

ヒドラジナー水加物のラットを用いた
経口投与によるがん原性試験(混水試験)報告書

試験番号 : 0284

APPENDIX

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APPENDIX A 1

CLINICAL OBSERVATION: SUMMARY, RAT: MALE

(2-YEAR STUDY)

STUDY NO. : 0284
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
DEATH	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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	1
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PILOERECTION	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FROG BELLY	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

STUDY NO. : 0284
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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PARALYTIC GAIT	Control	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PILOERECTION	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FROG BELLY	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

STUDY NO. : 0284
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			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											
DEATH	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PARALYTIC GAIT	Control	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PILOERECTION	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FROG BELLY	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

STUDY NO. : 0284
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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PARALYTIC GAIT	Control	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PILOERECTION	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FROG BELLY	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

STUDY NO. : 0284
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	1	1	1	1	1	1	1	1
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	1	1	1	1	1	1	1	1	1
MORIBUND SACRIFICE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PARALYTIC GAIT	Control	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PILOERECTION	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	1	1	1	1	1	0	0	0	0	0	0	0	0	0
FROG BELLY	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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ANIMAL : RAT F344/DuCrj
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Clinical sign	Group Name	Administration Week-day				74-7	75-7	76-7	77-7	78-7	79-7	80-7	81-7	82-7	83-7	84-7
		71-7	72-7	73-7												
DEATH	Control	1	1	1		1	2	2	2	2	2	2	2	2	2	3
	20 ppm	0	0	0		0	0	1	1	1	1	1	1	2	2	2
	40 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	80 ppm	1	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	0	0	0	0	0
	20 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0		0	0	0	0	0	0	0	0	1	2	2
LOCOMOTOR MOVEMENT DECR	Control	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
PARALYTIC GAIT	Control	1	1	1		1	1	1	1	1	1	1	1	1	1	1
	20 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
PILOERECTION	Control	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
FROG BELLY	Control	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0

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ANIMAL : RAT F344/DuCrj
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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	3	3	3	3	3	3	3	3	3	5	5	5	5	5
	20 ppm	2	2	2	2	3	3	3	3	3	3	3	3	5	5
	40 ppm	0	0	0	0	0	0	0	1	1	1	1	1	1	1
	80 ppm	2	2	2	2	2	2	2	2	2	2	2	3	3	3
MORIBUND SACRIFICE	Control	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	20 ppm	0	1	1	1	1	1	1	1	1	1	1	1	1	1
	40 ppm	0	1	1	1	1	1	2	2	2	2	2	2	2	2
	80 ppm	2	2	2	3	3	3	4	5	6	6	6	6	7	7
LOCOMOTOR MOVEMENT DECR	Control	0	0	0	0	0	0	0	0	1	0	0	0	0	0
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	1	0	0	0	0	0	0	0
	80 ppm	0	0	0	1	0	0	1	1	0	0	0	0	0	0
HUNCHBACK POSITION	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	1	1	1	0	0	0	0	0	0
PARALYTIC GAIT	Control	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	20 ppm	0	1	1	1	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	1	1	1	1	0	0	0	0	0	0	0
WASTING	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	1	1	1	0	0	0	0	0	0
PILOERECTION	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	1	0	1
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FROG BELLY	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	1	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
DEATH	Control	7	8	9	9	10	11
	20 ppm	6	7	8	8	10	10
	40 ppm	1	1	1	1	3	3
	80 ppm	3	3	3	3	3	4
MORIBUND SACRIFICE	Control	1	1	2	2	2	2
	20 ppm	1	1	1	1	1	1
	40 ppm	3	3	3	3	3	3
	80 ppm	7	7	7	7	7	7
LOCOMOTOR MOVEMENT DECR	Control	0	0	0	0	0	0
	20 ppm	0	0	0	0	0	0
	40 ppm	1	0	0	0	0	0
	80 ppm	0	0	0	0	0	0
HUNCHBACK POSITION	Control	0	0	0	0	0	0
	20 ppm	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0
PARALYTIC GAIT	Control	0	0	0	0	0	0
	20 ppm	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0
WASTING	Control	0	0	0	0	0	0
	20 ppm	0	0	0	1	1	1
	40 ppm	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0
PILOERECTION	Control	0	0	0	1	1	0
	20 ppm	0	0	0	1	1	1
	40 ppm	1	0	0	0	0	0
	80 ppm	0	0	0	0	0	0
FROG BELLY	Control	0	0	0	0	0	0
	20 ppm	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0
	80 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
SOILED PERI GENITALIA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EXOPHTHALMOS	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EYE OPACITY	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CATARACT	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CORNEAL OPACITY	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
SOILED PERI GENITALIA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EXOPHTHALMOS	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	1	1	1	1	1	1	1	1	1	1
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EYE OPACITY	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	1	1	1	1	1	1	1	1	1
	80 ppm	0	0	0	0	0	0	0	0	1	1	1	1	1	1
CATARACT	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	1	1	1	1	1	1	1	1	1
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CORNEAL OPACITY	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	1	1	1	1	1	1
ANTERIOR CHAMBER OPACITY	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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												
SOILED PERI GENITALIA	Control	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
EXOPHTHALMOS	Control	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	40 ppm	1	1	1		1	1	1	1	1	1	1	1	1	2	2
	80 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
EYE OPACITY	Control	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	40 ppm	1	1	1		1	1	1	1	1	1	1	1	1	1	1
	80 ppm	1	1	1		1	1	1	1	1	1	1	1	1	1	1
CATARACT	Control	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	40 ppm	1	1	1		1	1	1	1	1	1	1	1	1	1	1
	80 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
CORNEAL OPACITY	Control	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	80 ppm	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
	20 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0		0	0	0	1	1	1	1	1	1	1	1
	80 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
	20 ppm	0	0	0		0	0	0	0	0	0	0	1	1	1	1
	40 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	80 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			46-7	47-7	48-7	49-7	50-7	51-7	52-7	53-7	54-7	55-7	56-7
		43-7	44-7	45-7											
SOILED PERI GENITALIA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EXOPHTHALMOS	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	2	2	2	2	2	2	2	2	2	2	1	1	1	1
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EYE OPACITY	Control	0	0	0	0	0	0	0	0	0	0	0	1	1	1
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	80 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
CATARACT	Control	0	0	0	0	0	0	0	0	0	0	0	1	1	1
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CORNEAL OPACITY	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	1	1	1	1	1	1	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EXTERNAL MASS	Control	0	0	0	0	1	1	1	1	1	1	1	1	1	1
	20 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	1	1
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
SOILED PERI GENITALIA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EXOPHTHALMOS	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EYE OPACITY	Control	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	1	1	1	1	1	2	2	2	2	2	2	2	2	2
	80 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
CATARACT	Control	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	1	1	1	1	1	2	2	2	2	2	2	2	2	2
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CORNEAL OPACITY	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EXTERNAL MASS	Control	1	1	1	1	1	1	0	0	0	0	0	0	0	1
	20 ppm	1	1	1	1	1	2	2	2	2	2	2	2	2	1
	40 ppm	1	1	1	1	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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 ANIMAL : RAT F344/DuCrj
 REPORT TYPE : A1 104

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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
SOILED PERI GENITALIA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EXOPHTHALMOS	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EYE OPACITY	Control	1	1	1	2	1	1	1	1	1	1	1	1	1	1
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	3	3	3	4	4	4	5	5	5	5	5	5	5	5
	80 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	0
CATARACT	Control	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	3	3	3	3	3	3	4	4	4	4	4	4	4	4
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CORNEAL OPACITY	Control	0	0	0	1	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	1	1	1	1	1	1	1	1	1	1	1
	80 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	0
ANTERIOR CHAMBER OPACITY	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EXTERNAL MASS	Control	1	2	2	2	2	2	2	2	2	2	3	3	4	4
	20 ppm	1	1	1	1	1	1	1	1	1	1	1	2	4	4
	40 ppm	0	2	2	2	2	2	2	2	2	2	2	2	2	2
	80 ppm	0	0	0	1	1	3	4	4	4	4	4	3	3	3
INTERNAL MASS	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	1	0	0	0	0	0	0	0	0	0	0	0	0	0

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 ANIMAL : RAT F344/DuCrj
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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											
SOILED PERI GENITALIA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	1	1	1	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	1	1	0	0	0	0	0	0	0
EXOPHTHALMOS	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	1	1	1	1	1	1	1	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EYE OPACITY	Control	1	1	1	1	1	1	2	2	2	2	2	2	2	2
	20 ppm	1	1	1	1	1	1	1	2	2	2	2	2	2	2
	40 ppm	5	4	4	4	5	5	5	4	4	4	4	4	4	4
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CATARACT	Control	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	20 ppm	0	1	1	1	1	1	1	1	1	1	1	1	1	1
	40 ppm	4	4	4	4	5	5	5	4	4	4	4	4	4	4
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CORNEAL OPACITY	Control	0	0	0	0	0	0	1	1	1	1	1	1	1	1
	20 ppm	1	0	0	0	0	0	0	1	1	1	1	1	1	1
	40 ppm	1	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EXTERNAL MASS	Control	4	4	4	4	4	6	6	6	6	5	5	6	9	10
	20 ppm	4	4	6	6	6	7	7	10	10	10	9	9	9	10
	40 ppm	2	1	1	1	1	2	2	3	3	2	2	2	2	3
	80 ppm	3	3	4	3	2	2	3	3	3	3	3	4	5	6
INTERNAL MASS	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	1	0	0
	40 ppm	0	0	0	0	0	0	1	1	1	1	1	1	1	1
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	1	1	1

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 ANIMAL. : RAT F344/DuCrj
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Clinical sign	Group Name	Administration Week-day					
		99-7	100-7	101-7	102-7	103-7	104-7
SOILED PERI GENITALIA	Control	0	0	0	0	0	0
	20 ppm	0	0	0	0	0	0
	40 ppm	0	0	1	2	0	0
	80 ppm	0	0	0	0	0	0
EXOPHTHALMOS	Control	0	0	0	0	0	0
	20 ppm	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0
EYE OPACITY	Control	1	1	1	1	1	1
	20 ppm	2	2	2	2	2	2
	40 ppm	4	4	4	4	4	4
	80 ppm	0	0	0	0	0	0
CATARACT	Control	1	1	1	1	1	1
	20 ppm	1	1	1	1	1	1
	40 ppm	4	4	4	4	4	4
	80 ppm	0	0	0	0	0	0
CORNEAL OPACITY	Control	0	0	0	0	0	0
	20 ppm	1	1	1	1	1	1
	40 ppm	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0
ANTERIOR CHAMBER OPACITY	Control	0	0	0	0	0	0
	20 ppm	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0
EXTERNAL MASS	Control	9	11	10	11	11	11
	20 ppm	10	10	9	8	7	7
	40 ppm	3	4	4	5	4	5
	80 ppm	6	6	6	8	8	8
INTERNAL MASS	Control	2	2	1	1	1	1
	20 ppm	0	0	0	0	0	0
	40 ppm	1	2	2	2	1	1
	80 ppm	1	1	1	1	1	1

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 ANIMAL : RAT F344/DuCrj
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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
M.NOSE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M.HEAD	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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				18-7	19-7	20-7	21-7	22-7	23-7	24-7	25-7	26-7	27-7	28-7
		15-7	16-7	17-7												
M.NOSE	Control	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
M.HEAD	Control	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	80 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												
M.NOSE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	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	0
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	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	0
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	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	0
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	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	0
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M.HEAD	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	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	0
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	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	0
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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													
		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.NOSE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M.HEAD	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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				60-7	61-7	62-7	63-7	64-7	65-7	66-7	67-7	68-7	69-7	70-7
		57-7	58-7	59-7												
M.NOSE	Control	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	1	1	1		1	1	1	1	1	1	1	1	1	1	1
	40 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
M.HEAD	Control	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	80 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.NOSE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M.PERI MOUTH	Control	0	1	1	1	1	1	1	1	1	1	1	1	1	1
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	40 ppm	0	1	1	1	1	1	1	1	1	1	1	1	1	1
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M.HEAD	Control	0	0	0	0	0	0	0	0	0	0	0	0	1	1
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	1	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	1	1	1	1	1	1	1	1	1	1	1	1	1
	80 ppm	0	0	0	0	0	1	1	1	1	1	1	1	1	1
M.FORLIMB	Control	0	0	0	0	0	0	0	0	0	0	1	1	1	1
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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											
M.NOSE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	1	1	1	1	1	1	1	1	1	1	1	1
	40 ppm	0	0	0	0	0	0	0	1	1	0	0	0	0	0
	80 ppm	0	0	1	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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	1	1	1
M.EAR	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	40 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	80 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
	20 ppm	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M.HEAD	Control	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	20 ppm	0	0	0	0	0	0	0	1	1	1	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	1	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	1	1	1	1	0	0	0	0	0	0	0	0	0	0
M.FORLIMB	Control	1	1	1	1	1	1	1	1	1	0	0	0	0	0
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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.NOSE	Control	0	1	1	1	1	1
	20 ppm	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0
M.PERI MOUTH	Control	1	1	0	1	1	1
	20 ppm	1	1	1	1	1	1
	40 ppm	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0
M.ORAL CAVITY	Control	0	0	0	0	0	0
	20 ppm	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0
	80 ppm	1	1	1	1	1	1
M.EAR	Control	0	0	0	0	0	0
	20 ppm	1	1	1	1	1	1
	40 ppm	1	1	1	1	1	1
	80 ppm	0	0	0	0	0	0
M.PERI EAR	Control	0	0	0	0	0	0
	20 ppm	2	1	0	0	0	0
	40 ppm	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0
M.HEAD	Control	1	1	1	1	1	1
	20 ppm	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0
M.NECK	Control	0	0	0	0	0	0
	20 ppm	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0
	80 ppm	0	0	0	1	1	1
M.FORLIMB	Control	0	0	0	0	0	0
	20 ppm	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0
	80 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
M.BREAST	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M.ANUS	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M.ANUS	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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ANIMAL : RAT F344/DuCrj
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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
M.BREAST	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M.ANUS	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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				46-7	47-7	48-7	49-7	50-7	51-7	52-7	53-7	54-7	55-7	56-7
		43-7	44-7	45-7												
M.BREAST	Control	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
M.ABDOMEN	Control	0	0	0		0	1	1	1	1	1	1	1	1	1	1
	20 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0		0	0	0	0	0	0	0	0	0	1	1
	80 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
	20 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
M.ANUS	Control	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M.ABDOMEN	Control	1	1	1	1	1	1	0	0	0	0	0	0	0	0
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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	1
	20 ppm	0	0	0	0	0	1	1	1	1	1	1	1	1	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	1	1	1	1	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M.ANUS	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	1	2	2
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	1	1	2	3	3	3	3	3	2	2	2
M.ANTERIOR.DORSUM	Control	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M.ANUS	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	1	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	1	1	1	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
M.BREAST	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	1	1	1	1	1	1	1
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	1	1
M.ABDOMEN	Control	0	0	0	0	0	0	0	0	0	0	0	1	2	2
	20 ppm	1	1	1	1	1	1	1	2	2	2	2	2	2	2
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	80 ppm	2	2	2	2	2	2	2	2	2	2	2	2	2	2
M.ANTERIOR.DORSUM	Control	1	1	1	1	1	3	3	3	3	3	3	3	4	4
	20 ppm	0	0	1	1	1	2	2	2	2	2	2	2	2	4
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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	1
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	1	1	0	0	0	0	0	0	0
	80 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	1	1
	20 ppm	0	0	0	0	0	0	0	1	1	1	1	1	1	1
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	1
M.ANUS	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	1	1	1	1	1	1	1	1
ANEMIA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	1	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	0
	20 ppm	0	0	0	0	0	0
	40 ppm	1	1	1	1	0	0
	80 ppm	1	1	1	1	1	1
M.ABDOMEN	Control	2	2	2	2	2	2
	20 ppm	2	3	3	2	2	2
	40 ppm	1	1	1	1	1	1
	80 ppm	2	2	2	2	2	2
M.ANTERIOR.DORSUM	Control	4	5	5	5	5	5
	20 ppm	4	4	4	4	4	4
	40 ppm	0	0	0	1	1	2
	80 ppm	0	0	0	0	0	0
M.POSTERIOR DORSUM	Control	0	0	0	0	0	0
	20 ppm	0	0	0	0	0	0
	40 ppm	0	1	1	1	1	1
	80 ppm	0	0	0	1	1	1
M.HINDLIMB	Control	0	0	0	0	0	0
	20 ppm	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0
M.GENITALIA	Control	1	1	1	1	1	1
	20 ppm	1	1	1	1	0	0
	40 ppm	0	0	0	0	0	0
	80 ppm	1	1	1	2	2	2
M.ANUS	Control	0	0	0	0	0	0
	20 ppm	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0
	80 ppm	1	1	1	1	1	1
ANEMIA	Control	1	1	0	0	0	0
	20 ppm	0	0	1	1	1	1
	40 ppm	0	0	1	1	0	0
	80 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
CRUSTA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SWELLING	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
CRUSTA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SWELLING	Control	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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												
CRUSTA	Control	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
SWELLING	Control	1	1	1		1	1	1	1	1	1	1	1	1	1	1
	20 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	80 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
CRUSTA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SWELLING	Control	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
CRUSTA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SWELLING	Control	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
CRUSTA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SWELLING	Control	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	1	0
ABNORMAL RESPIRATION	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	1	0
ABNORMAL RESPIRA.SOUND	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	1	0	0	0	0	0	0	0	0	0	1	0	1	0

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		85-7	86-7	87-7												
CRUSTA	Control	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
SWELLING	Control	1	1	1		1	1	1	1	1	1	1	1	1	1	1
	20 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	80 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	0	0	0	0	0
	20 ppm	0	0	0		0	0	0	0	0	0	0	0	1	0	0
	40 ppm	0	0	0		0	0	1	1	0	0	0	0	0	0	0
	80 ppm	0	0	0		1	0	0	1	1	0	0	0	0	0	0
ABNORMAL RESPIRATION	Control	0	0	0		0	0	0	0	0	1	0	0	0	0	0
	20 ppm	0	0	0		0	0	0	0	0	0	0	0	1	0	0
	40 ppm	0	0	0		0	0	1	1	0	0	0	0	0	0	0
	80 ppm	0	0	0		1	0	0	1	1	0	0	0	0	0	0
ABNORMAL RESPIRA.SOUND	Control	0	0	0		0	0	0	0	0	1	0	0	0	0	0
	20 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0		0	0	0	0	0	0	0	0	1	0	0
YELLOW URINE	Control	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
SMALL STOOL	Control	0	0	0		0	0	0	1	1	1	0	0	0	0	0
	20 ppm	0	0	0		0	0	0	0	0	0	0	0	1	1	1
	40 ppm	0	0	0		0	0	1	1	0	0	0	0	0	0	0
	80 ppm	0	0	0		1	1	1	1	0	0	0	0	0	0	0

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		99-7	100-7	101-7	102-7	103-7	104-7
CRUSTA	Control	1	1	1	1	1	1
	20 ppm	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0
SWELLING	Control	0	0	0	0	0	0
	20 ppm	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0
IRREGULAR BREATHING	Control	0	1	0	0	0	0
	20 ppm	0	0	0	0	0	0
	40 ppm	1	0	0	0	0	0
	80 ppm	0	0	0	0	0	0
ABNORMAL RESPIRATION	Control	0	1	0	0	0	0
	20 ppm	0	0	0	0	0	0
	40 ppm	1	0	0	0	0	0
	80 ppm	0	0	0	0	0	0
ABNORMAL RESPIRA.SOUND	Control	0	0	0	0	0	2
	20 ppm	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0
RED URINE	Control	0	0	0	0	0	0
	20 ppm	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0
YELLOW URINE	Control	1	1	1	1	1	0
	20 ppm	0	0	0	0	0	0
	40 ppm	0	0	1	1	0	0
	80 ppm	0	0	0	0	0	0
SMALL STOOL	Control	1	2	1	1	1	1
	20 ppm	0	0	0	1	0	0
	40 ppm	1	0	0	1	1	1
	80 ppm	0	1	0	0	0	0

STUDY NO. : 0284
ANIMAL : RAT F344/DuCrj
REPORT TYPE : A1 104

CLINICAL OBSERVATION (SUMMARY)
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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
OLIGO-STOOL	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

(HAN190)

BAIS3

STUDY NO. : 0284
ANIMAL : RAT F344/DuCrj
REPORT TYPE : A1 104

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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
OLIGO-STOOL	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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STUDY NO. : 0284
ANIMAL : RAT F344/DuCrj
REPORT TYPE : A1 104

CLINICAL OBSERVATION (SUMMARY)
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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
OLIGO-STOOL	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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STUDY NO. : 0284
ANIMAL : RAT F344/DuCrj
REPORT TYPE : A1 104

CLINICAL OBSERVATION (SUMMARY)
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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
OLIGO-STOOL	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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STUDY NO. : 0284
ANIMAL : RAT F344/DuCrj
REPORT TYPE : A1 104

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ALL ANIMALS

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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
OLIGO-STOOL	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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STUDY NO. : 0284
ANIMAL : RAT F344/DuCrj
REPORT TYPE : A1 104

CLINICAL OBSERVATION (SUMMARY)
ALL ANIMALS

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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
OLIGO-STOOL	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	1	1
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	1	0	0	0	0	0	0	0	0	0	1	1	1	0
SUBNORMAL TEMP	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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STUDY NO. : 0284
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													
		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
OLIGO-STOOL	Control	0	0	0	0	0	0	0	1	1	0	0	0	0	0
	20 ppm	1	0	0	0	0	0	0	0	0	0	0	1	0	1
	40 ppm	0	0	0	0	0	1	1	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	1	0	0	0	0	0	0	0	0	0	0

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STUDY NO. : 0284
ANIMAL : RAT F344/DuCrj
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CLINICAL OBSERVATION (SUMMARY)
ALL ANIMALS

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Clinical sign	Group Name	Administration Week-day					
		99-7	100-7	101-7	102-7	103-7	104-7
OLIGO-STOOL	Control	2	2	1	1	1	0
	20 ppm	0	0	1	1	0	0
	40 ppm	1	0	0	1	0	0
	80 ppm	0	1	0	1	1	0
SUBNORMAL TEMP	Control	0	0	0	0	0	0
	20 ppm	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0

(HAN190)

BAIS3

APPENDIX A 2

CLINICAL OBSERVATION: SUMMARY, RAT: FEMALE

(2-YEAR STUDY)

STUDY NO. : 0284
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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PILOERECTION	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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ANIMAL : RAT F344/DuCrj
REPORT TYPE : A1 104

CLINICAL OBSERVATION (SUMMARY)
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SEX : FEMALE

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Clinical sign	Group Name	Administration Week-day				18-7	19-7	20-7	21-7	22-7	23-7	24-7	25-7	26-7	27-7	28-7
		15-7	16-7	17-7												
DEATH	Control	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
PILOERECTION	Control	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0

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ANIMAL : RAT F344/DuCrj
REPORT TYPE : A1 104

CLINICAL OBSERVATION (SUMMARY)
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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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PILOERECTION	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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ANIMAL : RAT F344/DuCrj
REPORT TYPE : A1 104

CLINICAL OBSERVATION (SUMMARY)
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Clinical sign	Group Name	Administration Week-day				46-7	47-7	48-7	49-7	50-7	51-7	52-7	53-7	54-7	55-7	56-7
		43-7	44-7	45-7												
DEATH	Control	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	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	0
	20 ppm	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	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	0
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	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	0
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	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	0
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	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	0
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	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	0
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
PILOERECTION	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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													
		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	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	1	1	2	2	2	3	3	3	4	4	4	4	4
MORIBUND SACRIFICE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	1	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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PILOERECTION	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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				74-7	75-7	76-7	77-7	78-7	79-7	80-7	81-7	82-7	83-7	84-7
		71-7	72-7	73-7												
DEATH	Control	1	1	1		1	1	2	2	2	2	2	2	3	3	3
	20 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	1
	40 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	80 ppm	4	4	4		5	6	8	8	8	8	8	9	10	10	11
MORIBUND SACRIFICE	Control	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	20 ppm	1	1	1		2	2	2	2	2	2	2	2	2	2	2
	40 ppm	0	0	0		0	0	0	1	1	1	1	1	1	1	1
	80 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
	20 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0		0	0	0	0	0	0	1	0	0	0	0
ATAXIC GAIT	Control	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	1		0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	1		1	1	1	0	0	0	0	0	0	0	0
	80 ppm	0	0	0		0	1	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
	20 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
PILOERECTION	Control	0	0	0		0	0	0	0	0	0	0	0	1	1	1
	20 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	80 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
DEATH	Control	3	3	4	4	4	4	4	4	4	4	4	4	4	5
	20 ppm	1	1	1	1	1	1	1	1	1	1	1	1	2	2
	40 ppm	1	1	1	1	1	1	2	2	2	2	2	2	2	2
	80 ppm	11	11	11	11	11	11	11	12	13	13	13	15	15	16
MORIBUND SACRIFICE	Control	0	1	2	2	2	2	2	2	2	2	3	3	3	3
	20 ppm	2	2	3	3	3	3	3	3	3	3	3	3	4	4
	40 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	80 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	1	0	0	0
	20 ppm	0	0	0	0	0	0	0	0	0	1	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HUNCHBACK POSITION	Control	2	1	1	0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	1	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WASTING	Control	0	0	1	0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0	0	0	0	0	0	0	1	1	1	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	1	1	1	1	2	1	1	1	0	1	0
SOILED	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PILOERECTION	Control	1	1	1	0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0	0	0	0	0	0	0	1	1	1	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	1	1	2	2	1

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Clinical sign	Group Name	Administration Week-day					
		99-7	100-7	101-7	102-7	103-7	104-7
DEATH	Control	5	5	5	5	6	6
	20 ppm	3	5	5	6	7	7
	40 ppm	2	2	2	2	3	4
	80 ppm	16	17	17	17	18	18
MORIBUND SACRIFICE	Control	4	4	4	4	4	4
	20 ppm	4	4	4	4	4	4
	40 ppm	2	2	2	2	2	2
	80 ppm	0	1	1	2	3	3
LOCOMOTOR MOVEMENT DECR	Control	0	0	0	0	0	0
	20 ppm	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0
	80 ppm	0	0	0	0	1	0
HUNCHBACK POSITION	Control	0	0	0	0	0	0
	20 ppm	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0
	80 ppm	0	0	0	0	1	0
ATAXIC GAIT	Control	0	0	0	0	0	0
	20 ppm	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0
WASTING	Control	0	0	0	0	0	0
	20 ppm	1	1	1	0	0	0
	40 ppm	0	0	0	0	0	0
	80 ppm	0	0	1	1	0	0
SOILED	Control	0	0	0	0	0	0
	20 ppm	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0
PILOERECTION	Control	0	1	1	1	1	1
	20 ppm	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0
	80 ppm	1	1	1	1	2	1

