0) (0)	0 0 0 0 0 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 (5) (0) (0)
[Respiratory	system]				
nasal cavit	thrombus	1 2 0 0 (9) (18) (0) (0)	(15) 1 2 1 0 (7) (13) (7) (0)	<17> 1 0 1 0 (6) (0) (6) (0)	(20) 0 1 1 0 (0) (5) (5) (0)
	eosinophilic change:olfactory epithelium	4 0 0 0 0 (36) (0) (0) (0)	2 4 4 1 * (13) (27) (27) (7)	0 8 8 0 ** (0) (47) (47) (0)	2 4 9 1 ** (10) (20) (45) (5)
	inflammation:foreign body	2 2 0 0 (18) (18) (0) (0)	7 0 0 0 0 (47) (0) (0) (0)	7 2 1 0 (41) (12) (6) (0)	5 3 1 0 (25) (15) (5) (0)
	necrosis:olfactory epithelium	0 0 0 0 0 (0)	0 0 0 0 0 0 (0) (0)	1 0 0 0 0 (6) (6) (0) (0)	2 0 0 0 0 (10) (10) (10) (10)
lung	congestion	0 0 0 0 (0) (0) (0) (0)	1 0 0 0 (7) (0) (0) (0)	1 0 0 0 (6) (0) (0) (0)	<pre></pre>
Grade <a>a> <a>b <a>c <a>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 difference; $*: P \le 0.05$ **: $P \le 0.01$	4 : Severe Test of Chi Square			

STUDY NO. : 0269 ANIMAL : RAT F344/DuCrj HISTOLOGICAL FINDINGS : NON-NEOPLASTIC LESIONS (SUMMARY)

DEAD AND MORIBUND ANIMALS (0-105W)

REPORT TYPE : A1
SEX : MALE

PAGE: 2

0rgan		Group Name Control No. of Animals on Study 11 Grade 1 2 3 4 (%) (%) (%) (%)	50 ppm 15 1 2 3 4 (%) (%) (%) (%)	100 ppm 17 1 2 3 4 (%) (%) (%) (%)	200 ppm 20 1 2 3 4 (%) (%) (%) (%)
(Respiratory	system]				
uns	hemorrhage	0 0 0 0 (0) (0) (0) (0)	\(\lambda 15 \) \[1 0 0 \\ (7) (0) (0) (0) \]	0 0 0 0 (0) (0) (0) (0)	<20> 0 0 0 0 (0) (0) (0) (0)
	inflammation	0 0 0 0 0 (0)	1 0 0 0 0 (7) (0) (0) (0)	1 1 0 0 (6)(6)(0)(0)	1 0 0 0 0 (5) (0) (0) (0)
	bronchiolar-alveolar cell hyperplasia	0 0 0 0 0 (0)	(0) (0) (0) (0)	2 0 0 0 0 (12) (0) (0) (0)	0 0 0 0 0 (0)
Hematopoieti	c system]				
one marrow	necrosis	<11> 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	15> 1 0 0 0 (7) (0) (0) (0)	0 0 0 0 (0) (0) (0) (0)	<pre></pre>
	fibrosis	0 0 0 0 0 (0) (0)	0 0 0 0 0 (0) (0)	1 0 0 0 0 (6) (6) (70) (70)	0 0 0 0 0 (0) (0)
	increased hematopoiesis	1 0 0 0 (9) (0) (0)	0 0 0 0 0 (0) (0)	0 0 0 0 0 0 (0) (0)	4 0 0 0 0 (20) (0) (0) (0)
	granulopoiesis:increased	0 0 0 0 0 (0)	0 0 0 0 0 0 (0)	1 0 0 0 0 (6) (6) (70)	0 0 0 0 0 (0) (0)
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 lifference; *: P ≤ 0.05 **: P ≤				

(HPT150)

HISTOLOGICAL FINDINGS : NON-NEOPLASTIC LESIONS (SUMMARY)

ANIMAL : RAT F344/DuCrj REPORT TYPE : A1

DEAD AND MORIBUND ANIMALS (0-105W)

Organ		Group Name Control No. of Animals on Study 11 Grade 1 2 3 4 (%) (%) (%) (%)	50 ppm 15 1 2 3 4 (%) (%) (%) (%)	100 ppm 17 1 2 3 4 (%) (%) (%) (%)	200 ppm 20 1 2 3 4 (%) (%) (%) (%)
(Hematopoiet	ic system}				
spleen	fibrosis	0 0 0 0 (0) (0) (0) (0)	<15> 0 0 0 0 0 0 0 0 0 0 0 0	\(\lambda 17 \rangle \) \[1 1 0 0 \\ (6) (6) (0) (0) \]	<20> 0 0 0 0 0 0 0 0 0 0 0
	extramedullary hematopoiesis	0 0 1 0 (0) (9) (0)	2 1 2 0 (13) (7) (13) (0)	3 1 0 0 (18) (6) (0) (0)	1 3 1 0 (5) (15) (5) (0)
[Circulatory	system]				
peart	thrombus	0 0 0 0 (0) (0) (0) (0)	<15> 0 0 0 0 (0) (0) (0) (0)	\(\langle 17> \) \(1 0 0 \) \(6) \(0) \(0) \(0) \) \(0) \)	2 0 0 0 (10) (0) (0) (0)
	mineralization	1 0 0 0 0 (9) (9) (0) (0)	4 0 0 0 (27) (0) (0) (0)	3 0 0 0 0 (18) (0) (0) (0)	0 0 0 0 0
	myocardial fibrosis	1 0 0 0 0 (9) (0) (0)	5 0 0 0 0 (33) (0) (0) (0)	3 0 0 0 (18) (0) (0) (0)	6 0 0 0 0 (30) (0) (0) (0)
Digestive s	ystem]				
esophagus	inflammation	(11) 0 0 0 0 (0) (0) (0) (0)	0 0 0 0 (0) (0) (0) (0)	1 0 0 0 (6) (0) (0) (0)	0 0 0 0 (0) (0) (0) (0)
Grade (a> b	1: Slight 2: Moderate 3 a: Number of animals examined at the si b: Number of animals with lesion c: b/a*100	: Marked 4 : Severe te			

(HPT150)

HISTOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)

ANIMAL : RAT F344/DuCrj DEAD AND MORIBUND ANIMALS (0-105W)

REPORT TYPE : A1
SEX : MALE

PAGE: 4

Organ	Group No. of Grade Findings	Name Control Animals on Study 11 1 2 3 4 (%) (%) (%) (%)	50 ppm 15 1 2 3 4 (%) (%) (%) (%)	100 ppm 17 1 2 3 4 (%) (%) (%) (%)	200 ppm 20 1 2 3 4 (%) (%) (%) (%)
[Digestive	system]				
stomach	mineralization	3 0 0 0 (27) (0) (0) (0)	<pre></pre>	<17> 4 0 0 0 (24) (0) (0) (0)	200> 2 0 0 0 (10) (0) (0) (0)
	ulcer:forestomach	1 3 0 0 (9) (27) (0) (0)	0 3 0 0 (0) (20) (0) (0)	1 4 0 0 (6) (24) (0) (0)	1 6 0 0 (5) (30) (0) (0)
	hyperplasia:forestomach	0 0 1 0 (0) (9) (0)	1 0 1 0 (7) (0) (7) (0)	1 0 0 0 (6) (0) (0) (0)	0 2 0 0 (0) (10) (0) (0)
	edema:forestomach	1 0 0 0 0 (9) (0) (0)	0 0 0 0 0 0 (0) (0)	0 0 0 0 0 (0) (0)	1 0 0 0 (5) (0) (0) (0)
	ulcer:glandular stomach	0 0 0 0 0 0 (0) (0)	1 0 0 0 (7) (0) (0) (0)	0 0 0 0 0 (0) (0)	0 0 0 0 0 (0) (0)
liver	herniation	0 0 0 0 (0) (0) (0) (0)	<15> 0 0 0 0 0 0 0 0 0 0 0	\(\lambda 17 \) \(1 0 0 \\ (6) (0) (0) (0) \)	<20> 1 0 0 0 (5) (0) (0) (0)
	angiectasis	0 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 (5) (0) (0) (0)
	basophilic cell focus	2 0 0 0 (18) (0) (0) (0)	3 0 0 0 (20) (0) (0) (0)	2 1 0 0 (12) (6) (0) (0)	5 0 0 0 (25)(0)(0)(0)
Grade <a>> b <a>> Significant	1: Slight 2: Moderate 3: Marl 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	ted 4 : Severe Test of Chi Square			

(HPT150)

SEX

HISTOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)

DEAD AND MORIBUND ANIMALS (0-105W)

ANIMAL : RAT F344/DuCrj REPORT TYPE : A1

: MALE

PAGE: 5

Organ	Grade	Control als on Study 11 1 2 3 4 (%) (%) (%) (%)	50 ppm 15 1 2 3 4 (%) (%) (%) (%)	100 ppm 17 1 2 3 4 (%) (%) (%) (%)	200 ppm 20 1 2 3 4 (%) (%) (%) (%)
[Digestive s	system]				
liver	bile duct hyperplasia	7 1 0 0 (64) (9) (0) (0)	5 1 0 0 (33) (7) (0) (0)	7 0 0 0 (41) (0) (0) (0)	\(\lambda 20 \rangle \) 12 3 0 0 (60) (15) (0) (0)
pancreas	atrophy	(11) 0 0 0 0 (0) (0) (0) (0)	(15) 1 0 0 0 (7) (0) (0) (0)	3 0 0 0 (18) (0) (0) (0)	\(\lambda 20 \rangle \) \(1 0 0 0 \\ (5) (0) (0) (0) (0) \)
(Urinary sys	stem]				
cidney	chronic nephropathy	(11) 0 1 3 4 (0) (9) (27) (36)	(15) 0 1 5 6 (0) (7) (33) (40)	<17> 0 5 5 7 (0) (29) (29) (41)	20> 2 2 11 2 (10) (10) (55) (10)
	hydronephrasis	1 0 0 0 0 (9) (0) (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]				
oituitary	hyperplasia	0 0 0 0 (0) (0) (0) (0)	<15> 2 0 0 0 (13) (0) (0) (0)	1 0 0 0 (6) (0) (0) (0)	<20> 0 0 0 0 (0) (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 tdifference; $*: P \le 0.05$ **: $P \le 0.01$ Te	4 : Severe			

HISTOLOGICAL FINDINGS : NON-NEOPLASTIC LESIONS (SUMMARY)

ANIMAL : RAT F344/DuCri REPORT TYPE : A1

: MALE

DEAD AND MORIBUND ANIMALS (0-105W)

PAGE: 6 Group Name Control 50 ppm 100 ppm 200 ppm No. of Animals on Study 11 15 17 Grade Findings [Endocrine system] pituitary <11> <15> <17> <20> Rathke pouch 0 0 0 0 0 (0) (0) (0) (0) (7)(0)(0)(0) (12) (0) (0) (0) (10) (0) (0) (0) thyroid ⟨11⟩ <15> <17> <20> focal follicular cell hyperplasia 0 0 0 0 1 0 0 0 1 0 0 0 1 0 0 0 (0)(0)(0)(0) (7)(0)(0)(0) (6)(0)(0)(0) (5)(0)(0)(0) adrenal <11> <15> <17> ⟨20⟩ fatty change 0 0 0 0 0 0 0 1 0 0 0 0 1 0 0 (0)(0)(0)(0) (0)(0)(0)(0) (6)(0)(0)(0) (0)(5)(0)(0) hyperplasia:medulla 3 (0)(0)(0)(0) (20) (0) (0) (0) (6)(0)(0)(0) (0)(0)(0)(0) [Reproductive system] testis <11> <15> atrophy 0 0 0 0 0 0 3 3 0 0 0 (18) (0) (0) (0) (13) (0) (0) (0) (18) (0) (0) (0) (15) (0) (0) (0) epididymis <11> <15> spermatogenic granuloma 0 1 0 0 0 0 0 0 0 0 0 0 0 0 (0)(9)(0)(0) (0)(0)(0)(0) (0)(0)(0)(0) (0)(0)(0)(0) Grade 1:Slight 2 : Moderate 3 : Marked 4 : Severe a : Number of animals examined at the site <a>> b b: Number of animals with lesion (c) c:b/a*100Significant difference; $*: P \le 0.05$ **: $P \le 0.01$ Test of Chi Square

HISTOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)

ANIMAL : RAT F344/DuCrj

REPORT TYPE : A1

DEAD AND MORIBUND ANIMALS (0-105W)

: MALE SEX PAGE: 7 Group Name 50 ppm 100 ppm Control 200 ppm No. of Animals on Study 15 17 11 Findings [Reproductive system] (11) semin ves <15> <17> inflammation 0 0 0 0 0 0 0 0 0 0 0 0 (9)(0)(0)(0) (0)(0)(0)(0) (0)(0)(0)(0) (0)(0)(0)(0) prostate <11> <15> <17> <20> inflammation 4 0 0 0 2 0 0 0 6 1 0 0 3 0 0 0 (36) (0) (0) (0) (13) (0) (0) (0) (35) (6) (0) (0) (15) (0) (0) (0) hyperplasia 3 0 0 0 1 0 0 0 (0)(0)(0)(0) (7)(0)(0)(0) (18) (0) (0) (0) (5)(0)(0)(0) mammary gl <11> <15> (17) <20> 2 0 0 0 2 0 0 0 5 0 0 0 galactocele 3 0 0 0 (18) (0) (0) (0) (13) (0) (0) (0) (29) (0) (0) (0) (15) (0) (0) (0) [Nervous system] brain (11) <15> 0 0 0 0 0 0 0 hemorrhage 1 0 0 0 (0)(0)(0)(0) (0) (0) (0) (0) (0)(0)(0)(0) (5)(0)(0)(0) [Special sense organs/appandage] еуе (11) <15> <17> cataract 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 (9)(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

(HPT150)

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

STUDY NO. : 0269
ANIMAL : RAT F344/DuCrj
REPORT TYPE : A1
SEX : MALE

HISTOLOGICAL FINDINGS : NON-NEOPLASTIC LESIONS (SUMMARY)

DEAD AND MORIBUND ANIMALS (0-105W)

gan Findings		No. of Animal Grade			2 (%)		<u>4</u> (%)	(%)	2	15 3 (%)	<u>4</u> (%)	1 (%)	100 p 1 2 (%)		4 (%)	(%)	200 pr 20 2 (%)		<u>4</u> (%)
pecial sense organs/ap	pandage]																		
e keratiti	S		(0 0) (<11 0 0) (0 (0)	0 (0)	(7)	0		0 (0)	4 (24)	<1 0 (0)	0	0 (0)	2 (10)	<20 0 (0))> 0 (0) (0 (0)
b b: Number c) c:b/a	of animals examined at to of animals with lesion		4 : Se																

APPENDIX J 3

HISTOLOGICAL FINDINGS: NON-NEOPLASTIC LESIONS: SUMMARY, RAT: MALE: SACRIFICED ANIMALS (2-YEAR STUDY)

HISTOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY) SACRIFICED ANIMALS (105W)

ANIMAL : RAT F344/DuCrj REPORT TYPE : A1

: MALE

0rgan	1	Froup Name Control No. of Animals on Study 39 Frade 1 2 3 4 (%) (%) (%) (%)	50 ppm 35 1 2 3 4 (%) (%) (%) (%)	100 ppm 33 1 2 3 4 (%) (%) (%) (%)	200 ppm 30 1 2 3 4 (%) (%) (%) (%)
[Integumentar	y system/appandage]				
skin/app	inflammation	39> 1 0 0 0 (3) (0) (0) (0)	<35> 0 0 0 0 0 0 0 0 0 0 0	333> 1 0 0 0 (3) (0) (0) (0)	<pre></pre>
	hyperplasia:epidermis	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 (3) (0) (0)
	epidermal cyst	1 0 0 0 0 (3) (3) (0) (0)	0 0 0 0 0 (0) (0)	0 0 0 0 0 (0) (0)	1 0 0 0 0 (3) (0) (0) (0)
subcutis	abscess	<39> 0 0 0 0 (0) (0) (0) (0)	<pre></pre>	33> 1 0 0 0 (3) (0) (0) (0)	<30> 0 0 0 0 0 0 0 0 0 0 0
[Respiratory	system]				
nasal cavit	thrombus	<pre></pre>	(35> 0 0 1 0 (0) (0) (3) (0)	33> 0 0 0 0 (0) (0) (0) (0)	<pre></pre>
	eosinophilic change:olfactory epitheli	18 6 0 0 (46) (15) (0) (0)	0 6 28 1 ** (0) (17) (80) (3)	0 1 26 6 ** (0) (3) (79) (18)	0 6 21 3 ** (0) (20) (70) (10)
Grade <a>> b (c) Significant o	1: Slight 2: Moderate 3 a: Number of animals examined at the si b: Number of animals with lesion c: b / a * 100 difference; *: $P \le 0.05$ **: $P \le 0.05$				

(HPT150)

STUDY NO. : 0269 ANIMAL : RAT F344/DuCrj HISTOLOGICAL FINDINGS : NON-NEOPLASTIC LESIONS (SUMMARY)

SACRIFICED ANIMALS (105W)

REPORT TYPE : A1 SEX : MALE

Organ	N	Froup Name to. of Animals on Study trade $\frac{1}{(\%)}$	Contro 39 2 (%)		<u>4</u> (%)	<u>1</u> (%)	50 pp 35 2 (%)			100 pp 33 2 (%)		<u>4</u> (%)	1(%)	200 ppm 30 2 (%)	3	4 (%)
[Respiratory s	system]				7=				· · · · · · · · · · · · · · · · · · ·							
nasal ca∪it	inflammation:foreign body	10 (26)	<39 4 (10) (0	0 (0)	14 (40)	<35 1 (3)	5> 0 0 (0) (0	11 (33)	<33 1 (3)		0 (0)	7 (23) ((30) 1 3) (0	0 0)
	respiratory metaplasia:olfactory epithe	olium 4 (10)	(0) (0 0) (0 (0)	4 (11)	0 (0)	0 0	2) (6)	0 (0)	0 (0)	0 (0)	4 (13) (0 (0 (0
	necrosis:olfactory epithelium	(0)	0 (0) (0 (0)	0 (0)	0 (0)	0 (0)	0 0	1 (3)	0 (0)	0 (0)	0 (0)	0 (0) (0 (0
lung	bronchiolar—alveolar cell hyperplasia	2 (5)	<39 0 (0) (0	0 (0)			5> 0 0 (0) (0		(3) (3)	0		1 (3) (<30) 0 (0) (0	0
[Hematopoietic	c system]															
bone marrow	increased hematopolesis	0 (0)	<39 0 (0) (0	0 (0)	0 (0)	<38 0 (0)			<3 0 (0)	0	0 (0)	1 (3)	<30) 0 (0) (0	0 0)
lymph node	lymphadenitis	0 (0)	<39 0 (0) (0		1 (3)			2) (6)	<3 0 (0)	0	0 (0)	0 (0)	<30) 0 (0) (0	0
(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 ifference; $*: P \leq 0.05$ **: $P \leq$							1,000								

