

*o*-フェニレンジアミン二塩酸塩のラットを用いた  
経口投与によるがん原性試験(混水試験)報告書

試験番号：0371

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## APPENDIX A 1

CLINICAL OBSERVATION : SUMMARY, RAT : MALE  
(2-YEAR STUDY)

STUDY NO. : 0371  
ANIMAL : RAT F344/DuCrj  
REPORT TYPE : A1 104

CLINICAL OBSERVATION (SUMMARY)  
ALL ANIMALS

SEX : MALE

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Clinical sign	Group Name	Administration Week-day		3-7	4-7	5-7	6-7	7-7	8-7	9-7	10-7	11-7	12-7	13-7	14-7
		1-7	2-7												
DEATH	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MORIBUND SACRIFICE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
LATERAL	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HUNCHBACK POSITION	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PARALYTIC GAIT	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WASTING	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SOILED	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

STUDY NO. : 0371  
ANIMAL : RAT F344/DuCrj  
REPORT TYPE : A1 104

CLINICAL OBSERVATION (SUMMARY)  
ALL ANIMALS

SEX : MALE

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Clinical sign	Group Name	Administration Week-day													
		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	28-7
DEATH	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MORIBUND SACRIFICE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
LATERAL	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HUNCHBACK POSITION	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PARALYTIC GAIT	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WASTING	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SOILED	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

STUDY NO. : 0371  
ANIMAL : RAT F344/DuCrj  
REPORT TYPE : A1 104

CLINICAL OBSERVATION (SUMMARY)  
ALL ANIMALS

SEX : MALE

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Clinical sign	Group Name	Administration Week-day													
		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	42-7
DEATH	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MORIBUND SACRIFICE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
LATERAL	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HUNCHBACK POSITION	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PARALYTIC GAIT	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WASTING	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SOILED	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0



STUDY NO. : 0371  
ANIMAL : RAT F344/DuCrj  
REPORT TYPE : A1 104

CLINICAL OBSERVATION (SUMMARY)  
ALL ANIMALS

SEX : MALE

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Clinical sign	Group Name	Administration Week-day													
		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	56-7
DEATH	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MORIBUND SACRIFICE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
LATERAL	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HUNCHBACK POSITION	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PARALYTIC GAIT	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WASTING	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SOILED	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

STUDY NO. : 0371  
ANIMAL : RAT F344/DuCrj  
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CLINICAL OBSERVATION (SUMMARY)  
ALL ANIMALS

SEX : MALE

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Clinical sign	Group Name	Administration Week-day													
		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	70-7
DEATH	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	1	1	1	1
	2000 ppm	1	1	1	1	1	1	1	1	2	2	2	2	2	2
MORIBUND SACRIFICE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
LATERAL	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HUNCHBACK POSITION	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PARALYTIC GAIT	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WASTING	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SOILED	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	1	1	1	1	1	1	0

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Clinical sign	Group Name	Administration Week-day													
		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	84-7
DEATH	Control	0	0	0	0	0	0	0	0	0	0	0	0	2	2
	500 ppm	0	0	1	1	1	2	2	2	2	2	2	2	2	2
	1000 ppm	1	1	1	1	2	2	3	3	4	4	4	4	4	4
	2000 ppm	2	2	2	2	2	2	2	2	2	2	2	2	2	2
MORIBUND SACRIFICE	Control	0	0	0	0	0	0	0	0	0	1	1	1	1	1
	500 ppm	0	0	0	0	0	1	1	1	1	1	1	1	1	1
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
LATERAL	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HUNCHBACK POSITION	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PARALYTIC GAIT	Control	0	0	0	0	0	0	0	0	0	1	1	1	0	0
	500 ppm	0	0	0	1	1	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WASTING	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SOILED	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	1	0	0	0	0	0	0	0	0	0	0	0	0	0

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Clinical sign	Group Name	Administration Week-day													
		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	98-7
DEATH	Control	2	2	3	3	3	3	3	3	4	4	4	4	4	4
	500 ppm	2	3	3	3	3	3	3	4	5	5	5	5	5	5
	1000 ppm	4	4	4	4	4	4	4	4	4	5	5	5	5	6
	2000 ppm	2	2	2	2	2	2	2	2	2	2	2	2	2	2
MORIBUND SACRIFICE	Control	1	1	1	1	1	1	1	1	1	1	1	1	1	2
	500 ppm	1	1	1	1	1	1	1	1	2	3	4	4	5	5
	1000 ppm	0	0	0	0	0	0	0	0	0	0	1	1	1	1
	2000 ppm	0	0	1	1	1	1	1	1	1	2	2	2	3	4
LOCOMOTOR MOVEMENT DECR	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	1	1	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	1	0	0	0	0	0	0	1	0	0	0	0
LATERAL	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	1	0	0	0	0	0	0	0	0	0	0	0
HUNCHBACK POSITION	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	1
PARALYTIC GAIT	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WASTING	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	1
SOILED	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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		99-7	100-7	101-7	102-7	103-7	104-7
DEATH	Control	4	5	5	5	5	6
	500 ppm	5	5	6	6	9	9
	1000 ppm	6	6	6	6	6	7
	2000 ppm	2	2	2	3	3	4
MORIBUND SACRIFICE	Control	3	3	3	3	3	3
	500 ppm	5	5	5	5	5	5
	1000 ppm	1	1	1	1	1	1
	2000 ppm	4	4	4	4	4	4
LOCOMOTOR MOVEMENT DECR	Control	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0
LATERAL	Control	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0
HUNCHBACK POSITION	Control	0	0	0	0	0	0
	500 ppm	0	1	0	0	0	0
	1000 ppm	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0
PARALYTIC GAIT	Control	0	0	0	1	1	0
	500 ppm	0	0	0	1	0	0
	1000 ppm	0	0	0	0	0	0
	2000 ppm	0	0	0	0	1	0
WASTING	Control	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0
SOILED	Control	0	0	0	0	1	0
	500 ppm	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0

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Clinical sign	Group Name	Administration Week-day													
		1-7	2-7	3-7	4-7	5-7	6-7	7-7	8-7	9-7	10-7	11-7	12-7	13-7	14-7
PILOERECTION	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	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
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EXOPHTHALMOS	Control	0	0	0	0	0	0	1	1	1	2	1	1	1	2
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	1	2	3	3	3	3	4	4	4	4	4	4	4	4
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	1
EYE OPACITY	Control	0	0	0	0	0	0	1	1	1	1	1	2	2	2
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	1	1	2	2	2	2	2	2	2	2	3	4
	2000 ppm	0	0	2	2	3	3	3	3	3	3	3	3	4	4
CATARACT	Control	0	0	0	0	0	0	0	0	0	0	0	1	1	1
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	1	1	1	1	1	1	1	1	1	1	2	2
CORNEAL OPACITY	Control	0	0	0	0	0	0	1	1	1	1	1	1	1	1
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	1	1	2	2	2	2	2	2	2	2	3	4
	2000 ppm	0	0	1	1	2	2	2	2	2	2	2	2	2	2
ANTERIOR CHAMBER OPACITY	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ABNORMAL GROWTH OF TEETH	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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Clinical sign	Group Name	Administration Week-day													
		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	28-7
PILOERECTOR	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	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
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EXOPHTHALMOS	Control	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	4	4	4	5	5	5	5	5	5	5	5	5	5	5
	2000 ppm	1	1	1	2	2	2	2	2	2	2	2	2	2	2
EYE OPACITY	Control	2	3	3	3	3	3	3	3	3	3	3	3	3	3
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	4	5	5	5	5	5	5	5	5	5	6	6	6	6
	2000 ppm	4	4	4	4	4	4	4	4	4	4	4	4	4	4
CATARACT	Control	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	1	1	1	1	1	1	1	1	1	1	1	1	1
	2000 ppm	2	2	2	2	2	2	2	2	2	1	1	1	1	1
CORNEAL OPACITY	Control	1	2	2	2	2	2	2	2	2	2	2	2	2	2
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	4	4	4	4	4	4	4	4	4	4	5	5	5	5
	2000 ppm	2	2	2	2	2	2	2	2	2	3	3	3	3	3
ANTERIOR CHAMBER OPACITY	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ABNORMAL GROWTH OF TEETH	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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Clinical sign	Group Name	Administration Week-day			32-7	33-7	34-7	35-7	36-7	37-7	38-7	39-7	40-7	41-7	42-7
		29-7	30-7	31-7											
PILOERECTION	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	1	1
SOILED PERI GENITALIA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EXOPHTHALMOS	Control	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	500 ppm	0	0	0	0	1	1	1	1	1	1	1	1	1	1
	1000 ppm	5	5	6	6	6	6	6	6	6	6	6	6	6	6
	2000 ppm	2	2	2	2	2	2	2	2	2	2	2	2	2	2
EYE OPACITY	Control	3	3	3	3	3	3	3	3	4	4	4	4	4	4
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	7	7	7	7	7	7	7	7	7	8	8	8	8	8
	2000 ppm	4	4	5	5	5	5	6	7	7	7	7	7	7	7
CATARACT	Control	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	2	2	2	2	2	2	2	3	3	4	4	4	4	4
	2000 ppm	1	1	2	2	2	2	3	4	4	4	4	4	4	4
CORNEAL OPACITY	Control	2	2	2	2	2	2	2	2	3	3	3	3	3	3
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	5	5	5	5	5	5	5	4	4	4	4	4	4	4
	2000 ppm	3	3	3	3	3	3	3	3	3	3	3	3	3	3
ANTERIOR CHAMBER OPACITY	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ABNORMAL GROWTH OF TEETH	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	1	1	1	1	1	1	1	1	0	0	0



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		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	56-7
PILOERECTOR	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
SOILED PERI GENITALIA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	1	0
EXOPHTHALMOS	Control	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	500 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	1000 ppm	6	6	6	6	6	6	6	6	6	7	7	7	7	7
	2000 ppm	2	2	2	2	2	2	2	2	2	2	2	2	2	2
EYE OPACITY	Control	4	4	4	4	4	4	4	4	4	4	4	4	4	4
	500 ppm	0	0	0	0	0	0	1	1	1	1	2	2	2	2
	1000 ppm	8	8	8	8	8	8	8	8	8	8	8	8	8	8
	2000 ppm	7	7	7	7	9	9	9	9	9	9	9	9	9	9
CATARACT	Control	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	500 ppm	0	0	0	0	0	0	1	1	1	1	2	2	2	2
	1000 ppm	4	5	5	5	5	5	5	5	5	5	5	5	5	6
	2000 ppm	4	4	4	4	6	6	6	6	6	6	6	6	6	6
CORNEAL OPACITY	Control	3	3	3	3	3	3	3	3	3	3	3	3	3	3
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	4	3	3	3	3	3	3	3	3	3	3	3	3	2
	2000 ppm	3	3	3	3	3	3	3	3	3	3	3	3	3	3
ANTERIOR CHAMBER OPACITY	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ABNORMAL GROWTH OF TEETH	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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Clinical sign	Group Name	Administration Week-day													
		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	70-7
PILOERECTION	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	1	1	0	0	0	0	0	0	0	0	0	0	1	0
SOILED PERI GENITALIA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	1	0	0	0	0	0	0	0	0	0	0	0	0	0
EXOPHTHALMOS	Control	1	1	1	1	1	1	1	2	2	2	2	2	2	2
	500 ppm	1	1	1	1	1	1	1	1	1	1	1	2	2	2
	1000 ppm	7	7	7	7	7	7	7	7	7	7	7	7	7	7
	2000 ppm	2	2	2	2	2	2	2	2	2	2	2	2	2	2
EYE OPACITY	Control	4	5	5	5	5	5	5	5	5	6	6	7	7	7
	500 ppm	2	2	2	2	2	2	2	2	2	3	3	4	3	3
	1000 ppm	8	8	8	8	8	8	8	8	8	8	8	9	9	9
	2000 ppm	9	9	9	9	9	9	9	9	9	9	9	9	9	9
CATARACT	Control	1	2	2	2	2	2	3	3	3	4	4	4	4	4
	500 ppm	2	2	2	2	2	2	2	2	2	2	2	3	3	3
	1000 ppm	6	5	5	5	6	6	6	6	6	6	6	7	7	7
	2000 ppm	6	6	6	6	6	6	7	7	7	7	7	7	7	7
CORNEAL OPACITY	Control	3	3	3	3	3	3	2	2	2	2	2	2	2	2
	500 ppm	0	0	0	0	0	0	0	0	0	1	1	1	0	0
	1000 ppm	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	2000 ppm	3	3	3	3	3	3	2	2	2	2	2	2	2	2
ANTERIOR CHAMBER OPACITY	Control	0	0	0	0	0	0	0	0	0	0	0	1	1	1
	500 ppm	0	1	0	0	0	1	1	1	1	1	1	1	1	1
	1000 ppm	0	1	1	1	1	1	1	1	1	1	1	1	1	1
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ABNORMAL GROWTH OF TEETH	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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Clinical sign	Group Name	Administration Week-day													
		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	84-7
PILOERECTOR	Control	0	0	0	0	0	0	0	0	1	2	1	1	0	1
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	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
	500 ppm	0	0	0	1	1	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EXOPHTHALMOS	Control	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	500 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	1000 ppm	7	7	7	7	7	6	6	6	6	6	6	6	6	6
	2000 ppm	2	2	2	2	2	2	2	2	2	2	2	2	2	2
EYE OPACITY	Control	7	7	7	7	7	7	7	7	7	7	7	7	7	7
	500 ppm	3	3	3	3	3	3	3	3	3	3	3	3	4	4
	1000 ppm	9	9	9	9	9	8	8	8	8	8	8	8	8	8
	2000 ppm	9	9	9	9	9	9	10	10	10	10	11	11	11	11
CATARACT	Control	4	4	4	4	4	4	5	5	5	5	5	5	5	5
	500 ppm	3	3	2	2	2	2	2	2	2	2	2	2	3	3
	1000 ppm	7	7	7	7	7	6	6	6	6	6	6	6	6	6
	2000 ppm	7	7	7	7	7	7	8	8	8	8	9	9	9	10
CORNEAL OPACITY	Control	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	500 ppm	0	0	1	1	1	1	1	1	1	1	1	1	1	1
	1000 ppm	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	2000 ppm	2	2	2	2	2	2	2	2	2	2	2	2	2	1
ANTERIOR CHAMBER OPACITY	Control	1	1	1	1	1	1	1	0	0	0	0	0	0	0
	500 ppm	1	1	1	1	1	1	1	0	0	0	1	1	1	0
	1000 ppm	1	1	2	2	2	2	2	1	1	1	1	1	1	1
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ABNORMAL GROWTH OF TEETH	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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Clinical sign	Group Name	Administration Week-day				88-7	89-7	90-7	91-7	92-7	93-7	94-7	95-7	96-7	97-7	98-7
		85-7	86-7	87-7												
PILOERECTION	Control	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	1	0	0	0	0	0	0	1	1	0	0	0	1	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	1	1	0	0	0	0	0	0	0	0	0	1	1	1
SOILED PERI GENITALIA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EXOPHTHALMOS	Control	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	500 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	1000 ppm	6	6	6	6	6	5	5	5	5	4	3	3	3	3	3
	2000 ppm	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
EYE OPACITY	Control	7	7	7	7	7	7	7	7	7	7	7	7	7	7	8
	500 ppm	4	4	5	5	5	5	5	5	5	4	4	4	5	5	5
	1000 ppm	8	8	8	8	8	8	8	8	8	8	7	7	7	7	6
	2000 ppm	11	11	11	11	11	11	11	11	11	11	11	10	10	10	10
CATARACT	Control	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
	500 ppm	3	3	3	3	3	3	3	3	3	3	2	2	3	3	4
	1000 ppm	6	7	7	7	7	7	7	7	7	7	6	6	6	6	5
	2000 ppm	10	10	10	10	10	10	10	10	10	10	10	9	9	9	9
CORNEAL OPACITY	Control	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3
	500 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	1000 ppm	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	2000 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
ANTERIOR CHAMBER OPACITY	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	1	1	1	1	1	1	1	1	1	1	1	1	0
	1000 ppm	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ABNORMAL GROWTH OF TEETH	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	1	1	1	1	2	2	2	2	2	2	3

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Clinical sign	Group Name	Administration Week-day					
		99-7	100-7	101-7	102-7	103-7	104-7
PILOERECTION	Control	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0
	2000 ppm	1	1	1	2	2	2
SOILED PERI GENITALIA	Control	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0
EXOPHTHALMOS	Control	2	2	2	2	2	2
	500 ppm	1	1	1	1	1	1
	1000 ppm	3	3	3	3	3	3
	2000 ppm	2	2	2	2	2	2
EYE OPACITY	Control	8	7	7	7	7	8
	500 ppm	5	5	6	6	6	6
	1000 ppm	6	6	6	6	7	7
	2000 ppm	10	10	10	9	9	9
CATARACT	Control	5	5	5	5	7	8
	500 ppm	4	4	5	5	5	5
	1000 ppm	5	5	5	5	6	6
	2000 ppm	9	9	9	8	8	8
CORNEAL OPACITY	Control	3	2	2	2	2	2
	500 ppm	1	1	1	1	1	1
	1000 ppm	1	1	1	1	1	1
	2000 ppm	1	1	1	1	1	1
ANTERIOR CHAMBER OPACITY	Control	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	1
	1000 ppm	0	0	1	1	1	2
	2000 ppm	0	0	0	0	0	0
ABNORMAL GROWTH OF TEETH	Control	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0
	2000 ppm	2	2	3	3	2	2

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Clinical sign	Group Name	Administration Week-day													
		1-7	2-7	3-7	4-7	5-7	6-7	7-7	8-7	9-7	10-7	11-7	12-7	13-7	14-7
EXTERNAL MASS	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	1	1	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
INTERNAL MASS	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	500 ppm	0	0	0	0	0	0	0	0	0	1	1	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. NECK	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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Clinical sign	Group Name	Administration Week-day													
		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	28-7
EXTERNAL MASS	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
INTERNAL MASS	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. NECK	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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Clinical sign	Group Name	Administration Week-day													
		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	42-7
EXTERNAL MASS	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
INTERNAL MASS	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. NECK	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0



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		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	56-7
EXTERNAL MASS	Control	0	0	0	0	0	0	0	1	1	1	1	1	1	1
	500 ppm	0	0	0	0	0	0	0	1	2	2	3	3	4	4
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	1	1
	2000 ppm	0	0	0	0	0	0	0	0	0	0	2	1	3	3
INTERNAL MASS	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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	1	1	1	1	1	1	1
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	500 ppm	0	0	0	0	0	0	0	0	0	0	1	1	1	1
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. NECK	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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		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	70-7
EXTERNAL MASS	Control	1	2	2	1	1	1	1	1	1	2	2	2	2	2
	500 ppm	4	4	4	4	4	6	6	6	6	6	6	6	6	6
	1000 ppm	1	1	1	1	0	0	0	0	1	1	1	2	2	2
	2000 ppm	3	3	4	4	3	3	3	3	3	3	3	4	4	4
INTERNAL MASS	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. NOSE	Control	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	1	1	1
	2000 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
	500 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. PERI MOUTH	Control	0	1	1	0	0	0	0	0	0	1	1	1	1	1
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	1	1	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
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. NECK	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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		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	84-7
EXTERNAL MASS	Control	2	2	2	2	2	2	3	2	2	2	2	2	2	2
	500 ppm	7	7	7	9	9	8	9	10	10	10	11	11	13	13
	1000 ppm	2	2	2	2	2	2	1	2	2	3	3	3	3	3
	2000 ppm	4	4	4	4	4	4	4	3	3	3	3	3	3	4
INTERNAL MASS	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. NOSE	Control	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	1	1
	1000 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	2000 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
	500 ppm	2	2	2	2	2	1	1	1	1	1	1	1	1	1
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. PERI MOUTH	Control	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	500 ppm	0	0	0	0	0	0	1	0	0	0	1	1	1	1
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. NECK	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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		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	98-7
EXTERNAL MASS	Control	2	2	1	1	1	1	1	1	1	2	2	3	3	3
	500 ppm	14	13	13	13	13	14	14	14	15	13	11	11	11	13
	1000 ppm	4	4	5	5	4	5	5	5	4	4	4	4	5	5
	2000 ppm	4	5	6	5	4	5	4	5	7	7	7	7	6	6
INTERNAL MASS	Control	0	0	0	0	0	0	0	0	0	0	0	0	1	1
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	1	1
	2000 ppm	0	0	0	0	0	0	0	0	1	1	1	1	1	2
M. NOSE	Control	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	500 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	1000 ppm	1	1	1	1	1	1	1	1	1	1	1	1	2	2
	2000 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
	500 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	1000 ppm	0	0	0	0	0	1	1	1	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. PERI MOUTH	Control	1	1	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	2	2	2	2	2	2	2	1	2	2	1	1	1	2
	1000 ppm	1	1	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	1	1	1	1	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
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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	1	1	1
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. NECK	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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		99-7	100-7	101-7	102-7	103-7	104-7
EXTERNAL MASS	Control	4	4	5	6	6	7
	500 ppm	12	12	14	13	11	11
	1000 ppm	5	7	9	9	9	9
	2000 ppm	7	6	6	6	6	6
INTERNAL MASS	Control	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0
	2000 ppm	1	1	1	1	1	1
M. NOSE	Control	1	1	1	1	1	1
	500 ppm	1	1	1	1	1	1
	1000 ppm	2	2	2	2	2	2
	2000 ppm	0	0	0	0	0	0
M. EYE	Control	0	0	0	0	0	0
	500 ppm	1	1	1	1	1	1
	1000 ppm	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0
M. PERI MOUTH	Control	0	0	0	0	0	0
	500 ppm	1	1	2	1	1	1
	1000 ppm	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0
M. EAR	Control	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0
	1000 ppm	0	1	2	2	2	2
	2000 ppm	0	0	0	0	0	0
M. PERI EAR	Control	1	1	1	1	1	1
	500 ppm	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0
M. NECK	Control	0	0	0	0	0	0
	500 ppm	0	0	1	1	0	0
	1000 ppm	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0

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		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	14-7
M. BREAST	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. TAIL	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ANEMIA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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		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	28-7
M. BREAST	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. TAIL	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ANEMIA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	1	1	0	0	0	0	0

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		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	42-7
M. BREAST	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 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
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. TAIL	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ANEMIA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0



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		43-7	44-7	45-7												
M. BREAST	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
M. ABDOMEN	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	1	2	2	2	2	3	3	3
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
M. ANTERIOR. DORSUM	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	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	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	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	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
M. GENITALIA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. TAIL	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
ANEMIA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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		57-7	58-7	59-7												
M. BREAST	Control	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0		0	0	1	1	1	1	1	1	1	1	1
	1000 ppm	1	1	1		1	0	0	0	0	0	0	0	0	0	0
	2000 ppm	1	1	1		1	1	1	1	1	1	1	1	1	1	1
M. ABDOMEN	Control	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	500 ppm	3	3	3		3	3	3	3	3	3	3	3	3	3	3
	1000 ppm	0	0	0		0	0	0	0	1	1	1	1	1	1	1
	2000 ppm	1	1	1		1	1	1	1	1	1	1	1	1	1	1
M. ANTERIOR DORSUM	Control	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0		0	0	0	0	0	0	0	1	1	1	1
M. POSTERIOR DORSUM	Control	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	2000 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
	500 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	2000 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
	500 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
M. TAIL	Control	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0		0	0	1	1	2	2	2	2	2	2	2
	1000 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	1	1	1		1	1	1	1	1	1	1	1	1	1	1
ANEMIA	Control	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0

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		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	84-7
M. BREAST	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
M. ABDOMEN	Control	0	0	0	0	0	0	1	0	0	0	0	0	0	0
	500 ppm	3	3	3	3	3	3	3	3	3	3	3	3	4	4
	1000 ppm	1	1	1	1	1	1	0	0	0	0	0	0	0	0
	2000 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
M. ANTERIOR. DORSUM	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	1	1	1	1	1	1	1	1	1	2	2
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	1	1	1	1	1	1	1	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
	500 ppm	0	0	0	1	1	1	1	2	2	2	2	2	2	2
	1000 ppm	0	0	0	0	0	0	0	1	1	1	1	1	1	1
	2000 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
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	1
M. GENITALIA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	1	1	1	1	1	1	1
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. TAIL	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	1000 ppm	0	0	0	0	0	0	0	0	0	1	1	1	1	1
	2000 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
ANEMIA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	1	2	2	2	1	1	1	1	1	1	1	2	1
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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		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	98-7
M. BREAST	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	1	1	1	1	1	1	1	0	0	0	0	0	0	1
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	1	1	1	1	0	0	0	0	0	0	0	0	0	0
M. ABDOMEN	Control	0	0	0	0	0	0	0	0	0	1	1	1	1	1
	500 ppm	4	3	3	3	3	3	3	3	3	3	2	2	2	3
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	1	1	1	1	1	1	1	2	4	4	4	4	4	4
M. ANTERIOR. DORSUM	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	2	2	2	2	2	3	3	4	4	2	1	1	1	1
	1000 ppm	0	0	1	1	1	1	1	1	1	1	1	1	1	2
	2000 ppm	0	0	0	0	0	1	1	1	1	1	1	1	1	1
M. POSTERIOR DORSUM	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	1000 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	2000 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
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	1	1	0	0	0	0	0	0	0	0	0	0
	2000 ppm	1	2	2	1	1	1	1	1	1	1	1	1	0	0
M. GENITALIA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. TAIL	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	2	2	2	2	2	2	2	2	2	2	2	2	2	1
	1000 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	2000 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
ANEMIA	Control	0	0	0	0	0	0	0	0	0	0	0	1	1	1
	500 ppm	1	0	0	0	0	0	0	0	1	2	2	2	2	2
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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		99-7	100-7	101-7	102-7	103-7	104-7
M. BREAST	Control	0	0	0	0	0	1
	500 ppm	1	1	1	1	1	1
	1000 ppm	0	0	1	1	1	2
	2000 ppm	0	0	0	0	0	0
M. ABDOMEN	Control	2	2	2	2	2	3
	500 ppm	3	3	3	3	3	3
	1000 ppm	0	0	0	0	0	0
	2000 ppm	4	4	4	4	4	4
M. ANTERIOR. DORSUM	Control	0	0	1	2	2	2
	500 ppm	1	1	1	1	1	1
	1000 ppm	2	3	3	3	3	3
	2000 ppm	2	1	1	1	1	1
M. POSTERIOR DORSUM	Control	0	0	0	0	0	0
	500 ppm	2	2	2	2	1	1
	1000 ppm	1	1	1	1	1	1
	2000 ppm	0	0	0	0	0	0
M. HINDLIMB	Control	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0
M. GENITALIA	Control	0	0	0	0	0	0
	500 ppm	1	1	1	1	1	1
	1000 ppm	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0
M. TAIL	Control	0	0	0	0	0	0
	500 ppm	1	1	1	1	1	1
	1000 ppm	1	1	1	1	1	1
	2000 ppm	1	1	1	1	1	1
ANEMIA	Control	0	0	0	0	0	0
	500 ppm	2	2	2	2	2	2
	1000 ppm	0	0	1	1	1	1
	2000 ppm	0	0	0	0	1	1

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		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	14-7
JAUNDICE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ULCER	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CRUSTA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HEMORRHAGE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TORTICOLLIS	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
IRREGULAR BREATHING	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RESPIRATORY SOUND ABNOR	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NOISY	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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Clinical sign	Group Name	Administration Week-day													
		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	28-7
JAUNDICE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ULCER	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CRUSTA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HEMORRHAGE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TORTICOLLIS	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
IRREGULAR BREATHING	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RESPIRATORY SOUND ABNOR	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NOISY	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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Clinical sign	Group Name	Administration Week-day													
		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	42-7
JAUNDICE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ULCER	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CRUSTA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HEMORRHAGE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TORTICOLLIS	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
IRREGULAR BREATHING	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RESPIRATORY SOUND ABNOR	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NOISY	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0



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		43-7	44-7	45-7												
JAUNDICE	Control	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
ULCER	Control	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
CRUSTA	Control	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0		0	0	0	0	0	0	1	1	0	0	0
	1000 ppm	0	0	0		0	0	0	0	0	0	1	1	0	0	0
	2000 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
HEMORRHAGE	Control	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
TORTICOLLIS	Control	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
IRREGULAR BREATHING	Control	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
RESPIRATORY SOUND ABNOR	Control	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
NOISY	Control	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0

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		57-7	58-7	59-7											
JAUNDICE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ULCER	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CRUSTA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	1	1	1	1	1	1	1	1	1
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HEMORRHAGE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TORTICOLLIS	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
IRREGULAR BREATHING	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RESPIRATORY SOUND ABNOR	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NOISY	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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		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	84-7
JAUNDICE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ULCER	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CRUSTA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	1	1	1	1	1	1	1	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HEMORRHAGE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TORTICOLLIS	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
IRREGULAR BREATHING	Control	0	0	0	0	0	0	0	0	1	1	1	1	0	0
	500 ppm	0	1	1	1	1	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RESPIRATORY SOUND ABNOR	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NOISY	Control	0	0	0	0	0	0	0	0	0	0	0	1	1	1
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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		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	98-7
JAUNDICE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ULCER	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CRUSTA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HEMORRHAGE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	1	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	2000 ppm	1	0	0	0	0	0	1	0	0	0	2	0	0	0
TORTICOLLIS	Control	0	0	0	0	0	0	0	0	0	0	0	1	1	1
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
IRREGULAR BREATHING	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	1	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	1	0	0	0	0	0	0	0	0	0	0	0
RESPIRATORY SOUND ABNOR	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	1	1	1	0	0	0	0
NOISY	Control	1	1	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	1	1	1

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		99-7	100-7	101-7	102-7	103-7	104-7
JAUNDICE	Control	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0
ULCER	Control	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0
CRUSTA	Control	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0
HEMORRHAGE	Control	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0
	2000 ppm	0	3	0	0	0	0
TORTICOLLIS	Control	1	1	1	1	1	1
	500 ppm	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0
IRREGULAR BREATHING	Control	1	0	0	0	0	0
	500 ppm	0	1	0	0	0	0
	1000 ppm	0	0	0	0	0	0
	2000 ppm	0	0	1	0	0	0
RESPIRATORY SOUND ABNOR	Control	1	0	0	0	0	0
	500 ppm	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0
NOISY	Control	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0
	2000 ppm	0	0	1	0	0	0

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		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	14-7
ABNORMAL RESPIRATION	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DEEP BREATHING	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ABNORMAL RESPIRA. SOUND	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HEMATURIA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RED URINE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
YELLOW URINE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SMALL STOOL	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
OLIGO-STOOL	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	2
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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		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	28-7
ABNORMAL RESPIRATION	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DEEP BREATHING	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ABNORMAL RESPIRA. SOUND	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HEMATURIA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RED URINE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
YELLOW URINE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SMALL STOOL	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
OLIGO-STOOL	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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		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	42-7
ABNORMAL RESPIRATION	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DEEP BREATHING	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ABNORMAL RESPIRA. SOUND	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HEMATURIA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RED URINE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
YELLOW URINE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SMALL STOOL	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	1	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	1	1	0	0	0	0	0	0	0	0	0	0
OLIGO-STOOL	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	1	1	1	0	0	0	0	0	0	1	0	0	0



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		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	56-7
ABNORMAL RESPIRATION	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DEEP BREATHING	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ABNORMAL RESPIRA. SOUND	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HEMATURIA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RED URINE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	1
YELLOW URINE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SMALL STOOL	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	1
OLIGO-STOOL	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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		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	70-7
ABNORMAL RESPIRATION	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DEEP BREATHING	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ABNORMAL RESPIRA. SOUND	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HEMATURIA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RED URINE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	1	1	2	1	0	0	0	0	0	0
YELLOW URINE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SMALL STOOL	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	1	0	0	0	0	0	0	0
OLIGO-STOOL	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	1	0	1	0	1	1	0	0	0

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		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	84-7
ABNORMAL RESPIRATION	Control	0	0	0	0	0	0	0	0	1	1	1	1	0	0
	500 ppm	0	1	1	2	2	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DEEP BREATHING	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	1	0	1	1	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ABNORMAL RESPIRA. SOUND	Control	0	0	0	0	0	0	0	0	0	0	0	1	1	1
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HEMATURIA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	1	1	0	0	0	0	0	0	0
RED URINE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	1	0	0	2	0
YELLOW URINE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SMALL STOOL	Control	0	0	0	0	0	0	0	0	1	2	1	1	0	1
	500 ppm	0	0	0	2	1	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	1	0	0	0	0	0	2	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
OLIGO-STOOL	Control	0	0	0	0	0	0	0	0	1	2	1	1	0	0
	500 ppm	0	1	1	2	1	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	1	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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		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	98-7
ABNORMAL RESPIRATION	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	1	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	1	0	0	0	0	1	1	1	0	0	0	0
DEEP BREATHING	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	1	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	1	1	1	0	0	0	0
ABNORMAL RESPIRA. SOUND	Control	1	1	0	0	0	0	0	0	0	0	0	0	0	1
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	1	1	1	0	1	1	1
HEMATURIA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	2	0	0	0	0	0	0	0	0	0	0
RED URINE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	1	1	1	1	1	1	1	1	1	1	1	3	3	2
YELLOW URINE	Control	0	0	0	0	0	0	0	0	0	0	0	1	1	1
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	1	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SMALL STOOL	Control	1	1	0	0	0	0	0	1	0	0	0	1	1	2
	500 ppm	0	0	0	0	0	0	2	3	1	2	0	1	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	1	0	0	0	0	0	0	1	1	3	3	2
OLIGO-STOOL	Control	0	1	0	0	0	0	0	0	0	0	0	1	1	1
	500 ppm	0	0	0	0	0	0	0	1	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	1	0	0	0	0	0	0	0	0	1	1	1

STUDY NO. : 0371  
ANIMAL : RAT F344/DuCrj  
REPORT TYPE : A1 104

CLINICAL OBSERVATION (SUMMARY)  
ALL ANIMALS

SEX : MALE

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Clinical sign	Group Name	Administration Week-day					
		99-7	100-7	101-7	102-7	103-7	104-7
ABNORMAL RESPIRATION	Control	1	0	0	0	0	0
	500 ppm	0	1	0	0	0	0
	1000 ppm	0	0	0	0	0	0
	2000 ppm	0	0	1	0	0	0
DEEP BREATHING	Control	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0
ABNORMAL RESPIRA. SOUND	Control	1	0	0	0	0	0
	500 ppm	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0
	2000 ppm	0	0	1	0	0	0
HEMATURIA	Control	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0
RED URINE	Control	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0
	2000 ppm	2	2	8	4	3	9
YELLOW URINE	Control	0	0	0	0	0	1
	500 ppm	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0
SMALL STOOL	Control	2	0	0	0	1	1
	500 ppm	1	0	1	1	0	0
	1000 ppm	0	0	0	0	0	0
	2000 ppm	1	2	2	1	1	1
OLIGO-STOOL	Control	2	0	0	0	1	0
	500 ppm	0	0	1	1	0	0
	1000 ppm	0	0	0	0	0	0
	2000 ppm	0	1	2	0	0	2

STUDY NO. : 0371  
ANIMAL : RAT F344/DuCrj  
REPORT TYPE : A1 104

CLINICAL OBSERVATION (SUMMARY)  
ALL ANIMALS

SEX : MALE

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Clinical sign	Group Name	Administration Week-day													
		1-7	2-7	3-7	4-7	5-7	6-7	7-7	8-7	9-7	10-7	11-7	12-7	13-7	14-7
SUBNORMAL TEMP	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NON REMARKABLE	Control	50	50	50	50	50	50	49	49	49	48	48	48	48	48
	500 ppm	50	50	50	50	50	50	50	50	50	49	49	50	50	50
	1000 ppm	49	48	47	47	47	47	46	46	46	46	46	46	46	44
	2000 ppm	50	50	48	48	47	47	47	47	47	47	47	47	46	46

(HAN190)

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STUDY NO. : 0371  
ANIMAL : RAT F344/DuCrj  
REPORT TYPE : A1 104

CLINICAL OBSERVATION (SUMMARY)  
ALL ANIMALS

SEX : MALE

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Clinical sign	Group Name	Administration Week-day													
		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	28-7
SUBNORMAL TEMP	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NON REMARKABLE	Control	48	47	47	47	47	47	47	47	47	47	47	47	47	47
	500 ppm	50	50	50	50	50	50	50	50	50	50	50	50	50	50
	1000 ppm	45	44	44	44	44	44	44	44	44	44	44	44	44	44
	2000 ppm	46	46	46	46	46	46	46	45	45	46	46	46	46	46

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STUDY NO. : 0371  
ANIMAL : RAT F344/DuCrj  
REPORT TYPE : A1 104

CLINICAL OBSERVATION (SUMMARY)  
ALL ANIMALS

SEX : MALE

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Clinical sign	Group Name	Administration Week-day													
		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	42-7
SUBNORMAL TEMP	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NON REMARKABLE	Control	47	47	47	47	47	47	47	47	46	46	46	46	46	46
	500 ppm	49	50	50	50	49	49	49	49	49	49	49	49	49	49
	1000 ppm	43	43	42	42	42	42	42	42	42	41	41	41	41	41
	2000 ppm	46	46	45	45	45	45	44	43	43	43	43	43	43	43

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STUDY NO. : 0371  
ANIMAL : RAT F344/DuCrj  
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CLINICAL OBSERVATION (SUMMARY)  
ALL ANIMALS

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Clinical sign	Group Name	Administration Week-day													
		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	56-7
SUBNORMAL TEMP	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NON REMARKABLE	Control	46	46	46	46	46	46	46	45	45	45	45	45	45	45
	500 ppm	49	49	49	49	49	49	48	47	46	46	44	44	44	44
	1000 ppm	41	41	41	41	41	41	41	41	41	40	39	39	40	40
	2000 ppm	43	43	43	43	41	41	41	41	41	41	39	40	37	37

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STUDY NO. : 0371  
ANIMAL : RAT F344/DuCrj  
REPORT TYPE : A1 104

CLINICAL OBSERVATION (SUMMARY)  
ALL ANIMALS

SEX : MALE

PAGE : 53

Clinical sign	Group Name	Administration Week-day													
		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	70-7
SUBNORMAL TEMP	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NON REMARKABLE	Control	45	43	43	44	44	44	44	44	44	42	42	41	41	41
	500 ppm	44	44	44	44	44	42	42	42	42	42	42	40	40	40
	1000 ppm	40	40	40	40	40	39	39	39	38	38	37	36	36	36
	2000 ppm	36	37	37	37	36	36	35	36	36	36	36	35	35	35

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STUDY NO. : 0371  
ANIMAL : RAT F344/DuCrj  
REPORT TYPE : A1 104

CLINICAL OBSERVATION (SUMMARY)  
ALL ANIMALS

SEX : MALE

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Clinical sign	Group Name	Administration Week-day													
		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	84-7
SUBNORMAL TEMP	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NON REMARKABLE	Control	41	41	41	41	41	41	40	41	40	39	39	39	38	38
	500 ppm	40	39	39	37	37	37	36	35	35	35	34	34	31	31
	1000 ppm	36	36	36	36	36	36	36	36	35	34	34	34	34	34
	2000 ppm	35	35	35	35	35	35	34	35	35	34	34	34	32	33

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BAIS 4

STUDY NO. : 0371  
ANIMAL : RAT F344/DuCrj  
REPORT TYPE : A1 104

CLINICAL OBSERVATION (SUMMARY)  
ALL ANIMALS

SEX : MALE

PAGE : 55

Clinical sign	Group Name	Administration Week-day													
		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	98-7
SUBNORMAL TEMP	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	1	1	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0	0	0	0	1	0	0	0	0
NON REMARKABLE	Control	38	38	38	38	38	38	38	37	37	36	36	34	34	33
	500 ppm	30	30	30	30	30	29	28	27	26	26	26	25	25	24
	1000 ppm	33	33	33	33	33	33	33	33	33	33	33	33	32	30
	2000 ppm	32	30	29	29	31	30	30	30	28	28	26	26	26	25

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STUDY NO. : 0371  
ANIMAL : RAT F344/DuCrj  
REPORT TYPE : A1 104

CLINICAL OBSERVATION (SUMMARY)  
ALL ANIMALS

SEX : MALE

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Clinical sign	Group Name	Administration Week-day					
		99-7	100-7	101-7	102-7	103-7	104-7
SUBNORMAL TEMP	Control	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0
	2000 ppm	0	0	0	0	0	0
NON REMARKABLE	Control	32	32	31	29	28	26
	500 ppm	24	24	21	21	21	21
	1000 ppm	32	30	27	27	27	26
	2000 ppm	24	25	22	25	24	21

(HAN190)

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## APPENDIX A 2

CLINICAL OBSERVATION : SUMMARY, RAT : FEMALE  
(2-YEAR STUDY)

STUDY NO. : 0371  
ANIMAL : RAT F344/DuCrj  
REPORT TYPE : A1 104

CLINICAL OBSERVATION (SUMMARY)  
ALL ANIMALS

SEX : FEMALE

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Clinical sign	Group Name	Administration Week-day													
		1-7	2-7	3-7	4-7	5-7	6-7	7-7	8-7	9-7	10-7	11-7	12-7	13-7	14-7
DEATH	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MORIBUND SACRIFICE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 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
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HUNCHBACK POSITION	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ATAXIC GAIT	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PARALYTIC GAIT	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WASTING	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SOILED	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

STUDY NO. : 0371  
ANIMAL : RAT F344/DuCrj  
REPORT TYPE : A1 104

CLINICAL OBSERVATION (SUMMARY)  
ALL ANIMALS

SEX : FEMALE

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Clinical sign	Group Name	Administration Week-day													
		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	28-7
DEATH	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MORIBUND SACRIFICE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 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
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HUNCHBACK POSITION	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ATAXIC GAIT	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PARALYTIC GAIT	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WASTING	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SOILED	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0



STUDY NO. : 0371  
ANIMAL : RAT F344/DuCrj  
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CLINICAL OBSERVATION (SUMMARY)  
ALL ANIMALS

SEX : FEMALE

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Clinical sign	Group Name	Administration Week-day													
		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	42-7
DEATH	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MORIBUND SACRIFICE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 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
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HUNCHBACK POSITION	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	1	1
ATAXIC GAIT	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PARALYTIC GAIT	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WASTING	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SOILED	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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		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	56-7
DEATH	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MORIBUND SACRIFICE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 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
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HUNCHBACK POSITION	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	1	1	0	1	0	0	0	0	0	0	0	0	0	0
ATAXIC GAIT	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PARALYTIC GAIT	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WASTING	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SOILED	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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		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	70-7
DEATH	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	250 ppm	0	0	0	0	1	1	1	1	1	1	1	1	1	1
	500 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	1
MORIBUND SACRIFICE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 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
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HUNCHBACK POSITION	Control	0	0	0	0	0	0	0	0	0	0	0	1	1	0
	250 ppm	0	0	0	1	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	1	1	1	1	1	1	1	1	0
ATAXIC GAIT	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PARALYTIC GAIT	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WASTING	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SOILED	Control	0	0	0	0	0	0	0	0	1	1	1	1	1	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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		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	84-7
DEATH	Control	1	1	2	2	2	2	2	2	2	3	3	3	3	3
	250 ppm	2	2	3	3	3	3	3	3	4	4	4	4	4	4
	500 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	1000 ppm	1	1	1	1	2	2	2	2	2	2	2	2	2	2
MORIBUND SACRIFICE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 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
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HUNCHBACK POSITION	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ATAXIC GAIT	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	1	0	0	0	0	0	0	0	0	0	0
PARALYTIC GAIT	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	1	1
WASTING	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	1	1	1	1	0	0	0	0	0	0	0	0	0	0
SOILED	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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		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	98-7
DEATH	Control	3	3	3	3	4	4	4	4	4	4	5	5	5	5
	250 ppm	4	5	5	5	5	5	5	5	5	5	5	5	5	6
	500 ppm	1	1	1	1	1	1	1	1	1	2	2	4	4	4
	1000 ppm	2	2	2	2	2	2	2	2	3	3	4	4	4	4
MORIBUND SACRIFICE	Control	0	0	0	0	1	1	1	1	1	1	1	1	1	1
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	1	1
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	1	1	1
	1000 ppm	0	0	0	1	2	2	2	2	2	2	2	2	2	2
LOCOMOTOR MOVEMENT DECR	Control	0	0	0	0	1	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	1	0	0
	1000 ppm	0	0	0	0	1	0	0	0	0	0	0	0	0	0
HUNCHBACK POSITION	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	1	1
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	1	1	1	0	0	0	0	0	0	0	0	0
ATAXIC GAIT	Control	0	0	0	0	0	1	1	1	1	1	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PARALYTIC GAIT	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	1	1	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
WASTING	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SOILED	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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		99-7	100-7	101-7	102-7	103-7	104-7
DEATH	Control	5	5	5	6	6	6
	250 ppm	6	7	7	8	8	8
	500 ppm	4	4	4	4	4	4
	1000 ppm	4	5	5	5	5	5
MORIBUND SACRIFICE	Control	1	3	3	3	3	3
	250 ppm	1	1	1	2	3	4
	500 ppm	2	2	2	2	2	2
	1000 ppm	2	2	2	3	4	4
LOCOMOTOR MOVEMENT DECR	Control	0	0	0	0	0	0
	250 ppm	0	0	1	0	0	0
	500 ppm	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0
HUNCHBACK POSITION	Control	0	0	0	0	0	0
	250 ppm	1	0	0	0	0	0
	500 ppm	0	0	0	0	0	0
	1000 ppm	1	1	1	1	0	0
ATAXIC GAIT	Control	0	0	0	0	0	0
	250 ppm	0	0	1	0	0	0
	500 ppm	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0
PARALYTIC GAIT	Control	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0
	1000 ppm	1	0	0	0	0	0
WASTING	Control	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0
SOILED	Control	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0

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		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	14-7
PILOERECTOR	Control	0	0	0	0	0	0	0	0	0	1	1	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	2	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
LOSS OF HAIR	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	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
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	1	1	0	0	0	0	0	0	0	0
EXOPHTHALMOS	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EYE OPACITY	Control	0	0	0	1	1	2	2	2	2	2	2	2	3	3
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	1	1	1	1
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	1	1
CATARACT	Control	0	0	0	0	0	0	0	0	0	0	0	0	1	1
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	1	1	1	1
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	1	1
CORNEAL OPACITY	Control	0	0	0	1	1	2	2	2	2	2	2	2	2	2
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ANTERIOR CHAMBER OPACITY	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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		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	28-7
PILOERECTOR	Control	0	0	0	0	1	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
LOSS OF HAIR	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	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
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	1	0	0	0	0
	1000 ppm	0	0	0	0	0	0	1	1	1	0	0	0	0	0
EXOPHTHALMOS	Control	0	0	0	0	0	0	0	0	0	0	0	1	1	1
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EYE OPACITY	Control	3	3	3	3	3	3	3	3	3	3	3	3	3	3
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	1	1	1
	500 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	1000 ppm	1	1	2	2	2	2	2	2	2	2	2	3	3	3
CATARACT	Control	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	1000 ppm	1	1	2	2	2	2	2	2	2	2	2	3	3	3
CORNEAL OPACITY	Control	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	1	1	1
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ANTERIOR CHAMBER OPACITY	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0



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Clinical sign	Group Name	Administration Week-day		31-7	32-7	33-7	34-7	35-7	36-7	37-7	38-7	39-7	40-7	41-7	42-7
		29-7	30-7												
PILOERECTION	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
LOSS OF HAIR	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	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
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	1	1	1	1
EXOPHTHALMOS	Control	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EYE OPACITY	Control	3	5	5	5	5	6	6	6	6	6	6	6	6	6
	250 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	500 ppm	1	1	1	1	1	1	1	2	2	2	2	2	2	2
	1000 ppm	3	3	3	3	3	3	3	3	3	3	3	3	3	3
CATARACT	Control	1	3	3	3	3	4	4	4	4	4	4	4	4	4
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	2
	1000 ppm	3	3	3	3	3	3	3	3	3	3	3	3	3	3
CORNEAL OPACITY	Control	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	250 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ANTERIOS CHAMBER OPACITY	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	1	1	1	1	1	1	1
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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Clinical sign	Group Name	Administration Week-day													
		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	56-7
PILOERECTION	Control	0	0	0	0	0	0	0	0	0	0	0	1	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
LOSS OF HAIR	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	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
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	1	0	0	0	0	0	1	1	1	1	1	1	0	0
EXOPHTHALMOS	Control	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EYE OPACITY	Control	6	6	6	6	6	6	6	6	6	6	6	7	7	7
	250 ppm	1	1	1	1	1	1	1	1	1	1	1	2	2	2
	500 ppm	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	1000 ppm	3	3	3	3	3	3	3	3	3	3	3	3	3	3
CATARACT	Control	4	4	4	4	4	4	4	4	5	5	5	6	6	6
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	1	1	1
	500 ppm	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	1000 ppm	3	3	3	3	3	3	3	3	3	3	3	3	3	3
CORNEAL OPACITY	Control	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	250 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ANTERIOR CHAMBER OPACITY	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	1	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	1	1	0