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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
LOSS OF HAIR	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FROG BELLY	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EXOPHTHALMOS	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EYE OPACITY	Control	0	0	0	0	0	0	0	0	0	0	0	0	1	1
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CATARACT	Control	0	0	0	0	0	0	0	0	0	0	0	0	1	1
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CORNEAL OPACITY	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
LOSS OF HAIR	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FROG BELLY	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	4	4	4	3	4
EXOPHTHALMOS	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EYE OPACITY	Control	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	1	1	1	1	1	1
CATARACT	Control	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	1	1	1	1	1	1
CORNEAL OPACITY	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
LOSS OF HAIR	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FROG BELLY	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	3	0	0	0	0	0	0	0	0	0	0	0	0	0
EXOPHTHALMOS	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EYE OPACITY	Control	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
CATARACT	Control	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
CORNEAL OPACITY	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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				46-7	47-7	48-7	49-7	50-7	51-7	52-7	53-7	54-7	55-7	56-7
		43-7	44-7	45-7												
LOSS OF HAIR	Control	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
FROG BELLY	Control	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
EXOPHTHALMOS	Control	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
EYE OPACITY	Control	1	1	1		1	1	1	1	1	1	1	1	1	1	1
	20 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	80 ppm	1	1	1		1	1	1	1	1	1	1	1	1	1	1
CATARACT	Control	1	1	1		1	1	1	1	1	1	1	1	1	1	1
	20 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	80 ppm	1	1	1		1	1	1	1	1	1	1	1	1	1	1
CORNEAL OPACITY	Control	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	80 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				60-7	61-7	62-7	63-7	64-7	65-7	66-7	67-7	68-7	69-7	70-7
		57-7	58-7	59-7												
LOSS OF HAIR	Control	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
FROG BELLY	Control	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
EXOPHTHALMOS	Control	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
EYE OPACITY	Control	1	1	1		1	1	1	1	1	1	1	1	1	1	1
	20 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0		0	0	0	0	0	1	1	1	1	1	1
	80 ppm	1	1	1		1	1	1	1	1	1	1	1	1	1	1
CATARACT	Control	1	1	1		1	1	1	1	1	1	1	1	1	1	1
	20 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0		0	0	0	0	0	1	1	1	1	1	1
	80 ppm	1	1	1		1	1	1	1	1	1	1	1	1	1	1
CORNEAL OPACITY	Control	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	80 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	1	1	1	1	1
	20 ppm	0	0	0		0	0	0	0	0	1	1	1	1	1	1
	40 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0		0	0	0	0	0	0	0	0	0	1	1

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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
LOSS OF HAIR	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	1	1	1	1	1	1	1	1
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	1
FROG BELLY	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EXOPHTHALMOS	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0	0	0	0	0	0	0	1	1	1	1	1
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EYE OPACITY	Control	1	1	1	1	1	1	1	1	1	1	1	1	1	2
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	2
	80 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
CATARACT	Control	1	1	1	1	1	1	1	1	1	1	1	1	1	2
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	80 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
CORNEAL OPACITY	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	80 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	5
	20 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	40 ppm	0	0	0	0	0	0	0	0	0	0	1	1	1	1
	80 ppm	2	1	1	1	1	1	1	1	1	1	1	1	1	1

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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
LOSS OF HAIR	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
FROG BELLY	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SOILED PERI GENITALIA	Control	1	0	0	0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	1	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EXOPHTHALMOS	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EYE OPACITY	Control	2	2	2	2	2	2	2	3	3	4	4	3	3	3
	20 ppm	0	0	0	0	0	0	0	0	1	1	1	1	1	1
	40 ppm	2	2	1	1	1	1	1	1	1	1	1	1	1	1
	80 ppm	1	1	1	1	1	1	1	1	1	1	1	0	0	0
CATARACT	Control	2	2	2	2	2	2	2	2	2	3	3	3	3	3
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	1	1	1
	40 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	80 ppm	1	1	1	1	1	1	1	1	1	1	1	0	0	0
CORNEAL OPACITY	Control	0	0	0	0	0	0	0	1	1	1	1	0	0	0
	20 ppm	0	0	0	0	0	0	0	0	1	1	1	1	1	1
	40 ppm	1	1	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EXTERNAL MASS	Control	5	4	6	6	6	7	7	7	7	7	7	7	7	7
	20 ppm	1	1	1	2	2	2	2	3	4	4	4	4	4	4
	40 ppm	2	2	3	3	3	2	1	1	1	1	1	1	1	1
	80 ppm	1	1	1	1	1	1	1	1	1	1	1	1	2	2

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Clinical sign	Group Name	Administration Week-day					
		99-7	100-7	101-7	102-7	103-7	104-7
LOSS OF HAIR	Control	0	0	0	0	0	0
	20 ppm	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0
	80 ppm	2	2	2	2	2	2
FROG BELLY	Control	0	0	0	0	0	0
	20 ppm	0	0	0	0	0	0
	40 ppm	1	1	1	1	1	0
	80 ppm	0	0	0	0	0	0
SOILED PERI GENITALIA	Control	0	0	0	0	0	0
	20 ppm	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0
	80 ppm	0	1	0	0	0	0
EXOPHTHALMOS	Control	0	0	0	0	0	0
	20 ppm	1	1	1	1	1	1
	40 ppm	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0
EYE OPACITY	Control	2	2	2	2	1	1
	20 ppm	1	1	1	1	1	1
	40 ppm	1	1	1	1	2	2
	80 ppm	0	0	0	0	0	0
CATARACT	Control	2	2	2	2	1	1
	20 ppm	1	1	1	1	1	1
	40 ppm	1	1	1	1	2	2
	80 ppm	0	0	0	0	0	0
CORNEAL OPACITY	Control	0	0	0	0	0	0
	20 ppm	1	1	1	1	1	1
	40 ppm	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0
EXTERNAL MASS	Control	6	6	7	9	8	8
	20 ppm	4	5	5	6	5	7
	40 ppm	0	1	1	1	1	0
	80 ppm	3	3	2	2	1	1

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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
INTERNAL MASS	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M.MANDIBULAR	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M.BREAST	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
INTERNAL MASS	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M.MANDIBULAR	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M.BREAST	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
INTERNAL MASS	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M.MANDIBULAR	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M.BREAST	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
INTERNAL MASS	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M.MANDIBULAR	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M.BREAST	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
INTERNAL MASS	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M.MANDIBULAR	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M.BREAST	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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	1	1	1	1	1
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	1	1	1	1	1	1
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	1	1

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		71-7	72-7	73-7												
INTERNAL MASS	Control	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	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	0
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M.MANDIBULAR	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	1	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	1	1
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	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	0
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M.BREAST	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
M.ABDOMEN	Control	1	1	1	1	1	1	1	1	2	2	2	2	2	2	3
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1
	80 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	1
	20 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

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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												
INTERNAL MASS	Control	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	1
	40 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	1
M.PERI MOUTH	Control	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
M.MANDIBULAR	Control	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
M.PERI EAR	Control	1	0	0		0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
M.NECK	Control	0	0	0		0	0	1	1	1	1	1	1	0	0	0
	20 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
M.BREAST	Control	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0		1	1	1	1	1	1	1	1	1	1	1
	40 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0		0	0	0	0	0	0	0	0	0	1	1
M.ABDOMEN	Control	3	3	3		3	3	4	4	4	4	4	4	4	4	4
	20 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	40 ppm	1	1	1		1	1	1	1	1	1	1	1	1	1	1
	80 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
M.ANTERIOR.DORSUM	Control	1	1	1		1	1	1	1	1	1	1	1	1	1	1
	20 ppm	1	1	1		1	1	1	1	1	1	1	1	1	1	1
	40 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	80 ppm	1	1	1		1	1	1	1	1	1	1	1	1	1	1

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Clinical sign	Group Name	Administration Week-day					
		99-7	100-7	101-7	102-7	103-7	104-7
INTERNAL MASS	Control	0	0	0	0	1	1
	20 ppm	1	0	0	0	0	0
	40 ppm	0	0	0	0	1	0
	80 ppm	1	1	0	0	0	0
M.PERI MOUTH	Control	0	0	0	1	1	0
	20 ppm	0	0	0	0	0	0
	40 ppm	0	1	1	1	1	0
	80 ppm	0	0	0	0	0	0
M.MANDIBULAR	Control	0	0	0	0	0	0
	20 ppm	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0
M.PERI EAR	Control	0	0	0	0	0	0
	20 ppm	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0
M.NECK	Control	0	0	0	0	0	0
	20 ppm	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0
M.BREAST	Control	0	0	0	0	0	1
	20 ppm	1	2	2	2	2	3
	40 ppm	0	0	0	0	0	0
	80 ppm	1	1	1	1	1	1
M.ABDOMEN	Control	3	3	4	4	4	4
	20 ppm	0	0	0	0	0	1
	40 ppm	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0
M.ANTERIOR.DORSUM	Control	1	1	1	2	1	1
	20 ppm	1	1	1	1	0	0
	40 ppm	0	0	0	0	0	0
	80 ppm	1	1	1	1	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.GENITALIA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BRADYPNEA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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.GENITALIA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BRADYPNEA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
M.GENITALIA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	1	1	1	1	1	1	1
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BRADYPNEA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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.GENITALIA	Control	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	40 ppm	1	1	1		1	1	1	1	1	1	1	1	1	1	1
	80 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
	20 ppm	0	0	0		0	0	0	0	0	1	0	0	0	0	0
	40 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0		0	0	0	1	0	0	0	0	0	0	0
	40 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0		0	0	0	1	0	0	0	0	0	0	0
	40 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0		0	0	0	1	0	0	0	0	0	0	0
	40 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
BRADYPNEA	Control	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	80 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.GENITALIA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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	1	1	1	1
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	1	2
	40 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	80 ppm	0	0	1	1	1	1	1	1	1	2	2	2	2	2
HEMORRHAGE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BRADYPNEA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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.GENITALIA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CRUSTA	Control	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	20 ppm	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	40 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	80 ppm	2	2	2	2	2	2	2	2	2	2	2	2	2	2
HEMORRHAGE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	1	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	1	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	1	1	1	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	1	0
ABNORMAL RESPIRATION	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	1	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	1	1	1	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	1	0
BRADYPNEA	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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.GENITALIA	Control	0	0	2	2	2	2	2	2	2	2	2	2	2	2
	20 ppm	0	0	0	0	0	0	0	1	2	2	2	2	2	2
	40 ppm	1	1	2	2	2	1	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	1	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	1
CRUSTA	Control	1	1	1	1	1	1	1	1	1	1	1	0	0	0
	20 ppm	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	40 ppm	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	80 ppm	2	2	2	2	2	2	2	2	2	2	2	2	2	2
HEMORRHAGE	Control	0	0	0	0	0	0	0	1	0	0	0	0	0	0
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	1	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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	1
	20 ppm	0	0	0	0	0	0	0	0	0	1	1	1	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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	1	0	0	1
	20 ppm	0	0	0	0	0	0	0	0	0	1	1	1	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BRADYPNEA	Control	0	0	0	0	0	0	0	0	0	0	1	0	0	0
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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.GENITALIA	Control	2	2	2	3	3	3
	20 ppm	2	2	2	3	3	3
	40 ppm	0	0	0	0	0	0
	80 ppm	1	1	0	0	0	0
ANEMIA	Control	0	0	0	1	1	2
	20 ppm	0	0	1	0	0	0
	40 ppm	0	0	1	1	0	0
	80 ppm	1	1	0	0	0	0
CRUSTA	Control	0	0	0	0	0	0
	20 ppm	1	1	1	1	1	1
	40 ppm	1	1	1	1	1	1
	80 ppm	2	2	2	2	2	2
HEMORRHAGE	Control	0	0	0	0	0	0
	20 ppm	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0
TORTICOLLIS	Control	0	0	0	0	0	1
	20 ppm	0	0	0	0	1	1
	40 ppm	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0
IRREGULAR BREATHING	Control	0	0	0	0	0	0
	20 ppm	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0
	80 ppm	1	1	0	0	1	0
ABNORMAL RESPIRATION	Control	0	0	0	0	0	0
	20 ppm	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0
	80 ppm	1	1	0	0	1	0
BRADYPNEA	Control	0	0	0	0	0	0
	20 ppm	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0

STUDY NO. : 0284
 ANIMAL : RAT F344/DuCrj
 REPORT TYPE : A1 104

CLINICAL OBSERVATION (SUMMARY)
 ALL ANIMALS

SEX : FEMALE

PAGE : 81

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
RED URINE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

(HAN190)

BAIS3

STUDY NO. : 0284
 ANIMAL : RAT F344/DuCrj
 REPORT TYPE : A1 104

CLINICAL OBSERVATION (SUMMARY)
 ALL ANIMALS

SEX : FEMALE

PAGE : 82

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
RED URINE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

(HAN190)

BAIS 3

STUDY NO. : 0284
ANIMAL : RAT F344/DuCrj
REPORT TYPE : A1 104

CLINICAL OBSERVATION (SUMMARY)
ALL ANIMALS

SEX : FEMALE

PAGE : 83

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
RED URINE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

(HAN190)

BAIS 3

STUDY NO. : 0284
ANIMAL : RAT F344/DuCrj
REPORT TYPE : A1 104

CLINICAL OBSERVATION (SUMMARY)
ALL ANIMALS

SEX : FEMALE

PAGE : 84

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
RED URINE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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	0	0	0	0	0	0
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	1	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0

(HAN190)

BAIS3

STUDY NO. : 0284
 ANIMAL : RAT F344/DuGrj
 REPORT TYPE : A1 104

CLINICAL OBSERVATION (SUMMARY)
 ALL ANIMALS

SEX : FEMALE

PAGE : 85

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
RED URINE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	1	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
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	1	0	0	0	0	0	0	0	0

(HAN190)

BAIS 3

STUDY NO. : 0284
 ANIMAL : RAT F344/DuCrj
 REPORT TYPE : A1 104

CLINICAL OBSERVATION (SUMMARY)
 ALL ANIMALS

SEX : FEMALE

PAGE : 86

Clinical sign	Group Name	Administration Week-day				74-7	75-7	76-7	77-7	78-7	79-7	80-7	81-7	82-7	83-7	84-7
		71-7	72-7	73-7												
RED URINE	Control	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0		2	3	5	5	5	5	5	6	7	5	5
	80 ppm	0	0	0		9	10	8	8	9	10	11	12	11	11	10
YELLOW URINE	Control	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0		0	0	0	0	0	0	0	0	0	0	0
	80 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	1	2
	20 ppm	0	1	1		0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	1		1	1	1	0	0	0	0	0	0	0	0
	80 ppm	0	0	0		0	0	0	0	0	0	1	0	0	0	0
OLIGO-STOOL	Control	0	0	0		0	0	0	0	0	0	1	1	1	1	2
	20 ppm	0	1	1		0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	1		1	1	1	0	0	0	0	0	0	0	0
	80 ppm	0	0	0		0	0	0	0	0	0	1	0	0	1	0

(HAN190)

BAIS 3

STUDY NO. : 0284
ANIMAL : RAT F344/DuCrj
REPORT TYPE : A1 104

CLINICAL OBSERVATION (SUMMARY)
ALL ANIMALS

SEX : FEMALE

PAGE : 87

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
RED URINE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0	0	1	1	1	1	1	1	1	1	1	1
	40 ppm	6	6	6	8	9	9	6	7	6	6	9	8	7	7
	80 ppm	12	12	11	15	18	19	19	19	18	17	19	18	19	19
YELLOW URINE	Control	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SMALL STOOL	Control	2	2	1	0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	0	0	0	0	0	0	0	0	1	1	1	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	1	1	0	0	0	0	2	2	1	1	0
OLIGO-STOOL	Control	2	2	1	0	0	0	0	0	0	0	0	0	0	0
	20 ppm	0	1	0	0	0	0	0	0	1	1	1	1	0	0
	40 ppm	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0	0	0	0	1	1	2	2	1

(HAN190)

BAIS 3

STUDY NO. : 0284
ANIMAL : RAT F344/DuCrj
REPORT TYPE : A1 104

CLINICAL OBSERVATION (SUMMARY)
ALL ANIMALS

SEX : FEMALE

PAGE : 88

Clinical sign	Group Name	Administration Week-day					
		99-7	100-7	101-7	102-7	103-7	104-7
RED URINE	Control	0	0	0	0	0	0
	20 ppm	0	0	0	0	0	0
	40 ppm	10	11	11	13	11	13
	80 ppm	18	6	9	13	13	16
YELLOW URINE	Control	0	0	0	0	0	0
	20 ppm	1	0	0	0	0	0
	40 ppm	0	0	0	0	0	0
	80 ppm	0	0	0	0	0	0
SMALL STOOL	Control	0	0	0	0	2	2
	20 ppm	1	1	1	0	0	0
	40 ppm	0	0	0	0	0	0
	80 ppm	0	0	0	0	1	0
OLIGO-STOOL	Control	0	1	1	1	1	1
	20 ppm	1	1	1	0	0	0
	40 ppm	0	0	0	0	0	0
	80 ppm	1	1	1	1	1	0

(HAN190)

BAIS3

APPENDIX B 1

BODY WEIGHT CHANGES: SUMMARY, RAT: MALE

(2-YEAR STUDY)

STUDY NO. : 0284
 ANIMAL : RAT F344/DuCrj
 UNIT : g
 REPORT TYPE : A1 104
 SEX : MALE

BODY WEIGHT CHANGES (SUMMARY)
 ALL ANIMALS

PAGE : 1

Group Name	Administration week						
	0	1	2	3	4	5	6
Control	126± 5	156± 7	184± 11	204± 14	219± 16	232± 18	244± 20
20 ppm	126± 5	154± 6	180± 9	200± 11	215± 13	230± 15	242± 17
40 ppm	126± 5	150± 6**	176± 9**	194± 11**	209± 13**	223± 14**	234± 15*
80 ppm	126± 5	145± 7**	166± 9**	182± 11**	193± 13**	204± 15**	212± 17**

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

Test of Dunnett

(HAN260)

BAIS 3

STUDY NO. : 0284
 ANIMAL : RAT F344/DuCrj
 UNIT : g
 REPORT TYPE : A1 104
 SEX : MALE

BODY WEIGHT CHANGES (SUMMARY)
 ALL ANIMALS

PAGE : 2

Group Name	Administration		week											
	7		8		9		10		11		12		13	
Control	260±	20	270±	22	280±	23	289±	24	299±	23	305±	24	313±	24
20 ppm	258±	18	269±	18	279±	19	288±	19	297±	18	303±	18	310±	18
40 ppm	249±	17*	261±	18*	270±	19	278±	20*	287±	19**	292±	19**	300±	19**
80 ppm	224±	18**	234±	19**	243±	19**	249±	19**	257±	19**	261±	19**	269±	18**

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

Test of Dunnett

(HAN260)

BAIS 3

STUDY NO. : 0284
 ANIMAL : RAT F344/DuCrj
 UNIT : g
 REPORT TYPE : A1 104
 SEX : MALE

BODY WEIGHT CHANGES (SUMMARY)
 ALL ANIMALS

PAGE : 3

Group Name	Administration week		14		18		22		26		30		34		38	
Control	321±	25	348±	25	367±	24	382±	22	399±	23	413±	24	426±	25		
20 ppm	318±	18	341±	17	355±	18*	371±	18*	383±	17**	397±	18**	406±	18*		
40 ppm	307±	19*	328±	18**	339±	18**	353±	18**	364±	18**	377±	18**	386±	18**		
80 ppm	275±	18**	293±	18**	300±	19**	311±	20**	318±	22**	327±	23**	330±	25**		

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

Test of Dunnett

(HAN260)

BAIS3

STUDY NO. : 0284
 ANIMAL : RAT F344/DuCrj
 UNIT : g
 REPORT TYPE : A1 104
 SEX : MALE

BODY WEIGHT CHANGES (SUMMARY)
 ALL ANIMALS

PAGE : 4

Group Name	Administration week											
	42		46		50		54		58		62	66
Control	438± 25		448± 27		448± 27		463± 28		468± 28		479± 28	485± 28
20 ppm	420± 18*		426± 19*		428± 18*		440± 20*		446± 21*		454± 19*	461± 20**
40 ppm	397± 19**		403± 20**		401± 19**		413± 19**		420± 20**		423± 20**	430± 21**
80 ppm	336± 26**		335± 28**		330± 28**		339± 29**		342± 30**		344± 21**	349± 22**

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

Test of Dunnett

(HAN260)

BAIS 3

STUDY NO. : 0284
 ANIMAL : RAT F344/DuCrj
 UNIT : g
 REPORT TYPE : A1 104
 SEX : MALE

BODY WEIGHT CHANGES (SUMMARY)
 ALL ANIMALS

PAGE : 5

Group Name	Administration week											
	70		74		78		82		86		90	94
Control	493± 28		498± 29		502± 28		501± 27		500± 27		501± 32	496± 32
20 ppm	465± 22**		466± 24**		466± 26**		464± 31**		462± 27**		461± 30**	460± 34*
40 ppm	433± 20**		435± 20**		432± 20**		429± 20**		421± 21**		418± 23**	416± 19**
80 ppm	350± 21**		350± 20**		351± 19**		349± 21**		341± 22**		338± 32**	344± 17**

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

Test of Dunnett

(HAN260)

BAIS 3

STUDY NO. : 0284
ANIMAL : RAT F344/DuCrj
UNIT : g
REPORT TYPE : A1 104
SEX : MALE

BODY WEIGHT CHANGES (SUMMARY)
ALL ANIMALS

PAGE : 6

Group Name	Administration week					
	98		102		104	
Control	482±	40	473±	49	468±	54
20 ppm	454±	44	454±	52	452±	57
40 ppm	407±	25**	407±	34**	397±	24**
80 ppm	335±	16**	331±	18**	330±	22**

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

Test of Dunnett

(HAN260)

BAIS 3

APPENDIX B 2

BODY WEIGHT CHANGES: SUMMARY, RAT: FEMALE

(2-YEAR STUDY)

STUDY NO. : 0284
 ANIMAL : RAT F344/DuCrj
 UNIT : g
 REPORT TYPE : A1 104
 SEX : FEMALE

BODY WEIGHT CHANGES (SUMMARY)
 ALL ANIMALS

PAGE : 7

Group Name	Administration week		1		2		3		4		5		6	
	0													
Control	101±	3	118±	4	131±	5	141±	5	150±	6	158±	8	163±	9
20 ppm	101±	3	116±	4*	129±	4	139±	5	148±	6	155±	6	160±	7
40 ppm	101±	3	112±	4**	124±	5**	134±	6**	143±	6**	150±	6**	155±	7**
80 ppm	101±	3	105±	4**	115±	5**	124±	5**	132±	6**	136±	7**	140±	7**

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

Test of Dunnett

(HAN260)

BAIS 3

STUDY NO. : 0284
 ANIMAL : RAT F344/DuCrj
 UNIT : g
 REPORT TYPE : A1 104
 SEX : FEMALE

BODY WEIGHT CHANGES (SUMMARY)
 ALL ANIMALS

PAGE : 8

Group Name	Administration week		7		8		9		10		11		12		13	
Control	169±	10	172±	11	176±	10	181±	11	185±	11	189±	11	191±	11		
20 ppm	165±	7*	168±	7	172±	8	176±	8**	179±	9	181±	9**	183±	9**		
40 ppm	159±	7**	162±	7**	165±	8**	168±	8**	171±	8**	172±	8**	174±	8**		
80 ppm	144±	8**	146±	8**	149±	8**	150±	8**	153±	8**	153±	8**	158±	8**		

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

Test of Dunnett

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(HAN260)

BAIS3

STUDY NO. : 0284
 ANIMAL : RAT F344/DuCrj
 UNIT : g
 REPORT TYPE : A1 104
 SEX : FEMALE

BODY WEIGHT CHANGES (SUMMARY)
 ALL ANIMALS

PAGE : 9

Group Name	Administration week		14		18		22		26		30		34		38	
Control	193±	11	201±	13	207±	13	214±	13	219±	13	228±	14	234±	15		
20 ppm	185±	8	192±	9*	197±	9*	203±	9*	206±	9*	214±	10*	216±	10**		
40 ppm	176±	8**	180±	8**	182±	8**	189±	9**	186±	8**	191±	8**	190±	9**		
80 ppm	158±	8**	161±	8**	162±	9**	166±	8**	167±	9**	170±	8**	169±	9**		

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

Test of Dunnett

(HAN260)

BAIS 3

STUDY NO. : 0284
 ANIMAL : RAT F344/DuCrj
 UNIT : g
 REPORT TYPE : A1 104
 SEX : FEMALE

BODY WEIGHT CHANGES (SUMMARY)
 ALL ANIMALS

PAGE : 10

Group Name	Administration week											
	42		46		50		54		58		62	
Control	242± 16		248± 17		254± 18		261± 18		269± 20		278± 20	
20 ppm	225± 11*		227± 12**		230± 11**		235± 13**		242± 13**		246± 15**	
40 ppm	195± 9**		193± 9**		195± 9**		193± 9**		198± 10**		196± 12**	
80 ppm	172± 9**		172± 9**		171± 10**		168± 10**		173± 10**		170± 13**	

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

Test of Dunnett

(HAN260)

BAIS 3

STUDY NO. : 0284
 ANIMAL : RAT F344/DuCrj
 UNIT : g
 REPORT TYPE : A1 104
 SEX : FEMALE

BODY WEIGHT CHANGES (SUMMARY)
 ALL ANIMALS

PAGE : 11

Group Name	Administration week		74		78		82		86		90		94	
	70													
Control	296±	21	301±	22	308±	22	308±	32	307±	34	315±	26	316±	28
20 ppm	263±	17**	268±	19**	275±	22**	279±	22*	280±	24*	285±	26*	283±	31*
40 ppm	205±	14**	206±	18**	211±	17**	213±	18**	213±	19**	216±	21**	220±	21**
80 ppm	177±	11**	172±	14**	177±	12**	176±	11**	174±	13**	176±	14**	177±	14**

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

Test of Dunnett

(HAN260)

BAIS 3

STUDY NO. : 0284
ANIMAL : RAT F344/DuCrj
UNIT : g
REPORT TYPE : A1 104
SEX : FEMALE

BODY WEIGHT CHANGES (SUMMARY)
ALL ANIMALS

PAGE : 12

Group Name	Administration week					
	98		102		104	
Control	322± 32		327± 45		322± 53	
20 ppm	287± 30*		292± 30		286± 33	
40 ppm	219± 23**		223± 23**		219± 22**	
80 ppm	177± 12**		179± 15**		181± 14**	
Significant difference ; * : $P \leq 0.05$ ** : $P \leq 0.01$ Test of Dunnett						

(HAN260)

BAIS3

APPENDIX C 1

WATER CONSUMPTION CHANGES: SUMMARY, RAT: MALE

(2-YEAR STUDY)

STUDY NO. : 0284
 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	17.8± 1.3	19.1± 1.8	20.0± 2.0	20.1± 2.7	19.5± 3.1	18.5± 3.5	18.4± 2.2
20 ppm	15.2± 2.3**	15.1± 1.4**	15.4± 1.7**	15.1± 1.5**	15.0± 1.4**	14.3± 1.4**	14.9± 1.4**
40 ppm	13.5± 1.0**	14.0± 1.0**	14.2± 1.4**	14.0± 1.5**	13.8± 1.3**	12.9± 1.5**	13.3± 1.4**
80 ppm	13.1± 1.5**	13.3± 1.9**	13.0± 1.0**	12.6± 1.6**	12.0± 1.6**	11.1± 1.4**	11.7± 1.7**

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

Test of Dunnett

(HAN260)