(HPT150)

HISTOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)

SACRIFICED ANIMALS (105W)

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

Organ	Findings	Group Name Control No. of Animals on Study 39 Grade 1 2 (%) (%)	3 4 (%) (%)	50 ppm 35 1 2 3 4 (%) (%) (%) (%)	100 ppm 33 1 2 3 4 (%) (%) (%) (%)	200 ppm 30 1 2 3 4 (%) (%) (%) (%)
[Hematopoietio	c system]					
spleen	fibrosis	39> 3 0 (8) (0) (0 0	3 3 0 0 (9) (9) (0) (0)	33> 1 1 1 0 (3) (3) (3) (0)	<pre></pre>
	extramedullary hematopoiesis	5 0 (13) (0) (0 0 0 0) (0)	2 0 0 0 0 (6) (6) (7) (7)	2 1 0 0 (6) (3) (0) (0)	0 1 0 0 (0) (0)
[Circulatory s	system]					
heart	thrombus	(39) (0)(0)(0 0	<35> 1 0 0 0 (3) (0) (0) (0)	<pre></pre>	<pre></pre>
	myocardial fibrosis	7 0 (18) (0) (0 0 0 0) (0)	4 0 0 0 0 (11) (0) (0) (0)	7 0 0 0 (21) (0) (0) (0)	5 0 0 0 (17) (0) (0) (0)
[Digestive sys	stem]					
oral cavity	abscess	(39) 0 0 (0) (0) (0 0	<pre></pre>	<pre></pre>	30> 0 0 0 0 0 0 0 0 0 0 0 0
(a) b	a: Number of animals examined at the :b: Number of animals with lesionc: b / a * 100	3 : Marked 4 : Severe site ≦ 0.01 Test of Chi Square				

ANIMAL : RAT F344/DuCrj

REPORT TYPE : A1 SEX : MALE

HISTOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY) SACRIFICED ANIMALS (105W)

PAGE : 4

Organ	Findings	Group Name Control No. of Animals on Study 39 Grade 1 2 3 (%) (%) (%)	50 ppm 35 4 1 2 3 4 (%) (%) (%) (%)	100 ppm 33 1 2 3 4 (%) (%) (%) (%)	200 ppm 30 1 2 3 4 (%) (%) (%) (%)
[Digestive :	system]				
ongue	arteritis	(0) (0) (0) (0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	<333> 0 0 0 0 (0) (0) (0) (0)	<30> 2 0 0 0 (7) (0) (0) (0)
tomach	mineralization	<39> 0 0 0 (0) (0) (0) (0 1 0 0 0 0) (3) (0) (0) (0)	<33> 1 0 0 0 (3) (0) (0) (0)	<30> 1 0 0 0 (3) (0) (0) (0)
	basal cell hyperplasia	0 0 0 (0) (0) (0 0 0 0 0 0 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 (3) (0) (0) (0)
	ulcer:forestomach	0 1 0 (0) (3) (0) (0 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0	1 3 0 0 (3) (10) (0) (0)
	hyperplasia:forestomach	0 0 0 (0) (0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 2 2 0 (0) (6) (6) (0)	0 1 0 0 (0) (0)
	edema:forestomach	0 0 0 (0) (0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	4 0 0 0 0 (12) (0) (0) (0)	2 0 0 0 0 (7) (0) (0) (0)
iver	herniation	<39> 0 0 0 (0) (0) (0) (0 1 0 0 0 0) (3) (0) (0) (0)	<33> 1 0 0 0 (3) (0) (0) (0)	<30> 0 0 0 0 (0) (0) (0) (0)

SEX

ANIMAL : RAT F344/DuCrj REPORT TYPE : A1 : MALE

HISTOLOGICAL FINDINGS : NON-NEOPLASTIC LESIONS (SUMMARY) SACRIFICED ANIMALS (105W)

PAGE: 5

Organ	Findings	Group Name Control No. of Animals on Study 39 Grade 1 2 3 4 (%) (%) (%) (%)	50 ppm 35 1 2 3 4 (%) (%) (%) (%)	100 ppm 33 1 2 3 4 (%) (%) (%) (%)	200 ppm 30 1 2 3 4 (%) (%) (%) (%)
Digestive s	system]				
liver	clear cell focus	<39> 3 0 0 0 (8) (0) (0) (0)	<35> 3 0 0 0 (9) (0) (0) (0)	<33> 2 0 0 0 (6) (0) (0) (0)	<30> 1 0 0 0 (3) (0) (0) (0)
	acidophilic cell focus	0 0 0 0 0 (0) (0)	0 0 0 0 0 (0) (0)	2 0 0 0 (6) (6) (0) (0)	0 0 0 0 0 (0) (0)
	basophilic cell focus	12 0 0 0 (31) (0) (0) (0)	7 1 0 0 (20) (3) (0) (0)	15 1 0 0 (45) (3) (0) (0)	10 2 0 0 (33) (7) (0) (0)
	spongiosis hepatis	1 0 0 0 0 (3) (3) (0) (0)	0 0 0 0 0 0 (0)	0 0 0 0 0 (0) (0)	1 0 0 0 0 (3) (0) (0) (0)
	bile duct hyperplasia	36 0 1 0 (92) (0) (3) (0)	33 0 0 0 (94) (0) (0) (0)	29 0 0 0 (88) (0) (0) (0)	27 0 0 0 (90) (0) (0) (0)
ancreas	atrophy	<39> 5 0 0 0 (13) (0) (0) (0)	35> 3 0 1 0 (9) (0) (3) (0)	333> 3 0 0 0 (9) (0) (0) (0)	30> 4 0 0 0 (13) (0) (0) (0)
	hyperplasia:acinar cell	0 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 (3) (0) (0) (0)
[Urinary sys	stem]				
idney	chronic nephropathy	\(\frac{39}{1} \) \[\frac{1}{2} 28 8 \] \(\frac{3}{3} \) \(\frac{5}{5} \) \(\frac{72}{21} \)	(35) 0 0 31 4 (0) (0) (89) (11)	33> 1 0 25 7 (3) (0) (76) (21)	<30> 0 0 20 10 (0) (0) (67) (33)

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

HISTOLOGICAL FINDINGS : NON-NEOPLASTIC LESIONS (SUMMARY)

SACRIFICED ANIMALS (105W)

ANIMAL : RAT F344/DuCrj REPORT TYPE : A1

SEX : MALE

PAGE : 6

Organ		Group Name Control No. of Animals on Study 39 Grade 1 2 3 4 (%) (%) (%) (%)	50 ppm 35 1 2 3 4 (%) (%) (%) (%)	100 ppm 33 1 2 3 4 (%) (%) (%) (%)	200 ppm 30 1 2 3 4 (%) (%) (%) (%)
[Endocrine s	ystem]				
pituitary	hyperplasia	<pre></pre>	<pre></pre>	<333> 6 0 0 0 (18) (0) (0) (0)	<30> 5 0 0 0 (17) (0) (0) (0)
	Rathke pouch	3 0 0 0 0 (8) (0) (0) (0)	4 0 0 0 0 (11) (0) (0)	6 0 0 0 0 (18) (0) (0) (0)	2 0 0 0 0 (7) (0) (0) (0)
thyroid	C-cell hyperplasia	<pre></pre>	<35> 2 0 0 0 (6) (0) (0) (0)	333> 0 0 0 0 0 0 0 0	30> 0 0 0 0 0 0 0 0 0 0 0 0
	focal follicular cell hyperplasia	1 0 0 0 0 (3) (0) (0)	3 0 0 0 0 (9) (0) (0)	1 0 0 0 0 (3) (0) (0) (0)	3 0 0 0 0 (10) (0) (0)
adrena l	fatty change	39> 2 0 0 0 (5) (0) (0) (0)	35> 3 0 0 0 (9) (0) (0) (0)	333> 1 0 0 0 (3) (0) (0) (0)	30> 2 0 0 0 (7) (0) (0) (0)
	hyperplasia:medulla	5 0 0 0 (13) (0) (0) (0)	0 1 0 0 (0) (0) (0)	3 0 0 0 0 (9) (0) (0)	5 0 0 0 (17) (0) (0) (0)
[Reproduction	pe system]				
testis	atrophy	39> 4 0 0 0 (10) (0) (0) (0)	35> 3 0 0 0 (9) (0) (0) (0)	<33> 2 0 0 0 (6) (0) (0) (0)	30> 1 0 0 0 (3) (0) (0) (0)
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 ≤				

(HPT150)

ANIMAL : RAT F344/DuCrj

REPORT TYPE: A1 SEX : MALE HISTOLOGICAL FINDINGS : NON-NEOPLASTIC LESIONS (SUMMARY)

SACRIFICED ANIMALS (105W)

50 ppm 100 ppm Group Name Control 200 ppm No. of Animals on Study 39 35 33 Grade Findings [Reproductive system] prostate <39> <35> ⟨33⟩ ⟨30⟩ inflammation 11 11 1 6 0 0 0 0 0 (28) (3) (0) (0) (46) (3) (0) (0) (33) (3) (0) (0) (20) (0) (0) (0) hyperplasia 3 0 0 0 0 8 0 0 0 (13) (0) (0) (0) (9)(0)(0)(0) (21) (0) (0) (0) (27) (0) (0) (0) mammary gl <39> ⟨35⟩ <33> <30> galactocele 0 0 0 0 0 0 6 0 0 0 2 0 0 0 (23) (0) (0) (0) (26) (0) (0) (0) (18) (0) (0) (0) (7)(0)(0)(0) [Special sense organs/appandage] еуе <39> ⟨30⟩ cataract 0 0 0 1 0 0 0 0 0 0 0 0 0 0 (3)(0)(0)(0) (3)(0)(0)(0) (3)(0)(0)(0) (0)(0)(0)(0) keratitis (0)(0)(0)(0) (0)(0)(0)(0) (3)(0)(0)(0) (3)(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*100Significant difference; *: $P \le 0.05$ **: $P \le 0.01$ Test of Chi Square

(HPT150)

BAIS3

APPENDIX J4

HISTOLOGICAL FINDINGS: NON-NEOPLASTIC LESIONS: SUMMARY, RAT: FEMALE: ALL ANIMALS (2-YEAR STUDY)

ANIMAL : RAT F344/DuCrj

REPORT TYPE : A1 SEX : FEMALE

HISTOLOGICAL FINDINGS : NON-NEOPLASTIC LESIONS (SUMMARY) ALL ANIMALS (0-105W)

PAGE: 10

0rgan	1	Croup Name to. of Animals on Study Grade 1 (%)	Contro 5 2 (%)		<u>4</u> (%)	1 (%)		ppm 50		<u>4</u> (%)	(1	00 p 5 2 (%))	<u>4</u> (%)	-	<u>1</u> (%)	200 g E 2 (%)	ppm 60 3 (%)		
[Integumentar	y system/appandage]																					
skin/app	epidermal cyst	0 (0)	(5) (0)	0	0 (0)	0 (0)	0))) (0		1 2) (0	0> 0 (0)		0 0)		0	0	50> 0 (0)	0 (0)	
[Respiratory	system]																					
nasal cavit	thrombus	(0)	2 (4)	0	0 (0)	0 (0)	1	(50>))) (0 0)		0 0) (2	0> (0)		0 (0)	(0	0	50> 1 (2)	0 (0)	
	eosinophilic change:olfactory epithelio		11 (22)	6 (12)	0 (0)	1 (2)	3 (6)		2 4) (14 ** 28)		0 0) (3 6)	39 (78		8 ** 16)	(0	1 2)	35 (70)	13	
	inflammation:foreign body	6 (12)	0 (0)	0 (0)	0 (0)	9 (18)	(0)		o 0) (0		4 8) (0	0		0 0)	(3 6)	0 0)	(0)	0 (0)	
	respiratory metaplasia:olfactory epith		0 (0)	0 (0)	0 (0)	1 (2)	(0)) (0 0) (0 0)	(0 0) (0	0) (0 0)	(0	0 (0)	(0)	0 (0)	
	inflammation:transitional epithelium	0 (0)	1 (2)	0 (0)	0 (0)	0 (0)	(0)		0 0) (0		0 0) (0	0) (0 0)	(1 2)	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)	(1 2)	0 (0)	0 (0)	0 (0	

(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)

HISTOLOGICAL FINDINGS : NON-NEOPLASTIC LESIONS (SUMMARY)

ALL ANIMALS (0-105W)

ANIMAL : RAT F344/DuCrj REPORT TYPE : A1

SEX : FEMALE

Group Name Control 50 ppm 100 ppm 200 ppm No. of Animals on Study 50 50 50 50 Findings Organ_ [Respiratory system] lung <50> <50> <50> congestion 0 0 0 0 0 0 0 0 0 0 0 0 0 (4)(0)(0)(0) (0) (0) (0) (0) (0)(0)(0)(0) (0)(0)(0)(0) osseous metaplasia (0)(0)(0)(0) (0)(0)(0)(0) (2)(0)(0)(0) (0)(0)(0)(0) accumulation of foamy cells 0 0 0 0 0 0 1 0 0 0 (2) (0) (0) (0) (0)(0)(0)(0) (0)(0)(0)(0) (2)(0)(0)(0) bronchiolar-alveolar cell hyperplasia 1 3 0 0 0 3 (0)(0)(0)(0) (2)(0)(0)(0) (6)(0)(0)(0) .(6)(0)(0)(0) [Hematopoietic system] bone marrow granulation 0 2 0 0 0 0 0 0 4 1 0 0 (4) (0) (0) (0) (8)(0)(0)(0) (8)(2)(0)(0) xanthogranuloma 1 0 0 0 0 0 0 (2)(0)(0)(0) (0)(0)(0)(0) (0)(0)(0)(0) (0)(0)(0)(0) lymph node ⟨50⟩ lymphadenitis 0 0 0 0 0 0 0 0 0 0 0 0 0 (2) (0) (0) (0) (2) (0) (0) (0) (2)(0)(0)(0) (0)(0)(0)(0) Grade 1 : Slight 2 : Moderate 3 : Marked 4 : Severe (a) a: Number of animals examined at the site b b: Number of animals with lesion (c) c:b/a*100

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

HISTOLOGICAL FINDINGS : NON-NEOPLASTIC LESIONS (SUMMARY)

ALL ANIMALS (0-105W)

ANIMAL : RAT F344/DuCrj REPORT TYPE : A1

EX : FEMALE

PAGE: 12

Organ	Findings	Group Name Control No. of Animals on Study 50 Grade 1 2 3 4 (%) (%) (%) (%)	50 ppm 50 1 2 3 4 (%) (%) (%) (%)	100 ppm 50 1 2 3 4 (%) (%) (%) (%)	200 ppm 50 1 2 3 4 (%) (%) (%) (%)
[Hematopoiet	tic system]				
spleen	fibrosis	(50) 1 0 0 0 (2) (0) (0) (0)	(50) 0 0 0 0 (0) (0) (0) (0)	(50) 0 0 0 0 (0) (0) (0) (0)	<50> 0 0 0 0 (0) (0) (0) (0)
	extramedullary hematopoiesis	4 3 0 0 (8) (6) (0) (0)	5 4 1 0 (10) (8) (2) (0)	6 1 0 0 (12) (2) (0) (0)	4 1 0 0 (8) (2) (0) (0)
[Circulatory	/ system]				
heart	thrombus	<50> 0 0 0 0 (0) (0) (0) (0)	(50) 1 0 0 0 (2) (0) (0) (0)	(50) 1 0 0 0 (2) (0) (0) (0)	<50> 0 0 0 0 (0) (0) (0) (0)
	mineralization	1 0 0 0 0 (2) (3) (4) (5)	0 0 0 0 0 (0)	0 0 0 0 0 (0) (0)	0 0 0 0 0 (0) (0)
	myocardial fibrosis	3 0 0 0 0 (6) (6) (0) (0)	2 0 0 0 0 (4) (0) (0) (0)	1 0 0 0 0 (2) (0) (0)	2 0 0 0 0 (4) (0) (0) (0)
[Digestive s	system]				
stomach	mineralization	<50> 1 0 0 0 (2) (0) (0) (0)	<50> 0 0 0 0 (0) (0) (0) (0)	(50) 0 0 0 0 (0) (0) (0) (0)	<50> 0 0 0 0 (0) (0) (0) (0)
Grade <a>> b (c) Significant	1: Slight 2: Moderate a: Number of animals examined at the sb: Number of animals with lesion c:b/a*100 difference: $*:P \le 0.05$ **: P:				

HISTOLOGICAL FINDINGS : NON-NEOPLASTIC LESIONS (SUMMARY)

ANIMAL : RAT F344/DuCrj REPORT TYPE : A1

SEX : FEMALE

ALL ANIMALS (0-105W)

Organ	Findings	Group Name Control No. of Animals on Study 50 Grade 1 2 3 4 (%) (%) (%) (%)	50 ppm 50 1 2 3 4 (%) (%) (%) (%)	100 ppm 50 1 2 3 4 (%) (%) (%) (%)	200 ppm 50 1 2 3 4 (%) (%) (%) (%)
[Digestive sy	vstem]				
stomach	ulcer:forestomach	(0) (6) (0) (0)	<50> 0 1 0 0 (0) (2) (0) (0)	<50> 0 0 0 0 (0) (0) (0) (0)	<50> 1 0 0 0 (2) (0) (0) (0)
	hyperplasia:forestomach	0 2 0 0 (0) (4) (0) (0)	0 1 0 0 (0) (0) (0)	0 0 0 0 0 (0) (0)	0 0 0 0 0 (0) (0) (0)
	erosion:glandular stomach	0 0 0 0 0 (0) (0)	0 0 0 0 0 (0) (0)	1 0 0 0 0 (2) (0) (0) (0)	0 0 0 0 0 (0) (0)
	ulcer:glandular stomach	0 0 0 0 0 (0) (0)		0 0 0 0 0 (0) (0)	0 0 0 0 0 (0) (0) (0)
large intes	erasion	<50> 0 0 0 0 (0) (0) (0) (0)		<50> 0 0 0 0 (0) (0) (0) (0)	<50> 0 0 0 0 (0) (0) (0) (0)
liver	herniation	3 0 0 0 (6) (0) (0) (0)		<50> 1 0 0 0 (2) (0) (0) (0)	<50> 3 0 0 0 (6) (0) (0) (0)
	necrosis:central	0 0 0 0 0	1 0 0 0 0 (2) (0) (0) (0)	0 0 0 0 0 (0) (0)	0 0 0 0 0 (0) (0) (0)
Grade (a) b (c) Significant of	1: Slight 2: Moderate a: Number of animals examined at the b: Number of animals with lesion c: b / a * 100 difference; *: P ≤ 0.05 **: P				