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Clinical sign	Group Name	Administration Week-day													
		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	70-7
PILOERECTOR	Control	0	0	0	0	0	0	0	0	1	1	1	1	1	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	1
LOSS OF HAIR	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	0	1	1	1	1	1	1	1	1	1	1	1	1	1
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	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
	250 ppm	0	0	0	0	0	0	0	0	0	0	1	1	1	1
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EXOPHTHALMOS	Control	1	1	1	1	0	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EYE OPACITY	Control	8	8	7	7	7	7	7	7	7	7	7	7	7	7
	250 ppm	2	2	2	2	2	2	3	3	3	3	3	3	3	3
	500 ppm	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	1000 ppm	3	3	3	3	3	3	3	3	3	3	3	3	4	4
CATARACT	Control	6	6	6	6	6	6	6	6	6	6	6	6	6	6
	250 ppm	1	1	1	1	1	1	2	2	2	2	2	2	2	2
	500 ppm	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	1000 ppm	3	3	3	3	3	3	3	3	3	3	3	3	4	4
CORNEAL OPACITY	Control	3	3	2	2	2	2	2	2	2	2	2	2	2	2
	250 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ANTERIOR CHAMBER OPACITY	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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Clinical sign	Group Name	Administration Week-day													
		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	84-7
PILOERECTOR	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	1	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	1	1	1	1	0	0	0	0	0	0	0	0	0	0
LOSS OF HAIR	Control	0	1	1	1	1	1	1	1	1	1	1	1	1	1
	250 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	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
	250 ppm	1	1	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	1	3	2	1	0	0	0	0	0	0	0	0	1	1
EXOPHTHALMOS	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EYE OPACITY	Control	7	7	7	7	7	7	7	7	7	7	7	7	7	8
	250 ppm	3	3	3	3	3	3	3	3	3	3	3	3	3	3
	500 ppm	2	2	2	2	2	2	2	2	2	2	2	3	3	3
	1000 ppm	4	4	4	4	3	3	3	3	3	3	3	3	3	3
CATARACT	Control	6	6	6	6	6	6	6	6	6	6	6	6	6	6
	250 ppm	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	500 ppm	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	1000 ppm	4	4	4	4	3	3	3	3	3	3	3	3	3	3
CORNEAL OPACITY	Control	2	2	2	2	2	2	2	2	1	1	1	1	1	1
	250 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ANTERIOR CHAMBER OPACITY	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	1	1	1
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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Clinical sign	Group Name	Administration Week-day				88-7	89-7	90-7	91-7	92-7	93-7	94-7	95-7	96-7	97-7	98-7
		85-7	86-7	87-7												
PILOERECTION	Control	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	1	2	2	2	1
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
LOSS OF HAIR	Control	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0
	250 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	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	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	2	1	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
	1000 ppm	1	1	1	1	1	1	1	1	1	2	2	1	1	1	1
EXOPHTHALMOS	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EYE OPACITY	Control	8	8	8	8	8	7	7	7	7	7	7	7	7	7	7
	250 ppm	3	3	3	4	4	4	4	4	4	4	4	4	4	4	4
	500 ppm	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
	1000 ppm	3	3	3	3	2	2	2	2	2	2	3	3	3	3	3
CATARACT	Control	6	6	6	6	6	5	7	7	7	7	7	7	7	7	7
	250 ppm	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	500 ppm	2	2	2	3	3	3	3	3	3	3	3	3	3	3	3
	1000 ppm	3	3	3	3	2	2	2	2	2	2	2	2	2	3	3
CORNEAL OPACITY	Control	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0
	250 ppm	1	1	1	2	2	2	2	2	2	2	2	2	2	2	2
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0
ANTERIOR CHAMBER OPACITY	Control	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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Clinical sign	Group Name	Administration Week-day					
		99-7	100-7	101-7	102-7	103-7	104-7
PILOERECTION	Control	0	0	0	0	0	0
	250 ppm	1	0	0	0	0	0
	500 ppm	0	0	0	0	0	0
	1000 ppm	2	2	2	3	1	1
LOSS OF HAIR	Control	0	0	0	0	0	0
	250 ppm	1	1	1	1	1	1
	500 ppm	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0
SOILED PERI GENITALIA	Control	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0
	1000 ppm	1	1	1	1	0	0
EXOPHTHALMOS	Control	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0
EYE OPACITY	Control	7	7	7	6	6	6
	250 ppm	4	4	4	4	4	4
	500 ppm	4	4	4	4	4	4
	1000 ppm	3	3	3	3	3	3
CATARACT	Control	7	7	7	6	6	6
	250 ppm	2	2	2	2	2	2
	500 ppm	4	4	4	4	4	4
	1000 ppm	3	3	3	3	3	3
CORNEAL OPACITY	Control	0	0	0	0	0	0
	250 ppm	2	2	2	2	2	2
	500 ppm	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0
ANTERIOR CHAMBER OPACITY	Control	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0

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Clinical sign	Group Name	Administration Week day													
		1-7	2-7	3-7	4-7	5-7	6-7	7-7	8-7	9-7	10-7	11-7	12-7	13-7	14-7
ABNORMAL GROWTH OF TEETH	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EXTERNAL MASS	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
INTERNAL MASS	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 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
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 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
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. ORAL CAVITY	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 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
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. FORLIMB	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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		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	28-7
ABNORMAL GROWTH OF TEETH	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EXTERNAL MASS	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
INTERNAL MASS	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 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
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 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
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. ORAL CAVITY	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 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
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. FORLIMB	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0



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Clinical sign	Group Name	Administration Week-day													
		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	42-7
ABNORMAL GROWTH OF TEETH	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EXTERNAL MASS	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
INTERNAL MASS	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 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
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 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
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. ORAL CAVITY	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 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
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. FORLIMB	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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		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	56-7
ABNORMAL GROWTH OF TEETH	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EXTERNAL MASS	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
INTERNAL MASS	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 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
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 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
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. ORAL CAVITY	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 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
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. FORLIMB	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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		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	70-7
ABNORMAL GROWTH OF TEETH	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EXTERNAL MASS	Control	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	250 ppm	0	0	0	0	0	0	0	1	1	1	1	1	1	1
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	1	1	1	1	1	1	2	1	1	1	1	1	1	0
INTERNAL MASS	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	1	1	1	1	1
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 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
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 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
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. ORAL CAVITY	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	1	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
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. FORLIMB	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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		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	84-7
ABNORMAL GROWTH OF TEETH	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EXTERNAL MASS	Control	1	1	1	1	1	1	1	2	2	2	2	2	3	3
	250 ppm	1	1	1	1	2	2	1	2	2	2	2	2	2	2
	500 ppm	0	0	0	0	0	1	1	1	0	1	1	2	2	2
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	1	1
INTERNAL MASS	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	1	1	0	1	0	0	0	1	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	1	1
M. NOSE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 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
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	1	1	1	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. ORAL CAVITY	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 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
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	1	1
M. FORLIMB	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	1	1	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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		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	98-7
ABNORMAL GROWTH OF TEETH	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	1	1	0	0	0	0	0	0
EXTERNAL MASS	Control	3	4	4	5	4	4	4	4	4	5	7	7	7	7
	250 ppm	2	1	1	3	3	3	2	2	2	2	3	3	3	4
	500 ppm	2	2	2	3	3	4	4	4	5	6	6	6	6	7
	1000 ppm	1	1	1	1	1	3	3	3	2	2	3	3	3	3
INTERNAL MASS	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	1	1	1	1	0	0	1	1	1	1	0	0	0	1
M. NOSE	Control	0	1	1	1	1	1	1	1	1	1	1	1	1	1
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 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
	250 ppm	0	0	0	1	1	1	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. ORAL CAVITY	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 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	1	1	1	1	1
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	1	1	1	1	1	0	0
	1000 ppm	1	1	1	1	1	1	1	1	0	0	0	0	0	0
M. FORLIMB	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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		99-7	100-7	101-7	102-7	103-7	104-7
ABNORMAL GROWTH OF TEETH	Control	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0
EXTERNAL MASS	Control	7	6	5	6	6	6
	250 ppm	4	5	5	5	5	4
	500 ppm	6	6	6	8	8	8
	1000 ppm	3	2	2	2	2	2
INTERNAL MASS	Control	0	0	0	0	0	0
	250 ppm	0	0	0	0	3	3
	500 ppm	0	0	0	0	0	0
	1000 ppm	1	0	0	0	1	1
M. NOSE	Control	1	1	1	1	1	1
	250 ppm	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0
M. PERI MOUTH	Control	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0
M. ORAL CAVITY	Control	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0
M. PERI EAR	Control	1	1	1	1	1	1
	250 ppm	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0
M. FORLIMB	Control	0	0	0	0	0	0
	250 ppm	0	1	1	1	1	1
	500 ppm	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0

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		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	14-7
M. BREAST	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 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
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 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
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 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
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 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
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ANEMIA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JAUNDICE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CRUSTA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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Clinical sign	Group Name	Administration Week-day													
		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	28-7
M. BREAST	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 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
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 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
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 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
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 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
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ANEMIA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
JAUNDICE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CRUSTA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0



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		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	42-7
M. BREAST	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 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
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 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
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 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
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 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
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
ANEMIA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	1	0	0	0	0	0	1	1	1	1	1
JAUNDICE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CRUSTA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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		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	56-7
M. BREAST	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 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
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 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
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 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
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 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
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
ANEMIA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	1	1	1	0	1	1	1	0	1	1	1
JAUNDICE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CRUSTA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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		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	70-7
M. BREAST	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 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
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 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
	250 ppm	0	0	0	0	0	0	0	1	1	1	1	1	1	1
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 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
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. GENITALIA	Control	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	0
ANEMIA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	1	1	0	0	0	0	0	1	1	1	1	1
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	0
JAUNDICE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CRUSTA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	1	0	0

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		71-7	72-7	73-7												
M. BREAST	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
	250 ppm	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	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	1	1
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1
	1000 ppm	0	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	0
	250 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1
	1000 ppm	0	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	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. GENITALIA	Control	1	1	1	1	1	1	1	1	2	2	2	2	2	1	1
	250 ppm	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ANEMIA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	1	1	0	0	0	0	0	0	0	0	1	1	1	1	1
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
JAUNDICE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CRUSTA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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		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	98-7
M. BREAST	Control	1	1	1	1	1	1	1	1	1	1	3	3	3	3
	250 ppm	1	0	0	1	1	1	1	1	1	1	2	2	2	2
	500 ppm	0	0	0	1	1	1	1	1	1	1	1	1	1	1
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M. ABDOMEN	Control	1	1	1	2	2	2	2	2	2	2	2	2	2	2
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	1	1	1	1	1	2	2	1	2	2	2	2	3	4
	1000 ppm	0	0	0	0	0	1	1	1	1	1	1	1	1	1
M. ANTERIOR DORSUM	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	500 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	1000 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
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	1	1	1	1
M. GENITALIA	Control	1	1	1	1	0	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	500 ppm	0	0	0	0	0	0	0	0	0	1	1	1	1	1
	1000 ppm	0	0	0	0	0	1	1	1	1	1	1	1	1	2
ANEMIA	Control	0	0	0	0	0	0	0	0	0	1	1	1	1	1
	250 ppm	1	0	0	0	0	0	0	0	1	2	2	2	2	2
	500 ppm	0	0	0	0	0	0	0	0	0	1	2	2	1	1
	1000 ppm	1	1	1	1	0	0	0	0	0	0	0	0	0	0
JAUNDICE	Control	0	0	0	0	0	0	0	0	0	1	1	1	1	1
	250 ppm	0	0	0	0	0	0	0	0	0	0	1	1	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CRUSTA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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		99-7	100-7	101-7	102-7	103-7	104-7
M. BREAST	Control	3	3	2	3	3	3
	250 ppm	2	2	2	2	2	1
	500 ppm	1	1	1	2	2	2
	1000 ppm	0	0	0	0	0	0
M. ABDOMEN	Control	2	1	1	1	1	1
	250 ppm	0	0	0	0	0	0
	500 ppm	4	4	4	4	4	4
	1000 ppm	1	1	1	1	1	1
M. ANTERIOR. DORSUM	Control	0	0	0	0	0	0
	250 ppm	1	1	1	1	1	1
	500 ppm	1	1	1	1	1	1
	1000 ppm	0	0	0	0	0	0
M. POSTERIOR DORSUM	Control	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0
	1000 ppm	1	0	0	0	0	0
M. GENITALIA	Control	0	0	0	0	0	0
	250 ppm	1	1	1	1	1	1
	500 ppm	0	0	0	1	1	1
	1000 ppm	2	2	2	2	2	2
ANEMIA	Control	1	1	0	0	0	0
	250 ppm	1	0	0	1	1	2
	500 ppm	0	0	0	1	2	2
	1000 ppm	1	0	0	1	0	0
JAUNDICE	Control	1	1	0	0	0	0
	250 ppm	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0
CRUSTA	Control	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0

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		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	14-7
HEMORRHIAGE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TORTICOLLIS	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
IRREGULAR BREATHING	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NOISY	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 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
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DEEP BREATHING	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ABNORMAL RESPIRA. SOUND	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RED URINE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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		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	28-7
HEMORRHAGE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TORTICOLLIS	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
IRREGULAR BREATHING	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NOISY	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 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
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DEEP BREATHING	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ABNORMAL RESPIRA. SOUND	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RED URINE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0



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		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	42-7
HEMORRHAGE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TORTICOLLIS	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
IRREGULAR BREATHING	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NOISY	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 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
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DEEP BREATHING	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ABNORMAL RESPIRA. SOUND	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RED URINE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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		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	56-7
HEMORRHAGE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	1	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TORTICOLLIS	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
IRREGULAR BREATHING	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NOISY	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 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
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DEEP BREATHING	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ABNORMAL RESPIRA. SOUND	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RED URINE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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		57-7	58-7	59-7											
HEMORRHAGE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TORTICOLLIS	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
IRREGULAR BREATHING	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	1	1	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NOISY	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 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
	250 ppm	0	0	0	0	0	0	0	0	0	1	1	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DEEP BREATHING	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ABNORMAL RESPIRA. SOUND	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RED URINE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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		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	84-7
HEMORRHAGE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	1	0	1	1
	500 ppm	0	0	1	0	0	0	0	0	0	0	0	0	1	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TORTICOLLIS	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
IRREGULAR BREATHING	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	0	1	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NOISY	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 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
	250 ppm	0	1	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DEEP BREATHING	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ABNORMAL RESPIRA. SOUND	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RED URINE	Control	0	0	0	0	0	0	0	0	0	0	1	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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Clinical sign	Group Name	Administration Week-day													
		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	98-7
HEMORRHIAGE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	2	0	0	0	0	1	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	1	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TORTICOLLIS	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	1	1	1	0	0	0	0	0	0	0	0	0	0
IRREGULAR BREATHING	Control	0	0	0	0	0	0	0	0	0	1	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	1	2	3	2
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	1	0	0
	1000 ppm	0	0	0	2	1	0	0	0	1	1	0	0	0	0
NOISY	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	1	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ABNORMAL RESPIRATION	Control	0	0	0	0	1	0	0	0	0	1	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	1	2	3	2
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	1	0	0
	1000 ppm	0	0	0	2	1	0	0	0	1	1	0	0	0	0
DEEP BREATHING	Control	0	0	0	0	1	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	1	0	0	0	0	0	0	0	0	0
ABNORMAL RESPIRA. SOUND	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	1	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RED URINE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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Clinical sign	Group Name	Administration Week-day					
		99-7	100-7	101-7	102-7	103-7	104-7
HEMORRHAGE	Control	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0
TORTICOLLIS	Control	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0
IRREGULAR BREATHING	Control	1	1	1	0	0	0
	250 ppm	2	1	1	1	1	0
	500 ppm	0	0	0	1	1	1
	1000 ppm	0	0	0	0	0	0
NOISY	Control	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0
ABNORMAL RESPIRATION	Control	1	1	1	0	0	0
	250 ppm	2	1	1	1	1	0
	500 ppm	0	0	0	1	1	1
	1000 ppm	0	0	0	0	0	0
DEEP BREATHING	Control	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0
ABNORMAL RESPIRA. SOUND	Control	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0
RED URINE	Control	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0

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Clinical sign	Group Name	Administration Week-day													
		1-7	2-7	3-7	4-7	5-7	6-7	7-7	8-7	9-7	10-7	11-7	12-7	13-7	14-7
YELLOW URINE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SMALL STOOL	Control	0	0	0	0	0	0	0	0	0	1	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	1	0	2	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
OLIGO-STOOL	Control	0	0	0	0	0	0	0	0	0	1	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	1	0	2	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	1	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	1	0
SUBNORMAL TEMP	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NON REMARKABLE	Control	50	50	50	49	49	48	48	48	48	47	47	48	47	47
	250 ppm	50	50	50	50	50	50	50	49	50	48	50	50	50	50
	500 ppm	50	50	50	50	50	50	50	50	50	50	49	48	49	49
	1000 ppm	50	50	50	50	49	49	50	50	50	50	50	50	48	49

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Clinical sign	Group Name	Administration Week-day													
		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	28-7
YELLOW URINE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SMALL STOOL	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
OLIGO-STOOL	Control	0	0	0	0	1	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	1	1	0	0	0
	1000 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
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NON REMARKABLE	Control	47	47	47	47	46	47	47	47	47	47	47	47	47	47
	250 ppm	50	50	50	50	50	50	50	50	50	50	50	49	49	49
	500 ppm	49	49	49	49	49	49	49	49	49	48	48	49	49	49
	1000 ppm	49	49	48	48	48	48	47	47	47	48	48	47	47	47

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Clinical sign	Group Name	Administration Week-day													
		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	42-7
YELLOW URINE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SMALL STOOL	Control	0	0	0	0	0	0	0	0	0	0	0	0	1	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	1	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
OLIGO-STOOL	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	1	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
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NON REMARKABLE	Control	47	45	45	45	45	44	44	44	44	44	44	44	43	44
	250 ppm	49	49	49	49	49	49	49	49	49	49	49	49	49	49
	500 ppm	49	49	49	48	49	49	49	48	48	48	48	48	48	48
	1000 ppm	46	46	46	46	46	46	46	46	46	46	46	46	46	46

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Clinical sign	Group Name	Administration Week-day													
		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	56-7
YELLOW URINE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SMALL STOOL	Control	0	0	0	0	0	0	0	0	0	1	1	1	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
OLIGO-STOOL	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	1	0
	1000 ppm	0	0	0	1	1	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
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NON REMARKABLE	Control	44	44	44	44	44	44	44	44	44	43	43	42	43	43
	250 ppm	49	49	49	49	49	49	49	49	49	49	49	48	48	48
	500 ppm	47	47	47	47	46	47	47	47	47	47	47	47	46	47
	1000 ppm	46	46	46	45	45	46	46	46	46	46	46	46	46	46

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Clinical sign	Group Name	Administration Week-day													
		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	70-7
YELLOW URINE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	1	0	0	0	0	0	0	1	1	1	1
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SMALL STOOL	Control	0	0	0	0	0	1	0	0	1	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	1	1	1	1
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	1	0	0	1	0	0	0	0	0	0	1	2	0
OLIGO-STOOL	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	1	0	0	0	0	0	0	1	1	1	1
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	1	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
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NON REMARKABLE	Control	41	41	42	42	42	41	42	42	41	41	41	41	41	41
	250 ppm	48	47	46	46	46	46	45	44	44	42	42	43	43	43
	500 ppm	47	47	47	47	47	47	47	47	47	47	47	47	47	47
	1000 ppm	46	45	46	46	45	46	46	46	46	46	46	45	44	45

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Clinical sign	Group Name	Administration Week-day													
		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	84-7
YELLOW URINE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	1	1	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SMALL STOOL	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	1	1	0	0	0	0	0	1	0	0	0	1	1	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	1
OLIGO-STOOL	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	1	1	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	1	0
SUBNORMAL TEMP	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NON REMARKABLE	Control	41	41	40	40	40	40	40	39	39	38	37	38	37	36
	250 ppm	42	42	42	41	41	41	42	40	40	40	39	40	40	40
	500 ppm	47	47	46	47	47	46	46	46	47	46	46	44	43	44
	1000 ppm	45	43	44	45	45	45	45	45	45	45	45	45	43	43

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Clinical sign	Group Name	Administration Week-day													
		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	98-7
YELLOW URINE	Control	0	0	0	0	0	0	0	0	0	0	0	1	1	1
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	1	0	0
	500 ppm	0	0	0	0	0	0	1	1	1	2	1	0	0	0
	1000 ppm	0	1	1	1	0	0	0	0	0	0	0	0	0	0
SMALL STOOL	Control	1	1	1	1	1	1	1	1	1	1	0	1	1	1
	250 ppm	0	0	0	0	0	0	0	0	0	3	2	3	4	1
	500 ppm	0	0	0	0	0	0	0	0	1	2	1	3	0	0
	1000 ppm	1	3	6	6	4	3	4	4	2	4	3	4	3	2
OLIGO-STOOL	Control	1	1	1	1	2	1	1	1	1	1	1	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	1	3	2	2	2	1
	500 ppm	0	0	0	0	0	0	1	1	1	2	1	2	1	0
	1000 ppm	0	2	3	3	2	1	1	1	0	0	0	0	0	1
SUBNORMAL TEMP	Control	0	0	0	0	1	0	0	0	0	0	0	0	0	0
	250 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	500 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1000 ppm	0	0	0	0	1	0	0	0	0	0	0	0	0	0
NON REMARKABLE	Control	35	34	34	33	33	33	33	33	33	33	31	31	31	31
	250 ppm	39	40	40	38	38	37	39	39	38	36	35	34	34	34
	500 ppm	44	44	44	43	43	41	41	42	41	38	38	37	35	35
	1000 ppm	43	43	40	40	40	38	38	38	37	35	35	35	35	35

(HAN190)

BAIS 4

STUDY NO. : 0371  
ANIMAL : RAT F344/DuCrj  
REPORT TYPE : A1 104

CLINICAL OBSERVATION (SUMMARY)  
ALL ANIMALS

SEX : FEMALE

PAGE : 104

Clinical sign	Group Name	Administration Week-day					
		99-7	100-7	101-7	102-7	103-7	104-7
YELLOW URINE	Control	1	1	0	0	0	0
	250 ppm	0	0	0	0	1	1
	500 ppm	0	0	0	0	0	0
	1000 ppm	0	0	0	1	0	0
SMALL STOOL	Control	2	1	1	0	0	0
	250 ppm	1	0	1	0	1	2
	500 ppm	0	0	0	0	0	1
	1000 ppm	2	2	2	3	1	1
OLIGO-STOOL	Control	1	0	1	0	0	0
	250 ppm	3	1	2	1	2	1
	500 ppm	0	0	0	0	1	1
	1000 ppm	0	0	0	1	0	0
SUBNORMAL TEMP	Control	0	0	0	0	0	0
	250 ppm	0	0	0	0	1	0
	500 ppm	0	0	0	0	0	0
	1000 ppm	0	0	0	0	0	0
NON REMARKABLE	Control	31	31	31	30	30	30
	250 ppm	32	32	31	31	28	26
	500 ppm	35	35	35	33	33	32
	1000 ppm	36	36	36	35	34	34

## APPENDIX B 1

### BODY WEIGHT CHANGES :SUMMARY, RAT : MALE (2-YEAR STUDY)

STUDY NO. : 0371  
 ANIMAL : RAT F344/DuCrj  
 UNIT : g  
 REPORT TYPE : A1 104  
 SEX : MALE

BODY WEIGHT CHANGES (SUMMARY)  
 ALL ANIMALS

PAGE : 1

Group Name	Administration		week-day											
	0-0		1-7		2-7		3-7		4-7		5-7		6-7	
Control	118±	5	147±	7	176±	10	202±	12	223±	12	239±	13	251±	14
500 ppm	118±	5	143±	6**	171±	8**	194±	10**	214±	11**	229±	12**	239±	13**
1000 ppm	118±	5	139±	6**	166±	9**	192±	10**	212±	11**	228±	11**	238±	12**
2000 ppm	118±	5	129±	7**	154±	8**	178±	9**	196±	9**	211±	9**	219±	10**

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

Test of Dunnett



STUDY NO. : 0371  
 ANIMAL : RAT F344/DuCrj  
 UNIT : g  
 REPORT TYPE : A1 104  
 SEX : MALE

BODY WEIGHT CHANGES (SUMMARY)  
 ALL ANIMALS

PAGE : 2

Group Name	Administration		week-day									
	7-7		8-7		9-7		10-7		11-7		12-7	
Control	261±	15	273±	16	282±	17	289±	18	296±	18	303±	18
500 ppm	250±	15**	259±	15**	268±	15**	276±	15*	282±	16**	288±	17**
1000 ppm	248±	13**	257±	14**	266±	15**	274±	15**	281±	16**	287±	16**
2000 ppm	227±	10**	235±	12**	241±	12**	247±	12**	251±	13**	257±	13**
Significant difference ; * : $P \leq 0.05$ ** : $P \leq 0.01$ Test of Dunnett												

(HAN260)

BAIS 4

STUDY NO. : 0371  
 ANIMAL : RAT F344/DuCrj  
 UNIT : g  
 REPORT TYPE : A1 104  
 SEX : MALE

BODY WEIGHT CHANGES (SUMMARY)  
 ALL ANIMALS

PAGE : 3

Group Name	Administration		week-day									
	14-7		18-7		22-7		26-7		30-7		34-7	
Control	315±	19	330±	19	344±	22	358±	23	368±	25	376±	26
500 ppm	300±	17**	319±	17**	332±	18	345±	18	354±	18**	360±	20**
1000 ppm	297±	19**	313±	17**	326±	18**	338±	19**	346±	19**	353±	20**
2000 ppm	267±	15**	279±	14**	289±	14**	301±	15**	306±	17**	313±	17**

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

Test of Dunnett

(HAN260)

BAIS 4

STUDY NO. : 0371  
 ANIMAL : RAT F344/DuCrj  
 UNIT : g  
 REPORT TYPE : A1 104  
 SEX : MALE

BODY WEIGHT CHANGES (SUMMARY)  
 ALL ANIMALS

PAGE : 4

Group Name	Administration		week-day									
	42-7		46-7		50-7		54-7		58-7		62-7	
Control	388±	29	396±	30	398±	30	404±	32	410±	31	413±	30
500 ppm	375±	20	380±	21	383±	22	387±	22	389±	24*	392±	23*
1000 ppm	365±	22**	369±	22**	373±	22**	376±	22**	377±	22**	379±	22**
2000 ppm	319±	19**	322±	21**	325±	18**	325±	22**	327±	20**	328±	22**

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

Test of Dunnett

(HAN260)

BAIS 4

STUDY NO. : 0371  
 ANIMAL : RAT F344/DuCrj  
 UNIT : g  
 REPORT TYPE : A1 104  
 SEX : MALE

BODY WEIGHT CHANGES (SUMMARY)  
 ALL ANIMALS

PAGE : 5

Group Name	Administration		week-day									
	70-7		74-7		78-7		82-7		86-7		90-7	
Control	425 ±	31	426 ±	31	426 ±	34	426 ±	45	430 ±	44	430 ±	33
500 ppm	396 ±	25**	394 ±	35**	400 ±	27*	401 ±	29*	403 ±	21*	399 ±	34**
1000 ppm	382 ±	24**	384 ±	30**	382 ±	23**	383 ±	24**	381 ±	23**	376 ±	23**
2000 ppm	330 ±	22**	329 ±	21**	327 ±	21**	327 ±	23**	323 ±	25**	317 ±	26**

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

Test of Dunnett

(HAN260)

BAIS 4

STUDY NO. : 0371  
ANIMAL : RAT F344/DuCrj  
UNIT : g  
REPORT TYPE : A1 104  
SEX : MALE

BODY WEIGHT CHANGES (SUMMARY)  
ALL ANIMALS

PAGE : 6

Group Name	Administration week-day					
	98-7		102-7		104-7	
Control	419±	34	413±	32	406±	34
500 ppm	383±	22**	377±	43**	377±	44*
1000 ppm	362±	22**	355±	22**	349±	23**
2000 ppm	302±	28**	294±	28**	287±	29**
Significant difference ; * : $P \leq 0.05$ ** : $P \leq 0.01$ Test of Dunnett						

(HAN260)

BAIS 4

## APPENDIX B 2

### BODY WEIGHT CHANGES : SUMMARY, RAT : FEMALE (2-YEAR STUDY)

STUDY NO. : 0371  
 ANIMAL : RAT F344/DuCrj  
 UNIT : g  
 REPORT TYPE : A1 104  
 SEX : FEMALE

BODY WEIGHT CHANGES (SUMMARY)  
 ALL ANIMALS

PAGE : 7

Group Name	Administration		week-day											
	0-0		1-7		2-7		3-7		4-7		5-7		6-7	
Control	95±	3	110±	4	123±	5	133±	6	141±	7	148±	7	153±	7
250 ppm	95±	3	110±	4	123±	5	133±	5	140±	7	147±	7	151±	8
500 ppm	95±	3	108±	4**	121±	5	130±	5*	138±	6*	144±	6*	149±	7*
1000 ppm	95±	3	105±	4**	118±	5**	126±	6**	132±	6**	137±	7**	140±	7**

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

Test of Dunnett

STUDY NO. : 0371  
 ANIMAL : RAT F344/DuCrj  
 UNIT : g  
 REPORT TYPE : A1 104  
 SEX : FEMALE

BODY WEIGHT CHANGES (SUMMARY)  
 ALL ANIMALS

PAGE : 8

Group Name	Administration		week-day											
	7-7		8-7		9-7		10-7		11-7		12-7		13-7	
Control	157±	8	161±	8	165±	8	167±	11	171±	9	173±	9	175±	10
250 ppm	156±	8	160±	10	164±	9	166±	12	172±	10	174±	11	176±	11
500 ppm	153±	8*	157±	8	160±	8*	164±	9	167±	10	170±	10	172±	9
1000 ppm	145±	8**	149±	8**	151±	9**	155±	10**	158±	10**	160±	10**	161±	10**

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

Test of Dunnett



STUDY NO. : 0371  
 ANIMAL : RAT F344/DuCrj  
 UNIT : g  
 REPORT TYPE : A1 104  
 SEX : FEMALE

BODY WEIGHT CHANGES (SUMMARY)  
 ALL ANIMALS

PAGE : 9

Group Name	Administration		week-day									
	14-7		18-7		22-7		26-7		30-7		34-7	
Control	176±	10	184±	10	189±	12	193±	11	199±	13	204±	13
250 ppm	178±	12	185±	11	188±	12	194±	13	198±	13	204±	14
500 ppm	174±	10	181±	10	185±	12	190±	13	196±	14	200±	16
1000 ppm	163±	10**	169±	11**	173±	11**	178±	12**	182±	12**	185±	13**

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

Test of Dunnett

STUDY NO. : 0371  
 ANIMAL : RAT F344/DuCrj  
 UNIT : g  
 REPORT TYPE : A1 104  
 SEX : FEMALE

BODY WEIGHT CHANGES (SUMMARY)  
 ALL ANIMALS

PAGE : 10

Group Name	Administration		week-day									
	42-7		46-7		50-7		54-7		58-7		62-7	
Control	211±	14	215±	15	219±	16	223±	18	227±	19	232±	21
250 ppm	210±	15	213±	15	216±	17	220±	17	223±	18	227±	19
500 ppm	205±	16	208±	17	212±	17	216±	19	220±	19	224±	20
1000 ppm	189±	14**	191±	15**	196±	15**	199±	17**	202±	18**	204±	18**

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

Test of Dunnett

(HAN260)

BAIS 4

STUDY NO. : 0371  
 ANIMAL : RAT F344/DuCrj  
 UNIT : g  
 REPORT TYPE : A1 104  
 SEX : FEMALE

BODY WEIGHT CHANGES (SUMMARY)  
 ALL ANIMALS

PAGE : 11

Group Name	Administration		week-day									
	70-7		74-7		78-7		82-7		86-7		90-7	
Control	243±	23	250±	25	255±	26	263±	29	264±	31	264±	28
250 ppm	236±	24	244±	22	248±	23	252±	23	255±	24	256±	24
500 ppm	232±	22	237±	23*	240±	23**	245±	23**	249±	22*	251±	23*
1000 ppm	209±	22**	214±	23**	217±	21**	221±	22**	219±	26**	221±	26**

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

Test of Dunnett

STUDY NO. : 0371  
ANIMAL : RAT F344/DuCrj  
UNIT : g  
REPORT TYPE : A1 104  
SEX : FEMALE

BODY WEIGHT CHANGES (SUMMARY)  
ALL ANIMALS

PAGE : 12

Group Name	Administration week-day					
	98-7		102-7		104-7	
Control	267±	25	271±	24	269±	24
250 ppm	256±	29	259±	27	253±	31
500 ppm	251±	24*	250±	23**	248±	24**
1000 ppm	219±	23**	218±	24**	217±	20**

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

Test of Dunnett

## APPENDIX C 1

WATER CONSUMPTION CHANGES : SUMMARY, RAT : MALE  
(2-YEAR STUDY)

STUDY NO. : 0371  
 ANIMAL : RAT F344/DuCrj  
 UNIT : g  
 REPORT TYPE : A1 104  
 SEX : MALE

WATER CONSUMPTION CHANGES (SUMMARY)  
 ALL ANIMALS

PAGE : 1

Group Name	Administration 1-7(4)	week-day(effective) 2-7(4)	3-7(4)	4-7(4)	5-7(4)	6-7(4)	7-7(4)
Control	17.1± 1.1	18.0± 1.8	19.1± 1.5	19.5± 1.8	19.5± 1.4	19.8± 1.8	19.1± 1.7
500 ppm	15.7± 1.4**	16.0± 1.0**	17.4± 1.6**	17.2± 1.5**	17.4± 1.4**	16.9± 1.3**	16.8± 1.2**
1000 ppm	13.7± 0.9**	14.3± 1.3**	15.3± 1.3**	15.8± 1.4**	16.4± 3.5**	16.2± 2.3**	15.5± 1.5**
2000 ppm	11.7± 1.0**	12.3± 1.0**	13.4± 1.6**	13.4± 1.0**	13.2± 0.8**	13.3± 1.0**	12.7± 1.0**

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

STUDY NO. : 0371  
 ANIMAL : RAT F344/DuCrj  
 UNIT : g  
 REPORT TYPE : A1 104  
 SEX : MALE

WATER CONSUMPTION CHANGES (SUMMARY)  
 ALL ANIMALS

PAGE : 2

Group Name	Administration week-day(effective)						
	8-7(4)	9-7(4)	10-7(4)	11-7(4)	12-7(4)	13-7(4)	14-7(4)
Control	19.0± 2.1	18.7± 1.9	18.6± 3.1	18.0± 1.7	18.1± 1.9	18.0± 1.8	18.1± 1.8
500 ppm	16.9± 1.4**	17.4± 1.3	17.5± 1.7*	16.4± 1.0**	16.2± 1.3**	16.1± 1.3**	16.1± 4.9**
1000 ppm	15.4± 1.5**	15.8± 1.7**	16.2± 1.5**	15.2± 1.2**	14.9± 1.2**	15.0± 1.7**	14.4± 2.7**
2000 ppm	12.7± 1.1**	13.1± 1.2**	13.2± 1.1**	12.9± 1.1**	12.4± 1.1**	12.3± 1.2**	12.4± 1.1**

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

Test of Dunnett

STUDY NO. : 0371  
 ANIMAL : RAT F344/DuCrj  
 UNIT : g  
 REPORT TYPE : A1 104  
 SEX : MALE

WATER CONSUMPTION CHANGES (SUMMARY)  
 ALL ANIMALS

PAGE : 3

Group Name	Administration week-day(effective)						
	18-7(4)	22-7(4)	26-7(4)	30-7(4)	34-7(4)	38-7(4)	42-7(4)
Control	18.0± 1.1	17.3± 1.4	17.2± 1.7	16.1± 1.0	16.5± 1.1	16.7± 1.2	16.5± 1.5
500 ppm	16.6± 1.0**	15.5± 1.7**	15.7± 1.1**	14.8± 1.0**	15.1± 1.8**	15.2± 1.1**	15.4± 1.0**
1000 ppm	15.2± 1.4**	14.8± 1.1**	14.3± 1.0**	13.7± 1.1**	14.3± 1.6**	14.6± 0.9**	14.4± 1.1**
2000 ppm	12.7± 1.0**	12.4± 1.1**	12.2± 1.0**	11.6± 1.4**	12.1± 1.0**	12.5± 1.2**	12.8± 1.7**
Significant difference ; * : $P \leq 0.05$ ** : $P \leq 0.01$ Test of Dunnett							

(HAN260)

BAIS4



STUDY NO. : 0371  
 ANIMAL : RAT F344/DuCrj  
 UNIT : g  
 REPORT TYPE : A1 104  
 SEX : MALE

WATER CONSUMPTION CHANGES (SUMMARY)  
 ALL ANIMALS

PAGE : 4

Group Name	Administration 46-7(4)	week-day(effective) 50-7(4)	54-7(4)	58-7(4)	62-7(4)	66-7(4)	70-7(4)
Control	16.9± 1.1	16.9± 1.3	17.0± 1.2	17.2± 1.5	17.1± 1.4	16.6± 1.5	17.9± 2.4
500 ppm	15.3± 0.9**	15.6± 1.5**	15.7± 1.2**	15.1± 2.3**	15.6± 1.1**	14.8± 1.4**	15.5± 1.3**
1000 ppm	14.3± 1.0**	14.8± 1.2**	14.8± 0.9**	14.4± 1.2**	14.8± 1.2**	14.2± 1.0**	14.6± 1.2**
2000 ppm	12.6± 2.0**	13.4± 1.7**	13.6± 1.6**	13.0± 1.3**	13.5± 1.6**	13.3± 1.7**	13.8± 1.2**

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

STUDY NO. : 0371  
 ANIMAL : RAT F344/DuCrj  
 UNIT : g  
 REPORT TYPE : A1 104  
 SEX : MALE

WATER CONSUMPTION CHANGES (SUMMARY)  
 ALL ANIMALS

PAGE : 5

Group Name	Administration 74-7(4)	week-day(effective) 78-7(4)	82-7(4)	86-7(4)	90-7(4)	94-7(4)	98-7(4)
Control	17.6± 2.3	17.7± 2.3	17.6± 2.6	18.6± 3.2	18.6± 4.3	19.5± 4.6	20.7± 4.9
500 ppm	15.9± 2.3**	16.4± 2.1*	16.3± 3.3**	15.5± 2.4**	15.7± 2.7**	16.7± 4.5**	17.3± 3.5**
1000 ppm	14.5± 1.5**	14.8± 1.2**	14.4± 1.2**	14.6± 1.2**	14.5± 1.3**	14.7± 1.5**	15.6± 2.3**
2000 ppm	13.0± 1.2**	13.7± 1.5**	13.8± 1.5**	13.9± 1.8**	14.2± 2.1**	14.2± 1.8**	15.1± 2.6**

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

Test of Dunnett

STUDY NO. : 0371  
ANIMAL : RAT F344/DuCrj  
UNIT : g  
REPORT TYPE : A1 104  
SEX : MALE

WATER CONSUMPTION CHANGES (SUMMARY)  
ALL ANIMALS

PAGE : 6

Group Name	Administration		week-day(effective)	
	102-7(4)		104-7(4)	
Control	19.5±	3.3	20.0±	4.8
500 ppm	17.4±	4.1**	18.2±	5.6*
1000 ppm	15.3±	3.2**	15.2±	3.1**
2000 ppm	15.5±	2.0**	15.3±	2.1**
Significant difference ; * : $P \leq 0.05$ ** : $P \leq 0.01$ Test of Dunnett				

(HAN260)

BAIS 4

## APPENDIX C 2

WATER CONSUMPTION CHANGES : SUMMARY, RAT : FEMALE  
(2-YEAR STUDY)

STUDY NO. : 0371  
 ANIMAL : RAT F344/DuCrj  
 UNIT : g  
 REPORT TYPE : A1 104  
 SEX : FEMALE

WATER CONSUMPTION CHANGES (SUMMARY)  
 ALL ANIMALS

PAGE : 7

Group Name	Administration week-day(effective)						
	1-7(4)	2-7(4)	3-7(4)	4-7(4)	5-7(4)	6-7(4)	7-7(4)
Control	15.0± 1.6	17.2± 4.4	17.4± 5.3	17.8± 5.9	17.7± 5.5	17.1± 4.2	16.3± 5.4
250 ppm	15.2± 3.2	16.0± 2.9	16.5± 3.0	17.1± 4.7	17.2± 4.2	19.1± 6.3	15.3± 4.7
500 ppm	13.9± 2.4**	15.4± 4.5**	14.3± 1.2**	14.5± 2.2**	15.3± 4.3**	15.9± 5.6	13.0± 2.8**
1000 ppm	11.6± 1.5**	11.8± 2.2**	11.8± 1.9**	11.5± 0.9**	11.4± 2.8**	11.4± 2.9**	10.4± 1.8**

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

Test of Dunnett

STUDY NO. : 0371  
 ANIMAL : RAT F344/DuCrj  
 UNIT : g  
 REPORT TYPE : AI 104  
 SEX : FEMALE

WATER CONSUMPTION CHANGES (SUMMARY)  
 ALL ANIMALS

PAGE : 8

Group Name	Administration 8-7(4)	week-day(effective) 9-7(4)	10-7(4)	11-7(4)	12-7(4)	13-7(4)	14-7(4)
Control	18.0± 6.6	18.2± 6.0	18.0± 6.5	17.0± 5.8	16.7± 4.8	18.1± 6.0	20.4± 9.1
250 ppm	17.3± 5.9	18.5± 6.5	17.7± 6.3	17.0± 5.5	16.9± 4.4	18.0± 5.7	19.6± 8.6
500 ppm	13.7± 3.1**	15.5± 5.3**	15.2± 4.5*	14.5± 3.5**	14.5± 3.8*	14.4± 3.2**	14.6± 3.4**
1000 ppm	11.2± 3.2**	11.6± 2.5**	11.3± 2.3**	11.0± 1.7**	10.9± 1.3**	10.8± 2.6**	10.9± 1.4**

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

Test of Dunnett

(HAN260)

BAIS 4

STUDY NO. : 0371  
 ANIMAL : RAT F344/DuCrj  
 UNIT : g  
 REPORT TYPE : A1 104  
 SEX : FEMALE

WATER CONSUMPTION CHANGES (SUMMARY)  
 ALL ANIMALS

PAGE : 9

Group Name	Administration 18-7(4)	week-day(effective) 22-7(4)	26-7(4)	30-7(4)	34-7(4)	38-7(4)	42-7(4)
Control	19.2± 5.8	16.6± 4.3	16.5± 3.8	17.8± 6.2	15.8± 3.8	15.7± 3.0	15.4± 3.1
250 ppm	17.3± 4.0	16.5± 4.8	17.1± 5.9	15.7± 4.8	15.4± 4.9	14.4± 2.9	14.5± 2.9
500 ppm	15.4± 4.2**	14.8± 3.0*	14.7± 3.5*	14.0± 3.2**	13.3± 2.9**	13.0± 2.0**	13.6± 3.0**
1000 ppm	11.7± 2.1**	11.0± 1.1**	10.8± 1.1**	10.7± 1.3**	10.4± 1.2**	10.6± 1.8**	10.8± 1.3**

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

Test of Dunnett

(HAN260)

BAIS 4

STUDY NO. : 0371  
 ANIMAL : RAT F344/DuCrj  
 UNIT : g  
 REPORT TYPE : A1 104  
 SEX : FEMALE

WATER CONSUMPTION CHANGES (SUMMARY)  
 ALL ANIMALS

PAGE : 10

Group Name	Administration 46-7(4)	week-day(effective) 50-7(4)	54-7(4)	58-7(4)	62-7(4)	66-7(4)	70-7(4)
Control	14.9± 2.5	14.6± 2.1	15.2± 3.8	14.7± 2.2	14.9± 2.5	14.6± 2.5	15.1± 3.1
250 ppm	14.3± 1.8	13.9± 2.9	14.4± 2.6	14.1± 2.8	14.4± 2.5	13.8± 2.1	14.0± 2.5
500 ppm	13.3± 2.1**	12.7± 1.7**	13.5± 3.6**	12.9± 2.1**	12.9± 1.8**	12.9± 1.3**	12.8± 1.3**
1000 ppm	10.8± 1.9**	11.1± 1.2**	11.4± 1.2**	11.1± 1.2**	11.3± 1.1**	12.0± 2.7**	11.6± 1.2**

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

Test of Dunnett



STUDY NO. : 0371  
 ANIMAL : RAT F344/DuCrj  
 UNIT : g  
 REPORT TYPE : A1 104  
 SEX : FEMALE

WATER CONSUMPTION CHANGES (SUMMARY)  
 ALL ANIMALS

PAGE : 11

Group Name	Administration 74-7(4)	week-day(effective) 78-7(4)	82-7(4)	86-7(4)	90-7(4)	94-7(4)	98-7(4)
Control	14.3± 2.0	15.8± 3.5	16.0± 3.4	15.3± 2.7	15.6± 3.3	16.3± 3.4	16.9± 4.4
250 ppm	13.9± 2.2	14.2± 1.9	13.9± 2.0*	14.4± 2.6	14.0± 2.1*	15.1± 3.5	16.2± 3.8
500 ppm	12.4± 1.3**	13.1± 1.9**	12.9± 1.6**	13.2± 2.3**	13.2± 2.0**	13.7± 3.2**	13.8± 2.6**
1000 ppm	11.3± 1.7**	11.3± 1.1**	11.5± 1.4**	11.2± 1.6**	11.8± 1.3**	12.3± 1.6**	12.3± 1.7**

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

Test of Dunnett

(HAN260)

BAIS 4

STUDY NO. : 0371  
ANIMAL : RAT F344/DuCrj  
UNIT : g  
REPORT TYPE : A1 104  
SEX : FEMALE

WATER CONSUMPTION CHANGES (SUMMARY)  
ALL ANIMALS

PAGE : 12

Group Name	Administration week-day(effective)	
	102-7(4)	104-7(4)
Control	17.7± 4.0	18.1± 4.1
250 ppm	15.7± 3.4	15.8± 3.7
500 ppm	13.7± 2.5**	14.4± 3.1**
1000 ppm	12.6± 2.1**	12.6± 2.1**

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

Test of Dunnett

(HAN260)

BAIS 4

## APPENDIX D 1

FOOD CONSUMPTION CHANGES : SUMMARY, RAT : MALE  
(2-YEAR STUDY)

STUDY NO. : 0371  
 ANIMAL : RAT F344/DuCrj  
 UNIT : g  
 REPORT TYPE : A1 104  
 SEX : MALE

FOOD CONSUMPTION CHANGES (SUMMARY)  
 ALL ANIMALS

PAGE : 1

Group Name	Administration 1-7(7)	week-day(effective) 2-7(7)	3-7(7)	4-7(7)	5-7(7)	6-7(7)	7-7(7)
Control	13.3± 0.8	14.4± 1.1	15.7± 1.0	16.1± 1.0	15.8± 1.0	15.9± 1.0	15.5± 1.1
500 ppm	12.7± 0.8**	13.9± 0.8*	14.7± 0.9**	15.4± 1.0**	15.3± 0.9*	15.1± 1.0**	14.8± 1.0**
1000 ppm	12.0± 0.7**	13.5± 1.0**	14.6± 1.0**	15.3± 0.9**	15.2± 0.9**	15.1± 0.9**	14.8± 0.9**
2000 ppm	10.3± 0.7**	12.2± 0.8**	13.4± 0.8**	14.1± 0.8**	14.2± 0.7**	13.9± 0.8**	13.5± 0.7**

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

Test of Dunnett

STUDY NO. : 0371  
 ANIMAL : RAT F344/DuCrj  
 UNIT : g  
 REPORT TYPE : A1 104  
 SEX : MALE

FOOD CONSUMPTION CHANGES (SUMMARY)  
 ALL ANIMALS

PAGE : 2

Group Name	Administration 8-7(7)	week-day(effective) 9-7(7)	10-7(7)	11-7(7)	12-7(7)	13-7(7)	14-7(7)
Control	15.6± 0.9	15.5± 1.1	15.5± 1.4	15.6± 1.2	15.6± 1.2	15.3± 1.1	15.2± 1.0
500 ppm	14.7± 1.0**	14.9± 0.9*	15.1± 0.8	15.0± 1.0*	15.0± 1.0*	14.8± 0.9*	14.6± 1.2
1000 ppm	14.9± 1.0**	14.8± 1.4	15.4± 1.0	15.4± 1.1	15.6± 1.1	15.1± 1.0	14.8± 1.4
2000 ppm	13.6± 0.9**	13.6± 0.9**	13.8± 0.9**	14.0± 0.9**	14.3± 1.2**	13.9± 1.0**	13.7± 1.3**