BAIS3

STUDY NO. : 0284
 ANIMAL : RAT F344/DuCrj
 UNIT : g
 REPORT TYPE : A1 104
 SEX : MALE

WATER CONSUMPTION CHANGES (SUMMARY)
 ALL ANIMALS

PAGE : 2

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	17.8± 2.5	18.2± 2.7	17.7± 2.2	18.2± 2.1	18.5± 2.3	18.2± 2.8	17.3± 1.5
20 ppm	14.7± 1.6**	14.8± 1.5**	14.5± 1.3**	14.9± 1.3**	14.7± 1.7**	14.4± 1.2**	14.2± 1.3**
40 ppm	13.4± 1.6**	13.4± 1.5**	13.1± 1.5**	13.2± 1.4**	13.3± 1.3**	13.0± 1.2**	12.7± 1.1**
80 ppm	11.5± 2.0**	11.6± 1.3**	11.6± 1.2**	11.5± 1.4**	11.4± 1.2**	11.4± 1.3**	11.5± 1.3**

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

Test of Dunnett

(HAN260)

BAIS3

STUDY NO. : 0284
 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	18.5± 2.8	18.1± 1.3	18.3± 2.5	18.0± 1.1	18.1± 1.0	18.7± 1.1	19.2± 1.0
20 ppm	15.3± 1.2**	15.5± 1.3**	15.2± 1.0**	15.0± 1.0**	15.9± 0.9**	15.9± 1.3**	17.6± 1.1**
40 ppm	13.8± 1.7**	13.4± 1.2**	13.9± 1.1**	13.4± 0.8**	14.3± 1.1**	14.5± 0.9**	15.5± 1.1**
80 ppm	11.7± 1.2**	12.1± 1.3**	12.4± 1.5**	12.4± 1.4**	13.1± 1.8**	13.5± 1.9**	14.4± 1.5**

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

Test of Dunnett

(HAN260)

BAIS3

STUDY NO. : 0284
 ANIMAL : RAT F344/DuCrj
 UNIT : g
 REPORT TYPE : A1 104
 SEX : MALE

WATER CONSUMPTION CHANGES (SUMMARY)
 ALL ANIMALS

PAGE : 4

Group Name	Administration week-day(effective)						
	46-7(4)	50-7(4)	54-7(4)	58-7(4)	62-7(4)	66-7(4)	70-7(4)
Control	19.1± 1.1	18.4± 1.4	19.3± 1.1	19.2± 1.7	20.3± 1.5	20.1± 2.2	20.4± 2.7
20 ppm	16.1± 1.4**	17.0± 1.1**	16.8± 0.9**	17.1± 4.1**	16.8± 1.1**	18.8± 1.9*	18.0± 2.3**
40 ppm	14.9± 1.1**	15.3± 1.3**	15.7± 1.2**	16.5± 1.7**	15.2± 1.4**	16.6± 2.6**	16.4± 1.8**
80 ppm	14.0± 2.2**	14.8± 2.2**	15.5± 2.8**	16.1± 3.3**	14.7± 2.4**	15.6± 1.8**	15.6± 2.3**
Significant difference ; * : $P \leq 0.05$ ** : $P \leq 0.01$ Test of Dunnett							

(HAN260)

BAIS3

STUDY NO. : 0284
 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	20.7± 2.2	20.6± 2.2	21.8± 2.5	21.8± 2.9	22.4± 4.1	23.4± 4.1	23.6± 6.3
20 ppm	18.2± 3.0**	17.8± 3.3**	18.9± 3.9**	17.5± 1.9**	18.3± 2.4**	19.3± 2.7**	19.5± 3.9**
40 ppm	16.6± 1.7**	16.2± 1.6**	16.4± 1.6**	15.9± 1.9**	16.7± 3.0**	17.0± 2.5**	17.2± 3.4**
80 ppm	15.2± 2.3**	15.2± 3.0**	15.4± 2.3**	14.8± 2.4**	15.3± 2.5**	15.4± 2.6**	15.7± 3.2**
Significant difference ; * : $P \leq 0.05$ ** : $P \leq 0.01$ Test of Dunnett							

STUDY NO. : 0284
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	25.6± 6.2	26.8± 6.0
20 ppm	20.8± 4.5**	22.1± 5.8**
40 ppm	17.3± 3.4**	18.6± 5.0**
80 ppm	15.4± 2.7**	16.0± 3.1**

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

Test of Dunnett

APPENDIX C 2

WATER CONSUMPTION CHANGES: SUMMARY, RAT: FEMALE

(2-YEAR STUDY)

STUDY NO. : 0284
 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	16.7± 1.5	16.7± 2.1	16.9± 3.3	17.7± 3.3	19.2± 5.8	18.5± 5.5	18.8± 5.4
20 ppm	14.1± 1.4**	12.4± 1.2**	12.0± 1.1**	13.0± 3.2**	12.7± 3.5**	12.2± 3.7**	12.5± 3.2**
40 ppm	11.7± 1.8**	10.8± 0.7**	10.5± 0.9**	10.7± 0.8**	10.4± 0.7**	10.1± 0.7**	9.7± 0.7**
80 ppm	10.8± 1.2**	9.8± 0.9**	9.5± 0.9**	9.6± 1.1**	8.9± 0.9**	8.7± 0.8**	8.4± 1.1**
Significant difference ; * : $P \leq 0.05$ ** : $P \leq 0.01$ Test of Dunnett							

STUDY NO. : 0284
 ANIMAL : RAT F344/DuCrj
 UNIT : g
 REPORT TYPE : A1 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	18.2± 5.6	16.6± 3.7	17.1± 4.8	18.2± 5.8	19.2± 4.7	19.3± 5.7	19.1± 5.0
20 ppm	11.6± 3.0**	11.0± 2.1**	11.5± 3.0**	11.7± 3.3**	12.1± 3.6**	11.0± 2.0**	11.7± 2.4**
40 ppm	9.3± 0.7**	8.8± 0.7**	8.9± 0.7**	9.1± 1.2**	9.2± 1.2**	9.0± 1.0**	10.0± 3.6**
80 ppm	8.1± 0.9**	8.1± 1.9**	8.1± 0.9**	8.0± 1.3**	8.1± 1.2**	8.9± 1.1**	8.2± 1.0**

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

Test of Dunnett

(HAN260)

BAIS 3

STUDY NO. : 0284
 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	19.4± 7.3	20.0± 6.7	19.0± 6.2	19.9± 7.9	17.9± 4.1	18.8± 5.7	20.6± 6.1
20 ppm	11.3± 2.1**	12.0± 1.3**	11.8± 1.5**	11.2± 1.7**	12.2± 2.1**	11.5± 1.2**	13.3± 2.0**
40 ppm	9.1± 1.0**	9.8± 1.7**	10.1± 2.1**	9.6± 1.4**	10.1± 1.9**	9.9± 1.4**	11.4± 1.4**
80 ppm	8.4± 1.2**	9.0± 1.2**	8.5± 1.0**	9.2± 1.9**	9.0± 1.3**	8.8± 1.3**	10.1± 1.6**

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

Test of Dunnett

(HAN260)

BAIS3

STUDY NO. : 0284
 ANIMAL : RAT F344/DuCrj
 UNIT : g
 REPORT TYPE : A1 104
 SEX : FEMALE

WATER CONSUMPTION CHANGES (SUMMARY)
 ALL ANIMALS

PAGE : 10

Group Name	Administration		week-day(effective)					
	46-7(4)		50-7(4)		54-7(4)		58-7(4)	
Control	18.3± 4.8		17.5± 2.9		17.7± 4.1		16.6± 2.4	
20 ppm	12.0± 1.4**		14.0± 1.2**		12.5± 1.4**		13.6± 1.6**	
40 ppm	10.3± 1.7**		12.3± 1.6**		10.5± 1.4**		11.7± 1.5**	
80 ppm	9.9± 1.4**		10.4± 1.6**		10.0± 1.5**		11.0± 1.8**	

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

Test of Dunnett

(HAN260)

BAIS3

STUDY NO. : 0284
 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	16.2± 2.6	17.2± 3.6	17.3± 4.3	18.4± 5.2	17.8± 3.1	16.9± 3.5	18.9± 3.8
20 ppm	14.0± 1.8**	14.3± 2.9**	15.0± 2.2**	14.9± 2.7**	15.6± 2.6**	15.4± 4.0	15.9± 2.8**
40 ppm	11.9± 1.8**	12.8± 1.7**	13.4± 1.9**	13.8± 2.3**	14.7± 2.3**	14.2± 2.7**	15.7± 3.4**
80 ppm	11.3± 2.6**	13.4± 3.3**	14.5± 3.4**	13.8± 3.6**	15.4± 3.6**	15.0± 3.8*	16.1± 4.4**
Significant difference : * : $P \leq 0.05$ ** : $P \leq 0.01$ Test of Dunnett							

(HAN260)

BAIS3

STUDY NO. : 0284
ANIMAL : RAT F344/DuGrj
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	19.1± 3.6	19.0± 4.4
20 ppm	16.2± 2.6**	17.0± 3.1
40 ppm	17.1± 4.3**	17.1± 4.0
80 ppm	16.4± 5.1**	18.2± 4.8
Significant difference ; * : $P \leq 0.05$ ** : $P \leq 0.01$ Test of Dunnett		

(HAN260)

BAIS 3

APPENDIX D 1

FOOD CONSUMPTION CHANGES: SUMMARY, RAT: MALE

(2-YEAR STUDY)

STUDY NO. : 0284
 ANIMAL : RAT F344/DuCrj
 UNIT : g
 REPORT TYPE : A1 104
 SEX : MALE

FOOD CONSUMPTION CHANGES (SUMMARY)
 ALL ANIMALS

PAGE : 1

Group Name	Administration week-day(effective)						
	1-7(7)	2-7(7)	3-7(7)	4-7(7)	5-7(7)	6-7(7)	7-7(7)
Control	13.8± 0.8	15.1± 1.1	15.3± 1.2	15.1± 1.4	15.0± 1.5	14.1± 1.5	14.7± 1.7
20 ppm	13.0± 0.7**	14.3± 1.0**	14.4± 0.9**	14.3± 1.3**	14.5± 1.3	13.6± 1.4	14.0± 1.4*
40 ppm	12.4± 0.7**	13.9± 0.9**	13.9± 1.1**	13.7± 1.2**	14.2± 1.3*	13.1± 1.3**	13.4± 1.3**
80 ppm	11.9± 0.6**	13.4± 1.0**	13.3± 0.9**	12.9± 1.1**	13.1± 1.3**	12.1± 1.3**	12.2± 1.3**

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

Test of Dunnett

(HAN260)

BAIS3

STUDY NO. : 0284
 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	14.6± 1.7	14.7± 1.5	14.6± 1.3	15.1± 1.2	14.6± 1.5	14.5± 1.4	14.5± 1.2
20 ppm	14.5± 1.5	14.6± 1.4	14.5± 1.2	14.8± 1.2	14.3± 1.1	14.2± 1.0	14.1± 1.0
40 ppm	13.8± 1.4*	13.9± 1.3**	13.8± 1.3**	14.1± 1.2**	13.7± 1.3*	13.7± 1.1**	13.6± 1.0**
80 ppm	12.7± 1.4**	13.0± 1.3**	13.0± 1.2**	13.1± 1.1**	12.8± 1.0**	13.1± 1.0**	13.0± 1.0**

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

Test of Dunnett

(HAN260)

BAIS 3

STUDY NO. : 0284
 ANIMAL : RAT F344/DuCrj
 UNIT : g
 REPORT TYPE : A1 104
 SEX : MALE

FOOD CONSUMPTION CHANGES (SUMMARY)
 ALL ANIMALS

PAGE : 3

Group Name	Administration week-day(effective)						
	18-7(7)	22-7(7)	26-7(7)	30-7(7)	34-7(7)	38-7(7)	42-7(7)
Control	15.7± 1.3	15.4± 1.1	15.5± 1.0	15.9± 1.0	16.2± 0.9	16.7± 0.9	16.7± 0.8
20 ppm	15.1± 1.0*	14.8± 1.3*	15.0± 1.0*	15.2± 0.9**	15.9± 0.8	16.2± 0.9*	16.4± 0.9
40 ppm	14.6± 0.9**	14.1± 1.0**	14.4± 1.0**	14.4± 0.9**	15.1± 0.8**	15.6± 0.9**	15.8± 0.8**
80 ppm	13.7± 0.9**	13.1± 1.1**	13.7± 1.0**	13.6± 1.1**	13.9± 1.0**	14.3± 1.2**	14.5± 1.1**

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

Test of Dunnett

(HAN260)

BAIS3

STUDY NO. : 0284
 ANIMAL : RAT F344/DuCrj
 UNIT : g
 REPORT TYPE : A1 104
 SEX : MALE

FOOD CONSUMPTION CHANGES (SUMMARY)
 ALL ANIMALS

PAGE : 4

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	16.8± 1.0	16.6± 0.9	16.6± 0.9	17.0± 1.2	17.7± 1.0	17.3± 1.1	17.6± 1.2
20 ppm	15.8± 1.0**	16.4± 1.0	15.7± 1.1**	16.7± 1.6	16.7± 1.0**	17.1± 1.0	16.9± 1.1**
40 ppm	15.5± 0.8**	15.3± 0.9**	15.2± 0.9**	16.3± 0.9**	15.7± 1.0**	16.3± 1.3**	16.1± 1.0**
80 ppm	14.1± 1.1**	14.2± 1.3**	14.0± 1.2**	14.9± 1.3**	14.6± 0.9**	15.0± 1.0**	15.0± 1.4**

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

Test of Dunnnett

(HAN260)

BAIS3

STUDY NO. : 0284
 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	17.6± 1.3	17.3± 1.0	17.4± 1.1	17.3± 1.1	16.8± 1.4	16.9± 1.6	16.0± 2.4
20 ppm	16.7± 1.5*	16.3± 1.6*	16.4± 1.3*	16.2± 1.5**	16.0± 1.2	16.3± 1.7	15.6± 2.5
40 ppm	15.8± 0.9**	15.5± 0.8**	15.2± 0.9**	15.1± 1.2**	14.8± 1.8**	15.1± 1.4**	14.6± 1.1**
80 ppm	14.8± 1.0**	14.7± 0.9**	14.5± 1.4**	14.4± 1.0**	14.2± 1.5**	14.9± 1.0**	14.0± 1.0**

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

Test of Dunnett

(HAN260)

BAIS3

STUDY NO. : 0284
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(7)
Control	16.1± 2.8	15.5± 2.0
20 ppm	16.0± 2.4	15.7± 1.8
40 ppm	15.1± 2.0**	14.5± 1.1**
80 ppm	14.0± 1.7**	13.8± 1.2**

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. : 0284
 ANIMAL : RAT F344/DuCrj
 UNIT : g
 REPORT TYPE : A1 104
 SEX : FEMALE

FOOD CONSUMPTION CHANGES (SUMMARY)
 ALL ANIMALS

PAGE : 7

Group Name	Administration week-day(effective)						
	1-7(7)	2-7(7)	3-7(7)	4-7(7)	5-7(7)	6-7(7)	7-7(7)
Control	11.0± 0.6	11.1± 0.7	11.1± 0.7	11.1± 0.7	11.1± 0.9	10.7± 0.9	10.8± 0.9
20 ppm	10.5± 0.5**	10.7± 0.7**	10.3± 0.6**	10.6± 0.7**	10.7± 0.7	9.9± 0.6**	10.0± 0.6**
40 ppm	9.6± 0.5**	10.1± 0.6**	9.8± 0.6**	10.0± 0.7**	10.0± 0.7**	9.6± 0.6**	9.5± 0.5**
80 ppm	8.7± 0.6**	9.6± 0.6**	9.2± 0.6**	9.1± 0.7**	9.1± 0.6**	8.7± 0.7**	8.7± 0.7**

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

Test of Dunnett

(HAN260)

BAIS3

STUDY NO. : 0284
 ANIMAL : RAT F344/DuCrj
 UNIT : g
 REPORT TYPE : A1 104
 SEX : FEMALE

FOOD CONSUMPTION CHANGES (SUMMARY)
 ALL ANIMALS

PAGE : 8

Group Name	Administration week-day(effective)						
	8-7(7)	9-7(7)	10-7(7)	11-7(7)	12-7(7)	13-7(7)	14-7(7)
Control	10.4± 0.9	10.6± 0.8	10.6± 0.8	10.7± 0.9	10.8± 0.8	10.8± 0.8	10.5± 0.9
20 ppm	9.9± 0.7**	9.9± 0.7**	9.9± 0.6**	9.8± 0.7**	9.7± 0.7**	9.7± 0.6**	9.9± 0.7**
40 ppm	9.3± 0.7**	9.3± 0.6**	9.2± 0.7**	9.2± 0.7**	9.2± 0.7**	9.2± 0.6**	9.3± 0.6**
80 ppm	8.8± 0.7**	8.8± 0.7**	8.5± 0.7**	8.6± 0.7**	8.5± 0.8**	8.9± 0.7**	8.8± 0.7**

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

Test of Dunnett

(HAN260)

BAIS3

STUDY NO. : 0284
 ANIMAL : RAT F344/DuCrj
 UNIT : g
 REPORT TYPE : A1 104
 SEX : FEMALE

FOOD CONSUMPTION CHANGES (SUMMARY)
 ALL ANIMALS

PAGE : 9

Group Name	Administration week-day(effective)						
	18-7(7)	22-7(7)	26-7(7)	30-7(7)	34-7(7)	38-7(7)	42-7(7)
Control	10.7± 0.7	10.6± 0.6	11.3± 0.8	11.0± 0.7	11.8± 0.7	11.7± 0.7	12.0± 1.0
20 ppm	9.8± 0.7**	9.9± 0.6**	10.5± 0.6**	10.0± 0.6**	10.9± 0.7**	10.6± 0.6**	11.3± 0.6*
40 ppm	9.2± 0.6**	9.3± 0.6**	9.7± 0.7**	9.2± 0.6**	9.6± 0.6**	9.5± 0.7**	10.0± 0.7**
80 ppm	8.7± 0.6**	8.8± 0.7**	9.0± 0.7**	8.7± 0.7**	8.9± 0.7**	8.8± 0.8**	9.0± 0.8**

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

Test of Dunnett

(HAN260)

BAIS3

STUDY NO. : 0284
 ANIMAL : RAT F344/DuCrj
 UNIT : g
 REPORT TYPE : A1 104
 SEX : FEMALE

FOOD CONSUMPTION CHANGES (SUMMARY)
 ALL ANIMALS

PAGE : 10

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	11.6± 0.7	11.9± 0.7	11.7± 0.7	12.2± 0.9	12.5± 0.7	12.0± 0.8	12.5± 0.9
20 ppm	10.7± 0.7**	11.2± 0.6**	10.7± 0.6**	11.6± 0.8**	11.1± 0.7**	12.1± 0.8	12.0± 0.8**
40 ppm	9.4± 0.7**	10.1± 0.7**	9.4± 0.7**	10.2± 0.9**	9.7± 0.8**	10.6± 1.0**	10.6± 0.9**
80 ppm	8.9± 0.8**	9.1± 0.9**	8.6± 1.0**	9.5± 0.9**	9.2± 1.3**	9.4± 1.1**	10.4± 1.1**
Significant difference ; * : $P \leq 0.05$ ** : $P \leq 0.01$ Test of Dunnett							

(HAN260)

BAIS3

STUDY NO. : 0284
 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	12.3± 1.8	12.6± 1.8	12.4± 2.5	12.4± 2.0	13.0± 1.5	12.7± 2.1	13.0± 2.3
20 ppm	11.9± 1.1	12.1± 1.0	11.9± 1.0*	11.9± 1.9	12.5± 1.6	11.9± 2.1	12.1± 2.6
40 ppm	10.6± 1.1**	10.8± 1.1**	10.7± 0.9**	10.6± 1.1**	11.0± 1.3**	11.0± 1.2**	10.9± 1.5**
80 ppm	9.6± 1.4**	10.2± 1.3**	10.3± 1.1**	10.3± 1.3**	10.8± 1.1**	10.6± 1.6**	10.8± 1.5**
Significant difference ; * : $P \leq 0.05$ ** : $P \leq 0.01$ Test of Dunnett							

(HAN260)

BAIS3

STUDY NO. : 0284
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(7)
Control	13.7± 2.3	12.1± 2.4
20 ppm	12.7± 1.2*	11.5± 1.1
40 ppm	11.5± 1.1**	10.7± 1.3**
80 ppm	11.0± 1.9**	11.0± 1.4**
Significant difference ; * : $P \leq 0.05$ ** : $P \leq 0.01$ Test of Dunnett		

(HAN260)

BAIS 3

APPENDIX E1

CHEMICAL INTAKE CHANGES: SUMMARY, RAT: MALE

(2-YEAR STUDY)

STUDY NO. : 0284
 ANIMAL : RAT F344/DuCrj
 UNIT : mg/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
20 ppm	1.967± 0.306	1.671± 0.131	1.542± 0.150	1.405± 0.078	1.304± 0.068	1.178± 0.066	1.154± 0.069
40 ppm	3.588± 0.214	3.191± 0.158	2.915± 0.184	2.683± 0.214	2.473± 0.138	2.203± 0.158	2.127± 0.133
80 ppm	7.201± 0.815	6.398± 0.797	5.712± 0.334	5.224± 0.507	4.705± 0.426	4.184± 0.332	4.150± 0.363

(HAN300)

BAIS 3

STUDY NO. : 0284
ANIMAL : RAT F344/DuCrj
UNIT : mg/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
20 ppm	1.089± 0.070	1.062± 0.069	1.007± 0.052	1.003± 0.063	0.969± 0.090	0.931± 0.054	0.894± 0.065
40 ppm	2.046± 0.150	1.976± 0.115	1.889± 0.153	1.845± 0.139	1.817± 0.096	1.732± 0.099	1.657± 0.087
80 ppm	3.913± 0.485	3.826± 0.265	3.716± 0.234	3.580± 0.252	3.499± 0.246	3.401± 0.266	3.351± 0.250

(HAN300)

BAIS 3

STUDY NO. : 0284
 ANIMAL : RAT F344/DuCrj
 UNIT : mg/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
20 ppm	0.896± 0.050	0.871± 0.063	0.821± 0.039	0.784± 0.042	0.800± 0.036	0.785± 0.057	0.839± 0.041
40 ppm	1.678± 0.180	1.580± 0.098	1.568± 0.091	1.474± 0.080	1.518± 0.102	1.506± 0.079	1.567± 0.094
80 ppm	3.198± 0.235	3.220± 0.258	3.184± 0.287	3.109± 0.288	3.206± 0.364	3.257± 0.363	3.437± 0.289

STUDY NO. : 0284
 ANIMAL : RAT F344/DuCrj
 UNIT : mg/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
20 ppm	0.754± 0.055	0.797± 0.049	0.762± 0.037	0.760± 0.175	0.742± 0.043	0.814± 0.072	0.776± 0.106
40 ppm	1.484± 0.082	1.531± 0.110	1.519± 0.096	1.576± 0.151	1.439± 0.108	1.539± 0.235	1.518± 0.157
80 ppm	3.351± 0.480	3.582± 0.424	3.662± 0.590	3.773± 0.714	3.410± 0.522	3.566± 0.322	3.565± 0.517

(HAN300)

BAIS 3

STUDY NO. : 0284
 ANIMAL : RAT F344/DuCrj
 UNIT : mg/kg/day
 REPORT TYPE : A1 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
20 ppm	0.783± 0.145	0.765± 0.173	0.821± 0.238	0.757± 0.088	0.793± 0.101	0.835± 0.111	0.865± 0.173
40 ppm	1.528± 0.146	1.498± 0.139	1.533± 0.142	1.506± 0.171	1.594± 0.284	1.635± 0.256	1.694± 0.375
80 ppm	3.479± 0.499	3.467± 0.671	3.536± 0.510	3.483± 0.590	3.635± 0.628	3.588± 0.568	3.754± 0.794

(HAN300)

BAIS3

STUDY NO. : 0284
ANIMAL : RAT F344/DuCrj
UNIT : mg/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
20 ppm	0.926± 0.240	1.001± 0.349
40 ppm	1.708± 0.339	1.894± 0.668
80 ppm	3.722± 0.672	3.878± 0.713

(HAN300)

BAIS3

APPENDIX E2

CHEMICAL INTAKE CHANGES: SUMMARY, RAT: FEMALE

(2-YEAR STUDY)

STUDY NO. : 0284
 ANIMAL : RAT F344/DuCrj
 UNIT : mg/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
20 ppm	2.447± 0.244	1.930± 0.161	1.734± 0.127	1.750± 0.408	1.639± 0.441	1.518± 0.461	1.515± 0.400
40 ppm	4.206± 0.615	3.471± 0.201	3.127± 0.193	2.982± 0.216	2.768± 0.159	2.600± 0.145	2.441± 0.141
80 ppm	8.185± 0.887	6.789± 0.584	6.156± 0.520	5.831± 0.545	5.240± 0.471	4.953± 0.386	4.695± 0.458

(HAN300)

BAIS3

STUDY NO. : 0284
ANIMAL : RAT F344/DuCrj
UNIT : mg/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
20 ppm	1.385± 0.374	1.284± 0.238	1.311± 0.336	1.310± 0.373	1.333± 0.377	1.199± 0.210	1.265± 0.248
40 ppm	2.284± 0.135	2.128± 0.137	2.121± 0.128	2.117± 0.217	2.124± 0.225	2.078± 0.195	2.264± 0.793
80 ppm	4.420± 0.397	4.331± 0.983	4.326± 0.383	4.163± 0.572	4.217± 0.537	4.529± 0.439	4.153± 0.404

(HAN300)

BAIS3

STUDY NO. : 0284
 ANIMAL : RAT F344/DuCrj
 UNIT : mg/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
20 ppm	1.174± 0.195	1.217± 0.109	1.163± 0.149	1.087± 0.147	1.140± 0.170	1.069± 0.096	1.187± 0.175
40 ppm	2.011± 0.193	2.149± 0.311	2.128± 0.397	2.068± 0.277	2.106± 0.346	2.090± 0.242	2.332± 0.258
80 ppm	4.151± 0.570	4.439± 0.487	4.084± 0.387	4.396± 0.855	4.240± 0.507	4.155± 0.481	4.694± 0.658

(HAN300)

BAIS3

STUDY NO. : 0284
 ANIMAL : RAT F344/DuCrj
 UNIT : mg/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	0.000± 0.000		
20 ppm	1.059± 0.098	1.215± 0.091	1.068± 0.109	1.125± 0.139	1.027± 0.123	1.135± 0.117	1.022± 0.145			
40 ppm	2.136± 0.320	2.527± 0.297	2.183± 0.296	2.379± 0.312	2.235± 0.388	2.506± 0.439	2.300± 0.403			
80 ppm	4.593± 0.519	4.870± 0.559	4.770± 0.712	5.082± 0.786	5.004± 0.970	5.098± 1.146	5.724± 1.061			

(HAN300)

BAIS 3

STUDY NO. : 0284
 ANIMAL : RAT F344/DuCrj
 UNIT : mg/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		
20 ppm	1.049± 0.148	1.043± 0.232	1.083± 0.205	1.076± 0.229	1.099± 0.217	1.098± 0.296	1.118± 0.252			
40 ppm	2.328± 0.389	2.437± 0.356	2.532± 0.433	2.628± 0.532	2.751± 0.587	2.602± 0.579	2.910± 0.820			
80 ppm	5.278± 1.143	6.078± 1.471	6.577± 1.481	6.345± 1.483	6.985± 1.499	6.807± 1.653	7.258± 1.963			

(HAN300)

BAIS3

STUDY NO. : 0284
ANIMAL : RAT F344/DuCrj
UNIT : mg/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
20 ppm	1.129± 0.283	1.218± 0.381
40 ppm	3.127± 0.968	3.165± 0.894
80 ppm	7.309± 2.094	8.033± 2.053