(HPT150)

BAIS3

SEX

HISTOLOGICAL FINDINGS : NON-NEOPLASTIC LESIONS (SUMMARY)

ANIMAL : RAT F344/DuCrj

REPORT TYPE : A1 : FEMALE ALL ANIMALS (0-105W)

Group Name Control 50 ppm 100 ppm 200 ppm No. of Animals on Study 50 50 50 50 Findings [Digestive system] liver <50> <50> granulation 9 1 0 0 0 0 0 1 0 0 8 0 0 0 (18) (2) (0) (0) (18) (0) (0) (0) (10) (2) (0) (0) (16) (0) (0) (0) clear cell focus 2 0 0 0 1 0 0 0 (0)(0)(0)(0) (2)(0)(0)(0) (4)(0)(0)(0) (2)(0)(0)(0) basophilic cell focus 2 0 0 0 3 0 0 0 3 0 0 0 (6)(0)(0)(0) (4)(0)(0)(0) (6)(0)(0)(0) (6)(0)(0)(0) bile duct hyperplasia 0 0 6 0 0 0 4 0 0 0 (8) (0) (0) (0) (8)(0)(0)(0) (12) (0) (0) (0) (8)(0)(0)(0) pancreas <50> ⟨50⟩ <50> <50> atrophy 2 0 0 8 0 0 0 2 0 0 6 9 1 0 0 (12) (4) (0) (0) (16) (0) (0) (0) (12) (4) (0) (0) (18) (2) (0) (0) arteritis 0 0 0 0 0 (0)(0)(0)(0) (0)(0)(0)(0) (2) (0) (0) (0) (0)(0)(0)(0) [Urinary system] kidney <50> infarct 0 0 0 0 0 0 0 1 0 0 0 0 0 0 0 (0)(0)(0)(0) (0)(0)(0)(0) (2) (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 : b / a * 100(c) Significant difference; *: $P \le 0.05$ **: $P \le 0.01$ Test of Chi Square

(HPT150)

BAIS3

ANIMAL : RAT F344/DuC-j

REPORT TYPE : A1 SEX : FEMALE HISTOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY) ALL ANIMALS (0-105W)

Organ	Findings	Group Name Control No. of Animals on Study 50 Grade 1 2 3 4 (%) (%) (%) (%) (%)	50 ppm 50 1 2 3 4 (%) (%) (%) (%)	100 ppm 50 1 2 3 4 (%) (%) (%) (%)	200 ppm 50 1 2 3 4 (%) (%) (%) (%)
[Urinary syst	tem]				
kidney	cyst	<50> 0 0 0 0 (0) (0) (0) (0)	<50> 2 0 0 0 (4) (0) (0) (0)	<50> 0 0 0 0 (0) (0) (0) (0)	<50> 0 0 0 0 (0) (0) (0) (0)
	chronic nephropathy	14 18 11 2 (28) (36) (22) (4)	18 11 14 0 (36) (22) (28) (0)	19 9 5 1 * (38) (18) (10) (2)	22 3 2 0 ** (44) (6) (4) (0)
	dilatation:tubular lumon	0 0 0 0 0 (0) (0)	1 0 0 0 (2) (0) (0) (0)	0 0 0 0 0 (0) (0) (0)	0 0 0 0 0 (0) (0)
	eosinophilic droplet:proximal tubule	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 (2) (0) (0) (0)
[Endocrine s	ystem]				
pituitary	hyperplasia	\$50> 9 0 0 0 (18) (0) (0) (0)	(50) 7 0 0 0 (14) (0) (0) (0)	<50> 8 0 0 0 (16) (0) (0) (0)	<50> 10 0 0 0 (20) (0) (0) (0)
	Rathke pouch	4 0 0 0 (8) (0) (0) (0)	6 0 0 0 (12) (0) (0) (0)	3 0 0 0 0 (6) (6) (70) (70)	3 0 0 0 0 (6) (6) (70) (70)
thyroid	C-cell hyperplasia	4 0 0 0 (8) (0) (0) (0)	<50> 4 0 0 0 (8) (0) (0) (0)	<50> 5 0 0 0 (10) (0) (0) (0)	2 0 0 0 (4) (0) (0) (0)

HISTOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY) ALL ANIMALS (0-105W)

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

PAGE: 16

Organ	Group No. of No. of Grade Findings	Control Animals on Study	50 ppm 50 1 2 3 4 (%) (%) (%) (%)	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	200 ppm 50 1 2 3 4 (%) (%) (%) (%)
Endocrine :	system]				
thyroid	focal follicular cell hyperplasia	<50> 0 0 0 0 (0) (0) (0) (0)	(50) 1 0 0 0 (2) (0) (0) (0)	(50) 1 0 0 0 (2) (0) (0) (0)	49> 1 0 0 0 (2) (0) (0) (0)
adrena l	fatty change	50> 5 0 0 0 (10) (0) (0) (0)	<pre></pre>	<50> 6 0 0 0 (12) (0) (0) (0)	<50> 5 1 0 0 (10) (2) (0) (0)
	hyperplasia:medulla	1 0 0 0 0 (2) (0) (0) (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 (2) (0) (0)	2 0 0 0 0 (4) (0) (0) (0)
(Reproductio	ue system]				
DUACY	atrophy	<50> 0 0 0 0 (0) (0) (0) (0)	<50> 0 0 0 0 (0) (0) (0) (0)	\(\langle 50 \rangle \) 1	(49) 1 0 0 0 (2) (0) (0) (0)
	cyst	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	2 0 0 0 0 (4) (0) (0) (0)	1 0 0 0 0 (2) (0) (0)	0 0 0 0 0
uterus	dilatation	\(\frac{50}{0} \) \(\begin{picture} 1 & 0 & 0 & 0 \\ (2) & (0) & (0) & (0) \end{picture} \)	3 0 0 0 (6) (0) (0) (0)	(50) 0 0 0 0 (0) (0) (0) (0)	(50) 0 0 0 0 (0) (0) (0) (0)
Grade <a>> b (c) Significant	1: Slight 2: Moderate 3: Marka 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				

: RAT F344/DuCrj ANIMAL

HISTOLOGICAL FINDINGS : NON-NEOPLASTIC LESIONS (SUMMARY)

REPORT TYPE : A1

SEX

: FEMALE

ALL ANIMALS (0-105W)

PAGE: 17 Group Name Control 50 ppm 100 ppm 200 ppm No. of Animals on Study 50 50 50 50 Grade 0rgan_ Findings (%) (%) [Reproductive system] mammary gl <50> <50> <50> <50> galactocele 18 0 0 0 0 0 0 10 0 0 0 0 0 (36) (0) (0) (0) (42) (0) (0) (0) (20) (0) (0) (0) (28) (0) (0) (0) [Special sense organs/appandage] еуе <50> ⟨50⟩ cataract 0 0 2 0 0 0 2 0 0 1 0 0 0 (4)(0)(0)(0) (4)(0)(0)(0) (4)(0)(0)(0) (2)(0)(0)(0) keratitis 0 0 0 0 0 0 0 0 0 0 0 (6)(0)(0)(0) (0)(0)(0)(0) (2) (0) (0) (0) (0)(0)(0)(0) [Musculoskeletal system] bone <50> <50> <50> osteosclerosis 0 0 0 0 0 0 0 0 (4)(0)(0)(0) (8)(0)(0)(0) (2) (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*100Significant difference; * : $P \le 0.05$ ** : $P \le 0.01$ Test of Chi Square (HPT150)

APPENDIX J 5

HISTOLOGICAL FINDINGS: NON-NEOPLASTIC LESIONS: SUMMARY, RAT: FEMALE: DEAD AND MORIBUND ANIMALS (2-YEAR STUDY)

ANIMAL : RAT F344/DuCrj

HISTOLOGICAL FINDINGS : NON-NEOPLASTIC LESIONS (SUMMARY) DEAD AND MORIBUND ANIMALS (0-105W)

REPORT TYPE : A1

: FEMALE

PAGE: 9

Organ	Group Name No. of Anima Grade Findings	Control Ls on Study 12 1 2 3 4 (%) (%) (%) (%)	50 ppm 10 1 2 3 4 (%) (%) (%) (%)	100 ppm 5 1 2 3 4 (%) (%) (%) (%)	200 ppm 6 1 2 3 4 (%) (%) (%) (%)
	TIMILOS		(%) (%) (%)	(h) (h) (h) (h)	(%) (%) (%)
[Respiratory	system]				
nasal cavit	thrombus	0 1 0 0 (0) (8) (0) (0)	0 1 0 0 (0) (10) (0) (0)	< 5> 0 2 0 0 (0) (40) (0) (0)	<pre></pre>
	eosinophilic change:olfactory epithelium	7 2 0 0 (58) (17) (0) (0)	0 1 8 1 ** (0) (10) (80) (10)	0 1 4 0 ** (0) (20) (80) (0)	0 1 3 1 * (0) (17) (50) (17)
	inflammation:foreign body	2 0 0 0 (17) (0) (0) (0)	3 0 0 0 0 (30) (0) (0) (0)	2 0 0 0 0 (40) (0) (0) (0)	0 0 0 0 0 (0) (0)
	respiratory metaplasia:olfactory epithelium	1 0 0 0 0 (8) (0) (0) (0)	0 0 0 0 0 (0) (0)	0 0 0 0 0 (0) (0)	0 0 0 0 0 (0) (0)
	inflammation:transitional epithelium	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 (17) (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)	1 0 0 0 0 (17) (0) (0) (0)
lung	congestion	2 0 0 0 (17) (0) (0) (0)	(10) 0 0 0 0 (0) (0) (0) (0)	<pre></pre>	<pre></pre>
	bronchiolar—alveolar cell hyperplasia	0 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 (17) (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 difference; *: P ≤ 0.05 **: P ≤ 0.01 Tes	4 : Severe			

(HPT150)

: RAT F344/DuCrj

HISTOLOGICAL FINDINGS : NON-NEOPLASTIC LESIONS (SUMMARY)

REPORT TYPE: A1

ANIMAL

SEX

: FEMALE

DEAD AND MORIBUND ANIMALS (0-105W)

PAGE: 10 Group Name Control 50 ppm 100 ppm 200 ppm No. of Animals on Study 12 10 5 6 Grade Findings (%) [Hematopoietic system] Lymph node <12> <10> < 5> < 6> lymphadenitis 1 0 0 0 0 0 0 0 0 0 0 0 (0)(0)(0)(0) (10) (0) (0) (0) (0)(0)(0)(0) (0)(0)(0)(0) spleen <12> <10> < 5> < 6> extramedullary hematopoiesis 0 2 0 0 3 1 0 1 1 0 0 1 1 0 0 (0) (17) (0) (0) (0)(30)(10)(0) (20) (20) (0) (0) (17) (17) (0) (0) [Circulatory system] heart <10> < 5> < 6> thrombus 0 0 0 0 0 0 0 1 0 0 0 0 0 0 0 (0)(0)(0)(0) (10) (0) (0) (0) (20) (0) (0) (0) (0)(0)(0)(0) myocardial fibrosis 2 0 0 0 0 0 0 0 0 0 0 0 (17) (0) (0) (0) (0)(0)(0)(0) (0)(0)(0)(0) (0)(0)(0)(0) [Digestive system] stomach <12> <10> < 5> < 6> ulcer:forestomach 0 3 0 0 0 0 0 0 0 0 0 0 (0)(25)(0)(0) (0)(0)(0)(0) (0)(0)(0)(0) (17) (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 * 100Significant difference; *: $P \le 0.05$ **: $P \le 0.01$ Test of Chi Square

ANIMAL : RAT F344/DuCrj

HISTOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)
DEAD AND MORIBUND ANIMALS (0-105W)

REPORT TYPE : A1

: FEMALE SEX

PAGE: 11

Organ	Findings	Group Name Control No. of Animals on Study 12 Grade 1 2 3 4 (%) (%) (%) (%)	50 ppm 10 1 2 3 4 (%) (%) (%) (%)	100 ppm 5 1 2 3 4 (%) (%) (%) (%)	200 ppm 6 1 2 3 4 (%) (%) (%)
[Digestive sy	rstem]				
stomach	hyperplasia:forestomach	0 1 0 0 (0) (8) (0) (0)	<10> 0 1 0 0 (0) (10) (0) (0)	< 5> 0 0 0 0 (0) (0) (0) (0)	<pre></pre>
	erosion:glandular stomach	0 0 0 0 0 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)
	ulcer:glandular stomach	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)	(0) (0) (0) (0)	0 0 0 0 0 (0) (0)
large intes	erasion	0 0 0 0 (0) (0) (0) (0)	1 0 0 0 (10) (0) (0) (0)	<pre></pre>	<pre></pre>
liver	necrosis:central	0 0 0 0 (0) (0) (0) (0)	1 0 0 0 (10) (0) (0) (0)	< 5> 0 0 0 0 (0) (0) (0) (0)	<pre></pre>
pancreas	atrophy	1 0 0 0 (8) (0) (0) (0)	<10> 0 0 0 0 (0) (0) (0) (0)	< 5> 0 0 0 0 (0) (0) (0) (0)	<pre></pre>
	arteritis	0 0 0 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)
Grade <a>> b (c) Significant c	1: Slight 2: Moderate a: Number of animals examined at the b: Number of animals with lesion c: b / a * 100 difference; *: P ≤ 0.05 **:	3: Marked 4: Severe me site P ≦ 0.01 Test of Chi Square	-		

HISTOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY) DEAD AND MORIBUND ANIMALS (0-105W)

ANIMAL : RAT F344/DuCrj REPORT TYPE : A1

SEX : FEMALE

Organ	Findings	Group Name Control No. of Animals on Study 12 Grade 1 2 3 4 (%) (%) (%) (%)	50 ppm 10 1 2 3 4 (%) (%) (%) (%)	100 ppm 5 1 2 3 4 (%) (%) (%) (%)	200 ppm 6 1 2 3 4 (%) (%) (%) (%)
[Urinary sys	stem]				
kidney	chronic nephropathy	4 1 2 0 (33) (8) (17) (0)	6 1 0 0 (60) (10) (0) (0)	<pre></pre>	<pre></pre>
	dilatation:tubular lumen	0 0 0 0 0 (0) (0)	1 0 0 0 (10) (10) (0) (0)	0 0 0 0 0 0 (0) (0)	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
	easinophilic droplet:proximal 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)	1 0 0 0 0 (17) (0) (0) (0)
[Endocrine s	system]				
pituitary	hyperplasia	1 0 0 0 (8) (0) (0) (0)	2 0 0 0 (20) (0) (0) (0)	<pre></pre>	65 1 0 0 0 0 (17) (0) (0) (0)
	Rathke pouch	1 0 0 0 (8) (0) (0) (0)	0 0 0 0 0 (0) (0)	0 0 0 0 0 0 (0) (0)	0 0 0 0 0 (0) (0)
adrena l	fatty change	1 0 0 0 (8) (0) (0) (0)	(10) 0 0 0 0 (0) (0) (0) (0)	<pre></pre>	<pre></pre>
Grade <a>> b (c) Significant	1: Slight 2: Moderate a: Number of animals examined at the b: Number of animals with lesion c: b / a * 100 difference; *: P ≤ 0.05 **: P				

(HPT150)

HISTOLOGICAL FINDINGS : NON-NEOPLASTIC LESIONS (SUMMARY)

ANIMAL : RAT F344/DuC-j DEAD AND MORIBUND ANIMALS (0-105W)

REPORT TYPE : A1 SEX : FEMALE

CMAIL:

PAGE: 13

Organ	Group Nam No. of Am Grade Findings	ne Control nimals on Study 12 1 2 3 4 (%) (%) (%) (%)	50 ppm 10 1 2 3 4 (%) (%) (%)	100 ppm 5 1 2 3 4 (%) (%) (%) (%)	200 ppm 6 1 2 3 4 (%) (%) (%) (%)
[Endocrine sy	vstem]				
adrenal	hyperplasia:medulla	0 0 0 0 (0) (0) (0) (0)	(10) 0 0 0 0 (0) (0) (0) (0)	(5) 1 0 0 0 (20) (0) (0) (0)	0 0 0 0 0 (0) (0) (0) (0)
[Reproductive	e system]				
DUACY	atrophy	0 0 0 0 (0) (0) (0) (0)	0 0 0 0 (0) (0) (0) (0)	(5> 1	(6) (0) (0) (0)
mammary gl	galactocele	4 0 0 0 (33) (0) (0) (0)	<10> 4 0 0 0 (40) (0) (0) (0)	< 5> 2 0 0 0 (40) (0) (0) (0)	< 6> 1 0 0 0 (17) (0) (0) (0)
[Special sens	se organs/appandage]				
өуө	cataract	0 0 0 0 (0) (0) (0) (0)	0 0 0 0 (0) (0) (0) (0)	0 0 0 0 (0) (0) (0) (0)	(6> 1 0 0 0 (17) (0) (0) (0)
	keratitis	1 0 0 0 0 (8) (0) (0) (0)	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 <a>> b (c) Significant o	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; $*: P \le 0.05$ **: $P \le 0.01$				

ANIMAL : RAT F344/DuCrj

HISTOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)
DEAD AND MORIBUND ANIMALS (0-105W)

REPORT TYPE : A1

SEX : FEMALE

)rgan	Findings	Group Name No. of Animals or Grade		 3 4 %) (%)	1 (%)	50 pp 10 2 (%)	<u>4</u> (%)	1 (%)	100 pp		<u>4</u> (%)	<u>1</u> (%)	2	6 (3) (3)	3 ()	<u>4</u> (%)
[Musculaskel	etal system]															
cone	osteosclerosis		0 (0) (0 0 0) (0)	1 (10)	(0) (0	1 (20) (< 8 0 0) (0	0	0 (0)	0	•))) (0
Grade (a> b (c) Genificant	1: Slight 2: Moderate a: Number of animals examined at the b: Number of animals with lesion c: b / a * 100 difference; *: P ≤ 0.05 **: P	site	1 : Severe Chi Square													

APPENDIX J6

HISTOLOGICAL FINDINGS: NON-NEOPLASTIC LESIONS: SUMMARY, RAT: FEMALE: SACRIFICED ANIMALS (2-YEAR STUDY)

HISTOLOGICAL FINDINGS : NON-NEOPLASTIC LESIONS (SUMMARY)

SACRIFICED ANIMALS (105W)