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

Test of Dunnett

(HAN260)

BAIS 4

STUDY NO. : 0371  
 ANIMAL : RAT F344/DuCrj  
 UNIT : g  
 REPORT TYPE : A1 104  
 SEX : MALE

FOOD CONSUMPTION CHANGES (SUMMARY)  
 ALL ANIMALS

PAGE : 3

Group Name	Administration 18-7(7)	week-day(effective) 22-7(7)	26-7(7)	30-7(7)	34-7(7)	38-7(7)	42-7(7)
Control	15.0± 0.8	15.3± 1.0	15.5± 1.0	15.1± 1.0	15.2± 1.1	15.5± 1.1	15.5± 1.1
500 ppm	14.9± 0.8	14.9± 1.0	15.3± 0.7	14.9± 0.8	15.3± 1.1	15.5± 0.9	15.8± 0.8
1000 ppm	14.6± 0.8*	15.4± 1.0	15.2± 0.9	14.9± 0.9	15.3± 1.0	15.6± 1.0	15.7± 0.9
2000 ppm	13.7± 0.9**	14.3± 1.1**	14.4± 0.9**	14.0± 1.2**	14.7± 1.0*	14.6± 1.1**	15.0± 1.0*

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

Test of Dunnett

STUDY NO. : 0371  
 ANIMAL : RAT F344/DuCrj  
 UNIT : g  
 REPORT TYPE : A1 104  
 SEX : MALE

FOOD CONSUMPTION CHANGES (SUMMARY)  
 ALL ANIMALS

PAGE : 4

Group Name	Administration week-day(effective)						
	46-7(7)	50-7(7)	54-7(7)	58-7(7)	62-7(7)	66-7(7)	70-7(7)
Control	15.7± 1.0	15.8± 1.1	16.2± 1.2	16.1± 1.0	15.9± 1.0	15.9± 1.0	15.9± 0.9
500 ppm	15.7± 0.9	15.7± 1.1	16.1± 1.0	15.8± 1.1	15.8± 0.8	15.2± 0.9*	15.3± 1.0**
1000 ppm	15.8± 1.0	15.9± 1.1	16.2± 1.0	15.8± 0.9	15.8± 1.0	15.1± 1.1**	15.3± 1.0**
2000 ppm	14.9± 1.7**	15.0± 1.2**	15.3± 1.6**	15.2± 1.1**	14.7± 1.1**	13.8± 1.5**	14.5± 1.0**

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

Test of Dunnett

STUDY NO. : 0371  
 ANIMAL : RAT F344/DuCrj  
 UNIT : g  
 REPORT TYPE : A1 104  
 SEX : MALE

FOOD CONSUMPTION CHANGES (SUMMARY)  
 ALL ANIMALS

PAGE : 5

Group Name	Administration week-day(effective)						
	74-7(7)	78-7(7)	82-7(7)	86-7(7)	90-7(7)	94-7(7)	98-7(7)
Control	16.1± 1.0	16.1± 1.5	15.8± 1.8	15.8± 1.7	16.3± 1.1	16.0± 1.2	15.9± 1.5
500 ppm	15.2± 2.5	16.0± 0.9	15.7± 1.0	15.3± 1.1**	15.5± 1.6**	15.3± 1.5*	15.6± 1.1
1000 ppm	15.8± 1.3	15.8± 1.1	15.5± 1.1	15.3± 1.0*	15.3± 1.1**	15.1± 1.2**	15.0± 1.1**
2000 ppm	14.5± 1.0**	14.6± 1.0**	14.5± 1.0**	14.0± 1.4**	14.1± 1.2**	13.8± 1.4**	14.0± 1.3**

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

Test of Dunnett



STUDY NO. : 0371  
ANIMAL : RAT F344/DuCrj  
UNIT : g  
REPORT TYPE : A1 104  
SEX : MALE

FOOD CONSUMPTION CHANGES (SUMMARY)  
ALL ANIMALS

PAGE : 6

Group Name	Administration week-day(effective)	
	102-7(7)	104-7(3)
Control	15.7± 1.4	15.5± 2.6
500 ppm	15.5± 1.6	16.2± 1.9
1000 ppm	14.9± 1.4*	14.7± 1.3*
2000 ppm	13.9± 1.5**	13.4± 2.0**

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

Test of Dunnett

## APPENDIX D 2

FOOD CONSUMPTION CHANGES : SUMMARY, RAT : FEMALE  
(2-YEAR STUDY)

STUDY NO. : 0371  
 ANIMAL : RAT F344/DuCrj  
 UNIT : g  
 REPORT TYPE : A1 104  
 SEX : FEMALE

FOOD CONSUMPTION CHANGES (SUMMARY)  
 ALL ANIMALS

PAGE : 7

Group Name	Administration 1-7(7)	week-day(effective) 2-7(7)	3-7(7)	4-7(7)	5-7(7)	6-7(7)	7-7(7)
Control	10.5± 0.5	10.7± 0.7	10.9± 0.8	11.0± 0.7	10.9± 0.7	10.6± 0.6	10.3± 0.6
250 ppm	10.5± 0.7	10.9± 0.6	11.0± 0.6	11.1± 0.6	10.8± 0.8	10.6± 0.8	10.4± 0.7
500 ppm	10.0± 0.5**	10.6± 0.6	10.9± 0.7	10.9± 0.7	10.6± 0.7	10.4± 0.7	10.2± 0.8
1000 ppm	9.3± 0.4**	10.1± 0.7**	10.3± 0.6**	10.1± 0.8**	10.0± 0.7**	9.5± 0.7**	9.5± 0.8**

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

Test of Dunnett

STUDY NO. : 0371  
 ANIMAL : RAT F344/DuCrj  
 UNIT : g  
 REPORT TYPE : A1 104  
 SEX : FEMALE

FOOD CONSUMPTION CHANGES (SUMMARY)  
 ALL ANIMALS

PAGE : 8

Group Name	Administration 8-7(7)	week-day(effective) 9-7(7)	10-7(7)	11-7(7)	12-7(7)	13-7(7)	14-7(7)
Control	10.5± 0.6	10.5± 0.6	10.3± 0.9	10.5± 0.7	10.5± 0.6	10.2± 0.7	10.1± 0.7
250 ppm	10.5± 1.0	10.7± 0.8	10.6± 1.2	10.8± 0.9*	10.8± 0.9	10.5± 0.9	10.5± 0.8*
500 ppm	10.3± 0.7	10.3± 0.7	10.5± 0.8	10.5± 0.8	10.5± 0.9	10.4± 0.7	10.2± 0.8
1000 ppm	9.8± 0.8**	9.8± 0.8**	9.8± 0.8*	9.8± 0.8**	9.9± 0.9*	9.7± 0.9**	9.4± 0.7**

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

Test of Dunnett

STUDY NO. : 0371  
 ANIMAL : RAT F344/DuCrj  
 UNIT : g  
 REPORT TYPE : A1 104  
 SEX : FEMALE

FOOD CONSUMPTION CHANGES (SUMMARY)  
 ALL ANIMALS

PAGE : 9

Group Name	Administration 18-7(7)	week-day(effective) 22-7(7)	26-7(7)	30-7(7)	34-7(7)	38-7(7)	42-7(7)
Control	10.3± 0.6	10.5± 0.8	10.5± 0.6	10.8± 0.7	10.7± 0.6	10.7± 0.7	11.1± 0.7
250 ppm	10.5± 0.7	10.7± 0.7	10.9± 0.9	10.9± 0.8	10.9± 0.7	10.8± 0.7	11.2± 0.7
500 ppm	10.3± 0.7	10.6± 0.7	10.8± 0.8	10.7± 0.8	10.6± 0.9	10.5± 0.7	10.9± 0.9
1000 ppm	9.6± 0.9**	9.9± 0.8**	10.1± 0.7**	10.0± 0.8**	10.0± 0.8**	10.0± 0.8**	10.4± 0.9**

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

Test of Dunnett

STUDY NO. : 0371  
ANIMAL : RAT F344/DuCrj  
UNIT : g  
REPORT TYPE : A1 104  
SEX : FEMALE

FOOD CONSUMPTION CHANGES (SUMMARY)  
ALL ANIMALS

PAGE : 10

Group Name	Administration 46-7(7)	week-day(effective) 50-7(7)	54-7(7)	58-7(7)	62-7(7)	66-7(7)	70-7(7)
Control	11.1± 1.0	11.2± 0.7	11.4± 0.9	11.1± 0.9	11.2± 0.9	11.1± 0.9	11.3± 1.0
250 ppm	11.2± 0.8	11.1± 0.7	11.3± 0.8	11.2± 0.8	11.2± 0.8	11.0± 1.0	11.4± 1.4
500 ppm	10.9± 0.9	11.0± 0.8	10.9± 1.1*	11.2± 1.0	11.0± 0.9	10.9± 0.9	11.1± 0.9
1000 ppm	10.4± 1.1**	10.6± 0.9**	10.6± 0.9**	10.6± 1.0*	10.3± 0.8**	10.3± 0.9**	10.4± 0.9**

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

STUDY NO. : 0371  
ANIMAL : RAT F344/DuCrj  
UNIT : g  
REPORT TYPE : A1 104  
SEX : FEMALE

FOOD CONSUMPTION CHANGES (SUMMARY)  
ALL ANIMALS

PAGE : 11

Group Name	Administration 74-7(7)	week-day(effective) 78-7(7)	82-7(7)	86-7(7)	90-7(7)	94-7(7)	98-7(7)
Control	11.3± 0.9	11.9± 1.1	12.2± 1.4	11.7± 1.5	11.9± 1.2	11.9± 1.0	11.9± 1.2
250 ppm	11.4± 1.0	11.7± 1.3	11.7± 1.3	11.6± 1.1	11.9± 1.1	11.7± 1.8	12.1± 1.7
500 ppm	11.1± 0.9	11.3± 0.9*	11.5± 0.9*	11.3± 1.0	11.5± 1.1	11.2± 2.0	11.4± 1.1
1000 ppm	10.6± 1.0**	10.6± 0.9**	10.9± 1.2**	10.4± 1.4**	10.9± 1.0**	10.7± 1.1**	10.6± 1.0**

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

Test of Dunnett

STUDY NO. : 0371  
ANIMAL : RAT F344/DuCrj  
UNIT : g  
REPORT TYPE : A1 104  
SEX : FEMALE

FOOD CONSUMPTION CHANGES (SUMMARY)  
ALL ANIMALS

PAGE : 12

Group Name	Administration week-day(effective)	
	102-7(7)	104-7(3)
Control	12.1± 1.0	11.6± 1.0
250 ppm	11.8± 1.5	11.2± 2.6
500 ppm	11.1± 1.2**	11.2± 1.3
1000 ppm	10.6± 1.2**	10.5± 0.8**

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

Test of Dunnett



## APPENDIX E 1

CHEMICAL INTAKE CHANGES : SUMMARY, RAT : MALE  
(2-YEAR STUDY)

STUDY NO. : 0371  
ANIMAL : RAT F344/DuCrj  
UNIT : g/kg/day  
REPORT TYPE : A1 104  
SEX : MALE

CHEMICAL INTAKE CHANGES (SUMMARY)  
ALL ANIMALS

PAGE : 1

Group Name	Administration (weeks)									
	1	2	3	4	5	6	7			
Control	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000		
500 ppm	0.055± 0.004	0.047± 0.002	0.045± 0.004	0.040± 0.003	0.038± 0.003	0.035± 0.002	0.034± 0.002			
1000 ppm	0.099± 0.005	0.086± 0.005	0.080± 0.005	0.075± 0.006	0.072± 0.017	0.068± 0.010	0.062± 0.005			
2000 ppm	0.182± 0.013	0.160± 0.010	0.151± 0.016	0.136± 0.008	0.125± 0.005	0.121± 0.006	0.111± 0.006			

(HAN300)

BAIS 4

STUDY NO. : 0371  
ANIMAL : RAT F344/DuCrj  
UNIT : g/kg/day  
REPORT TYPE : A1 104  
SEX : MALE

CHEMICAL INTAKE CHANGES (SUMMARY)  
ALL ANIMALS

PAGE : 2

Group Name	Administration (weeks)									
	8	9	10	11	12	13	14			
Control	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000		
500 ppm	0.033± 0.002	0.033± 0.002	0.032± 0.003	0.029± 0.002	0.028± 0.002	0.027± 0.002	0.027± 0.002	0.027± 0.008		
1000 ppm	0.060± 0.004	0.060± 0.006	0.059± 0.005	0.054± 0.004	0.052± 0.003	0.051± 0.005	0.048± 0.005	0.048± 0.008		
2000 ppm	0.108± 0.006	0.109± 0.007	0.107± 0.007	0.103± 0.006	0.096± 0.007	0.094± 0.008	0.093± 0.007			

(HAN300)

BAIS 4

STUDY NO. : 0371  
ANIMAL : RAT F344/DuCrj  
UNIT : g/kg/day  
REPORT TYPE : A1 104  
SEX : MALE

CHEMICAL INTAKE CHANGES (SUMMARY)  
ALL ANIMALS

PAGE : 3

Group Name	Administration (weeks)													
	18		22		26		30		34		38		42	
Control	0.000±	0.000	0.000±	0.000	0.000±	0.000	0.000±	0.000	0.000±	0.000	0.000±	0.000	0.000±	0.000
500 ppm	0.026±	0.001	0.023±	0.002	0.023±	0.001	0.021±	0.001	0.021±	0.003	0.021±	0.001	0.020±	0.001
1000 ppm	0.049±	0.004	0.045±	0.003	0.042±	0.003	0.039±	0.003	0.040±	0.004	0.041±	0.002	0.039±	0.003
2000 ppm	0.091±	0.006	0.086±	0.006	0.081±	0.007	0.076±	0.008	0.078±	0.006	0.079±	0.007	0.080±	0.011

(HAN300)

BAIS 4

STUDY NO. : 0371  
 ANIMAL : RAT F344/DuCrj  
 UNIT : g/kg/day  
 REPORT TYPE : A1 104  
 SEX : MALE

CHEMICAL INTAKE CHANGES (SUMMARY)  
 ALL ANIMALS

PAGE : 4

Group Name	Administration (weeks)									
	46	50	54	58	62	66	70			
Control	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000		
500 ppm	0.020± 0.001	0.020± 0.002	0.020± 0.002	0.020± 0.003	0.020± 0.002	0.019± 0.002	0.020± 0.002	0.020± 0.002		
1000 ppm	0.039± 0.002	0.040± 0.003	0.040± 0.002	0.038± 0.003	0.039± 0.002	0.037± 0.002	0.038± 0.003	0.038± 0.003		
2000 ppm	0.078± 0.011	0.083± 0.011	0.084± 0.009	0.079± 0.007	0.083± 0.010	0.081± 0.010	0.084± 0.008	0.084± 0.008		

(HAN300)

BAIS 4

STUDY NO. : 0371  
ANIMAL : RAT F344/DuCrj  
UNIT : g/kg/day  
REPORT TYPE : AI 104  
SEX : MALE

CHEMICAL INTAKE CHANGES (SUMMARY)  
ALL ANIMALS

PAGE : 5

Group Name	Administration (weeks)									
	74	78	82	86	90	94	98			
Control	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000		
500 ppm	0.020± 0.005	0.021± 0.003	0.021± 0.006	0.019± 0.003	0.020± 0.003	0.022± 0.007	0.023± 0.005			
1000 ppm	0.038± 0.003	0.039± 0.002	0.038± 0.002	0.038± 0.002	0.039± 0.003	0.040± 0.003	0.043± 0.006			
2000 ppm	0.079± 0.009	0.084± 0.011	0.085± 0.011	0.087± 0.014	0.091± 0.018	0.093± 0.015	0.101± 0.021			

(HAN300)

BAIS 4

STUDY NO. : 0371  
ANIMAL : RAT F344/DuCrj  
UNIT : g/kg/day  
REPORT TYPE : A1 104  
SEX : MALE

CHEMICAL INTAKE CHANGES (SUMMARY)  
ALL ANIMALS

PAGE : 6

Group Name	Administration (weeks)	
	102	104
Control	0.000 ± 0.000	0.000 ± 0.000
500 ppm	0.023 ± 0.006	0.025 ± 0.009
1000 ppm	0.043 ± 0.009	0.044 ± 0.009
2000 ppm	0.107 ± 0.020	0.108 ± 0.020

(HAN300)

BATS 4

## APPENDIX E 2

CHEMICAL INTAKE CHANGES : SUMMARY, RAT : FEMALE

(2-YEAR STUDY)



STUDY NO. : 0371  
 ANIMAL : RAT F344/DuCrj  
 UNIT : g/kg/day  
 REPORT TYPE : A1 104  
 SEX : FEMALE

CHEMICAL INTAKE CHANGES (SUMMARY)  
 ALL ANIMALS

PAGE : 7

Group Name	Administration (weeks)						
	1	2	3	4	5	6	7
Control	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000
250 ppm	0.034± 0.007	0.033± 0.006	0.031± 0.006	0.031± 0.009	0.029± 0.007	0.032± 0.011	0.025± 0.007
500 ppm	0.064± 0.011	0.064± 0.019	0.055± 0.005	0.052± 0.007	0.053± 0.014	0.054± 0.019	0.042± 0.009
1000 ppm	0.110± 0.013	0.100± 0.017	0.094± 0.014	0.087± 0.006	0.083± 0.018	0.081± 0.018	0.072± 0.010

(HAN300)

BAIS 4

STUDY NO. : 0371  
 ANIMAL : RAT F344/DuCrj  
 UNIT : g/kg/day  
 REPORT TYPE : A1 104  
 SEX : FEMALE

CHEMICAL INTAKE CHANGES (SUMMARY)  
 ALL ANIMALS

PAGE : 8

Group Name	Administration (weeks)						
	8	9	10	11	12	13	14
Control	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000
250 ppm	0.027± 0.009	0.028± 0.010	0.026± 0.009	0.025± 0.008	0.024± 0.006	0.026± 0.008	0.028± 0.013
500 ppm	0.044± 0.009	0.049± 0.016	0.046± 0.014	0.043± 0.010	0.043± 0.011	0.042± 0.010	0.042± 0.010
1000 ppm	0.075± 0.020	0.077± 0.015	0.073± 0.013	0.070± 0.009	0.068± 0.007	0.067± 0.015	0.067± 0.008

(HAN300)

BAIS 4

STUDY NO. : 0371  
ANIMAL : RAT F344/DuCrj  
UNIT : g/kg/day  
REPORT TYPE : A1 104  
SEX : FEMALE

CHEMICAL INTAKE CHANGES (SUMMARY)  
ALL ANIMALS

PAGE : 9

Group Name	Administration (weeks)													
	18		22		26		30		34		38		42	
Control	0.000±	0.000	0.000±	0.000	0.000±	0.000	0.000±	0.000	0.000±	0.000	0.000±	0.000	0.000±	0.000
250 ppm	0.024±	0.006	0.022±	0.006	0.022±	0.008	0.020±	0.006	0.019±	0.007	0.018±	0.004	0.017±	0.004
500 ppm	0.043±	0.012	0.040±	0.008	0.039±	0.009	0.036±	0.008	0.033±	0.007	0.032±	0.005	0.033±	0.007
1000 ppm	0.069±	0.012	0.063±	0.005	0.061±	0.006	0.059±	0.007	0.056±	0.006	0.057±	0.009	0.057±	0.006

(HAN300)

BATS 4

STUDY NO. : 0371  
ANIMAL : RAT F344/DuCrj  
UNIT : g/kg/day  
REPORT TYPE : A1 104  
SEX : FEMALE

CHEMICAL INTAKE CHANGES (SUMMARY)  
ALL ANIMALS

PAGE : 10

Group Name	Administration (weeks)						
	46	50	54	58	62	66	70
Control	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000
250 ppm	0.017± 0.002	0.016± 0.003	0.017± 0.003	0.016± 0.003	0.016± 0.003	0.015± 0.003	0.015± 0.003
500 ppm	0.032± 0.005	0.030± 0.004	0.031± 0.009	0.029± 0.005	0.029± 0.004	0.028± 0.003	0.028± 0.003
1000 ppm	0.057± 0.010	0.057± 0.006	0.057± 0.006	0.055± 0.006	0.056± 0.008	0.059± 0.017	0.056± 0.011

(HAN300)

BATS 4

STUDY NO. : 0371  
ANIMAL : RAT F344/DuCrj  
UNIT : g/kg/day  
REPORT TYPE : A1 104  
SEX : FEMALE

CHEMICAL INTAKE CHANGES (SUMMARY)  
ALL ANIMALS

PAGE : 11

Group Name	Administration (weeks)									
	74	78	82	86	90	94	98			
Control	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000	0.000± 0.000		
250 ppm	0.014± 0.003	0.014± 0.002	0.014± 0.003	0.014± 0.003	0.014± 0.003	0.015± 0.004	0.016± 0.005			
500 ppm	0.026± 0.003	0.027± 0.004	0.026± 0.003	0.027± 0.005	0.026± 0.004	0.028± 0.006	0.027± 0.005			
1000 ppm	0.054± 0.015	0.053± 0.007	0.053± 0.008	0.051± 0.009	0.054± 0.008	0.057± 0.011	0.057± 0.011			

(HAN300)

BATS 4

STUDY NO. : 0371  
ANIMAL : RAT F344/DuCrj  
UNIT : g/kg/day  
REPORT TYPE : A1 104  
SEX : FEMALE

CHEMICAL INTAKE CHANGES (SUMMARY)  
ALL ANIMALS

PAGE : 12

Group Name	Administration (weeks)	
	102	104
Control	0.000± 0.000	0.000± 0.000
250 ppm	0.015± 0.004	0.016± 0.005
500 ppm	0.028± 0.006	0.029± 0.008
1000 ppm	0.059± 0.016	0.059± 0.012

(HAN300)

BAIS 4

## APPENDIX F 1

HEMATOLOGY : SUMMARY, RAT : MALE

(2-YEAR STUDY)

STUDY NO. : 0371  
ANIMAL : RAT F344/DuCrj  
MEASURE. TIME : 1  
SEX : MALE

HEMATOLOGY (SUMMARY)  
ALL ANIMALS (105W)

REPORT TYPE : A1

PAGE : 1

Group Name	NO. of Animals	RED BLOOD CELL 1 O <sup>6</sup> /μℓ		HEMOGLOBIN g/dℓ		HEMATOCRIT %		MCV f ℓ		MCH p g		MCHC g/dℓ		PLATELET 1 O <sup>3</sup> /μℓ	
Control	40	7.93±	1.28	13.2±	2.5	39.2±	5.9	50.1±	7.7	16.8±	2.0	33.5±	1.8	923±	238
500 ppm	36	8.06±	1.76	13.2±	3.4	39.0±	8.7	48.4±	2.3	16.2±	1.5*	33.3±	2.5	869±	171
1000 ppm	42	8.29±	1.48	13.6±	2.4	40.1±	6.0	48.8±	4.4*	16.4±	1.3*	33.7±	1.6	889±	226
2000 ppm	42	8.15±	1.51	13.7±	2.6	40.4±	6.8	50.0±	3.7	16.8±	1.2	33.6±	1.4	822±	238

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

Test of Dunnett

(HCL070)

BATS 4



STUDY NO. : 0371  
ANIMAL : RAT F344/DuCrj  
MEASURE. TIME : 1  
SEX : MALE

HEMATOLOGY (SUMMARY)  
ALL ANIMALS (105W)

REPORT TYPE : A1

PAGE : 2

Group Name	NO. of Animals	WBC		Differential		WBC (%)		EOSINO		BASO		MONO		LYMPHO		OTHER	
		1	0 <sup>2</sup> /μl	N-BAND		N-SEG											
Control	40	5.20±	3.89	3±	2	49±	11	1±	1	0±	0	3±	2	40±	10	3±	9
500 ppm	36	4.66±	1.43	3±	2	50±	10	2±	1	0±	0	4±	1	40±	10	2±	3
1000 ppm	42	5.15±	2.42	3±	2	50±	9	2±	1	0±	0	4±	2	39±	8	3±	5
2000 ppm	42	5.75±	2.63	3±	2	52±	10	1±	1	0±	0	4±	2	36±	8	3±	7

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

\*\* :  $P \leq 0.01$

Test of Dunnett

(HCL070)

BAIS 4

## APPENDIX F 2

HEMATOLOGY : SUMMARY, RAT : FEMALE  
(2-YEAR STUDY)

STUDY NO. : 0371  
 ANIMAL : RAT F344/DuCrj  
 MEASURE. TIME : 1  
 SEX : FEMALE

HEMATOLOGY (SUMMARY)  
 ALL ANIMALS (105W)

REPORT TYPE : A1

PAGE : 3

Group Name	NO. of Animals	RED BLOOD CELL 10 <sup>6</sup> /μl		HEMOGLOBIN g/dl		HEMATOCRIT %		MCV fl		MCH pg		MCHC g/dl		PLATELET 10 <sup>3</sup> /μl	
Control	39	7.87±	1.06	14.5±	1.8	41.6±	4.5	53.2±	3.4	18.4±	0.8	34.7±	1.0	644±	115
250 ppm	38	7.75±	1.95	14.1±	3.2	40.6±	8.4	55.5±	14.1	18.8±	2.7	34.3±	2.2	578±	154
500 ppm	43	7.66±	1.63	13.9±	2.8	40.4±	7.2	54.4±	10.0	18.5±	2.5	34.2±	1.9	661±	156
1000 ppm	41	7.90±	1.18	14.0±	1.8*	40.6±	4.9	52.1±	5.8**	17.9±	1.9**	34.4±	0.8**	777±	168**

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

Test of Dunnett

(HCL070)

BAIS 4

STUDY NO. : 0371  
 ANIMAL : RAT F344/DuCrj  
 MEASURE. TIME : 1  
 SEX : FEMALE

HEMATOLOGY (SUMMARY)  
 ALL ANIMALS (105W)

REPORT TYPE : A1

PAGE : 4

Group Name	NO. of Animals	WBC 10 <sup>9</sup> /μl		Differential N-BAND		WBC (%) N-SEG		EOSINO		BASO		MONO		LYMPHO		OTHER	
Control	39	3.17±	3.47	3±	2	44±	12	2±	1	0±	0	3±	2	44±	10	3±	8
250 ppm	38	6.29±	14.24	3±	2	43±	15	1±	1	0±	0	3±	2	44±	16	6±	18
500 ppm	43	3.22±	7.13	3±	2	48±	11	2±	1	0±	0	4±	2	40±	10	4±	11
1000 ppm	41	7.29±	24.05	3±	2	45±	15	2±	1	0±	0	3±	2	43±	15	4±	14

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

\*\* :  $P \leq 0.01$

Test of Dunnett

(HCL070)

BATS 4

## APPENDIX G 1

BIOCHEMISTRY : SUMMARY, RAT : MALE

(2-YEAR STUDY)

STUDY NO. : 0371  
ANIMAL : RAT F344/DuCrj  
MEASURE. TIME : 1  
SEX : MALE

BIOCHEMISTRY (SUMMARY)  
ALL ANIMALS (105W)

REPORT TYPE : A1

PAGE : 1

Group Name	NO. of Animals	TOTAL PROTEIN g/dl		ALBUMIN g/dl		A/G RATIO		T-BILIRUBIN mg/dl		GLUCOSE mg/dl		T-CHOLESTEROL mg/dl		TRIGLYCERIDE mg/dl	
Control	40	6.8±	0.4	3.5±	0.2	1.1±	0.1	0.20±	0.19	141±	22	185±	72	96±	68
500 ppm	36	6.6±	0.4	3.5±	0.3	1.1±	0.1	0.18±	0.03	139±	20	172±	77	110±	108
1000 ppm	42	6.7±	0.3	3.5±	0.2	1.1±	0.1	0.17±	0.06	139±	17	155±	52	75±	52
2000 ppm	42	6.5±	0.4**	3.5±	0.2	1.2±	0.1**	0.17±	0.06	136±	20	123±	39**	69±	62

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

Test of Dunnett

(HCL074)

BAIS 4

STUDY NO. : 0371  
 ANIMAL : RAT F344/DuCrj  
 MEASURE. TIME : 1  
 SEX : MALE

BIOCHEMISTRY (SUMMARY)  
 ALL ANIMALS (105W)

REPORT TYPE : A1

PAGE : 2

Group Name	NO. of Animals	PHOSPHOLIPID mg/dl		GOT I U/l		GPT I U/l		LDH I U/l		ALP I U/l		G-GTP I U/l		CPK I U/l	
Control	40	272±	98	97±	49	45±	23	210±	50	228±	87	12±	6	92±	26
500 ppm	36	265±	103	76±	25	41±	17	192±	37	212±	68	14±	6	82±	14
1000 ppm	42	237±	69	167±	270	90±	168	210±	88	202±	49	23±	36*	87±	31*
2000 ppm	42	201±	51**	1887±	10973*	256±	1059*	270±	494	231±	111	16±	12	97±	88

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

Test of Dunnett

(HCL074)

BAIS 4

STUDY NO. : 0371  
 ANIMAL : RAT F344/DuCrj  
 MEASURE. TIME : 1  
 SEX : MALE

BIOCHEMISTRY (SUMMARY)  
 ALL ANIMALS (105W)

REPORT TYPE : A1

PAGE : 3

Group Name	NO. of Animals	UREA NITROGEN mg/dl		CREATININE mg/dl		SODIUM mEq/l		POTASSIUM mEq/l		CHLORIDE mEq/l		CALCIUM mg/dl		INORGANIC PHOSPHORUS mg/dl	
Control	40	19.1±	2.0	0.5±	0.1	142±	2	3.9±	0.3	105±	2	10.3±	0.4	4.3±	0.5
500 ppm	36	20.0±	2.8	0.5±	0.1	141±	2	4.0±	0.3	105±	2	10.1±	0.3*	4.1±	0.5
1000 ppm	42	19.6±	3.7	0.5±	0.1	141±	1*	4.1±	0.3	105±	1	10.2±	0.3	4.1±	0.6
2000 ppm	42	26.0±	19.2**	0.6±	0.6	141±	2*	4.3±	1.0**	106±	2	10.0±	0.4**	4.6±	2.0

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

(HCL074)

BATS 4



## APPENDIX G 2

BIOCHEMISTRY : SUMMARY, RAT : FEMALE

(2-YEAR STUDY)

STUDY NO. : 0371  
 ANIMAL : RAT F344/DuCrj  
 MEASURE. TIME : 1  
 SEX : FEMALE

BIOCHEMISTRY (SUMMARY)  
 ALL ANIMALS (105W)

REPORT TYPE : A1

PAGE : 4

Group Name	NO. of Animals	TOTAL PROTEIN g/dl		ALBUMIN g/dl		A/G RATIO		T-BILIRUBIN mg/dl		GLUCOSE mg/dl		T-CHOLESTEROL mg/dl		TRIGLYCERIDE mg/dl	
Control	39	7.1±	0.4	4.0±	0.3	1.3±	0.1	0.17±	0.07	136±	12	139±	36	70±	49
250 ppm	38	6.8±	0.5**	3.9±	0.4	1.3±	0.1	0.40±	0.95	131±	22	132±	34	75±	66
500 ppm	43	6.9±	0.5	4.0±	0.3	1.4±	0.1	0.20±	0.25	133±	22	139±	32	60±	46
1000 ppm	41	7.0±	0.4	4.0±	0.2	1.3±	0.1	0.18±	0.07	130±	14	165±	36**	81±	45

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

Test of Dunnett

(HCL074)

BAIS 4

STUDY NO. : 0371  
 ANIMAL : RAT F344/DuCrj  
 MEASURE. TIME : 1  
 SEX : FEMALE

BIOCHEMISTRY (SUMMARY)  
 ALL ANIMALS (105W)

REPORT TYPE : A1

PAGE : 5

Group Name	NO. of Animals	PHOSPHOLIPID mg/dl		GOT I U / l		GPT I U / l		LDH I U / l		ALP I U / l		G-GTP I U / l		CPK I U / l	
Control	39	257±	64	127±	82	54±	26	228±	108	139±	81	6±	5	89±	54
250 ppm	38	247±	64	179±	263	62±	54	419±	786	193±	313	7±	6	93±	76
500 ppm	43	254±	48	179±	325	78±	218	259±	304	141±	128	9±	13	108±	157
1000 ppm	41	290±	51*	596±	928**	254±	322**	287±	314	206±	128**	42±	56**	87±	24

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

Test of Dunnett

(HCL074)

BATS 4

STUDY NO. : 0371  
 ANIMAL : RAT F344/DuCrj  
 MEASURE. TIME : 1  
 SEX : FEMALE

BIOCHEMISTRY (SUMMARY)  
 ALL ANIMALS (105W)

REPORT TYPE : A1

PAGE : 6

Group Name	NO. of Animals	UREA NITROGEN mg/dl		CREATININE mg/dl		SODIUM mEq/l		POTASSIUM mEq/l		CHLORIDE mEq/l		CALCIUM mg/dl		INORGANIC PHOSPHORUS mg/dl	
Control	39	17.2±	5.3	0.5±	0.1	140±	2	3.9±	0.4	103±	2	10.3±	0.3	3.9±	0.7
250 ppm	38	17.1±	2.7	0.5±	0.1	141±	2	3.7±	0.4	104±	3	10.2±	0.3	3.9±	0.7
500 ppm	43	18.8±	11.6	0.5±	0.1	140±	2	3.9±	0.4	104±	2	10.4±	0.4	4.1±	1.6
1000 ppm	41	18.7±	3.2**	0.5±	0.1	140±	1	4.0±	0.4	103±	2	10.5±	0.4*	4.2±	0.9

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

Test of Dunnett

(HCL074)

BAIS 4

## APPENDIX H 1

URINALYSIS : SUMMARY, RAT : MALE  
(2-YEAR STUDY)

STUDY NO. : 0371  
 ANIMAL : RAT F344/DuCrj  
 MEASURE. TIME : 1  
 SEX : MALE

URINALYSIS

REPORT TYPE : A1

PAGE : 1

Group Name	NO. of Animals	pH_____							CHI	Protein_____					CHI	Glucose_____					CHI	Ketone body					CHI	Bilirubin				CHI		
		5.0	6.0	6.5	7.0	7.5	8.0	8.5		—	±	+	2+	3+		4+	—	±	+	2+		3+	4+	—	±	+		2+	3+	4+	—		+	2+
Control	40	0	2	4	10	23	1	0		0	0	0	5	26	9		40	0	0	0	0	0		36	4	0	0	0	0		38	1	1	0
500 ppm	36	0	0	6	11	18	1	0		0	0	0	2	19	15		36	0	0	0	0	0		30	5	1	0	0	0		36	0	0	0
1000 ppm	42	0	2	12	12	12	4	0		0	0	0	3	25	14		42	0	0	0	0	0		36	6	0	0	0	0		42	0	0	0
2000 ppm	43	0	7	12	12	10	2	0	*	0	0	0	7	28	8		43	0	0	0	0	0		37	6	0	0	0	0		41	1	1	0

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

Test of CHI SQUARE

(HCL101)

BAIS 4

STUDY NO. : 0371  
ANIMAL : RAT F344/DuCrj  
MEASURE. TIME : 1  
SEX : MALE

URINALYSIS

REPORT TYPE : A1

PAGE : 2

Group Name	NO. of Animals	Occult blood					CHI	Urobilinogen					CHI
		-	±	+	2+	3+		±	+	2+	3+	4+	
Control	40	37	2	1	0	0		40	0	0	0	0	
500 ppm	36	30	2	1	1	2		36	0	0	0	0	
1000 ppm	42	33	2	0	3	4		42	0	0	0	0	
2000 ppm	43	8	1	1	4	29	**	42	0	1	0	0	

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

Test of CHI SQUARE

(HCL101)

BAIS 4

## APPENDIX H 2

URINALYSIS : SUMMARY, RAT : FEMALE

(2-YEAR STUDY)



STUDY NO. : 0371  
 ANIMAL : RAT F344/DuCrj  
 MEASURE. TIME : 1  
 SEX : FEMALE

URINALYSIS

REPORT TYPE : A1

PAGE : 3

Group Name	NO. of Animals	pH							CHI	Protein					CHI	Glucose					CHI	Ketone body					CHI	Bilirubin			CHI			
		5.0	6.0	6.5	7.0	7.5	8.0	8.5		—	±	+	2+	3+		4+	—	±	+	2+		3+	4+	—	±	+		2+	3+	4+		—	+	2+
Control	41	0	0	4	10	12	14	1		0	3	12	13	6	7		41	0	0	0	0	0		22	18	1	0	0	0		41	0	0	0
250 ppm	39	0	3	2	9	10	14	1		0	1	6	15	10	7		39	0	0	0	0	0		11	27	1	0	0	0		37	1	0	1
500 ppm	44	0	2	13	15	9	5	0	*	0	1	9	14	13	7		44	0	0	0	0	0		11	33	0	0	0	0	*	42	2	0	0
1000 ppm	41	0	6	20	11	3	1	0	**	0	0	4	15	17	5	*	41	0	0	0	0	0		9	32	0	0	0	0	**	41	0	0	0

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

Test of CHI SQUARE

(HCL101)

BAIS 4

STUDY NO. : 0371  
ANIMAL : RAT F344/DuCrj  
MEASURE. TIME : 1  
SEX : FEMALE

URINALYSIS

REPORT TYPE : A1

PAGE : 4

Group Name	NO. of Animals	Occult blood					CHI	Urobilinogen					CHI
		-	±	+	2+	3+		±	+	2+	3+	4+	
Control	41	39	1	0	0	1		41	0	0	0	0	
250 ppm	39	35	0	0	0	4		38	1	0	0	0	
500 ppm	44	39	1	1	1	2		43	1	0	0	0	
1000 ppm	41	21	4	0	3	13	**	41	0	0	0	0	

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

Test of CHI SQUARE

(HCL101)

BAIS 4

## APPENDIX I 1

GROSS FINDINGS : SUMMARY, RAT : MALE ALL ANIMALS

(2-YEAR STUDY)

STUDY NO. : 0371  
ANIMAL : RAT F344/DuCrj  
REPORT TYPE : A1  
SEX : MALE

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

PAGE : 1

Organ	Findings	Group Name NO. of Animals	Control	500 ppm	1000 ppm	2000 ppm
			50 (%)	50 (%)	50 (%)	50 (%)
skin/app	nodule		1 ( 2)	6 ( 12)	1 ( 2)	1 ( 2)
	mass		0 ( 0)	1 ( 2)	0 ( 0)	0 ( 0)
subcutis	jaundice		1 ( 2)	0 ( 0)	1 ( 2)	0 ( 0)
	mass		6 ( 12)	10 ( 20)	8 ( 16)	4 ( 8)
lung	white zone		2 ( 4)	0 ( 0)	0 ( 0)	0 ( 0)
	red zone		0 ( 0)	2 ( 4)	0 ( 0)	0 ( 0)
	brown zone		1 ( 2)	0 ( 0)	0 ( 0)	0 ( 0)
	nodule		0 ( 0)	2 ( 4)	2 ( 4)	3 ( 6)
	voluminus		1 ( 2)	0 ( 0)	0 ( 0)	0 ( 0)
lymph node	enlarged		1 ( 2)	1 ( 2)	1 ( 2)	1 ( 2)
spleen	enlarged		4 ( 8)	3 ( 6)	5 ( 10)	1 ( 2)
	white zone		1 ( 2)	1 ( 2)	0 ( 0)	0 ( 0)
	nodule		1 ( 2)	0 ( 0)	0 ( 0)	0 ( 0)
heart	nodule		0 ( 0)	1 ( 2)	0 ( 0)	0 ( 0)
	hypertrophy		2 ( 4)	0 ( 0)	0 ( 0)	0 ( 0)
oral cavity	nodule		1 ( 2)	1 ( 2)	0 ( 0)	1 ( 2)
tongue	nodule		0 ( 0)	0 ( 0)	1 ( 2)	0 ( 0)
forestomach	nodule		0 ( 0)	0 ( 0)	0 ( 0)	2 ( 4)
	ulcer		1 ( 2)	0 ( 0)	1 ( 2)	0 ( 0)
	thick		1 ( 2)	0 ( 0)	0 ( 0)	0 ( 0)
gl stomach	nodule		0 ( 0)	1 ( 2)	0 ( 0)	0 ( 0)
	ulcer		0 ( 0)	1 ( 2)	0 ( 0)	0 ( 0)

STUDY NO. : 0371  
 ANIMAL : RAT F344/DuCrj  
 REPORT TYPE : A1  
 SEX : MALE

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

PAGE : 2

Organ	Findings	Group Name NO. of Animals	Control		500 ppm		1000 ppm		2000 ppm	
			50	(%)	50	(%)	50	(%)	50	(%)
cecum	gas		0	( 0)	1	( 2)	0	( 0)	0	( 0)
liver	pale		0	( 0)	1	( 2)	0	( 0)	0	( 0)
	white zone		0	( 0)	0	( 0)	1	( 2)	3	( 6)
	red zone		1	( 2)	1	( 2)	6	( 12)	3	( 6)
	nodule		4	( 8)	3	( 6)	24	( 48)	18	( 36)
	cyst		0	( 0)	0	( 0)	0	( 0)	2	( 4)
	rough		2	( 4)	0	( 0)	1	( 2)	0	( 0)
	herniation		12	( 24)	6	( 12)	6	( 12)	7	( 14)
	enlarged		0	( 0)	0	( 0)	1	( 2)	0	( 0)
kidney	white patch		0	( 0)	1	( 2)	0	( 0)	0	( 0)
	white zone		0	( 0)	1	( 2)	0	( 0)	0	( 0)
	cyst		0	( 0)	0	( 0)	1	( 2)	0	( 0)
	granular		8	( 16)	2	( 4)	3	( 6)	0	( 0)
	hydronephrosis		0	( 0)	0	( 0)	0	( 0)	1	( 2)
	nodule		1	( 2)	0	( 0)	0	( 0)	3	( 6)
urin bladd	urine:marked retention		1	( 2)	1	( 2)	0	( 0)	0	( 0)
	urine:red		0	( 0)	0	( 0)	0	( 0)	1	( 2)
	enlarged		7	( 14)	4	( 8)	2	( 4)	0	( 0)
pituitary	red zone		2	( 4)	3	( 6)	1	( 2)	0	( 0)
	nodule		1	( 2)	1	( 2)	5	( 10)	2	( 4)
	enlarged		3	( 6)	0	( 0)	1	( 2)	5	( 10)
thyroid	nodule		1	( 2)	0	( 0)	0	( 0)	0	( 0)

STUDY NO. : 0371  
ANIMAL : RAT F344/DuCrj  
REPORT TYPE : A1  
SEX : MALE

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

PAGE : 3

Organ	Findings	Group Name NO. of Animals	Control	500 ppm	1000 ppm	2000 ppm
			50 (%)	50 (%)	50 (%)	50 (%)
adrenal	enlarged		1 ( 2)	0 ( 0)	0 ( 0)	1 ( 2)
	red zone		1 ( 2)	0 ( 0)	0 ( 0)	0 ( 0)
testis	atrophic		1 ( 2)	4 ( 8)	1 ( 2)	2 ( 4)
	nodule		33 ( 66)	38 ( 76)	41 ( 82)	39 ( 78)
brain	swollen		0 ( 0)	0 ( 0)	0 ( 0)	1 ( 2)
	yellow zone		0 ( 0)	0 ( 0)	0 ( 0)	1 ( 2)
	brown zone		1 ( 2)	0 ( 0)	0 ( 0)	0 ( 0)
	hemorrhage		0 ( 0)	0 ( 0)	1 ( 2)	0 ( 0)
	soft		0 ( 0)	1 ( 2)	0 ( 0)	0 ( 0)
spinal cord	brown zone		1 ( 2)	0 ( 0)	0 ( 0)	0 ( 0)
eye	turbid		0 ( 0)	2 ( 4)	1 ( 2)	1 ( 2)
	white		8 ( 16)	5 ( 10)	8 ( 16)	10 ( 20)
Zymbal gl	nodule		0 ( 0)	1 ( 2)	0 ( 0)	0 ( 0)
muscle	nodule		1 ( 2)	0 ( 0)	0 ( 0)	0 ( 0)
mediastinum	mass		0 ( 0)	1 ( 2)	0 ( 0)	0 ( 0)
peritoneum	nodule		0 ( 0)	1 ( 2)	0 ( 0)	0 ( 0)
abdominal c	mass		1 ( 2)	0 ( 0)	0 ( 0)	0 ( 0)
mesenterium	nodule		1 ( 2)	0 ( 0)	0 ( 0)	0 ( 0)
thoracic ca	mass		0 ( 0)	1 ( 2)	0 ( 0)	0 ( 0)
	pleural fluid		1 ( 2)	1 ( 2)	1 ( 2)	0 ( 0)
other	tail:nodule		0 ( 0)	1 ( 2)	1 ( 2)	1 ( 2)
	ear:nodule		0 ( 0)	0 ( 0)	1 ( 2)	0 ( 0)

STUDY NO. : 0371  
ANIMAL : RAT F344/DuCrj  
REPORT TYPE : A1  
SEX : MALE

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

PAGE : 4

Organ	Findings	Group Name NO. of Animals	Control		500 ppm		1000 ppm		2000 ppm	
			50	(%)	50	(%)	50	(%)	50	(%)
other	forelimb:nodule		0	( 0)	0	( 0)	1	( 2)	0	( 0)
	lower jaw:nodule		0	( 0)	0	( 0)	0	( 0)	1	( 2)
	nose:nodule		1	( 2)	1	( 2)	2	( 4)	0	( 0)
whole body	anemic		0	( 0)	2	( 4)	0	( 0)	0	( 0)

(HPT080)

BAIS 4

## APPENDIX I 2

GROSS FINDINGS : SUMMARY, RAT : FEMALE ALL ANIMALS

(2-YEAR STUDY)



STUDY NO. : 0371  
ANIMAL : RAT F344/DuCrj  
REPORT TYPE : A1  
SEX : FEMALE

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

PAGE : 5

Organ	Findings	Group Name NO. of Animals	Control		250 ppm		500 ppm		1000 ppm	
			50	(%)	50	(%)	50	(%)	50	(%)
skin/app	nodule		0	( 0)	0	( 0)	1	( 2)	1	( 2)
	ulcer		0	( 0)	0	( 0)	0	( 0)	1	( 2)
subcutis	jaundice		1	( 2)	3	( 6)	0	( 0)	0	( 0)
	mass		7	( 14)	10	( 20)	10	( 20)	2	( 4)
lung	red zone		1	( 2)	0	( 0)	1	( 2)	0	( 0)
	brown zone		1	( 2)	0	( 0)	0	( 0)	0	( 0)
	edema		1	( 2)	1	( 2)	0	( 0)	0	( 0)
	nodule		0	( 0)	2	( 4)	1	( 2)	2	( 4)
lymph node	enlarged		0	( 0)	0	( 0)	0	( 0)	1	( 2)
spleen	enlarged		4	( 8)	8	( 16)	4	( 8)	3	( 6)
	white zone		1	( 2)	0	( 0)	0	( 0)	0	( 0)
	black zone		0	( 0)	1	( 2)	0	( 0)	0	( 0)
	deformed		1	( 2)	0	( 0)	0	( 0)	0	( 0)
	adhesion		2	( 4)	0	( 0)	0	( 0)	0	( 0)
heart	white		0	( 0)	0	( 0)	0	( 0)	1	( 2)
	white zone		2	( 4)	1	( 2)	0	( 0)	0	( 0)
capillary	thick		1	( 2)	0	( 0)	0	( 0)	0	( 0)
tongue	nodule		0	( 0)	1	( 2)	1	( 2)	0	( 0)
forestomach	ulcer		0	( 0)	2	( 4)	0	( 0)	1	( 2)
gl stomach	nodule		0	( 0)	0	( 0)	0	( 0)	1	( 2)
	erosion		1	( 2)	0	( 0)	0	( 0)	0	( 0)
liver	atrophic		0	( 0)	1	( 2)	1	( 2)	1	( 2)