APPENDIX F 1

HEMATOLOGY: SUMMARY, RAT: MALE

(2-YEAR STUDY)

STUDY NO. : 0284
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 10 ⁶ /μl		HEMOGLOBIN g/dl		HEMATOCRIT %		MCV fl		MCH pg		MCHC g/dl		PLATELET 10 ³ /μl	
Control	37	7.62±	1.37	13.3±	2.8	39.8±	7.1	52.5±	3.5	17.4±	1.7	33.1±	2.1	934±	240
20 ppm	38	8.48±	1.36**	14.7±	2.6**	43.9±	6.8**	51.9±	2.6	17.2±	1.2	33.2±	1.7	833±	248*
40 ppm	44	8.96±	0.94**	15.3±	1.5**	45.3±	4.2**	50.7±	1.6**	17.1±	0.5*	33.8±	1.0	760±	110**
80 ppm	39	8.73±	1.61**	14.0±	2.5	41.9±	6.8	48.3±	2.3**	16.0±	1.0**	33.1±	1.5	799±	139**

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

Test of Dunnett

(HCL070)

BAIS3

STUDY NO. : 0284
 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 10 ³ /μl		Differential N-BAND		WBC (%) N-SEG		EOSINO		BASO		MONO		LYMPHO		OTHERS	
Control	37	5.23±	2.55	1±	1	54±	8	1±	1	0±	0	4±	2	34±	8	6±	5
20 ppm	38	5.14±	2.19	1±	1	51±	10	2±	1	0±	0	5±	2	36±	10	5±	4
40 ppm	44	4.62±	2.41	1±	1	50±	11	2±	2**	0±	0	5±	2*	39±	9	3±	5**
80 ppm	39	3.92±	2.46	1±	1	50±	11	2±	1*	0±	0	5±	2*	39±	10	3±	3**

Significant difference ; * : $P \leq 0.05$

** : $P \leq 0.01$

Test of Dunnett

(HCL070)

BAIS3

APPENDIX F 2

HEMATOLOGY: SUMMARY, RAT: FEMALE

(2-YEAR STUDY)

STUDY NO. : 0284
 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 ⁶ /μl		HEMOGLOBIN g/dl		HEMATOCRIT %		MCV fl		MCH pg		MCHC g/dl		PLATELET 10 ³ /μl	
Control	37	7.73±	1.40	14.4±	2.3	42.0±	6.1	55.6±	8.5	18.9±	1.8	34.2±	1.6	617±	114
20 ppm	39	7.84±	0.53	14.1±	1.1	41.2±	2.9	52.5±	1.6*	18.0±	0.8*	34.2±	1.2	687±	92*
40 ppm	43	7.66±	0.76	13.1±	1.2**	38.5±	3.5**	50.4±	2.3**	17.2±	1.0**	34.1±	1.5	752±	125**
80 ppm	28	7.96±	0.56	11.3±	1.2**	35.1±	2.7**	44.2±	2.5**	14.3±	1.0**	32.2±	1.2**	903±	151**

Significant difference ; * : $P \leq 0.05$

** : $P \leq 0.01$

Test of Dunnett

(HCL070)

BAIS3

STUDY NO. : 0284
 ANIMAL : RAT F344/DuGrj
 MEASURE. TIME : 1
 SEX : FEMALE

HEMATOLOGY (SUMMARY)
 ALL ANIMALS (105W)

REPORT TYPE : A1

PAGE : 4

Group Name	NO. of Animals	WBC 10 ³ /μl		Differential N-BAND		WBC (%) N-SEG		EOSINO		BASO		MONO		LYMPHO		OTHERS	
Control	37	4.26±	11.50	1±	2	49±	11	2±	1	0±	0	5±	2	37±	11	6±	13
20 ppm	39	2.93±	2.89	1±	2	52±	10	2±	1	0±	0	4±	2	36±	8	5±	4
40 ppm	43	2.62±	2.11	1±	1	50±	12	1±	1	0±	0	5±	2	36±	9	7±	12
80 ppm	28	3.24±	1.60	1±	1	50±	12	2±	3	0±	0	5±	2	35±	10	8±	13

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

Test of Dunnett

(HCL070)

BAIS3

APPENDIX G 1

BIOCHEMISTRY: SUMMARY, RAT: MALE

(2-YEAR STUDY)

STUDY NO. : 0284
 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	37	6.5±	0.5	3.3±	0.2	1.1±	0.2	0.18±	0.04	138±	32	201±	81	180±	136
20 ppm	38	6.4±	0.3	3.3±	0.2	1.1±	0.2	0.18±	0.03	145±	22	168±	60	152±	85
40 ppm	44	6.3±	0.3	3.5±	0.2**	1.2±	0.2**	0.17±	0.03	151±	17	152±	55*	113±	107*
80 ppm	39	6.1±	0.3**	3.5±	0.3**	1.4±	0.2**	0.15±	0.02**	140±	19	111±	23**	50±	18**

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

Test of Dunnett

(HCL074)

BAIS3

STUDY NO. : 0284
 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 IU/l		GPT IU/l		LDH IU/l		ALP IU/l		G-GTP IU/l		CPK IU/l	
Control	37	297±	118	72±	28	40±	20	226±	175	152±	56	8±	4	86±	22
20 ppm	38	255±	85	75±	28	42±	18	229±	184	149±	41	7±	3	93±	33
40 ppm	44	233±	89*	81±	20	46±	17*	195±	54	160±	37	6±	2	92±	26
80 ppm	39	175±	29**	115±	44**	64±	53**	210±	105	248±	417*	6±	3	87±	19

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

Test of Dunnett

(HCL074)

BAIS3

STUDY NO. : 0284
 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	37	21.6±	6.7	0.8±	0.3	142±	2	3.8±	0.3	106±	2	10.7±	0.6	4.3±	1.2
20 ppm	38	19.4±	3.6	0.6±	0.1*	142±	2	3.9±	0.3	106±	2	10.5±	0.3	4.1±	0.7
40 ppm	44	19.4±	2.7	0.6±	0.1**	141±	2*	3.9±	0.3	106±	2	10.4±	0.3**	3.9±	0.8
80 ppm	39	19.9±	3.6	0.5±	0.1**	142±	2	4.0±	0.2**	106±	1	10.3±	0.2**	4.2±	0.7

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

Test of Dunnett

(HCL074)

BAIS3

APPENDIX G 2

BIOCHEMISTRY: SUMMARY, RAT: FEMALE

(2-YEAR STUDY)

STUDY NO. : 0284
 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	38	6.7±	0.4	3.8±	0.3	1.4±	0.2	0.17±	0.11	143±	26	131±	23	75±	60
20 ppm	39	6.7±	0.4	3.8±	0.3	1.3±	0.1	0.16±	0.04	145±	13	148±	47	102±	73*
40 ppm	43	6.6±	0.5	3.9±	0.3	1.5±	0.2	0.14±	0.02**	128±	19**	141±	44	61±	56
80 ppm	28	6.3±	0.6**	3.8±	0.3	1.6±	0.2**	0.14±	0.01**	106±	18**	133±	24	58±	31

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

Test of Dunnett

(HCL074)

BAIS3

STUDY NO. : 0284
 ANIMAL : RAT F344/DuGrj
 MEASURE. TIME : 1
 SEX : FEMALE

BIOCHEMISTRY (SUMMARY)
 ALL ANIMALS (105W)

REPORT TYPE : A1

PAGE : 5

Group Name	NO. of Animals	PHOSPHOLIPID mg/dl		GOT IU/l		GPT IU/l		LDH IU/l		ALP IU/l		G-GTP IU/l		CPK IU/l	
Control	38	231±	41	135±	93	63±	29	263±	132	126±	67	5±	2	97±	81
20 ppm	39	262±	72	132±	132	61±	26	246±	88	113±	59	5±	3	85±	25
40 ppm	43	258±	70	124±	51	60±	17	258±	128	123±	51	4±	3	94±	34
80 ppm	28	255±	44	135±	36	61±	21	240±	91	159±	47	7±	2*	103±	24**

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

Test of Dunnett

(HCL074)

BAIS3

STUDY NO. : 0284
 ANIMAL : RAT F344/DuCrj
 MEASURE. TIME : 1
 SEX : FEMALE

REPORT TYPE : A1

BIOCHEMISTRY (SUMMARY)
 ALL ANIMALS (105W)

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	38	16.9±	8.1	0.5±	0.1	141±	2	3.9±	0.4	106±	3	10.4±	0.2	3.7±	1.0
20 ppm	39	15.8±	3.0	0.5±	0.1	140±	1**	3.9±	0.4	104±	2**	10.6±	0.4*	3.9±	0.9
40 ppm	43	20.5±	4.4**	0.6±	0.1	139±	2**	4.0±	0.3	104±	2**	10.7±	0.4**	4.5±	0.7**
80 ppm	28	23.7±	5.1**	0.5±	0.1	140±	2	4.1±	0.3	105±	2*	10.7±	0.4**	5.0±	0.7**

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

Test of Dunnett

(HCL074)

BAIS3

APPENDIX H 1

URINALYSIS: SUMMARY, RAT: MALE

(2-YEAR STUDY)

STUDY NO. : 0284
 ANIMAL : RAT F344/DuCrj
 MEASURE. TIME : 2
 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+	3+	
Control	37	0	2	4	8	11	12	0		0	0	0	0	11	26		37	0	0	0	0	0		37	0	0	0	0	0		37	0	0	0	
20 ppm	39	0	2	1	8	6	21	1		0	0	0	0	8	31		39	0	0	0	0	0		36	3	0	0	0	0		39	0	0	0	
40 ppm	44	0	2	5	4	8	21	4		0	0	0	0	17	27		44	0	0	0	0	0		41	3	0	0	0	0		44	0	0	0	
80 ppm	39	0	1	8	8	11	10	1		0	0	0	3	27	9	**	39	0	0	0	0	0		35	4	0	0	0	0	*	39	0	0	0	

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

Test of CHI SQUARE

(HCL101)

BAIS3

STUDY NO. : 0284
ANIMAL : RAT F344/DuCrj
MEASURE. TIME : 2
SEX : MALE

URINALYSIS

REPORT TYPE : A1

PAGE : 2

Group Name	NO. of Animals	Occult blood					Urobilinogen						
		-	±	+	2+	3+	CHI	±	+	2+	3+	4+	CHI
Control	37	36	1	0	0	0		37	0	0	0	0	
20 ppm	39	36	1	0	2	0		39	0	0	0	0	
40 ppm	44	32	1	0	5	6	*	44	0	0	0	0	
80 ppm	39	7	3	1	6	22	**	39	0	0	0	0	

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

Test of CHI SQUARE

(HCL101)

BAIS3

APPENDIX H 2

URINALYSIS: SUMMARY, RAT: FEMALE

(2-YEAR STUDY)

STUDY NO. : 0284
 ANIMAL : RAT F344/DuCrj
 MEASURE, TIME : 2
 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+	3+	
Control	40	0	1	6	8	19	6	0		0	0	1	8	15	16		40	0	0	0	0	0		38	2	0	0	0	0		40	0	0	0	
20 ppm	39	0	1	8	15	11	3	1		0	0	0	2	9	28	*	39	0	0	0	0	0		38	1	0	0	0	0		39	0	0	0	
40 ppm	45	0	10	11	7	10	7	0	*	0	0	0	2	21	22		45	0	0	0	0	0		45	0	0	0	0	0		45	0	0	0	
80 ppm	29	0	9	8	6	4	2	0	**	0	0	0	2	15	12		29	0	0	0	0	0		28	1	0	0	0	0		29	0	0	0	

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

Test of CHI SQUARE

(HCL101)

BAIS3

STUDY NO. : 0284
ANIMAL : RAT F344/DuCrj
MEASURE. TIME : 2
SEX : FEMALE

URINALYSIS

REPORT TYPE : A1

PAGE : 4

Group Name	NO. of Animals	Occult blood					Urobilinogen						
		-	±	+	2+	3+	CHI	±	+	2+	3+	4+	CHI
Control	40	39	1	0	0	0		40	0	0	0	0	
20 ppm	39	32	2	2	1	2		39	0	0	0	0	
40 ppm	45	8	1	2	6	28	**	45	0	0	0	0	
80 ppm	29	1	0	0	2	26	**	29	0	0	0	0	

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

Test of CHI SQUARE

(HCL101)

BAIS3

APPENDIX I 1

GROSS FINDINGS: SUMMARY, RAT: MALE: ALL ANIMALS

(2-YEAR STUDY)

STUDY NO. : 0284
 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	20 ppm	40 ppm	80 ppm
			50 (%)	50 (%)	50 (%)	50 (%)
skin/app	nodule		7 (14)	4 (8)	0 (0)	3 (6)
	scab		1 (2)	0 (0)	0 (0)	0 (0)
subcutis	jaundice		2 (4)	0 (0)	0 (0)	0 (0)
	mass		8 (16)	10 (20)	8 (16)	7 (14)
nasal cavit	nodule		1 (2)	0 (0)	0 (0)	0 (0)
lung	white zone		1 (2)	0 (0)	0 (0)	0 (0)
	red zone		0 (0)	0 (0)	0 (0)	2 (4)
	brown zone		0 (0)	0 (0)	1 (2)	0 (0)
	edema		2 (4)	0 (0)	0 (0)	0 (0)
	nodule		2 (4)	3 (6)	0 (0)	2 (4)
	voluminus		0 (0)	1 (2)	0 (0)	0 (0)
lymph node	enlarged		1 (2)	1 (2)	1 (2)	1 (2)
spleen	enlarged		5 (10)	2 (4)	1 (2)	2 (4)
	white zone		1 (2)	1 (2)	0 (0)	0 (0)
	brown zone		0 (0)	1 (2)	0 (0)	0 (0)
	nodule		0 (0)	0 (0)	0 (0)	1 (2)
heart	white zone		2 (4)	0 (0)	0 (0)	0 (0)
	nodule		0 (0)	0 (0)	0 (0)	1 (2)
forestomach	ulcer		1 (2)	1 (2)	1 (2)	1 (2)
gl stomach	ulcer		3 (6)	0 (0)	0 (0)	0 (0)
	thick		0 (0)	1 (2)	0 (0)	0 (0)
stomach	ulcer		1 (2)	0 (0)	0 (0)	0 (0)

STUDY NO. : 0284
 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		20 ppm		40 ppm		80 ppm	
			50	(%)	50	(%)	50	(%)	50	(%)
small intes	nodule		1	(2)	0	(0)	0	(0)	0	(0)
cecum	diverticula		0	(0)	0	(0)	1	(2)	2	(4)
liver	enlarged		0	(0)	0	(0)	1	(2)	1	(2)
	white patch/zone		0	(0)	0	(0)	0	(0)	1	(2)
	white zone		0	(0)	0	(0)	0	(0)	1	(2)
	nodule		1	(2)	0	(0)	3	(6)	4	(8)
	rough		2	(4)	0	(0)	0	(0)	1	(2)
	herniation		1	(2)	1	(2)	2	(4)	2	(4)
	pancreas		0	(0)	1	(2)	0	(0)	2	(4)
kidney	cyst		1	(2)	0	(0)	0	(0)	0	(0)
	deformed		1	(2)	4	(8)	23	(46)	33	(66)
	granular		25	(50)	16	(32)	11	(22)	0	(0)
urin bladd	urine:marked retention		0	(0)	2	(4)	0	(0)	1	(2)
pituitary	enlarged		11	(22)	5	(10)	3	(6)	0	(0)
	red zone		4	(8)	2	(4)	5	(10)	6	(12)
	nodule		3	(6)	2	(4)	6	(12)	0	(0)
thyroid	enlarged		2	(4)	3	(6)	4	(8)	0	(0)
	nodule		1	(2)	0	(0)	0	(0)	0	(0)
adrenal	enlarged		0	(0)	3	(6)	2	(4)	1	(2)
testis	atrophic		1	(2)	2	(4)	0	(0)	0	(0)
	nodule		32	(64)	36	(72)	42	(84)	36	(72)
prep/cli gl	nodule		0	(0)	0	(0)	0	(0)	1	(2)

STUDY NO. : 0284
 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		20 ppm		40 ppm		80 ppm	
			50	(%)	50	(%)	50	(%)	50	(%)
brain	red zone		0	(0)	1	(2)	0	(0)	0	(0)
spinal cord	red zone		1	(2)	0	(0)	0	(0)	0	(0)
eye	turbid		1	(2)	0	(0)	0	(0)	0	(0)
	white		1	(2)	2	(4)	5	(10)	0	(0)
Zymbal gl	nodule		0	(0)	0	(0)	0	(0)	1	(2)
vertebra	nodule		0	(0)	0	(0)	0	(0)	1	(2)
mediastinum	mass		0	(0)	0	(0)	0	(0)	1	(2)
peritoneum	nodule		1	(2)	1	(2)	0	(0)	2	(4)
retroperit	mass		0	(0)	0	(0)	0	(0)	1	(2)
abdominal c	mass		2	(4)	0	(0)	1	(2)	0	(0)
	ascites		2	(4)	2	(4)	1	(2)	1	(2)
thoracic ca	pleural fluid		3	(6)	1	(2)	1	(2)	2	(4)
other	ear:nodule		0	(0)	1	(2)	1	(2)	0	(0)
whole body	anemic		2	(4)	0	(0)	0	(0)	0	(0)

(HPT080)

BAIS3

APPENDIX 12

GROSS FINDINGS: SUMMARY, RAT: FEMALE: ALL ANIMALS

(2-YEAR STUDY)

STUDY NO. : 0284
 ANIMAL : RAT F344/DuCrj
 REPORT TYPE : A1
 SEX : FEMALE

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

PAGE : 4

Organ	Findings	Group Name NO. of Animals	Control	20 ppm	40 ppm	80 ppm
			50 (%)	50 (%)	50 (%)	50 (%)
skin/app	nodule		4 (8)	1 (2)	0 (0)	0 (0)
	erosion		1 (2)	0 (0)	0 (0)	0 (0)
	scab		0 (0)	1 (2)	1 (2)	2 (4)
subcutis	dry		0 (0)	0 (0)	0 (0)	1 (2)
	mass		11 (22)	10 (20)	2 (4)	4 (8)
lung	red		1 (2)	0 (0)	0 (0)	1 (2)
	nodule		0 (0)	0 (0)	0 (0)	1 (2)
lymph node	enlarged		1 (2)	0 (0)	1 (2)	1 (2)
thymus	enlarged		0 (0)	0 (0)	0 (0)	1 (2)
spleen	enlarged		4 (8)	2 (4)	2 (4)	1 (2)
	nodule		0 (0)	2 (4)	0 (0)	0 (0)
	deformed		1 (2)	0 (0)	0 (0)	0 (0)
stomach	nodule		0 (0)	0 (0)	1 (2)	0 (0)
	ulcer		0 (0)	1 (2)	0 (0)	0 (0)
liver	yellow patch/zone		1 (2)	0 (0)	0 (0)	0 (0)
	white zone		0 (0)	0 (0)	0 (0)	1 (2)
	red zone		1 (2)	0 (0)	0 (0)	0 (0)
	nodule		0 (0)	1 (2)	5 (10)	6 (12)
	cyst		0 (0)	0 (0)	0 (0)	1 (2)
	rough		2 (4)	1 (2)	0 (0)	1 (2)
	herniation		1 (2)	4 (8)	9 (18)	2 (4)
	accentuation of lobular structure		0 (0)	0 (0)	0 (0)	1 (2)

STUDY NO. : 0284
 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	20 ppm	40 ppm	80 ppm
			50 (%)	50 (%)	50 (%)	50 (%)
pancreas	nodule		0 (0)	1 (2)	0 (0)	0 (0)
kidney	atrophic		0 (0)	0 (0)	1 (2)	1 (2)
	cyst		0 (0)	0 (0)	1 (2)	0 (0)
	deformed		1 (2)	7 (14)	39 (78)	25 (50)
	granular		1 (2)	3 (6)	2 (4)	0 (0)
urin bladd	urine:marked retention		0 (0)	0 (0)	1 (2)	0 (0)
	urine:red		1 (2)	0 (0)	0 (0)	0 (0)
pituitary	enlarged		8 (16)	8 (16)	5 (10)	3 (6)
	red zone		8 (16)	11 (22)	11 (22)	8 (16)
	nodule		2 (4)	4 (8)	2 (4)	2 (4)
thyroid	enlarged		2 (4)	2 (4)	1 (2)	0 (0)
adrenal	enlarged		0 (0)	1 (2)	1 (2)	0 (0)
ovary	enlarged		0 (0)	0 (0)	1 (2)	0 (0)
	cyst		1 (2)	2 (4)	0 (0)	1 (2)
uterus	nodule		2 (4)	5 (10)	5 (10)	1 (2)
vagina	nodule		0 (0)	0 (0)	0 (0)	1 (2)
prep/cli gl	nodule		0 (0)	0 (0)	1 (2)	0 (0)
spinal cord	red zone		1 (2)	0 (0)	0 (0)	0 (0)
eye	turbid		1 (2)	0 (0)	0 (0)	0 (0)
	white		1 (2)	1 (2)	2 (4)	0 (0)
Zymbal gl	nodule		1 (2)	0 (0)	0 (0)	0 (0)
mediastinum	mass		0 (0)	1 (2)	0 (0)	0 (0)

STUDY NO. : 0284
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	20 ppm	40 ppm	80 ppm
			50 (%)	50 (%)	50 (%)	50 (%)
retroperit	mass		1 (2)	0 (0)	0 (0)	0 (0)
abdominal c	hemorrhage		2 (4)	1 (2)	1 (2)	0 (0)
	ascites		0 (0)	1 (2)	0 (0)	1 (2)
thoracic ca	pleural fluid		0 (0)	0 (0)	1 (2)	2 (4)

(HPT080)

BAIS3

APPENDIX 13

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

(2-YEAR STUDY)

STUDY NO. : 0284
 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 13 (%)	20 ppm 11 (%)	40 ppm 6 (%)	80 ppm 11 (%)
skin/app	nodule		1 (8)	2 (18)	0 (0)	0 (0)
subcutis	jaundice		2 (15)	0 (0)	0 (0)	0 (0)
	mass		2 (15)	3 (27)	2 (33)	1 (9)
lung	red zone		0 (0)	0 (0)	0 (0)	2 (18)
	edema		2 (15)	0 (0)	0 (0)	0 (0)
	nodule		0 (0)	1 (9)	0 (0)	2 (18)
	voluminous		0 (0)	1 (9)	0 (0)	0 (0)
lymph node	enlarged		0 (0)	1 (9)	1 (17)	1 (9)
spleen	enlarged		3 (23)	1 (9)	1 (17)	2 (18)
	white zone		0 (0)	1 (9)	0 (0)	0 (0)
heart	white zone		2 (15)	0 (0)	0 (0)	0 (0)
	nodule		0 (0)	0 (0)	0 (0)	1 (9)
forestomach	ulcer		1 (8)	1 (9)	0 (0)	0 (0)
gl stomach	ulcer		1 (8)	0 (0)	0 (0)	0 (0)
	thick		0 (0)	1 (9)	0 (0)	0 (0)
stomach	ulcer		1 (8)	0 (0)	0 (0)	0 (0)
small intes	nodule		1 (8)	0 (0)	0 (0)	0 (0)
liver	enlarged		0 (0)	0 (0)	1 (17)	1 (9)
	white patch/zone		0 (0)	0 (0)	0 (0)	1 (9)
	white zone		0 (0)	0 (0)	0 (0)	1 (9)
	nodule		0 (0)	0 (0)	1 (17)	0 (0)
	rough		1 (8)	0 (0)	0 (0)	1 (9)

STUDY NO. : 0284
 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 13 (%)	20 ppm 11 (%)	40 ppm 6 (%)	80 ppm 11 (%)
liver	herniation		0 (0)	0 (0)	1 (17)	0 (0)
pancreas	nodule		0 (0)	1 (9)	0 (0)	2 (18)
kidney	cyst		1 (8)	0 (0)	0 (0)	0 (0)
	granular		4 (31)	2 (18)	1 (17)	0 (0)
urin bladd	urine:marked retention		0 (0)	2 (18)	0 (0)	1 (9)
pituitary	enlarged		6 (46)	0 (0)	2 (33)	0 (0)
	nodule		0 (0)	0 (0)	1 (17)	0 (0)
thyroid	enlarged		0 (0)	1 (9)	0 (0)	0 (0)
adrenal	enlarged		0 (0)	0 (0)	1 (17)	0 (0)
testis	atrophic		1 (8)	1 (9)	0 (0)	0 (0)
	nodule		4 (31)	4 (36)	5 (83)	5 (45)
brain	red zone		0 (0)	1 (9)	0 (0)	0 (0)
spinal cord	red zone		1 (8)	0 (0)	0 (0)	0 (0)
eye	turbid		1 (8)	0 (0)	0 (0)	0 (0)
	white		0 (0)	0 (0)	1 (17)	0 (0)
Zymbal gl	nodule		0 (0)	0 (0)	0 (0)	1 (9)
vertebra	nodule		0 (0)	0 (0)	0 (0)	1 (9)
mediastinum	mass		0 (0)	0 (0)	0 (0)	1 (9)
peritoneum	nodule		1 (8)	1 (9)	0 (0)	1 (9)
retroperit	mass		0 (0)	0 (0)	0 (0)	1 (9)
abdominal c	ascites		2 (15)	2 (18)	1 (17)	1 (9)
thoracic ca	pleural fluid		3 (23)	0 (0)	1 (17)	2 (18)

STUDY NO. : 0284
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	20 ppm	40 ppm	80 ppm
		NO. of Animals	13 (%)	11 (%)	6 (%)	11 (%)
whole body	anemic		2 (15)	0 (0)	0 (0)	0 (0)

(HPT080)

BAIS3

APPENDIX 14

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

(2-YEAR STUDY)

STUDY NO. : 0284
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 10 (%)	20 ppm 11 (%)	40 ppm 6 (%)	80 ppm 21 (%)
skin/app	erosion		1 (10)	0 (0)	0 (0)	0 (0)
subcutis	dry		0 (0)	0 (0)	0 (0)	1 (5)
	mass		4 (40)	1 (9)	1 (17)	2 (10)
lung	red		1 (10)	0 (0)	0 (0)	1 (5)
	nodule		0 (0)	0 (0)	0 (0)	1 (5)
lymph node	enlarged		1 (10)	0 (0)	1 (17)	1 (5)
thymus	enlarged		0 (0)	0 (0)	0 (0)	1 (5)
spleen	enlarged		3 (30)	2 (18)	1 (17)	1 (5)
stomach	ulcer		0 (0)	1 (9)	0 (0)	0 (0)
liver	yellow patch/zone		1 (10)	0 (0)	0 (0)	0 (0)
	red zone		1 (10)	0 (0)	0 (0)	0 (0)
	nodule		0 (0)	1 (9)	2 (33)	3 (14)
	cyst		0 (0)	0 (0)	0 (0)	1 (5)
	rough		0 (0)	0 (0)	0 (0)	1 (5)
	herniation		0 (0)	0 (0)	1 (17)	1 (5)
pancreas	nodule		0 (0)	1 (9)	0 (0)	0 (0)
kidney	atrophic		0 (0)	0 (0)	0 (0)	1 (5)
urine bladder	urine:marked retention		0 (0)	0 (0)	1 (17)	0 (0)
	urine:red		1 (10)	0 (0)	0 (0)	0 (0)
pituitary	enlarged		4 (40)	4 (36)	2 (33)	0 (0)
	red zone		0 (0)	1 (9)	0 (0)	0 (0)
	nodule		1 (10)	1 (9)	0 (0)	1 (5)