ANIMAL : RAT F344/DuCrj REPORT TYPE : A1

SEX : FEMALE

0rgan	ı	Froup Name Control Fro. of Animals on Study 38 Frade 1 2 3 4 (%) (%) (%) (%)	50 ppm 40 1 2 3 4 (%) (%) (%) (%)	100 ppm 45 1 2 3 4 (%) (%) (%) (%)	200 ppm 44 1 2 3 4 (%) (%) (%) (%)
[Integumentar	y system/appandage]				
skin/app	epidermał cyst	<38> 0 0 0 0 0 0 0 0 0 0 0	<40> 0 0 0 0 0 0 0 0 0 0 0	\(\lambda 45 \rangle \) \(1 0 0 0 \) \(2) \((0) (0) (0) \)	0 0 0 0 (0) (0) (0) (0)
[Respiratory	system]				
nasal cavit	thrombus	38> 0 1 0 0 (0) (3) (0) (0)	0 0 0 0 (0) (0) (0) (0)	<45> 0 0 0 0 (0) (0) (0) (0)	<44> 0 0 0 0 0 0 0 0 0 0 0 0 0 0
	eosinophilic change:olfactory epitheli	17 9 6 0 (45) (24) (16) (0)	1 2 24 13 ** (3) (5) (60) (33)	0 2 35 8 ** (0) (4) (78) (18)	0 0 32 12 ** (0) (0) (73) (27)
	inflammation:foreign body	4 0 0 0 0 (11) (0) (0) (0)	6 0 0 0 (15) (0) (0) (0)	2 0 0 0 0 (4) (0) (0) (0)	3 0 0 0 0 (7) (0) (0) (0)
	respiratory metaplasia:olfactory epith	0 0 0 0 0 0 (0) (0) (0)	1 0 0 0 0 (3) (0) (0) (0)	0 0 0 0 0 (0) (0)	0 0 0 0 0 (0) (0)
	inflammation:transitional epithelium	0 1 0 0 (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	osseous metaplasia	38> 0 0 0 0 (0) (0) (0) (0)	(40) 0 0 0 0 (0) (0) (0) (0)	445> 1 0 0 0 (2) (0) (0) (0)	0 0 0 0 (0) (0) (0) (0)
Grade <a>> b (c) Significant c	1: Slight 2: Moderate 3 a: Number of animals examined at the sib: Number of animals with lesion c: b / a * 100 lifference; $*: P \le 0.05$ **: $P \le 0.05$				

HISTOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)

ANIMAL : RAT F344/DuCrj

REPORT TYPE : A1 SEX : FEMALE SACRIFICED ANIMALS (105W)

PAGE: 9 Group Name Control 50 ppm 100 ppm 200 ppm No. of Animals on Study 38 40 44 Findings [Respiratory system] tung <38> <45> <44> accumulation of foamy cells 0 0 0 0 0 0 0 0 0 1 0 0 0 (3)(0)(0)(0) (0)(0)(0)(0) (0) (0) (0) (0) (2)(0)(0)(0) bronchiolar-alveolar cell hyperplasia 3 0 2 0 0 0 (0)(0)(0)(0) (3)(0)(0)(0) (7)(0)(0)(0) (5)(0)(0)(0) [Hematopoietic system] bone marrow <38> <40> <45> <44> granulation 2 0 0 2 0 0 0 0 0 0 4 1 0 0 (11) (5) (0) (0) (5)(0)(0)(0) (9)(0)(0)(0) (9)(2)(0)(0) xanthogranuloma (3)(0)(0)(0) (0)(0)(0)(0) (0)(0)(0)(0) (0)(0)(0)(0) Lymph node <38> <40> <45> <44> Lymphadenitis 0 0 0 0 0 0 1 0 0 0 0 0 0 0 (3)(0)(0)(0) (0)(0)(0)(0) (2)(0)(0)(0) (0)(0)(0)(0) spleen <38> <40> (45) <44> fibrosis 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 (3)(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*100Significant difference; * : $P \le 0.05$ ** : $P \le 0.01$ Test of Chi Square

ANIMAL : RAT F344/DuCrj

HISTOLOGICAL FINDINGS : NON-NEOPLASTIC LESIONS (SUMMARY)

SACRIFICED ANIMALS (105W)

REPORT TYPE : A1

E: AI : FEMALE

Group Name Control mag 03 100 ppm 200 ppm No. of Animals on Study Findings [Hematopoietic system] spleen ⟨38⟩ <45> extramedullary hematopoiesis 4 1 0 0 5 1 0 0 5 0 0 0 3 0 0 0 (11) (3) (0) (0) (13) (3) (0) (0) (11) (0) (0) (0) (7)(0)(0)(0) [Circulatory system] heart <40> mineralization 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 (0)(0)(0)(0) (0)(0)(0)(0) (0)(0)(0)(0) myocardial fibrosis 1 0 0 0 2 0 0 0 (3)(0)(0)(0) (5)(0)(0)(0) (2)(0)(0)(0) (5)(0)(0)(0) [Digestive system] stomach <40> mineralization 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 (3)(0)(0)(0) (0)(0)(0)(0) (0)(0)(0)(0) (0)(0)(0)(0) ulcer:forestomach 0 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 (0)(0)(0)(0) (0)(3)(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*100Significant difference; * : $P \le 0.05$ ** : $P \le 0.01$ Test of Chi Square

HISTOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY) SACRIFICED ANIMALS (105W)

ANIMAL : RAT F344/DuCrj

REPORT TYPE : A1 SEX : FEMALE PAGE: 11

0rgan	Group Name No. of Anima Grade Findings	Control als on Study 38 1 2 3 4 (%) (%) (%) (%)	50 ppm 40 1 2 3 4 (%) (%) (%) (%)	100 ppm 45 1 2 3 4 (%) (%) (%) (%)	200 ppm 44 1 2 3 4 (%) (%) (%) (%)
[Digestive s	system]				
stomach	hyperplasia:forestomach	<38> 0 1 0 0 (0) (3) (0) (0)	0 0 0 0 (0) (0) (0) (0)	<45> 0 0 0 0 (0) (0) (0) (0)	0 0 0 0 (0) (0) (0) (0)
liver	herniation	3 0 0 0 (8) (0) (0) (0)	<40> 0 0 0 0 (0) (0) (0) (0)	<45> 1 0 0 0 (2) (0) (0) (0)	3 0 0 0 (7) (0) (0) (0)
	granulation	9 1 0 0 (24) (3) (0) (0)	9 0 0 0 0 (23) (0) (0) (0)	5 1 0 0 (11) (2) (0) (0)	8 0 0 0 (18) (0) (0) (0)
	clear cell focus	0 0 0 0 0 (0) (0)	1 0 0 0 (3) (0) (0) (0)	2 0 0 0 (4) (0) (0) (0)	1 0 0 0 0 (2) (0) (0)
	basophilic cell focus	3 0 0 0 0 (8) (0) (0) (0)	2 0 0 0 (5) (0) (0) (0)	3 0 0 0 0 (7) (0) (0) (0)	3 0 0 0 0 (7) (0) (0) (0)
	bile duct hyperplasia	4 0 0 0 0 (11) (0) (0)	4 0 0 0 0 (10) (10) (10)	6 0 0 0 (13) (0) (0) (0)	4 0 0 0 0 (9) (0) (0)
pancreas	atrophy	38> 5 2 0 0 (13) (5) (0) (0)	<40> 8 0 0 0 (20) (0) (0) (0)	6 2 0 0 (13) (4) (0) (0)	\$ 1 0 0 (18) (2) (0) (0)
Grade <a>> b <a>Coa> 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 Test	4 : Severe st of Chi Square			

ANIMAL : RAT F344/DuCrj

REPORT TYPE : A1 SEX : FEMALE

HISTOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY) SACRIFICED ANIMALS (105W)

PAGE: 12

Organ	Group Nam No. of Ar Grade Findings	e Control imals on Study 38 1 2 3 4 (%) (%) (%)	50 ppm 40 1 2 3 4 (%) (%) (%) (%)	100 ppm 45 1 2 3 4 (%) (%) (%) (%)	200 ppm 44 1 2 3 4 (%) (%) (%) (%)
[Urinary sys	rstem]				
kidney	infarct	<38> 0 0 0 0 0 0 0 0 0 0 0	<40> 0 0 0 0 (0) (0) (0) (0)	\(\lambda 45 \rangle \) \[1 0 0 0 (2) (0) \qquad (0) (\qquad 0) (0) \	<44> 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
	cyst	0 0 0 0 0 (0) (0)	2 0 0 0 0 (5) (0) (0)	0 0 0 0 0 (0) (0)	0 0 0 0 0 (0) (0) (0)
	chronic nephropathy	10 17 9 2 (26) (45) (24) (5)	12 10 14 0 (30) (25) (35) (0)	17 9 4 0 ** (38) (20) (9) (0)	22 3 2 0 ** (50) (7) (5) (0)
[Endocrine :	system]				
pituitary	hyperplasia	<pre></pre>	5 0 0 0 (13) (0) (0) (0)	445> 6 0 0 0 (13) (0) (0) (0)	9 0 0 0 (20) (0) (0) (0)
	Rathke pouch	3 0 0 0 0 (8) (8) (9) (9) (9)	6 0 0 0 (15) (0) (0) (0)	3 0 0 0 0 (7) (0) (0) (0)	3 0 0 0 0 (7) (0) (0) (0)
thyroid	C-cell hyperplasia	<38> 4 0 0 0 (11) (0) (0) (0)	40> 4 0 0 0 (10) (0) (0) (0)	<45> 5 0 0 0 (11) (0) (0) (0)	<43> 2 0 0 0 (5) (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 t difference; *: P ≤ 0.05 **: P ≤ 0.01	4 : Severe			

(HPT150)

HISTOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY) SACRIFICED ANIMALS (105W)

ANIMAL : RAT F344/DuCrj

REPORT TYPE : A1 SEX : FEMALE

Organ	Findings	Group Name Control No. of Animals on Study 38 Grade 1 2 3 4 (%) (%) (%) (%)	50 ppm 40 1 2 3 4 (%) (%) (%) (%)	100 ppm 45 1 2 3 4 (%) (%) (%) (%)	200 ppm 44 1 2 3 4 (%) (%) (%) (%)
(Endocrine :	system]				
thyroid	focal follicular cell hyperplasia	<38> 0 0 0 0 (0) (0) (0) (0)	\(\langle 40 \rangle \) \[1 0 0 0 \\ (3) (0) (0) (0) (0) \]	\(\lambda 45 \rangle \) \[1 0 0 0 (2) (0) \qquad (0) (\qquad 0) (0) \	<43> 1 0 0 0 (2) (0) (0) (0)
adrena l	fatty change	<38> 4 0 0 0 (11) (0) (0) (0)	7 1 0 0 (18) (3) (0) (0)	<45> 6 0 0 0 (13) (0) (0) (0)	5 1 0 0 (11) (2) (0) (0)
	hyperplasia:medulla	1 0 0 0 0 (3) (0) (0)	0 0 0 0 0 (0) (0)	0 0 0 0 0 0 (0) (0)	2 0 0 0 0 (5) (0) (0) (0)
[Reproducti	ue system]				
DUALY	atrophy	<38> 0 0 0 0 (0) (0) (0) (0)	<40> 0 0 0 0 (0) (0) (0) (0)	<45> 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	(43) 1 0 0 0 (2) (0) (0) (0)
	cyst	0 0 0 0 0 0 (0) (0)	2 0 0 0 0 (5) (0) (0)	1 0 0 0 0 (2) (0) (0)	0 0 0 0 0 (0) (0)
uterus	dilatation	38> 1 0 0 0 (3) (0) (0) (0)	3 0 0 0 (8) (0) (0) (0)	<45> 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 (0) (0) (0) (0)
Grade <a>> b (c) Significant	1: Slight 2: Moderate a: Number of animals examined at the: b: Number of animals with lesion c: b / a * 100 t difference; *: P ≤ 0.05 **: P				

ANIMAL : RAT F344/DuCrj

HISTOLOGICAL FINDINGS : NON-NEOPLASTIC LESIONS (SUMMARY) SACRIFICED ANIMALS (105W)

REPORT TYPE : A1 : FEMALE

PAGE: 14

0rgan	1	roup Name Control o. of Animals on Study 38 rade 1 2 3 4 (%) (%) (%) (%)	50 ppm 40 1 2 3 4 (%) (%) (%) (%)	100 ppm 45 1 2 3 4 (%) (%) (%) (%)	200 ppm 44 1 2 3 4 (%) (%) (%) (%)
[Reproductive	e system]				
mammary gl	galactocele	(38) 14 0 0 0 (37) (0) (0) (0)	17 0 0 0 (43) (0) (0) (0)	<45> 8 0 0 0 (18) (0) (0) (0)	30 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
[Special sens	se organs/appandage]				
еуе	cataract	<38> 2 0 0 0 (5) (0) (0) (0)	2 0 0 0 (5) (0) (0) (0)	2 0 0 0 (4) (0) (0) (0)	<44> 0 0 0 0 0 0 0 0 0 0 0 0
	keratitis	2 0 0 0 (5) (0) (0) (0)	0 0 0 0 0 (0) (0)	1 0 0 0 (2) (0) (0) (0)	0 0 0 0 0 (0) (0)
[Musculaskele	etal system]				
bane	osteosclerosis	2 0 0 0 (5) (0) (0) (0)	3 0 0 0 (8) (0) (0) (0)	<45> 0 0 0 0 (0) (0) (0) (0)	<44> 0 0 0 0 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 ≤ 0.05 **: P ≤				
(HPT150)					BA

BAIS3

APPENDIX K 1

NUMBER OF ANIMALS WITH TUMORS AND NUMBER OF TUMORS-TIME RELATED RAT: MALE $(\ 2\text{-YEAR STUDY}\)$

NUMBER OF ANIMALS WITH TUMORS AND NUMBER OF TUMORS - TIME RELATED

STUDY NO. : 0269 ANIMAL : RAT F344/DuCrj

REPORT TYPE : A1
SEX : MALE

Time-relatedWeeks	Items	Group Name	Control	70 ppm	100 ppm	200 ppm	
0 - 52	NO. OF EXAMINED ANIMALS		1	0	0	0	
	NO. OF ANIMALS WITH TUMORS NO. OF ANIMALS WITH SINGLE TUMORS NO. OF ANIMALS WITH MULTIPLE TUMORS		1 1 0	0 0 0	0 0 0	0 0 0	
	NO. OF BENIGN TUMORS NO. OF MALIGNANT TUMORS NO. OF TOTAL TUMORS		0 1 1	0 0 0	0 0 0	0 0 0	
53 - 78	NO. OF EXAMINED ANIMALS	***	1	2	0	0	
	NO. OF ANIMALS WITH TUMORS NO. OF ANIMALS WITH SINGLE TUMORS NO. OF ANIMALS WITH MULTIPLE TUMORS		1 0 1	2 0 2	0 0 0	0 0 0	
	NO. OF BENIGN TUMORS NO. OF MALIGNANT TUMORS NO. OF TOTAL TUMORS		1 1 2	3 1 4	0 0 0	0 0 0	
79 - 104	NO. OF EXAMINED ANIMALS		9	13	17	20	
	NO. OF ANIMALS WITH TUMORS NO. OF ANIMALS WITH SINGLE TUMORS NO. OF ANIMALS WITH MULTIPLE TUMORS		9 2 7	12 3 9	17 2 15	20 1 19	
	NO. OF BENIGN TUMORS NO. OF MALIGNANT TUMORS NO. OF TOTAL TUMORS		15 4 19	17 7 24	29 8 37	30 19 49	
105 - 105	NO. OF EXAMINED ANIMALS		39	35	33	30	
	NO. OF ANIMALS WITH TUMORS NO. OF ANIMALS WITH SINGLE TUMORS NO. OF ANIMALS WITH MULTIPLE TUMORS		39 12 27	35 11 24	33 8 25	30 9 21	
	NO. OF BENIGN TUMORS NO. OF MALIGNANT TUMORS NO. OF TOTAL TUMORS		75 7 82	62 6 68	74 4 78	56 6 62	

NUMBER OF ANIMALS WITH TUMORS AND NUMBER OF TUMORS - TIME RELATED

PAGE: 2

ANIMAL : RAT F344/DuCrj

REPORT TYPE : A1

SEX : MALE

Time-relatedWeeks	Items	Group Name	Control	50 ppm	100 ppm	200 ppm	
0 - 105	NO. OF EXAMINED ANIMALS		50	50	50	50	
	NO. OF ANIMALS WITH TUMORS		50	49	50	50	
	NO. OF ANIMALS WITH SINGLE TUMORS		15	14	10	10	
	NO. OF ANIMALS WITH MULTIPLE TUMORS		35	35	40	40	
	NO. OF BENIGN TUMORS		91	82	103	86	
	NO. OF MALIGNANT TUMORS		13	. 14	12	25	
	NO. OF TOTAL TUMORS		104	96	115	111	

(HPTO70) BAIS3

APPENDIX K 2

NUMBER OF ANIMALS WITH TUMORS AND NUMBER OF TUMORS-TIME RELATED RAT: FEMALE $(\ 2\text{-YEAR STUDY}\)$

NUMBER OF ANIMALS WITH TUMORS AND NUMBER OF TUMORS - TIME RELATED

ANIMAL : RAT F344/DuCrj

REPORT TYPE : A1

STUDY NO. : 0269

SEX : FEMALE

Time-relatedWeeks	Items	Group Name	Control	50 ppm	100 ppm	200 ppm	
0 - 52	NO. OF EXAMINED ANIMALS		0	0	0	1	
	NO. OF ANIMALS WITH TUMORS NO. OF ANIMALS WITH SINGLE TUMORS NO. OF ANIMALS WITH MULTIPLE TUMORS		0 0 0	0 0 0	0 0 0	1 1 0	
	NO. OF BENIGN TUMORS NO. OF MALIGNANT TUMORS NO. OF TOTAL TUMORS		0 0 0	0 0 0	0 0 0	0 1 1	
53 - 78	NO. OF EXAMINED ANIMALS		3	3	0	1	
	NO. OF ANIMALS WITH TUMORS NO. OF ANIMALS WITH SINGLE TUMORS NO. OF ANIMALS WITH MULTIPLE TUMORS		3 3 0	3 3 0	0 0 0	1 0 1	
	NO. OF BENIGN TUMORS NO. OF MALIGNANT TUMORS NO. OF TOTAL TUMORS		1 2 3	0 3 3	0 0 0	1 1 2	
79 - 104	NO. OF EXAMINED ANIMALS		9	7	5	4	
	NO. OF ANIMALS WITH TUMORS NO. OF ANIMALS WITH SINGLE TUMORS NO. OF ANIMALS WITH MULTIPLE TUMORS		9 6 3	7 4 3	5 2 3	4 2 2	
	NO. OF BENIGN TUMORS NO. OF MALIGNANT TUMORS NO. OF TOTAL TUMORS		3 9 12	7 4 11	7 2 9	4 2 6	
105 - 105	NO. OF EXAMINED ANIMALS		38	40	45	44	
	NO. OF ANIMALS WITH TUMORS NO. OF ANIMALS WITH SINGLE TUMORS NO. OF ANIMALS WITH MULTIPLE TUMORS		32 19 13	34 22 12	34 14 20	30 23 7	
	NO. OF BENIGN TUMORS NO. OF MALIGNANT TUMORS NO. OF TOTAL TUMORS		48 3 51	43 3 46	59 10 69	37 4 41	