STUDY NO. : 0371  
 ANIMAL : RAT F344/DuCrj  
 REPORT TYPE : A1  
 SEX : FEMALE

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

PAGE : 6

Organ	Findings	Group Name NO. of Animals	Control		250 ppm		500 ppm		1000 ppm	
			50	(%)	50	(%)	50	(%)	50	(%)
liver	white zone		0	( 0)	1	( 2)	4	( 8)	2	( 4)
	red zone		2	( 4)	2	( 4)	1	( 2)	0	( 0)
	black zone		0	( 0)	0	( 0)	1	( 2)	0	( 0)
	nodule		2	( 4)	2	( 4)	18	( 36)	45	( 90)
	rough		2	( 4)	3	( 6)	0	( 0)	1	( 2)
	granular		0	( 0)	1	( 2)	0	( 0)	0	( 0)
	herniation		13	( 26)	17	( 34)	10	( 20)	8	( 16)
kidney	cyst		0	( 0)	1	( 2)	0	( 0)	0	( 0)
	deformed		1	( 2)	0	( 0)	0	( 0)	0	( 0)
	granular		1	( 2)	1	( 2)	0	( 0)	0	( 0)
urin bladd	red zone		0	( 0)	0	( 0)	1	( 2)	0	( 0)
	urine:marked retention		0	( 0)	1	( 2)	0	( 0)	2	( 4)
pituitary	enlarged		10	( 20)	4	( 8)	5	( 10)	3	( 6)
	red zone		4	( 8)	3	( 6)	6	( 12)	2	( 4)
	red patch		0	( 0)	1	( 2)	0	( 0)	0	( 0)
	nodule		5	( 10)	3	( 6)	6	( 12)	3	( 6)
	cyst		1	( 2)	0	( 0)	0	( 0)	2	( 4)
thyroid	enlarged		3	( 6)	4	( 8)	5	( 10)	1	( 2)
adrenal	enlarged		1	( 2)	0	( 0)	0	( 0)	2	( 4)
ovary	nodule		1	( 2)	0	( 0)	0	( 0)	0	( 0)
	cyst		1	( 2)	0	( 0)	1	( 2)	1	( 2)
uterus	nodule		5	( 10)	6	( 12)	6	( 12)	3	( 6)

STUDY NO. : 0371  
ANIMAL : RAT F344/DuCrj  
REPORT TYPE : A1  
SEX : FEMALE

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

PAGE : 7

Organ	Findings	Group Name NO. of Animals	Control		250 ppm		500 ppm		1000 ppm	
			50	(%)	50	(%)	50	(%)	50	(%)
uterus	cyst		0	( 0)	0	( 0)	1	( 2)	0	( 0)
vagina	nodule		0	( 0)	0	( 0)	1	( 2)	0	( 0)
brain	red zone		0	( 0)	0	( 0)	1	( 2)	0	( 0)
	hemorrhage		1	( 2)	0	( 0)	0	( 0)	0	( 0)
	elevated		0	( 0)	1	( 2)	0	( 0)	0	( 0)
spinal cord	red zone		0	( 0)	0	( 0)	1	( 2)	0	( 0)
eye	turbid		1	( 2)	1	( 2)	0	( 0)	0	( 0)
	white		9	( 18)	3	( 6)	4	( 8)	5	( 10)
	red		1	( 2)	0	( 0)	0	( 0)	0	( 0)
Zymbal gl	nodule		1	( 2)	0	( 0)	1	( 2)	1	( 2)
bone	nodule		0	( 0)	2	( 4)	0	( 0)	0	( 0)
vertebra	nodule		0	( 0)	1	( 2)	0	( 0)	0	( 0)
mediastinum	mass		1	( 2)	0	( 0)	0	( 0)	0	( 0)
retroperit	mass		0	( 0)	0	( 0)	0	( 0)	1	( 2)
abdominal c	ascites		0	( 0)	1	( 2)	0	( 0)	0	( 0)
thoracic ca	hemorrhage		1	( 2)	0	( 0)	0	( 0)	1	( 2)
	pleural fluid		1	( 2)	1	( 2)	0	( 0)	0	( 0)
other	nose:nodule		1	( 2)	0	( 0)	0	( 0)	0	( 0)
whole body	anemic		0	( 0)	1	( 2)	0	( 0)	0	( 0)

## APPENDIX I 3

GROSS FINDINGS : SUMMARY, RAT : MALE : SACRIFICED ANIMALS

(2-YEAR STUDY)

STUDY NO. : 0371  
ANIMAL : RAT F344/DuCrj  
REPORT TYPE : A1  
SEX : MALE

GROSS FINDINGS (SUMMARY)  
SACRIFICED ANIMALS (105W)

PAGE : 1

Organ	Findings	Group Name NO. of Animals	Control	500 ppm	1000 ppm	2000 ppm
			41 (%)	36 (%)	42 (%)	42 (%)
skin/app	nodule		0 ( 0)	5 ( 14)	1 ( 2)	1 ( 2)
subcutis	mass		6 ( 15)	5 ( 14)	7 ( 17)	4 ( 10)
lung	white zone		2 ( 5)	0 ( 0)	0 ( 0)	0 ( 0)
	brown zone		1 ( 2)	0 ( 0)	0 ( 0)	0 ( 0)
	nodule		0 ( 0)	0 ( 0)	2 ( 5)	2 ( 5)
lymph node	enlarged		1 ( 2)	0 ( 0)	1 ( 2)	0 ( 0)
spleen	enlarged		3 ( 7)	2 ( 6)	2 ( 5)	1 ( 2)
	white zone		1 ( 2)	0 ( 0)	0 ( 0)	0 ( 0)
	nodule		1 ( 2)	0 ( 0)	0 ( 0)	0 ( 0)
heart	hypertrophy		2 ( 5)	0 ( 0)	0 ( 0)	0 ( 0)
oral cavity	nodule		1 ( 2)	1 ( 3)	0 ( 0)	1 ( 2)
tongue	nodule		0 ( 0)	0 ( 0)	1 ( 2)	0 ( 0)
forestomach	nodule		0 ( 0)	0 ( 0)	0 ( 0)	2 ( 5)
	ulcer		0 ( 0)	0 ( 0)	1 ( 2)	0 ( 0)
gl stomach	nodule		0 ( 0)	1 ( 3)	0 ( 0)	0 ( 0)
	ulcer		0 ( 0)	1 ( 3)	0 ( 0)	0 ( 0)
liver	white zone		0 ( 0)	0 ( 0)	1 ( 2)	3 ( 7)
	red zone		1 ( 2)	1 ( 3)	6 ( 14)	3 ( 7)
	nodule		4 ( 10)	3 ( 8)	23 ( 55)	17 ( 40)
	rough		1 ( 2)	0 ( 0)	0 ( 0)	0 ( 0)
	herniation		8 ( 20)	4 ( 11)	5 ( 12)	7 ( 17)
kidney	cyst		0 ( 0)	0 ( 0)	1 ( 2)	0 ( 0)

STUDY NO. : 0371  
ANIMAL : RAT F344/DuCrj  
REPORT TYPE : A1  
SEX : MALE

GROSS FINDINGS (SUMMARY)  
SACRIFICED ANIMALS (105W)

PAGE : 2

Organ	Findings	Group Name NO. of Animals	Control	500 ppm	1000 ppm	2000 ppm
			41 (%)	36 (%)	42 (%)	42 (%)
kidney	granular		7 ( 17)	2 ( 6)	3 ( 7)	0 ( 0)
urin bladd	nodule		0 ( 0)	0 ( 0)	0 ( 0)	1 ( 2)
pituitary	enlarged		3 ( 7)	1 ( 3)	1 ( 2)	0 ( 0)
	red zone		1 ( 2)	2 ( 6)	1 ( 2)	0 ( 0)
	nodule		1 ( 2)	1 ( 3)	5 ( 12)	2 ( 5)
thyroid	enlarged		2 ( 5)	0 ( 0)	1 ( 2)	3 ( 7)
adrenal	enlarged		1 ( 2)	0 ( 0)	0 ( 0)	1 ( 2)
testis	atrophic		0 ( 0)	0 ( 0)	1 ( 2)	1 ( 2)
	nodule		29 ( 71)	32 ( 89)	38 ( 90)	35 ( 83)
eye	turbid		0 ( 0)	2 ( 6)	1 ( 2)	1 ( 2)
	white		8 ( 20)	4 ( 11)	6 ( 14)	8 ( 19)
muscle	nodule		1 ( 2)	0 ( 0)	0 ( 0)	0 ( 0)
abdominal c	mass		1 ( 2)	0 ( 0)	0 ( 0)	0 ( 0)
thoracic ca	pleural fluid		1 ( 2)	0 ( 0)	0 ( 0)	0 ( 0)
other	tail:nodule		0 ( 0)	1 ( 3)	1 ( 2)	1 ( 2)
	ear:nodule		0 ( 0)	0 ( 0)	1 ( 2)	0 ( 0)
	lower jaw:nodule		0 ( 0)	0 ( 0)	0 ( 0)	1 ( 2)
	nose:nodule		1 ( 2)	1 ( 3)	2 ( 5)	0 ( 0)
whole body	anemic		0 ( 0)	2 ( 6)	0 ( 0)	0 ( 0)

## APPENDIX I 4

GROSS FINDINGS : SUMMARY, RAT : FEMALE : SACRIFICED ANIMALS  
(2-YEAR STUDY)

STUDY NO. : 0371  
 ANIMAL : RAT F344/DuCrj  
 REPORT TYPE : A1  
 SEX : FEMALE

GROSS FINDINGS (SUMMARY)  
 SACRIFICED ANIMALS (105W)

PAGE : 3

Organ	Findings	Group Name NO. of Animals	Control		250 ppm		500 ppm		1000 ppm	
			41	(%)	38	(%)	44	(%)	41	(%)
skin/app	nodule		0	( 0)	0	( 0)	1	( 2)	1	( 2)
subcutis	jaundice		0	( 0)	2	( 5)	0	( 0)	0	( 0)
	mass		5	( 12)	7	( 18)	10	( 23)	1	( 2)
lung	red zone		0	( 0)	0	( 0)	1	( 2)	0	( 0)
	nodule		0	( 0)	0	( 0)	1	( 2)	0	( 0)
spleen	enlarged		2	( 5)	3	( 8)	2	( 5)	1	( 2)
	white zone		1	( 2)	0	( 0)	0	( 0)	0	( 0)
	adhesion		1	( 2)	0	( 0)	0	( 0)	0	( 0)
heart	white zone		1	( 2)	0	( 0)	0	( 0)	0	( 0)
tongue	nodule		0	( 0)	1	( 3)	1	( 2)	0	( 0)
forestomach	ulcer		0	( 0)	1	( 3)	0	( 0)	0	( 0)
gi stomach	nodule		0	( 0)	0	( 0)	0	( 0)	1	( 2)
liver	atrophic		0	( 0)	1	( 3)	1	( 2)	1	( 2)
	white zone		0	( 0)	1	( 3)	4	( 9)	2	( 5)
	red zone		2	( 5)	2	( 5)	1	( 2)	0	( 0)
	black zone		0	( 0)	0	( 0)	1	( 2)	0	( 0)
	nodule		2	( 5)	2	( 5)	17	( 39)	41	(100)
	rough		2	( 5)	1	( 3)	0	( 0)	0	( 0)
	granular		0	( 0)	1	( 3)	0	( 0)	0	( 0)
	herniation		12	( 29)	14	( 37)	9	( 20)	7	( 17)
kidney	cyst		0	( 0)	1	( 3)	0	( 0)	0	( 0)
	granular		1	( 2)	1	( 3)	0	( 0)	0	( 0)



STUDY NO. : 0371  
ANIMAL : RAT F344/DuCrj  
REPORT TYPE : A1  
SEX : FEMALE

GROSS FINDINGS (SUMMARY)  
SACRIFICED ANIMALS (105W)

PAGE : 4

Organ	Findings	Group Name NO. of Animals	Control	250 ppm	500 ppm	1000 ppm
			41 (%)	38 (%)	44 (%)	41 (%)
pituitary	enlarged		8 ( 20)	2 ( 5)	3 ( 7)	3 ( 7)
	red zone		4 ( 10)	2 ( 5)	5 ( 11)	2 ( 5)
	nodule		4 ( 10)	1 ( 3)	6 ( 14)	3 ( 7)
	cyst		0 ( 0)	0 ( 0)	0 ( 0)	2 ( 5)
thyroid	enlarged		3 ( 7)	4 ( 11)	5 ( 11)	1 ( 2)
adrenal	enlarged		1 ( 2)	0 ( 0)	0 ( 0)	2 ( 5)
ovary	cyst		1 ( 2)	0 ( 0)	1 ( 2)	1 ( 2)
uterus	nodule		4 ( 10)	4 ( 11)	6 ( 14)	3 ( 7)
eye	turbid		1 ( 2)	1 ( 3)	0 ( 0)	0 ( 0)
	white		6 ( 15)	3 ( 8)	4 ( 9)	3 ( 7)
	red		1 ( 2)	0 ( 0)	0 ( 0)	0 ( 0)
Zymbal gl	nodule		1 ( 2)	0 ( 0)	0 ( 0)	0 ( 0)
bone	nodule		0 ( 0)	1 ( 3)	0 ( 0)	0 ( 0)
other	nose:nodule		1 ( 2)	0 ( 0)	0 ( 0)	0 ( 0)

## APPENDIX I 5

GROSS FINDINGS : SUMMARY, RAT : MALE

DEAD AND MORIBUND ANIMALS

(2-YEAR STUDY)

STUDY NO. : 0371  
ANIMAL : RAT F344/DuCrj  
REPORT TYPE : A1  
SEX : MALE

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

PAGE : 1

Organ	Findings	Group Name NO. of Animals	Control 9 (%)	500 ppm 14 (%)	1000 ppm 8 (%)	2000 ppm 8 (%)
skin/app	nodule		1 ( 11)	1 ( 7)	0 ( 0)	0 ( 0)
	mass		0 ( 0)	1 ( 7)	0 ( 0)	0 ( 0)
subcutis	jaundice		1 ( 11)	0 ( 0)	1 ( 13)	0 ( 0)
	mass		0 ( 0)	5 ( 36)	1 ( 13)	0 ( 0)
lung	red zone		0 ( 0)	2 ( 14)	0 ( 0)	0 ( 0)
	nodule		0 ( 0)	2 ( 14)	0 ( 0)	1 ( 13)
	voluminus		1 ( 11)	0 ( 0)	0 ( 0)	0 ( 0)
lymph node	enlarged		0 ( 0)	1 ( 7)	0 ( 0)	1 ( 13)
spleen	enlarged		1 ( 11)	1 ( 7)	3 ( 38)	0 ( 0)
	white zone		0 ( 0)	1 ( 7)	0 ( 0)	0 ( 0)
heart	nodule		0 ( 0)	1 ( 7)	0 ( 0)	0 ( 0)
forestomach	ulcer		1 ( 11)	0 ( 0)	0 ( 0)	0 ( 0)
	thick		1 ( 11)	0 ( 0)	0 ( 0)	0 ( 0)
cecum	gas		0 ( 0)	1 ( 7)	0 ( 0)	0 ( 0)
liver	pale		0 ( 0)	1 ( 7)	0 ( 0)	0 ( 0)
	nodule		0 ( 0)	0 ( 0)	1 ( 13)	1 ( 13)
	cyst		0 ( 0)	0 ( 0)	0 ( 0)	2 ( 25)
	rough		1 ( 11)	0 ( 0)	1 ( 13)	0 ( 0)
	herniation		4 ( 44)	2 ( 14)	1 ( 13)	0 ( 0)
kidney	enlarged		0 ( 0)	0 ( 0)	1 ( 13)	0 ( 0)
	white patch		0 ( 0)	1 ( 7)	0 ( 0)	0 ( 0)

STUDY NO. : 0371  
ANIMAL : RAT F344/DuCrj  
REPORT TYPE : A1  
SEX : MALE

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

PAGE : 2

Organ	Findings	Group Name NO. of Animals	Control 9 (%)	500 ppm 14 (%)	1000 ppm 8 (%)	2000 ppm 8 (%)
kidney	granular		1 ( 11)	0 ( 0)	0 ( 0)	0 ( 0)
	hydronephrosis		0 ( 0)	0 ( 0)	0 ( 0)	1 ( 13)
urin bladd	nodule		1 ( 11)	0 ( 0)	0 ( 0)	2 ( 25)
	urine:marked retention		1 ( 11)	1 ( 7)	0 ( 0)	0 ( 0)
	urine:red		0 ( 0)	0 ( 0)	0 ( 0)	1 ( 13)
pituitary	enlarged		4 ( 44)	3 ( 21)	1 ( 13)	0 ( 0)
	red zone		1 ( 11)	1 ( 7)	0 ( 0)	0 ( 0)
thyroid	enlarged		1 ( 11)	0 ( 0)	0 ( 0)	2 ( 25)
	nodule		1 ( 11)	0 ( 0)	0 ( 0)	0 ( 0)
adrenal	red zone		1 ( 11)	0 ( 0)	0 ( 0)	0 ( 0)
testis	atrophic		1 ( 11)	4 ( 29)	0 ( 0)	1 ( 13)
	nodule		4 ( 44)	6 ( 43)	3 ( 38)	4 ( 50)
brain	swollen		0 ( 0)	0 ( 0)	0 ( 0)	1 ( 13)
	yellow zone		0 ( 0)	0 ( 0)	0 ( 0)	1 ( 13)
	brown zone		1 ( 11)	0 ( 0)	0 ( 0)	0 ( 0)
	hemorrhage		0 ( 0)	0 ( 0)	1 ( 13)	0 ( 0)
	soft		0 ( 0)	1 ( 7)	0 ( 0)	0 ( 0)
spinal cord	brown zone		1 ( 11)	0 ( 0)	0 ( 0)	0 ( 0)
eye	white		0 ( 0)	1 ( 7)	2 ( 25)	2 ( 25)
Zymbal gl	nodule		0 ( 0)	1 ( 7)	0 ( 0)	0 ( 0)
mediastinum	mass		0 ( 0)	1 ( 7)	0 ( 0)	0 ( 0)

STUDY NO. : 0371  
ANIMAL : RAT F344/DuCrj  
REPORT TYPE : A1  
SEX : MALE

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

PAGE : 3

Organ	Findings	Group Name	Control	500 ppm	1000 ppm	2000 ppm
		NO. of Animals	9 (%)	14 (%)	8 (%)	8 (%)
mesenterium	nodule		1 ( 11)	0 ( 0)	0 ( 0)	0 ( 0)
thoracic ca	mass		0 ( 0)	1 ( 7)	0 ( 0)	0 ( 0)
	pleural fluid		0 ( 0)	1 ( 7)	1 ( 13)	0 ( 0)
other	forelimb:nodule		0 ( 0)	0 ( 0)	1 ( 13)	0 ( 0)

(HPT080)

BAIS 4

## APPENDIX I 6

GROSS FINDINGS : SUMMARY, RAT : FEMALE

DEAD AND MORIBUND ANIMALS

(2-YEAR STUDY)

STUDY NO. : 0371  
 ANIMAL : RAT F344/DuCrj  
 REPORT TYPE : A1  
 SEX : FEMALE

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

PAGE : 4

Organ	Findings	Group Name NO. of Animals	Control 9 (%)	250 ppm 12 (%)	500 ppm 6 (%)	1000 ppm 9 (%)
skin/app	ulcer		0 ( 0)	0 ( 0)	0 ( 0)	1 ( 11)
subcutis	jaundice		1 ( 11)	1 ( 8)	0 ( 0)	0 ( 0)
	mass		2 ( 22)	3 ( 25)	0 ( 0)	1 ( 11)
lung	red zone		1 ( 11)	0 ( 0)	0 ( 0)	0 ( 0)
	brown zone		1 ( 11)	0 ( 0)	0 ( 0)	0 ( 0)
	edema		1 ( 11)	1 ( 8)	0 ( 0)	0 ( 0)
	nodule		0 ( 0)	2 ( 17)	0 ( 0)	2 ( 22)
lymph node	enlarged		0 ( 0)	0 ( 0)	0 ( 0)	1 ( 11)
spleen	enlarged		2 ( 22)	5 ( 42)	2 ( 33)	2 ( 22)
	black zone		0 ( 0)	1 ( 8)	0 ( 0)	0 ( 0)
	deformed		1 ( 11)	0 ( 0)	0 ( 0)	0 ( 0)
	adhesion		1 ( 11)	0 ( 0)	0 ( 0)	0 ( 0)
heart	white		0 ( 0)	0 ( 0)	0 ( 0)	1 ( 11)
	white zone		1 ( 11)	1 ( 8)	0 ( 0)	0 ( 0)
capillary	thick		1 ( 11)	0 ( 0)	0 ( 0)	0 ( 0)
forestomach	ulcer		0 ( 0)	1 ( 8)	0 ( 0)	1 ( 11)
gl stomach	erosion		1 ( 11)	0 ( 0)	0 ( 0)	0 ( 0)
liver	nodule		0 ( 0)	0 ( 0)	1 ( 17)	4 ( 44)
	rough		0 ( 0)	2 ( 17)	0 ( 0)	1 ( 11)
	herniation		1 ( 11)	3 ( 25)	1 ( 17)	1 ( 11)
kidney	deformed		1 ( 11)	0 ( 0)	0 ( 0)	0 ( 0)

STUDY NO. : 0371  
ANIMAL : RAT F344/DuCrj  
REPORT TYPE : A1  
SEX : FEMALE

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

PAGE : 5

Organ	Findings	Group Name NO. of Animals	Control 9 (%)	250 ppm 12 (%)	500 ppm 6 (%)	1000 ppm 9 (%)
urin bladd	urine marked retention		0 ( 0)	1 ( 8)	0 ( 0)	2 ( 22)
pituitary	enlarged		2 ( 22)	2 ( 17)	2 ( 33)	0 ( 0)
	red zone		0 ( 0)	1 ( 8)	1 ( 17)	0 ( 0)
	red patch		0 ( 0)	1 ( 8)	0 ( 0)	0 ( 0)
	nodule		1 ( 11)	2 ( 17)	0 ( 0)	0 ( 0)
	cyst		1 ( 11)	0 ( 0)	0 ( 0)	0 ( 0)
ovary	nodule		1 ( 11)	0 ( 0)	0 ( 0)	0 ( 0)
uterus	nodule		1 ( 11)	2 ( 17)	0 ( 0)	0 ( 0)
	cyst		0 ( 0)	0 ( 0)	1 ( 17)	0 ( 0)
vagina	nodule		0 ( 0)	0 ( 0)	1 ( 17)	0 ( 0)
brain	red zone		0 ( 0)	0 ( 0)	1 ( 17)	0 ( 0)
	hemorrhage		1 ( 11)	0 ( 0)	0 ( 0)	0 ( 0)
	elevated		0 ( 0)	1 ( 8)	0 ( 0)	0 ( 0)
spinal cord	red zone		0 ( 0)	0 ( 0)	1 ( 17)	0 ( 0)
eye	white		3 ( 33)	0 ( 0)	0 ( 0)	2 ( 22)
Zymbal gl	nodule		0 ( 0)	0 ( 0)	1 ( 17)	1 ( 11)
bone	nodule		0 ( 0)	1 ( 8)	0 ( 0)	0 ( 0)
vertebra	nodule		0 ( 0)	1 ( 8)	0 ( 0)	0 ( 0)
mediastinum	mass		1 ( 11)	0 ( 0)	0 ( 0)	0 ( 0)
retroperit	mass		0 ( 0)	0 ( 0)	0 ( 0)	1 ( 11)
abdominal c	ascites		0 ( 0)	1 ( 8)	0 ( 0)	0 ( 0)



STUDY NO. : 0371  
ANIMAL : RAT F344/DuCrj  
REPORT TYPE : A1  
SEX : FEMALE

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

PAGE : 6

Organ	Findings	Group Name	Control	250 ppm	500 ppm	1000 ppm
		NO. of Animals	9 (%)	12 (%)	6 (%)	9 (%)
thoracic ca	pleural fluid		1 ( 11)	1 ( 8)	0 ( 0)	0 ( 0)
whole body	anemic		0 ( 0)	1 ( 8)	0 ( 0)	0 ( 0)

(HPT080)

BAIS 4

## APPENDIX J 1

ORGAN WEIGHT, ABSOLUTE : SUMMARY, RAT : MALE

(2-YEAR STUDY)

STUDY NO. : 0371  
ANIMAL : RAT F344/DuCrj  
REPORT TYPE : A1  
SEX : MALE  
UNIT: g

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

PAGE : 1

Group Name	NO. of Animals	Body Weight		ADRENALS		TESTES		HEART		LUNGS		KIDNEYS	
Control	41	382±	33	0.082±	0.072	2.751±	1.358	1.283±	0.203	1.448±	0.319	2.633±	0.322
500 ppm	36	355±	47*	0.064±	0.009	3.444±	0.946*	1.195±	0.128	1.360±	0.098	2.564±	0.179
1000 ppm	42	330±	22**	0.058±	0.008**	3.796±	1.093**	1.104±	0.084**	1.383±	0.466**	2.490±	0.171
2000 ppm	42	269±	29**	0.069±	0.108**	3.334±	1.356	0.975±	0.097**	1.192±	0.095**	2.255±	0.220**

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

Test of Dunnett

(HCL040)

BAIS 4

STUDY NO. : 0371  
ANIMAL : RAT F344/DuCrj  
REPORT TYPE : A1  
SEX : MALE  
UNIT: g

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

PAGE : 2

Group Name	NO. of Animals	SPLEEN		LIVER		BRAIN	
Control	41	1.290±	1.941	11.367±	2.693	2.043±	0.060
500 ppm	36	0.942±	0.396	10.606±	1.290	2.007±	0.049**
1000 ppm	42	0.918±	0.609	10.651±	2.410	1.988±	0.046**
2000 ppm	42	0.589±	0.486**	9.269±	3.410**	1.929±	0.048**
Significant difference ; * : $P \leq 0.05$ ** : $P \leq 0.01$ Test of Dunnett							
(HCL040)							

BAIS 4

## APPENDIX J 2

ORGAN WEIGHT, ABSOLUTE : SUMMARY, RAT : FEMALE  
(2-YEAR STUDY)

STUDY NO. : 0371  
ANIMAL : RAT F344/DuCrj  
REPORT TYPE : A1  
SEX : FEMALE  
UNIT: g

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

PAGE : 3

Group Name	NO. of Animals	Body Weight		ADRENALS		OVARIES		HEART		LUNGS		KIDNEYS	
Control	41	253±	23	0.076±	0.053	0.135±	0.019	0.874±	0.063	1.015±	0.094	1.729±	0.140
250 ppm	38	237±	30	0.070±	0.013	0.125±	0.020	0.878±	0.096	1.084±	0.303	1.715±	0.133
500 ppm	44	234±	24**	0.065±	0.012	0.127±	0.024	0.870±	0.081	1.051±	0.315	1.712±	0.126
1000 ppm	41	204±	19**	0.081±	0.135**	0.124±	0.021	0.791±	0.079**	0.957±	0.146**	1.691±	0.153

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

Test of Dunnett

(HCL040)

BAIS 4

STUDY NO. : 0371  
ANIMAL : RAT F344/DuCrj  
REPORT TYPE : A1  
SEX : FEMALE  
UNIT: g

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

PAGE : 4

Group Name	NO. of Animals	SPLEEN		LIVER		BRAIN	
Control	41	0.660±	0.566	6.694±	0.951	1.862±	0.049
250 ppm	38	1.313±	2.723	6.580±	1.098	1.854±	0.044
500 ppm	44	0.697±	0.707	6.814±	1.323	1.833±	0.043*
1000 ppm	41	0.716±	1.332	9.406±	3.630**	1.826±	0.050**

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

Test of Dunnett

(HCL040)

BAIS 4

## APPENDIX K 1

ORGAN WEIGHT, RELATIVE : SUMMARY, RAT : MALE

(2-YEAR STUDY)



STUDY NO. : 0371  
ANIMAL : RAT F344/DuCrj  
REPORT TYPE : A1  
SEX : MALE  
UNIT: %

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

PAGE : 1

Group Name	NO. of Animals	Body Weight (g)	ADRENALS	TESTES	HEART	LUNGS	KIDNEYS
Control	41	382± 33	0.022± 0.022	0.721± 0.346	0.338± 0.065	0.381± 0.091	0.692± 0.093
500 ppm	36	355± 47*	0.018± 0.003	0.983± 0.278**	0.342± 0.057	0.388± 0.047	0.732± 0.090*
1000 ppm	42	330± 22**	0.018± 0.002	1.155± 0.347**	0.336± 0.034	0.421± 0.157**	0.756± 0.049**
2000 ppm	42	269± 29**	0.026± 0.043	1.247± 0.483**	0.364± 0.027**	0.447± 0.054**	0.845± 0.095**

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

Test of Dunnett

(HCL042)

BAIS 4

STUDY NO. : 0371  
ANIMAL : RAT F344/DuCrj  
REPORT TYPE : A1  
SEX : MALE  
UNIT: %

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

PAGE : 2

Group Name	NO. of Animals	SPLEEN	LIVER	BRAIN
Control	41	0.342± 0.536	2.986± 0.753	0.538± 0.045
500 ppm	36	0.271± 0.128	3.009± 0.344	0.573± 0.056*
1000 ppm	42	0.276± 0.169	3.241± 0.818**	0.605± 0.043**
2000 ppm	42	0.223± 0.212**	3.461± 1.344**	0.726± 0.083**

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

Test of Dunnett

(HCL042)

BAIS 4

## APPENDIX K 2

ORGAN WEIGHT, RELATIVE : SUMMARY, RAT : FEMALE  
(2-YEAR STUDY)

STUDY NO. : 0371  
 ANIMAL : RAT F344/DuCrj  
 REPORT TYPE : A1  
 SEX : FEMALE  
 UNIT: %

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

PAGE : 3

Group Name	NO. of Animals	Body Weight (g)	ADRENALS	OVARIES	HEART	LUNGS	KIDNEYS
Control	41	253± 23	0.030± 0.020	0.053± 0.007	0.348± 0.031	0.404± 0.048	0.688± 0.071
250 ppm	38	237± 30	0.030± 0.007	0.053± 0.008	0.377± 0.073	0.473± 0.190	0.739± 0.139
500 ppm	44	234± 24**	0.028± 0.006	0.054± 0.009	0.376± 0.054*	0.454± 0.152	0.738± 0.087*
1000 ppm	41	204± 19**	0.040± 0.069	0.061± 0.011**	0.389± 0.037**	0.474± 0.093**	0.833± 0.085**

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

Test of Dunnett

(HCL042)

BAIS 4

STUDY NO. : 0371  
ANIMAL : RAT F344/DuCrj  
REPORT TYPE : A1  
SEX : FEMALE  
UNIT: %

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

PAGE : 4

Group Name	NO. of Animals	SPLEEN	LIVER	BRAIN
Control	41	0.264± 0.230	2.653± 0.338	0.743± 0.071
250 ppm	38	0.616± 1.402	2.809± 0.538	0.797± 0.119
500 ppm	44	0.307± 0.353	2.934± 0.626	0.792± 0.088*
1000 ppm	41	0.363± 0.734	4.649± 1.846**	0.904± 0.097**

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

(HCL042)

BAIS 4

## APPENDIX L 1

HISTOLOGICAL FINDINGS : NON-NEOPLASTIC LESIONS : SUMMARY

RAT : MALE : ALL ANIMALS

(2-YEAR STUDY)

STUDY NO. : 0371  
 ANIMAL : RAT F344/DuCrj  
 REPORT TYPE : A1  
 SEX : MALE

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

PAGE : 1

Organ_____	Findings_____	Group Name	Control				500 ppm				1000 ppm				2000 ppm			
		No. of Animals on Study	50				50				50				50			
		Grade	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Integumentary system/appandage}																		
skin/app			<50>				<50>				<50>				<50>			
	scab		0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
		( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 2)	( 0)	( 0)	( 0)	
	epidermal cyst		0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0
		( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 6)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	
{Respiratory system}																		
nasal cavit			<50>				<50>				<50>				<50>			
	thrombus		1	0	0	0	2	1	0	0	0	0	0	0	1	0	0	0
		( 2)	( 0)	( 0)	( 0)	( 4)	( 2)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 2)	( 0)	( 0)	( 0)	
	mineralization		20	0	0	0	24	0	0	0	22	0	0	0	9	0	0	0 *
		( 40)	( 0)	( 0)	( 0)	( 48)	( 0)	( 0)	( 0)	( 44)	( 0)	( 0)	( 0)	( 18)	( 0)	( 0)	( 0)	
	eosinophilic change:olfactory epithelium		27	4	2	0	25	7	1	0	21	16	2	0 *	20	22	6	0 **
		( 54)	( 8)	( 4)	( 0)	( 50)	( 14)	( 2)	( 0)	( 42)	( 32)	( 4)	( 0)	( 40)	( 44)	( 12)	( 0)	
	eosinophilic change:respiratory epithelium		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)	( 0)	( 0)	( 0)	( 0)	
	inflammation:foreign body		15	1	0	0	10	2	1	0	10	3	0	0	3	2	1	0 *
		( 30)	( 2)	( 0)	( 0)	( 20)	( 4)	( 2)	( 0)	( 20)	( 6)	( 0)	( 0)	( 6)	( 4)	( 2)	( 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 ≤ 0.05 \*\* : P ≤ 0.01 Test of Chi Square

STUDY NO. : 0371  
ANIMAL : RAT F344/DuCrj  
REPORT TYPE : A1  
SEX : MALE

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

PAGE : 2

Organ	Findings	Group Name No. of Animals on Study Grade	Control 50				500 ppm 50				1000 ppm 50				2000 ppm 50			
			1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Respiratory system}																		
nasal cavit			<50>				<50>				<50>				<50>			
	inflammation:respiratory epithelium		1	0	0	0	0	0	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)
	inflammation:olfactory epithelium		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)	( 0)	( 0)	( 0)	( 0)
	squamous cell metaplasia:olfactory epithelium		0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
			( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 2)	( 0)	( 0)	( 0)
nasopharynx			<50>				<50>				<50>				<50>			
	inflammation		0	0	0	0	2	0	0	0	0	0	0	0	1	0	0	0
			( 0)	( 0)	( 0)	( 0)	( 4)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 2)	( 0)	( 0)	( 0)
	inflammation:foreign body		0	0	0	0	0	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)
lung			<50>				<50>				<50>				<50>			
	congestion		6	0	0	0	7	0	0	0	1	0	0	0	2	0	0	0
			( 12)	( 0)	( 0)	( 0)	( 14)	( 0)	( 0)	( 0)	( 2)	( 0)	( 0)	( 0)	( 4)	( 0)	( 0)	( 0)
	hemorrhage		2	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0
			( 4)	( 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 : Number of animals with lesion  
( c ) c : b / a \* 100  
Significant difference ; \* : P ≤ 0.05 \*\* : P ≤ 0.01 Test of Chi Square



STUDY NO. : 0371  
ANIMAL : RAT F344/DuCrj  
REPORT TYPE : A1  
SEX : MALE

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

PAGE : 3

Organ	Findings	Group Name No. of Animals on Study				Control 50				500 ppm 50				1000 ppm 50				2000 ppm 50			
		Grade				1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Respiratory system}																					
lung		<50>				<50>				<50>				<50>				<50>			
	osseous metaplasia	1	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		( 2)	( 0)	( 0)	( 0)	( 6)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)
	atypical hyperplasia	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
		( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 2)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)
	accumulation of foamy cells	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0
		( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 4)	( 0)	( 0)	( 0)	( 4)	( 0)	( 0)	( 0)
	bronchiolar-alveolar cell hyperplasia	1	1	0	0	2	3	0	0	6	0	0	0	6	0	0	0	4	1	0	0
		( 2)	( 2)	( 0)	( 0)	( 4)	( 6)	( 0)	( 0)	( 12)	( 0)	( 0)	( 0)	( 12)	( 0)	( 0)	( 0)	( 8)	( 2)	( 0)	( 0)
{Hematopoietic system}																					
bone marrow		<50>				<50>				<50>				<50>				<50>			
	granulation	6	0	0	0	2	0	0	0	3	0	1	0	3	0	1	0	3	0	0	0
		( 12)	( 0)	( 0)	( 0)	( 4)	( 0)	( 0)	( 0)	( 6)	( 0)	( 2)	( 0)	( 6)	( 0)	( 2)	( 0)	( 6)	( 0)	( 0)	( 0)
	increased hematopoiesis	3	0	0	0	5	0	0	0	2	0	0	0	1	0	0	0	1	0	0	0
		( 6)	( 0)	( 0)	( 0)	( 10)	( 0)	( 0)	( 0)	( 4)	( 0)	( 0)	( 0)	( 2)	( 0)	( 0)	( 0)	( 2)	( 0)	( 0)	( 0)
	decreased hematopoiesis	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
		( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 2)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)

Grade 1 : Slight 2 : Moderate 3 : Marked 4 : Severe  
< a > a : Number of animals examined at the site  
b : Number of animals with lesion  
( c ) c : b / a \* 100  
Significant difference ; \* : P ≤ 0.05 \*\* : P ≤ 0.01 Test of Chi Square

STUDY NO. : 0371  
ANIMAL : RAT F344/DuCrj  
REPORT TYPE : A1  
SEX : MALE

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

PAGE : 4

		Group Name	Control				500 ppm				1000 ppm				2000 ppm			
		No. of Animals on Study	50				50				50				50			
Organ	Findings	Grade	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
[Hematopoietic system]																		
lymph node			<50>				<50>				<50>				<50>			
	lymphadenitis		1 ( 2)	0 ( 0)	0 ( 0)	0 ( 0)	2 ( 4)	0 ( 0)	0 ( 0)	0 ( 0)	2 ( 4)	0 ( 0)	0 ( 0)	0 ( 0)	2 ( 4)	0 ( 0)	0 ( 0)	0 ( 0)
spleen			<50>				<50>				<50>				<50>			
	deposit of hemosiderin		33 ( 66)	3 ( 6)	2 ( 4)	0 ( 0)	34 ( 68)	2 ( 4)	1 ( 2)	0 ( 0)	39 ( 78)	2 ( 4)	1 ( 2)	0 ( 0)	36 ( 72)	3 ( 6)	1 ( 2)	0 ( 0)
	fibrosis		2 ( 4)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	2 ( 4)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)
	extramedullary hematopoiesis		2 ( 4)	0 ( 0)	1 ( 2)	0 ( 0)	5 ( 10)	1 ( 2)	3 ( 6)	0 ( 0)	5 ( 10)	1 ( 2)	0 ( 0)	0 ( 0)	1 ( 2)	0 ( 0)	0 ( 0)	0 ( 0)
[Circulatory system]																		
heart			<50>				<50>				<50>				<50>			
	thrombus		0 ( 0)	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 ( 0)	0 ( 0)	0 ( 0)
	mineralization		1 ( 2)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)

Grade 1 : Slight 2 : Moderate 3 : Marked 4 : Severe  
< a > a : Number of animals examined at the site  
b : Number of animals with lesion  
( c ) c : b / a \* 100  
Significant difference ; \* : P ≤ 0.05 \*\* : P ≤ 0.01 Test of Chi Square

STUDY NO. : 0371  
 ANIMAL : RAT F344/DuCrj  
 REPORT TYPE : A1  
 SEX : MALE

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

PAGE : 5

Organ_____	Findings_____	Group Name	Control				500 ppm				1000 ppm				2000 ppm			
		No. of Animals on Study	50				50				50				50			
		Grade	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
(Circulatory system)																		
heart	inflammatory cell nest		<50>				<50>				<50>				<50>			
		1	0	0	0	0	0	0	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 )	( 0 )
fibrosis:focal		0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 2 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )
	myocardial fibrosis	19	0	0	0	20	0	0	0	16	0	0	0	9	0	0	0	*
		( 38 )	( 0 )	( 0 )	( 0 )	( 40 )	( 0 )	( 0 )	( 0 )	( 32 )	( 0 )	( 0 )	( 0 )	( 18 )	( 0 )	( 0 )	( 0 )	( 0 )
artery/aort	arteritis		<50>				<50>				<50>				<50>			
		0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
		( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 2 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )
(Digestive system)																		
oral cavity	erosion		<50>				<50>				<50>				<50>			
		0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
		( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 2 )	( 0 )	( 0 )	( 0 )	( 0 )
tooth	inflammation		<50>				<50>				<50>				<50>			
		11	1	0	0	0	0	0	0	1	0	0	0	8	0	0	0	0
		( 22 )	( 2 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 2 )	( 0 )	( 0 )	( 0 )	( 16 )	( 0 )	( 0 )	( 0 )	( 0 )

Grade 1 : Slight 2 : Moderate 3 : Marked 4 : Severe  
 < a > a : Number of animals examined at the site  
 b : Number of animals with lesion  
 ( c ) c : b / a \* 100  
 Significant difference : \* : P ≤ 0.05 \*\* : P ≤ 0.01 Test of Chi Square

STUDY NO. : 0371  
 ANIMAL : RAT F344/DuCrj  
 REPORT TYPE : A1  
 SEX : MALE

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

PAGE : 6

Organ	Findings	Group Name No. of Animals on Study				Control 50				500 ppm 50				1000 ppm 50				2000 ppm 50			
		Grade				1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
(Digestive system)																					
tooth	epidermal cyst	<50>				0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
		( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 2 )	( 0 )	( 0 )	( 0 )
tongue	mineralization	<50>				1	0	0	0	0	0	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 )	( 0 )	( 0 )	( 0 )	( 0 )
	arteritis	1	0	0	0	( 2 )	( 0 )	( 0 )	( 0 )	0	0	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 )	( 0 )	( 0 )	( 0 )	( 0 )
stomach	mineralization	<50>				1	0	0	0	1	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 )	( 0 )	( 0 )	( 0 )	( 0 )
	ulcer:forestomach	0	0	2	0	0	0	2	0	1	1	0	0	0	1	0	0	0	0	0	0
		( 0 )	( 0 )	( 4 )	( 0 )	( 0 )	( 0 )	( 2 )	( 0 )	( 2 )	( 2 )	( 0 )	( 0 )	( 0 )	( 2 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )
	squamous cell hyperplasia:forestomach	2	0	0	0	( 4 )	( 0 )	( 0 )	( 0 )	2	1	0	0	1	0	0	0	2	0	0	0
		( 4 )	( 0 )	( 0 )	( 0 )	( 4 )	( 0 )	( 2 )	( 0 )	( 4 )	( 2 )	( 0 )	( 0 )	( 2 )	( 0 )	( 0 )	( 0 )	( 4 )	( 0 )	( 0 )	( 0 )
liver	herniation	<50>				12	0	0	0	6	0	0	0	6	0	0	0	8	0	0	0
		( 24 )	( 0 )	( 0 )	( 0 )	( 12 )	( 0 )	( 0 )	( 0 )	( 12 )	( 0 )	( 0 )	( 0 )	( 12 )	( 0 )	( 0 )	( 0 )	( 16 )	( 0 )	( 0 )	( 0 )

Grade 1 : Slight 2 : Moderate 3 : Marked 4 : Severe  
 < a > a : Number of animals examined at the site  
 b : Number of animals with lesion  
 ( c ) c : b / a \* 100  
 Significant difference ; \* : P ≤ 0.05 \*\* : P ≤ 0.01 Test of Chi Square

STUDY NO. : 0371  
 ANIMAL : RAT F344/DuCrj  
 REPORT TYPE : A1  
 SEX : MALE

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

PAGE : 7

Organ	Findings	Group Name No. of Animals on Study Grade	Control 50				500 ppm 50				1000 ppm 50				2000 ppm 50			
			1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Digestive system}																		
liver	necrosis:central		<50>				<50>				<50>				<50>			
			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 )	( 0 )	( 0 )	( 0 )	( 0 )
	fatty change:peripheral		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 )	( 0 )	( 0 )	( 0 )	( 0 )
	abscess		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 )	( 0 )	( 0 )	( 0 )	( 0 )
	granulation		18	3	0	0	16	1	0	0	12	3	0	0	17	1	0	0
			( 36 )	( 6 )	( 0 )	( 0 )	( 32 )	( 2 )	( 0 )	( 0 )	( 24 )	( 6 )	( 0 )	( 0 )	( 34 )	( 2 )	( 0 )	( 0 )
	clear cell focus		2	0	0	0	9	0	0	0	8	3	1	0 *	3	0	0	0
			( 4 )	( 0 )	( 0 )	( 0 )	( 18 )	( 0 )	( 0 )	( 0 )	( 16 )	( 6 )	( 2 )	( 0 )	( 6 )	( 0 )	( 0 )	( 0 )
	acidophilic cell focus		1	0	0	0	2	0	0	0	1	1	0	0	4	1	0	0
			( 2 )	( 0 )	( 0 )	( 0 )	( 4 )	( 0 )	( 0 )	( 0 )	( 2 )	( 2 )	( 0 )	( 0 )	( 8 )	( 2 )	( 0 )	( 0 )
	basophilic cell focus		18	1	0	0	22	9	0	0 **	15	17	4	1 **	25	12	1	0 **
			( 36 )	( 2 )	( 0 )	( 0 )	( 44 )	( 18 )	( 0 )	( 0 )	( 30 )	( 34 )	( 8 )	( 2 )	( 50 )	( 24 )	( 2 )	( 0 )
	bile duct hyperplasia		49	1	0	0	49	0	0	0	50	0	0	0	48	0	0	0
			( 98 )	( 2 )	( 0 )	( 0 )	( 98 )	( 0 )	( 0 )	( 0 )	( 100 )	( 0 )	( 0 )	( 0 )	( 96 )	( 0 )	( 0 )	( 0 )

Grade 1 : Slight 2 : Moderate 3 : Marked 4 : Severe  
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 Significant difference : \* : P ≤ 0.05 \*\* : P ≤ 0.01 Test of Chi Square

STUDY NO. : 0371  
 ANIMAL : RAT F344/DuCrj  
 REPORT TYPE : A1  
 SEX : MALE

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

PAGE : 8

Organ	Findings	Group Name No. of Animals on Study Grade	Control 50				500 ppm 50				1000 ppm 50				2000 ppm 50			
			1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
(Digestive system)																		
liver	biliary cyst		<50>				<50>				<50>				<50>			
			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 )	( 0 )	( 0 )	( 0 )	( 0 )
pancreas	atrophy		<50>				<50>				<50>				<50>			
			4	0	1	0	8	1	0	0	10	0	0	0	7	0	1	0
			( 8 )	( 0 )	( 2 )	( 0 )	( 16 )	( 2 )	( 0 )	( 0 )	( 20 )	( 0 )	( 0 )	( 0 )	( 14 )	( 0 )	( 2 )	( 0 )
	hyperplasia:acinar cell		0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
			( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 2 )	( 0 )	( 0 )	( 0 )
(Urinary system)																		
kidney	infarct		<50>				<50>				<50>				<50>			
			0	0	0	0	2	0	0	0	2	0	0	0	6	1	0	0 *
			( 0 )	( 0 )	( 0 )	( 0 )	( 4 )	( 0 )	( 0 )	( 0 )	( 4 )	( 0 )	( 0 )	( 0 )	( 12 )	( 2 )	( 0 )	( 0 )
	cyst		0	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 )
	abscess		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 )	( 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  
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 Significant difference ; \* : P ≤ 0.05 \*\* : P ≤ 0.01 Test of Chi Square

STUDY NO. : 0371  
ANIMAL : RAT F344/DuCrj  
REPORT TYPE : A1  
SEX : MALE

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

PAGE : 9

Organ	Findings	Group Name No. of Animals on Study Grade	Control 50				500 ppm 50				1000 ppm 50				2000 ppm 50			
			1 (%)	2 (%)	3 (%)	4 (%)	1 (%)	2 (%)	3 (%)	4 (%)	1 (%)	2 (%)	3 (%)	4 (%)	1 (%)	2 (%)	3 (%)	4 (%)
(Urinary system)																		
kidney			<50>				<50>				<50>				<50>			
	chronic nephropathy		3 ( 6)	25 ( 50)	20 ( 40)	2 ( 4)	10 ( 20)	18 ( 36)	13 ( 26)	3 * ( 6)	8 ( 16)	18 ( 36)	20 ( 40)	0 ( 0)	16 ( 32)	19 ( 38)	5 ( 10)	0 ** ( 0)
	hydronephrosis		0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	1 ( 2)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	1 ( 2)	0 ( 0)	0 ( 0)	0 ( 0)
	papillary necrosis		0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	10 ( 20)	5 ( 10)	0 ( 0)	0 ** ( 0)
	mineralization:papilla		7 ( 14)	0 ( 0)	0 ( 0)	0 ( 0)	18 ( 36)	0 ( 0)	0 ( 0)	0 * ( 0)	16 ( 32)	0 ( 0)	0 ( 0)	0 ( 0)	24 ( 48)	2 ( 4)	0 ( 0)	0 ** ( 0)
	urothelial hyperplasia:pelvis		8 ( 16)	0 ( 0)	0 ( 0)	0 ( 0)	10 ( 20)	0 ( 0)	0 ( 0)	0 ( 0)	17 ( 34)	1 ( 2)	0 ( 0)	19 ( 38)	3 ( 6)	0 ( 0)	0 ** ( 0)	
urin bladd			<50>				<50>				<50>				<50>			
	simple hyperplasia:transitional epithelium		1 ( 2)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	1 ( 2)	0 ( 0)	3 ( 6)	0 ( 0)	0 ( 0)	0 ( 0)	6 ( 12)	0 ( 0)	0 ( 0)	0 ( 0)
	nodular hyperplasia:transitional epithelium		0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	1 ( 2)	0 ( 0)	0 ( 0)	0 ( 0)	1 ( 2)	0 ( 0)	0 ( 0)	0 ( 0)	6 ( 12)	0 ( 0)	0 ( 0)	0 * ( 0)
	papillary hyperplasia:transitional epithelium		0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	1 ( 2)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	1 ( 2)	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 ≤ 0.05    ** : P ≤ 0.01    Test of Chi Square															