STUDY NO. : 0284
 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 10 (%)	20 ppm 11 (%)	40 ppm 6 (%)	80 ppm 21 (%)
ovary	enlarged		0 (0)	0 (0)	1 (17)	0 (0)
	cyst		0 (0)	1 (9)	0 (0)	0 (0)
uterus	nodule		1 (10)	1 (9)	1 (17)	0 (0)
prep/cli gl	nodule		0 (0)	0 (0)	1 (17)	0 (0)
spinal cord	red zone		1 (10)	0 (0)	0 (0)	0 (0)
eye	turbid		1 (10)	0 (0)	0 (0)	0 (0)
Zymbal gl	nodule		1 (10)	0 (0)	0 (0)	0 (0)
mediastinum	mass		0 (0)	1 (9)	0 (0)	0 (0)
retroperit	mass		1 (10)	0 (0)	0 (0)	0 (0)
abdominal c	hemorrhage		2 (20)	1 (9)	1 (17)	0 (0)
	ascites		0 (0)	1 (9)	0 (0)	1 (5)
thoracic ca	pleural fluid		0 (0)	0 (0)	1 (17)	2 (10)

APPENDIX 15

GROSS FINDINGS: SUMMARY, RAT : MALE : SACRIFICED ANIMALS

(2-YEAR STUDY)

STUDY NO. : 0284
 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 37 (%)	20 ppm 39 (%)	40 ppm 44 (%)	80 ppm 39 (%)
skin/app	nodule		6 (16)	2 (5)	0 (0)	3 (8)
	scab		1 (3)	0 (0)	0 (0)	0 (0)
subcutis	mass		6 (16)	7 (18)	6 (14)	6 (15)
nasal cavit	nodule		1 (3)	0 (0)	0 (0)	0 (0)
lung	white zone		1 (3)	0 (0)	0 (0)	0 (0)
	brown zone		0 (0)	0 (0)	1 (2)	0 (0)
	nodule		2 (5)	2 (5)	0 (0)	0 (0)
lymph node	enlarged		1 (3)	0 (0)	0 (0)	0 (0)
spleen	enlarged		2 (5)	1 (3)	0 (0)	0 (0)
	white zone		1 (3)	0 (0)	0 (0)	0 (0)
	brown zone		0 (0)	1 (3)	0 (0)	0 (0)
	nodule		0 (0)	0 (0)	0 (0)	1 (3)
forestomach	ulcer		0 (0)	0 (0)	1 (2)	1 (3)
gl stomach	ulcer		2 (5)	0 (0)	0 (0)	0 (0)
cecum	diverticula		0 (0)	0 (0)	1 (2)	2 (5)
liver	nodule		1 (3)	0 (0)	2 (5)	4 (10)
	rough		1 (3)	0 (0)	0 (0)	0 (0)
	herniation		1 (3)	1 (3)	1 (2)	2 (5)
kidney	deformed		1 (3)	4 (10)	23 (52)	33 (85)
	granular		21 (57)	14 (36)	10 (23)	0 (0)
pituitary	enlarged		5 (14)	5 (13)	1 (2)	0 (0)
	red zone		4 (11)	2 (5)	5 (11)	6 (15)

STUDY NO. : 0284
 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	20 ppm	40 ppm	80 ppm
			37 (%)	39 (%)	44 (%)	39 (%)
pituitary	nodule		3 (8)	2 (5)	5 (11)	0 (0)
thyroid	enlarged		2 (5)	2 (5)	4 (9)	0 (0)
	nodule		1 (3)	0 (0)	0 (0)	0 (0)
adrenal	enlarged		0 (0)	3 (8)	1 (2)	1 (3)
testis	atrophic		0 (0)	1 (3)	0 (0)	0 (0)
	nodule		28 (76)	32 (82)	37 (84)	31 (79)
prep/cli gl	nodule		0 (0)	0 (0)	0 (0)	1 (3)
eye	white		1 (3)	2 (5)	4 (9)	0 (0)
peritoneum	nodule		0 (0)	0 (0)	0 (0)	1 (3)
abdominal c	mass		2 (5)	0 (0)	1 (2)	0 (0)
thoracic ca	pleural fluid		0 (0)	1 (3)	0 (0)	0 (0)
other	ear:nodule		0 (0)	1 (3)	1 (2)	0 (0)

APPENDIX 16

GROSS FINDINGS: SUMMARY, RAT : FEMALE : SACRIFICED ANIMALS

(2-YEAR STUDY)

STUDY NO. : 0284
 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	20 ppm	40 ppm	80 ppm
			40 (%)	39 (%)	44 (%)	29 (%)
skin/app	nodule		4 (10)	1 (3)	0 (0)	0 (0)
	scab		0 (0)	1 (3)	1 (2)	2 (7)
subcutis	mass		7 (18)	9 (23)	1 (2)	2 (7)
spleen	enlarged		1 (3)	0 (0)	1 (2)	0 (0)
	nodule		0 (0)	2 (5)	0 (0)	0 (0)
	deformed		1 (3)	0 (0)	0 (0)	0 (0)
gl stomach	nodule		0 (0)	0 (0)	1 (2)	0 (0)
liver	white zone		0 (0)	0 (0)	0 (0)	1 (3)
	nodule		0 (0)	0 (0)	3 (7)	3 (10)
	rough		2 (5)	1 (3)	0 (0)	0 (0)
	herniation		1 (3)	4 (10)	8 (18)	1 (3)
	accentuation of lobular structure		0 (0)	0 (0)	0 (0)	1 (3)
kidney	atrophic		0 (0)	0 (0)	1 (2)	0 (0)
	cyst		0 (0)	0 (0)	1 (2)	0 (0)
	deformed		1 (3)	7 (18)	39 (89)	25 (86)
	granular		1 (3)	3 (8)	2 (5)	0 (0)
pituitary	enlarged		4 (10)	4 (10)	3 (7)	3 (10)
	red zone		8 (20)	10 (26)	11 (25)	8 (28)
	nodule		1 (3)	3 (8)	2 (5)	1 (3)
thyroid	enlarged		2 (5)	2 (5)	1 (2)	0 (0)
adrenal	enlarged		0 (0)	1 (3)	1 (2)	0 (0)
ovary	cyst		1 (3)	1 (3)	0 (0)	1 (3)

STUDY NO. : 0284
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	20 ppm	40 ppm	80 ppm
			40 (%)	39 (%)	44 (%)	29 (%)
uterus	nodule		1 (3)	4 (10)	4 (9)	1 (3)
vagina	nodule		0 (0)	0 (0)	0 (0)	1 (3)
eye	white		1 (3)	1 (3)	2 (5)	0 (0)

(HPT080)

BAIS 3

APPENDIX J 1

ORGAN WEIGHT , ABSOLUTE: SUMMARY, RAT: MALE

(2-YEAR STUDY)

STUDY NO. : 0284
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	37	440± 58	0.084± 0.014	3.996± 1.648	1.276± 0.088	1.530± 0.201	3.127± 0.904
20 ppm	39	425± 57	0.107± 0.116	4.441± 1.878	1.198± 0.105**	1.474± 0.122	2.929± 0.320
40 ppm	44	376± 25**	0.101± 0.180**	4.033± 1.400	1.098± 0.070**	1.357± 0.075**	2.900± 0.287
80 ppm	39	311± 24**	0.077± 0.083**	4.230± 1.596	1.020± 0.087**	1.232± 0.084**	2.801± 0.149

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

Test of Dunnett

(HCL040)

BAIS 3

STUDY NO. : 0284
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	37	1.182±	0.452	12.708±	1.835	2.016±	0.068
20 ppm	39	1.223±	0.609	11.831±	1.671	2.015±	0.041
40 ppm	44	0.890±	0.228**	10.397±	1.116**	1.996±	0.051
80 ppm	39	0.848±	0.723**	9.319±	0.958**	1.978±	0.045*
Significant difference ; * : $P \leq 0.05$ ** : $P \leq 0.01$ Test of Dunnett							
(HCL040)							

BAIS 3

APPENDIX J 2

ORGAN WEIGHT , ABSOLUTE: SUMMARY, RAT: FEMALE

(2-YEAR STUDY)

STUDY NO. : 0284
 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	40	305± 53	0.072± 0.013	0.141± 0.052	0.917± 0.092	1.084± 0.124	1.917± 0.139
20 ppm	39	269± 33	0.086± 0.109	0.141± 0.054	0.873± 0.088	1.038± 0.104	2.153± 0.172**
40 ppm	44	205± 22**	0.071± 0.062**	0.128± 0.018	0.781± 0.072**	0.940± 0.088**	2.202± 0.300**
80 ppm	29	164± 13**	0.059± 0.008**	0.126± 0.028	0.732± 0.104**	0.864± 0.124**	2.076± 0.221**

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

Test of Dunnett

(HCL040)

BAIS 3

STUDY NO. : 0284
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	40	0.816±	0.980	7.118±	0.860	1.843±	0.069
20 ppm	39	0.665±	0.399	7.550±	1.635	1.826±	0.047
40 ppm	44	0.513±	0.354**	6.154±	0.877**	1.821±	0.046*
80 ppm	29	0.435±	0.128**	6.285±	0.804**	1.798±	0.066**

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

(HCL040)

BAIS3

APPENDIX K 1

ORGAN WEIGHT, RELATIVE: SUMMARY, RAT: MALE

(2-YEAR STUDY)

STUDY NO. : 0284
 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	37	440± 58	0.020± 0.005	0.902± 0.347	0.296± 0.051	0.355± 0.079	0.749± 0.399
20 ppm	39	425± 57	0.027± 0.039	1.054± 0.454	0.286± 0.040	0.351± 0.042	0.700± 0.110
40 ppm	44	376± 25**	0.027± 0.045	1.077± 0.382	0.293± 0.022	0.363± 0.028*	0.778± 0.117**
80 ppm	39	311± 24**	0.025± 0.026	1.367± 0.529**	0.329± 0.033**	0.398± 0.034**	0.905± 0.070**

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

(HCL042)

BAIS 3

STUDY NO. : 0284
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	37	0.269± 0.096	2.917± 0.437	0.466± 0.066
20 ppm	39	0.291± 0.156	2.811± 0.406	0.482± 0.061
40 ppm	44	0.238± 0.062	2.791± 0.481	0.534± 0.038**
80 ppm	39	0.274± 0.234	2.998± 0.243	0.639± 0.048**

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

(HCL042)

BAIS3

APPENDIX K 2

ORGAN WEIGHT, RELATIVE: SUMMARY, RAT: FEMALE

(2-YEAR STUDY)

STUDY NO. : 0284
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	40	305± 53	0.024± 0.006	0.047± 0.017	0.308± 0.056	0.367± 0.087	0.648± 0.125
20 ppm	39	269± 33	0.036± 0.067	0.053± 0.019	0.328± 0.050	0.393± 0.081	0.813± 0.158**
40 ppm	44	205± 22**	0.034± 0.029**	0.063± 0.011**	0.385± 0.041**	0.462± 0.039**	1.081± 0.135**
80 ppm	29	164± 13**	0.036± 0.005**	0.077± 0.018**	0.448± 0.061**	0.529± 0.070**	1.273± 0.142**

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

Test of Dunnett

(HCL042)

BAIS3

STUDY NO. : 0284
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	40	0.300± 0.521	2.377± 0.368	0.625± 0.133
20 ppm	39	0.253± 0.160	2.844± 0.738**	0.688± 0.094
40 ppm	44	0.247± 0.144**	3.024± 0.410**	0.900± 0.094**
80 ppm	29	0.266± 0.076**	3.851± 0.489**	1.105± 0.091**

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

Test of Dunnett

(HCL042)

BAIS 3

APPENDIX L 1

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

STUDY NO. : 0284
ANIMAL : RAT F344/DuCrj
REPORT TYPE : A1
SEX : MALE

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

PAGE : 1

Organ	Findings	Group Name	Control				20 ppm				40 ppm				80 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>			
	squamous cell hyperplasia		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)	(2)	(0)	(0)	(0)	
	epidermal cyst		2	0	0	0	0	0	0	0	1	0	0	0	0	0	0	
			(4)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(2)	(0)	(0)	(0)	(0)	(0)	(0)	
[Respiratory system]																		
nasal cavit			<50>				<50>				<50>				<50>			
	thrombus		5	1	0	0	1	0	0	0	2	0	0	0	5	0	0	
			(10)	(2)	(0)	(0)	(2)	(0)	(0)	(0)	(4)	(0)	(0)	(0)	(10)	(0)	(0)	
	inflammatory infiltration		0	0	0	0	0	1	0	0	6	0	0	0 *	0	0	0	
			(0)	(0)	(0)	(0)	(0)	(2)	(0)	(0)	(12)	(0)	(0)	(0)	(0)	(0)	(0)	
	eosinophilic change:olfactory epithelium		33	4	0	0	19	0	0	0 **	24	4	0	0	16	1	0	
			(66)	(8)	(0)	(0)	(38)	(0)	(0)	(0)	(48)	(8)	(0)	(0)	(32)	(2)	(0)	
	inflammation:foreign body		22	0	0	0	14	0	0	0	5	1	0	0 **	5	0	0	
			(44)	(0)	(0)	(0)	(28)	(0)	(0)	(0)	(10)	(2)	(0)	(0)	(10)	(0)	(0)	
	respiratory metaplasia:olfactory epithelium		0	0	0	0	1	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)	

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. : 0284
 ANIMAL : RAT F344/DuCrj
 REPORT TYPE : A1
 SEX : MALE

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

PAGE : 2

Organ	Findings	Group Name No. of Animals on Study Grade				Control 50				20 ppm 50				40 ppm 50				80 ppm 50			
		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>			
	ulcer:respiratory epithelium	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)
lung		<50>				<50>				<50>				<50>				<50>			
	congestion	6	0	0	0	3	1	0	0	1	0	0	0	1	0	0	0	1	0	0	0
		(12)	(0)	(0)	(0)	(6)	(2)	(0)	(0)	(2)	(0)	(0)	(0)	(2)	(0)	(0)	(0)	(2)	(0)	(0)	(0)
	hemorrhage	2	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0
		(4)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(6)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	inflammation	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)
	osseous metaplasia	1	0	0	0	0	0	0	0	2	0	0	0	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)
	interstitial pneumonia	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)	(0)	(0)	(0)	(0)
	bronchiolar-alveolar cell hyperplasia	2	0	0	0	5	0	0	0	0	0	1	0	0	0	2	0	0	2	0	0
		(4)	(0)	(0)	(0)	(10)	(0)	(0)	(0)	(0)	(0)	(2)	(0)	(0)	(0)	(4)	(0)	(0)	(4)	(0)	(0)
	hyaline membrane	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)	(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. : 0284
ANIMAL : RAT F344/DuCrj
REPORT TYPE : A1
SEX : MALE

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

PAGE : 3

Organ_____	Findings_____	Group Name	Control				20 ppm				40 ppm				80 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
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
[Hematopoietic system]																		
bone marrow			<50>				<50>				<50>				<50>			
	necrosis:focal		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)
	granulation		1	0	0	0	0	0	1	0	2	0	0	0	4	0	0	0
			(2)	(0)	(0)	(0)	(0)	(0)	(2)	(0)	(4)	(0)	(0)	(0)	(8)	(0)	(0)	(0)
	increased hematopoiesis		1	0	0	0	5	1	0	0	0	2	0	3	1	0	0	
			(2)	(0)	(0)	(0)	(10)	(2)	(0)	(0)	(0)	(4)	(0)	(6)	(2)	(0)	(0)	
	ostitis fibrosa		0	0	0	0	1	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)	
Lymph node			<50>				<50>				<50>				<50>			
	Lymphadenitis		1	0	0	0	3	0	0	0	1	0	0	0	1	0	0	0
			(2)	(0)	(0)	(0)	(6)	(0)	(0)	(0)	(2)	(0)	(0)	(0)	(2)	(0)	(0)	(0)
spleen			<50>				<50>				<50>				<50>			
	atrophy		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)
	deposit of hemosiderin		34	2	0	0	36	5	0	0	43	3	0	0 *	35	7	1	0
			(68)	(4)	(0)	(0)	(72)	(10)	(0)	(0)	(86)	(6)	(0)	(0)	(70)	(14)	(2)	(0)

Grade 1 : Slight 2 : Moderate 3 : Marked 4 : Severe
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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. : 0284
 ANIMAL : RAT F344/DuCrj
 REPORT TYPE : A1
 SEX : MALE

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

PAGE : 4

Organ_____	Findings_____	Group Name No. of Animals on Study Grade	Control 50				20 ppm 50				40 ppm 50				80 ppm 50			
			1 (%)	2 (%)	3 (%)	4 (%)	1 (%)	2 (%)	3 (%)	4 (%)	1 (%)	2 (%)	3 (%)	4 (%)	1 (%)	2 (%)	3 (%)	4 (%)
[Hematopoietic system]																		
spleen			<50>				<50>				<50>				<50>			
	fibrosis		2 (4)	0 (0)	0 (0)	0 (0)	1 (2)	1 (2)	0 (0)	0 (0)	2 (4)	0 (0)	0 (0)	0 (0)	4 (8)	0 (0)	0 (0)	0 (0)
	extramedullary hematopoiesis		24 (48)	2 (4)	3 (6)	0 (0)	30 (60)	3 (6)	5 (10)	0 (0)	38 (76)	2 (4)	1 (2)	0 * (0)	26 (52)	3 (6)	3 (6)	0 (0)
[Circulatory system]																		
heart			<50>				<50>				<50>				<50>			
	thrombus		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)
	mineralization		0 (0)	0 (0)	0 (0)	0 (0)	1 (2)	0 (0)	1 (2)	0 (0)	1 (2)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
	myocardial fibrosis		20 (40)	4 (8)	0 (0)	0 (0)	24 (48)	2 (4)	1 (2)	0 (0)	25 (50)	1 (2)	0 (0)	0 (0)	5 (10)	1 (2)	0 (0)	0 ** (0)
[Digestive system]																		
oral cavity			<50>				<50>				<50>				<50>			
	squamous cell hyperplasia		0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	2 (4)	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. : 0284
 ANIMAL : RAT F344/DuCrj
 REPORT TYPE : A1
 SEX : MALE

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

PAGE : 5

Organ	Findings	Group Name No. of Animals on Study				Control 50				20 ppm 50				40 ppm 50				80 ppm 50			
		Grade				1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
[Digestive system]																					
oral cavity	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)
tooth	inflammation	<50>				7	0	0	0	6	0	0	0	1	0	0	0	1	0	0	0
		(14)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(12)	(0)	(0)	(0)	(2)	(0)	(0)	(0)	(2)	(0)	(0)	(0)
tongue	mineralization	<50>				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)
	perivasculitis	<50>				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)
stomach	basal cell activation	<50>				0	0	0	0	1	0	0	0	0	0	0	0	3	0	0	0
		(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(2)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(6)	(0)	(0)	(0)
	erosion:forestomach	<50>				1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
		(2)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(2)	(0)	(0)	(0)
	ulcer:forestomach	<50>				0	0	3	0	0	0	2	0	0	0	1	0	0	2	0	0
		(0)	(0)	(6)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(4)	(0)	(0)	(0)	(2)	(0)	(0)	(4)	(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. : 0284
 ANIMAL : RAT F344/DuCrj
 REPORT TYPE : A1
 SEX : MALE

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

PAGE : 6

Organ_____	Findings_____	Group Name No. of Animals on Study Grade	Control 50				20 ppm 50				40 ppm 50				80 ppm 50			
			1 (%)	2 (%)	3 (%)	4 (%)	1 (%)	2 (%)	3 (%)	4 (%)	1 (%)	2 (%)	3 (%)	4 (%)	1 (%)	2 (%)	3 (%)	4 (%)
[Digestive system]																		
stomach			<50>				<50>				<50>				<50>			
	hyperplasia:forestomach		4 (8)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	2 (4)	0 (0)	0 (0)	0 (0)	2 (4)	0 (0)	0 (0)	0 (0)
	erosion:glandular stomach		0 (0)	0 (0)	0 (0)	0 (0)	1 (2)	1 (2)	0 (0)	0 (0)	5 (10)	0 (0)	0 (0)	0 (0)	3 (6)	0 (0)	0 (0)	0 (0)
	ulcer:glandular stomach		0 (0)	1 (2)	1 (2)	0 (0)	0 (0)	0 (0)	1 (2)	0 (0)	2 (4)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
	mineralization:glandular stomach		0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	2 (4)	0 (0)	1 (2)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
liver			<50>				<50>				<50>				<50>			
	herniation		1 (2)	0 (0)	0 (0)	0 (0)	1 (2)	0 (0)	0 (0)	0 (0)	1 (2)	0 (0)	0 (0)	0 (0)	2 (4)	0 (0)	0 (0)	0 (0)
	necrosis:central		0 (0)	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)
	fatty change		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)	0 (0)	0 (0)	0 (0)
	fatty change:central		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. : 0284
 ANIMAL : RAT F344/DuCrj
 REPORT TYPE : A1
 SEX : MALE

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

PAGE : 7

Organ_____	Findings_____	Group Name	Control				20 ppm				40 ppm				80 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>			
	granulation		11 (22)	1 (2)	0 (0)	0 (0)	8 (16)	0 (0)	0 (0)	0 (0)	2 (4)	0 (0)	0 (0)	0 (0)	3 (6)	0 (0)	0 (0)	0 (0)
	clear cell focus		2 (4)	1 (2)	0 (0)	0 (0)	3 (6)	0 (0)	0 (0)	0 (0)	2 (4)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
	acidophilic cell focus		6 (12)	1 (2)	0 (0)	0 (0)	8 (16)	4 (8)	0 (0)	0 (0)	7 (14)	13 (26)	0 (0)	0 (0)	10 (20)	26 (52)	0 (0)	0 (0)
	basophilic cell focus		13 (26)	4 (8)	0 (0)	0 (0)	10 (20)	5 (10)	0 (0)	0 (0)	13 (26)	3 (6)	0 (0)	0 (0)	18 (36)	2 (4)	0 (0)	0 (0)
	vacuolated 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)	0 (0)	0 (0)	0 (0)	0 (0)
	mixed cell focus		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)	0 (0)	0 (0)	0 (0)
	spongiosis hepatitis		0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1 (2)	0 (0)	0 (0)	0 (0)	1 (2)	0 (0)	0 (0)	0 (0)
bile duct hyperplasia		42 (84)	2 (4)	0 (0)	0 (0)	42 (84)	2 (4)	0 (0)	0 (0)	42 (84)	3 (6)	0 (0)	0 (0)	34 (68)	0 (0)	0 (0)	0 (0)	

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

STUDY NO. : 0284
ANIMAL : RAT F344/DuCrj
REPORT TYPE : A1
SEX : MALE

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

PAGE : 8

Organ_____	Findings_____	Group Name	Control				20 ppm				40 ppm				80 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	biliary cyst		<50>				<50>				<50>				<50>			
		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)	(0)	(0)	(0)	(0)	
pancreas	atrophy		<50>				<50>				<50>				<50>			
		8	1	0	0	5	2	0	0	4	1	0	0	4	1	0	0	
			(16)	(2)	(0)	(0)	(10)	(4)	(0)	(0)	(8)	(2)	(0)	(0)	(8)	(2)	(0)	(0)
	periarteritis nodosa		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)	
	hyperplasia:acinar 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)	(2)	(0)	(0)	(0)	
[Urinary system]																		
kidney	hyperplasia:tubular epithelial cell		<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)	(2)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	
	infarct		0	0	0	0	1	0	0	0	5	0	0	0	11	0	0	
			(0)	(0)	(0)	(0)	(2)	(0)	(0)	(0)	(10)	(0)	(0)	(0)	(22)	(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. : 0284
ANIMAL : RAT F344/DuCrj
REPORT TYPE : A1
SEX : MALE

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

PAGE : 9

Organ	Findings	Group Name	Control				20 ppm				40 ppm				80 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
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
[Urinary system]																		
kidney																		
	basophilic change		<50>				<50>				<50>				<50>			
			0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(2)	(2)	(2)	(0)
	chronic nephropathy		7	8	25	8	3	13	27	5	8	19	22	1 *	24	19	4	0 **
			(14)	(16)	(50)	(16)	(6)	(26)	(54)	(10)	(16)	(38)	(44)	(2)	(48)	(38)	(8)	(0)
	papillary necrosis		0	0	0	0	0	0	0	0	1	0	0	0	10	9	1	0 **
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(2)	(0)	(0)	(0)	(20)	(18)	(2)	(0)
	mineralization:papilla		0	0	0	0	6	0	0	0 *	8	0	0	0 **	28	1	0	0 **
			(0)	(0)	(0)	(0)	(12)	(0)	(0)	(0)	(16)	(0)	(0)	(0)	(56)	(2)	(0)	(0)
	urothelial hyperplasia:pelvis		6	0	0	0	15	1	0	0 *	27	0	0	0 **	28	0	0	0 **
			(12)	(0)	(0)	(0)	(30)	(2)	(0)	(0)	(54)	(0)	(0)	(0)	(56)	(0)	(0)	(0)
	eosinophilic droplet:proximal tubule		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)
urin bladd																		
	dilatation		<50>				<50>				<50>				<50>			
			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)	(0)
	hyperplasia		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)	(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. : 0284
 ANIMAL : RAT F344/DuCrj
 REPORT TYPE : A1
 SEX : MALE

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

PAGE : 10

		Group Name No. of Animals on Study Grade	Control 50				20 ppm 50				40 ppm 50				80 ppm 50				
Organ	Findings		1 (%)	2 (%)	3 (%)	4 (%)	1 (%)	2 (%)	3 (%)	4 (%)	1 (%)	2 (%)	3 (%)	4 (%)	1 (%)	2 (%)	3 (%)	4 (%)	
[Endocrine system]																			
pituitary			<50>				<50>				<50>				<50>				
	hyperplasia		7 (14)	1 (2)	0 (0)	0 (0)	4 (8)	0 (0)	0 (0)	0 (0)	9 (18)	3 (6)	0 (0)	0 (0)	5 (10)	0 (0)	0 (0)	0 (0)	0 (0)
	Rathke pouch		1 (2)	0 (0)	0 (0)	0 (0)	1 (2)	0 (0)	0 (0)	0 (0)	3 (6)	0 (0)	0 (0)	0 (0)	7 (14)	0 (0)	0 (0)	0 (0)	0 (0)
thyroid			<50>				<50>				<50>				<50>				
	ultimibranhial body remanet		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)	0 (0)
	follicular hyperplasia		1 (2)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1 (2)	0 (0)	0 (0)	0 (0)	5 (10)	0 (0)	0 (0)	0 (0)	0 (0)
	C-cell hyperplasia		2 (4)	0 (0)	0 (0)	1 (2)	6 (12)	0 (0)	0 (0)	0 (0)	2 (4)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
parathyroid			<50>				<50>				<50>				<50>				
	hyperplasia		0 (0)	0 (0)	0 (0)	0 (0)	2 (4)	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			<50>				<50>				<50>				<50>				
	cyst		0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	2 (4)	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 Squaro