ANIMAL : RAT F344/DuC-j

REPORT TYPE : A1 SEX : FEMALE NUMBER OF ANIMALS WITH TUMORS AND NUMBER OF TUMORS - TIME RELATED

PAGE: 4

Time-relatedWeeks	Items	Group Name	Control	50 ppm	100 ppm	200 ppm	
0 - 105	NO. OF EXAMINED ANIMALS		50	50	50	50	
	NO. OF ANIMALS WITH TUMORS NO. OF ANIMALS WITH SINGLE TUMORS NO. OF ANIMALS WITH MULTIPLE TUMORS		44 28 16	44 29 15	39 16 23	36 26 10	
	NO. OF BENIGN TUMORS NO. OF MALIGNANT TUMORS NO. OF TOTAL TUMORS		52 14 66	50 10 60	66 12 78	42 8 50	

(HPT070) BAIS3

APPENDIX L1

HISTOLOGICAL FINDINGS: NEOPLASTIC LESIONS: SUMMARY, RAT: MALE (2-YEAR STUDY)

ANIMAL : RAT F344/DuCrj

REPORT TYPE : A1
SEX : MALE

HISTOLOGICAL FINDINGS : NEOPLASTIC LESIONS (SUMMARY)

ALL ANIMALS (0-105W)

Organ	Findings	Group Name No. of animals on Study	Control 50	50 ppm 50	100 ppm 50	200 ppm 50
[Integumentary	v system/appandage]					
skin/app	squamous cell papilloma		<50> 0 (0%)	<50> 0 (0%)	<50> 1 (2%)	<50> 0 (0%)
	keratoacanthoma		1 (2%)	1 (2%)	1 (2%)	1 (2%)
	sebaceous adenoma		0 (0%)	0 (0%)	0 (0%)	1 (2%)
	squamous cell carcinoma		0 (0%)	0 (0%)	0 (0%)	1 (2%)
subcutis	fibroma		<50> 1 (2%)	<50> 3 (6%)	<50> 4 (8%)	<50> 3 (6%)
	lipoma		0 (0%)	0 (0%)	1 (2%)	0 (0%)
	schwannoma:malignant		0 (0%)	0 (0%)	2 (4%)	0 (0%)
Respiratory s	system]					
nasal cavit	adenoma		<50> 1 (2%)	<50> 0 (0%)	<50> 0 (0%)	<50> 0 (0%)
ung	bronchiolar-alveolar adenoma		<50> 1 (2%)	<50> 3 (6%)	<50> 4 (8%)	<50> 1 (2%)
	squamous cell carcinoma		0 (0%)	0 (0%)	0 (0%)	1 (2%)
[Hematopoietio	c system]					
thymus	thymoma:malignant		<50> 0 (0%)	<50> 1 (2%)	<50> 0 (0%)	<50> 0 (0%)
<a>> b (c)	a: Number of animals examined at the site b: Number of animals with neoplasm c:b	/ a * 100	TVT-1844			

(HPT085)

ANIMAL : RAT F344/DuCrj

HISTOLOGICAL FINDINGS: NEOPLASTIC LESIONS (SUMMARY) ALL ANIMALS (0-105W)

REPORT TYPE : A1

SEX : MALE

rgan	Findings	Group Name Control No. of animals on Study 50	90 maa 90	100 ppm 50	200 ppm 50
Hematopoietic	system]			•	
pleen	fibrosarcoma	<50> 0 (0%)	<50> 0 (0%)	<50> 1 (2%)	<50> 0 (0%)
	mononuclear cell leukemia	5 (10%)	2 (4%)	2 (4%)	4 (8%)
Digestive sys	tem]				
ral cavity	squamous cell carcinoma	<50> 0 (0%)	<50> 1 (2%)	<50> 1 (2%)	<50> 0 (0%)
ongue	squamous cell papilloma	<50> 0 (0%)	<50> 1 (2%)	<50> 0 (0%)	<50> 1 (2%)
alivary gl	adenocarcinoma	<50> 0 (0%)	<50> 0 (0%)	<50> 1 (2%)	<50> 0 (0%)
	schwannoma:malignant	0 (0%)	0 (0%)	0 (0%)	1 (2%)
rtomach	le i omyoma	<50> 0 (0%)	<50> 0 (0%)	<50> 1 (2%)	<50> 0 (0%)
mall intes	adenocarcinoma	<50> 0 (0%)	<50> 0 (0%)	<50> 0 (0%)	<50> 1 (2%)
arge intes	leiomyosarcoma	<50> 0 (0%)	<50> 0 (0%)	<50> 0 (0%)	<50> 1 (2%)
iver	hepatocellular adenoma	<50> 0 (0%)	<50> 2 (4%)	<50> 1 (2%)	<50> 1 (2%)
	histiocytic sarcoma	0 (0%)	1 (2%)	0 (0%)	0 (0%)
pancreas	islet cell adenoma	<50> 4 (8%)	<50> 3 (6%)	<50> 2 (4%)	<50> 0 (0%)

ANIMAL : RAT F344/DuCrj HISTOLOGICAL FINDINGS: NEOPLASTIC LESIONS (SUMMARY)

ALL ANIMALS (0-105W)

REPORT TYPE: A1 : MALE SEX

(HPT085)

Group Name Control 50 ppm 100 ppm 200 ppm 0rgan Findings No. of animals on Study 50 50 50 50 [Urinary system] urin bladd <50> <50> <50> <50> transitional cell papilloma 0 (0%) 0 (0%) 1 (2%) 2 (4%) [Endocrine system] pituitary <50> <50> <50> ⟨50⟩ adenoma 23 (46%) 11 (22%) 16 (32%) 13 (26%) thyroid <50> ⟨50⟩ <50> <50> C-cell adenoma 6 (12%) 5 (10%) 2 (4%) 6 (12%) follicular adenoma 2 (4%) 0 (0%) 2 (4%) 6 (12%) C-cell carcinoma 0 (0%) 0 (0%) 1 (2%) 0 (0%) follicular adenocarcinoma 2 (4%) 4 (8%) 1 (2%) 4 (8%) adrenal <50> <50> <50> <50> pheochromocytoma 4 (8%) 4 (8%) 9 (18%) 2 (4%) pheochromocytoma:malignant 0 (0%) 2 (4%) 0 (0%) 3 (6%) [Reproductive system] testis <50> ⟨50⟩ <50> <50> interstitial cell tumor 44 (88%) 47 (94%) 49 (98%) 47 (94%) prostate <50> <50> <50> <50> squamous cell carcinoma 1 (2%) 0 (0%) 0 (0%) 0 (0%) mammary gl <50> <50> <50> <50> adenoma 0 (0%) 0 (0%) 3 (6%) 0 (0%) (a) a: Number of animals examined at the site b (c) b: Number of animals with neoplasm c:b/a*100

STUDY NO. : 0269 ANIMAL : RAT F344/DuCrj HISTOLOGICAL FINDINGS: NEOPLASTIC LESIONS (SUMMARY)

ALL ANIMALS (0-105W)

REPORT TYPE : A1

SEX : MALE

Findings No. of		50 ppm 50	100 ppm 50	200 ppm 50
system]				
fibroadenoma	<50> 2 (4%)	<50> 0 (0%)	<50> 0 (0%)	<50> 0 (0%)
adenoma	<50> 0 (0%)	<50> 1 (2%)	<50> 4 (8%)	<50> 1 (2%)
[mem]				
malignant reticulosis	<50> 1 (2%)	<50> 0 (0%)	<50> 0 (0%)	<50> 0 (0%)
glioma	1 (2%)	0 (0%)	0 (0%)	2 (4%)
glioma	<50> 1 (2%)	<50> 0 (0%)	<50> 0 (0%)	<50> 0 (0%)
e organs/appandage]				
adenoma	<50> 1 (2%)	<50> 0 (0%)	<50> 0 (0%)	<50> 0 (0%)
adenoma	<50> 0 (0%)	<50> 1 (2%)	<50> 2 (4%)	<50> 1 (2%)
squamous cell carcinoma	1 (2%)	0 (0%)	1 (2%)	1 (2%)
tal system]				
tipoma	<50> 1 (2%)	<50> 0 (0%)	<50> 0 (0%)	<50> 0 (0%)
rhabdomyosarcoma	0 (0%)	1 (2%)	0 (0%)	0 (0%)
•	FindingsNo. of system] fibroadenoma adenoma m] malignant reticulosis glioma glioma organs/appandage] adenoma adenoma squamous cell carcinoma cal system]	No. of animals on Study 50	No. of animals on Study 50 50	No. of animals on Study 50 50 50 50

: RAT F344/DuCrj

HISTOLOGICAL FINDINGS : NEOPLASTIC LESIONS (SUMMARY)

ALL ANIMALS (0-105W)

REPORT TYPE : A1 SEX : MALE

ANIMAL

Group Name 100 ppm 200 ppm Control 50 ppm Findings_ No. of animals on Study 50 50 Organ__ [Musculoskeletal system] <50> <50> <50> <50> muscle 1 (2%) sarcoma:NOS 0 (0%) 0 (0%) 0 (0%) <50> <50> ⟨50⟩ bone <50> 0 (0%) 0 (0%) 0 (0%) 1 (2%) osteosarcoma <50> ⟨50⟩ <50> <50> vertebra 0 (0%) 0 (0%) 1 (2%) 0 (0%) chordoma:malignant [Body cavities] <50> mediastinum ⟨50⟩ <50> <50> 1 (2%) 0 (0%) 0 (0%) hemangiosarcoma 0 (0%) <50> <50> <50> ⟨50⟩ peritoneum 0 (0%) 1 (2%) 0 (0%) 0 (0%) osteosarcoma 1 (2%) 1 (2%) 1 (2%) 3 (6%) mesothelioma

	(a)	>	а	:	Number	of	animals	examined	at	the	site
--	----------	-----	---	---	---	--------	----	---------	----------	----	-----	------

b (c) b: Number of animals with neoplasm c:b/a*100

(HPT085)

BAIS3

APPENDIX L 2

HISTOLOGICAL FINDINGS: NEOPLASTIC LESIONS: SUMMARY, RAT: FEMALE (2-YEAR STUDY)

HISTOLOGICAL FINDINGS: NEOPLASTIC LESIONS (SUMMARY)

ALL ANIMALS (0-105W)

: RAT F344/DuCrj REPORT TYPE : A1

ANIMAL

SEX : FEMALE

Group Name Control 50 ppm 100 ppm 200 ppm 50 50 50 Findings_ No. of animals on Study 0rgan___ [Integumentary system/appandage] skin/app <50> <50> <50> <50> trichoepithelioma 0 (0%) 0 (0%) 1 (2%) 0 (0%) subcutis ⟨50⟩ <50> <50> <50> fibroma 0 (0%) 0 (0%) 0 (0%) 1 (2%) [Respiratory system] ⟨50⟩ <50> lung <50> <50> 0 (0%) 0 (0%) bronchiolar-alveolar adenoma 1 (2%) 2 (4%) [Hematopoietic system] bone marrow <50> <50> <50> <50> histiocytic sarcoma 1 (2%) 0 (0%) 1 (2%) 0 (0%) thymus <50> ⟨50⟩ <50> <49> thymoma:malignant 0 (0%) 1 (2%) 0 (0%) 0 (0%) <50> <50> <50> spleen <50> mononuclear cell teukemia 4 (8%) 6 (12%) 5 (10%) 3 (6%) [Digestive system] <50> <50> tongue <50> <49> squamous cell papilloma 0 (0%) 0 (0%) 1 (2%) 0 (0%) small intes ⟨50⟩ <50> <50> <50> hemangiosarcoma 0 (0%) 0 (0%) 0 (0%) 1 (2%) liver ⟨50⟩ ⟨50⟩ <50> ⟨50⟩ hepatocellular adenoma 0 (0%) 1 (2%) 0 (0%) 0 (0%) histiocytic sarcoma 0 (0%) 0 (0%) 0 (0%) 1 (2%)

⁽a) a: Number of animals examined at the site

b (c) b: Number of animals with neoplasm c:b/a*100

HISTOLOGICAL FINDINGS : NEOPLASTIC LESIONS (SUMMARY) ALL ANIMALS (0-105W)

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

Organ	Findings	Group Name Cont	rol 50	50 ppm 50	100 ppm 50	200 ppm 50
[Digestive sys	rtem]					
pancreas	islet cell adenoma	2	<50> (4%)	<50> 1 (2%)	<50> 1 (2%)	<50> 0 (0%)
(Endocrine sys	etem]				, ,,,,	
pituitary	adenoma	27	<50> (54%)	<50> 27 (54%)	<50> 23 (46%)	<50> 21 (42%)
	adenocarcinoma	1	(2%)	0 (0%)	0 (0%)	0 (0%)
thyroid	C-cell adenoma	4	<50> (8%)	<50> 4 (8%)	<50> 4 (8%)	<49> 3 (6%)
	follicular adenoma	. 0	(0%)	1 (2%)	2 (4%)	0 (0%)
	C-cell carcinoma	1	(2%)	0 (0%)	0 (0%)	0 (0%)
	follicular adenocarcinoma	0	(0%)	0 (0%)	2 (4%)	0 (0%)
adrenal	pheochromocytoma	1	<50> (2%)	<50> 0 (0%)	<50> 3 (6%)	<50> 1 (2%)
	cortical adenoma	1	(2%)	1 (2%)	1 (2%)	0 (0%)
	pheochromocytoma:malignant	3	(6%)	0 (0%)	0 (0%)	1 (2%)
[Reproductive	system]					
ovary	schwannoma:malignant	1	<50> (2%)	<50> 0 (0%)	<50> 0 (0%)	<49> 0 (0%)
(a)	a: Number of animals examined at the site b: Number of animals with neoplasm c: b	/ a * 100				

⁽HPT085)

ANIMAL : RAT F344/DuCrj

REPORT TYPE : A1

SEX : FEMALE HISTOLOGICAL FINDINGS: NEOPLASTIC LESIONS (SUMMARY)

ALL ANIMALS (0-105W)

SEX	: FEMALE							PAGE: 8
							· · · · · · · · · · · · · · · · · · ·	
			Group Name	Control	50 ppm	100 ppm	200 ppm	

Findings	Group Name Control No. of animals on Study 50	50 ppm 50	100 ppm 50	200 ppm 50
ystem]				
endometrial stromal polyp	<50> 7 (14%)	<50> 6 (12%)	<50> 13 (26%)	<50> 7 (14%)
leiomyosarcoma	1 (2%)	0 (0%)	0 (0%)	0 (0%)
schwannoma:malignant	1 (2%)	1 (2%)	0 (0%)	1 (2%)
endometrial stromal sarcoma	0 (0%)	1 (2%)	1 (2%)	0 (0%)
adenoma	<50> 1 (2%)	<50> 0 (0%)	<50> 1 (2%)	<50> 1 (2%)
fibroadenoma	8 (16%)	9 (18%)	11 (22%)	4 (8%)
adenocarcinoma	0 (0%)	1 (2%)	0 (0%)	0 (0%)
anaplastic carcinoma	0 (0%)	0 (0%)	0 (0%)	1 (2%)
adenoma	<50> 0 (0%)	<50> 1 (2%)	<50> 4 (8%)	<50> 1 (2%)
]				
meningioma:benign	<50> 0 (0%)	<50> 0 (0%)	<50> 0 (0%)	<50> 1 (2%)
glioma	<50> 0 (0%)	<50> 0 (0%)	<50> 1 (2%)	<50> 0 (0%)
l system]				
osteosarcoma .	<50> 1 (2%)	<50> 0 (0%)	<50> 2 (4%)	<50> 0 (0%)
	endometrial stromal polyp leiomyosarcoma schwannoma:malignant endometrial stromal sarcoma adenoma fibroadenoma adenocarcinoma anaplastic carcinoma adenoma] meningioma:benign glioma l system]	No. of animals on Study 50	No. of animals on Study 50 50 50 50 50 50 50 5	No. of animals on Study 50 50 50 50 50 50 50 5

b (c) b: Number of animals with neoplasm

c:b/a*100

APPENDIX M 1

NEOPLASTIC LESIONS - INCIDENCE AND STATISTICAL ANALYSIS, RAT: MALE (2-YEAR STUDY)

ANIMAL : RAT F344/DuCrj
SEX : MALE

STUDY No. : 0269

Group Name	Control	50 ppm	100 ppm	200 ppm
	SITE : subcutis			
Tumor rate	TUMOR : fibroma			
Overall rates(a)	1/50(2.0)	3/50(6.0)	4/50(8.0)	3/50(6.0)
Adjusted rates(b)	2.56	6.82	9.09	10.00
Terminal rates(c) Statistical analysis	1/39(2.6)	2/35(5.7)	3/33(9.1)	3/30(10.0)
Peto test Standard method(d)	P = 0.3831			
Prevalence method(d)	P = 0.1572			
Combined analysis(d)	P = 0.1530			
Cochran-Armitage test(e) Fisher Exact test(e)	P = 0.4316	P = 0.3235	P = 0.1998	D - A 2000
Fisher Exact test(e)		r - 0.3233	P = 0.1996	P = 0.3235
	SITE : lung			
	TUMOR : bronchiolar-alveolar adenoma	a		
Tumor rate	4.504			
Overall rates(a) Adjusted rates(b)	1/50(2.0) 2.56	3/50(6.0) 7.69	4/50(8.0) 12.12	1/50(2.0) 2.50
Terminal rates(c)	1/39(2.6)	2/35(5.7)	4/33(12.1)	0/30(0.0)
Statistical analysis	, , ,	, , , , , , , , , , , , , , , , , , , ,	4,55, 52,57	0,000
Peto test Standard method(d)	P =			
Prevalence method(d)	P = 0.5037			
Combined analysis(d)	P =			
Cochran-Armitage test(e)	P = 0.8627			
Fisher Exact test(e)		P = 0.3235	P = 0.1998	P = 0.2475
	SITE : spleen			
	TUMOR : mononuclear cell leukemia			
Tumor rate	E/E0(10 0)	0/50/ 4.0	0/50(track and a
Overall rates(a) Adjusted rates(b)	5/50(10.0) 7.69	2/50(4.0) 2.86	2/50(4.0) 0.0	4/50(8.0) 0.0
Terminal rates(c)	3/39(7.7)	1/35(2.9)	0/33(0.0)	0/30(0.0)
Statistical analysis			, ,	-,(
Peto test Standard method(d)	P = 0.0997			
Prevalence method(d)	P = 0.0997 P = 0.9839			
Combined analysis(d)	P = 0.4688			
Cochran-Armitage test(e)	P = 0.8844			
Fisher Exact test(e)		P = 0.2425	P = 0.2425	P = 0.4883