STUDY NO. : 0371  
ANIMAL : RAT F344/DuCrj  
REPORT TYPE : A1  
SEX : MALE

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

PAGE : 10

Organ	Findings	Group Name No. of Animals on Study Grade	Control 50				500 ppm 50				1000 ppm 50				2000 ppm 50			
			1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Endocrine system}																		
pituitary	cyst		<50>				<50>				<50>				<50>			
			3	0	0	0	8	0	0	0	3	0	0	0	2	0	0	0
			( 6)	( 0)	( 0)	( 0)	( 16)	( 0)	( 0)	( 0)	( 6)	( 0)	( 0)	( 0)	( 4)	( 0)	( 0)	( 0)
	hyperplasia		7	1	0	0	9	1	0	0	9	3	0	0	10	1	0	0
			( 14)	( 2)	( 0)	( 0)	( 18)	( 2)	( 0)	( 0)	( 18)	( 6)	( 0)	( 0)	( 20)	( 2)	( 0)	( 0)
	Rathke pouch		1	0	0	0	3	0	0	0	2	0	0	0	2	0	0	0
			( 2)	( 0)	( 0)	( 0)	( 6)	( 0)	( 0)	( 0)	( 4)	( 0)	( 0)	( 0)	( 4)	( 0)	( 0)	( 0)
thyroid	ultimibranhial body remanet		<50>				<50>				<50>				<50>			
			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)	( 4)	( 0)	( 0)	( 0)
	C-cell hyperplasia		3	0	0	0	3	0	0	0	5	0	0	0	2	0	0	0
			( 6)	( 0)	( 0)	( 0)	( 6)	( 0)	( 0)	( 0)	( 10)	( 0)	( 0)	( 0)	( 4)	( 0)	( 0)	( 0)
	focal follicular cell hyperplasia		1	0	0	0	0	0	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)
parathyroid	hyperplasia		<50>				<50>				<50>				<50>			
			1	0	0	0	0	0	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)

Grade 1 : Slight 2 : Moderate 3 : Marked 4 : Severe  
< a > a : Number of animals examined at the site  
b : Number of animals with lesion  
( c ) c : b / a \* 100  
Significant difference ; \* : P ≤ 0.05 \*\* : P ≤ 0.01 Test of Chi Square



STUDY NO. : 0371  
 ANIMAL : RAT F344/DuCrj  
 REPORT TYPE : A1  
 SEX : MALE

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

PAGE : 11

		Group Name No. of Animals on Study	Control 50				500 ppm 50				1000 ppm 50				2000 ppm 50			
Organ	Findings	Grade	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
(Endocrine system)																		
adrenal			<50>				<50>				<50>				<50>			
	peliosis-like lesion		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)	( 0)	( 0)	( 0)	( 0)
	hyperplasia:medulla		2	0	0	0	2	0	0	0	2	0	0	0	0	0	0	0
			( 4)	( 0)	( 0)	( 0)	( 4)	( 0)	( 0)	( 0)	( 4)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)
	focal fatty change:cortex		9	0	1	0	6	0	0	0	4	1	0	0	6	0	0	0
			( 18)	( 0)	( 2)	( 0)	( 12)	( 0)	( 0)	( 0)	( 8)	( 2)	( 0)	( 0)	( 12)	( 0)	( 0)	( 0)
(Reproductive system)																		
testis			<50>				<50>				<50>				<50>			
	atrophy		47	0	0	0	46	0	0	0	43	0	0	0	35	0	0	0 **
			( 94)	( 0)	( 0)	( 0)	( 92)	( 0)	( 0)	( 0)	( 86)	( 0)	( 0)	( 0)	( 70)	( 0)	( 0)	( 0)
	arteritis		5	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
			( 10)	( 0)	( 0)	( 0)	( 2)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)
	interstitial cell hyperplasia		2	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0
			( 4)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 4)	( 0)	( 0)	( 0)
semin ves			<50>				<50>				<50>				<50>			
	inflammation		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)	( 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 ≤ 0.05 ** : P ≤ 0.01 Test of Chi Square																		

STUDY NO. : 0371  
 ANIMAL : RAT F344/DuCrj  
 REPORT TYPE : A1  
 SEX : MALE

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

PAGE : 12

Organ	Findings	Group Name	Control				500 ppm				1000 ppm				2000 ppm			
		No. of Animals on Study	50				50				50				50			
		Grade	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
[Reproductive system]																		
prostate	inflammation		<50>				<50>				<50>				<50>			
		10	0	0	0	8	4	0	0	10	3	0	0	8	2	0	0	
		( 20 )	( 0 )	( 0 )	( 0 )	( 16 )	( 8 )	( 0 )	( 0 )	( 20 )	( 6 )	( 0 )	( 0 )	( 16 )	( 4 )	( 0 )	( 0 )	
	hyperplasia		4	0	0	0	4	0	0	0	8	0	0	0	0	0	0	0
		( 8 )	( 0 )	( 0 )	( 0 )	( 8 )	( 0 )	( 0 )	( 0 )	( 16 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	
mammary gl	duct ectasia		<50>				<50>				<50>				<50>			
		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 )	( 0 )	( 0 )	( 0 )	( 0 )	
	galactoceles		7	0	0	0	5	0	0	0	6	0	0	0	2	0	0	0
		( 14 )	( 0 )	( 0 )	( 0 )	( 10 )	( 0 )	( 0 )	( 0 )	( 12 )	( 0 )	( 0 )	( 0 )	( 4 )	( 0 )	( 0 )	( 0 )	
[Nervous system]																		
brain	gliosis		<50>				<50>				<50>				<50>			
		1	0	0	0	0	0	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 )		
	degeneration:granular cell		0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	
		( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 2 )	( 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 ≤ 0.05 \*\* : P ≤ 0.01 Test of Chi Square

STUDY NO. : 0371  
ANIMAL : RAT F344/DuCrj  
REPORT TYPE : A1  
SEX : MALE

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

PAGE : 13

Organ	Findings	Group Name No. of Animals on Study Grade	Control 50				500 ppm 50				1000 ppm 50				2000 ppm 50			
			1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
(Nervous system)																		
spinal cord	gliosis		<50>				<50>				<50>				<50>			
			1	0	0	0	0	0	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)
(Special sense organs/appendage)																		
eye	fibrosis		<50>				<50>				<50>				<50>			
			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)	( 0)	( 0)	( 0)	( 0)
	cataract		6	0	0	0	5	0	0	0	11	0	0	0	9	1	0	0
			( 12)	( 0)	( 0)	( 0)	( 10)	( 0)	( 0)	( 0)	( 22)	( 0)	( 0)	( 0)	( 18)	( 2)	( 0)	( 0)
	retinal atrophy		8	0	0	0	5	0	0	0	10	0	0	0	10	1	0	0
			( 16)	( 0)	( 0)	( 0)	( 10)	( 0)	( 0)	( 0)	( 20)	( 0)	( 0)	( 0)	( 20)	( 2)	( 0)	( 0)
Harder gl	inflammatory infiltration		<50>				<50>				<50>				<50>			
			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)	( 0)	( 0)
	lymphocytic infiltration		6	0	0	0	7	0	0	0	9	0	0	0	11	0	0	0
			( 12)	( 0)	( 0)	( 0)	( 14)	( 0)	( 0)	( 0)	( 18)	( 0)	( 0)	( 0)	( 22)	( 0)	( 0)	( 0)

Grade 1 : Slight 2 : Moderate 3 : Marked 4 : Severe  
< a > a : Number of animals examined at the site  
b : Number of animals with lesion  
( c ) c : b / a \* 100  
Significant difference ; \* : P ≤ 0.05 \*\* : P ≤ 0.01 Test of Chi Square

STUDY NO. : 0371  
 ANIMAL : RAT F344/DuCrj  
 REPORT TYPE : A1  
 SEX : MALE

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

PAGE : 14

		Group Name	Control				500 ppm				1000 ppm				2000 ppm			
		No. of Animals on Study	50				50				50				50			
Organ_____	Findings_____	Grade	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
<hr/>																		
(Musculoskeletal system)																		
<hr/>																		
muscle			<50>				<50>				<50>				<50>			
	mineralization		1	0	0	0	0	0	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 )

Grade 1 : Slight 2 : Moderate 3 : Marked 4 : Severe  
 < a > a : Number of animals examined at the site  
 b : Number of animals with lesion  
 ( c ) c : b / a \* 100  
 Significant difference : \* : P ≤ 0.05 \*\* : P ≤ 0.01 Test of Chi Square

(HPT150)

BAIS4

## APPENDIX L 2

HISTOLOGICAL FINDINGS : NON-NEOPLASTIC LESIONS : SUMMARY

RAT : FEMALE: ALL ANIMALS

(2-YEAR STUDY)

STUDY NO. : 0371  
 ANIMAL : RAT F344/DuCrj  
 REPORT TYPE : A1  
 SEX : FEMALE

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

PAGE : 15

Organ	Findings	Group Name No. of Animals on Study				Control 50				250 ppm 50				500 ppm 50				1000 ppm 50			
		Grade																			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Respiratory system}																					
nasal cavit		<50>				<50>				<50>				<50>				<50>			
	thrombus	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0
		( 0 )	( 0 )	( 0 )	( 0 )	( 10 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 4 )	( 0 )	( 0 )	( 0 )
	mineralization	24	0	0	0	16	0	0	0	16	0	0	0	16	0	0	0	12	0	0	0 *
		( 48 )	( 0 )	( 0 )	( 0 )	( 32 )	( 0 )	( 0 )	( 0 )	( 32 )	( 0 )	( 0 )	( 0 )	( 32 )	( 0 )	( 0 )	( 0 )	( 24 )	( 0 )	( 0 )	( 0 )
	eosinophilic change:olfactory epithelium	20	23	5	0	13	17	15	0 *	8	28	11	0 *	6	12	29	1 **	( 40 )	( 46 )	( 10 )	( 0 )
		( 40 )	( 46 )	( 10 )	( 0 )	( 26 )	( 34 )	( 30 )	( 0 )	( 16 )	( 56 )	( 22 )	( 0 )	( 12 )	( 24 )	( 58 )	( 2 )				
	inflammation:foreign body	4	1	0	0	2	0	0	0	1	0	0	0	1	0	0	0	( 8 )	( 2 )	( 0 )	( 0 )
		( 8 )	( 2 )	( 0 )	( 0 )	( 4 )	( 0 )	( 0 )	( 0 )	( 2 )	( 0 )	( 0 )	( 0 )	( 2 )	( 0 )	( 0 )	( 0 )				
nasopharynx		<50>				<50>				<50>				<50>				<50>			
	inflammation	1	0	0	0	0	0	0	0	0	0	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 )	( 0 )	( 0 )	( 0 )	( 0 )
lung		<50>				<50>				<50>				<50>				<50>			
	congestion	3	0	0	0	4	0	0	0	3	0	0	0	2	0	0	0	( 6 )	( 0 )	( 0 )	( 0 )
		( 6 )	( 0 )	( 0 )	( 0 )	( 8 )	( 0 )	( 0 )	( 0 )	( 6 )	( 0 )	( 0 )	( 0 )	( 4 )	( 0 )	( 0 )	( 0 )				
	hemorrhage	1	0	0	0	1	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 )	( 0 )	( 0 )	( 0 )	( 0 )				

Grade 1 : Slight 2 : Moderate 3 : Marked 4 : Severe  
 < a > a : Number of animals examined at the site  
 b : Number of animals with lesion  
 ( c ) c : b / a \* 100  
 Significant difference ; \* : P ≤ 0.05 \*\* : P ≤ 0.01 Test of Chi Square

STUDY NO. : 0371  
 ANIMAL : RAT F344/DuCrj  
 REPORT TYPE : A1  
 SEX : FEMALE

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

PAGE : 16

Organ	Findings	Group Name	Control				250 ppm				500 ppm				1000 ppm			
		No. of Animals on Study	50				50				50				50			
		Grade	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
(Respiratory system)																		
lung	osseous metaplasia		<50>				<50>				<50>				<50>			
			0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
			( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 2 )	( 0 )	( 0 )	( 0 )
	accumulation of foamy cells		10	0	0	0	7	0	0	0	8	0	0	0	14	0	0	0
			( 20 )	( 0 )	( 0 )	( 0 )	( 14 )	( 0 )	( 0 )	( 0 )	( 16 )	( 0 )	( 0 )	( 0 )	( 28 )	( 0 )	( 0 )	( 0 )
	bronchiolar-alveolar cell hyperplasia		0	1	0	0	1	0	0	0	1	0	0	0	0	0	0	0
			( 0 )	( 2 )	( 0 )	( 0 )	( 2 )	( 0 )	( 0 )	( 0 )	( 2 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )
	granulomatous pneumonia		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 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )
(Hematopoietic system)																		
bone marrow	granulation		<50>				<50>				<50>				<50>			
			5	1	2	0	12	4	0	0	6	4	1	0	6	3	0	0
			( 10 )	( 2 )	( 4 )	( 0 )	( 24 )	( 8 )	( 0 )	( 0 )	( 12 )	( 8 )	( 2 )	( 0 )	( 12 )	( 6 )	( 0 )	( 0 )
	increased hematopoiesis		0	0	0	0	5	0	0	0	4	0	0	0	2	0	0	0
			( 0 )	( 0 )	( 0 )	( 0 )	( 10 )	( 0 )	( 0 )	( 0 )	( 8 )	( 0 )	( 0 )	( 0 )	( 4 )	( 0 )	( 0 )	( 0 )
	decreased hematopoiesis		1	0	1	0	1	0	0	0	0	0	0	0	0	0	0	
			( 2 )	( 0 )	( 2 )	( 0 )	( 2 )	( 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																	
Significant difference :    * : P ≤ 0.05    ** : P ≤ 0.01    Test of Chi Square																		

STUDY NO. : 0371  
ANIMAL : RAT F344/DuCrj  
REPORT TYPE : A1  
SEX : FEMALE

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

PAGE : 17

Organ	Findings	Group Name No. of Animals on Study Grade	Control 50				250 ppm 50				500 ppm 50				1000 ppm 50			
			1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Hematopoietic system}																		
lymph node			<50>				<50>				<50>				<50>			
	lymphadenitis		0	0	0	0	3	0	0	0	1	0	0	0	1	1	0	0
			( 0 )	( 0 )	( 0 )	( 0 )	( 6 )	( 0 )	( 0 )	( 0 )	( 2 )	( 0 )	( 0 )	( 0 )	( 2 )	( 2 )	( 0 )	( 0 )
	chronic nephropathy		0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
			( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 2 )	( 0 )	( 0 )
	papillary necrosis		0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
spleen			( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 2 )	( 0 )	( 0 )	( 0 )
	deposit of hemosiderin		<50>				<50>				<50>				<50>			
			28	16	0	0	21	18	0	0	21	22	0	0	26	15	1	0
	fibrosis		( 56 )	( 32 )	( 0 )	( 0 )	( 42 )	( 36 )	( 0 )	( 0 )	( 42 )	( 44 )	( 0 )	( 0 )	( 52 )	( 30 )	( 2 )	( 0 )
			0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0
	extramedullary hematopoiesis		( 0 )	( 0 )	( 0 )	( 0 )	( 2 )	( 0 )	( 0 )	( 0 )	( 2 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )
			3	1	2	0	1	0	3	1	6	1	2	0	4	2	4	0
			( 6 )	( 2 )	( 4 )	( 0 )	( 2 )	( 0 )	( 6 )	( 2 )	( 12 )	( 2 )	( 4 )	( 0 )	( 8 )	( 4 )	( 8 )	( 0 )
{Circulatory system}																		
heart			<50>				<50>				<50>				<50>			
	thrombus		0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0
			( 0 )	( 0 )	( 0 )	( 0 )	( 2 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 2 )	( 0 )	( 0 )	( 0 )

Grade 1 : Slight 2 : Moderate 3 : Marked 4 : Severe  
< a > a : Number of animals examined at the site  
b : Number of animals with lesion  
( c ) c : b / a \* 100  
Significant difference ; \* : P ≤ 0.05 \*\* : P ≤ 0.01 Test of Chi Square



STUDY NO. : 0371  
 ANIMAL : RAT F344/DuCrj  
 REPORT TYPE : A1  
 SEX : FEMALE

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

PAGE : 18

		Group Name	Control				250 ppm				500 ppm				1000 ppm			
		No. of Animals on Study	50				50				50				50			
Organ	Findings	Grade	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Circulatory system}																		
heart			<50>				<50>				<50>				<50>			
	embolus		1 ( 2)	0 ( 0)	0 ( 0)	0 ( 0)	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		1 ( 2)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)
	fibrosis:focal		0 ( 0)	1 ( 2)	0 ( 0)	0 ( 0)	1 ( 2)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	1 ( 2)	0 ( 0)	0 ( 0)	0 ( 0)
	myocardial fibrosis		12 ( 24)	1 ( 2)	0 ( 0)	0 ( 0)	19 ( 38)	0 ( 0)	0 ( 0)	0 ( 0)	21 ( 42)	0 ( 0)	0 ( 0)	0 ( 0)	18 ( 36)	0 ( 0)	0 ( 0)	0 ( 0)
artery/aort			<50>				<50>				<50>				<50>			
	arteritis		1 ( 2)	0 ( 0)	0 ( 0)	0 ( 0)	1 ( 2)	0 ( 0)	0 ( 0)	0 ( 0)	1 ( 2)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)
{Digestive system}																		
tooth			<50>				<50>				<50>				<50>			
	inflammation		5 ( 10)	0 ( 0)	0 ( 0)	0 ( 0)	3 ( 6)	0 ( 0)	0 ( 0)	0 ( 0)	3 ( 6)	0 ( 0)	0 ( 0)	0 ( 0)	1 ( 2)	0 ( 0)	0 ( 0)	0 ( 0)

Grade 1 : Slight 2 : Moderate 3 : Marked 4 : Severe  
 < a > a : Number of animals examined at the site  
 b : Number of animals with lesion  
 ( c ) c : b / a \* 100  
 Significant difference ; \* : P ≤ 0.05 \*\* : P ≤ 0.01 Test of Chi Square

STUDY NO. : 0371  
 ANIMAL : RAT F344/DuCrj  
 REPORT TYPE : A1  
 SEX : FEMALE

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

PAGE : 19

		Group Name	Control				250 ppm				500 ppm				1000 ppm				
		No. of Animals on Study	50				50				50				50				
Organ	Findings	Grade	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	
(Digestive system)																			
stomach	mineralization		<50>				<50>				<50>				<50>				
		1	0	0	0	0	0	0	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)	( 0)	
	basal cell hyperplasia		0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
			( 0)	( 0)	( 0)	( 0)	( 2)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)
	epidermal cyst		0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
			( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 2)	( 0)	( 0)	( 0)	( 0)
	ulcer:forestomach		1	0	0	0	1	1	2	0	0	0	0	0	0	0	1	0	0
			( 2)	( 0)	( 0)	( 0)	( 2)	( 2)	( 4)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 2)	( 0)	( 0)	( 0)
	erosion:glandular stomach		1	0	0	0	2	0	0	0	0	0	0	0	0	1	0	0	0
			( 2)	( 0)	( 0)	( 0)	( 4)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 2)	( 0)	( 0)	( 0)	( 0)
	squamous cell hyperplasia:forestomach		1	0	0	0	3	0	0	0	0	0	0	0	0	2	0	0	0
			( 2)	( 0)	( 0)	( 0)	( 6)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 4)	( 0)	( 0)	( 0)	( 0)
large intes	erosion		<50>				<50>				<50>				<50>				
		0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	
			( 0)	( 0)	( 0)	( 0)	( 2)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	
liver	herniation		<50>				<50>				<50>				<50>				
		14	0	0	0	16	0	0	0	10	0	0	0	6	0	0	0	0	
		( 28)	( 0)	( 0)	( 0)	( 32)	( 0)	( 0)	( 0)	( 20)	( 0)	( 0)	( 0)	( 12)	( 0)	( 0)	( 0)	( 0)	

Grade 1 : Slight 2 : Moderate 3 : Marked 4 : Severe  
 < a > a : Number of animals examined at the site  
 b : Number of animals with lesion  
 ( c ) c : b / a \* 100  
 Significant difference ; \* : P ≤ 0.05 \*\* : P ≤ 0.01 Test of Chi Square

STUDY NO. : 0371  
ANIMAL : RAT F344/DuCrj  
REPORT TYPE : A1  
SEX : FEMALE

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

PAGE : 20

Organ	Findings	Group Name No. of Animals on Study				Control 50				250 ppm 50				500 ppm 50				1000 ppm 50			
		Grade																			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Digestive system}																					
liver		<50>				<50>				<50>				<50>				<50>			
	peliosis-like lesion	1 ( 2)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	1 ( 2)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	1 ( 2)	0 ( 0)	0 ( 0)	0 ( 0)	1 ( 2)	0 ( 0)	0 ( 0)
	necrosis:central	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	1 ( 2)	0 ( 0)	0 ( 0)	1 ( 2)	0 ( 0)	0 ( 0)
	necrosis:focal	1 ( 2)	0 ( 0)	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 ( 2)	0 ( 0)	0 ( 0)	1 ( 2)	0 ( 0)	0 ( 0)
	granulation	30 ( 60)	4 ( 8)	3 ( 6)	2 ( 4)	15 ( 30)	9 ( 18)	8 ( 16)	0 * ( 0)	26 ( 52)	7 ( 14)	3 ( 6)	0 ( 0)	21 ( 42)	6 ( 12)	3 ( 6)	2 ( 4)	21 ( 42)	6 ( 12)	3 ( 6)	2 ( 4)
	clear cell focus	1 ( 2)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	1 ( 2)	1 ( 2)	0 ( 0)	0 ( 0)	0 ( 0)	3 ( 6)	0 ( 0)	0 ( 0)	0 ( 0)	3 ( 6)	0 ( 0)	0 ( 0)
	acidophilic cell focus	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	1 ( 2)	0 ( 0)	0 ( 0)	0 ( 0)	3 ( 6)	1 ( 2)	1 ( 2)	0 ( 0)	3 ( 6)	1 ( 2)	1 ( 2)	0 ( 0)
	basophilic cell focus	7 ( 14)	1 ( 2)	0 ( 0)	0 ( 0)	15 ( 30)	6 ( 12)	0 ( 0)	0 * ( 0)	21 ( 42)	13 ( 26)	5 ( 10)	0 ** ( 0)	17 ( 34)	8 ( 16)	8 ( 16)	0 ** ( 0)	17 ( 34)	8 ( 16)	8 ( 16)	0 ** ( 0)
	bile duct hyperplasia	13 ( 26)	0 ( 0)	0 ( 0)	0 ( 0)	10 ( 20)	0 ( 0)	0 ( 0)	0 ( 0)	10 ( 20)	0 ( 0)	0 ( 0)	0 ( 0)	3 ( 6)	0 ( 0)	0 ( 0)	0 * ( 0)	3 ( 6)	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 ≤ 0.05 \*\* : P ≤ 0.01 Test of Chi Square

STUDY NO. : 0371  
 ANIMAL : RAT F344/DuCrj  
 REPORT TYPE : A1  
 SEX : FEMALE

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

PAGE : 21

Organ_____	Findings_____	Group Name	Control				250 ppm				500 ppm				1000 ppm			
		No. of Animals on Study	50				50				50				50			
		Grade	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Digestive system}																		
liver			<50>				<50>				<50>				<50>			
	cholangiofibrosis		0	0	0	0	0	0	1	0	0	0	2	0	0	1	0	0
		( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 2 )	( 0 )	( 0 )	( 0 )	( 4 )	( 0 )	( 0 )	( 2 )	( 0 )	( 0 )	
			<50>				<50>				<50>				<50>			
	biliary cyst		0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
		( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 2 )	( 0 )	( 0 )	
pancreas			<50>				<50>				<50>				<50>			
	atrophy		0	0	0	0	6	0	0	0 *	1	0	0	0	4	0	0	0
		( 0 )	( 0 )	( 0 )	( 0 )	( 12 )	( 0 )	( 0 )	( 0 )	( 2 )	( 0 )	( 0 )	( 0 )	( 8 )	( 0 )	( 0 )	( 0 )	
{Urinary system}																		
kidney			<50>				<50>				<50>				<50>			
	infarct		0	1	0	0	0	0	0	0	2	0	0	0	3	0	0	0
		( 0 )	( 2 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 4 )	( 0 )	( 0 )	( 0 )	( 6 )	( 0 )	( 0 )	( 0 )	
			<50>				<50>				<50>				<50>			
	cyst		0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
		( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 2 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	
			<50>				<50>				<50>				<50>			
	chronic nephropathy		27	3	5	0	27	2	4	0	25	9	3	0	30	4	2	0
		( 54 )	( 6 )	( 10 )	( 0 )	( 54 )	( 4 )	( 8 )	( 0 )	( 50 )	( 18 )	( 6 )	( 0 )	( 60 )	( 8 )	( 4 )	( 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 ≤ 0.05 \*\* : P ≤ 0.01 Test of Chi Square

STUDY NO. : 0371  
 ANIMAL : RAT F344/DuCrj  
 REPORT TYPE : A1  
 SEX : FEMALE

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

PAGE : 22

Organ	Findings	Group Name No. of Animals on Study Grade	Control 50				250 ppm 50				500 ppm 50				1000 ppm 50			
			1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Urinary system}																		
kidney			<50>				<50>				<50>				<50>			
	hydronephrosis		0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0
			( 0 )	( 0 )	( 0 )	( 0 )	( 2 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 2 )	( 0 )	( 0 )	( 0 )
	papillary necrosis		2	0	0	0	1	0	0	0	1	0	0	0	6	5	0	0 *
			( 4 )	( 0 )	( 0 )	( 0 )	( 2 )	( 0 )	( 0 )	( 0 )	( 2 )	( 0 )	( 0 )	( 0 )	( 12 )	( 10 )	( 0 )	( 0 )
	mineralization:cortico-medullary junction		1	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0
			( 2 )	( 0 )	( 0 )	( 0 )	( 2 )	( 0 )	( 0 )	( 0 )	( 2 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )
	mineralization:papilla		7	0	0	0	8	1	0	0	12	0	0	0	22	2	0	0 **
			( 14 )	( 0 )	( 0 )	( 0 )	( 16 )	( 2 )	( 0 )	( 0 )	( 24 )	( 0 )	( 0 )	( 0 )	( 44 )	( 4 )	( 0 )	( 0 )
	urothelial hyperplasia:pelvis		2	0	0	0	12	0	0	0 **	10	0	0	0 *	17	0	0	0 **
			( 4 )	( 0 )	( 0 )	( 0 )	( 24 )	( 0 )	( 0 )	( 0 )	( 20 )	( 0 )	( 0 )	( 0 )	( 34 )	( 0 )	( 0 )	( 0 )
urin bladd			<50>				<50>				<50>				<50>			
	osseous metaplasia		0	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 )
	simple hyperplasia:transitional epithelium		0	0	0	0	1	0	0	0	0	0	0	0	0	2	0	0
			( 0 )	( 0 )	( 0 )	( 0 )	( 2 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 4 )	( 0 )	( 0 )
	nodular hyperplasia:transitional epithelium		0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
			( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 2 )	( 0 )	( 0 )	( 0 )

Grade 1 : Slight 2 : Moderate 3 : Marked 4 : Severe  
 < a > a : Number of animals examined at the site  
 b : Number of animals with lesion  
 ( c ) c : b / a \* 100  
 Significant difference ; \* : P ≤ 0.05 \*\* : P ≤ 0.01 Test of Chi Square

STUDY NO. : 0371  
 ANIMAL : RAT F344/DuCrj  
 REPORT TYPE : A1  
 SEX : FEMALE

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

PAGE : 23

Organ	Findings	Group Name No. of Animals on Study				Control 50				250 ppm 50				500 ppm 50				1000 ppm 50			
		Grade				1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Endocrine system}																					
pituitary	cyst	<50>				12	0	0	0	24	2	0	0 *	21	1	0	0	15	0	0	0
		( 24)	( 0)	( 0)	( 0)	( 24)	( 0)	( 0)	( 0)	( 48)	( 4)	( 0)	( 0)	( 42)	( 2)	( 0)	( 0)	( 30)	( 0)	( 0)	( 0)
	hyperplasia	8	2	0	0	( 16)	( 4)	( 0)	( 0)	13	0	0	0	14	3	0	0	9	0	0	0
		( 16)	( 4)	( 0)	( 0)	( 26)	( 0)	( 0)	( 0)	( 28)	( 6)	( 0)	( 0)	( 18)	( 0)	( 0)	( 0)	( 18)	( 0)	( 0)	( 0)
	Rathke pouch	2	0	0	0	( 4)	( 0)	( 0)	( 0)	2	0	0	0	1	0	0	0	1	0	0	0
		( 4)	( 0)	( 0)	( 0)	( 4)	( 0)	( 0)	( 0)	( 2)	( 0)	( 0)	( 0)	( 2)	( 0)	( 0)	( 0)	( 2)	( 0)	( 0)	( 0)
thyroid	ultimibranhial body remanet	<50>				2	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0
		( 4)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 4)	( 0)	( 0)	( 0)
	C-cell hyperplasia	6	0	0	0	( 12)	( 0)	( 0)	( 0)	7	0	0	0	3	0	0	0	7	0	0	0
		( 12)	( 0)	( 0)	( 0)	( 14)	( 0)	( 0)	( 0)	( 6)	( 0)	( 0)	( 0)	( 14)	( 0)	( 0)	( 0)	( 14)	( 0)	( 0)	( 0)
adrenal	peliosis-like lesion	<50>				24	0	0	0	24	0	0	0	23	0	0	0	18	0	0	0
		( 48)	( 0)	( 0)	( 0)	( 48)	( 0)	( 0)	( 0)	( 48)	( 0)	( 0)	( 0)	( 46)	( 0)	( 0)	( 0)	( 36)	( 0)	( 0)	( 0)
	necrosis:zonal	0	0	0	0	( 0)	( 0)	( 0)	( 0)	0	1	0	0	0	0	0	0	0	0	0	0
		( 0)	( 0)	( 0)	( 0)	( 0)	( 2)	( 0)	( 0)	( 0)	( 2)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)

Grade 1 : Slight 2 : Moderate 3 : Marked 4 : Severe  
 < a > a : Number of animals examined at the site  
 b : Number of animals with lesion  
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 Significant difference ; \* : P ≤ 0.05 \*\* : P ≤ 0.01 Test of Chi Square

STUDY NO. : 0371  
 ANIMAL : RAT F344/DuCrj  
 REPORT TYPE : A1  
 SEX : FEMALE

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

PAGE : 24

Organ	Findings	Group Name No. of Animals on Study				Control 50				250 ppm 50				500 ppm 50				1000 ppm 50			
		Grade																			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Endocrine system}																					
adrenal		<50>				<50>				<50>				<50>				<50>			
	fibrosis	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
		( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 2 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )
	hyperplasia:cortical cell	2	0	0	0	1	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0
		( 4 )	( 0 )	( 0 )	( 0 )	( 2 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 4 )	( 0 )	( 0 )	( 0 )	( 4 )	( 0 )	( 0 )	( 0 )
	hyperplasia:medulla	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
		( 2 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 2 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )
	focal fatty change:cortex	4	1	0	0	9	2	1	0	6	3	0	0	9	4	1	0	9	4	1	0
		( 8 )	( 2 )	( 0 )	( 0 )	( 18 )	( 4 )	( 2 )	( 0 )	( 12 )	( 6 )	( 0 )	( 0 )	( 18 )	( 8 )	( 2 )	( 0 )	( 18 )	( 8 )	( 2 )	( 0 )
{Reproductive system}																					
ovary		<50>				<50>				<50>				<50>				<50>			
	cyst	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
		( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 2 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )
uterus		<50>				<50>				<50>				<50>				<50>			
	dilatation	3	0	0	0	1	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0
		( 6 )	( 0 )	( 0 )	( 0 )	( 2 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 4 )	( 0 )	( 0 )	( 0 )	( 4 )	( 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 ≤ 0.05 \*\* : P ≤ 0.01 Test of Chi Square

STUDY NO. : 0371  
 ANIMAL : RAT F344/DuCrj  
 REPORT TYPE : A1  
 SEX : FEMALE

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

PAGE : 25

Organ_____	Findings_____	Group Name	Control				250 ppm				500 ppm				1000 ppm			
		No. of Animals on Study	50				50				50				50			
		Grade	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
<hr/>																		
{Reproductive system}																		
uterus			<50>				<50>				<50>				<50>			
	cystic change		2	0	0	0	2	0	0	0	4	0	0	0	1	0	0	0
			( 4)	( 0)	( 0)	( 0)	( 4)	( 0)	( 0)	( 0)	( 8)	( 0)	( 0)	( 0)	( 2)	( 0)	( 0)	( 0)
	decidual change		1	0	0	0	0	0	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)
mammary gl			<50>				<50>				<50>				<50>			
	galactoceles		3	0	0	0	9	0	0	0	5	0	0	0	2	0	0	0
			( 6)	( 0)	( 0)	( 0)	( 18)	( 0)	( 0)	( 0)	( 10)	( 0)	( 0)	( 0)	( 4)	( 0)	( 0)	( 0)
{Nervous system}																		
spinal cord			<50>				<50>				<50>				<50>			
	hemorrhage		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)	( 0)	( 0)	( 0)	( 0)
{Special sense organs/appendage}																		
eye			<50>				<50>				<50>				<50>			
	cataract		8	0	0	0	2	0	0	0	4	0	0	0	4	0	0	0
			( 16)	( 0)	( 0)	( 0)	( 4)	( 0)	( 0)	( 0)	( 8)	( 0)	( 0)	( 0)	( 8)	( 0)	( 0)	( 0)

Grade 1 : Slight 2 : Moderate 3 : Marked 4 : Severe  
 < a > a : Number of animals examined at the site  
 b : Number of animals with lesion  
 ( c ) c : b / a \* 100  
 Significant difference ; \* : P ≤ 0.05 \*\* : P ≤ 0.01 Test of Chi Square



STUDY NO. : 0371  
 ANIMAL : RAT F344/DuCrj  
 REPORT TYPE : A1  
 SEX : FEMALE

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

PAGE : 26

Organ_____	Findings_____	Group Name	Control				250 ppm				500 ppm				1000 ppm			
		No. of Animals on Study	50				50				50				50			
		Grade	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Special sense organs/appendage}																		
eye			<50>				<50>				<50>				<50>			
	retinal atrophy		9	0	0	0	2	0	0	0	4	0	0	0	6	0	0	0
			( 18)	( 0)	( 0)	( 0)	( 4)	( 0)	( 0)	( 0)	( 8)	( 0)	( 0)	( 0)	( 12)	( 0)	( 0)	( 0)
Harder gl			<50>				<50>				<50>				<50>			
	lymphocytic infiltration		5	0	0	0	11	0	0	0	7	0	0	0	11	0	0	0
			( 10)	( 0)	( 0)	( 0)	( 22)	( 0)	( 0)	( 0)	( 14)	( 0)	( 0)	( 0)	( 22)	( 0)	( 0)	( 0)
{Musculoskeletal system}																		
bone			<50>				<50>				<50>				<50>			
	osteosclerosis		1	0	2	0	1	0	0	0	0	0	0	0	3	0	0	0
			( 2)	( 0)	( 4)	( 0)	( 2)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 6)	( 0)	( 0)	( 0)

Grade 1 : Slight 2 : Moderate 3 : Marked 4 : Severe  
 < a > a : Number of animals examined at the site  
 b : Number of animals with lesion  
 ( c ) c : b / a \* 100  
 Significant difference ; \* : P ≤ 0.05 \*\* : P ≤ 0.01 Test of Chi Square

## APPENDIX L 3

HISTOLOGICAL FINDINGS : NON-NEOPLASTIC LESIONS : SUMMARY

RAT : MALE : SACRIFICED ANIMALS

(2-YEAR STUDY)

STUDY NO. : 0371  
ANIMAL : RAT F344/DuCrj  
REPORT TYPE : A1  
SEX : MALE

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

PAGE : 1

Organ	Findings	Group Name No. of Animals on Study Grade	Control 41				500 ppm 36				1000 ppm 42				2000 ppm 42			
			1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
(Integumentary system/appandage)																		
skin/app			<41>				<36>				<42>				<42>			
	scab		0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
			( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 2 )	( 0 )	( 0 )	( 0 )
	epidermal cyst		0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0
			( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 7 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )
(Respiratory system)																		
nasal cavit			<41>				<36>				<42>				<42>			
	mineralization		19	0	0	0	20	0	0	0	16	0	0	0	8	0	0	0 *
			( 46 )	( 0 )	( 0 )	( 0 )	( 56 )	( 0 )	( 0 )	( 0 )	( 38 )	( 0 )	( 0 )	( 0 )	( 19 )	( 0 )	( 0 )	( 0 )
	eosinophilic change:olfactory epithelium		24	3	2	0	18	7	1	0	20	16	2	0 **	17	20	5	0 **
			( 59 )	( 7 )	( 5 )	( 0 )	( 50 )	( 19 )	( 3 )	( 0 )	( 48 )	( 38 )	( 5 )	( 0 )	( 40 )	( 48 )	( 12 )	( 0 )
	eosinophilic change:respiratory epithelium		2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			( 5 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )
	inflammation:foreign body		14	1	0	0	7	2	1	0	10	2	0	0	2	1	0	0 **
			( 34 )	( 2 )	( 0 )	( 0 )	( 19 )	( 6 )	( 3 )	( 0 )	( 24 )	( 5 )	( 0 )	( 0 )	( 5 )	( 2 )	( 0 )	( 0 )
	inflammation:olfactory epithelium		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 )	( 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 ≤ 0.05 \*\* : P ≤ 0.01 Test of Chi Square

STUDY NO. : 0371  
 ANIMAL : RAT F344/DuCrj  
 REPORT TYPE : A1  
 SEX : MALE

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

PAGE : 2

Organ	Findings	Group Name No. of Animals on Study Grade				Control 41				500 ppm 36				1000 ppm 42				2000 ppm 42			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Respiratory system}																					
nasal cavit		<41>				<36>				<42>				<42>				<42>			
	squamous cell metaplasia:olfactory epithelium	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0
		( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 2 )	( 0 )	( 0 )	( 0 )	( 2 )	( 0 )	( 0 )	( 0 )
nasopharynx		<41>				<36>				<42>				<42>				<42>			
	inflammation:foreign body	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0
		( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 5 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )
lung		<41>				<36>				<42>				<42>				<42>			
	hemorrhage	2	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
		( 5 )	( 0 )	( 0 )	( 0 )	( 3 )	( 0 )	( 0 )	( 0 )	( 2 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )
		<41>				<36>				<42>				<42>				<42>			
	osseous metaplasia	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		( 0 )	( 0 )	( 0 )	( 0 )	( 6 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )
		<41>				<36>				<42>				<42>				<42>			
	atypical hyperplasia	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
		( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 2 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )
		<41>				<36>				<42>				<42>				<42>			
	accumulation of foamy cells	0	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	2	0	0	0
		( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 5 )	( 0 )	( 0 )	( 0 )	( 5 )	( 0 )	( 0 )	( 0 )	( 5 )	( 0 )	( 0 )	( 0 )
		<41>				<36>				<42>				<42>				<42>			
	bronchiolar alveolar cell hyperplasia	1	1	0	0	2	2	0	0	5	0	0	0	4	1	0	0	4	1	0	0
		( 2 )	( 2 )	( 0 )	( 0 )	( 6 )	( 6 )	( 0 )	( 0 )	( 12 )	( 0 )	( 0 )	( 0 )	( 10 )	( 2 )	( 0 )	( 0 )	( 10 )	( 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  
 ( c ) c : b / a \* 100  
 Significant difference ; \* : P ≤ 0.05 \*\* : P ≤ 0.01 Test of Chi Square

STUDY NO. : 0371  
 ANIMAL : RAT F344/DuCrj  
 REPORT TYPE : A1  
 SEX : MALE

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

PAGE : 3

Organ	Findings	Group Name No. of Animals on Study Grade				Control 41				500 ppm 36				1000 ppm 42				2000 ppm 42			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
(Hematopoietic system)																					
bone marrow		<41>				<36>				<42>				<42>				<42>			
	granulation	5	0	0	0	2	0	0	0	2	0	1	0	3	0	0	0	3	0	0	0
		( 12)	( 0)	( 0)	( 0)	( 6)	( 0)	( 0)	( 0)	( 5)	( 0)	( 2)	( 0)	( 7)	( 0)	( 0)	( 0)	( 7)	( 0)	( 0)	( 0)
	increased hematopoiesis	3	0	0	0	3	0	0	0	0	0	0	0	1	0	0	0	2	0	0	0
		( 7)	( 0)	( 0)	( 0)	( 8)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 2)	( 0)	( 0)	( 0)	( 2)	( 0)	( 0)	( 0)
	decreased hematopoiesis	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
		( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 2)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)
lymph node		<41>				<36>				<42>				<42>				<42>			
	lymphadenitis	0	0	0	0	1	0	0	0	2	0	0	0	2	0	0	0	5	0	0	0
spleen		( 0)	( 0)	( 0)	( 0)	( 3)	( 0)	( 0)	( 0)	( 5)	( 0)	( 0)	( 0)	( 5)	( 0)	( 0)	( 0)	( 5)	( 0)	( 0)	( 0)
	deposit of hemosiderin	30	0	0	0	28	0	0	0	38	0	0	0	33	0	0	0	79	0	0	0
		( 73)	( 0)	( 0)	( 0)	( 78)	( 0)	( 0)	( 0)	( 90)	( 0)	( 0)	( 0)	( 79)	( 0)	( 0)	( 0)	( 79)	( 0)	( 0)	( 0)
	fibrosis	2	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0
		( 5)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 5)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)
	extramedullary hematopoiesis	2	0	0	0	2	0	2	0	5	1	0	0	1	0	0	0	2	0	0	0
		( 5)	( 0)	( 0)	( 0)	( 6)	( 0)	( 6)	( 0)	( 12)	( 2)	( 0)	( 0)	( 2)	( 0)	( 0)	( 0)	( 2)	( 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 ≤ 0.05 \*\* : P ≤ 0.01 Test of Chi Square

STUDY NO. : 0371  
ANIMAL : RAT F344/DuCrj  
REPORT TYPE : A1  
SEX : MALE

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

PAGE : 4

		Group Name No. of Animals on Study Grade	Control 41				500 ppm 36				1000 ppm 42				2000 ppm 42			
Organ	Findings		1 (%)	2 (%)	3 (%)	4 (%)	1 (%)	2 (%)	3 (%)	4 (%)	1 (%)	2 (%)	3 (%)	4 (%)	1 (%)	2 (%)	3 (%)	4 (%)
{Circulatory system}																		
heart			<41>				<36>				<42>				<42>			
	inflammatory cell nest		1 ( 2)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)
	fibrosis:focal		0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	1 ( 3)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)
	myocardial fibrosis		18 ( 44)	0 ( 0)	0 ( 0)	0 ( 0)	12 ( 33)	0 ( 0)	0 ( 0)	0 ( 0)	11 ( 26)	0 ( 0)	0 ( 0)	0 ( 0)	8 ( 19)	0 ( 0)	0 ( 0)	0 ( 0) *
artery/aort			<41>				<36>				<42>				<42>			
	arteritis		0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	1 ( 2)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)
{Digestive system}																		
oral cavity			<41>				<36>				<42>				<42>			
	erosion		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 ( 2)	0 ( 0)	0 ( 0)	0 ( 0)
tooth			<41>				<36>				<42>				<42>			
	inflammation		9 ( 22)	1 ( 2)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0) **	1 ( 2)	0 ( 0)	0 ( 0)	0 ( 0) *	5 ( 12)	0 ( 0)	0 ( 0)	0 ( 0)

Grade 1 : Slight 2 : Moderate 3 : Marked 4 : Severe  
< a > a : Number of animals examined at the site  
b : Number of animals with lesion  
( c ) c : b / a \* 100  
Significant difference ; \* : P ≤ 0.05 \*\* : P ≤ 0.01 Test of Chi Square

STUDY NO. : 0371  
 ANIMAL : RAT F344/DuCrj  
 REPORT TYPE : A1  
 SEX : MALE

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

PAGE : 5

Organ_____	Findings_____	Group Name	Control				500 ppm				1000 ppm				2000 ppm			
		No. of Animals on Study	41				36				42				42			
		Grade	1 (%)	2 (%)	3 (%)	4 (%)	1 (%)	2 (%)	3 (%)	4 (%)	1 (%)	2 (%)	3 (%)	4 (%)	1 (%)	2 (%)	3 (%)	4 (%)
{Digestive system}																		
tooth	epidermal cyst		<41>				<36>				<42>				<42>			
			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 ( 2 )	0 ( 0 )	0 ( 0 )	0 ( 0 )
stomach	ulcer:forestomach		<41>				<36>				<42>				<42>			
			0 ( 0 )	0 ( 0 )	0 ( 0 )	0 ( 0 )	0 ( 0 )	0 ( 0 )	0 ( 0 )	0 ( 0 )	1 ( 2 )	0 ( 0 )	0 ( 0 )	0 ( 0 )	0 ( 0 )	0 ( 0 )	0 ( 0 )	0 ( 0 )
	squamous cell hyperplasia:forestomach		1 ( 2 )	0 ( 0 )	0 ( 0 )	0 ( 0 )	0 ( 0 )	1 ( 3 )	0 ( 0 )	0 ( 0 )	0 ( 0 )	0 ( 0 )	0 ( 0 )	0 ( 0 )	0 ( 0 )	0 ( 0 )	0 ( 0 )	0 ( 0 )
liver	herniation		<41>				<36>				<42>				<42>			
			8 ( 20 )	0 ( 0 )	0 ( 0 )	0 ( 0 )	4 ( 11 )	0 ( 0 )	0 ( 0 )	0 ( 0 )	5 ( 12 )	0 ( 0 )	0 ( 0 )	0 ( 0 )	8 ( 19 )	0 ( 0 )	0 ( 0 )	0 ( 0 )
	granulation		18 ( 44 )	2 ( 5 )	0 ( 0 )	0 ( 0 )	16 ( 44 )	1 ( 3 )	0 ( 0 )	0 ( 0 )	11 ( 26 )	3 ( 7 )	0 ( 0 )	0 ( 0 )	17 ( 40 )	1 ( 2 )	0 ( 0 )	0 ( 0 )
	clear cell focus		2 ( 5 )	0 ( 0 )	0 ( 0 )	0 ( 0 )	9 ( 25 )	0 ( 0 )	0 ( 0 )	0 ( 0 )	8 ( 19 )	3 ( 7 )	1 ( 2 )	0 ( 0 )	3 ( 7 )	0 ( 0 )	0 ( 0 )	0 ( 0 )
	acidophilic cell focus		1 ( 2 )	0 ( 0 )	0 ( 0 )	0 ( 0 )	2 ( 6 )	0 ( 0 )	0 ( 0 )	0 ( 0 )	1 ( 2 )	1 ( 2 )	0 ( 0 )	0 ( 0 )	4 ( 10 )	1 ( 2 )	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 ≤ 0.05 \*\* : P ≤ 0.01 Test of Chi Square