STUDY NO. : 0284
ANIMAL : RAT F344/DuCrj
REPORT TYPE : A1
SEX : MALE

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

PAGE : 11

Organ	Findings	Group Name	Control				20 ppm				40 ppm				80 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
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
[Endocrine system]																		
adrenal			<50>				<50>				<50>				<50>			
	hyperplasia:medulla		4	1	0	0	8	0	0	0	5	0	0	0	6	0	0	0
			(8)	(2)	(0)	(0)	(16)	(0)	(0)	(0)	(10)	(0)	(0)	(0)	(12)	(0)	(0)	(0)
	accessory cortical nodule		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)
	cortical vacuolation:diffuse		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)	(2)	(0)	(0)	(0)	
	focal fatty change		4	1	0	0	5	0	0	0	6	1	0	0	4	1	0	0
			(8)	(2)	(0)	(0)	(10)	(0)	(0)	(0)	(12)	(2)	(0)	(0)	(8)	(2)	(0)	(0)
[Reproductive system]																		
testis			<50>				<50>				<50>				<50>			
	atrophy		31	6	0	0	32	12	0	0	30	9	1	0	31	6	1	0
			(62)	(12)	(0)	(0)	(64)	(24)	(0)	(0)	(60)	(18)	(2)	(0)	(62)	(12)	(2)	(0)
	periarteritis nodosa		8	0	0	0	4	0	0	0	0	0	0	0 **	0	0	0	0 **
			(16)	(0)	(0)	(0)	(8)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	interstitial cell hyperplasia		3	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)	(4)	(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. : 0284
ANIMAL : RAT F344/DuCrj
REPORT TYPE : A1
SEX : MALE

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

PAGE : 12

		Group Name	Control				20 ppm				40 ppm				80 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
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
[Reproductive system]																		
testis			<50>				<50>				<50>				<50>			
	germ cell necrosis		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)
prostate			<50>				<50>				<50>				<50>			
	inflammation		13	3	0	0	7	4	0	0	12	2	0	0	10	0	0	0
			(26)	(6)	(0)	(0)	(14)	(8)	(0)	(0)	(24)	(4)	(0)	(0)	(20)	(0)	(0)	(0)
	hyperplasia		8	0	0	0	5	0	0	0	5	0	0	0	1	0	0	0 *
			(16)	(0)	(0)	(0)	(10)	(0)	(0)	(0)	(10)	(0)	(0)	(0)	(2)	(0)	(0)	(0)
mammary gl			<50>				<50>				<50>				<50>			
	galactoceles		13	0	0	0	7	0	0	0	10	0	0	0	0	0	0	0 **
			(26)	(0)	(0)	(0)	(14)	(0)	(0)	(0)	(20)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
[Nervous system]																		
periph nerv			<50>				<50>				<50>				<50>			
	radiculoneuropathy		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)	(2)	(0)	(0)	(0)	
[Special sense organs/appendage]																		
eye			<50>				<50>				<50>				<50>			
	cataract		1	0	0	0	1	0	0	0	5	0	0	0	0	0	0	0
			(2)	(0)	(0)	(0)	(2)	(0)	(0)	(0)	(10)	(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 ; * : $P \leq 0.05$ ** : $P \leq 0.01$ Test of Chi Square

STUDY NO. : 0284
 ANIMAL : RAT F344/DuCrj
 REPORT TYPE : A1
 SEX : MALE

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

PAGE : 13

		Group Name No. of Animals on Study	Control 50				20 ppm 50				40 ppm 50				80 ppm 50				
Organ_____	Findings_____	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		0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	5 (10)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
	keratitis		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)	0 (0)
Harder gl			<50>				<50>				<50>				<50>				
	lymphocytic infiltration		5 (10)	0 (0)	0 (0)	0 (0)	5 (10)	0 (0)	0 (0)	0 (0)	3 (6)	0 (0)	0 (0)	0 (0)	0 (0)	4 (8)	0 (0)	0 (0)	0 (0)
	granulation		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)	0 (0)
[Body cavities]																			
adipose			<50>				<50>				<50>				<50>				
	granulation		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)	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 2

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

STUDY NO. : 0284
 ANIMAL : RAT F344/DuCrj
 REPORT TYPE : A1
 SEX : FEMALE

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

PAGE : 14

Organ_____	Findings_____	Group Name	Control				20 ppm				40 ppm				80 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>			
	inflammation		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)
	squamous cell hyperplasia		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)
[Respiratory system]																		
nasal cavit			<50>				<50>				<50>				<50>			
	thrombus		1	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0
			(2)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(2)	(0)	(0)	(0)	(2)	(0)	(0)	(0)
	inflammatory infiltration		3	1	0	0	4	0	0	0	2	0	0	0	0	0	0	0
			(6)	(2)	(0)	(0)	(8)	(0)	(0)	(0)	(4)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	eosinophilic change:olfactory epithelium		18	2	0	0	14	1	0	0	16	11	1	0 *	14	2	0	0
			(36)	(4)	(0)	(0)	(28)	(2)	(0)	(0)	(32)	(22)	(2)	(0)	(28)	(4)	(0)	(0)
	inflammation:foreign body		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)
lung			<50>				<50>				<50>				<50>			
	congestion		3	0	0	0	2	0	0	0	2	0	0	0	6	0	0	0
			(6)	(0)	(0)	(0)	(4)	(0)	(0)	(0)	(4)	(0)	(0)	(0)	(12)	(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. : 0284
 ANIMAL : RAT F344/DuCrj
 REPORT TYPE : A1
 SEX : FEMALE

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

PAGE : 15

Organ_____	Findings_____	Group Name	Control				20 ppm				40 ppm				80 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			<50>				<50>				<50>				<50>			
	hemorrhage		2 (4)	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)
	accumulation of foamy cells		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)
	bronchiolar-alveolar cell hyperplasia		0 (0)	1 (2)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	4 (8)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
	inflammation:foreign body		1 (2)	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)	0 (0)	0 (0)
[Hematopoietic system]																		
bone marrow			<50>				<50>				<50>				<50>			
	granulation		4 (8)	0 (0)	0 (0)	0 (0)	4 (8)	1 (2)	0 (0)	0 (0)	8 (16)	3 (6)	0 (0)	0 (0)	5 (10)	3 (6)	0 (0)	0 (0)
	increased hematopoiesis		1 (2)	0 (0)	0 (0)	0 (0)	1 (2)	0 (0)	0 (0)	0 (0)	4 (8)	0 (0)	0 (0)	0 (0)	3 (6)	2 (4)	0 (0)	0 (0)
lymph node			<50>				<50>				<50>				<50>			
	lymphadenitis		0 (0)	0 (0)	0 (0)	0 (0)	2 (4)	0 (0)	0 (0)	0 (0)	4 (8)	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. : 0284
ANIMAL : RAT F344/DuCrj
REPORT TYPE : A1
SEX : FEMALE

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

PAGE : 16

Organ_____	Findings_____	Group Name	Control				20 ppm				40 ppm				80 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
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
[Hematopoietic system]																		
spleen			<50>				<50>				<50>				<50>			
	atrophy		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)	(6)	(0)	(0)	(0)
	deposit of hemosiderin		36	4	1	0	39	5	0	0	34	6	1	0	33	9	0	0
			(72)	(8)	(2)	(0)	(78)	(10)	(0)	(0)	(68)	(12)	(2)	(0)	(66)	(18)	(0)	(0)
	granulation		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)	(0)
	fibrosis		2	0	0	0	3	0	1	0	1	0	0	0	0	0	0	0
			(4)	(0)	(0)	(0)	(6)	(0)	(2)	(0)	(2)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	extramedullary hematopoiesis		35	3	3	0	35	2	1	0	33	8	2	1	31	2	0	0
			(70)	(6)	(6)	(0)	(70)	(4)	(2)	(0)	(66)	(16)	(4)	(2)	(62)	(4)	(0)	(0)
[Circulatory system]																		
heart			<50>				<50>				<50>				<50>			
	mineralization		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)
	myocardial fibrosis		9	0	0	0	10	1	0	0	21	1	0	0 *	16	0	0	0
			(18)	(0)	(0)	(0)	(20)	(2)	(0)	(0)	(42)	(2)	(0)	(0)	(32)	(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. : 0284
ANIMAL : RAT F344/DuCrj
REPORT TYPE : A1
SEX : FEMALE

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

PAGE : 17

		Group Name	Control				20 ppm				40 ppm				80 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
Organ_____	Findings_____		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
[Digestive system]																		
oral cavity	squamous cell hyperplasia	<50>	1	0	0	0	1	0	0	0	1	0	0	0	1	0	0	0
		(2) (0) (0) (0)	(2) (0) (0) (0)	(2) (0) (0) (0)	(2) (0) (0) (0)													
tooth	inflammation	<50>	3	0	0	0	3	0	0	0	0	0	0	0	1	0	0	0
		(6) (0) (0) (0)	(6) (0) (0) (0)	(0) (0) (0) (0)	(2) (0) (0) (0)													
tongue	mineralization	<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)	(2) (0) (0) (0)	(0) (0) (0) (0)													
	perivasculitis	<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)													
salivary gl	mineralization	<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)	(2) (0) (0) (0)	(0) (0) (0) (0)													
stomach	basal cell activation	<50>	1	0	0	0	1	0	0	0	1	0	0	0	3	0	0	0
		(2) (0) (0) (0)	(2) (0) (0) (0)	(2) (0) (0) (0)	(6) (0) (0) (0)													
	erosion:forestomach	<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)	(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. : 0284
 ANIMAL : RAT F344/DuCrj
 REPORT TYPE : A1
 SEX : FEMALE

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

PAGE : 18

Organ	Findings	Group Name No. of Animals on Study Grade				Control 50				20 ppm 50				40 ppm 50				80 ppm 50			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
[Digestive system]																					
stomach		<50>				<50>				<50>				<50>				<50>			
	ulcer:forestomach	1 (2)	1 (2)	0 (0)	0 (0)	0 (0)	2 (4)	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)
	hyperplasia:forestomach	0 (0)	1 (2)	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)	0 (0)	0 (0)	0 (0)	0 (0)
	erosion:glandular stomach	3 (6)	0 (0)	0 (0)	0 (0)	0 (0)	1 (2)	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)
liver		<50>				<50>				<50>				<50>				<50>			
	herniation	2 (4)	0 (0)	0 (0)	0 (0)	4 (8)	0 (0)	0 (0)	0 (0)	10 (20)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1 (2)	0 (0)	0 (0)	0 (0)
	peliosis-like lesion	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)	0 (0)	0 (0)	0 (0)	0 (0)
	necrosis:central	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1 (2)	0 (0)	1 (2)	1 (2)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
	necrosis:focal	2 (4)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
	fatty change	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)	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

STUDY NO. : 0284
 ANIMAL : RAT F344/DuCrj
 REPORT TYPE : A1
 SEX : FEMALE

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

PAGE : 19

		Group Name	Control				20 ppm				40 ppm				80 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]																		
liver																		
			<50>				<50>				<50>				<50>			
	fatty change:central		1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
			(2)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(2)	(0)	(0)	(0)
	cyst		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)
	granulation		14	4	0	0	18	2	2	0	15	1	0	0	16	5	0	0
			(28)	(8)	(0)	(0)	(36)	(4)	(4)	(0)	(30)	(2)	(0)	(0)	(32)	(10)	(0)	(0)
	clear cell focus		1	0	0	0	0	1	0	0	1	0	0	0	2	0	0	0
			(2)	(0)	(0)	(0)	(0)	(2)	(0)	(0)	(2)	(0)	(0)	(0)	(4)	(0)	(0)	(0)
	acidophilic cell focus		0	0	0	0	3	1	0	0	11	11	0	0 **	9	17	0	0 **
			(0)	(0)	(0)	(0)	(6)	(2)	(0)	(0)	(22)	(22)	(0)	(0)	(18)	(34)	(0)	(0)
	basophilic cell focus		4	0	0	0	7	1	0	0	14	5	0	0 **	11	8	0	0 **
			(8)	(0)	(0)	(0)	(14)	(2)	(0)	(0)	(28)	(10)	(0)	(0)	(22)	(16)	(0)	(0)
	spongiosis hepatitis		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)
	bile duct hyperplasia		1	0	0	0	1	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)

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. : 0284
 ANIMAL : RAT F344/DuCrj
 REPORT TYPE : A1
 SEX : FEMALE

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

PAGE : 20

Organ	Findings	Group Name No. of Animals on Study				Control 50				20 ppm 50				40 ppm 50				80 ppm 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>				<50>			
	cholangiofibrosis	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)	(0)	(0)
	biliary cyst	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
		(0)	(0)	(0)	(0)	(2)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(2)	(0)	(0)	(0)
pancreas		<50>				<50>				<50>				<50>				<50>			
	atrophy	0	0	0	0	2	0	0	0	4	0	0	0	0	0	0	0	1	0	1	0
		(0)	(0)	(0)	(0)	(4)	(0)	(0)	(0)	(8)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(2)	(0)	(2)	(0)
	periarteritis nodosa	0	0	0	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)	(0)	(0)	(0)	(0)	(2)	(0)	(0)	(0)
[Urinary system]																					
kidney		<50>				<50>				<50>				<50>				<50>			
	atrophy	0	0	0	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)	(0)	(0)	(0)	(0)	(2)	(0)	(0)	(0)
	infarct	0	0	0	0	2	0	1	0	15	16	4	0 **	21	7	1	0 **	21	7	1	0 **
		(0)	(0)	(0)	(0)	(4)	(0)	(2)	(0)	(30)	(32)	(8)	(0)	(42)	(14)	(2)	(0)	(42)	(14)	(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. : 0284
ANIMAL : RAT F344/DuCrj
REPORT TYPE : A1
SEX : FEMALE

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

PAGE : 21

Organ	Findings	Group Name	Control				20 ppm				40 ppm				80 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
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
[Urinary system]																		
kidney																		
	cyst		<50>				<50>				<50>				<50>			
			0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(2)	(2)	(0)	(0)	(0)	(0)	(0)	(0)
	basophilic change		0	0	0	0	0	0	0	0	1	1	1	0	0	1	0	0
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(2)	(2)	(2)	(0)	(0)	(0)	(2)	(0)
	chronic nephropathy		17	13	12	0	8	15	21	1	31	3	8	1 *	31	4	1	0 **
			(34)	(26)	(24)	(0)	(16)	(30)	(42)	(2)	(62)	(6)	(16)	(2)	(62)	(8)	(2)	(0)
	papillary necrosis		0	0	0	0	1	0	0	0	11	16	8	0 **	4	10	28	0 **
			(0)	(0)	(0)	(0)	(2)	(0)	(0)	(0)	(22)	(32)	(16)	(0)	(8)	(20)	(56)	(0)
	mineralization:papilla		0	0	0	0	13	0	0	0 **	32	3	1	0 **	33	14	0	0 **
			(0)	(0)	(0)	(0)	(26)	(0)	(0)	(0)	(64)	(6)	(2)	(0)	(66)	(28)	(0)	(0)
	urothelial hyperplasia:pelvis		19	0	0	0	22	0	0	0	32	9	1	0 **	34	11	0	0 **
			(38)	(0)	(0)	(0)	(44)	(0)	(0)	(0)	(64)	(18)	(2)	(0)	(68)	(22)	(0)	(0)
	eosinophilic droplet:proximal tubule		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)
urin bladd																		
	dilatation		<50>				<50>				<50>				<50>			
			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)	(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 ; * : $P \leq 0.05$ ** : $P \leq 0.01$ Test of Chi Square

STUDY NO. : 0284
ANIMAL : RAT F344/DuCrj
REPORT TYPE : A1
SEX : FEMALE

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

PAGE : 22

Organ	Findings	Group Name No. of Animals on Study Grade				Control 50				20 ppm 50				40 ppm 50				80 ppm 50			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
[Endocrine system]																					
pituitary	cyst	<50>				<50>				<48>				<50>							
		0	0	0	0	4	2	0	0 *	4	0	0	0	2	0	0	0	2	0	0	0
		(0)	(0)	(0)	(0)	(8)	(4)	(0)	(0)	(8)	(0)	(0)	(0)	(4)	(0)	(0)	(0)	(4)	(0)	(0)	(0)
	hyperplasia	4	3	0	0	8	1	0	0	4	0	0	0	4	1	0	0	4	1	0	0
		(8)	(6)	(0)	(0)	(16)	(2)	(0)	(0)	(8)	(0)	(0)	(0)	(8)	(2)	(0)	(0)	(8)	(2)	(0)	(0)
	Rathke pouch	4	0	0	0	4	0	0	0	4	0	0	0	1	0	0	0	1	0	0	0
		(8)	(0)	(0)	(0)	(8)	(0)	(0)	(0)	(8)	(0)	(0)	(0)	(2)	(0)	(0)	(0)	(2)	(0)	(0)	(0)
thyroid	ultimibranhial body remanet	<50>				<50>				<50>				<50>				<50>			
		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)	(4)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	follicular hyperplasia	0	0	0	0	1	0	0	0	1	0	0	0	2	0	0	0	2	0	0	0
		(0)	(0)	(0)	(0)	(2)	(0)	(0)	(0)	(2)	(0)	(0)	(0)	(4)	(0)	(0)	(0)	(4)	(0)	(0)	(0)
	C-cell hyperplasia	4	2	0	0	2	0	0	0	2	0	0	0	0	3	0	0	0	6	0	0
		(8)	(4)	(0)	(0)	(4)	(0)	(0)	(0)	(4)	(0)	(0)	(0)	(0)	(6)	(0)	(0)	(0)	(6)	(0)	(0)
parathyroid	hyperplasia	<50>				<50>				<50>				<50>				<50>			
		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)

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

STUDY NO. : 0284
 ANIMAL : RAT F344/DuCrj
 REPORT TYPE : A1
 SEX : FEMALE

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

PAGE : 23

		Group Name	Control				20 ppm				40 ppm				80 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
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
[Endocrine system]																		
adrenal			<50>				<50>				<50>				<50>			
	thrombus		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)
	peliosis-like lesion		26	0	0	0	28	0	0	0	22	1	0	0	24	2	1	0
			(52)	(0)	(0)	(0)	(56)	(0)	(0)	(0)	(44)	(2)	(0)	(0)	(48)	(4)	(2)	(0)
	necrosis:central		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)	(0)	(0)
	cyst		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)
	hyperplasia:cortical cell		1	1	0	0	0	0	0	0	3	0	0	0	1	1	0	0
			(2)	(2)	(0)	(0)	(0)	(0)	(0)	(0)	(6)	(0)	(0)	(0)	(2)	(2)	(0)	(0)
	hyperplasia:medulla		2	0	0	0	2	0	0	0	3	0	0	0	0	0	0	0
			(4)	(0)	(0)	(0)	(4)	(0)	(0)	(0)	(6)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	focal fatty change		2	1	0	0	8	1	0	0	2	2	0	0	4	0	0	0
			(4)	(2)	(0)	(0)	(16)	(2)	(0)	(0)	(4)	(4)	(0)	(0)	(8)	(0)	(0)	(0)
[Reproductive system]																		
ovary			<50>				<50>				<50>				<50>			
	atrophy		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)	(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

STUDY NO. : 0284
ANIMAL : RAT F344/DuCrj
REPORT TYPE : A1
SEX : FEMALE

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

PAGE : 24

		Group Name No. of Animals on Study	Control 50				20 ppm 50				40 ppm 50				80 ppm 50																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
Organ_____	Findings_____	Grade	1 (%)	2 (%)	3 (%)	4 (%)	1 (%)	2 (%)	3 (%)	4 (%)	1 (%)	2 (%)	3 (%)	4 (%)	1 (%)	2 (%)	3 (%)	4 (%)																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
[Reproductive system]																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
ovary	cyst		<50>				<50>				<50>				<50>																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
		1 (2)	0 (0)	0 (0)	0 (0)	1 (2)	0 (0)	1 (2)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1 (2)	0 (0)	0 (0)	0 (0)																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
uterus	dilatation		<50>				<50>				<50>				<50>																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
		0 (0)	0 (0)	0 (0)	0 (0)	1 (2)	0 (0)	0 (0)	0 (0)	2 (4)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
mammary gl	hyperplasia		<50>				<50>				<50>				<50>																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
		0 (0)	0 (0)	0 (0)	0 (0)	2 (4)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
	galactoceles		<50>				<50>				<50>				<50>																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
		12 (24)	0 (0)	0 (0)	0 (0)	14 (28)	0 (0)	0 (0)	0 (0)	5 (10)	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)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	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. : 0284
 ANIMAL : RAT F344/DuCrj
 REPORT TYPE : A1
 SEX : FEMALE

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

PAGE : 25

Organ	Findings	Group Name No. of Animals on Study				Control 50				20 ppm 50				40 ppm 50				80 ppm 50			
		Grade				1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)

[Special sense organs/appendage]

eye	keratitis	<50>				<50>				<50>				<50>			
		2	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
		(4)	(0)	(0)	(0)	(2)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)

Harder gl	lymphocytic infiltration	<50>				<50>				<50>				<50>			
		10	0	0	0	6	0	0	0	3	0	0	0	2	0	0	0 *
		(20)	(0)	(0)	(0)	(12)	(0)	(0)	(0)	(6)	(0)	(0)	(0)	(4)	(0)	(0)	(0)

[Musculoskeletal system]

bone	osteosclerosis	<50>				<50>				<50>				<50>			
		11	0	0	0	5	0	0	0	8	0	0	0	1	0	0	0 **
		(22)	(0)	(0)	(0)	(10)	(0)	(0)	(0)	(16)	(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

APPENDIX L 3

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

STUDY NO. : 0284
 ANIMAL : RAT F344/DuCrj
 REPORT TYPE : A1
 SEX : MALE

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

PAGE : 1

Organ	Findings	Group Name No. of Animals on Study Grade	Control 13				20 ppm 11				40 ppm 6				80 ppm 11			
			1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
[Respiratory system]																		
nasal cavity			<13>				<11>				<6>				<11>			
	thrombus		4 (31)	1 (8)	0 (0)	0 (0)	1 (9)	0 (0)	0 (0)	0 (0)	2 (33)	0 (0)	0 (0)	0 (0)	4 (36)	0 (0)	0 (0)	0 (0)
	inflammatory infiltration		0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1 (9)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
	eosinophilic change:olfactory epithelium		7 (54)	1 (8)	0 (0)	0 (0)	1 (9)	0 (0)	0 (0)	0 * (0)	1 (17)	0 (0)	0 (0)	0 (0)	3 (27)	0 (0)	0 (0)	0 (0)
	inflammation:foreign body		5 (38)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1 (17)	0 (0)	0 (0)	0 (0)	2 (18)	0 (0)	0 (0)	0 (0)
lung			<13>				<11>				<6>				<11>			
	congestion		6 (46)	0 (0)	0 (0)	0 (0)	1 (9)	0 (0)	0 (0)	0 (0)	1 (17)	0 (0)	0 (0)	0 (0)	1 (9)	0 (0)	0 (0)	0 (0)
	hemorrhage		1 (8)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
	interstitial pneumonia		0 (0)	0 (0)	0 (0)	0 (0)	1 (9)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
	bronchiolar-alveolar cell hyperplasia		0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1 (9)	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. : 0284
 ANIMAL : RAT F344/DuCrj
 REPORT TYPE : A1
 SEX : MALE

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

PAGE : 2

Organ	Findings	Control 13				20 ppm 11				40 ppm 6				80 ppm 11			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
[Respiratory system]																	
Lung		<13>				<11>				< 6>				<11>			
	hyaline membrane	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)	(0)	(0)
[Hematopoietic system]																	
bone marrow		<13>				<11>				< 6>				<11>			
	necrosis:focal	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)	(9)	(0)	(0)	(0)
	increased hematopoiesis	0	0	0	0	3	1	0	0	0	1	0	0	1	1	0	0
		(0)	(0)	(0)	(0)	(27)	(9)	(0)	(0)	(0)	(17)	(0)	(0)	(9)	(9)	(0)	(0)
	ostitis fibrosa	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
		(0)	(0)	(0)	(0)	(9)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
spleen		<13>				<11>				< 6>				<11>			
	atrophy	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)
	deposit of hemosiderin	5	2	0	0	3	4	0	0	3	0	0	0	2	4	1	0
		(38)	(15)	(0)	(0)	(27)	(36)	(0)	(0)	(50)	(0)	(0)	(0)	(18)	(36)	(9)	(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. : 0284
 ANIMAL : RAT F344/DuCrj
 REPORT TYPE : A1
 SEX : MALE

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

PAGE : 3

		Group Name No. of Animals on Study Grade	Control 13				20 ppm 11				40 ppm 6				80 ppm 11			
Organ	Findings		1 (%)	2 (%)	3 (%)	4 (%)	1 (%)	2 (%)	3 (%)	4 (%)	1 (%)	2 (%)	3 (%)	4 (%)	1 (%)	2 (%)	3 (%)	4 (%)
[Hematopoietic system]																		
spleen			<13>				<11>				< 6>				<11>			
	extramedullary hematopoiesis		3 (23)	0 (0)	2 (15)	0 (0)	2 (18)	2 (18)	3 (27)	0 (0)	2 (33)	1 (17)	1 (17)	0 (0)	1 (9)	2 (18)	2 (18)	0 (0)
[Circulatory system]																		
heart			<13>				<11>				< 6>				<11>			
	thrombus		1 (8)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1 (17)	0 (0)	0 (0)	0 (0)	0 (0)	1 (9)	0 (0)	0 (0)
	mineralization		0 (0)	0 (0)	0 (0)	0 (0)	1 (9)	0 (0)	1 (9)	0 (0)	1 (17)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
	myocardial fibrosis		5 (38)	2 (15)	0 (0)	0 (0)	4 (36)	2 (18)	1 (9)	0 (0)	2 (33)	1 (17)	0 (0)	0 (0)	2 (18)	0 (0)	0 (0)	0 (0)
[Digestive system]																		
oral cavity			<13>				<11>				< 6>				<11>			
	squamous cell hyperplasia		0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1 (17)	0 (0)	0 (0)	0 (0)	1 (9)	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. : 0284
 ANIMAL : RAT F344/DuCrj
 REPORT TYPE : A1
 SEX : MALE

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

PAGE : 4

Organ_____	Findings_____	Group Name	Control				20 ppm				40 ppm				80 ppm			
		No. of Animals on Study	13				11				6				11			
Grade		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	
		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	
<hr/>																		
[Digestive system]																		
tooth	inflammation	<13>				<11>				< 6>				<11>				
		0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	
		(0)	(0)	(0)	(0)	(18)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	
tongue	mineralization	<13>				<11>				< 6>				<11>				
		0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	
		(0)	(0)	(0)	(0)	(9)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	
stomach	basal cell activation	<13>				<11>				< 6>				<11>				
		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)	(9)	(0)	(0)	(0)	
	erosion:forestomach	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)	(0)	(0)	(0)	(0)	
	ulcer:forestomach	0	0	2	0	0	0	2	0	0	0	0	0	0	1	0	0	0
(0)		(0)	(15)	(0)	(0)	(0)	(18)	(0)	(0)	(0)	(0)	(0)	(0)	(9)	(0)	(0)	(0)	
hyperplasia:forestomach	3	0	0	0	0	0	0	0	0	2	0	0	0	1	0	0	0	
	(23)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(33)	(0)	(0)	(0)	(9)	(0)	(0)	(0)	
erosion:glandular stomach	0	0	0	0	1	0	0	0	2	0	0	0	1	0	0	0	0	
	(0)	(0)	(0)	(0)	(9)	(0)	(0)	(0)	(33)	(0)	(0)	(0)	(9)	(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. : 0284
 ANIMAL : RAT F344/DuCrj
 REPORT TYPE : A1
 SEX : MALE