(HPT360A)

NEOPLASTIC LESIONS-INCIDENCE AND STATISTICAL ANALYSIS

ANIMAL : RAT F344/DuCrj

SEX	:	MALE

Group Name Control 50 ppm 100 ppm 200 ppm SITE : pancreas TUMOR : islet cell adenoma Tumor rate Overall rates(a) 4/50(8.0) 3/50(6.0) 2/50(4.0) 0/50(0.0) Adjusted rates(b) 8.89 8.57 4.65 0.0 2/39(5.1) Terminal rates(c) 3/35(8.6) 0/33(0.0) 0/30(0.0) Statistical analysis Peta test Standard method(d) Prevalence method(d) P = 0.9758Combined analysis(d) P = ----Cochran-Armitage test(e) P = 0.0436*Fisher Exact test(e) P = 0.4895P = 0.3574P = 0.0688SITE : pituitary gland TUMOR : adenoma Tumor rate Overall rates(a) 23/50(46.0) 11/50(22.0) 16/50(32.0) 13/50(26.0) Adjusted rates(b) 50.00 31.43 33.33 23.68 19/39(48.7) Terminal rates(c) 11/35(31.4) 10/33(30.3) 7/30(23.3) Statistical analysis Peto test Standard method(d) P = 0.1376Prevalence method(d) P = 0.9564Combined analysis(d) P = 0.8902Cochran-Armitage test(e) P = 0.1165Fisher Exact test(e) P = 0.0555P = 0.2231P = 0.1075SITE : thyroid TUMOR : C-cell adenoma Tumor rate Overall rates(a) 6/50(12.0) 5/50(10.0) 2/50(4.0) 6/50(12.0) Adjusted rates(b) 14.63 14.29 6.06 13.33 Terminal rates(c) 5/39(12.8) 5/35(14.3) 2/33(6,1) 4/30(13.3) Statistical analysis Peto test Standard method(d) P = ----Prevalence method(d) P = 0.4141Combined analysis(d) P = ----Cochran-Armitage test(e) P = 0.9675Fisher Exact test(e) P = 0.4872P = 0.1606P = 0.3807

(HPT360A)

PAGE:

2

STUDY No. : 0269 ANIMAL : RAT F344/DuCrj

SEX : MALE

Group Name Control 50 ppm 100 ppm 200 ppm SITE : thyroid TUMOR : follicular adenoma Tumor rate Overall rates(a) 2/50(4.0) 0/50(0.0) 2/50(4.0) 6/50(12.0) Adjusted rates(b) 5.13 0.0 6.06 19.35 Terminal rates(c) 2/39(5.1) 0/35(0.0) 2/33(6.1) 5/30(16.7) Statistical analysis Peto test Standard method(d) P = ----Prevalence method(d) P = 0.0052**P = ----Combined analysis(d) Cochran-Armitage test(e) P = 0.0213*Fisher Exact test(e) P = 0.2574P = 0.3088P = 0.1606SITE : thyroid TUMOR : follicular adenocarcinoma Tumor rate Overall rates(a) 2/50(4.0) 4/50(8.0) 1/50(2.0) 4/50(8.0) Adjusted rates(b) 5.13 11.43 3.03 10.53 Terminal rates(c) 2/39(5.1) 4/35(11.4) 1/33(3.0) 2/30(6.7) Statistical analysis Peto test Standard method(d) P = ----Prevalence method(d) P = 0.2160Combined analysis(d) P = ----Cochran-Armitage test(e) P = 0.5641Fisher Exact test(e) P = 0.3574P = 0.4926P = 0.3574

SITE : thyroid

TUMOR : C-cell adenoma, C-cell carcinoma Tumor rate Overall rates(a) 6/50(12.0) 5/50(10.0) 3/50(6.0) 6/50(12.0) Adjusted rates(b) 14.63 14.29 6.06 13.33 Terminal rates(c) 5/39(12.8) 5/35(14.3) 2/33(6.1) 4/30(13.3) Statistical analysis Peto test Standard method(d) P = 0.3796Prevalence method(d) P = 0.4149Combined analysis(d) P = 0.3966Cochran-Armitage test(e) P = 1.0000Fisher Exact test(e) P = 0.4872P = 0.2728P = 0.3807

(HPT360A)

PAGE :

3

STUDY No. : 0269 ANIMAL : RAT F344/DuCrj

SEX : MALE

Group Name Control 50 ppm 100 ppm 200 ppm SITE : thyroid TUMOR : fallicular adenoma, fallicular adenocarcinoma Tumor rate Overall rates(a) 4/50(8.0) 4/50(8.0) 3/50(6.0) 10/50(20.0) Adjusted rates(b) 10.26 11.43 9.09 27.27 4/39(10.3) Terminal rates(c) 4/35(11.4) 3/33(9.1) 7/30(23.3) Statistical analysis Peto test Standard method(d) P = ----Prevalence method(d) P = 0.0080**Combined analysis(d) P = -----Cochran-Armitage test(e) P = 0.0388*Fisher Exact test(e) P = 0.3579P = 0.4895P = 0.1108SITE : adrenal gland TUMOR : pheochromocytoma Tumor rate 4/50(8.0) Overall rates(a) 4/50(8.0) 9/50(18.0) 2/50(4.0) Adjusted rates(b) 10.26 10.81 24.24 6.67 Terminal rates(c) 4/39(10.3) 3/35(8.6) 8/33(24.2) 2/30(6.7) Statistical analysis Peto test Standard method(d) P = -----Prevalence method(d) P = 0.5568Combined analysis(d) P = ----Cochran-Armitage test(e) P = 0.5962Fisher Exact test(e) P = 0.3579P = 0.1562P = 0.3574SITE : adrenal gland TUMOR : pheochromocytoma:malignant Tumor rate Overall rates(a) 0/50(0.0) 2/50(4.0) 0/50(0.0) 3/50(6.0) Adjusted rates(b) 0.0 0.0 0.0 9.38 Terminal rates(c) 0/39(0.0) 0/35(0.0) 0/33(0.0) 2/30(6.7) Statistical analysis Peto test Standard method(d) P = 0.7158

P = 0.5000

P = 0.2574

(HPT360A)

Prevalence method(d)

Combined analysis(d)

Fisher Exact test(e)

Cochran-Armitage test(e)

P = 0.0023**?

P = 0.0456*

P = 0.1079

P = 0.1325

PAGE:

4

PAGE: 5

BAIS3

STUDY No. : 0269 ANIMAL : RAT F344/DuCrj SEX : MALE

(HPT360A)

Group Name	Control	50 ppm	100 ppm	200 ppm
	SITE : adrenal gland TUMOR : pheochromocytoma,phe			
'umor rate		SUCH UNDCY LUMA · MA LISHAMIL		
Overall rates(a)	4/50(8.0)	6/50(12.0)	9/50(18.0)	5/50(10.0)
Adjusted rates(b)	10.26	10.81	24.24	15.63
Terminal rates(c)	4/39(10.3)	3/35(8.6)	8/33(24.2)	4/30(13.3)
Statistical analysis				
Peto test	D - 0 E1E0			
Standard method(d) Prevalence method(d)	P = 0.7158 P = 0.1765			
Combined analysis(d)	P = 0.2488			
Cochran-Armitage test(e)	P = 0.7686			
Fisher Exact test(e)		P = 0.3944	P = 0.1562	P = 0.4883
Cumor rate Overall rates(a) Adjusted rates(b) Terminal rates(c) Statistical analysis Peto test Standard method(d) Prevalence method(d) Combined analysis(d) Cochran-Armitage test(e) Fisher Exact test(e)	SITE : testis TUMOR : interstitial cell to 44/50(88.0) 95.45 37/39(94.9) P = P = 0.0636 P = P = 0.2648	47/50(94.0) 95.74 33/35(94.3) P = 0.4671	49/50(98.0) 100.00 33/33(100.0) P = 0.4094	47/50(94.0) 100.00 30/30(100.0) P = 0.4671
	SITE : mammary gland TUMOR : adenoma			
iumor rate Overall rates(a)	0/50(0.0)	0/50(0.0)	2/50/ (5.0)	0/50/ 0.0
Adjusted rates(b)	0.0	0.0	3/50(6.0) 7.50	0/50(0.0) 0.0
Terminal rates(c)	0/39(0.0)	0/35(0.0)	2/33(6.1)	0/30(0.0)
statistical analysis			-,,	0,000
Peto test	_			
Standard method(d)	P =			
Prevalence method(d) Combined analysis(d)	P = 0.3256 P =			
Cochran-Armitage test(e)	P = 0.7680			
Unchran-Armitade Tectiei				

STUDY No. : 0269 ANIMAL : RAT F344/DuCrj

SEX	: 1	MALE

Group Name	Control	50 ppm	100 ppm	200 ppm
	SITE : preputial/clitoral	gland		
Tumor rate	TUMOR : adenoma		•	
Overall rates(a)	0/50(0.0)	1/50(2.0)	4/50(8.0)	1/50/ 0.0
Adjusted rates(b)	0.0	2.04	4/50(8.0)	1/50(2.0)
Terminal rates(c)	0/39(0.0)	0/35(0.0)		3.33
Statistical analysis	0/00(0.0)	0/33(0.0)	4/33(12.1)	1/30(3.3)
Peto test				
Standard method(d)	P =			
Prevalence method(d)	P = 0.2154			
Combined analysis(d)	P =			
Cochran-Armitage test(e)	P = 0.4835			
Fisher Exact test(e)		P = 0.4950	P = 0.0688	P = 0.4950
	SITE : Zymbal gland TUMOR : adenoma,squamous co	ell carcinoma		
Tumor rate				
Overall rates(a)	1/50(2.0)	1/50(2.0)	3/50(6.0)	2/50(4.0)
Adjusted rates(b)	2.56	2.86	3.03	2,44
Terminal rates(c)	1/39(2.6)	1/35(2.9)	1/33(3.0)	0/30(0.0)
Statistical analysis				
Peto test	D 0.1404			
Standard method(d)	P = 0.1424			
Prevalence method(d) Combined analysis(d)	P = 0.4515			
	P = 0.2132			
Cochran-Armitage test(e)	P = 0.4744	D 0.0475	b 0.005	
Fisher Exact test(e)		P = 0.2475	P = 0.3235	P = 0.4926

(HPT360A)

BAIS3

NEOPLASTIC LESIONS-INCIDENCE AND STATISTICAL ANALYSIS

ANIMAL : RAT F344/DuCrj

: MALE

PAGE: 7

Group Name	Control	50 ppm	100 ppm	200 ppm	
	SITE : peritoneum				
.	TUMOR : mesothelioma				
Tumor rate					
Overall rates(a)	1/50(2.0)	1/50(2.0)	1/50(2.0)	3/50(6.0)	
Adjusted rates(b)	0.0	0.0	0.0	3.33	
Terminal rates(c)	0/39(0.0)	0/35(0.0)	0/33(0.0)	1/30(3.3)	
Statistical analysis					
Peto test					
Standard method(d)	P = 0.2111				
Prevalence method(d)	P = 0.0906				
Combined analysis(d)	P = 0.0868				
Cochran-Armitage test(e)	P = 0.2072				
Fisher Exact test(e)	1 0.2072	P = 0.2475	P = 0.2475	P = 0.3235	
Trains Brade tost(b)		1 - 0.2410	1 - 0.24/0	1 - 0.0200	
HPT360A)					BA

Standard method : Death analysis

Prevalence method: Incidental tumor test

Combined analysis: Death analysis + Incidental tumor test

⁽a): Number of tumor-bearing animals/number of animals examined at the site.

⁽b): Kaplan-Meire estimated tumor incidence at the end of the study after adjusting for intercurrent mortality.

⁽c): Observed tumor incidence at terminal kill.

⁽d): Beneath the control incidence are the P-values associated with the trend test.

⁽e): The Cochran-Armitage and Fisher exact test compare directly the overall incidence rates.

^{?:} The conditional probabities of the largest and smallest possible out comes can not estimated or this P-value is beyond the estimated P-value.

^{----:} There is no data which should be statistical analysis.

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

APPENDIX M 2

NEOPLASTIC LESIONS - INCIDENCE AND STATISTICAL ANALYSIS, RAT: FEMALE $(\hbox{2-YEAR STUDY}\,)$

STUDY No. : 0269 ANIMAL : RAT F344/DuCrj

: FEMALE SEX PAGE: 8 Group Name Contral 50 ppm 100 ppm 200 ppm SITE : spleen TUMOR : mononuclear cell leukemia Tumor rate Overall rates(a) 4/50(8.0) 6/50(12.0) 5/50(10.0) 3/50(6.0) Adjusted rates(b) 2.56 5.00 8.89 2.27 Terminal rates(c) 0/38(0.0) 2/40(5.0) 4/45(8.9) 1/44(2.3) Statistical analysis Peto test Standard method(d) P = 0.8016Prevalence method(d) P = 0.5404Combined analysis(d) P = 0.7648Cochran-Armitage test(e) P = 0.5587Fisher Exact test(e) P = 0.3944P = 0.4883P = 0.4895SITE : pituitary gland TUMOR : adenoma Tumor rate Overall rates(a) 27/50(54.0) 27/50(54.0) 23/50(46.0) 21/50(42.0) Adjusted rates(b) 63.16 58.54 44.44 45.45 Terminal rates(c) 24/38(63.2) 23/40(57.5) 20/45(44.4) 20/44(45.5) Statistical analysis Peto test Standard method(d) P = 0.8253Prevalence method(d) P = 0.9710Combined analysis(d) P = 0.9833Cochran-Armitage test(e) P = 0.1655Fisher Exact test(e) P = 0.4330P = 0.3866P = 0.2961SITE : thyroid TUMOR : C-cell adenoma Tumor rate Overall rates(a) 4/50(8.0) 4/50(8.0) 4/50(8.0) 3/49(6.1) Adjusted rates(b) 10.53 10.00 8.89 6.98 Terminal rates(c) 4/38(10.5) 4/40(10.0) 4/45(8.9) 3/43(7.0) Statistical analysis Peto test Standard method(d) P = ----Prevalence method(d) P = 0.7220Combined analysis(d) P = ----Cochran-Armitage test(e) P = 0.7047Fisher Exact test(e) P = 0.3579P = 0.3579P = 0.4788

(HPT360A)

NEOPLASTIC LESIONS-INCIDENCE AND STATISTICAL ANALYSIS

PAGE: 9

ANIMAL : RAT F344/DuCrj SEX : FEMALE

Group Name	Control	50 ppm	100 ppm	200 ppm	
	SITE : thyroid				
umor rate	TUMOR : C-cell adenoma, C-ce	ll carcinoma			
Overall rates(a)	5/50(10.0)	4/50(8.0)	4/50(8.0)	3/49(6.1)	
Adjusted rates(b)	10.53	10.00	8.89	6.98	
Terminal rates(c)	4/38(10.5)	4/40(10.0)	4/45(8.9)	3/43(7.0)	
itatistical analysis					
Peto test					
Standard method(d)	P = 0.9213 ?				
Prevalence method(d)	P = 0.7220				
Combined analysis(d) Cochran-Armitage test(e)	P = 0.8127 P = 0.4994				
Fisher Exact test(e)	1 - V.4004	P = 0.4883	P = 0.4883	P = 0.3899	
			1 0.1000	1 0.5550	
	SITE : thyroid				
	TUMOR : follicular adenoma,	follicular adenocarcinoma			
umor rate					
Overall rates(a)	0/50(0.0)	1/50(2.0)	4/50(8.0)	0/49(0.0)	
Adjusted rates(b) Terminal rates(c)	0.0 0/38(0.0)	2.50	8.89	0.0	
Statistical analysis	0/36(0.0)	1/40(2.5)	4/45(8.9)	0/43(0.0)	
Peto test					
Standard method(d)	P =				
Prevalence method(d)	P = 0.4996				
Combined analysis(d)	P =				
Cochran-Armitage test(e)	P = 0.9250				
Fisher Exact test(e)		P = 0.4950	P = 0.0688	P = 0.5000	
	CITE A selected at a select				, , , , , , , ,
	SITE : adrenal gland TUMOR : pheochromocytoma				
ľumor rate	Tonon • proder a dilucy tolia				
Overall rates(a)	1/50(2.0)	0/50(0.0)	3/50(6.0)	1/50(2.0)	
Adjusted rates(b)	2.63	0.0	6.12	2.27	
Terminal rates(c)	1/38(2.6)	0/40(0.0)	2/45(4.4)	1/44(2.3)	
Statistical analysis					
Peto test	_				
Standard method(d)	P =				
Prevalence method(d)	P = 0.3668 P =				
Combined analysis(d) Cochran-Armitage test(e)	P = 0.7019				
Fisher Exact test(e)	L - 0.1019	P = 0.4950	P = 0.3235	P = 0.2475	
FISHEL EVACE FERFER		r - 0.4800	r = 0.3233	P = 0.24/5	