STUDY NO. : 0371  
 ANIMAL : RAT F344/DuCrj  
 REPORT TYPE : A1  
 SEX : MALE

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

PAGE : 6

Organ	Findings	Group Name No. of Animals on Study Grade	Control 41				500 ppm 36				1000 ppm 42				2000 ppm 42			
			1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Digestive system}																		
liver			<41>				<36>				<42>				<42>			
	basophilic cell focus		17	1	0	0	17	8	0	0 **	13	16	4	1 **	21	12	1	0 **
			( 41)	( 2)	( 0)	( 0)	( 47)	( 22)	( 0)	( 0)	( 31)	( 38)	( 10)	( 2)	( 50)	( 29)	( 2)	( 0)
	bile duct hyperplasia		41	0	0	0	36	0	0	0	42	0	0	0	41	0	0	0
			(100)	( 0)	( 0)	( 0)	(100)	( 0)	( 0)	( 0)	(100)	( 0)	( 0)	( 0)	( 98)	( 0)	( 0)	( 0)
	biliary cyst		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)	( 0)
pancreas			<41>				<36>				<42>				<42>			
	atrophy		4	0	1	0	7	1	0	0	9	0	0	0	7	0	0	0
			( 10)	( 0)	( 2)	( 0)	( 19)	( 3)	( 0)	( 0)	( 21)	( 0)	( 0)	( 0)	( 17)	( 0)	( 0)	( 0)
	hyperplasia: acinar cell		0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
			( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 2)	( 0)	( 0)	( 0)
{Urinary system}																		
kidney			<41>				<36>				<42>				<42>			
	infarct		0	0	0	0	1	0	0	0	2	0	0	0	6	1	0	0 *
			( 0)	( 0)	( 0)	( 0)	( 3)	( 0)	( 0)	( 0)	( 5)	( 0)	( 0)	( 0)	( 14)	( 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  
 ( c ) c : b / a \* 100  
 Significant difference ; \* : P ≤ 0.05 \*\* : P ≤ 0.01 Test of Chi Square



STUDY NO. : 0371  
ANIMAL : RAT F344/DuCrj  
REPORT TYPE : A1  
SEX : MALE

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

PAGE : 7

Organ	Findings	Group Name	Control				500 ppm				1000 ppm				2000 ppm			
		No. of Animals on Study	41				36				42				42			
		Grade	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
(Urinary system)																		
kidney			<41>				<36>				<42>				<42>			
	cyst		0	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 )
	chronic nephropathy		2	20	18	1	6	16	11	3	6	18	18	0	15	16	4	0 **
			( 5 )	( 49 )	( 44 )	( 2 )	( 17 )	( 44 )	( 31 )	( 8 )	( 14 )	( 43 )	( 43 )	( 0 )	( 36 )	( 38 )	( 10 )	( 0 )
	papillary necrosis		0	0	0	0	0	0	0	0	0	0	0	7	5	0	0 **	
			( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 17 )	( 12 )	( 0 )	( 0 )	
	mineralization:papilla		6	0	0	0	16	0	0	0 **	14	0	0	0	21	2	0	0 **
			( 15 )	( 0 )	( 0 )	( 0 )	( 44 )	( 0 )	( 0 )	( 0 )	( 33 )	( 0 )	( 0 )	( 0 )	( 50 )	( 5 )	( 0 )	( 0 )
	urothelial hyperplasia:pelvis		5	0	0	0	6	0	0	0	15	1	0	0 *	17	3	0	0 **
			( 12 )	( 0 )	( 0 )	( 0 )	( 17 )	( 0 )	( 0 )	( 0 )	( 36 )	( 2 )	( 0 )	( 0 )	( 40 )	( 7 )	( 0 )	( 0 )
urin bladd			<41>				<36>				<42>				<42>			
	simple hyperplasia:transitional epithelium		1	0	0	0	0	0	0	0	3	0	0	0	6	0	0	0
			( 2 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 7 )	( 0 )	( 0 )	( 0 )	( 14 )	( 0 )	( 0 )	( 0 )
	nodular hyperplasia:transitional epithelium		0	0	0	0	1	0	0	0	1	0	0	0	5	0	0	0
			( 0 )	( 0 )	( 0 )	( 0 )	( 3 )	( 0 )	( 0 )	( 0 )	( 2 )	( 0 )	( 0 )	( 0 )	( 12 )	( 0 )	( 0 )	( 0 )
	papillary hyperplasia:transitional epithelium		0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	
			( 0 )	( 0 )	( 0 )	( 0 )	( 3 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 2 )	( 0 )	( 0 )	( 0 )	

Grade 1 : Slight 2 : Moderate 3 : Marked 4 : Severe  
< a > a : Number of animals examined at the site  
b : Number of animals with lesion  
( c ) c : b / a \* 100  
Significant difference ; \* : P ≤ 0.05 \*\* : P ≤ 0.01 Test of Chi Square

STUDY NO. : 0371  
 ANIMAL : RAT F344/DuCrj  
 REPORT TYPE : A1  
 SEX : MALE

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

PAGE : 8

Organ	Findings	Group Name	Control				500 ppm				1000 ppm				2000 ppm			
		No. of Animals on Study	41				36				42				42			
		Grade	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
(Endocrine system)																		
pituitary		<41>																
	cyst	3	0	0	0	7	0	0	0	3	0	0	0	2	0	0	0	0
		( 7)	( 0)	( 0)	( 0)	( 19)	( 0)	( 0)	( 0)	( 7)	( 0)	( 0)	( 0)	( 5)	( 0)	( 0)	( 0)	( 0)
	hyperplasia	7	1	0	0	7	1	0	0	8	3	0	0	10	0	0	0	0
		( 17)	( 2)	( 0)	( 0)	( 19)	( 3)	( 0)	( 0)	( 19)	( 7)	( 0)	( 0)	( 24)	( 0)	( 0)	( 0)	( 0)
	Rathke pouch	1	0	0	0	3	0	0	0	2	0	0	0	2	0	0	0	0
		( 2)	( 0)	( 0)	( 0)	( 8)	( 0)	( 0)	( 0)	( 5)	( 0)	( 0)	( 0)	( 5)	( 0)	( 0)	( 0)	( 0)
thyroid		<41>																
	ultimibranhial body remanet	0	0	0	0	0	0	0	0	1	0	0	0	2	0	0	0	0
		( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 2)	( 0)	( 0)	( 0)	( 5)	( 0)	( 0)	( 0)	( 0)
	C-cell hyperplasia	3	0	0	0	3	0	0	0	5	0	0	0	2	0	0	0	0
		( 7)	( 0)	( 0)	( 0)	( 8)	( 0)	( 0)	( 0)	( 12)	( 0)	( 0)	( 0)	( 5)	( 0)	( 0)	( 0)	( 0)
	focal follicular cell hyperplasia	1	0	0	0	0	0	0	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)	( 0)
adrenal		<41>																
	peliosis like lesion	0	0	0	0	1	0	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)

Grade 1 : Slight 2 : Moderate 3 : Marked 4 : Severe  
 < a > a : Number of animals examined at the site  
 b : Number of animals with lesion  
 ( c ) c : b / a \* 100  
 Significant difference ; \* : P ≤ 0.05 \*\* : P ≤ 0.01 Test of Chi Square

STUDY NO. : 0371  
 ANIMAL : RAT F344/DuCrj  
 REPORT TYPE : A1  
 SEX : MALE

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

PAGE : 9

		Group Name No. of Animals on Study	Control 41				500 ppm 36				1000 ppm 42				2000 ppm 42			
Organ	Findings	Grade	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Endocrine system}																		
adrenal			<41>				<36>				<42>				<42>			
	hyperplasia:medulla		2	0	0	0	2	0	0	0	1	0	0	0	0	0	0	0
			( 5)	( 0)	( 0)	( 0)	( 6)	( 0)	( 0)	( 0)	( 2)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)
	focal fatty change:cortex		7	0	1	0	4	0	0	0	3	1	0	0	5	0	0	0
			( 17)	( 0)	( 2)	( 0)	( 11)	( 0)	( 0)	( 0)	( 7)	( 2)	( 0)	( 0)	( 12)	( 0)	( 0)	( 0)
{Reproductive system}																		
testis			<41>				<36>				<42>				<42>			
	atrophy		41	0	0	0	35	0	0	0	42	0	0	0	31	0	0	0 **
			(100)	( 0)	( 0)	( 0)	( 97)	( 0)	( 0)	( 0)	(100)	( 0)	( 0)	( 0)	( 74)	( 0)	( 0)	( 0)
	arteritis		5	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
			( 12)	( 0)	( 0)	( 0)	( 3)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	
	interstitial cell hyperplasia		2	0	0	0	0	0	0	0	0	0	0	2	0	0	0	
			( 5)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 5)	( 0)	( 0)	( 0)	
prostate			<41>				<36>				<42>				<42>			
	inflammation		8	0	0	0	4	2	0	0	10	2	0	0	7	2	0	0
			( 20)	( 0)	( 0)	( 0)	( 11)	( 6)	( 0)	( 0)	( 24)	( 5)	( 0)	( 0)	( 17)	( 5)	( 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 ≤ 0.05 \*\* : P ≤ 0.01 Test of Chi Square

STUDY NO. : 0371  
 ANIMAL : RAT F344/DuCrj  
 REPORT TYPE : A1  
 SEX : MALE

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

PAGE : 10

Organ	Findings	Group Name No. of Animals on Study Grade	Control 41				500 ppm 36				1000 ppm 42				2000 ppm 42			
			1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Reproductive system}																		
prostate	hyperplasia		<41>				<36>				<42>				<42>			
			3	0	0	0	4	0	0	0	8	0	0	0	0	0	0	0
			( 7)	( 0)	( 0)	( 0)	( 11)	( 0)	( 0)	( 0)	( 19)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)
mammary gl	duct ectasia		<41>				<36>				<42>				<42>			
			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)	( 0)
	galactocoele		4	0	0	0	2	0	0	0	3	0	0	0	2	0	0	0
			( 10)	( 0)	( 0)	( 0)	( 6)	( 0)	( 0)	( 0)	( 7)	( 0)	( 0)	( 0)	( 5)	( 0)	( 0)	( 0)
{Nervous system}																		
brain	gliosis		<41>				<36>				<42>				<42>			
			1	0	0	0	0	0	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)
spinal cord	degeneration:granular cell		0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
			( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 2)	( 0)	( 0)	( 0)
	gliosis		<41>				<36>				<42>				<42>			
			1	0	0	0	0	0	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)

Grade 1 : Slight 2 : Moderate 3 : Marked 4 : Severe  
 < a > a : Number of animals examined at the site  
 b : Number of animals with lesion  
 ( c ) c : b / a \* 100  
 Significant difference ; \* : P ≤ 0.05 \*\* : P ≤ 0.01 Test of Chi Square

STUDY NO. : 0371  
 ANIMAL : RAT F344/DuCrj  
 REPORT TYPE : A1  
 SEX : MALE

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

PAGE : 11

		Group Name	Control				500 ppm				1000 ppm				2000 ppm			
		No. of Animals on Study	41				36				42				42			
Organ_____	Findings_____	Grade	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Special sense organs/appendage}																		
eye			<41>				<36>				<42>				<42>			
	fibrosis		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)	( 0)
			<41>				<36>				<42>				<42>			
	cataract		6	0	0	0	4	0	0	0	7	0	0	0	7	1	0	0
		( 15)	( 0)	( 0)	( 0)	( 11)	( 0)	( 0)	( 0)	( 17)	( 0)	( 0)	( 0)	( 17)	( 2)	( 0)	( 0)	
		<41>				<36>				<42>				<42>				
	retinal atrophy		7	0	0	0	4	0	0	0	7	0	0	0	8	1	0	0
		( 17)	( 0)	( 0)	( 0)	( 11)	( 0)	( 0)	( 0)	( 17)	( 0)	( 0)	( 0)	( 19)	( 2)	( 0)	( 0)	
Harder gl			<41>				<36>				<42>				<42>			
	lymphocytic infiltration		5	0	0	0	7	0	0	0	8	0	0	0	11	0	0	0
		( 12)	( 0)	( 0)	( 0)	( 19)	( 0)	( 0)	( 0)	( 19)	( 0)	( 0)	( 0)	( 26)	( 0)	( 0)	( 0)	

Grade 1 : Slight 2 : Moderate 3 : Marked 4 : Severe  
 < a > a : Number of animals examined at the site  
 b : Number of animals with lesion  
 ( c ) c : b / a \* 100  
 Significant difference ; \* : P ≤ 0.05 \*\* : P ≤ 0.01 Test of Chi Square

(HPT150)

BAIS4

## APPENDIX L 4

HISTOLOGICAL FINDINGS : NON-NEOPLASTIC LESIONS : SUMMARY

RAT : FEMALE : SACRIFICED ANIMALS

(2-YEAR STUDY)

STUDY NO. : 0371  
ANIMAL : RAT F344/DuCrj  
REPORT TYPE : A1  
SEX : FEMALE

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

PAGE : 12

Organ	Findings	Group Name No. of Animals on Study Grade				Control 41				250 ppm 38				500 ppm 44				1000 ppm 41			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Respiratory system}																					
nasal cavit		<41>				<38>				<44>				<41>							
	thrombus	0	0	0	0	1	0	0	0	0	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 )
	mineralization	21	0	0	0	11	0	0	0	14	0	0	0	10	0	0	0	0 *			
		( 51 )	( 0 )	( 0 )	( 0 )	( 29 )	( 0 )	( 0 )	( 0 )	( 32 )	( 0 )	( 0 )	( 0 )	( 24 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )
	eosinophilic change:olfactory epithelium	16	20	5	0	9	13	15	0 *	7	27	10	0 *	4	9	27	1 **				
		( 39 )	( 49 )	( 12 )	( 0 )	( 24 )	( 34 )	( 39 )	( 0 )	( 16 )	( 61 )	( 23 )	( 0 )	( 10 )	( 22 )	( 66 )	( 2 )				
	inflammation:foreign body	4	1	0	0	1	0	0	0	1	0	0	0	1	0	0	0				
		( 10 )	( 2 )	( 0 )	( 0 )	( 3 )	( 0 )	( 0 )	( 0 )	( 2 )	( 0 )	( 0 )	( 0 )	( 2 )	( 0 )	( 0 )	( 0 )				
nasopharynx		<41>				<38>				<44>				<41>							
	inflammation	1	0	0	0	0	0	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 )				
lung		<41>				<38>				<44>				<41>							
	hemorrhage	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0				
		( 2 )	( 0 )	( 0 )	( 0 )	( 3 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )				
	osseous metaplasia	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0				
		( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 2 )	( 0 )	( 0 )	( 0 )				

Grade 1 : Slight 2 : Moderate 3 : Marked 4 : Severe  
< a > a : Number of animals examined at the site  
b : Number of animals with lesion  
( c ) c : b / a \* 100  
Significant difference ; \* : P ≤ 0.05 \*\* : P ≤ 0.01 Test of Chi Square

STUDY NO. : 0371  
ANIMAL : RAT F344/DuCrj  
REPORT TYPE : A1  
SEX : FEMALE

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

PAGE : 13

Organ	Findings	Group Name	Control				250 ppm				500 ppm				1000 ppm			
		No. of Animals on Study	41				38				44				41			
		Grade	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Respiratory system}																		
lung			<41>				<38>				<44>				<41>			
	accumulation of foamy cells	10 ( 24)	0 ( 0)	0 ( 0)	0 ( 0)	6 ( 16)	0 ( 0)	0 ( 0)	0 ( 0)	8 ( 18)	0 ( 0)	0 ( 0)	0 ( 0)	14 ( 34)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)
	bronchiolar-alveolar cell hyperplasia	0 ( 0)	1 ( 2)	0 ( 0)	0 ( 0)	1 ( 3)	0 ( 0)	0 ( 0)	0 ( 0)	1 ( 2)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)
{Hematopoietic system}																		
bone marrow			<41>				<38>				<44>				<41>			
	granulation	5 ( 12)	1 ( 2)	2 ( 5)	0 ( 0)	11 ( 29)	3 ( 8)	0 ( 0)	0 ( 0)	6 ( 14)	4 ( 9)	1 ( 2)	0 ( 0)	6 ( 15)	3 ( 7)	0 ( 0)	0 ( 0)	0 ( 0)
	increased hematopoiesis	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	2 ( 5)	0 ( 0)	0 ( 0)	0 ( 0)	2 ( 5)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)
	decreased hematopoiesis	1 ( 2)	0 ( 0)	1 ( 2)	0 ( 0)	1 ( 3)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)
lymph node			<41>				<38>				<44>				<41>			
	lymphadenitis	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	3 ( 8)	0 ( 0)	0 ( 0)	0 ( 0)	1 ( 2)	0 ( 0)	0 ( 0)	0 ( 0)	1 ( 2)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)

Grade 1 : Slight 2 : Moderate 3 : Marked 4 : Severe  
< a > a : Number of animals examined at the site  
b : Number of animals with lesion  
( c ) c : b / a \* 100  
Significant difference ; \* : P ≤ 0.05 \*\* : P ≤ 0.01 Test of Chi Square



STUDY NO. : 0371  
ANIMAL : RAT F344/DuCrj  
REPORT TYPE : A1  
SEX : FEMALE

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

PAGE : 14

		Group Name No. of Animals on Study Grade				Control 41				250 ppm 38				500 ppm 44				1000 ppm 41			
Organ	Findings	1 (%)	2 (%)	3 (%)	4 (%)	1 (%)	2 (%)	3 (%)	4 (%)	1 (%)	2 (%)	3 (%)	4 (%)	1 (%)	2 (%)	3 (%)	4 (%)				
(Hematopoietic system)																					
spleen		<41>				<38>				<44>				<41>							
	deposit of hemosiderin	26 ( 63)	12 ( 29)	0 ( 0)	0 ( 0)	20 ( 53)	14 ( 37)	0 ( 0)	0 ( 0)	20 ( 45)	20 ( 45)	0 ( 0)	0 ( 0)	24 ( 59)	14 ( 34)	0 ( 0)	0 ( 0)				
	fibrosis	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	1 ( 3)	0 ( 0)	0 ( 0)	0 ( 0)	1 ( 2)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)				
	extramedullary hematopoiesis	2 ( 5)	1 ( 2)	0 ( 0)	0 ( 0)	1 ( 3)	0 ( 0)	0 ( 0)	0 ( 0)	6 ( 14)	1 ( 2)	1 ( 2)	0 ( 0)	4 ( 10)	2 ( 5)	0 ( 0)	0 ( 0)				
(Circulatory system)																					
heart		<41>				<38>				<44>				<41>							
	embolus	1 ( 2)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)				
	fibrosis:focal	0 ( 0)	1 ( 2)	0 ( 0)	0 ( 0)	1 ( 3)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	1 ( 2)	0 ( 0)	0 ( 0)	0 ( 0)				
	myocardial fibrosis	9 ( 22)	0 ( 0)	0 ( 0)	0 ( 0)	13 ( 34)	0 ( 0)	0 ( 0)	0 ( 0)	19 ( 43)	0 ( 0)	0 ( 0)	0 ( 0)	14 ( 34)	0 ( 0)	0 ( 0)	0 ( 0)				
artery/aort		<41>				<38>				<44>				<41>							
	arteritis	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	1 ( 3)	0 ( 0)	0 ( 0)	0 ( 0)	1 ( 2)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)				

Grade 1 : Slight 2 : Moderate 3 : Marked 4 : Severe  
< a > a : Number of animals examined at the site  
b : Number of animals with lesion  
( c ) c : b / a \* 100  
Significant difference : \* : P ≤ 0.05 \*\* : P ≤ 0.01 Test of Chi Square

STUDY NO. : 0371  
 ANIMAL : RAT F344/DuCrj  
 REPORT TYPE : A1  
 SEX : FEMALE

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

PAGE : 15

Organ	Findings	Group Name No. of Animals on Study				Control 41				250 ppm 38				500 ppm 44				1000 ppm 41			
		Grade				1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
(Digestive system)																					
tooth	inflammation	<41>				3	0	0	0	<38>				2	0	0	0	<44>			
		( 7 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 3 )	( 0 )	( 0 )	( 0 )	( 5 )	( 0 )	( 0 )	( 0 )	( 2 )	( 0 )	( 0 )	( 0 )
stomach	basal cell hyperplasia	<41>				0	0	0	0	<38>				0	0	0	0	<44>			
		( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 3 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )
	epidermal cyst	<41>				0	0	0	0	<38>				0	0	0	0	<44>			
		( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 2 )	( 0 )	( 0 )	( 0 )
	ulcer:forestomach	<41>				0	0	0	0	<38>				0	0	0	0	<44>			
		( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 3 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )
liver	squamous cell hyperplasia:forestomach	<41>				0	0	0	0	<38>				0	0	0	0	<44>			
		( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 3 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )
	herniation	<41>				13	0	0	0	<38>				9	0	0	0	<44>			
		( 32 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 34 )	( 0 )	( 0 )	( 0 )	( 20 )	( 0 )	( 0 )	( 0 )	( 12 )	( 0 )	( 0 )	( 0 )
	peliosis like lesion	<41>				1	0	0	0	<38>				1	0	0	0	<44>			
		( 2 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 2 )	( 0 )	( 0 )	( 0 )	( 0 )	( 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  
 ( c ) c : b / a \* 100  
 Significant difference ; \* : P ≤ 0.05 \*\* : P ≤ 0.01 Test of Chi Square

STUDY NO. : 0371  
 ANIMAL : RAT F344/DuCrj  
 REPORT TYPE : A1  
 SEX : FEMALE

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

PAGE : 16

Organ	Findings	Group Name	Control				250 ppm				500 ppm				1000 ppm			
		No. of Animals on Study	41				38				44				41			
		Grade	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
(Digestive system)																		
liver			<41>				<38>				<44>				<41>			
	necrosis:focal		0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
			( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 2 )	( 0 )	( 0 )
	granulation		29	4	3	2	15	9	7	0 *	25	7	3	0	21	6	3	2
			( 71 )	( 10 )	( 7 )	( 5 )	( 39 )	( 24 )	( 18 )	( 0 )	( 57 )	( 16 )	( 7 )	( 0 )	( 51 )	( 15 )	( 7 )	( 5 )
	clear cell focus		0	0	0	0	0	0	0	0	1	1	0	0	0	3	0	0
			( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 2 )	( 2 )	( 0 )	( 0 )	( 0 )	( 7 )	( 0 )	( 0 )
	acidophilic cell focus		0	0	0	0	0	0	0	0	1	0	0	0	3	1	1	0
			( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 2 )	( 0 )	( 0 )	( 0 )	( 7 )	( 2 )	( 2 )	( 0 )
basophilic cell focus		7	1	0	0	14	6	0	0 **	20	13	5	0 **	16	8	8	0 **	
		( 17 )	( 2 )	( 0 )	( 0 )	( 37 )	( 16 )	( 0 )	( 0 )	( 45 )	( 30 )	( 11 )	( 0 )	( 39 )	( 20 )	( 20 )	( 0 )	
bile duct hyperplasia		12	0	0	0	8	0	0	0	7	0	0	0	3	0	0	0 *	
		( 29 )	( 0 )	( 0 )	( 0 )	( 21 )	( 0 )	( 0 )	( 0 )	( 16 )	( 0 )	( 0 )	( 0 )	( 7 )	( 0 )	( 0 )	( 0 )	
cholangiofibrosis		0	0	0	0	0	0	1	0	0	0	1	0	0	1	0	0	
		( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 3 )	( 0 )	( 0 )	( 0 )	( 2 )	( 0 )	( 0 )	( 2 )	( 0 )	( 0 )	
biliary cyst		0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	
		( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 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  
 ( c ) c : b / a \* 100  
 Significant difference : \* : P ≤ 0.05 \*\* : P ≤ 0.01 Test of Chi Square

STUDY NO. : 0371  
ANIMAL : RAT F344/DuCrj  
REPORT TYPE : A1  
SEX : FEMALE

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

PAGE : 17

		Group Name No. of Animals on Study	Control 41				250 ppm 38				500 ppm 44				1000 ppm 41			
Organ	Findings	Grade	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Digestive system}																		
pancreas			<41>				<38>				<44>				<41>			
	atrophy		0	0	0	0	5	0	0	0	1	0	0	0	4	0	0	0
			( 0)	( 0)	( 0)	( 0)	( 13)	( 0)	( 0)	( 0)	( 2)	( 0)	( 0)	( 0)	( 10)	( 0)	( 0)	( 0)
{Urinary system}																		
kidney			<41>				<38>				<44>				<41>			
	infarct		0	0	0	0	0	0	0	0	2	0	0	0	3	0	0	0
			( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 5)	( 0)	( 0)	( 0)	( 7)	( 0)	( 0)	( 0)
	cyst		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)
	chronic nephropathy		24	3	5	0	24	2	2	0	24	9	2	0	28	2	2	0
			( 59)	( 7)	( 12)	( 0)	( 63)	( 5)	( 5)	( 0)	( 55)	( 20)	( 5)	( 0)	( 68)	( 5)	( 5)	( 0)
	hydronephrosis		0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
			( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 2)	( 0)	( 0)	( 0)
	papillary necrosis		1	0	0	0	1	0	0	0	0	0	0	0	4	5	0	0 *
			( 2)	( 0)	( 0)	( 0)	( 3)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 10)	( 12)	( 0)	( 0)
	mineralization:cortico-medullary junction		1	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0
			( 2)	( 0)	( 0)	( 0)	( 3)	( 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 ≤ 0.05 \*\* : P ≤ 0.01 Test of Chi Square

STUDY NO. : 0371  
ANIMAL : RAT F344/DuCrj  
REPORT TYPE : A1  
SEX : FEMALE

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

PAGE : 18

		Group Name No. of Animals on Study Grade	Control 41				250 ppm 38				500 ppm 44				1000 ppm 41				
Organ	Findings		1 (%)	2 (%)	3 (%)	4 (%)	1 (%)	2 (%)	3 (%)	4 (%)	1 (%)	2 (%)	3 (%)	4 (%)	1 (%)	2 (%)	3 (%)	4 (%)	
{Urinary system}																			
kidney			<41>				<38>				<44>				<41>				
	mineralization:papilla		5 ( 12 )	0 ( 0 )	0 ( 0 )	0 ( 0 )	6 ( 16 )	1 ( 3 )	0 ( 0 )	0 ( 0 )	12 ( 27 )	0 ( 0 )	0 ( 0 )	0 ( 0 )	17 ( 41 )	2 ( 5 )	0 ( 0 )	0 ( 0 )	**
	urothelial hyperplasia:pelvis		2 ( 5 )	0 ( 0 )	0 ( 0 )	0 ( 0 )	10 ( 26 )	0 ( 0 )	0 ( 0 )	0 ( 0 )	0 ( 18 )	0 ( 0 )	0 ( 0 )	0 ( 0 )	16 ( 39 )	0 ( 0 )	0 ( 0 )	0 ( 0 )	**
urin bladd			<41>				<38>				<44>				<41>				
	simple hyperplasia:transitional epithelium		0 ( 0 )	0 ( 0 )	0 ( 0 )	0 ( 0 )	1 ( 3 )	0 ( 0 )	0 ( 0 )	0 ( 0 )	0 ( 0 )	0 ( 0 )	0 ( 0 )	0 ( 0 )	0 ( 0 )	1 ( 2 )	0 ( 0 )	0 ( 0 )	0 ( 0 )
	nodular hyperplasia:transitional epithelium		0 ( 0 )	0 ( 0 )	0 ( 0 )	0 ( 0 )	0 ( 0 )	0 ( 0 )	0 ( 0 )	0 ( 0 )	0 ( 0 )	0 ( 0 )	0 ( 0 )	0 ( 0 )	1 ( 2 )	0 ( 0 )	0 ( 0 )	0 ( 0 )	
{Endocrine system}																			
pituitary			<41>				<38>				<44>				<41>				
	cyst		12 ( 29 )	0 ( 0 )	0 ( 0 )	0 ( 0 )	21 ( 55 )	2 ( 5 )	0 ( 0 )	0 ( 0 )	0 ( 0 )	19 ( 43 )	1 ( 2 )	0 ( 0 )	0 ( 0 )	12 ( 29 )	0 ( 0 )	0 ( 0 )	0 ( 0 )
	hyperplasia		7 ( 17 )	0 ( 0 )	0 ( 0 )	0 ( 0 )	13 ( 34 )	0 ( 0 )	0 ( 0 )	0 ( 0 )	13 ( 30 )	3 ( 7 )	0 ( 0 )	0 ( 0 )	9 ( 22 )	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 ≤ 0.05 \*\* : P ≤ 0.01 Test of Chi Square

STUDY NO. : 0371  
ANIMAL : RAT F344/DuCrj  
REPORT TYPE : A1  
SEX : FEMALE

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

PAGE : 19

Organ	Findings	Group Name	Control				250 ppm				500 ppm				1000 ppm						
		No. of Animals on Study	41				38				44				41						
		Grade	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4			
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)			
(Endocrine system)																					
pituitary			<41>				<38>				<44>				<41>						
	Rathke pouch	2	0	0	0	0	2	0	0	0	0	1	0	0	0	0	1	0	0	0	0
		( 5)	( 0)	( 0)	( 0)	( 0)	( 5)	( 0)	( 0)	( 0)	( 0)	( 2)	( 0)	( 0)	( 0)	( 0)	( 2)	( 0)	( 0)	( 0)	( 0)
thyroid			<41>				<38>				<44>				<41>						
	ultimibranhial body remanet	2	0	0	0	0	0	0	0	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)	( 5)	( 0)	( 0)	( 0)	( 0)
	C-cell hyperplasia	6	0	0	0	0	5	0	0	0	0	3	0	0	0	0	7	0	0	0	0
		( 15)	( 0)	( 0)	( 0)	( 0)	( 13)	( 0)	( 0)	( 0)	( 0)	( 7)	( 0)	( 0)	( 0)	( 0)	( 17)	( 0)	( 0)	( 0)	( 0)
adrenal			<41>				<38>				<44>				<41>						
	peliosis-like lesion	21	0	0	0	0	23	0	0	0	0	22	0	0	0	0	14	0	0	0	0
		( 51)	( 0)	( 0)	( 0)	( 0)	( 61)	( 0)	( 0)	( 0)	( 0)	( 50)	( 0)	( 0)	( 0)	( 0)	( 34)	( 0)	( 0)	( 0)	( 0)
	fibrosis	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
		( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 2)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)
	hyperplasia:cortical cell	2	0	0	0	0	1	0	0	0	0	0	0	0	0	0	2	0	0	0	0
		( 5)	( 0)	( 0)	( 0)	( 0)	( 3)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 5)	( 0)	( 0)	( 0)	( 0)
	hyperplasia:medulla	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
		( 2)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 2)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)

Grade 1 : Slight 2 : Moderate 3 : Marked 4 : Severe  
< a > a : Number of animals examined at the site  
b : Number of animals with lesion  
( c ) c : b / a \* 100  
Significant difference ; \* : P ≤ 0.05 \*\* : P ≤ 0.01 Test of Chi Square

STUDY NO. : 0371  
 ANIMAL : RAT F344/DuCrj  
 REPORT TYPE : A1  
 SEX : FEMALE

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

PAGE : 20

Organ	Findings	Group Name	Control				250 ppm				500 ppm				1000 ppm			
		No. of Animals on Study	41				38				44				41			
		Grade	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Endocrine system}																		
adrenal			<41>				<38>				<44>				<41>			
	focal fatty change:cortex		4 ( 10)	1 ( 2)	0 ( 0)	0 ( 0)	6 ( 16)	1 ( 3)	1 ( 3)	0 ( 0)	6 ( 14)	2 ( 5)	0 ( 0)	0 ( 0)	8 ( 20)	4 ( 10)	0 ( 0)	0 ( 0)
{Reproductive system}																		
ovary			<41>				<38>				<44>				<41>			
	cyst		0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	1 ( 2)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)
uterus			<41>				<38>				<44>				<41>			
	dilatation		3 ( 7)	0 ( 0)	0 ( 0)	0 ( 0)	1 ( 3)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	2 ( 5)	0 ( 0)	0 ( 0)	0 ( 0)
	cystic change		2 ( 5)	0 ( 0)	0 ( 0)	0 ( 0)	2 ( 5)	0 ( 0)	0 ( 0)	0 ( 0)	4 ( 9)	0 ( 0)	0 ( 0)	0 ( 0)	1 ( 2)	0 ( 0)	0 ( 0)	0 ( 0)
	decidual change		1 ( 2)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)
mammary gl			<41>				<38>				<44>				<41>			
	galactoceles		1 ( 2)	0 ( 0)	0 ( 0)	0 ( 0)	4 ( 11)	0 ( 0)	0 ( 0)	0 ( 0)	4 ( 9)	0 ( 0)	0 ( 0)	0 ( 0)	1 ( 2)	0 ( 0)	0 ( 0)	0 ( 0)

Grade 1 : Slight 2 : Moderate 3 : Marked 4 : Severe  
 < a > a : Number of animals examined at the site  
 b : Number of animals with lesion  
 ( c ) c : b / a \* 100  
 Significant difference ; \* : P ≤ 0.05 \*\* : P ≤ 0.01 Test of Chi Square

STUDY NO. : 0371  
ANIMAL : RAT F344/DuCrj  
REPORT TYPE : A1  
SEX : FEMALE

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

PAGE : 21

Organ	Findings	Group Name	Control				250 ppm				500 ppm				1000 ppm			
		No. of Animals on Study	41				38				44				41			
		Grade	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Special sense organs/appendage}																		
eye			<41>				<38>				<44>				<41>			
	cataract		6	0	0	0	2	0	0	0	4	0	0	0	2	0	0	0
			( 15)	( 0)	( 0)	( 0)	( 5)	( 0)	( 0)	( 0)	( 9)	( 0)	( 0)	( 0)	( 5)	( 0)	( 0)	( 0)
	retinal atrophy		7	0	0	0	2	0	0	0	4	0	0	0	4	0	0	0
			( 17)	( 0)	( 0)	( 0)	( 5)	( 0)	( 0)	( 0)	( 9)	( 0)	( 0)	( 0)	( 10)	( 0)	( 0)	( 0)
Harder gl			<41>				<38>				<44>				<41>			
	lymphocytic infiltration		5	0	0	0	10	0	0	0	6	0	0	0	10	0	0	0
			( 12)	( 0)	( 0)	( 0)	( 26)	( 0)	( 0)	( 0)	( 14)	( 0)	( 0)	( 0)	( 24)	( 0)	( 0)	( 0)
{Musculoskeletal system}																		
bone			<41>				<38>				<44>				<41>			
	osteosclerosis		0	0	1	0	1	0	0	0	0	0	0	0	3	0	0	0
			( 0)	( 0)	( 2)	( 0)	( 3)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 7)	( 0)	( 0)	( 0)

Grade 1 : Slight 2 : Moderate 3 : Marked 4 : Severe  
< a > a : Number of animals examined at the site  
b : Number of animals with lesion  
( c ) c : b / a \* 100  
Significant difference ; \* : P ≤ 0.05 \*\* : P ≤ 0.01 Test of Chi Square



## APPENDIX L 5

HISTOLOGICAL FINDINGS : NON-NEOPLASTIC LESIONS : SUMMARY

RAT : MALE : DEAD AND MORIBUND ANIMALS

(2-YEAR STUDY)

STUDY NO. : 0371  
 ANIMAL : RAT F344/DuCrj  
 REPORT TYPE : A1  
 SEX : MALE

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

PAGE : 1

Organ	Findings	Group Name No. of Animals on Study Grade	Control 9				500 ppm 14				1000 ppm 8				2000 ppm 8			
			1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Respiratory system}																		
nasal cavit			< 9>				<14>				< 8>				< 8>			
	thrombus		1	0	0	0	2	1	0	0	0	0	0	0	1	0	0	0
			( 11)	( 0)	( 0)	( 0)	( 14)	( 7)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 13)	( 0)	( 0)	( 0)
	mineralization		1	0	0	0	4	0	0	0	6	0	0	0 *	1	0	0	0
			( 11)	( 0)	( 0)	( 0)	( 29)	( 0)	( 0)	( 0)	( 75)	( 0)	( 0)	( 0)	( 13)	( 0)	( 0)	( 0)
	eosinophilic change:olfactory epithelium		3	1	0	0	7	0	0	0	1	0	0	0	3	2	1	0
			( 33)	( 11)	( 0)	( 0)	( 50)	( 0)	( 0)	( 0)	( 13)	( 0)	( 0)	( 0)	( 38)	( 25)	( 13)	( 0)
	inflammation:foreign body		1	0	0	0	3	0	0	0	0	1	0	0	1	1	1	0
			( 11)	( 0)	( 0)	( 0)	( 21)	( 0)	( 0)	( 0)	( 0)	( 13)	( 0)	( 0)	( 13)	( 13)	( 13)	( 0)
	inflammation:respiratory epithelium		1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			( 11)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)
nasopharynx			< 9>				<14>				< 8>				< 8>			
	inflammation		0	0	0	0	2	0	0	0	0	0	0	0	1	0	0	0
			( 0)	( 0)	( 0)	( 0)	( 14)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 13)	( 0)	( 0)	( 0)
lung			< 9>				<14>				< 8>				< 8>			
	congestion		6	0	0	0	7	0	0	0	1	0	0	0	2	0	0	0
			( 67)	( 0)	( 0)	( 0)	( 50)	( 0)	( 0)	( 0)	( 13)	( 0)	( 0)	( 0)	( 25)	( 0)	( 0)	( 0)

Grade 1 : Slight 2 : Moderate 3 : Marked 4 : Severe  
 < a > a : Number of animals examined at the site  
 b : Number of animals with lesion  
 ( c ) c : b / a \* 100  
 Significant difference ; \* : P ≤ 0.05 \*\* : P ≤ 0.01 Test of Chi Square

STUDY NO. : 0371  
 ANIMAL : RAT F344/DuCrj  
 REPORT TYPE : A1  
 SEX : MALE

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

PAGE : 2

Organ	Findings	Group Name No. of Animals on Study Grade	Control 9				500 ppm 14				1000 ppm 8				2000 ppm 8			
			1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Respiratory system}																		
lung	osseous metaplasia		< 9>				<14>				< 8>				< 8>			
			1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
			( 11)	( 0)	( 0)	( 0)	( 7)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)
	bronchiolar-alveolar cell hyperplasia		< 9>				<14>				< 8>				< 8>			
			0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0
			( 0)	( 0)	( 0)	( 0)	( 0)	( 7)	( 0)	( 0)	( 13)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)
{Hematopoietic system}																		
bone marrow	granulation		< 9>				<14>				< 8>				< 8>			
			1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
			( 11)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 13)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)
	increased hematopoiesis		< 9>				<14>				< 8>				< 8>			
			0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	0
			( 0)	( 0)	( 0)	( 0)	( 14)	( 0)	( 0)	( 0)	( 25)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)
lymph node	lymphadenitis		< 9>				<14>				< 8>				< 8>			
			1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
			( 11)	( 0)	( 0)	( 0)	( 7)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)
spleen	deposit of hemosiderin		< 9>				<14>				< 8>				< 8>			
			3	3	2	0	5	2	1	0	1	2	1	0	3	3	1	0
			( 33)	( 33)	( 22)	( 0)	( 43)	( 14)	( 7)	( 0)	( 13)	( 25)	( 13)	( 0)	( 38)	( 38)	( 13)	( 0)

Grade 1 : Slight 2 : Moderate 3 : Marked 4 : Severe  
 < a > a : Number of animals examined at the site  
 b : Number of animals with lesion  
 ( c ) c : b / a \* 100  
 Significant difference ; \* : P ≤ 0.05 \*\* : P ≤ 0.01 Test of Chi Square

STUDY NO. : 0371  
 ANIMAL : RAT F344/DuCrj  
 REPORT TYPE : A1  
 SEX : MALE

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

PAGE : 3

		Group Name No. of Animals on Study				Control 9				500 ppm 14				1000 ppm 8				2000 ppm 8			
Organ	Findings	Grade	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4			
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)			
(Hematopoietic system)																					
spleen			< 9>				<14>				< 8>				< 8>						
	extramedullary hematopoiesis		0	0	1	0	3	1	1	0	0	0	0	0	0	0	0	0			
			( 0)	( 0)	( 11)	( 0)	( 21)	( 7)	( 7)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)			
(Circulatory system)																					
heart			< 9>				<14>				< 8>				< 8>						
	thrombus		0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0			
			( 0)	( 0)	( 0)	( 0)	( 7)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)			
	mineralization		1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
			( 11)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)			
	myocardial fibrosis		1	0	0	0	8	0	0	0	5	0	0	0	1	0	0	0			
			( 11)	( 0)	( 0)	( 0)	( 57)	( 0)	( 0)	( 0)	( 63)	( 0)	( 0)	( 0)	( 13)	( 0)	( 0)	( 0)			
(Digestive system)																					
tooth			< 9>				<14>				< 8>				< 8>						
	inflammation		2	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0			
			( 22)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 38)	( 0)	( 0)	( 0)			

Grade 1 : Slight 2 : Moderate 3 : Marked 4 : Severe  
 < a > a : Number of animals examined at the site  
 b : Number of animals with lesion  
 ( c ) c : b / a \* 100  
 Significant difference ; \* : P ≤ 0.05 \*\* : P ≤ 0.01 Test of Chi Square

STUDY NO. : 0371  
ANIMAL : RAT F344/DuCrj  
REPORT TYPE : A1  
SEX : MALE

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

PAGE : 4

Organ	Findings	Group Name No. of Animals on Study				Control 9				500 ppm 14				1000 ppm 8				2000 ppm 8			
		Grade				1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
(Digestive system)																					
tongue	mineralization	< 9>				1	0	0	0	<14>				< 8>				< 8>			
		( 11)	( 0)	( 0)	( 0)	( 11)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)
	arteritis	1	0	0	0	( 11)	( 0)	( 0)	( 0)	0	0	0	0	0	0	0	0	0	0	0	0
		( 11)	( 0)	( 0)	( 0)	( 11)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)
stomach	mineralization	< 9>				1	0	0	0	<14>				< 8>				< 8>			
		( 11)	( 0)	( 0)	( 0)	( 11)	( 0)	( 0)	( 0)	( 7)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)
	ulcer:forestomach	0	0	2	0	( 0)	( 0)	( 22)	( 0)	1	1	0	0	0	0	0	0	0	0	0	0
		( 0)	( 0)	( 22)	( 0)	( 0)	( 0)	( 22)	( 0)	( 7)	( 7)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)
	squamous cell hyperplasia:forestomach	1	0	0	0	( 11)	( 0)	( 0)	( 0)	2	0	0	0	1	0	0	0	2	0	0	0
		( 11)	( 0)	( 0)	( 0)	( 11)	( 0)	( 0)	( 0)	( 14)	( 0)	( 0)	( 0)	( 13)	( 0)	( 0)	( 0)	( 25)	( 0)	( 0)	( 0)
	herniation	< 9>				4	0	0	0	<14>				< 8>				< 8>			
		( 44)	( 0)	( 0)	( 0)	( 44)	( 0)	( 0)	( 0)	( 14)	( 0)	( 0)	( 0)	( 13)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)
liver	necrosis:central	0	0	0	0	( 0)	( 0)	( 0)	( 0)	1	0	0	0	0	0	0	0	0	0	0	0
		( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 7)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)

Grade 1 : Slight 2 : Moderate 3 : Marked 4 : Severe  
< a > a : Number of animals examined at the site  
b : Number of animals with lesion  
( c ) c : b / a \* 100  
Significant difference ; \* : P ≤ 0.05 \*\* : P ≤ 0.01 Test of Chi Square

STUDY NO. : 0371  
 ANIMAL : RAT F344/DuCrj  
 REPORT TYPE : A1  
 SEX : MALE

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

PAGE : 5

Organ	Findings	Group Name No. of Animals on Study				Control				500 ppm				1000 ppm				2000 ppm			
		Grade				9				14				8				8			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Digestive system}																					
liver		< 9>				<14>				< 8>				< 8>							
	fatty change:peripheral	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		( 22)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)
	abscess	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		( 0)	( 0)	( 0)	( 0)	( 7)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)
	granulation	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
		( 0)	( 11)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 13)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)
	basophilic cell focus	1	0	0	0	5	1	0	0	2	1	0	0	4	0	0	0	0	0	0	0
		( 11)	( 0)	( 0)	( 0)	( 36)	( 7)	( 0)	( 0)	( 25)	( 13)	( 0)	( 0)	( 50)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)
	bile duct hyperplasia	8	1	0	0	13	0	0	0	8	0	0	0	7	0	0	0	0	0	0	0
		( 89)	( 11)	( 0)	( 0)	( 93)	( 0)	( 0)	( 0)	( 100)	( 0)	( 0)	( 0)	( 88)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)
pancreas		< 9>				<14>				< 8>				< 8>							
	atrophy	0	0	0	0	1	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0
		( 0)	( 0)	( 0)	( 0)	( 7)	( 0)	( 0)	( 0)	( 13)	( 0)	( 0)	( 0)	( 0)	( 0)	( 13)	( 0)	( 0)	( 0)	( 0)	( 0)
{Urinary system}																					
kidney		< 9>				<14>				< 8>				< 8>							
	infarct	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		( 0)	( 0)	( 0)	( 0)	( 7)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)

Grade 1 : Slight 2 : Moderate 3 : Marked 4 : Severe  
 < a > a : Number of animals examined at the site  
 b : Number of animals with lesion  
 ( c ) c : b / a \* 100  
 Significant difference : \* : P ≤ 0.05 \*\* : P ≤ 0.01 Test of Chi Square

STUDY NO. : 0371  
ANIMAL : RAT F344/DuCrj  
REPORT TYPE : A1  
SEX : MALE

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

PAGE : 6

Organ_____	Findings_____	Group Name No. of Animals on Study Grade				Control 9				500 ppm 14				1000 ppm 8				2000 ppm 8			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4				
		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)				
{Urinary system}																					
kidney		< 9>				<14>				< 8>				< 8>							
	abscess	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	1 ( 7)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)				
	chronic nephropathy	1 ( 11)	5 ( 56)	2 ( 22)	1 ( 11)	4 ( 29)	2 ( 14)	2 ( 14)	0 ( 0)	2 ( 25)	0 ( 0)	2 ( 25)	0 * ( 0)	1 ( 13)	3 ( 38)	1 ( 13)	0 ( 0)				
	hydronephrosis	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	1 ( 7)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	1 ( 13)	0 ( 0)	0 ( 0)	0 ( 0)				
	papillary necrosis	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	3 ( 38)	0 ( 0)	0 ( 0)	0 ( 0)				
	mineralization:papilla	1 ( 11)	0 ( 0)	0 ( 0)	0 ( 0)	2 ( 14)	0 ( 0)	0 ( 0)	0 ( 0)	2 ( 25)	0 ( 0)	0 ( 0)	0 ( 0)	3 ( 38)	0 ( 0)	0 ( 0)	0 ( 0)				
	urothelial hyperplasia:pelvis	3 ( 33)	0 ( 0)	0 ( 0)	0 ( 0)	4 ( 29)	0 ( 0)	0 ( 0)	0 ( 0)	2 ( 25)	0 ( 0)	0 ( 0)	0 ( 0)	2 ( 25)	0 ( 0)	0 ( 0)	0 ( 0)				
urin bladd		< 9>				<14>				< 8>				< 8>							
	simple hyperplasia:transitional epithelium	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	1 ( 7)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)				
	nodular hyperplasia:transitional epithelium	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	1 ( 13)	0 ( 0)	0 ( 0)	0 ( 0)				

Grade 1 : Slight 2 : Moderate 3 : Marked 4 : Severe  
< a > a : Number of animals examined at the site  
b : Number of animals with lesion  
( c ) c : b / a \* 100  
Significant difference : \* : P ≤ 0.05 \*\* : P ≤ 0.01 Test of Chi Square

STUDY NO. : 0371  
ANIMAL : RAT F344/DuCrj  
REPORT TYPE : A1  
SEX : MALE

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

PAGE : 7

		Group Name	Control				500 ppm				1000 ppm				2000 ppm			
		No. of Animals on Study	9				14				8				8			
Organ	Findings	Grade	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Endocrine system}																		
pituitary			< 9>				<14>				< 8>				< 8>			
	cyst		0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
			( 0)	( 0)	( 0)	( 0)	( 7)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)
	hyperplasia		0	0	0	0	2	0	0	0	1	0	0	0	0	1	0	0
			( 0)	( 0)	( 0)	( 0)	( 14)	( 0)	( 0)	( 0)	( 13)	( 0)	( 0)	( 0)	( 0)	( 13)	( 0)	( 0)
parathyroid			< 9>				<14>				< 8>				< 8>			
	hyperplasia		1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			( 11)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)
adrenal			< 9>				<14>				< 8>				< 8>			
	hyperplasia:medulla		0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
			( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 13)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)
	focal fatty change:cortex		2	0	0	0	2	0	0	0	1	0	0	0	1	0	0	0
			( 22)	( 0)	( 0)	( 0)	( 14)	( 0)	( 0)	( 0)	( 13)	( 0)	( 0)	( 0)	( 13)	( 0)	( 0)	( 0)
{Reproductive system}																		
testis			< 9>				<14>				< 8>				< 8>			
	atrophy		6	0	0	0	11	0	0	0	1	0	0	0	4	0	0	0
			( 67)	( 0)	( 0)	( 0)	( 79)	( 0)	( 0)	( 0)	( 13)	( 0)	( 0)	( 0)	( 50)	( 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 ≤ 0.05 \*\* : P ≤ 0.01 Test of Chi Square