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

PAGE : 5

Organ	Findings	Group Name No. of Animals on Study Grade				Control 13				20 ppm 11				40 ppm 6				80 ppm 11			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
[Digestive system]																					
stomach	ulcer:glandular stomach	<13>				<11>				< 6>				<11>							
		0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
		(0)	(8)	(0)	(0)	(0)	(0)	(9)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	mineralization:glandular stomach	0	0	0	0	0	0	2	0	1	0	0	0	0	0	0	0	0	0	0	0
		(0)	(0)	(0)	(0)	(0)	(0)	(18)	(0)	(17)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
liver	herniation	<13>				<11>				< 6>				<11>							
		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)	(17)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	necrosis:central	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0
		(0)	(0)	(0)	(0)	(0)	(9)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(9)	(0)	(0)	(0)
	fatty change	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
		(8)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(17)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	fatty change:central	1	0	0	0	0	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)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	granulation	1	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0
		(8)	(0)	(0)	(0)	(9)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(9)	(0)	(0)	(0)	(9)	(0)	(0)	(0)
	basophilic cell focus	1	0	0	0	2	0	0	0	0	1	0	0	3	0	0	0	3	0	0	0
		(8)	(0)	(0)	(0)	(18)	(0)	(0)	(0)	(0)	(17)	(0)	(0)	(27)	(0)	(0)	(0)	(27)	(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. : 0284
 ANIMAL : RAT F344/DuCrj
 REPORT TYPE : A1
 SEX : MALE

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

PAGE : 6

Organ	Findings	Group Name No. of Animals on Study Grade				Control 13				20 ppm 11				40 ppm 6				80 ppm 11			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
[Digestive system]																					
Liver		<13>				<11>				< 6>				<11>							
	vacuolated cell focus	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)	(17)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	spongiosis hepatitis	0	0	0	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)	(0)	(0)	(0)	(0)	(9)	(0)	(0)	(0)
	bile duct hyperplasia	8	2	0	0	7	0	0	0	3	0	0	0	1	0	0	0	1	0	0	0 **
		(62)	(15)	(0)	(0)	(64)	(0)	(0)	(0)	(50)	(0)	(0)	(0)	(9)	(0)	(0)	(0)	(9)	(0)	(0)	(0)
pancreas		<13>				<11>				< 6>				<11>							
	atrophy	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		(8)	(0)	(0)	(0)	(0)	(9)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
[Urinary system]																					
kidney		<13>				<11>				< 6>				<11>							
	infarct	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)	(18)	(0)	(0)	(0)	(18)	(0)	(0)	(0)
	chronic nephropathy	4	2	3	2	2	4	1	2	1	2	3	0	8	0	0	0	8	0	0	0
		(31)	(15)	(23)	(15)	(18)	(36)	(9)	(18)	(17)	(33)	(50)	(0)	(73)	(0)	(0)	(0)	(73)	(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. : 0284
 ANIMAL : RAT F344/DuCrj
 REPORT TYPE : A1
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HISTOLOGICAL FINDINGS :NON-NEOPLASTIC LESIONS (SUMMARY)
 DEAD AND MORIBUND ANIMALS (0-105W)

PAGE : 7

		Group Name No. of Animals on Study	Control 13				20 ppm 11				40 ppm 6				80 ppm 11				
Organ_____	Findings_____	Grade	1 (%)	2 (%)	3 (%)	4 (%)	1 (%)	2 (%)	3 (%)	4 (%)	1 (%)	2 (%)	3 (%)	4 (%)	1 (%)	2 (%)	3 (%)	4 (%)	
[Urinary system]																			
kidney			<13>				<11>				< 6>				<11>				
	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)	1 (9)	3 (27)	0 (0)	0 (0)	
	mineralization:papilla		0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	4 (36)	1 (9)	0 (0)	0 * (0)	
	urothelial hyperplasia:pelvis		2 (15)	0 (0)	0 (0)	0 (0)	1 (9)	0 (0)	0 (0)	0 (0)	0 (0)	3 (50)	0 (0)	0 (0)	0 (0)	7 (64)	0 (0)	0 (0)	0 * (0)
	eosinophilic droplet:proximal tubule		0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1 (9)	0 (0)	0 (0)	0 (0)	
urin bladd			<13>				<11>				< 6>				<11>				
	dilatation		0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1 (9)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
[Endocrine system]																			
pituitary			<13>				<11>				< 6>				<11>				
	hyperplasia		0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1 (9)	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. : 0284
 ANIMAL : RAT F344/DuCrj
 REPORT TYPE : A1
 SEX : MALE

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

PAGE : 8

Organ	Findings	Group Name No. of Animals on Study Grade				Control 13				20 ppm 11				40 ppm 6				80 ppm 11			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
[Endocrine system]																					
pituitary		<13>				<11>				< 6>				<11>							
	Rathke pouch	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	1	0	0	0
		(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(17)	(0)	(0)	(0)	(9)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
thyroid		<13>				<11>				< 6>				<11>							
	follicular hyperplasia	1	0	0	0	0	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)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	C-cell hyperplasia	0	0	0	1	0	0	0	0	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)	(0)	(0)	(0)	(0)	(0)
parathyroid		<13>				<11>				< 6>				<11>							
	hyperplasia	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		(0)	(0)	(0)	(0)	(18)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
adrenal		<13>				<11>				< 6>				<11>							
	hyperplasia:medulla	1	0	0	0	2	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0
		(8)	(0)	(0)	(0)	(18)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(18)	(0)	(0)	(0)	(18)	(0)	(0)	(0)
	cortical vacuolation:diffuse	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)	(9)	(0)	(0)	(0)	(9)	(0)	(0)	(0)
	focal fatty change	1	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0
		(8)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(18)	(0)	(0)	(0)	(18)	(0)	(0)	(0)

Grade 1 : Slight 2 : Moderate 3 : Marked 4 : Severe

< a > a : Number of animals examined at the site

b : Number of animals with lesion

(c) c : b / a * 100

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

STUDY NO. : 0284
 ANIMAL : RAT F344/DuCrj
 REPORT TYPE : A1
 SEX : MALE

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

PAGE : 9

Organ	Findings	Control 13				20 ppm 11				40 ppm 6				80 ppm 11			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
[Reproductive system]																	
testis		<13>				<11>				< 6>				<11>			
	atrophy	5	1	0	0	6	2	0	0	0	4	0	0 *	6	1	1	0
		(38)	(8)	(0)	(0)	(55)	(18)	(0)	(0)	(0)	(67)	(0)	(0)	(55)	(9)	(9)	(0)
	periarteritis nodosa	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		(15)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	interstitial cell hyperplasia	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
		(8)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(9)	(0)	(0)	(0)
prostate		<13>				<11>				< 6>				<11>			
	inflammation	4	1	0	0	0	2	0	0	3	1	0	0	0	0	0	0
		(31)	(8)	(0)	(0)	(0)	(18)	(0)	(0)	(50)	(17)	(0)	(0)	(0)	(0)	(0)	(0)
	hyperplasia	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
		(0)	(0)	(0)	(0)	(9)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	galactocoele	5	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0
		(38)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(33)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
[Nervous system]																	
periph nerv		<13>				<11>				< 6>				<11>			
	radiculoneuropathy	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)	(9)	(0)	(0)	(0)

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

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 DEAD AND MORIBUND ANIMALS (0-105W)

PAGE : 10

Organ	Findings	Control 13				20 ppm 11				40 ppm 6				80 ppm 11			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)

[Special sense organs/appendage]

eye	cataract	<13>				<11>				< 6>				<11>			
		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)
	retinal atrophy																
		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)

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

(HPT150)

BAIS3

APPENDIX L 4

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

STUDY NO. : 0284
ANIMAL : RAT F344/DuCrj
REPORT TYPE : A1
SEX : FEMALE

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

PAGE : 11

Organ	Findings	Control 10				20 ppm 11				40 ppm 6				80 ppm 21			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
[Respiratory system]																	
nasal cavity		<10>				<11>				<6>				<21>			
	thrombus	1	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0
		(10)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(17)	(0)	(0)	(0)	(5)	(0)	(0)	(0)
	inflammatory infiltration	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		(0)	(10)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	eosinophilic change:olfactory epithelium	1	0	0	0	0	1	0	0	1	1	0	0	1	0	0	0
		(10)	(0)	(0)	(0)	(0)	(9)	(0)	(0)	(17)	(17)	(0)	(0)	(5)	(0)	(0)	(0)
lung		<10>				<11>				<6>				<21>			
	congestion	3	0	0	0	2	0	0	0	2	0	0	0	6	0	0	0
		(30)	(0)	(0)	(0)	(18)	(0)	(0)	(0)	(33)	(0)	(0)	(0)	(29)	(0)	(0)	(0)
	bronchiolar-alveolar cell 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)	(17)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	inflammation:foreign body	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
		(0)	(0)	(10)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
[Hematopoietic system]																	
bone marrow		<10>				<11>				<6>				<21>			
	granulation	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0
		(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(17)	(0)	(0)	(0)	(0)	(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. : 0284
 ANIMAL : RAT F344/DuCrj
 REPORT TYPE : A1
 SEX : FEMALE

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

PAGE : 12

Organ_____	Findings_____	Group Name No. of Animals on Study Grade	Control 10				20 ppm 11				40 ppm 6				80 ppm 21			
			1 (%)	2 (%)	3 (%)	4 (%)	1 (%)	2 (%)	3 (%)	4 (%)	1 (%)	2 (%)	3 (%)	4 (%)	1 (%)	2 (%)	3 (%)	4 (%)
[Hematopoietic system]																		
bone marrow	increased hematopoiesis		<10>				<11>				< 6>				<21>			
		0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	2 (33)	0 (0)	0 (0)	0 (0)	1 (5)	0 (0)	0 (0)	0 (0)	
spleen	atrophy		<10>				<11>				< 6>				<21>			
		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 (14)	0 (0)	0 (0)	0 (0)	
	deposit of hemosiderin		2 (20)	3 (30)	1 (10)	0 (0)	4 (36)	5 (45)	0 (0)	0 (0)	2 (33)	0 (0)	1 (17)	0 (0)	13 (62)	4 (19)	0 (0)	0 (0)
		fibrosis		0 (0)	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)
			extramedullary hematopoiesis		4 (40)	1 (10)	1 (10)	0 (0)	1 (9)	2 (18)	1 (9)	0 (0)	0 (0)	2 (33)	2 (33)	1 (17)	4 (19)	0 (0)
[Circulatory system]																		
heart	mineralization		<10>				<11>				< 6>				<21>			
		0 (0)	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 (10)	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. : 0284
 ANIMAL : RAT F344/DuCrj
 REPORT TYPE : A1
 SEX : FEMALE

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

PAGE : 13

		Group Name	Control				20 ppm				40 ppm				80 ppm			
		No. of Animals on Study	10				11				6				21			
Organ_____	Findings_____	Grade	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
[Circulatory system]																		
heart			<10>				<11>				< 6>				<21>			
	myocardial fibrosis		1	0	0	0	3	1	0	0	3	0	0	0	6	0	0	0
			(10)	(0)	(0)	(0)	(27)	(9)	(0)	(0)	(50)	(0)	(0)	(0)	(29)	(0)	(0)	(0)
[Digestive system]																		
oral cavity			<10>				<11>				< 6>				<21>			
	squamous cell hyperplasia		1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
			(10)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(5)	(0)	(0)	(0)
stomach			<10>				<11>				< 6>				<21>			
	basal cell activation		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)	(14)	(0)	(0)	(0)
	erosion:forestomach		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)
	ulcer:forestomach		1	1	0	0	0	2	0	0	0	0	0	0	0	0	1	0
			(10)	(10)	(0)	(0)	(0)	(18)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(5)	(0)
	hyperplasia:forestomach		0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0
			(0)	(10)	(0)	(0)	(9)	(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. : 0284
 ANIMAL : RAT F344/DuCrj
 REPORT TYPE : A1
 SEX : FEMALE

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

PAGE : 14

Organ	Findings	Control 10				20 ppm 11				40 ppm 6				80 ppm 21			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
[Digestive system]																	
stomach		<10>				<11>				< 6>				<21>			
	erosion:glandular stomach	2	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
		(20)	(0)	(0)	(0)	(0)	(9)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
liver		<10>				<11>				< 6>				<21>			
	herniation	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0
		(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(33)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	necrosis:central	0	0	0	0	0	0	1	0	1	1	0	0	0	0	0	0
		(0)	(0)	(0)	(0)	(0)	(0)	(9)	(0)	(17)	(17)	(0)	(0)	(0)	(0)	(0)	(0)
	fatty change	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		(10)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	fatty change:central	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		(10)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	cyst	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)	(5)	(0)	(0)	(0)
	granulation	1	0	0	0	1	0	0	0	0	0	0	0	2	0	0	0
		(10)	(0)	(0)	(0)	(9)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(10)	(0)	(0)	(0)
	acidophilic cell focus	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)	(10)	(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. : 0284
 ANIMAL : RAT F344/DuCrj
 REPORT TYPE : A1
 SEX : FEMALE

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

PAGE : 15

Organ	Findings	Control 10				20 ppm 11				40 ppm 6				80 ppm 21			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
[Digestive system]																	
Liver		<10>				<11>				< 6>				<21>			
	basophilic cell focus	0	0	0	0	0	1	0	0	1	0	0	0	1	1	0	0
		(0)	(0)	(0)	(0)	(0)	(9)	(0)	(0)	(17)	(0)	(0)	(0)	(5)	(5)	(0)	(0)
		<10>				<11>				< 6>				<21>			
	bile duct hyperplasia	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		(10)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
[Urinary system]																	
kidney		<10>				<11>				< 6>				<21>			
	atrophy	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)	(5)	(0)	(0)	(0)
		<10>				<11>				< 6>				<21>			
	infarct	0	0	0	0	0	0	0	0	2	1	0	0 *	7	2	0	0 *
		(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(33)	(17)	(0)	(0)	(33)	(10)	(0)	(0)
		<10>				<11>				< 6>				<21>			
	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)	(17)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
		<10>				<11>				< 6>				<21>			
	chronic nephropathy	5	0	2	0	2	4	2	0	3	0	0	0	8	1	0	0
		(50)	(0)	(20)	(0)	(18)	(36)	(18)	(0)	(50)	(0)	(0)	(0)	(38)	(5)	(0)	(0)
		<10>				<11>				< 6>				<21>			
	papillary necrosis	0	0	0	0	0	0	0	0	0	2	1	0 *	1	3	13	0 **
		(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(33)	(17)	(0)	(5)	(14)	(62)	(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. : 0284
 ANIMAL : RAT F344/DuCrj
 REPORT TYPE : A1
 SEX : FEMALE

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

PAGE : 16

		Group Name	Control				20 ppm				40 ppm				80 ppm			
		No. of Animals on Study	10				11				6				21			
Organ	Findings	Grade	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
[Urinary system]																		
kidney	mineralization:papilla		<10>				<11>				< 6>				<21>			
			0	0	0	0	3	0	0	0	5	0	0	0 **	15	4	0	0 **
			(0)	(0)	(0)	(0)	(27)	(0)	(0)	(0)	(83)	(0)	(0)	(0)	(71)	(19)	(0)	(0)
	urothelial hyperplasia:pelvis		4	0	0	0	1	0	0	0	3	1	0	0	14	2	0	0
			(40)	(0)	(0)	(0)	(9)	(0)	(0)	(0)	(50)	(17)	(0)	(0)	(67)	(10)	(0)	(0)
	eosinophilic droplet:proximal tubule		0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
			(0)	(0)	(0)	(0)	(9)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
urin bladd	dilatation		<10>				<11>				< 6>				<21>			
			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)
[Endocrine system]																		
pituitary	hyperplasia		<10>				<11>				< 6>				<21>			
			1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
			(10)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(5)	(0)	(0)	(0)
	Rathke pouch		0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0
			(0)	(0)	(0)	(0)	(9)	(0)	(0)	(0)	(17)	(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. : 0284
 ANIMAL : RAT F344/DuCrj
 REPORT TYPE : A1
 SEX : FEMALE

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

PAGE : 17

Organ	Findings	Control 10				20 ppm 11				40 ppm 6				80 ppm 21			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
[Endocrine system]																	
adrenal		<10>				<11>				< 6>				<21>			
	peliosis-like lesion	2 (20)	0 (0)	0 (0)	0 (0)	1 (9)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	7 (33)	0 (0)	1 (5)	0 (0)
	hyperplasia:cortical cell	0 (0)	1 (10)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
	focal fatty change	1 (10)	0 (0)	0 (0)	0 (0)	0 (0)	1 (9)	0 (0)	0 (0)	1 (17)	0 (0)	0 (0)	0 (0)	2 (10)	0 (0)	0 (0)	0 (0)
[Reproductive system]																	
ovary		<10>				<11>				< 6>				<21>			
	atrophy	0 (0)	0 (0)	0 (0)	0 (0)	1 (9)	0 (0)	0 (0)	0 (0)	1 (17)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
	cyst	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1 (9)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
mammary gl		<10>				<11>				< 6>				<21>			
	galactoceles	5 (50)	0 (0)	0 (0)	0 (0)	3 (27)	0 (0)	0 (0)	0 (0)	2 (33)	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. : 0284
 ANIMAL : RAT F344/DuCrj
 REPORT TYPE : A1
 SEX : FEMALE

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

PAGE : 18

Organ	Findings	Control 10				20 ppm 11				40 ppm 6				80 ppm 21			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
[Special sense organs/appendage]																	
eye	cataract	<10>				<11>				< 6>				<21>			
		0	0	0	0	1	0	0	0	0	0	0	0	4	0	0	0
		(0)	(0)	(0)	(0)	(9)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(19)	(0)	(0)	(0)
	keratitis	<10>				<11>				< 6>				<21>			
		1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		(10)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
Harder gl	lymphocytic infiltration	<10>				<11>				< 6>				<21>			
		1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
		(10)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(5)	(0)	(0)	(0)
[Musculoskeletal system]																	
bone	osteosclerosis	<10>				<11>				< 6>				<21>			
		1	0	0	0	1	0	0	0	1	0	0	0	1	0	0	0
		(10)	(0)	(0)	(0)	(9)	(0)	(0)	(0)	(17)	(0)	(0)	(0)	(5)	(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: SACRIFICED ANIMALS
(2-YEAR STUDY)

STUDY NO. : 0284
ANIMAL : RAT F344/DuCrj
REPORT TYPE : A1
SEX : MALE

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

PAGE : 1

Organ	Findings	Group Name No. of Animals on Study Grade				Control 37				20 ppm 39				40 ppm 44				80 ppm 39			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
[Integumentary system/appandage]																					
skin/app		<37>				<39>				<44>				<39>							
	squamous cell 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)	(3)	(0)	(0)	(0)				
	epidermal cyst	2	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0				
		(5)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(2)	(0)	(0)	(0)	(0)	(0)	(0)	(0)				
[Respiratory system]																					
nasal cavit		<37>				<39>				<44>				<39>							
	thrombus	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0				
		(3)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(3)	(0)	(0)	(0)				
	inflammatory infiltration	0	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0				
		(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(14)	(0)	(0)	(0)	(0)	(0)	(0)	(0)				
	eosinophilic change:olfactory epithelium	26	3	0	0	18	0	0	0 **	23	4	0	0	13	1	0	0 **				
		(70)	(8)	(0)	(0)	(46)	(0)	(0)	(0)	(52)	(9)	(0)	(0)	(33)	(3)	(0)	(0)				
	inflammation:foreign body	17	0	0	0	14	0	0	0	4	1	0	0 **	3	0	0	0 **				
		(46)	(0)	(0)	(0)	(36)	(0)	(0)	(0)	(9)	(2)	(0)	(0)	(8)	(0)	(0)	(0)				
	respiratory metaplasia: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 : Number of animals with lesion
(c) c : b / a * 100
Significant difference ; * : P ≤ 0.05 ** : P ≤ 0.01 Test of Chi Square

STUDY NO. : 0284
 ANIMAL : RAT F344/DuCrj
 REPORT TYPE : A1
 SEX : MALE

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

PAGE : 2

		Group Name No. of Animals on Study Grade	Control 37				20 ppm 39				40 ppm 44				80 ppm 39				
Organ_____	Findings_____		1 (%)	2 (%)	3 (%)	4 (%)	1 (%)	2 (%)	3 (%)	4 (%)	1 (%)	2 (%)	3 (%)	4 (%)	1 (%)	2 (%)	3 (%)	4 (%)	
[Respiratory system]																			
nasal cavit			<37>				<39>				<44>				<39>				
	ulcer:respiratory epithelium		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)	0 (0)
lung			<37>				<39>				<44>				<39>				
	congestion		0 (0)	0 (0)	0 (0)	0 (0)	2 (5)	1 (3)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
	hemorrhage		1 (3)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	3 (7)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
	inflammation		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)	0 (0)
	osseous metaplasia		1 (3)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	2 (5)	0 (0)	0 (0)	0 (0)	0 (0)	2 (5)	0 (0)	0 (0)	0 (0)
	bronchiolar-alveolar cell hyperplasia		2 (5)	0 (0)	0 (0)	0 (0)	5 (13)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1 (2)	0 (0)	0 (0)	1 (3)	0 (0)	0 (0)
[Hematopoietic system]																			
bone marrow			<37>				<39>				<44>				<39>				
	granulation		1 (3)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1 (3)	0 (0)	2 (5)	0 (0)	0 (0)	0 (0)	0 (0)	4 (10)	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. : 0284
ANIMAL : RAT F344/DuCrj
REPORT TYPE : A1
SEX : MALE

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

PAGE : 3

Organ	Findings	Group Name No. of Animals on Study Control 37 Grade				20 ppm 39				40 ppm 44				80 ppm 39			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
[Hematopoietic system]																	
bone marrow		<37>				<39>				<44>				<39>			
	increased hematopoiesis	1	0	0	0	2	0	0	0	0	1	0	0	2	0	0	0
		(3)	(0)	(0)	(0)	(5)	(0)	(0)	(0)	(0)	(2)	(0)	(0)	(5)	(0)	(0)	(0)
lymph node		<37>				<39>				<44>				<39>			
	lymphadenitis	1	0	0	0	3	0	0	0	1	0	0	0	1	0	0	0
		(3)	(0)	(0)	(0)	(8)	(0)	(0)	(0)	(2)	(0)	(0)	(0)	(3)	(0)	(0)	(0)
spleen		<37>				<39>				<44>				<39>			
	deposit of hemosiderin	29	0	0	0	33	1	0	0	40	3	0	0 **	33	3	0	0
		(78)	(0)	(0)	(0)	(85)	(3)	(0)	(0)	(91)	(7)	(0)	(0)	(85)	(8)	(0)	(0)
	fibrosis	2	0	0	0	1	1	0	0	2	0	0	0	4	0	0	0
		(5)	(0)	(0)	(0)	(3)	(3)	(0)	(0)	(5)	(0)	(0)	(0)	(10)	(0)	(0)	(0)
	extramedullary hematopoiesis	21	2	1	0	28	1	2	0	36	1	0	0	25	1	1	0
		(57)	(5)	(3)	(0)	(72)	(3)	(5)	(0)	(82)	(2)	(0)	(0)	(64)	(3)	(3)	(0)
[Circulatory system]																	
heart		<37>				<39>				<44>				<39>			
	myocardial fibrosis	15	2	0	0	20	0	0	0	23	0	0	0	3	1	0	0 **
		(41)	(5)	(0)	(0)	(51)	(0)	(0)	(0)	(52)	(0)	(0)	(0)	(8)	(3)	(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 ; * : $P \leq 0.05$ ** : $P \leq 0.01$ Test of Chi Square

STUDY NO. : 0284
 ANIMAL : RAT F344/DuCrj
 REPORT TYPE : A1
 SEX : MALE

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

PAGE : 4

Organ	Findings	Group Name No. of Animals on Study Control 37				20 ppm 39				40 ppm 44				80 ppm 39			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
[Digestive system]																	
oral cavity		<37>				<39>				<44>				<39>			
	squamous cell 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)	(2)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
		<37>				<39>				<44>				<39>			
	epidermal cyst	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)	(3)	(0)	(0)	(0)
tooth		<37>				<39>				<44>				<39>			
	inflammation	7	0	0	0	4	0	0	0	1	0	0	0 *	1	0	0	0
		(19)	(0)	(0)	(0)	(10)	(0)	(0)	(0)	(2)	(0)	(0)	(0)	(3)	(0)	(0)	(0)
tongue		<37>				<39>				<44>				<39>			
	perivascularitis	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)
stomach		<37>				<39>				<44>				<39>			
	basal cell activation	0	0	0	0	1	0	0	0	0	0	0	0	2	0	0	0
		(0)	(0)	(0)	(0)	(3)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(5)	(0)	(0)	(0)
		<37>				<39>				<44>				<39>			
	erosion:forestomach	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)	(3)	(0)	(0)	(0)
		<37>				<39>				<44>				<39>			
	ulcer:forestomach	0	0	1	0	0	0	0	0	0	0	1	0	0	1	0	0
		(0)	(0)	(3)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(2)	(0)	(0)	(3)	(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. : 0284
 ANIMAL : RAT F344/DuCrj
 REPORT TYPE : A1
 SEX : MALE

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

PAGE : 5

Organ	Findings	Control 37				20 ppm 39				40 ppm 44				80 ppm 39			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
[Digestive system]																	
stomach		<37>				<39>				<44>				<39>			
	hyperplasia:forestomach	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
		(3)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(3)	(0)	(0)	(0)
	erosion:glandular stomach	0	0	0	0	0	1	0	0	3	0	0	0	2	0	0	0
		(0)	(0)	(0)	(0)	(0)	(3)	(0)	(0)	(7)	(0)	(0)	(0)	(5)	(0)	(0)	(0)
	ulcer:glandular stomach	0	0	1	0	0	0	0	0	2	0	0	0	0	0	0	0
		(0)	(0)	(3)	(0)	(0)	(0)	(0)	(0)	(5)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
liver		<37>				<39>				<44>				<39>			
	herniation	1	0	0	0	1	0	0	0	0	0	0	0	2	0	0	0
		(3)	(0)	(0)	(0)	(3)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(5)	(0)	(0)	(0)
	granulation	10	1	0	0	7	0	0	0	2	0	0	0 **	2	0	0	0 *
		(27)	(3)	(0)	(0)	(18)	(0)	(0)	(0)	(5)	(0)	(0)	(0)	(5)	(0)	(0)	(0)
	clear cell focus	2	1	0	0	3	0	0	0	2	0	0	0	0	0	0	0
		(5)	(3)	(0)	(0)	(8)	(0)	(0)	(0)	(5)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	acidophilic cell focus	6	1	0	0	8	4	0	0	7	13	0	0 **	10	26	0	0 **
		(16)	(3)	(0)	(0)	(21)	(10)	(0)	(0)	(16)	(30)	(0)	(0)	(26)	(67)	(0)	(0)
	basophilic cell focus	12	4	0	0	8	5	0	0	13	2	0	0	15	2	0	0
		(32)	(11)	(0)	(0)	(21)	(13)	(0)	(0)	(30)	(5)	(0)	(0)	(38)	(5)	(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. : 0284
ANIMAL : RAT F344/DuCrj
REPORT TYPE : A1
SEX : MALE