STUDY No. : 0269 NEOPLASTIC LESIONS-INCIDENCE AND STATISTICAL ANALYSIS

ANIMAL : RAT F344/DuCrj

SEX : FEMALE PAGE : 10

Group Name	Contral	50 ppm	100 ppm	200 ppm
	SITE : adrenal gland			
_	TUMOR : pheochromocytoma:malignan	t		
Tumor rate	2/52/ 2.2	- (()	- 44	
Overall rates(a)	3/50(6.0)	0/50(0.0)	0/50(0.0)	1/50(2.0)
Adjusted rates(b)	0.0	0.0	0.0	2.27
Terminal rates(c)	0/38(0.0)	0/40(0.0)	0/45(0.0)	1/44(2.3)
Statistical analysis				
Peto test	P = 0.0049 9			
Standard method(d) Prevalence method(d)	P = 0.9942 ? P = 0.1117			
Combined analysis(d)	P = 0.1117 P = 0.8529			
Cochran-Armitage test(e)	P = 0.3056			
Fisher Exact test(e)	r = 0.3000	P = 0.1325	P = 0.1325	P = 0.3235
Tisho badot test(e)		1 - 0.1323	r - 0.1020	F = 0.3233
	SITE : adrenal gland			
	TUMOR: pheochromocytoma, pheochro	mocytoma:malignant		
ľumor rate				
Overall rates(a)	4/50(8.0)	0/50(0.0)	3/50(6.0)	2/50(4.0)
Adjusted rates(b)	2.63	0.0	6.12	4.55
Terminal rates(c)	1/38(2.6)	0/40(0.0)	2/45(4.4)	2/44(4.5)
Statistical analysis				
Peto test				
Standard method(d)	P = 0.9942 ?			
Prevalence method(d)	P = 0.1872			
Combined analysis(d)	P = 0.6764			
Cochran-Armitage test(e)	P = 0.6865			
Fisher Exact test(e)		P = 0.0688	P = 0.4895	P = 0.3574
	SITE : uterus TUMOR : endometrial stromal polyp			
fumor rate	Tonon - Graduloti rat de dinat potyp			
Overall rates(a)	7/50(14.0)	6/50(12.0)	13/50(26.0)	7/50(14.0)
	15.91	14.29	28.26	14.89
		_ I, UV		
Adjusted rates(b)		5/40(12.5)	12/45(26 7)	6/44(13.6)
Adjusted rates(b) Terminal rates(c)	6/38(15.8)	5/40(12.5)	12/45(26.7)	6/44(13.6)
Adjusted rates(b) Terminal rates(c) Statistical analysis		5/40(12.5)	12/45(26.7)	6/44(13.6)
Adjusted rates(b) Terminal rates(c) Statistical analysis		5/40(12.5)	12/45(26.7)	6/44(13.6)
Adjusted rates(b) Terminal rates(c) Statistical analysis Peto test	6/38(15.8)	5/40(12.5)	12/45(26.7)	6/44(13.6)
Adjusted rates(b) Terminal rates(c) Statistical analysis Peto test Standard method(d)	6/38(15.8) P =	5/40(12.5)	12/45(26.7)	6/44(13.6)
Adjusted rates(b) Terminal rates(c) Statistical analysis Peto test Standard method(d) Prevalence method(d)	6/38(15.8) P = P = 0.4538	5/40(12.5)	12/45(26.7)	6/44(13.6)
Adjusted rates(b) Terminal rates(c) Statistical analysis Peto test Standard method(d) Prevalence method(d) Combined analysis(d)	6/38(15.8) P = P = 0.4538 P =	5/40(12.5) P = 0.4863	12/45(26.7) P = 0.1634	6/44(13.6) P = 0.3882

NEOPLASTIC LESIONS-INCIDENCE AND STATISTICAL ANALYSIS

ANIMAL : RAT F344/DuCrj

SEX : FEMALE

PAGE: 11 Group Name Control 50 ppm 100 ppm 200 ppm SITE : mammary gland TUMOR : fibroadenoma Tumor rate Overall rates(a) 8/50(16.0) 9/50(18.0) 11/50(22.0) 4/50(8.0) Adjusted rates(b) 21.05 19.05 22.45 9.09 Terminal rates(c) 8/38(21.1) 7/40(17.5) 10/45(22.2) 4/44(9.1) Statistical analysis Peto test Standard method(d) P = 0.6164Prevalence method(d) P = 0.9191Combined analysis(d) P = 0.9312Cochran-Armitage test(e) P = 0.2405Fisher Exact test(e) P = 0.4846P = 0.3526P = 0.2169SITE : preputial/clitoral gland TUMOR : adenoma Tumor rate Overall rates(a) 0/50(0.0) 1/50(2.0) 4/50(8.0) 1/50(2.0) Adjusted rates(b) 0.0 2.50 8.51 2.17 Terminal rates(c) 0/38(0.0) 1/40(2.5) 3/45(6.7) 0/44(0.0) Statistical analysis Peto test Standard method(d) P = ----Prevalence method(d) P = 0.2984Combined analysis(d) P = ----Cochran-Armitage test(e) P = 0.4835Fisher Exact test(e) P = 0.4950P = 0.0688P = 0.4950

(HPT360A)

BAIS3

Standard method : Death analysis

Prevalence method: Incidental tumor test

Combined analysis: Death analysis + Incidental tumor test

(e): The Cochran-Armitage and Fisher exact test compare directly the overall incidence rates.

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

⁽a): Number of tumor-bearing animals/number of animals examined at the site.

⁽b): Kaplan-Meire estimated tumor incidence at the end of the study after adjusting for intercurrent mortality.

⁽c): Observed tumor incidence at terminal kill.

⁽d): Beneath the control incidence are the P-values associated with the trend test.

^{?:} The conditional probabities of the largest and smallest possible out comes can not estimated or this P-value is beyond the estimated P-value.

^{----:} There is no data which should be statistical analysis.

APPENDIX N 1

HISTOLOGICAL FINDINGS: METASTASIS OF TUMOR: SUMMARY, RAT: MALE: ALL ANIMALS (2-YEAR STUDY)

HISTOLOGICAL FINDINGS: METASTASIS OF TUMOR (SUMMARY)

ALL ANIMALS (0-105W)

ANIMAL : RAT F344/DuCrj REPORT TYPE : A1

SEX : MALE

)rgan	Findings	Group Name No. of Animals on Study	Control 50	50 ppm 50	100 ppm 50	200 ppm 50
						Hadrida Later Control
[Respiratory	system]					
lung	leukemic cell infiltration		<50> 3	<50> 0	<50> 2	<50>
	metastasis:liver tumor		0	1	0	0
	metastasis:thyroid tumor		0	1	0	0
	metastasis:subcutis tumor		0	0	2	0
	metastasis:vertebra tumor		0	0	1	0
	metastasis:salivary gland tumor		0	0	1	1
[Hematopoieti	ic system)					
one marrow	o oyotom,		<50>	< 50>	⟨50⟩	<50>
orto mar i ou	leukemic cell infiltration		1	0	1	2
	metastasis:liver tumor		0	1	0	0
ymph node	leukemic cell infiltration		<50> 1	<50> 0	<50> 0	<50> 0
	metastasis:muscle tumor		0	1	0	0
Digestive sy	vstem]					
salivary gl	metastasis:subcutis tumor		<50> 0	<50> 0	<50> 1	<50> 0
tomach	leukemic cell infiltration		<50> 1	<50> 0	<50> 0	<50> 0
iver.	leukemic cell infiltration		<50> 3	<50> 0	<50> 1	<50> 2
(a) b	a: Number of animals examined at the b: Number of animals with lesion	he site				

STUDY NO. : 0269 ANIMAL : RAT F344/DuCrj HISTOLOGICAL FINDINGS: METASTASIS OF TUMOR (SUMMARY) ALL ANIMALS (0-105W)

REPORT TYPE: A1 SEX

: MALE

Organ	Findings	Group Name Control No. of Animals on Study 50	50 ppm 50	100 ppm 50	200 ppm 50
				· ,	
[Digestive sys	stem]				
liver	metastasis:small intestine tumor	<50> 0	<50> 0	<50> 0	<50> 1
[Urinary syste	em}				
kidney	leukemic cell infiltration	<50> 0	<50> 0	<50> 0	<50> 1
	metastasis:liver tumor	0	1	0	0
[Endocrine sys	stem]				
adrenal .	leukemic cell infiltration	<50> 0	<50> 0	<50> 0	<50>
	metastasis:liver tumor	0	1	0	0
(Nervous syste	em]				
brain	leukemic cell infiltration	<50> 2	<50> 1	<50> 0	<50> 2
	metastasis:bone tumor	0	0	0	1
spinal cord	leukemic cell infiltration	<50> 0	<50> 1	<50> 0	<50> 0
(Musculoskele	otal system]				
bone	metastasis:liver tumor	<50> 0	<50> 1	<50> 0	<50> 0
(a) b	a : Number of animals examined at the b : Number of animals with lesion	site			
(JPT150)					BAI

APPENDIX N 2

HISTOLOGICAL FINDINGS: METASTASIS OF TUMOR: SUMMARY, RAT: MALE: DEAD AND MORIBUND ANIMALS (2-YEAR STUDY)

ANIMAL : RAT F344/DuCrj

HISTOLOGICAL FINDINGS: METASTASIS OF TUMOR (SUMMARY)
DEAD AND MORIBUND ANIMALS (0-105W)

REPORT TYPE : A1 SEX : MALE

PAGE: 1

Organ	Findings	Group Name Control No. of Animals on Study 11	50 ppm 15	100 ppm 17	200 ppm 20
	44444				
(Respirator	y system]				
lung	leukemic cell infiltration	<11> 2	<15> 0	<17> 2	<20>
	metastasis:liver tumor	0	1	0	0
	metastasis:subcutis tumor	0	0	2	0
	metastasis:vertebra tumor	0	0	1	0
	metastasis:salivary gland tumor	0	0	0	1
[Hematopoie	tic system]				
bone marrow	leukemic cell infiltration	<11> 1	<15> 0	<17> 1	<20>
	metastasis:liver tumor	0	1	0	0
lymph node	metastasis:muscle tumor	<11> 0	<15> 1	<17> 0	<20> 0
[Digestive :	system]				
salivary gl	metastasis:subcutis tumor	<11> 0	<15> 0	<17> 1	<20>
stomach	leukemic cell infiltration	<11> 1	<15> 0	<17> 0	<20>
liver	leukemic cell infiltration	<11> 2	<15> 0	<17> 1	<20>
	metastasis:small intestine tumor	0	0	0	1
(a) b	a: Number of animals examined at the b: Number of animals with lesion	site			
(JPT150)					

SEX

ANIMAL : RAT F344/DuCrj : MALE

REPORT TYPE : A1

HISTOLOGICAL FINDINGS: METASTASIS OF TUMOR (SUMMARY)

DEAD AND MORIBUND ANIMALS (0-105W)

Group Name Control 50 ppm 100 ppm 200 ppm No. of Animals on Study 11 15 17 20 Findings_ [Urinary system] kidney <11> <15> <17> <20> leukemic cell infiltration 1 metastasis:liver tumor 0 0 0 [Endocrine system] adrenal <11> <15> <17> <20> leukemic cell infiltration 1 metastasis:liver tumor 0 0 0 [Nervous system] brain <11> <15> (17) (20) leukemic cell infiltration 2 1 0 2 metastasis:bone tumor 0 0 1 spinal cord <11> <15> ⟨17⟩ <20> leukemic cell infiltration 0 0 [Musculoskeletal system] bane <11> <15> <17> <20> metastasis:liver tumor 0 0 0 <a>> a: Number of animals examined at the site b b: Number of animals with lesion (JPT150)

BAISS

PAGE: 2

APPENDIX N 3

HISTOLOGICAL FINDINGS: METASTASIS OF TUMOR: SUMMARY, RAT: MALE: SACRIFICED ANIMALS

(2-YEAR STUDY)

ANIMAL : RAT F344/DuCrj REPORT TYPE : A1

SEX : MALE

HISTOLOGICAL FINDINGS: METASTASIS OF TUMOR (SUMMARY) SACRIFICED ANIMALS (105W)

PAGE: 1

rgan		Group Name Control No. of Animals on Study 39	50 ppm 35	100 ppm 33	200 ppm 30
Respiratory	system]				
lung	leukemic cell infiltration	<39>	<35>	<33> 0	<30>
	metastasis:thyroid tumor	0	1	0	0
	metastasis:salivary gland tumor	0	0	1	0
Hematopojeti	c system]				
ymph node	leukemic cell infiltration	<39>	<35> 0	<33> 0	<30> 0
Digestive sy	vstem]				
.iver	leukemic cell infiltration	<39> 1	<35> 0	<333> 0	<30> 0
a> b	a : Number of animals examined at the si b : Number of animals with lesion	te			
JPT150)					

APPENDIX N 4

HISTOLOGICAL FINDINGS: METASTASIS OF TUMOR: SUMMARY, RAT: FEMALE: ALL ANIMALS (2-YEAR STUDY)

ANIMAL : RAT F344/DuCrj

REPORT TYPE : A1 SEX : FEMALE HISTOLOGICAL FINDINGS : METASTASIS OF TUMOR (SUMMARY)

ALL ANIMALS (0-105W)

PAGE: 3 Group Name Control 50 ppm 100 ppm 200 ppm

0rgan	Findings	Group Name Co	ontrol 50	50 ppm 50	100 ppm 50	200 ppm 50
[Respiratory	system]					
lung	leukemic cell infiltration		<50> 3	<50> 5	<50> 1	<50> 2
	metastasis:liver tumor		0	0	0	1
	metastasis:uterus tumor		0	0	1	0
	metastasis:adrenal tumor		1	0	0	0
	metastasis:thyroid tumor		1	0	0	0
	metastasis:bone tumor		1	0	1	0
[Hematopoieti	c system]					
bone marrow	leukemic cell infiltration		<50> 1	<50> 1	<50> 0	<50> 2
	metastasis:liver tumor		0	0	0	1
lymph node	leukemic cell infiltration		<50> 1	<50> 1	<50> 0	<50> 1
	metastasis:liver tumor		0	0	0	1
	metastasis:uterus tumor		0	0	1	0
	metastasis:thyroid tumor		1	0	0	0
	metastasis:bone tumor		1	0	0	0
spleen	metastasis:liver tumor		<50> 0	<50> 0	<50> 0	<50> 1
[Digestive sy	stem]					
large intes	metastasis:uterus tumor		<50> 0	<50> 1	<50> 0	<50> 0

b: Number of animals with lesion

⁽a) a : Number of animals examined at the site b

ANIMAL : RAT F344/DuCrj

REPORT TYPE : A1

: FEMALE SEX

HISTOLOGICAL FINDINGS: METASTASIS OF TUMOR (SUMMARY) ALL ANIMALS (0-105W)

PAGE: 4

BAIS3

)rgan		Group Name Control No. of Animals on Study 50	50 ppm 50	100 ppm 50	200 ppm 50
				h	
[Digestive sy	rstem]				
liver	leukemic cell infiltration	<50> 3	<50> 6	<50> 5	<50> 3
	metastasis:bone tumor	1	0	0	0
[Urinary syst	em]				
kidney	leukemic cell infiltration	<50> 0	<50> 0	<50> 0	<50>
	metastasis:liver tumor	0	0	0	1
	metastasis:adrenal tumor	1	0	0	0
[Reproductive	system]				
DUary	leukemic cell infiltration	<50> 0	<50> 1	<50> 0	<50>
	metastasis:liver tumor	0	0	0	1
	metastasis:adrenal tumor	1	0	0	0
uterus	metastasis:adrenal tumor	<50> 1	<50> 0	<50> 0	<50> 0
(Nervous syst	em]				
rain	leukemic cell infiltration	<50> 1	<50> 1	<50> 0	<50>
pinal cord	leukemic cell infiltration	<50> 0	<50> 1	<50> 0	<50> 0
a> b	a: Number of animals examined at the si b: Number of animals with lesion	te			

APPENDIX N 5

HISTOLOGICAL FINDINGS: METASTASIS OF TUMOR: SUMMARY, RAT: FEMALE: DEAD AND MORIBUND ANIMALS

(2-YEAR STUDY)

ANIMAL : RAT F344/DuCrj HISTOLOGICAL FINDINGS: METASTASIS OF TUMOR (SUMMARY) DEAD AND MORIBUND ANIMALS (0-105W)

REPORT TYPE : A1

: FEMALE

PAGE: 3

Group Name Control 50 ppm 100 ppm 200 ppm No. of Animals on Study 12 10 Organ Findings_ [Respiratory system] lung <12> <10> < 5> < 6> leukemic cell infiltration 3 metastasis: liver tumor 0 1 metastasis:uterus tumor 0 metastasis:adrenal tumor 0 0 metastasis:thyroid tumor 0 metastasis:bone tumor 1 0 [Hematopoietic system] bone marrow <12> <10> < 5> < 6> leukemic cell infiltration 1 0 2 metastasis:liver tumor 0 0 0 1 Lymph node <12> <10> < 5> < 6> leukemic cell infiltration 1 1 0 0 metastasis: liver tumor 0 0 0 metastasis:uterus tumor 0 1 0 metastasis:thyroid tumor 1 0 0 metastasis:bone tumor 0 0 spleen <12> <10> < 5> < 6> metastasis:liver tumor 0 [Digestive system] large intes <12> <10> < 5> < 6> metastasis:uterus tumor 0 1 0

⁽a)

a: Number of animals examined at the site

b: Number of animals with lesion Ь

ANIMAL : RAT F344/DuCrj

REPORT TYPE : A1

(JPT150)

: FEMALE

HISTOLOGICAL FINDINGS: METASTASIS OF TUMOR (SUMMARY) DEAD AND MORIBUND ANIMALS (0-105W)

PAGE: 4

BAIS3

Group Name Control 50 ppm 100 ppm 200 ppm No. of Animals on Study 12 10 Organ_ Findings_ [Digestive system] liver <12> <10> < 5> < 6> leukemic cell infiltration 1 metastasis:bone tumor [Urinary system] kidney ⟨12⟩ <10> < 5> < 6> leukemic cell infiltration metastasis: Liver tumor 0 metastasis:adrenal tumor 1 [Reproductive system] ovary <12> <10> < 5> < 6> leukemic cell infiltration 1 0 metastasis:liver tumor 0 metastasis:adrenal tumor 0 0 uterus <12> <10> < 5> < 6> metastasis:adrenal tumor 1 0 [Nervous system] brain <12> <10> < 5> < 6> leukemic cell infiltration 1 1 spinal cord <12> <10> < 5> < 6> leukemic cell infiltration 0 1 0 <a>> a: Number of animals examined at the site b: Number of animals with lesion b

APPENDIX N 6

HISTOLOGICAL FINDINGS: METASTASIS OF TUMOR: SUMMARY, RAT: FEMALE: SACRIFICED ANIMALS (2-YEAR STUDY)

ANIMAL : RAT F344/DuCrj

REPORT TYPE : A1
SEX : FEMALE

HISTOLOGICAL FINDINGS: METASTASIS OF TUMOR (SUMMARY)

PAGE: 2

SACRIFICED ANIMALS (105W)

Organ		Group Name Control No. of Animals on Study 38	50 ppm 40	100 ppm 45	200 ppm 44
[Respiratory	system]				
lung	leukemic cell infiltration	<38> 0	<40>	<45> 1	<44> 1
	metastasis:bone tumor	0	0	1	0
[Hematopoiet	ic system]				
lymph node	leukemic cell infiltration	<38> 0	<40> 0	<45> 0	<44>
[Digestive s	ystem]				
liver	leukemic cell infiltration	<38> 0	<40> 2	<45>	<44>
< a > b	a : Number of animals examined at the si b : Number of animals with lesion	te			
(JPT150)					

APPENDIX 01

IDENTITY OF 2-METHALLYL CHLORIDE IN THE 2-YEAR INHALATION STUDY

IDENTITY OF 2-METHALLYL CHLORIDE IN THE 2-YEAR INHALATION STUDY

A. Test Substance Lot No.: LKG5978

1. Spectral data

Mass Spectrometry

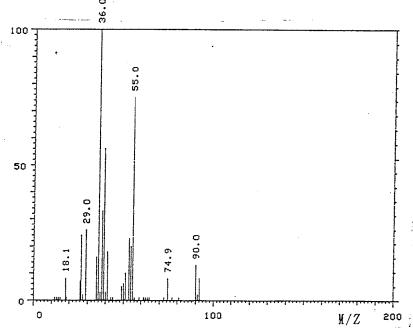
Instrument

: Hitachi M-80B Mass Spectrometer

Ionization

: EI(Electron Ionization)

Ionization Voltage : 70eV



Mass Spectrum of Test Substance

Results: The mass spectrum was consistent with literature spectrum.