STUDY NO. : 0371  
ANIMAL : RAT F344/DuCrj  
REPORT TYPE : A1  
SEX : MALE

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

PAGE : 8

Organ	Findings	Group Name No. of Animals on Study Grade				Control 9				500 ppm 14				1000 ppm 8				2000 ppm 8			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Reproductive system}																					
semin ves	inflammation	< 9>				<14>				< 8>				< 8>							
		0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		( 0)	( 0)	( 0)	( 0)	( 7)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)
prostate	inflammation	< 9>				<14>				< 8>				< 8>							
		2	0	0	0	4	2	0	0	0	1	0	0	1	0	0	0	1	0	0	0
		( 22)	( 0)	( 0)	( 0)	( 29)	( 14)	( 0)	( 0)	( 0)	( 13)	( 0)	( 0)	( 13)	( 0)	( 0)	( 0)	( 13)	( 0)	( 0)	( 0)
	hyperplasia	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		( 11)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)
mammary gl	galactoceles	< 9>				<14>				< 8>				< 8>							
		3	0	0	0	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0
		( 33)	( 0)	( 0)	( 0)	( 21)	( 0)	( 0)	( 0)	( 38)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)
{Special sense organs/appendage}																					
eye	cataract	< 9>				<14>				< 8>				< 8>							
		0	0	0	0	1	0	0	0	4	0	0	0	2	0	0	0	2	0	0	0
		( 0)	( 0)	( 0)	( 0)	( 7)	( 0)	( 0)	( 0)	( 50)	( 0)	( 0)	( 0)	( 25)	( 0)	( 0)	( 0)	( 25)	( 0)	( 0)	( 0)
	retinal atrophy	1	0	0	0	1	0	0	0	3	0	0	0	2	0	0	0	2	0	0	0
		( 11)	( 0)	( 0)	( 0)	( 7)	( 0)	( 0)	( 0)	( 38)	( 0)	( 0)	( 0)	( 25)	( 0)	( 0)	( 0)	( 25)	( 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 ≤ 0.05 \*\* : P ≤ 0.01 Test of Chi Square

STUDY NO. : 0371  
ANIMAL : RAT F344/DuCrj  
REPORT TYPE : A1  
SEX : MALE

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

PAGE : 9

		Group Name No. of Animals on Study Grade	Control 9				500 ppm 14				1000 ppm 8				2000 ppm 8				
Organ	Findings		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	
{Special sense organs/appendage}																			
Harder gl			< 9>				<14>				< 8>				< 8>				
	inflammatory infiltration		0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	1 ( 7)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)
	lymphocytic infiltration		1 ( 11)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	1 ( 13)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)
{Musculoskeletal system}																			
muscle			< 9>				<14>				< 8>				< 8>				
	mineralization		1 ( 11)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)

Grade 1 : Slight 2 : Moderate 3 : Marked 4 : Severe  
< a > a : Number of animals examined at the site  
b : Number of animals with lesion  
( c ) c : b / a \* 100  
Significant difference ; \* : P ≤ 0.05 \*\* : P ≤ 0.01 Test of Chi Square

(HPT150)

BAIS4

## APPENDIX L 6

HISTOLOGICAL FINDINGS : NON-NEOPLASTIC LESIONS : SUMMARY

RAT : FEMALE : DEAD AND MORIBUND ANIMALS

(2-YEAR STUDY)

STUDY NO. : 0371  
 ANIMAL : RAT F344/DuCrj  
 REPORT TYPE : A1  
 SEX : FEMALE

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

PAGE : 10

Organ	Findings	Group Name No. of Animals on Study Grade	Control 9				250 ppm 12				500 ppm 6				1000 ppm 9			
			1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Respiratory system}																		
nasal cavit	thrombus		< 9>				<12>				< 6>				< 9>			
			0	0	0	0	4	0	0	0	0	0	0	0	2	0	0	0
			( 0)	( 0)	( 0)	( 0)	( 33)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 22)	( 0)	( 0)	( 0)
	mineralization		3	0	0	0	5	0	0	0	2	0	0	0	2	0	0	0
			( 33)	( 0)	( 0)	( 0)	( 42)	( 0)	( 0)	( 0)	( 33)	( 0)	( 0)	( 0)	( 22)	( 0)	( 0)	( 0)
	eosinophilic change:olfactory epithelium		4	3	0	0	4	4	0	0	1	1	1	0	2	3	2	0
			( 44)	( 33)	( 0)	( 0)	( 33)	( 33)	( 0)	( 0)	( 17)	( 17)	( 17)	( 0)	( 22)	( 33)	( 22)	( 0)
	inflammation:foreign body		0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
			( 0)	( 0)	( 0)	( 0)	( 8)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)
lung	congestion		< 9>				<12>				< 6>				< 9>			
			3	0	0	0	4	0	0	0	3	0	0	0	2	0	0	0
			( 33)	( 0)	( 0)	( 0)	( 33)	( 0)	( 0)	( 0)	( 50)	( 0)	( 0)	( 0)	( 22)	( 0)	( 0)	( 0)
	accumulation of foamy cells		0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
			( 0)	( 0)	( 0)	( 0)	( 8)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)
	granulomatous pneumonia		0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
			( 0)	( 0)	( 11)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)
{Hematopoietic system}																		
bone marrow	granulation		< 9>				<12>				< 6>				< 9>			
			0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0
			( 0)	( 0)	( 0)	( 0)	( 8)	( 8)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)

Grade 1 : Slight 2 : Moderate 3 : Marked 4 : Severe  
 < a > a : Number of animals examined at the site  
 b : Number of animals with lesion  
 ( c ) c : b / a \* 100  
 Significant difference ; \* : P ≤ 0.05 \*\* : P ≤ 0.01 Test of Chi Square

STUDY NO. : 0371  
 ANIMAL : RAT F344/DuCrj  
 REPORT TYPE : A1  
 SEX : FEMALE

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

PAGE : 11

		Group Name	Control				250 ppm				500 ppm				1000 ppm			
		No. of Animals on Study	9				12				6				9			
Organ	Findings	Grade	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
(Hematopoietic system)																		
bone marrow			< 9>				<12>				< 6>				< 9>			
	increased hematopoiesis		0	0	0	0	3	0	0	0	2	0	0	0	2	0	0	0
			( 0 )	( 0 )	( 0 )	( 0 )	( 25 )	( 0 )	( 0 )	( 0 )	( 33 )	( 0 )	( 0 )	( 0 )	( 22 )	( 0 )	( 0 )	( 0 )
lymph node			< 9>				<12>				< 6>				< 9>			
	lymphadenitis		0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
			( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 11 )	( 0 )	( 0 )
	chronic nephropathy		0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
			( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 11 )	( 0 )	( 0 )
	papillary necrosis		0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
			( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 11 )	( 0 )	( 0 )	( 0 )
spleen			< 9>				<12>				< 6>				< 9>			
	deposit of hemosiderin		2	4	0	0	1	4	0	0	1	2	0	0	2	1	1	0
			( 22 )	( 44 )	( 0 )	( 0 )	( 8 )	( 33 )	( 0 )	( 0 )	( 17 )	( 33 )	( 0 )	( 0 )	( 22 )	( 11 )	( 11 )	( 0 )
	extramedullary hematopoiesis		1	0	2	0	0	0	3	1	0	0	1	0	0	0	4	0
			( 11 )	( 0 )	( 22 )	( 0 )	( 0 )	( 0 )	( 25 )	( 8 )	( 0 )	( 0 )	( 17 )	( 0 )	( 0 )	( 0 )	( 44 )	( 0 )
(Circulatory system)																		
heart			< 9>				<12>				< 6>				< 9>			
	thrombus		0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0
			( 0 )	( 0 )	( 0 )	( 0 )	( 8 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 0 )	( 11 )	( 0 )	( 0 )	( 0 )

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

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

PAGE : 12

Organ	Findings	Group Name No. of Animals on Study Grade	Control 9				250 ppm 12				500 ppm 6				1000 ppm 9			
			1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Circulatory system}																		
heart	inflammation		< 9>				<12>				< 6>				< 9>			
			1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			( 11)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)
	myocardial fibrosis		3	1	0	0	6	0	0	0	2	0	0	0	4	0	0	0
			( 33)	( 11)	( 0)	( 0)	( 50)	( 0)	( 0)	( 0)	( 33)	( 0)	( 0)	( 0)	( 44)	( 0)	( 0)	( 0)
artery/aort	arteritis		< 9>				<12>				< 6>				< 9>			
			1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			( 11)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)
{Digestive system}																		
tooth	inflammation		< 9>				<12>				< 6>				< 9>			
			2	0	0	0	2	0	0	0	1	0	0	0	0	0	0	0
			( 22)	( 0)	( 0)	( 0)	( 17)	( 0)	( 0)	( 0)	( 17)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)
stomach	mineralization		< 9>				<12>				< 6>				< 9>			
			1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			( 11)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)
	ulcer:forestomach		1	0	0	0	1	1	1	0	0	0	0	0	0	1	0	0
			( 11)	( 0)	( 0)	( 0)	( 8)	( 8)	( 8)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 11)	( 0)	( 0)

Grade 1 : Slight 2 : Moderate 3 : Marked 4 : Severe  
< a > a : Number of animals examined at the site  
b : Number of animals with lesion  
( c ) c : b / a \* 100  
Significant difference ; \* : P ≤ 0.05 \*\* : P ≤ 0.01 Test of Chi Square

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

PAGE : 13

Organ	Findings	Group Name No. of Animals on Study Grade	Control 9				250 ppm 12				500 ppm 6				1000 ppm 9			
			1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
(Digestive system)																		
stomach			< 9>				<12>				< 6>				< 9>			
	erosion:glandular stomach		1 ( 11)	0 ( 0)	0 ( 0)	0 ( 0)	2 ( 17)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	1 ( 11)	0 ( 0)	0 ( 0)	0 ( 0)
			< 9>				<12>				< 6>				< 9>			
	squamous cell hyperplasia:forestomach		1 ( 11)	0 ( 0)	0 ( 0)	0 ( 0)	2 ( 17)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	2 ( 22)	0 ( 0)	0 ( 0)	0 ( 0)
large intes			< 9>				<12>				< 6>				< 9>			
	erosion		0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	1 ( 8)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)
liver			< 9>				<12>				< 6>				< 9>			
	herniation		1 ( 11)	0 ( 0)	0 ( 0)	0 ( 0)	3 ( 25)	0 ( 0)	0 ( 0)	0 ( 0)	1 ( 17)	0 ( 0)	0 ( 0)	0 ( 0)	1 ( 11)	0 ( 0)	0 ( 0)	0 ( 0)
			< 9>				<12>				< 6>				< 9>			
	necrosis:central		0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	1 ( 11)	0 ( 0)	0 ( 0)
			< 9>				<12>				< 6>				< 9>			
	necrosis:focal		1 ( 11)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)
			< 9>				<12>				< 6>				< 9>			
	granulation		1 ( 11)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	1 ( 8)	0 ( 0)	1 ( 17)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)

Grade 1 : Slight 2 : Moderate 3 : Marked 4 : Severe  
 < a > a : Number of animals examined at the site  
 b : Number of animals with lesion  
 ( c ) c : b / a \* 100  
 Significant difference ; \* : P ≤ 0.05 \*\* : P ≤ 0.01 Test of Chi Square

STUDY NO. : 0371  
ANIMAL : RAT F344/DuCrj  
REPORT TYPE : A1  
SEX : FEMALE

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

PAGE : 14

Organ_____	Findings_____	Group Name	Control				250 ppm				500 ppm				1000 ppm			
		No. of Animals on Study	9				12				6				9			
		Grade	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Digestive system}																		
liver			< 9>				<12>				< 6>				< 9>			
	clear cell focus		1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			( 11)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)
	basophilic cell focus		0	0	0	0	1	0	0	0	1	0	0	0	1	0	0	0
			( 0)	( 0)	( 0)	( 0)	( 8)	( 0)	( 0)	( 0)	( 17)	( 0)	( 0)	( 0)	( 11)	( 0)	( 0)	( 0)
	bile duct hyperplasia		1	0	0	0	2	0	0	0	3	0	0	0	0	0	0	0
			( 11)	( 0)	( 0)	( 0)	( 17)	( 0)	( 0)	( 0)	( 50)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)
	cholangiofibrosis		0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
			( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 17)	( 0)	( 0)	( 0)	( 0)	( 0)
pancreas			< 9>				<12>				< 6>				< 9>			
	atrophy		0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
			( 0)	( 0)	( 0)	( 0)	( 8)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)
{Urinary system}																		
kidney			< 9>				<12>				< 6>				< 9>			
	infarct		0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		( 0)	( 11)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)

Grade 1 : Slight 2 : Moderate 3 : Marked 4 : Severe  
< a > a : Number of animals examined at the site  
b : Number of animals with lesion  
( c ) c : b / a \* 100  
Significant difference ; \* : P ≤ 0.05 \*\* : P ≤ 0.01 Test of Chi Square



STUDY NO. : 0371  
ANIMAL : RAT F344/DuCrj  
REPORT TYPE : A1  
SEX : FEMALE

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

PAGE : 15

Organ	Findings	Group Name No. of Animals on Study Grade	Control 9				250 ppm 12				500 ppm 6				1000 ppm 9			
			1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
{Urinary system}																		
kidney			< 9>				<12>				< 6>				< 9>			
	chronic nephropathy		3	0	0	0	3	0	2	0	1	0	1	0	2	2	0	0
			( 33)	( 0)	( 0)	( 0)	( 25)	( 0)	( 17)	( 0)	( 17)	( 0)	( 17)	( 0)	( 22)	( 22)	( 0)	( 0)
	hydronephrosis		0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
			( 0)	( 0)	( 0)	( 0)	( 8)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)
	papillary necrosis		1	0	0	0	0	0	0	0	1	0	0	0	2	0	0	0
			( 11)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 17)	( 0)	( 0)	( 0)	( 22)	( 0)	( 0)	( 0)
	mineralization:papilla		2	0	0	0	2	0	0	0	0	0	0	0	5	0	0	0
			( 22)	( 0)	( 0)	( 0)	( 17)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 56)	( 0)	( 0)	( 0)
	urothelial hyperplasia:pelvis		0	0	0	0	2	0	0	0	2	0	0	0	1	0	0	0
			( 0)	( 0)	( 0)	( 0)	( 17)	( 0)	( 0)	( 0)	( 33)	( 0)	( 0)	( 0)	( 11)	( 0)	( 0)	( 0)
urin bladd			< 9>				<12>				< 6>				< 9>			
	osseous metaplasia		0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
			( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 17)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)
	simple hyperplasia:transitional epithelium		0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
			( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 0)	( 11)	( 0)	( 0)
{Endocrine system}																		
pituitary			< 9>				<12>				< 6>				< 9>			
	cyst		0	0	0	0	3	0	0	0	2	0	0	0	3	0	0	0
			( 0)	( 0)	( 0)	( 0)	( 25)	( 0)	( 0)	( 0)	( 33)	( 0)	( 0)	( 0)	( 33)	( 0)	( 0)	( 0)

Grade 1 : Slight 2 : Moderate 3 : Marked 4 : Severe  
< a > a : Number of animals examined at the site  
b : Number of animals with lesion  
( c ) c : b / a \* 100  
Significant difference ; \* : P ≤ 0.05 \*\* : P ≤ 0.01 Test of Chi Square

STUDY NO. : 0371  
ANIMAL : RAT F344/DuCrj  
REPORT TYPE : A1  
SEX : FEMALE

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

PAGE : 16

		Group Name No. of Animals on Study Grade	Control 9				250 ppm 12				500 ppm 6				1000 ppm 9			
Organ_____	Findings_____		1 (%)	2 (%)	3 (%)	4 (%)	1 (%)	2 (%)	3 (%)	4 (%)	1 (%)	2 (%)	3 (%)	4 (%)	1 (%)	2 (%)	3 (%)	4 (%)
{Endocrine system}																		
pituitary	hyperplasia		< 9>				<12>				< 6>				< 9>			
		1 ( 11)	2 ( 22)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	1 ( 17)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)
thyroid	C-cell hyperplasia		< 9>				<12>				< 6>				< 9>			
		0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	2 ( 17)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)
adrenal	peliosis-like lesion		< 9>				<12>				< 6>				< 9>			
		3 ( 33)	0 ( 0)	0 ( 0)	0 ( 0)	1 ( 8)	0 ( 0)	0 ( 0)	0 ( 0)	1 ( 17)	0 ( 0)	0 ( 0)	0 ( 0)	4 ( 44)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)
	necrosis:zonal		0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	1 ( 8)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)
		focal fatty change:cortex		0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)	3 ( 25)	1 ( 8)	0 ( 0)	0 ( 0)	0 ( 0)	1 ( 17)	0 ( 0)	0 ( 0)	1 ( 11)	0 ( 0)	1 ( 11)
{Reproductive system}																		
mammary gl	galactoceles		< 9>				<12>				< 6>				< 9>			
		2 ( 22)	0 ( 0)	0 ( 0)	0 ( 0)	5 ( 42)	0 ( 0)	0 ( 0)	0 ( 0)	1 ( 17)	0 ( 0)	0 ( 0)	0 ( 0)	1 ( 11)	0 ( 0)	0 ( 0)	0 ( 0)	0 ( 0)

Grade 1 : Slight 2 : Moderate 3 : Marked 4 : Severe  
< a > a : Number of animals examined at the site  
b : Number of animals with lesion  
( c ) c : b / a \* 100  
Significant difference : \* : P ≤ 0.05 \*\* : P ≤ 0.01 Test of Chi Square

STUDY NO. : 0371  
ANIMAL : RAT F344/DuCrj  
REPORT TYPE : A1  
SEX : FEMALE

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

PAGE : 17

		Group Name No. of Animals on Study	Control 9				250 ppm 12				500 ppm 6				1000 ppm 9			
Organ	Findings	Grade	1 (%)	2 (%)	3 (%)	4 (%)	1 (%)	2 (%)	3 (%)	4 (%)	1 (%)	2 (%)	3 (%)	4 (%)	1 (%)	2 (%)	3 (%)	4 (%)
(Nervous system)																		
spinal cord			< 9>				<12>				< 6>				< 9>			
	hemorrhage		0 ( 0 )	0 ( 0 )	0 ( 0 )	0 ( 0 )	1 ( 8 )	0 ( 0 )	0 ( 0 )	0 ( 0 )	0 ( 0 )	0 ( 0 )	0 ( 0 )	0 ( 0 )	0 ( 0 )	0 ( 0 )	0 ( 0 )	0 ( 0 )
(Special sense organs/appendage)																		
eye			< 9>				<12>				< 6>				< 9>			
	cataract		2 ( 22 )	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 ( 22 )	0 ( 0 )	0 ( 0 )
	retinal atrophy		2 ( 22 )	0 ( 0 )	0 ( 0 )	0 ( 0 )	0 ( 0 )	0 ( 0 )	0 ( 0 )	0 ( 0 )	0 ( 0 )	0 ( 0 )	0 ( 0 )	0 ( 0 )	2 ( 22 )	0 ( 0 )	0 ( 0 )	0 ( 0 )
harder gl			< 9>				<12>				< 6>				< 9>			
	lymphocytic infiltration		0 ( 0 )	0 ( 0 )	0 ( 0 )	0 ( 0 )	1 ( 8 )	0 ( 0 )	0 ( 0 )	0 ( 0 )	1 ( 17 )	0 ( 0 )	0 ( 0 )	0 ( 0 )	0 ( 0 )	1 ( 11 )	0 ( 0 )	0 ( 0 )
(Musculoskeletal system)																		
bone			< 9>				<12>				< 6>				< 9>			
	osteosclerosis		1 ( 11 )	0 ( 0 )	1 ( 11 )	0 ( 0 )	0 ( 0 )	0 ( 0 )	0 ( 0 )	0 ( 0 )	0 ( 0 )	0 ( 0 )	0 ( 0 )	0 ( 0 )	0 ( 0 )	0 ( 0 )	0 ( 0 )	0 ( 0 )

Grade 1 : Slight 2 : Moderate 3 : Marked 4 : Severe  
< a > a : Number of animals examined at the site  
b b : Number of animals with lesion  
( c ) c : b / a \* 100  
Significant difference : \* : P ≤ 0.05 \*\* : P ≤ 0.01 Test of Chi Square

## APPENDIX M 1

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

RAT : MALE

(2-YEAR STUDY)

STUDY NO. : 0371  
ANIMAL : RAT F344/DuCrj  
REPORT TYPE : A1  
SEX : MALE

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

PAGE : 1

Time-related Weeks	Items	Group Name	Control	500 ppm	1000 ppm	2000 ppm
0 - 52	NO. OF EXAMINED ANIMALS		0	0	0	0
	NO. OF ANIMALS WITH TUMORS		0	0	0	0
	NO. OF ANIMALS WITH SINGLE TUMORS		0	0	0	0
	NO. OF ANIMALS WITH MULTIPLE TUMORS		0	0	0	0
	NO. OF BENIGN TUMORS		0	0	0	0
	NO. OF MALIGNANT TUMORS		0	0	0	0
	NO. OF TOTAL TUMORS		0	0	0	0
53 - 78	NO. OF EXAMINED ANIMALS		0	3	3	2
	NO. OF ANIMALS WITH TUMORS		0	3	3	2
	NO. OF ANIMALS WITH SINGLE TUMORS		0	1	3	2
	NO. OF ANIMALS WITH MULTIPLE TUMORS		0	2	0	0
	NO. OF BENIGN TUMORS		0	3	2	0
	NO. OF MALIGNANT TUMORS		0	3	1	2
	NO. OF TOTAL TUMORS		0	6	3	2
79 - 104	NO. OF EXAMINED ANIMALS		9	11	5	6
	NO. OF ANIMALS WITH TUMORS		9	10	5	6
	NO. OF ANIMALS WITH SINGLE TUMORS		2	2	0	2
	NO. OF ANIMALS WITH MULTIPLE TUMORS		7	8	5	4
	NO. OF BENIGN TUMORS		18	17	6	7
	NO. OF MALIGNANT TUMORS		4	6	6	4
	NO. OF TOTAL TUMORS		22	23	12	11
105 - 105	NO. OF EXAMINED ANIMALS		32	30	33	34
	NO. OF ANIMALS WITH TUMORS		32	30	33	34
	NO. OF ANIMALS WITH SINGLE TUMORS		7	8	10	5
	NO. OF ANIMALS WITH MULTIPLE TUMORS		25	22	23	29
	NO. OF BENIGN TUMORS		64	63	63	75
	NO. OF MALIGNANT TUMORS		10	3	10	12
	NO. OF TOTAL TUMORS		74	66	73	87

STUDY NO. : 0371  
ANIMAL : RAT F344/DuCrj  
REPORT TYPE : A1  
SEX : MALE

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

PAGE : 2

Time-related Weeks	Items	Group Name	Control	500 ppm	1000 ppm	2000 ppm
0 - 105	NO. OF EXAMINED ANIMALS		50	50	50	50
	NO. OF ANIMALS WITH TUMORS		41	43	41	42
	NO. OF ANIMALS WITH SINGLE TUMORS		9	11	13	9
	NO. OF ANIMALS WITH MULTIPLE TUMORS		32	32	28	33
	NO. OF BENIGN TUMORS		82	83	71	82
	NO. OF MALIGNANT TUMORS		14	12	17	18
	NO. OF TOTAL TUMORS		96	95	88	100

(HPT070)

BAIS4

## APPENDIX M 2

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

RAT : FEMALE

(2-YEAR STUDY)

STUDY NO. : 0371  
ANIMAL : RAT F344/DuCrj  
REPORT TYPE : A1  
SEX : FEMALE

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

PAGE : 3

Time-related Weeks	Items	Group Name	Control	250 ppm	500 ppm	1000 ppm
0 - 52	NO. OF EXAMINED ANIMALS		0	0	1	0
	NO. OF ANIMALS WITH TUMORS		0	0	1	0
	NO. OF ANIMALS WITH SINGLE TUMORS		0	0	1	0
	NO. OF ANIMALS WITH MULTIPLE TUMORS		0	0	0	0
	NO. OF BENIGN TUMORS		0	0	1	0
	NO. OF MALIGNANT TUMORS		0	0	0	0
	NO. OF TOTAL TUMORS		0	0	1	0
53 - 78	NO. OF EXAMINED ANIMALS		2	3	0	2
	NO. OF ANIMALS WITH TUMORS		1	3	0	2
	NO. OF ANIMALS WITH SINGLE TUMORS		0	3	0	1
	NO. OF ANIMALS WITH MULTIPLE TUMORS		1	0	0	1
	NO. OF BENIGN TUMORS		1	0	0	2
	NO. OF MALIGNANT TUMORS		1	3	0	1
	NO. OF TOTAL TUMORS		2	3	0	3
79 - 104	NO. OF EXAMINED ANIMALS		7	9	5	7
	NO. OF ANIMALS WITH TUMORS		6	9	5	7
	NO. OF ANIMALS WITH SINGLE TUMORS		3	4	4	6
	NO. OF ANIMALS WITH MULTIPLE TUMORS		3	5	1	1
	NO. OF BENIGN TUMORS		6	10	3	2
	NO. OF MALIGNANT TUMORS		3	7	4	6
	NO. OF TOTAL TUMORS		9	17	7	8
105 - 105	NO. OF EXAMINED ANIMALS		36	29	35	31
	NO. OF ANIMALS WITH TUMORS		26	23	31	30
	NO. OF ANIMALS WITH SINGLE TUMORS		12	15	12	3
	NO. OF ANIMALS WITH MULTIPLE TUMORS		14	8	19	27
	NO. OF BENIGN TUMORS		40	24	46	47
	NO. OF MALIGNANT TUMORS		5	9	10	21
	NO. OF TOTAL TUMORS		45	33	56	68



STUDY NO. : 0371  
ANIMAL : RAT F344/DuCrj  
REPORT TYPE : A1  
SEX : FEMALE

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

PAGE : 4

Time-related Weeks	Items	Group Name	Control	250 ppm	500 ppm	1000 ppm
0 - 105	NO. OF EXAMINED ANIMALS		50	50	50	50
	NO. OF ANIMALS WITH TUMORS		33	35	37	39
	NO. OF ANIMALS WITH SINGLE TUMORS		15	22	17	10
	NO. OF ANIMALS WITH MULTIPLE TUMORS		18	13	20	29
	NO. OF BENIGN TUMORS		47	34	50	51
	NO. OF MALIGNANT TUMORS		9	19	14	28
	NO. OF TOTAL TUMORS		56	53	64	79

(HPT070)

BAIS4

## APPENDIX N 1

HISTOPATHOLOGICAL FINDINGS : NEOPLASTIC LESIONS : SUMMARY,

RAT : MALE : ALL ANIMALS

(2-YEAR STUDY)

STUDY NO. : 0371  
ANIMAL : RAT F344/DuCrj  
REPORT TYPE : A1  
SEX : MALE

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

PAGE : 1

Organ	Findings	Group Name No. of animals on Study	Control 50	500 ppm 50	1000 ppm 50	2000 ppm 50
{Integumentary system/appandage}						
skin/app			<50>	<50>	<50>	<50>
	squamous cell papilloma		0 ( 0%)	2 ( 4%)	2 ( 4%)	1 ( 2%)
	trichoepithelioma		2 ( 4%)	1 ( 2%)	0 ( 0%)	0 ( 0%)
	keratoacanthoma		0 ( 0%)	3 ( 6%)	1 ( 2%)	0 ( 0%)
	squamous cell carcinoma		0 ( 0%)	1 ( 2%)	0 ( 0%)	0 ( 0%)
subcutis			<50>	<50>	<50>	<50>
	fibroma		5 ( 10%)	7 ( 14%)	7 ( 14%)	4 ( 8%)
	lipoma		1 ( 2%)	0 ( 0%)	0 ( 0%)	0 ( 0%)
	schwannoma:malignant		0 ( 0%)	1 ( 2%)	0 ( 0%)	0 ( 0%)
	carcinosarcoma		0 ( 0%)	1 ( 2%)	0 ( 0%)	0 ( 0%)
{Respiratory system}						
lung			<50>	<50>	<50>	<50>
	bronchiolar-alveolar adenoma		5 ( 10%)	1 ( 2%)	2 ( 4%)	1 ( 2%)
{Hematopoietic system}						
bone marrow			<50>	<50>	<50>	<50>
	histiocytic sarcoma		0 ( 0%)	0 ( 0%)	0 ( 0%)	1 ( 2%)
spleen			<50>	<50>	<50>	<50>
	osteosarcoma		1 ( 2%)	0 ( 0%)	0 ( 0%)	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. : 0371  
ANIMAL : RAT F344/DuCrj  
REPORT TYPE : A1  
SEX : MALE

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

PAGE : 2

Organ	Findings	Group Name No. of animals on Study	Control 50	500 ppm 50	1000 ppm 50	2000 ppm 50
{Hematopoietic system}						
spleen			<50>	<50>	<50>	<50>
	mononuclear cell leukemia		6 ( 12%)	3 ( 6%)	8 ( 16%)	1 ( 2%)
{Digestive system}						
oral cavity			<50>	<50>	<50>	<50>
	squamous cell papilloma		1 ( 2%)	1 ( 2%)	0 ( 0%)	1 ( 2%)
tongue			<50>	<50>	<50>	<50>
	squamous cell papilloma		0 ( 0%)	0 ( 0%)	1 ( 2%)	0 ( 0%)
stomach			<50>	<50>	<50>	<50>
	squamous cell papilloma		0 ( 0%)	0 ( 0%)	0 ( 0%)	2 ( 4%)
liver			<50>	<50>	<50>	<50>
	hamartoma		0 ( 0%)	0 ( 0%)	0 ( 0%)	1 ( 2%)
	hepatocellular adenoma		3 ( 6%)	2 ( 4%)	12 ( 24%)	15 ( 30%)
	hepatocellular carcinoma		1 ( 2%)	1 ( 2%)	6 ( 12%)	10 ( 20%)
pancreas			<50>	<50>	<50>	<50>
	islet cell adenoma		7 ( 14%)	3 ( 6%)	1 ( 2%)	1 ( 2%)
{Urinary system}						
kidney			<50>	<50>	<50>	<50>
	transitional cell papilloma		0 ( 0%)	0 ( 0%)	1 ( 2%)	0 ( 0%)
	renal cell adenoma		0 ( 0%)	0 ( 0%)	1 ( 2%)	1 ( 2%)
	transitional cell carcinoma		0 ( 0%)	0 ( 0%)	1 ( 2%)	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. : 0371  
 ANIMAL : RAT F344/DuCrj  
 REPORT TYPE : A1  
 SEX : MALE

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

PAGE : 3

Organ	Findings	Group Name No. of animals on Study	Control 50	500 ppm 50	1000 ppm 50	2000 ppm 50
{Urinary system}						
urin bladd	transitional cell papilloma		<50> 1 ( 2%)	<50> 0 ( 0%)	<50> 0 ( 0%)	<50> 6 ( 12%)
	transitional cell carcinoma		1 ( 2%)	0 ( 0%)	0 ( 0%)	4 ( 8%)
{Endocrine system}						
pituitary	adenoma		<50> 25 ( 50%)	<50> 20 ( 40%)	<50> 10 ( 20%)	<50> 13 ( 26%)
	adenocarcinoma		1 ( 2%)	0 ( 0%)	0 ( 0%)	0 ( 0%)
thyroid	C-cell adenoma		<50> 6 ( 12%)	<50> 8 ( 16%)	<50> 6 ( 12%)	<50> 8 ( 16%)
	follicular adenoma		0 ( 0%)	1 ( 2%)	0 ( 0%)	4 ( 8%)
	C-cell carcinoma		2 ( 4%)	0 ( 0%)	0 ( 0%)	1 ( 2%)
	follicular adenocarcinoma		1 ( 2%)	0 ( 0%)	1 ( 2%)	1 ( 2%)
adrenal	pheochromocytoma		<50> 2 ( 4%)	<50> 4 ( 8%)	<50> 0 ( 0%)	<50> 2 ( 4%)
	cortical adenoma		0 ( 0%)	0 ( 0%)	0 ( 0%)	1 ( 2%)
	pheochromocytoma:malignant		0 ( 0%)	0 ( 0%)	0 ( 0%)	1 ( 2%)
{Reproductive system}						
testis	interstitial cell tumor		<50> 37 ( 74%)	<50> 39 ( 78%)	<50> 45 ( 90%)	<50> 43 ( 86%)

< a > a : Number of animals examined at the site  
 b ( c ) b : Number of animals with neoplasm c : b / a \* 100

STUDY NO. : 0371  
 ANIMAL : RAT F344/DuCrj  
 REPORT TYPE : A1  
 SEX : MALE

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

PAGE : 4

Organ	Findings	Group Name No. of animals on Study	Control 50	500 ppm 50	1000 ppm 50	2000 ppm 50
{Reproductive system}						
mammary gl			<50>	<50>	<50>	<50>
	fibroadenoma		1 ( 2%)	0 ( 0%)	0 ( 0%)	0 ( 0%)
prep/cli gl			<50>	<50>	<50>	<50>
	adenoma		1 ( 2%)	3 ( 6%)	0 ( 0%)	0 ( 0%)
{Nervous system}						
brain			<50>	<50>	<50>	<50>
	glioma		1 ( 2%)	1 ( 2%)	0 ( 0%)	1 ( 2%)
	meningioma:malignant		1 ( 2%)	0 ( 0%)	0 ( 0%)	0 ( 0%)
spinal cord			<50>	<50>	<50>	<50>
	glioma		1 ( 2%)	0 ( 0%)	0 ( 0%)	0 ( 0%)
{Special sense organs/appendage}						
Zymbal gl			<50>	<50>	<50>	<50>
	adenoma		0 ( 0%)	0 ( 0%)	1 ( 2%)	0 ( 0%)
{Musculoskeletal system}						
muscle			<50>	<50>	<50>	<50>
	fibroma		1 ( 2%)	0 ( 0%)	0 ( 0%)	0 ( 0%)
bone			<50>	<50>	<50>	<50>
	osteosarcoma		0 ( 0%)	1 ( 2%)	1 ( 2%)	0 ( 0%)
{Body cavities}						
mediastinum			<50>	<50>	<50>	<50>
	sarcoma:NOS		0 ( 0%)	1 ( 2%)	0 ( 0%)	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. : 0371  
ANIMAL : RAT F344/DuCrj  
REPORT TYPE : A1  
SEX : MALE

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

PAGE : 5

Organ	Findings	Group Name No. of animals on Study	Control 50	500 ppm 50	1000 ppm 50	2000 ppm 50
{Body cavities}						
peritoneum	mesothelioma		<50> 0 ( 0%)	<50> 3 ( 6%)	<50> 4 ( 8%)	<50> 0 ( 0%)
adipose	lipoma		<50> 1 ( 2%)	<50> 0 ( 0%)	<50> 0 ( 0%)	<50> 0 ( 0%)
< a >	a : Number of animals examined at the site					
b ( c )	b : Number of animals with neoplasm      c : b / a * 100					

(HPT085)

BAIS4

## APPENDIX N 2

HISTOPATHOLOGICAL FINDINGS : NEOPLASTIC LESIONS : SUMMARY,

RAT : FEMALE : ALL ANIMALS

(2-YEAR STUDY)



STUDY NO. : 0371  
ANIMAL : RAT F344/DuCrj  
REPORT TYPE : A1  
SEX : FEMALE

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

PAGE : 6

Organ	Findings	Group Name No. of animals on Study	Control 50	250 ppm 50	500 ppm 50	1000 ppm 50
{Integumentary system/appandage}						
skin/app			<50>	<50>	<50>	<50>
	squamous cell papilloma		2 ( 4%)	0 ( 0%)	0 ( 0%)	0 ( 0%)
	trichoepithelioma		1 ( 2%)	0 ( 0%)	0 ( 0%)	0 ( 0%)
	basal cell epithelioma		0 ( 0%)	0 ( 0%)	1 ( 2%)	0 ( 0%)
	keratoacanthoma		0 ( 0%)	0 ( 0%)	0 ( 0%)	1 ( 2%)
subcutis			<50>	<50>	<50>	<50>
	fibroma		0 ( 0%)	1 ( 2%)	2 ( 4%)	0 ( 0%)
{Respiratory system}						
nasal cavit			<50>	<50>	<50>	<50>
	chondroma		0 ( 0%)	0 ( 0%)	1 ( 2%)	2 ( 4%)
	osteoma		0 ( 0%)	0 ( 0%)	1 ( 2%)	0 ( 0%)
nasopharynx	squamous cell carcinoma		<50> 0 ( 0%)	<50> 0 ( 0%)	<50> 0 ( 0%)	<50> 1 ( 2%)
lung	bronchiolar-alveolar adenoma		<50> 0 ( 0%)	<50> 1 ( 2%)	<50> 2 ( 4%)	<50> 0 ( 0%)
{Hematopoietic system}						
bone marrow	histiocytic sarcoma		<50> 0 ( 0%)	<50> 0 ( 0%)	<50> 0 ( 0%)	<50> 2 ( 4%)
thymus	thymoma:malignant		<50> 1 ( 2%)	<50> 0 ( 0%)	<50> 0 ( 0%)	<50> 0 ( 0%)

< a > a : Number of animals examined at the site  
b ( c ) b : Number of animals with neoplasm c : b / a \* 100

(IPT085)

BAIS4

STUDY NO. : 0371  
 ANIMAL : RAT F344/DuCrj  
 REPORT TYPE : A1  
 SEX : FEMALE

HISTOPATHOLOGICAL FINDINGS : NEOPLASTIC LESIONS (SUMMARY)  
 ALL ANIMALS (0-105#)

PAGE : 7

Organ	Findings	Group Name No. of animals on Study	Control 50	250 ppm 50	500 ppm 50	1000 ppm 50
{Hematopoietic system}						
spleen			<50>	<50>	<50>	<50>
	mononuclear cell leukemia		8 ( 16%)	14 ( 28%)	8 ( 16%)	6 ( 12%)
	hemangiosarcoma		0 ( 0%)	1 ( 2%)	0 ( 0%)	0 ( 0%)
{Digestive system}						
tongue			<50>	<50>	<50>	<50>
	squamous cell papilloma		0 ( 0%)	1 ( 2%)	1 ( 2%)	0 ( 0%)
liver			<50>	<50>	<50>	<50>
	hepatocellular adenoma		1 ( 2%)	3 ( 6%)	15 ( 30%)	36 ( 72%)
	hepatocellular carcinoma		0 ( 0%)	0 ( 0%)	4 ( 8%)	18 ( 36%)
pancreas			<50>	<50>	<50>	<50>
	islet cell adenoma		0 ( 0%)	1 ( 2%)	0 ( 0%)	0 ( 0%)
{Urinary system}						
kidney			<50>	<50>	<50>	<50>
	lipoma		1 ( 2%)	0 ( 0%)	0 ( 0%)	0 ( 0%)
urin bladd			<50>	<50>	<50>	<50>
	transitional cell papilloma		1 ( 2%)	0 ( 0%)	1 ( 2%)	1 ( 2%)
{Endocrine system}						
pituitary			<50>	<50>	<50>	<50>
	adenoma		23 ( 46%)	9 ( 18%)	14 ( 28%)	11 ( 22%)
	adenocarcinoma		1 ( 2%)	0 ( 0%)	1 ( 2%)	1 ( 2%)

< a > a : Number of animals examined at the site  
 b ( c ) b : Number of animals with neoplasm c : b / a \* 100

STUDY NO. : 0371  
ANIMAL : RAT F344/DuCrj  
REPORT TYPE : A1  
SEX : FEMALE

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

PAGE : 8

Organ	Findings	Group Name No. of animals on Study	Control 50	250 ppm 50	500 ppm 50	1000 ppm 50
(Endocrine system)						
thyroid			<50>	<50>	<50>	<50>
	C-cell adenoma		8 ( 16%)	7 ( 14%)	8 ( 16%)	5 ( 10%)
	follicular adenoma		1 ( 2%)	0 ( 0%)	1 ( 2%)	0 ( 0%)
	C-cell carcinoma		1 ( 2%)	1 ( 2%)	1 ( 2%)	0 ( 0%)
	follicular adenocarcinoma		0 ( 0%)	0 ( 0%)	1 ( 2%)	0 ( 0%)
adrenal			<50>	<50>	<50>	<50>
	pheochromocytoma		1 ( 2%)	1 ( 2%)	1 ( 2%)	3 ( 6%)
	cortical adenoma		1 ( 2%)	1 ( 2%)	0 ( 0%)	1 ( 2%)
(Reproductive system)						
ovary			<50>	<50>	<50>	<50>
	sertoli cell tumor		0 ( 0%)	0 ( 0%)	0 ( 0%)	1 ( 2%)
uterus			<50>	<50>	<50>	<50>
	endometrial stromal polyp		8 ( 16%)	8 ( 16%)	9 ( 18%)	4 ( 8%)
	schwannoma:malignant		0 ( 0%)	0 ( 0%)	1 ( 2%)	0 ( 0%)
	endometrial stromal sarcoma		0 ( 0%)	2 ( 4%)	0 ( 0%)	1 ( 2%)
mammary gl			<50>	<50>	<50>	<50>
	adenoma		1 ( 2%)	1 ( 2%)	0 ( 0%)	0 ( 0%)
	fibroadenoma		5 ( 10%)	6 ( 12%)	6 ( 12%)	1 ( 2%)

< a > a : Number of animals examined at the site  
b ( c ) b : Number of animals with neoplasm c : b / a \* 100

STUDY NO. : 0371  
 ANIMAL : RAT F344/DuCrj  
 REPORT TYPE : A1  
 SEX : FEMALE

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

PAGE : 9

Organ	Findings	Group Name No. of animals on Study	Control 50	250 ppm 50	500 ppm 50	1000 ppm 50
{Reproductive system}						
prep/cli gl	adenoma		<50> 1 ( 2%)	<50> 1 ( 2%)	<50> 2 ( 4%)	<50> 2 ( 4%)
{Nervous system}						
brain	glioma		<50> 0 ( 0%)	<50> 1 ( 2%)	<50> 0 ( 0%)	<50> 0 ( 0%)
{Special sense organs/appendage}						
Zymbal gl	adenoma		<50> 0 ( 0%)	<50> 0 ( 0%)	<50> 0 ( 0%)	<50> 1 ( 2%)
	adenocarcinoma		<50> 0 ( 0%)	<50> 0 ( 0%)	<50> 1 ( 2%)	<50> 0 ( 0%)
{Musculoskeletal system}						
bone	osteoma		<50> 0 ( 0%)	<50> 1 ( 2%)	<50> 0 ( 0%)	<50> 0 ( 0%)
	osteosarcoma		<50> 0 ( 0%)	<50> 1 ( 2%)	<50> 0 ( 0%)	<50> 1 ( 2%)
{Body cavities}						
mediastinum	teratoma:malignant		<50> 0 ( 0%)	<50> 1 ( 2%)	<50> 0 ( 0%)	<50> 0 ( 0%)

< a > a : Number of animals examined at the site  
 b ( c ) b : Number of animals with neoplasm c : b / a \* 100

(HPT085)

BAIS4

APPENDIX O 1

NEOPLASTIC LESIONS-INCIDENCE AND STATISTICAL ANALYSIS,

RAT : MALE

(2-YEAR STUDY)

STUDY No. : 0371  
ANIMAL : RAT F344/DuCrj  
SEX : MALE

NEOPLASTIC LESIONS-INCIDENCE AND STATISTICAL ANALYSIS

PAGE : 1

Group Name	Control	500 ppm	1000 ppm	2000 ppm
SITE : skin/appendage TUMOR : keratoacanthoma				
Tumor rate				
Overall rates(a)	0/50( 0.0)	3/50( 6.0)	1/50( 2.0)	0/50( 0.0)
Adjusted rates(b)	0.0	6.98	2.38	0.0
Terminal rates(c)	0/41( 0.0)	2/36( 5.6)	1/42( 2.4)	0/42( 0.0)
Statistical analysis				
Peto test				
Standard method(d)	P = -----			
Prevalence method(d)	P = 0.7488			
Combined analysis(d)	P = -----			
Cochran-Armitage test(e)	P = 0.4946			
Fisher Exact test(e)		P = 0.1212	P = 0.5000	P = N.C.
SITE : subcutis TUMOR : fibroma				
Tumor rate				
Overall rates(a)	5/50( 10.0)	7/50( 14.0)	7/50( 14.0)	4/50( 8.0)
Adjusted rates(b)	10.64	11.11	14.29	9.52
Terminal rates(c)	4/41( 9.8)	4/36( 11.1)	6/42( 14.3)	4/42( 9.5)
Statistical analysis				
Peto test				
Standard method(d)	P = 0.7411			
Prevalence method(d)	P = 0.6147			
Combined analysis(d)	P = 0.7143			
Cochran-Armitage test(e)	P = 0.6262			
Fisher Exact test(e)		P = 0.3798	P = 0.3798	P = 0.5000
SITE : lung TUMOR : bronchiolar-alveolar adenoma				
Tumor rate				
Overall rates(a)	5/50( 10.0)	1/50( 2.0)	2/50( 4.0)	1/50( 2.0)
Adjusted rates(b)	12.20	2.78	4.76	2.38
Terminal rates(c)	5/41( 12.2)	1/36( 2.8)	2/42( 4.8)	1/42( 2.4)
Statistical analysis				
Peto test				
Standard method(d)	P = -----			
Prevalence method(d)	P = 0.9512			
Combined analysis(d)	P = -----			
Cochran-Armitage test(e)	P = 0.1195			
Fisher Exact test(e)		P = 0.1022	P = 0.2180	P = 0.1022

(HPT360A)

BATS4

STUDY No. : 0371  
ANIMAL : RAT F344/DuCrj  
SEX : MALE

NEOPLASTIC LESIONS-INCIDENCE AND STATISTICAL ANALYSIS

PAGE : 2

Group Name	Control	500 ppm	1000 ppm	2000 ppm
SITE : spleen TUMOR : mononuclear cell leukemia				
Tumor rate				
Overall rates(a)	6/50( 12.0)	3/50( 6.0)	8/50( 16.0)	1/50( 2.0)
Adjusted rates(b)	12.20	4.26	11.90	2.38
Terminal rates(c)	5/41( 12.2)	1/36( 2.8)	5/42( 11.9)	1/42( 2.4)
Statistical analysis				
Peto test				
Standard method(d)	P = 0.6882			
Prevalence method(d)	P = 0.9145			
Combined analysis(d)	P = 0.9261			
Cochran-Armitage test(e)	P = 0.1556			
Fisher Exact test(e)		P = 0.2435	P = 0.3871	P = 0.0559
SITE : liver TUMOR : hepatocellular adenoma				
Tumor rate				
Overall rates(a)	3/50( 6.0)	2/50( 4.0)	12/50( 24.0)	15/50( 30.0)
Adjusted rates(b)	7.32	5.56	28.57	35.71
Terminal rates(c)	3/41( 7.3)	2/36( 5.6)	12/42( 28.6)	15/42( 35.7)
Statistical analysis				
Peto test				
Standard method(d)	P =			
Prevalence method(d)	P = 0.0001**			
Combined analysis(d)	P = -----			
Cochran-Armitage test(e)	P = 0.0001**			
Fisher Exact test(e)		P = 0.5000	P = 0.0113*	P = 0.0017**
SITE : liver TUMOR : hepatocellular carcinoma				
Tumor rate				
Overall rates(a)	1/50( 2.0)	1/50( 2.0)	6/50( 12.0)	10/50( 20.0)
Adjusted rates(b)	2.44	2.78	11.90	21.43
Terminal rates(c)	1/41( 2.4)	1/36( 2.8)	5/42( 11.9)	9/42( 21.4)
Statistical analysis				
Peto test				
Standard method(d)	P = 0.1446			
Prevalence method(d)	P = 0.0007**			
Combined analysis(d)	P = 0.0004**			
Cochran-Armitage test(e)	P = 0.0003**			
Fisher Exact test(e)		P = 0.7525	P = 0.0559	P = 0.0039**

STUDY No. : 0371  
ANIMAL : RAT F344/DuCrj  
SEX : MALE

NEOPLASTIC LESIONS-INCIDENCE AND STATISTICAL ANALYSIS

PAGE : 3

Group Name	Control	500 ppm	1000 ppm	2000 ppm
SITE : liver TUMOR : hepatocellular adenoma, hepatocellular carcinoma				
Tumor rate				
Overall rates(a)	4/50( 8.0)	3/50( 6.0)	16/50( 32.0)	22/50( 44.0)
Adjusted rates(b)	9.76	8.33	35.71	50.00
Terminal rates(c)	4/41( 9.8)	3/36( 8.3)	15/42( 35.7)	21/42( 50.0)
Statistical analysis				
Peto test				
Standard method(d)	P = 0.1446			
Prevalence method(d)	P < 0.0001**			
Combined analysis(d)	P < 0.0001**			
Cochran-Armitage test(e)	P < 0.0001**			
Fisher Exact test(e)		P = 0.5000	P = 0.0025**	P < 0.0001**
SITE : pancreas TUMOR : islet cell adenoma				
Tumor rate				
Overall rates(a)	7/50( 14.0)	3/50( 6.0)	1/50( 2.0)	1/50( 2.0)
Adjusted rates(b)	15.22	8.33	2.38	2.38
Terminal rates(c)	5/41( 12.2)	3/36( 8.3)	1/42( 2.4)	1/42( 2.4)
Statistical analysis				
Peto test				
Standard method(d)	P =			
Prevalence method(d)	P = 0.9954			
Combined analysis(d)	P = -----			
Cochran-Armitage test(e)	P = 0.0157*			
Fisher Exact test(e)		P = 0.1589	P = 0.0297*	P = 0.0297*
SITE : urinary bladder TUMOR : transitional cell papilloma				
Tumor rate				
Overall rates(a)	1/50( 2.0)	0/50( 0.0)	0/50( 0.0)	6/50( 12.0)
Adjusted rates(b)	2.44	0.0	0.0	11.90
Terminal rates(c)	1/41( 2.4)	0/36( 0.0)	0/42( 0.0)	5/42( 11.9)
Statistical analysis				
Peto test				
Standard method(d)	P = 0.1114			
Prevalence method(d)	P = 0.0058**			
Combined analysis(d)	P = 0.0018**			
Cochran-Armitage test(e)	P = 0.0022**			
Fisher Exact test(e)		P = 0.5000	P = 0.5000	P = 0.0559



STUDY No. : 0371  
ANIMAL : RAT F344/DuCrj  
SEX : MALE

NEOPLASTIC LESIONS-INCIDENCE AND STATISTICAL ANALYSIS

PAGE : 4

Group Name	Control	500 ppm	1000 ppm	2000 ppm
SITE : urinary bladder TUMOR : transitional cell carcinoma				
Tumor rate				
Overall rates(a)	1/50( 2.0)	0/50( 0.0)	0/50( 0.0)	4/50( 8.0)
Adjusted rates(b)	2.13	0.0	0.0	4.76
Terminal rates(c)	0/41( 0.0)	0/36( 0.0)	0/42( 0.0)	2/42( 4.8)
Statistical analysis				
Peto test				
Standard method(d)	P = 0.0182* ?			
Prevalence method(d)	P = 0.1580			
Combined analysis(d)	P = 0.0175*			
Cochran-Armitage test(e)	P = 0.0264*			
Fisher Exact test(e)		P = 0.5000	P = 0.5000	P = 0.1811
SITE : urinary bladder TUMOR : transitional cell papilloma,transitional cell carcinoma				
Tumor rate				
Overall rates(a)	2/50( 4.0)	0/50( 0.0)	0/50( 0.0)	10/50( 20.0)
Adjusted rates(b)	4.26	0.0	0.0	16.67
Terminal rates(c)	1/41( 2.4)	0/36( 0.0)	0/42( 0.0)	7/42( 16.7)
Statistical analysis				
Peto test				
Standard method(d)	P = 0.0043**?			
Prevalence method(d)	P = 0.0032**			
Combined analysis(d)	P = 0.0001**			
Cochran-Armitage test(e)	P = 0.0001**			
Fisher Exact test(e)		P = 0.2475	P = 0.2475	P = 0.0139*
SITE : pituitary gland TUMOR : adenoma				
Tumor rate				
Overall rates(a)	25/50( 50.0)	20/50( 40.0)	10/50( 20.0)	13/50( 26.0)
Adjusted rates(b)	46.81	37.84	21.28	28.57
Terminal rates(c)	17/41( 41.5)	13/36( 36.1)	8/42( 19.0)	12/42( 28.6)
Statistical analysis				
Peto test				
Standard method(d)	P = 0.9879			
Prevalence method(d)	P = 0.9841			
Combined analysis(d)	P = 0.9972			
Cochran-Armitage test(e)	P = 0.0084**			
Fisher Exact test(e)		P = 0.2108	P = 0.0015**	P = 0.0114*

STUDY No. : 0371  
ANIMAL : RAT F344/DuCrj  
SEX : MALE

NEOPLASTIC LESIONS-INCIDENCE AND STATISTICAL ANALYSIS

PAGE : 5

Group Name	Control	500 ppm	1000 ppm	2000 ppm
SITE : thyroid TUMOR : C-cell adenoma				
Tumor rate				
Overall rates(a)	6/50( 12.0)	8/50( 16.0)	6/50( 12.0)	8/50( 16.0)
Adjusted rates(b)	13.33	19.44	14.29	19.05
Terminal rates(c)	5/41( 12.2)	7/36( 19.4)	6/42( 14.3)	8/42( 19.0)
Statistical analysis				
Peto test				
Standard method(d)	P = -----			
Prevalence method(d)	P = 0.3747			
Combined analysis(d)	P = -----			
Cochran-Armitage test(e)	P = 0.6793			
Fisher Exact test(e)		P = 0.3871	P = 0.6202	P = 0.3871
SITE : thyroid TUMOR : follicular adenoma				
Tumor rate				
Overall rates(a)	0/50( 0.0)	1/50( 2.0)	0/50( 0.0)	4/50( 8.0)
Adjusted rates(b)	0.0	2.78	0.0	9.52
Terminal rates(c)	0/41( 0.0)	1/36( 2.8)	0/42( 0.0)	4/42( 9.5)
Statistical analysis				
Peto test				
Standard method(d)	P =			
Prevalence method(d)	P = 0.0084**			
Combined analysis(d)	P = -----			
Cochran-Armitage test(e)	P = 0.0115*			
Fisher Exact test(e)		P = 0.5000	P = N.C.	P = 0.0587
SITE : thyroid TUMOR : follicular adenoma, follicular adenocarcinoma				
Tumor rate				
Overall rates(a)	1/50( 2.0)	1/50( 2.0)	1/50( 2.0)	5/50( 10.0)
Adjusted rates(b)	2.44	2.78	2.38	10.64
Terminal rates(c)	1/41( 2.4)	1/36( 2.8)	1/42( 2.4)	4/42( 9.5)
Statistical analysis				
Peto test				
Standard method(d)	P = -----			
Prevalence method(d)	P = 0.0200*			
Combined analysis(d)	P = -----			
Cochran-Armitage test(e)	P = 0.0281*			
Fisher Exact test(e)		P = 0.7525	P = 0.7525	P = 0.1022

STUDY No. : 0371  
ANIMAL : RAT F344/DuCrj  
SEX : MALE

NEOPLASTIC LESIONS-INCIDENCE AND STATISTICAL ANALYSIS

PAGE : 6

Group Name	Control	500 ppm	1000 ppm	2000 ppm
SITE : adrenal gland TUMOR : pheochromocytoma				
Tumor rate				
Overall rates(a)	2/50( 4.0)	4/50( 8.0)	0/50( 0.0)	2/50( 4.0)
Adjusted rates(b)	4.88	9.30	0.0	4.76
Terminal rates(c)	2/41( 4.9)	3/36( 8.3)	0/42( 0.0)	2/42( 4.8)
Statistical analysis				
Peto test				
Standard method(d)	P = -----			
Prevalence method(d)	P = 0.6980			
Combined analysis(d)	P = -----			
Cochran-Armitage test(e)	P = 0.6256			
Fisher Exact test(e)		P = 0.3389	P = 0.2475	P = 0.6913
SITE : testis TUMOR : interstitial cell tumor				
Tumor rate				
Overall rates(a)	37/50( 74.0)	39/50( 78.0)	45/50( 90.0)	43/50( 86.0)
Adjusted rates(b)	80.43	92.31	95.65	91.11
Terminal rates(c)	32/41( 78.0)	33/36( 91.7)	40/42( 95.2)	38/42( 90.5)
Statistical analysis				
Peto test				
Standard method(d)	P =			
Prevalence method(d)	P = 0.0378*			
Combined analysis(d)	P = -----			
Cochran-Armitage test(e)	P = 0.0815			
Fisher Exact test(e)		P = 0.4076	P = 0.0332*	P = 0.1054
SITE : preputial/clitoral gland TUMOR : adenoma				
Tumor rate				
Overall rates(a)	1/50( 2.0)	3/50( 6.0)	0/50( 0.0)	0/50( 0.0)
Adjusted rates(b)	2.44	7.14	0.0	0.0
Terminal rates(c)	1/41( 2.4)	2/36( 5.6)	0/42( 0.0)	0/42( 0.0)
Statistical analysis				
Peto test				
Standard method(d)	P = -----			
Prevalence method(d)	P = 0.9201			
Combined analysis(d)	P = -----			
Cochran-Armitage test(e)	P = 0.1719			
Fisher Exact test(e)		P = 0.3087	P = 0.5000	P = 0.5000

STUDY No. : 0371  
ANIMAL : RAT F344/DuCrj  
SEX : MALE

NEOPLASTIC LESIONS-INCIDENCE AND STATISTICAL ANALYSIS

PAGE : 7

Group Name	Control	500 ppm	1000 ppm	2000 ppm
SITE : peritoneum TUMOR : mesothelioma				
Tumor rate				
Overall rates(a)	0/50( 0.0)	3/50( 6.0)	4/50( 8.0)	0/50( 0.0)
Adjusted rates(b)	0.0	6.52	9.30	0.0
Terminal rates(c)	0/41( 0.0)	2/36( 5.6)	3/42( 7.1)	0/42( 0.0)
Statistical analysis				
Peto test				
Standard method(d)	P = -----			
Prevalence method(d)	P = 0.6226			
Combined analysis(d)	P = -----			
Cochran-Armitage test(e)	P = 0.7450			
Fisher Exact test(e)		P = 0.1212	P = 0.0587	P = N. C.

(HPT360A)

BAIS4

- (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.  
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.  
? : The conditional probabilities of the largest and smallest possible outcomes can not be estimated or this P-value is beyond the estimated P-value.  
----- : There is no data which should be statistical analysis.  
Significant difference ; \* :  $P \leq 0.05$  \*\* :  $P \leq 0.01$   
N.C. : Statistical value cannot be calculated and was not significant.

APPENDIX O 2

NEOPLASTIC LESIONS-INCIDENCE AND STATISTICAL ANALYSIS,

RAT : FEMALE

(2-YEAR STUDY)

STUDY No. : 0371  
ANIMAL : RAT F344/DuCrj  
SEX : FEMALE

NEOPLASTIC LESIONS-INCIDENCE AND STATISTICAL ANALYSIS

PAGE : 8

Group Name	Control	250 ppm	500 ppm	1000 ppm
SITE : spleen TUMOR : mononuclear cell leukemia				
Tumor rate				
Overall rates(a)	8/50( 16.0)	14/50( 28.0)	8/50( 16.0)	6/50( 12.0)
Adjusted rates(b)	14.63	23.68	13.64	9.76
Terminal rates(c)	6/41( 14.6)	9/38( 23.7)	6/44( 13.6)	4/41( 9.8)
Statistical analysis				
Peto test				
Standard method(d)	P = 0.6752			
Prevalence method(d)	P = 0.8542			
Combined analysis(d)	P = 0.8726			
Cochran-Armitage test(e)	P = 0.2627			
Fisher Exact test(e)		P = 0.1135	P = 0.6071	P = 0.3871
SITE : liver TUMOR : hepatocellular adenoma				
Tumor rate				
Overall rates(a)	1/50( 2.0)	3/50( 6.0)	15/50( 30.0)	36/50( 72.0)
Adjusted rates(b)	2.44	7.89	31.82	82.93
Terminal rates(c)	1/41( 2.4)	3/38( 7.9)	14/44( 31.8)	34/41( 82.9)
Statistical analysis				
Peto test				
Standard method(d)	P =			
Prevalence method(d)	P < 0.0001**?			
Combined analysis(d)	P = -----			
Cochran-Armitage test(e)	P < 0.0001**			
Fisher Exact test(e)		P = 0.3087	P = 0.0001**	P < 0.0001**
SITE : liver TUMOR : hepatocellular carcinoma				
Tumor rate				
Overall rates(a)	0/50( 0.0)	0/50( 0.0)	4/50( 8.0)	18/50( 36.0)
Adjusted rates(b)	0.0	0.0	9.09	36.59
Terminal rates(c)	0/41( 0.0)	0/38( 0.0)	4/44( 9.1)	15/41( 36.6)
Statistical analysis				
Peto test				
Standard method(d)	P = 0.0043**?			
Prevalence method(d)	P < 0.0001**			
Combined analysis(d)	P < 0.0001**?			
Cochran-Armitage test(e)	P < 0.0001**			
Fisher Exact test(e)		P = N.C.	P = 0.0587	P < 0.0001**

STUDY No. : 0371  
ANIMAL : RAT F344/DuCrj  
SEX : FEMALE

NEOPLASTIC LESIONS-INCIDENCE AND STATISTICAL ANALYSIS

PAGE : 9

Group Name	Control	250 ppm	500 ppm	1000 ppm
SITE : liver TUMOR : hepatocellular adenoma, hepatocellular carcinoma				
Tumor rate				
Overall rates(a)	1/50( 2.0)	3/50( 6.0)	19/50( 38.0)	44/50( 88.0)
Adjusted rates(b)	2.44	7.89	40.91	95.12
Terminal rates(c)	1/41( 2.4)	3/38( 7.9)	18/44( 40.9)	39/41( 95.1)
Statistical analysis				
Peto test				
Standard method(d)	P = 0.0043**?			
Prevalence method(d)	P < 0.0001**?			
Combined analysis(d)	P < 0.0001**?			
Cochran-Armitage test(e)	P < 0.0001**			
Fisher Exact test(e)		P = 0.3087	P < 0.0001**	P < 0.0001**
SITE : pituitary gland TUMOR : adenoma				
Tumor rate				
Overall rates(a)	23/50( 46.0)	9/50( 18.0)	14/50( 28.0)	11/50( 22.0)
Adjusted rates(b)	51.22	14.29	27.27	26.83
Terminal rates(c)	21/41( 51.2)	4/38( 10.5)	12/44( 27.3)	11/41( 26.8)
Statistical analysis				
Peto test				
Standard method(d)	P = 0.9174			
Prevalence method(d)	P = 0.9485			
Combined analysis(d)	P = 0.9803			
Cochran-Armitage test(e)	P = 0.0471*			
Fisher Exact test(e)		P = 0.0025**	P = 0.0485*	P = 0.0098**
SITE : thyroid TUMOR : C-cell adenoma				
Tumor rate				
Overall rates(a)	8/50( 16.0)	7/50( 14.0)	8/50( 16.0)	5/50( 10.0)
Adjusted rates(b)	17.07	17.07	18.18	12.20
Terminal rates(c)	7/41( 17.1)	6/38( 15.8)	8/44( 18.2)	5/41( 12.2)
Statistical analysis				
Peto test				
Standard method(d)	P = -----			
Prevalence method(d)	P = 0.8215			
Combined analysis(d)	P = -----			
Cochran-Armitage test(e)	P = 0.4084			
Fisher Exact test(e)		P = 0.5000	P = 0.6071	P = 0.2768

STUDY No. : 0371  
 ANIMAL : RAT F344/DuCrj  
 SEX : FEMALE

NEOPLASTIC LESIONS-INCIDENCE AND STATISTICAL ANALYSIS

PAGE : 10

Group Name	Control	250 ppm	500 ppm	1000 ppm
SITE : adrenal gland TUMOR : pheochromocytoma				
Tumor rate				
Overall rates(a)	1/50( 2.0)	1/50( 2.0)	1/50( 2.0)	3/50( 6.0)
Adjusted rates(b)	2.44	2.63	2.27	7.32
Terminal rates(c)	1/41( 2.4)	1/38( 2.6)	1/44( 2.3)	3/41( 7.3)
Statistical analysis				
Peto test				
Standard method(d)	P = -----			
Prevalence method(d)	P = 0.1149			
Combined analysis(d)	P = -----			
Cochran-Armitage test(e)	P = 0.2072			
Fisher Exact test(e)		P = 0.7525	P = 0.7525	P = 0.3087
SITE : uterus TUMOR : endometrial stromal polyp				
Tumor rate				
Overall rates(a)	8/50( 16.0)	8/50( 16.0)	9/50( 18.0)	4/50( 8.0)
Adjusted rates(b)	18.18	18.60	18.37	9.76
Terminal rates(c)	7/41( 17.1)	7/38( 18.4)	8/44( 18.2)	4/41( 9.8)
Statistical analysis				
Peto test				
Standard method(d)	P =			
Prevalence method(d)	P = 0.8895			
Combined analysis(d)	P = -----			
Cochran-Armitage test(e)	P = 0.2348			
Fisher Exact test(e)		P = 0.6071	P = 0.5000	P = 0.1783

(HPT360A)

BAIS4



STUDY No. : 0371  
ANIMAL : RAT F344/DuCrj  
SEX : FEMALE

NEOPLASTIC LESIONS-INCIDENCE AND STATISTICAL ANALYSIS

PAGE : 11

Group Name	Control	250 ppm	500 ppm	1000 ppm
SITE : mammary gland TUMOR : fibroadenoma				
Tumor rate				
Overall rates(a)	5/50( 10.0)	6/50( 12.0)	6/50( 12.0)	1/50( 2.0)
Adjusted rates(b)	8.70	13.04	13.64	2.44
Terminal rates(c)	2/41( 4.9)	4/38( 10.5)	6/44( 13.6)	1/41( 2.4)
Statistical analysis				
Peto test				
Standard method(d)	P = 0.9134 ?			
Prevalence method(d)	P = 0.9225			
Combined analysis(d)	P = 0.9541			
Cochran-Armitage test(e)	P = 0.1125			
Fisher Exact test(e)		P = 0.5000	P = 0.5000	P = 0.1022

(HPT360A)

BAIS4

- (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.  
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.  
? : The conditional probabilities of the largest and smallest possible outcomes can not be estimated or this P-value is beyond the estimated P-value.  
----- : There is no data which should be statistical analysis.  
Significant difference : \* :  $P \leq 0.05$  \*\* :  $P \leq 0.01$   
N.C. : Statistical value cannot be calculated and was not significant.

## APPENDIX P 1

HISTOPATHOLOGICAL FINDINGS : METASTASIS OF TUMOR : SUMMARY,

RAT : MALE : ALL ANIMALS

(2-YEAR STUDY)

STUDY NO. : 0371  
 ANIMAL : RAT F344/DuCrj  
 REPORT TYPE : A1  
 SEX : MALE

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

PAGE : 1

Organ	Findings	Group Name No. of Animals on Study	Control 50	500 ppm 50	1000 ppm 50	2000 ppm 50
{Respiratory system}						
lung	leukemic cell infiltration		<50> 3	<50> 1	<50> 5	<50> 1
	metastasis:liver tumor		0	0	0	2
	metastasis:thyroid tumor		0	0	0	1
	metastasis:subcutis tumor		0	1	0	0
	metastasis:bone tumor		0	1	1	0
	metastasis:skin/appendage tumor		0	1	0	0
	metastasis:mediastinum tumor		0	1	0	0
{Hematopoietic system}						
bone marrow	leukemic cell infiltration		<50> 2	<50> 2	<50> 3	<50> 1
	metastasis:thyroid tumor		0	0	0	1
lymph node	leukemic cell infiltration		<50> 1	<50> 0	<50> 1	<50> 0
	metastasis:thyroid tumor		0	0	0	2
	metastasis:subcutis tumor		0	1	0	0
spleen	metastasis:thyroid tumor		<50> 0	<50> 0	<50> 0	<50> 1
{Circulatory system}						
heart	leukemic cell infiltration		<50> 0	<50> 1	<50> 1	<50> 0
< a >	a : Number of animals examined at the site					
b	b : Number of animals with lesion					

STUDY NO. : 0371  
 ANIMAL : RAT F344/DuCrj  
 REPORT TYPE : A1  
 SEX : MALE

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

PAGE : 2

Organ	Findings	Group Name No. of Animals on Study	Control 50	500 ppm 50	1000 ppm 50	2000 ppm 50
{Circulatory system}						
heart	metastasis:mediastinum tumor		<50> 0	<50> 1	<50> 0	<50> 0
{Digestive system}						
salivary gl	metastasis:thyroid tumor		<50> 0	<50> 0	<50> 0	<50> 1
large intes	metastasis:liver tumor		<50> 0	<50> 0	<50> 0	<50> 1
liver	leukemic cell infiltration		<50> 3	<50> 1	<50> 4	<50> 1
	metastasis:thyroid tumor		0	0	0	1
	metastasis:spleen tumor		1	0	0	0
pancreas	leukemic cell infiltration		<50> 0	<50> 0	<50> 0	<50> 1
{Urinary system}						
kidney	leukemic cell infiltration		<50> 0	<50> 0	<50> 2	<50> 0
{Endocrine system}						
adrenal	leukemic cell infiltration		<50> 1	<50> 0	<50> 0	<50> 0
{Nervous system}						
brain	leukemic cell infiltration		<50> 0	<50> 0	<50> 1	<50> 0

< a > a : Number of animals examined at the site  
 b b : Number of animals with lesion

STUDY NO. : 0371  
ANIMAL : RAT F344/DuCrj  
REPORT TYPE : A1  
SEX : MALE

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

PAGE : 3

		Group Name	Control	500 ppm	1000 ppm	2000 ppm
		No. of Animals on Study	50	50	50	50
Organ	Findings					
{Nervous system}						
spinal cord	leukemic cell infiltration		<50> 0	<50> 0	<50> 1	<50> 0
{Special sense organs/appendage}						
Harder gl	metastasis:subcutis tumor		<50> 0	<50> 1	<50> 0	<50> 0
< a > a : Number of animals examined at the site						
b b : Number of animals with lesion						

(JPT150)

BAIS4

## APPENDIX P 2

HISTOPATHOLOGICAL FINDINGS : METASTASIS OF TUMOR : SUMMARY,

RAT : FEMALE : ALL ANIMALS

(2-YEAR STUDY)

STUDY NO. : 0371  
 ANIMAL : RAT F344/DuCrj  
 REPORT TYPE : A1  
 SEX : FEMALE

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

PAGE : 4

Organ	Findings	Group Name No. of Animals on Study	Control 50	250 ppm 50	500 ppm 50	1000 ppm 50
{Integumentary system/appandage}						
subcutis	metastasis:bone tumor		<50> 0	<50> 0	<50> 0	<50> 1
{Respiratory system}						
lung	leukemic cell infiltration		<50> 4	<50> 8	<50> 4	<50> 3
	metastasis:liver tumor		0	0	0	5
	metastasis:uterus tumor		0	2	0	0
	metastasis:thyroid tumor		0	1	0	0
	metastasis:zybal gland tumor		0	0	1	0
	metastasis:mediastinum tumor		0	1	0	0
{Hematopoietic system}						
bone marrow	leukemic cell infiltration		<50> 1	<50> 7	<50> 2	<50> 3
lymph node	leukemic cell infiltration		<50> 2	<50> 0	<50> 2	<50> 2
{Circulatory system}						
heart	leukemic cell infiltration		<50> 1	<50> 0	<50> 0	<50> 0
{Digestive system}						
liver	leukemic cell infiltration		<50> 5	<50> 10	<50> 8	<50> 5

< a > a : Number of animals examined at the site  
 b : Number of animals with lesion

STUDY NO. : 0371  
 ANIMAL : RAT F344/DuCrj  
 REPORT TYPE : A1  
 SEX : FEMALE

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

PAGE : 5

Organ	Findings	Group Name No. of Animals on Study	Control 50	250 ppm 50	500 ppm 50	1000 ppm 50
{Urinary system}						
kidney			<50>	<50>	<50>	<50>
	leukemic cell infiltration		1	0	0	1
{Endocrine system}						
pituitary			<50>	<50>	<50>	<50>
	leukemic cell infiltration		1	0	0	0
adrenal			<50>	<50>	<50>	<50>
	leukemic cell infiltration		0	2	1	0
{Nervous system}						
brain			<50>	<50>	<50>	<50>
	leukemic cell infiltration		1	0	1	0
	metastasis:pituitary tumor		1	0	1	1
spinal cord			<50>	<50>	<50>	<50>
	leukemic cell infiltration		0	0	2	0
< a > a : Number of animals examined at the site b b : Number of animals with lesion						

(JPT150)

BAIS4



## APPENDIX P 3

HISTOPATHOLOGICAL FINDINGS : METASTASIS OF TUMOR : SUMMARY,

RAT : MALE : SACRIFICED ANIMALS

(2-YEAR STUDY)

STUDY NO. : 0371  
 ANIMAL : RAT F344/DuCrj  
 REPORT TYPE : A1  
 SEX : MALE

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

PAGE : 1

Organ	Findings	Group Name No. of Animals on Study	Control 41	500 ppm 36	1000 ppm 42	2000 ppm 42
{Respiratory system}						
lung			<41>	<36>	<42>	<42>
	leukemic cell infiltration		2	0	2	1
	metastasis:liver tumor		0	0	0	1
{Hematopoietic system}						
bone marrow			<41>	<36>	<42>	<42>
	leukemic cell infiltration		1	0	0	1
lymph node			<41>	<36>	<42>	<42>
	leukemic cell infiltration		0	0	1	0
{Circulatory system}						
heart			<41>	<36>	<42>	<42>
	leukemic cell infiltration		0	0	1	0
{Digestive system}						
large intes			<41>	<36>	<42>	<42>
	metastasis:liver tumor		0	0	0	1
liver			<41>	<36>	<42>	<42>
	leukemic cell infiltration		2	0	1	1
	metastasis:spleen tumor		1	0	0	0
pancreas			<41>	<36>	<42>	<42>
	leukemic cell infiltration		0	0	0	1
< a >	a : Number of animals examined at the site					
b	b : Number of animals with lesion					

## APPENDIX P 4

HISTOPATHOLOGICAL FINDINGS : METASTASIS OF TUMOR : SUMMARY,

RAT : FEMALE : SACRIFICED ANIMALS

(2-YEAR STUDY)

STUDY NO. : 0371  
 ANIMAL : RAT F344/DuCrj  
 REPORT TYPE : A1  
 SEX : FEMALE

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

PAGE : 2

Organ	Findings	Group Name No. of Animals on Study	Control 41	250 ppm 38	500 ppm 44	1000 ppm 41
{Respiratory system}						
lung	leukemic cell infiltration		<41> 2	<38> 3	<44> 2	<41> 1
	metastasis:liver tumor		0	0	0	3
	metastasis:thyroid tumor		0	1	0	0
{Hematopoietic system}						
bone marrow	leukemic cell infiltration		<41> 0	<38> 2	<44> 2	<41> 1
lymph node	leukemic cell infiltration		<41> 0	<38> 0	<44> 1	<41> 1
{Digestive system}						
liver	leukemic cell infiltration		<41> 3	<38> 5	<44> 6	<41> 3
{Urinary system}						
kidney	leukemic cell infiltration		<41> 0	<38> 0	<44> 0	<41> 1
{Nervous system}						
brain	metastasis:pituitary tumor		<41> 0	<38> 0	<44> 1	<41> 1
< a >	a : Number of animals examined at the site					
b	b : Number of animals with lesion					

APPENDIX P 5

HISTOPATHOLOGICAL FINDINGS : METASTASIS OF TUMOR : SUMMARY,

RAT : MALE : DEAD AND MORIBUND ANIMALS

(2-YEAR STUDY)

STUDY NO. : 0371  
ANIMAL : RAT F344/DuCrj  
REPORT TYPE : A1  
SEX : MALE

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

PAGE : 1

Organ	Findings	Group Name No. of Animals on Study	Control 9	500 ppm 14	1000 ppm 8	2000 ppm 8
{Respiratory system}						
lung	leukemic cell infiltration		< 9> 1	<14> 1	< 8> 3	< 8> 0
	metastasis:liver tumor		0	0	0	1
	metastasis:thyroid tumor		0	0	0	1
	metastasis:subcutis tumor		0	1	0	0
	metastasis:bone tumor		0	1	1	0
	metastasis:skin/appendage tumor		0	1	0	0
	metastasis:mediastinum tumor		0	1	0	0
{Hematopoietic system}						
bone marrow	leukemic cell infiltration		< 9> 1	<14> 2	< 8> 3	< 8> 0
	metastasis:thyroid tumor		0	0	0	1
lymph node	leukemic cell infiltration		< 9> 1	<14> 0	< 8> 0	< 8> 0
	metastasis:thyroid tumor		0	0	0	2
	metastasis:subcutis tumor		0	1	0	0
spleen	metastasis:thyroid tumor		< 9> 0	<14> 0	< 8> 0	< 8> 1
{Circulatory system}						
heart	leukemic cell infiltration		< 9> 0	<14> 1	< 8> 0	< 8> 0
< a >	a : Number of animals examined at the site					
b	b : Number of animals with lesion					

STUDY NO. : 0371  
ANIMAL : RAT F344/DuCrj  
REPORT TYPE : A1  
SEX : MALE

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

PAGE : 2

Organ	Findings	Group Name No. of Animals on Study	Control 9	500 ppm 14	1000 ppm 8	2000 ppm 8
{Circulatory system}						
heart	metastasis:mediastinum tumor		< 9> 0	<14> 1	< 8> 0	< 8> 0
{Digestive system}						
salivary gl	metastasis:thyroid tumor		< 9> 0	<14> 0	< 8> 0	< 8> 1
liver	leukemic cell infiltration		< 9> 1	<14> 1	< 8> 3	< 8> 0
	metastasis:thyroid tumor		0	0	0	1
{Urinary system}						
kidney	leukemic cell infiltration		< 9> 0	<14> 0	< 8> 2	< 8> 0
{Endocrine system}						
adrenal	leukemic cell infiltration		< 9> 1	<14> 0	< 8> 0	< 8> 0
{Nervous system}						
brain	leukemic cell infiltration		< 9> 0	<14> 0	< 8> 1	< 8> 0
spinal cord	leukemic cell infiltration		< 9> 0	<14> 0	< 8> 1	< 8> 0
{Special sense organs/appendage}						
Harder gl	metastasis:subcutis tumor		< 9> 0	<14> 1	< 8> 0	< 8> 0

< a > a : Number of animals examined at the site  
b : Number of animals with lesion

APPENDIX P 6

HISTOPATHOLOGICAL FINDINGS : METASTASIS OF TUMOR : SUMMARY,

RAT : FEMALE : DEAD AND MORIBUND ANIMALS

(2-YEAR STUDY)



STUDY NO. : 0371  
 ANIMAL : RAT F344/DuCrj  
 REPORT TYPE : A1  
 SEX : FEMALE

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

PAGE : 3

Organ	Findings	Group Name No. of Animals on Study	Control 9	250 ppm 12	500 ppm 6	1000 ppm 9
{Integumentary system/appandage}						
subcutis	metastasis:bone tumor		< 9> 0	<12> 0	< 6> 0	< 9> 1
{Respiratory system}						
lung	leukemic cell infiltration		< 9> 2	<12> 5	< 6> 2	< 9> 2
	metastasis:liver tumor		0	0	0	2
	metastasis:uterus tumor		0	2	0	0
	metastasis:zymbal gland tumor		0	0	1	0
	metastasis:mediastinum tumor		0	1	0	0
{Hematopoietic system}						
bone marrow	leukemic cell infiltration		< 9> 1	<12> 5	< 6> 0	< 9> 2
lymph node	leukemic cell infiltration		< 9> 2	<12> 0	< 6> 1	< 9> 1
{Circulatory system}						
heart	leukemic cell infiltration		< 9> 1	<12> 0	< 6> 0	< 9> 0
{Digestive system}						
liver	leukemic cell infiltration		< 9> 2	<12> 5	< 6> 2	< 9> 2
< a >	a : Number of animals examined at the site					
b	b : Number of animals with lesion					

STUDY NO. : 0371  
 ANIMAL : RAT F344/DuCrj  
 REPORT TYPE : A1  
 SEX : FEMALE

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

PAGE : 4

Organ	Findings	Group Name No. of Animals on Study	Control 9	250 ppm 12	500 ppm 6	1000 ppm 9
(Urinary system)						
kidney			< 9>	<12>	< 6>	< 9>
	leukemic cell infiltration		1	0	0	0
(Endocrine system)						
pituitary			< 9>	<12>	< 6>	< 9>
	leukemic cell infiltration		1	0	0	0
adrenal			< 9>	<12>	< 6>	< 9>
	leukemic cell infiltration		0	2	1	0
(Nervous system)						
brain			< 9>	<12>	< 6>	< 9>
	leukemic cell infiltration		1	0	1	0
	metastasis:pituitary tumor		1	0	0	0
spinal cord			< 9>	<12>	< 6>	< 9>
	leukemic cell infiltration		0	0	2	0
< a >	a : Number of animals examined at the site					
b	b : Number of animals with lesion					

(JPT150)

BAIS4

## APPENDIX Q 1

IDENTITY OF *o*-PHENYLENEDIAMINE DIHYDROCHLORIDE  
IN THE 2-YEAR DRINKING WATER STUDY

# IDENTITY OF *o*-PHENYLENEDIAMINE DIHYDROCHLORIDE IN THE 2-YEAR DRINKING WATER STUDY

Test Substance : *o*-Phenylenediamine Dihydrochloride (Wako Pure Chemical Industries, Ltd.)

Lot No. : PAG0825

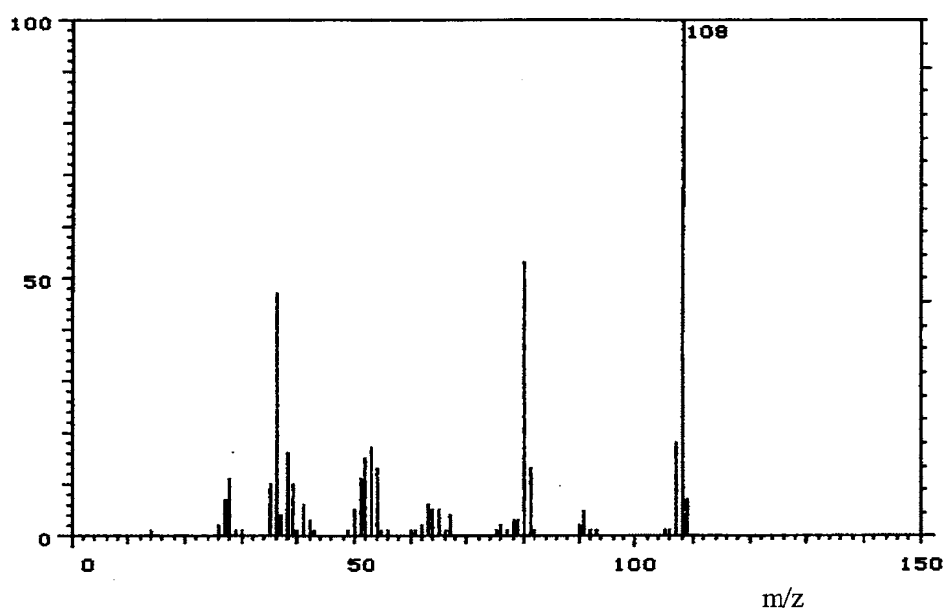
## 1. Spectral Data

### Mass Spectrometry

Instrument : Hitachi M-80B Mass Spectrometer

Ionization : EI (Electron Ionization)

Ionization Voltage : 70eV



Mass Spectrum of Test Substance

### Determined Value

Quasi-molecular ion Peak (m/z)

108

### Calculated Value

Quasi-molecular ion Peak (m/z)

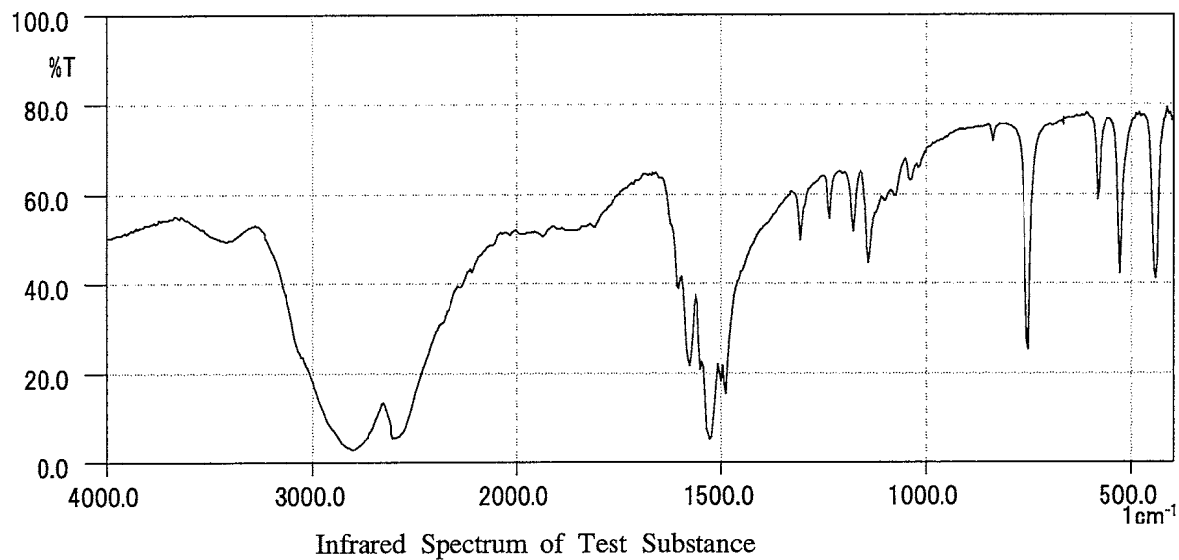
108 ( $\text{NH}_2\text{C}_6\text{H}_4\text{NH}_2 \cdot 2\text{HCl}$ ) - (2HCl)

Result: The mass spectrum was consistent with calculated spectrum.

Infrared Spectrometry

Instrument : Shimadzu FTIR-8200PC Infrared Spectrometer

Cell : KBr

Resolution : 2  $\text{cm}^{-1}$ Determined ValuesWave Number ( $\text{cm}^{-1}$ )

410~ 480

480~ 550

550~ 600

680~ 800

820~ 850

1010~1050

1050~1160

1160~1200

1250~1280

1280~1330

1330~1640

2100~3200

Literature Values\*Wave Number ( $\text{cm}^{-1}$ )

410~ 480

480~ 550

550~ 600

680~ 800

820~ 850

1010~1050

1050~1160

1160~1200

1250~1280

1280~1330

1330~1640

2100~3200

Result: The infrared spectrum was consistent with literature spectrum.

(\*Performed by Wako Pure Chemical Industries, Ltd.)

2. Conclusion: The test substance was identified as *o*-phenylenediamine dihydrochloride by mass spectrum and infrared spectrum.

## APPENDIX Q 2

### STABILITY OF *o*-PHENYLENEDIAMINE DIHYDROCHLORIDE IN THE 2-YEAR DRINKING WATER STUDY

STABILITY OF *o*-PHENYLENEDIAMINE DIHYDROCHLORIDE IN THE 2-YEAR DRINKING WATER STUDY

Test Substance : *o*-Phenylenediamine Dihydrochloride (Wako Pure Chemical Industries, Ltd.)

Lot No. : PAG0825

1. Sample : This lot was used from 1998.11.2 to 2000.11.7. Test substance was stored in cold storage in a dark place.

## 2. High Performance Liquid Chromatography

Instrument : Hewlett Packard 1090 High Performance Liquid Chromatograph

Column : TSK GEL ODS-80TM (4.6 m $\phi$   $\times$  15 cm)

Column Temperature : Room Temperature

Flow Rate : 1 mL/min

Mobile Phase : Distilled Water (10mM Potassium Dihydrogenphosphate, 5mM 1-Hexanesulfonic Acid Sodium Salt) : Acetonitrile = 80 : 20

Detector : UV (290 nm)

Injection Volume : 20  $\mu$ L

Date (date analyzed)	Peak No.	Retention Time (min)	Area (%)
1998.10.30	1	3.743	100
2000.12.18	1	3.743	100

Result: High performance liquid chromatography indicated one major peak (peak No.1) analyzed on 1998.10.30 and one major peak (peak No.1) analyzed on 2000.12.18. No new trace impurity peak in the test substance analyzed on 2000.12.18 was detected.

3. Conclusion: The test substance was stable for about 26 months in cold storage in a dark place.

## APPENDIX Q 3

CONCENTRATION OF *o*-PHENYLENEDIAMINE DIHYDROCHLORIDE  
IN FORMULATED WATER IN THE 2-YEAR DRINKING WATER STUDY



CONCENTRATION OF *o*-PHENYLENEDIAMINE DIHYDROCHLORIDE IN FORMULATED WATER IN THE 2-YEAR DRINKING WATER STUDY

Date Analyzed	Target Concentration			
	Female 250 <sup>a</sup>	Male and Female 500	Male and Female 1000	Male 2000
1998.11.02	258 (103) <sup>b</sup>	509 (102)	971 ( 97.1)	1940 ( 97.0)
1999.01.25	252 (101)	517 (103)	971 ( 97.1)	1920 ( 96.0)
1999.04.19	254 (102)	514 (103)	1020 (102)	2060 (103)
1999.07.12	252 (101)	506 (101)	1010 (101)	2000 (100)
1999.10.04	252 (101)	506 (101)	994 ( 99.4)	1950 ( 97.5)
1999.12.27	254 (102)	508 (102)	1000 (100)	2030 (102)
2000.03.13	247 ( 98.8)	496 ( 99.2)	997 ( 99.7)	2030 (102)
2000.06.05	239 ( 95.6)	482 ( 96.4)	963 ( 96.3)	1920 ( 96.0)
2000.08.28	246 ( 98.4)	481 ( 96.2)	952 ( 95.2)	1880 ( 94.0)

<sup>a</sup> ppm

<sup>b</sup> %

Analytical method : The samples were analyzed by high performance liquid chromatography.

Instrument : Hewlett Packard 1090 High Performance Liquid Chromatograph

Column : TSK GEL ODS-80TM (4.6 mm $\phi$   $\times$  15 cm)

Column Temperature : Room Temperature

Flow Rate : 1 mL/min

Mobile Phase : Distilled Water (10mM Potassium Dihydrogenphosphate, 5mM 1-Hexanesulfonic Acid Sodium Salt) :  
Acetonitrile = 80 : 20

Detector : UV (290 nm)

Injection Volume : 20  $\mu$ L

## APPENDIX Q 4

STABILITY OF *o*-PHENYLENEDIAMINE DIHYDROCHLORIDE IN FORMULATED WATER  
IN THE 2-YEAR DRINKING WATER STUDY

STABILITY OF *o*-PHENYLENEDIAMINE DIHYDROCHLORIDE IN FORMULATED WATER IN  
THE 2-YEAR DRINKING WATER STUDY

Date Prepared	Date Analyzed	Target Concentration	
		250 <sup>a</sup>	3000
1998.02.09	1998.02.09	251 (100) <sup>b</sup>	2970 (100)
	1998.02.17 <sup>c</sup>	231 ( 92.0)	2890 ( 97.3)

<sup>a</sup> ppm

<sup>b</sup> % (Percentage was based on the concentration on date of preparation.)

<sup>c</sup> Animal room samples

Analytical method : The samples were analyzed by high performance liquid chromatography.

Instrument : Hewlett Packard 1090 High Performance Liquid Chromatograph  
 Column : TSK GEL ODS-80TM (4.6 mm  $\phi$   $\times$  15 cm)  
 Column Temperature : Room Temperature  
 Flow Rate : 1 mL/min  
 Mobile Phase : Distilled Water (10mM Potassium Dihydrogenphosphate, 5mM 1-Hexanesulfonic Acid Sodium Salt) : Acetonitrile = 80 : 20  
 Detector : UV (290 nm)  
 Injection Volume : 20  $\mu$ L

## APPENDIX R 1

METHODS FOR HEMATOLOGY, BIOCHEMISTRY AND URINALYSIS IN THE 2-YEAR  
DRINKING WATER STUDY OF *o*-PHENYLENEDIAMINE DIHYDROCHLORIDE

METHODS FOR HEMATOLOGY,BIOCHEMISTRY AND URINALYSIS IN THE 2-YEAR  
DRINKING WATER STUDY OF o-PHENYLENEDIAMINE DIHYDROCHLORIDE

Item	Method
<b>Hematology</b>	
Red blood cell (RBC)	Light scattering method <sup>1)</sup>
Hemoglobin (Hgb)	Cyanmethemoglobin method <sup>1)</sup>
Hematocrit (Hct)	Calculated as $RBC \times MCV / 10$ <sup>1)</sup>
Mean corpuscular volume (MCV)	Light scattering method <sup>1)</sup>
Mean corpuscular hemoglobin (MCH)	Calculated as $Hgb / RBC \times 10$ <sup>1)</sup>
Mean corpuscular hemoglobin concentration (MCHC)	Calculated as $Hgb / Hct \times 100$ <sup>1)</sup>
Platelet	Light scattering method <sup>1)</sup>
White blood cell (WBC)	Pattern recognition method <sup>2)</sup>
Differential WBC	( Wright staining )
<b>Biochemistry</b>	
Total protein (TP)	Biuret method <sup>3)</sup>
Albumin (Alb)	BCG method <sup>3)</sup>
A/G ratio	Calculated as $Alb / (TP - Alb)$ <sup>3)</sup>
T-bilirubin	Alkaline azobilirubin method <sup>3)</sup>
Glucose	GlcK·G-6-PDH method <sup>3)</sup>
T-cholesterol	CE·COD·POD method <sup>3)</sup>
Triglyceride	LPL·GK·GPO·POD method <sup>3)</sup>
Phospholipid	PLD·ChOD·POD method <sup>3)</sup>
Glutamic oxaloacetic transaminase (GOT)	JSCC method <sup>3)</sup>
Glutamic pyruvic transaminase (GPT)	JSCC method <sup>3)</sup>
Lactate dehydrogenase (LDH)	SFBC method <sup>3)</sup>
Alkaline phosphatase (ALP)	GSCC method <sup>3)</sup>
$\gamma$ -Glutamyl transpeptidase ( $\gamma$ -GTP)	L- $\gamma$ -Glutamyl-p-nitroanilide method <sup>3)</sup>
Creatine phosphokinase (CPK)	JSCC method <sup>3)</sup>
Urea nitrogen	Urease·GLDH method <sup>3)</sup>
Creatinine	Jaffe method <sup>3)</sup>
Sodium	Ion selective electrode method <sup>3)</sup>
Potassium	Ion selective electrode method <sup>3)</sup>
Chloride	Ion selective electrode method <sup>3)</sup>
Calcium	OCPC method <sup>3)</sup>
Inorganic phosphorus	PNP·XOD·POD method <sup>3)</sup>
<b>Urinalysis</b>	
pH,Protein,Glucose,Ketone body,Bilirubin,Occult blood, Urobilinogen	Urinalysis reagent paper method <sup>4)</sup>

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

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

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

4) Ames reagent strips for urinalysis (Multistix : Bayer Corporation)

## APPENDIX R 2

UNITS AND DECIMAL PLACE FOR HEMATOLOGY, AND  
BIOCHEMISTRY IN THE 2-YEAR DRINKING WATER STUDY  
OF *o*-PHENYLENEDIAMINE DIHYDROCHLORIDE

UNITS AND DECIMAL PLACE FOR HEMATOLOGY AND BIOCHEMISTRY IN THE 2-YEAR  
DRINKING WATER STUDY OF *o*-PHENYLENEDIAMINE DIHYDROCHLORIDE

Item	Unit	Decimal place
<b>Hematology</b>		
Red blood cell (RBC)	$\times 10^6 / \mu\text{L}$	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	$\times 10^3 / \mu\text{L}$	0
White blood cell (WBC)	$\times 10^3 / \mu\text{L}$	2
Differential WBC	%	0
<b>Biochemistry</b>		
Total protein	g/dL	1
Albumin	g/dL	1
A/G ratio	—	1
T-bilirubin	mg/dL	2
Glucose	mg/dL	0
T-cholesterol	mg/dL	0
Triglyceride	mg/dL	0
Phospholipid	mg/dL	0
Glutamic oxaloacetic transaminase (GOT)	IU/L	0
Glutamic pyruvic transaminase (GPT)	IU/L	0
Lactate dehydrogenase (LDH)	IU/L	0
Alkaline phosphatase (ALP)	IU/L	0
$\gamma$ -Glutamyl transpeptidase ( $\gamma$ -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