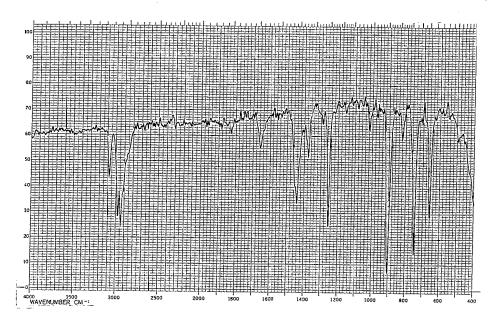
<u>Determined</u>	<u>Literature Value*</u>
Fragment Peak(M/Z)	Fragment Peak(M/Z)
36.0	36
39.0	39
55.0	55
90.0	90
	(*EPA/NIH Mass Spectral
	Data Base (1978) Vol. 1,
	p. 53.)

Infrared Spectrometry

Instrument : Hitachi 270-30 Infrared Spectrometer

Cell : KBr

Slit : Medium



Infrared Spectrum of Test Substance

Results: The infrared spectrum was consistent with literature spectrum.

Determined Value Wave Number(cm ⁻¹)	<u>Literature Value*</u> Wave Number(cm ⁻¹)
$480 \sim 520$ $640 \sim 690$ $720 \sim 780$ $800 \sim 840$ $880 \sim 940$ $970 \sim 990$ $1000 \sim 1040$ $1150 \sim 1180$ $1220 \sim 1240$ $1240 \sim 1280$ $1290 \sim 1310$ $1360 \sim 1400$ $1410 \sim 1480$ $1620 \sim 1680$ $1780 \sim 1860$ $2800 \sim 3030$ $3050 \sim 3130$	$640 \sim 670$ $720 \sim 770$ $800 \sim 830$ $880 \sim 940$ $960 \sim 990$ $1000 \sim 1040$ $1140 \sim 1170$ $1210 \sim 1230$ $1230 \sim 1280$ $1280 \sim 1300$ $1360 \sim 1390$ $1410 \sim 1480$ $1620 \sim 1680$ $1780 \sim 1860$ $2800 \sim 3000$ $3050 \sim 3130$
0000 0100	(*Performed by the WAKO PURE

PURE CHEMICAL INDUSTRIES, LTD)

2. Conclusions: The result of the mass spectrum and the infrared spectrum agreed with the literature values.

Consequently, the test substance was identified as Methallylchloride.

- B. Test Substance Lot No.: CAK4434
- 1. Spectral data

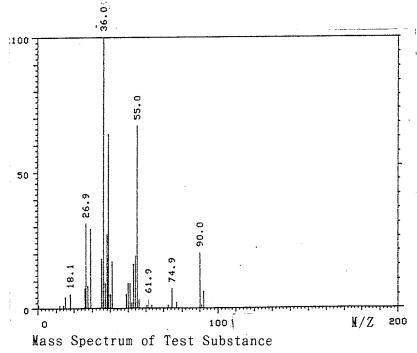
Mass Spectrometry

Instrument : H

: Hitachi M-80B Mass Spectrometer

Ionization : EI(Electron Ionization)

Ionization Voltage : 70eV



Results: The mass spectrum was consistent with literature spectrum.

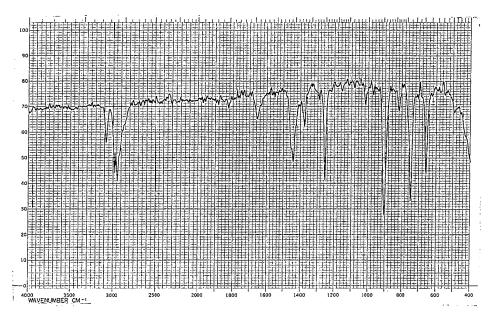
<u>Determined</u>	<u>Literature Value*</u>
Fragment Peak(M/Z)	Fragment Peak(M/Z)
36.0	36
39.0	39
55.0	55
90.0	90
	(*EPA/NIH Mass Spectral
	Data Base (1978) Vol. 1,
	p. 53.)

Infrared Spectrometry

Instrument : Hitachi 270-30 Infrared Spectrometer

Cell : KBr

Slit : Medium



Infrared Spectrum of Test Substance

Results: The infrared spectrum was consistent with literature spectrum.

<pre>Determined Value Wave Number(cm⁻¹)</pre>	<u>Literature Value*</u> Wave Number(cm ⁻¹)
480~ 520	
640~ 690	640~ 670
720~ 780	720~ 770
800~ 840	800~ 830
880~ 940	880~ 940
970~ 990	960~ 990
$1000 \sim 1040$	$1000 \sim 1040$
$1150 \sim 1180$	$1140 \sim 1170$
$1220 \sim 1240$	$1210 \sim 1230$
1240~1280	1230~1280
1290~1310	$1280 \sim 1300$
1360~1400	$1360 \sim 1390$
1410~1480	1410~1480
$1620 \sim 1680$	$1620 \sim 1680$
$1780 \sim 1860$	$1780 \sim 1860$
2800~3030	$2800 \sim 3000$
3050~3130	3050~3130
	(*Performed by the WAKO

(*Performed by the WAKO PURE PURE CHEMICAL INDUSTRIES, LTD)

Consequently, the test substance was identified as Methallylchloride.

^{2.} Conclusions: The result of the mass spectrum and the infrared spectrum agreed with the literature values.

- C. Test Substance Lot No.: SKK4584
- 1. Spectral data

Mass Spectrometry

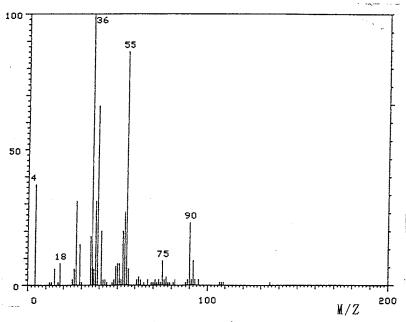
Instrument

: Hitachi M-80B Mass Spectrometer

Ionization

: EI(Electron Ionization)

Ionization Voltage : 70eV



Mass Spectrum of Test Substance

Results: The mass spectrum was consistent with literature spectrum.

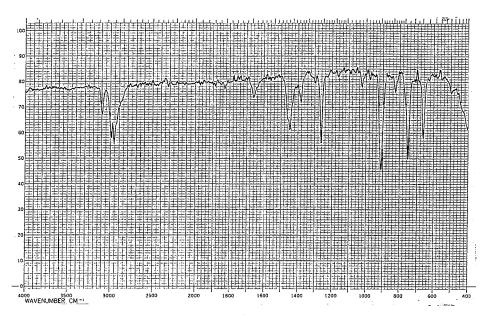
<u>Determined</u>	<u>Literature Value*</u>
Fragment Peak(M/Z)	Fragment Peak(M/Z)
36.0	36
39.0	39
55.0	55
90.0	90
	(*EPA/NIH Mass Spectral
	Data Base (1978) Vol. 1,
	p. 53.)

Infrared Spectrometry

Instrument : Hitachi 270-30 Infrared Spectrometer

Cell : KBr

Slit : Medium



Infrared Spectrum of Test Substance

Results: The infrared spectrum was consistent with literature spectrum.

<u>Determined Value</u> Wave Number(cm ⁻¹)	<u>Literature Value*</u> Wave Number(cm ⁻¹)
$480 \sim 520$ $640 \sim 690$ $720 \sim 780$ $800 \sim 840$ $880 \sim 940$ $970 \sim 990$ $1000 \sim 1040$ $1150 \sim 1180$ $1220 \sim 1240$ $1240 \sim 1280$ $1290 \sim 1310$ $1360 \sim 1400$ $1410 \sim 1480$ $1620 \sim 1680$ $1780 \sim 1860$ $2800 \sim 3030$ $3050 \sim 3130$	$640 \sim 670$ $720 \sim 770$ $800 \sim 830$ $880 \sim 940$ $960 \sim 990$ $1000 \sim 1040$ $1140 \sim 1170$ $1210 \sim 1230$ $1230 \sim 1280$ $1280 \sim 1300$ $1360 \sim 1390$ $1410 \sim 1480$ $1620 \sim 1680$ $1780 \sim 1860$ $2800 \sim 3000$ $3050 \sim 3130$
	(*Performed by the WAKO PURE

PURE CHEMICAL INDUSTRIES, LTD)

2. Conclusions: The result of the mass spectrum and the infrared spectrum agreed with the literature values.

Consequently, the test substance was identified as Methallylchloride.

APPENDIX O 2 STABILITY OF 2-METHALLYL CHLORIDE IN THE 2-YEAR INHALATION STUDY

STABILITY OF 2-METHALLYL CHLORIDE IN THE 2-YEAR INHALATION STUDY

A. Test Substance Lot No.: LKG5978

1. Sample: This lot was used from 1994.5.25 to 1994.11.8. Test substance was

stored at room temperature.

2. Infrared Spectrometry

Instrument

: Hitachi 270-30 Infrared Spectrometer

Cell

: KBr

Slit

: Medium

Results: Infrared spectrum of the test substance agreed with before use and after use.

1994.05.25(date analyzed)	1994.11.08(date analyzed)
Wave Number(cm ⁻¹)	Wave Number(cm ⁻¹)
480~ 520	480~ 520
640~ 690	640~ 690
720~ 780	720~ 780
800~ 840	800~ 840
880~ 940	880~ 940
970~ 990	970~ 990
1000~1040	1000~1040
1150~1180	1150~1180
1220~1240	$1220 \sim 1240$
1240~1280	1240~1280
1290~1310	1290~1310
1360~1400	1360~1400
1410~1480	1410~1480
1620~1680	1620~1680
1780~1860	1780~1860
2800~3030	2800~3030
3050~3130	3050~3130

3. Gas Chromatography

Instrument

: Hewlett Packard 5890A

Column

: Carbowax 20M(0.2mm $\phi \times 50$ m)

Column Temperature : 80°C

Flow Rate

: 0.9 ml/min

Detector

: FID(Flame Ionization Detector)

Injection Volume : 1 μ 1

Results: Gas chromatography indicated one major peak(peak No. 2) and two impurities(peak No. 1, 3 < 2% of total area) analyzed at 1994.5.25 and one major peak(peak No. 2) and two impurities(peak No. 1, 3 < 2% of total area) analyzed at 1994.11.8. It was identified only by comparing its gas chromatograph with that of the 1-Chloro-2-methyl-1-propene(peak No. 1) and 1, 2-Dichloroisobutane (peak No. 3) in the Methallylchloride, the amount in the test substance were 1.4% and 0.15% at 1994.5.25. No new trace impurity peak in the test substance analyzed at 1994.11.8 was detected.

Date (date analyzed)	Peak No.	Retention Time(min)	AREA(%)
1994. 05. 25	1	4. 14	1. 6
	2	4.442	98.3
	3	5.86	0.1
1994. 11. 08	1	4. 138	1.6
	2	4.442	98.3
	3	5.86	0.1

4. Conclusions: The results indicated that the test substance did not change when stored in the dark at room temperature during this period(for about 5 months).

- B. Test Substance Lot No.: CAK4434
- 1. Sample: This lot was used from 1994.11.9 to 1995.8.8. Test substance was stored at room temperature.
- 2. Infrared Spectrometry

Instrument

: Hitachi 270-30 Infrared Spectrometer

Cell

: KBr

Slit

: Medium

Results: Infrared spectrum of the test substance agreed with before use and after use.

<u>1994.11.02(date analyzed)</u>	<u>1995.08.08(date analyzed)</u>
Wave Number(cm ⁻¹)	Wave Number(cm ⁻¹)
,	,
400. 500	400 - 590
480~ 520	480~ 520
640~ 690	640~ 690
720~ 780	720~ 780
800~ 840	800∼ 840
880~ 940	880~ 940
970~ 990	970~ 990
$1000 \sim 1040$	$1000 \sim 1040$
1150~1180	$1150 \sim 1180$
$1220 \sim 1240$	$1220 \sim 1240$
1240~1280	$1240 \sim 1280$
1290~1310	$1290 \sim 1310$
$1360 \sim 1400$	$1360 \sim 1400$
1410~1480	$1410 \sim 1480$
1620~1680	$1620 \sim 1680$
1780~1860	1780~1860
2800~3030	2800~3030
3050~3130	3050~3130

3. Gas Chromatography

Instrument

: Hewlett Packard 5890A

Column

: Carbowax 20M(0.2mm $\phi \times 50$ m)

Column Temperature : 80°C

Flow Rate

: 0.9 ml/min

Detector

: FID(Flame Ionization Detector)

Injection Volume : 1 μ 1

Results: Gas chromatography indicated one major peak(peak No. 2) and two impurities(peak No. 1, 3 < 2% of total area) analyzed at 1994.11.2 and one major peak(peak No. 2) and two impurities(peak No. 1, 3 < 2% of total area) analyzed at 1995.8.8. It was identified only by comparing its gas chromatograph with that of the 1-Chloro-2-methyl-1-propene(peak No. 1) and 1, 2-Dichloroisobutane (peak No. 3) in the Methallylchloride, the amount in the test substance were 1.4% and 0.15% at 1994.11.2. No new trace impurity peak in the test substance analyzed at 1995.8.8 was detected.

Date (date analyzed)	Peak No.	Retention Time(min)	AREA(%)
1994.11.02	1	4. 14	1.6
	2	4.442	98.3
	3	5.863	0.1
1995. 08. 08	1	4. 142	1.6
	2	4.445	98.3
	3	5.863	0.1

^{4.} Conclusions: The results indicated that the test substance did not change when stored in the dark at room temperature during this period(for about 9 months).

١

C. Test Substance Lot No.: SKK4584

1. Sample: This lot was used from 1994.8.9 to 1996.6.20. Test substance was stored at room temperature.

2. Infrared Spectrometry

Instrument

: Hitachi 270-30 Infrared Spectrometer

Cell

: KBr

Slit

: Medium

Results: Infrared spectrum of the test substance agreed with before use and after use.

<u>1996.07.09(date analyzed)</u>
Wave Number(cm ⁻¹)
,
480~ 520
640~ 690
720~ 780
800~ 840
880~ 940
970~ 990
$1000 \sim 1040$
$1150 \sim 1180$
$1220 \sim 1240$
$1240 \sim 1280$
1290~1310
$1360 \sim 1400$
1410~1480
1620~1680
$1780 \sim 1860$
2800~3030
3050~3130

3. Gas Chromatography

Instrument

: Hewlett Packard 5890A

Column

: Carbowax 20M(0.2mm $\phi \times 50$ m)

Column Temperature : 80°C

Flow Rate : 0.9 ml/min

Detector

: FID(Flame Ionization Detector)

Injection Volume : 1 μ 1

Results: Gas chromatography indicated one major peak(peak No. 2) and two impurities(peak No. 1, 3 < 2% of total area) analyzed at 1995. 8.8 and one major peak(peak No. 2) and two impurities(peak No. 1, 3 < 2% of total area) analyzed at 1996. 7.9. It was identified only by comparing its gas chromatograph with that of the 1-Chloro-2-methyl-1-propene(peak No. 1) and 1, 2-Dichloroisobutane (peak No. 3) in the Methallylchloride, the amount in the test substance were 1.4% and 0.15% at 1995. 8.8. No new trace impurity peak in the test substance analyzed at 1996. 7.9 was detected.

Date (date analyzed)	Peak No.	Retention Time(min)	AREA(%)
1995. 08. 08	1	4. 14	1.6
	2	4.442	98.3
	3	5.863	0.1
1996. 07. 09	1 .	4. 143	1.6
	2	4.445	98.3
	3	5.865	0.1

^{4.} Conclusions: The results indicated that the test substance did not change when stored in the dark at room temperature during this period(for about 11 months).

1

APPENDIX P1

CONCENTRATION OF 2-METHALLYL CHLORIDE IN THE INHALATION CHAMBER OF THE 2-YEAR INHALATION STUDY

CONCENTRATION OF 2-METHALLYL CHLORIDE IN THE INHALATION CHAMBER OF THE 2-YEAR INHALATION STUDY

Group Name	Concentration (ppm) $ \text{Mean } \pm \text{ S.D.} $	
Control	0.0 ± 0.0	
50ppm	50.0 ± 0.4	
100ppm	100.4 ± 0.5	
200ppm	199.7 ± 1.0	

APPENDIX P 2

ENVIRONMENTAL CONDITIONS OF INHALATION CHAMBER IN THE 2-YEAR INHALATION STUDY OF 2-METHALLYL CHLORIDE

ENVIRONMENTAL CONDITIONS OF INHALATION CHAMBER IN THE 2-YEAR INHALATION STUDY OF 2-METHALLYL CHLORIDE

Group Name	Temperature(°C) Mean ± S.D.	Humidity(%) Mean ± S.D.	Ventilation Rate(L/min) Mean \pm S.D.	Room Air Change(time/h) Mean
Control	22.3 ± 0.3	53.5 ± 2.0	1525.5 ± 13.7	12.0
50ppm	22.7 ± 0.4	54.4 ± 2.1	1520.2 ± 12.0	12.0
100ppm	22.3 ± 0.4	52.7 ± 2.5	1518.5 ± 11.0	12.0
200ppm	22.3 ± 0.3	55.1 ± 2.3	1518.7 ± 13.9	12.0

APPENDIX Q1

METHODS FOR HEMATOLOGY, BIOCHEMISTRY AND URINALYSIS IN THE 2-YEAR INHALATION STUDY OF 2-METHALLYL CHLORIDE

METHODS FOR HEMATOLOGY, BIOCHEMISTRY AND URINALYSIS IN THE 2-YEAR INHALATION STUDY OF 2-METHALLYL CHLORIDE

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

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

APPENDIX Q2

UNITS AND DECIMAL PLACE FOR HEMATOLOGY AND BIOCHEMISTRY IN THE 2-YEAR INHALATION STUDY OF 2-METHALLYL CHLORIDE

UNITS AND DECIMAL PLACE FOR HEMATOLOGY AND BIOCHEMISTRY IN THE 2—YEAR INHALATION STUDY OF 2—METHALLYL CHLORIDE

Item	Unit	Decimal place
Hematology		
Red blood cell (RBC)	$ imes$ 10 6 / μ 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
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 transminase (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

′