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

PAGE : 6

Organ	Findings	Group Name No. of Animals on Study Grade	Control 37				20 ppm 39				40 ppm 44				80 ppm 39			
			1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
[Digestive system]																		
liver			<37>				<39>				<44>				<39>			
	mixed cell focus		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)	(0)	(0)	(0)
	spongiosis hepatis		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)
	bile duct hyperplasia		34	0	0	0	35	2	0	0	39	3	0	0	33	0	0	0
			(92)	(0)	(0)	(0)	(90)	(5)	(0)	(0)	(89)	(7)	(0)	(0)	(85)	(0)	(0)	(0)
	biliary cyst		0	0	0	0	1	0	0	0	2	0	0	0	0	0	0	0
			(0)	(0)	(0)	(0)	(3)	(0)	(0)	(0)	(5)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
pancreas			<37>				<39>				<44>				<39>			
	atrophy		7	1	0	0	5	1	0	0	4	1	0	0	4	1	0	0
			(19)	(3)	(0)	(0)	(13)	(3)	(0)	(0)	(9)	(2)	(0)	(0)	(10)	(3)	(0)	(0)
	periarteritis nodosa		0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(5)	(0)	(0)	(0)	(0)	(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)	(3)	(0)	(0)	(0)
[Urinary system]																		
kidney			<37>				<39>				<44>				<39>			
	hyperplasia:tubular epithelial cell		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)

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. : 0284
ANIMAL : RAT F344/DuCrj
REPORT TYPE : A1
SEX : MALE

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

PAGE : 7

Organ	Findings	Group Name No. of Animals on Study Grade	Control 37				20 ppm 39				40 ppm 44				80 ppm 39			
			1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
[Urinary system]																		
kidney			<37>				<39>				<44>				<39>			
	infarct		0	0	0	0	1	0	0	0	5	0	0	0	9	0	0	0 **
			(0)	(0)	(0)	(0)	(3)	(0)	(0)	(0)	(11)	(0)	(0)	(0)	(23)	(0)	(0)	(0)
	basophilic change		0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(3)	(3)	(3)	(0)
	chronic nephropathy		3	6	22	6	1	9	26	3	7	17	19	1 *	16	18	4	0 **
			(8)	(16)	(59)	(16)	(3)	(23)	(67)	(8)	(16)	(39)	(43)	(2)	(41)	(49)	(10)	(0)
	papillary necrosis		0	0	0	0	0	0	0	0	1	0	0	0	9	6	1	0 **
			(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(2)	(0)	(0)	(0)	(23)	(15)	(3)	(0)
	mineralization:papilla		0	0	0	0	6	0	0	0 *	8	0	0	0 *	24	0	0	0 **
			(0)	(0)	(0)	(0)	(15)	(0)	(0)	(0)	(18)	(0)	(0)	(0)	(62)	(0)	(0)	(0)
	urothelial hyperplasia:pelvis		4	0	0	0	14	1	0	0 *	24	0	0	0 **	21	0	0	0 **
			(11)	(0)	(0)	(0)	(36)	(3)	(0)	(0)	(55)	(0)	(0)	(0)	(54)	(0)	(0)	(0)
[Endocrine system]																		
pituitary			<37>				<39>				<44>				<39>			
	hyperplasia		7	1	0	0	4	0	0	0	9	3	0	0	4	0	0	0
			(19)	(3)	(0)	(0)	(10)	(0)	(0)	(0)	(20)	(7)	(0)	(0)	(10)	(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. : 0284
 ANIMAL : RAT F344/DuCrj
 REPORT TYPE : A1
 SEX : MALE

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

PAGE : 8

Organ	Findings	Group Name No. of Animals on Study Control 37				20 ppm 39				40 ppm 44				80 ppm 39			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
[Endocrine system]																	
pituitary		<37>				<39>				<44>				<39>			
	Rathke pouch	1	0	0	0	1	0	0	0	2	0	0	0	6	0	0	0
		(3)	(0)	(0)	(0)	(3)	(0)	(0)	(0)	(5)	(0)	(0)	(0)	(15)	(0)	(0)	(0)
thyroid		<37>				<39>				<44>				<39>			
	ultimibranchial body remanet	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)	(3)	(0)	(0)	(0)
	follicular hyperplasia	0	0	0	0	0	0	0	0	1	0	0	0	5	0	0	0
		(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(2)	(0)	(0)	(0)	(13)	(0)	(0)	(0)
adrenal	C-cell hyperplasia	2	0	0	0	6	0	0	0	2	0	0	0	0	0	0	0
		(5)	(0)	(0)	(0)	(15)	(0)	(0)	(0)	(5)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
		<37>				<39>				<44>				<39>			
	cyst	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)	(5)	(0)	(0)	(0)
	hyperplasia:medulla	3	1	0	0	6	0	0	0	5	0	0	0	4	0	0	0
		(8)	(3)	(0)	(0)	(15)	(0)	(0)	(0)	(11)	(0)	(0)	(0)	(10)	(0)	(0)	(0)
	accessory cortical nodule	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)	(3)	(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 ; * : $P \leq 0.05$ ** : $P \leq 0.01$ Test of Chi Square

STUDY NO. : 0284
 ANIMAL : RAT F344/DuCrj
 REPORT TYPE : A1
 SEX : MALE

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

PAGE : 9

Organ	Findings	Control 37				20 ppm 39				40 ppm 44				80 ppm 39			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
[Endocrine system]																	
adrenal		<37>				<39>				<44>				<39>			
	focal fatty change	3	1	0	0	5	0	0	0	6	1	0	0	2	1	0	0
		(8)	(3)	(0)	(0)	(13)	(0)	(0)	(0)	(14)	(2)	(0)	(0)	(5)	(3)	(0)	(0)
[Reproductive system]																	
testis		<37>				<39>				<44>				<39>			
	atrophy	26	5	0	0	26	10	0	0	30	5	1	0	25	5	0	0
		(70)	(14)	(0)	(0)	(67)	(26)	(0)	(0)	(68)	(11)	(2)	(0)	(64)	(13)	(0)	(0)
	periarteritis nodosa	6	0	0	0	4	0	0	0	0	0	0	0 *	0	0	0	0 *
		(16)	(0)	(0)	(0)	(10)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	interstitial cell hyperplasia	2	0	0	0	0	0	0	0	2	0	0	0	1	0	0	0
		(5)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(5)	(0)	(0)	(0)	(3)	(0)	(0)	(0)
	germ cell necrosis	0	0	0	0	2	0	0	0	0	0	0	0	1	0	0	0
		(0)	(0)	(0)	(0)	(5)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(3)	(0)	(0)	(0)
prostate		<37>				<39>				<44>				<39>			
	inflammation	9	2	0	0	7	2	0	0	9	1	0	0	10	0	0	0
		(24)	(5)	(0)	(0)	(18)	(5)	(0)	(0)	(20)	(2)	(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

STUDY NO. : 0284
 ANIMAL : RAT F344/DuCrj
 REPORT TYPE : A1
 SEX : MALE

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

PAGE : 10

Organ	Findings	Group Name No. of Animals on Study Control 37				20 ppm 39				40 ppm 44				80 ppm 39			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
[Reproductive system]																	
prostate	hyperplasia	<37>				<39>				<44>				<39>			
		8	0	0	0	4	0	0	0	5	0	0	0	1	0	0	0 *
		(22)	(0)	(0)	(0)	(10)	(0)	(0)	(0)	(11)	(0)	(0)	(0)	(3)	(0)	(0)	(0)
mammary gl	galactoceles	<37>				<39>				<44>				<39>			
		8	0	0	0	7	0	0	0	8	0	0	0	0	0	0	0 **
		(22)	(0)	(0)	(0)	(18)	(0)	(0)	(0)	(18)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
[Special sense organs/appendage]																	
eye	cataract	<37>				<39>				<44>				<39>			
		1	0	0	0	1	0	0	0	4	0	0	0	0	0	0	0
		(3)	(0)	(0)	(0)	(3)	(0)	(0)	(0)	(9)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	retinal atrophy	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0
		(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(9)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	keratitis	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)
Harder gl	lymphocytic infiltration	<37>				<39>				<44>				<39>			
		5	0	0	0	5	0	0	0	3	0	0	0	4	0	0	0
		(14)	(0)	(0)	(0)	(13)	(0)	(0)	(0)	(7)	(0)	(0)	(0)	(10)	(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. : 0284
 ANIMAL : RAT F344/DuCrj
 REPORT TYPE : A1
 SEX : MALE

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

PAGE : 11

Organ	Findings	Group Name No. of Animals on Study Control 37				20 ppm 39				40 ppm 44				80 ppm 39			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)

[Special sense organs/appendage]

Harder gl	granulation	<37>				<39>				<44>				<39>			
		1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		(3)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)

[Body cavities]

adipose	granulation	<37>				<39>				<44>				<39>			
		1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		(3)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)

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

(HPT150)

BAISS

APPENDIX L 6

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

STUDY NO. : 0284
 ANIMAL : RAT F344/DuCrj
 REPORT TYPE : A1
 SEX : FEMALE

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

PAGE : 12

Organ	Findings	Group Name No. of Animals on Study Control 40				20 ppm 39				40 ppm 44				80 ppm 29			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
[Integumentary system/appandage]																	
skin/app		<40>				<39>				<44>				<29>			
	inflammation	0	0	0	0	1	0	0	0	0	0	0	0	0	2	0	0
		(0)	(0)	(0)	(0)	(3)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(7)	(0)	(0)
		<40>				<39>				<44>				<29>			
	squamous cell hyperplasia	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)
[Respiratory system]																	
nasal cavit		<40>				<39>				<44>				<29>			
	inflammatory infiltration	3	0	0	0	4	0	0	0	2	0	0	0	0	0	0	0
		(8)	(0)	(0)	(0)	(10)	(0)	(0)	(0)	(5)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
		<40>				<39>				<44>				<29>			
	eosinophilic change:olfactory epithelium	17	2	0	0	14	0	0	0	15	10	1	0	13	2	0	0
		(43)	(5)	(0)	(0)	(36)	(0)	(0)	(0)	(34)	(23)	(2)	(0)	(45)	(7)	(0)	(0)
		<40>				<39>				<44>				<29>			
	inflammation:foreign body	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)	(3)	(0)	(0)	(0)
lung		<40>				<39>				<44>				<29>			
	hemorrhage	2	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
		(5)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(2)	(0)	(0)	(0)	(0)	(0)	(0)	(0)

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

STUDY NO. : 0284
 ANIMAL : RAT F344/DuCrj
 REPORT TYPE : A1
 SEX : FEMALE

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

PAGE : 13

Organ	Findings	Group Name No. of Animals on Study Control 40				20 ppm 39				40 ppm 44				80 ppm 29			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
[Respiratory system]																	
Lung		<40>				<39>				<44>				<29>			
	accumulation of foamy cells	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)	(3)	(0)	(0)	(0)
	bronchiolar-alveolar cell hyperplasia	0	1	0	0	0	0	0	0	3	0	0	0	0	0	0	0
		(0)	(3)	(0)	(0)	(0)	(0)	(0)	(0)	(7)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	inflammation:foreign body	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		(3)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
[Hematopoietic system]																	
bone marrow		<40>				<39>				<44>				<29>			
	granulation	4	0	0	0	4	1	0	0	7	3	0	0	5	2	0	0
		(10)	(0)	(0)	(0)	(10)	(3)	(0)	(0)	(16)	(7)	(0)	(0)	(17)	(7)	(0)	(0)
	increased hematopoiesis	1	0	0	0	1	0	0	0	2	0	0	0	2	2	0	0
		(3)	(0)	(0)	(0)	(3)	(0)	(0)	(0)	(5)	(0)	(0)	(0)	(7)	(7)	(0)	(0)
Lymph node		<40>				<39>				<44>				<29>			
	Lymphadenitis	0	0	0	0	2	0	0	0	4	0	0	0	0	0	0	0
		(0)	(0)	(0)	(0)	(5)	(0)	(0)	(0)	(9)	(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. : 0284
 ANIMAL : RAT F344/DuCrj
 REPORT TYPE : A1
 SEX : FEMALE

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

PAGE : 14

Organ	Findings	Control No. of Animals on Study Grade				20 ppm 39				40 ppm 44				80 ppm 29			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
[Hematopoietic system]																	
spleen		<40>				<39>				<44>				<29>			
	deposit of hemosiderin	34	1	0	0	35	0	0	0	32	6	0	0	20	5	0	0
		(85)	(3)	(0)	(0)	(90)	(0)	(0)	(0)	(73)	(14)	(0)	(0)	(69)	(17)	(0)	(0)
	granulation	0	0	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)
	fibrosis	2	0	0	0	3	0	1	0	0	0	0	0	0	0	0	0
		(5)	(0)	(0)	(0)	(8)	(0)	(3)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	extramedullary hematopoiesis	31	2	2	0	34	0	0	0	33	6	0	0	27	2	0	0
		(78)	(5)	(5)	(0)	(87)	(0)	(0)	(0)	(75)	(14)	(0)	(0)	(93)	(7)	(0)	(0)
[Circulatory system]																	
heart		<40>				<39>				<44>				<29>			
	mineralization	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)
	myocardial fibrosis	8	0	0	0	7	0	0	0	18	1	0	0	10	0	0	0
		(20)	(0)	(0)	(0)	(18)	(0)	(0)	(0)	(41)	(2)	(0)	(0)	(34)	(0)	(0)	(0)
[Digestive system]																	
oral cavity		<40>				<39>				<44>				<29>			
	squamous cell hyperplasia	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0
		(0)	(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 : Number of animals with lesion
 (c) c : b / a * 100
 Significant difference : * : P ≤ 0.05 ** : P ≤ 0.01 Test of Chi Square

STUDY NO. : 0284
ANIMAL : RAT F344/DuCrj
REPORT TYPE : A1
SEX : FEMALE

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

PAGE : 15

Organ	Findings	Group Name No. of Animals on Study Control 40				20 ppm 39				40 ppm 44				80 ppm 29			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
[Digestive system]																	
tooth	inflammation	<40>				<39>				<44>				<29>			
		3	0	0	0	3	0	0	0	0	0	0	0	1	0	0	0
		(8)	(0)	(0)	(0)	(8)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(3)	(0)	(0)	(0)
tongue	mineralization	<40>				<39>				<44>				<29>			
		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)
	perivascularitis	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)
salivary gl	mineralization	<40>				<39>				<44>				<29>			
		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)
stomach	basal cell activation	<40>				<39>				<44>				<29>			
		1	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0
		(3)	(0)	(0)	(0)	(3)	(0)	(0)	(0)	(2)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	erosion:glandular stomach	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
		(3)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(2)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
liver	herniation	<40>				<39>				<44>				<29>			
		2	0	0	0	4	0	0	0	8	0	0	0	1	0	0	0
		(5)	(0)	(0)	(0)	(10)	(0)	(0)	(0)	(18)	(0)	(0)	(0)	(3)	(0)	(0)	(0)

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

STUDY NO. : 0284
 ANIMAL : RAT F344/DuCrj
 REPORT TYPE : A1
 SEX : FEMALE

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

PAGE : 16

Organ	Findings	Group Name No. of Animals on Study Grade				Control 40				20 ppm 39				40 ppm 44				80 ppm 29			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
[Digestive system]																					
Liver		<40>				<39>				<44>				<29>							
	peliosis-like lesion	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)
	necrosis:focal	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)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	fatty change	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)
	fatty change:central	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)	(3)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	granulation	13	4	0	0	17	2	2	0	15	1	0	0	14	5	0	0	0	0	0	0
		(33)	(10)	(0)	(0)	(44)	(5)	(5)	(0)	(34)	(2)	(0)	(0)	(48)	(17)	(0)	(0)	(0)	(0)	(0)	(0)
	clear cell focus	1	0	0	0	0	1	0	0	1	0	0	0	2	0	0	0	0	0	0	0
		(3)	(0)	(0)	(0)	(0)	(3)	(0)	(0)	(2)	(0)	(0)	(0)	(7)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	acidophilic cell focus	0	0	0	0	3	1	0	0	11	11	0	0 **	7	17	0	0 **	0	0	0	0
		(0)	(0)	(0)	(0)	(8)	(3)	(0)	(0)	(25)	(25)	(0)	(0)	(24)	(59)	(0)	(0)	(0)	(0)	(0)	(0)
	basophilic cell focus	4	0	0	0	7	0	0	0	13	5	0	0 **	10	7	0	0 **	0	0	0	0
		(10)	(0)	(0)	(0)	(18)	(0)	(0)	(0)	(30)	(11)	(0)	(0)	(34)	(24)	(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. : 0284
 ANIMAL : RAT F344/DuCrj
 REPORT TYPE : A1
 SEX : FEMALE

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

PAGE : 17

Organ	Findings	Group Name No. of Animals on Study Control 40				20 ppm 39				40 ppm 44				80 ppm 29			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
[Digestive system]																	
Liver		<40>				<39>				<44>				<29>			
	spongiosis hepatitis	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)	(3)	(0)	(0)
	bile duct hyperplasia	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)
	cholangiofibrosis	0	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)
	biliary cyst	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0
		(0)	(0)	(0)	(0)	(3)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(3)	(0)	(0)	(0)
pancreas		<40>				<39>				<44>				<29>			
	atrophy	0	0	0	0	2	0	0	0	4	0	0	0	1	0	1	0
		(0)	(0)	(0)	(0)	(5)	(0)	(0)	(0)	(9)	(0)	(0)	(0)	(3)	(0)	(3)	(0)
	periarteritis nodosa	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)	(3)	(0)	(0)	(0)
[Urinary system]																	
kidney		<40>				<39>				<44>				<29>			
	infarct	0	0	0	0	2	0	1	0	13	15	4	0 **	14	5	1	0 **
		(0)	(0)	(0)	(0)	(5)	(0)	(3)	(0)	(30)	(34)	(9)	(0)	(48)	(17)	(3)	(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. : 0284
ANIMAL : RAT F344/DuCrj
REPORT TYPE : A1
SEX : FEMALE

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

PAGE : 18

Organ	Findings	Group Name No. of Animals on Study Grade				Control 40				20 ppm 39				40 ppm 44				80 ppm 29			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
[Urinary system]																					
kidney		<40>				<39>				<44>				<29>							
	cyst	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)
	basophilic change	0	0	0	0	0	0	0	0	1	1	1	0	0	1	0	0	0	1	0	0
		(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(2)	(2)	(2)	(0)	(0)	(3)	(0)	(0)	(0)	(0)	(0)	(0)
	chronic nephropathy	12	13	10	0	6	11	19	1	28	3	8	1 **	23	3	1	0 **	23	3	1	0 **
		(30)	(33)	(25)	(0)	(15)	(28)	(49)	(3)	(64)	(7)	(18)	(2)	(79)	(10)	(3)	(0)	(79)	(10)	(3)	(0)
	papillary necrosis	0	0	0	0	1	0	0	0	11	14	7	0 **	3	7	15	0 **	3	7	15	0 **
		(0)	(0)	(0)	(0)	(3)	(0)	(0)	(0)	(25)	(32)	(16)	(0)	(10)	(24)	(52)	(0)	(10)	(24)	(52)	(0)
	mineralization:papilla	0	0	0	0	10	0	0	0 **	27	3	1	0 **	18	10	0	0 **	18	10	0	0 **
		(0)	(0)	(0)	(0)	(26)	(0)	(0)	(0)	(61)	(7)	(2)	(0)	(62)	(34)	(0)	(0)	(62)	(34)	(0)	(0)
	urothelial hyperplasia:pelvis	15	0	0	0	21	0	0	0	29	8	1	0 **	20	9	0	0 **	20	9	0	0 **
		(38)	(0)	(0)	(0)	(54)	(0)	(0)	(0)	(66)	(18)	(2)	(0)	(69)	(31)	(0)	(0)	(69)	(31)	(0)	(0)

[Endocrine system]

pituitary		<40>				<39>				<42>				<29>							
	cyst	0	0	0	0	4	2	0	0 *	4	0	0	0	2	0	0	0	2	0	0	0
		(0)	(0)	(0)	(0)	(10)	(5)	(0)	(0)	(10)	(0)	(0)	(0)	(7)	(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

STUDY NO. : 0284
 ANIMAL : RAT F344/DuCrj
 REPORT TYPE : A1
 SEX : FEMALE

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

PAGE : 19

Organ	Findings	Group Name No. of Animals on Study Control 40				20 ppm 39				40 ppm 44				80 ppm 29			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
[Endocrine system]																	
pituitary		<40>				<39>				<42>				<29>			
	hyperplasia	3 (8)	3 (8)	0 (0)	0 (0)	8 (21)	1 (3)	0 (0)	0 (0)	4 (10)	0 (0)	0 (0)	0 (0)	3 (10)	1 (3)	0 (0)	0 (0)
	Rathke pouch	4 (10)	0 (0)	0 (0)	0 (0)	3 (8)	0 (0)	0 (0)	0 (0)	3 (7)	0 (0)	0 (0)	0 (0)	1 (3)	0 (0)	0 (0)	0 (0)
thyroid		<40>				<39>				<44>				<29>			
	ultimibranhial body remanet	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	2 (5)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
	follicular hyperplasia	0 (0)	0 (0)	0 (0)	0 (0)	1 (3)	0 (0)	0 (0)	0 (0)	1 (2)	0 (0)	0 (0)	0 (0)	2 (7)	0 (0)	0 (0)	0 (0)
	C-cell hyperplasia	4 (10)	2 (5)	0 (0)	0 (0)	2 (5)	0 (0)	0 (0)	0 (0)	2 (5)	0 (0)	0 (0)	0 (0)	0 (0)	3 (10)	0 (0)	0 (0)
parathyroid		<40>				<39>				<44>				<29>			
	hyperplasia	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)	0 (0)	0 (0)	0 (0)
adrenal		<40>				<39>				<44>				<29>			
	thrombus	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)

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. : 0284
ANIMAL : RAT F344/DuCrj
REPORT TYPE : A1
SEX : FEMALE

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

PAGE : 20

Organ	Findings	Group Name No. of Animals on Study Grade	Control 40				20 ppm 39				40 ppm 44				80 ppm 29			
			1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)

[Endocrine system]

adrenal		<40>					<39>					<44>				<29>			
	peliosis-like lesion	24 (60)	0 (0)	0 (0)	0 (0)	0 (0)	27 (69)	0 (0)	0 (0)	0 (0)	0 (0)	22 (50)	1 (2)	0 (0)	0 (0)	17 (59)	2 (7)	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)	1 (2)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
	cyst	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1 (3)	0 (0)	0 (0)	0 (0)
	hyperplasia:cortical cell	1 (3)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	3 (7)	0 (0)	0 (0)	0 (0)	1 (3)	1 (3)	0 (0)	0 (0)	0 (0)
	hyperplasia:medulla	2 (5)	0 (0)	0 (0)	0 (0)	0 (0)	2 (5)	0 (0)	0 (0)	0 (0)	3 (7)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
	focal fatty change	1 (3)	1 (3)	0 (0)	0 (0)	0 (0)	8 (21)	0 (0)	0 (0)	0 (0)	0 (0)	1 (2)	2 (5)	0 (0)	0 (0)	2 (7)	0 (0)	0 (0)	0 (0)

[Reproductive system]

ovary		<40>					<39>					<44>				<29>			
	atrophy	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)	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 ; * : $P \leq 0.05$ ** : $P \leq 0.01$ Test of Chi Square

STUDY NO. : 0284
ANIMAL : RAT F344/DuCrj
REPORT TYPE : A1
SEX : FEMALE

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

PAGE : 21

Organ	Findings	Group Name No. of Animals on Study Control 40				20 ppm 39				40 ppm 44				80 ppm 29			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
		(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
[Reproductive system]																	
ovary	cyst	<40>				<39>				<44>				<29>			
		1	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0
		(3)	(0)	(0)	(0)	(3)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(3)	(0)	(0)	(0)
uterus	dilatation	<40>				<39>				<44>				<29>			
		0	0	0	0	0	1	0	0	2	0	0	0	0	0	0	0
		(0)	(0)	(0)	(0)	(0)	(3)	(0)	(0)	(5)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
mammary gl	hyperplasia	<40>				<39>				<44>				<29>			
		0	0	0	0	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)
	galactocoele	7	0	0	0	11	0	0	0	3	0	0	0	1	0	0	0
		(18)	(0)	(0)	(0)	(28)	(0)	(0)	(0)	(7)	(0)	(0)	(0)	(3)	(0)	(0)	(0)
[Special sense organs/appendage]																	
eye	cataract	<40>				<39>				<44>				<29>			
		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)
	retinal atrophy	<40>				<39>				<44>				<29>			
		0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0
		(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(5)	(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 : * : $P \leq 0.05$ ** : $P \leq 0.01$ Test of Chi Square

STUDY NO. : 0284
 ANIMAL : RAT F344/DuCrj
 REPORT TYPE : A1
 SEX : FEMALE

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

PAGE : 22

Organ	Findings	Group Name No. of Animals on Study Grade	Control 40				20 ppm 39				40 ppm 44				80 ppm 29			
			1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
			(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
[Special sense organs/appendage]																		
eye	keratitis		<40>				<39>				<44>				<29>			
			1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
			(3)	(0)	(0)	(0)	(3)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
Harder gl	Lymphocytic infiltration		<40>				<39>				<44>				<29>			
			9	0	0	0	6	0	0	0	3	0	0	0	1	0	0	0
			(23)	(0)	(0)	(0)	(15)	(0)	(0)	(0)	(7)	(0)	(0)	(0)	(3)	(0)	(0)	(0)
[Musculoskeletal system]																		
bone	osteosclerosis		<40>				<39>				<44>				<29>			
			10	0	0	0	4	0	0	0	7	0	0	0	0	0	0	0 *
			(25)	(0)	(0)	(0)	(10)	(0)	(0)	(0)	(16)	(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 ; * : $P \leq 0.05$ ** : $P \leq 0.01$ 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. : 0284
 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	20 ppm	40 ppm	80 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		2	1	0	2
	NO. OF ANIMALS WITH TUMORS		2	1	0	1
	NO. OF ANIMALS WITH SINGLE TUMORS		2	0	0	1
	NO. OF ANIMALS WITH MULTIPLE TUMORS		0	1	0	0
	NO. OF BENIGN TUMORS		2	1	0	0
	NO. OF MALIGNANT TUMORS		0	1	0	1
	NO. OF TOTAL TUMORS		2	2	0	1
79 - 104	NO. OF EXAMINED ANIMALS		11	10	6	9
	NO. OF ANIMALS WITH TUMORS		11	10	6	9
	NO. OF ANIMALS WITH SINGLE TUMORS		5	3	0	1
	NO. OF ANIMALS WITH MULTIPLE TUMORS		6	7	6	8
	NO. OF BENIGN TUMORS		19	17	10	14
	NO. OF MALIGNANT TUMORS		4	8	2	7
	NO. OF TOTAL TUMORS		23	25	12	21
105 - 105	NO. OF EXAMINED ANIMALS		37	39	44	39
	NO. OF ANIMALS WITH TUMORS		37	39	44	39
	NO. OF ANIMALS WITH SINGLE TUMORS		7	10	12	9
	NO. OF ANIMALS WITH MULTIPLE TUMORS		30	29	32	30
	NO. OF BENIGN TUMORS		79	83	82	82
	NO. OF MALIGNANT TUMORS		8	5	7	6
	NO. OF TOTAL TUMORS		87	88	89	88

STUDY NO. : 0284
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	20 ppm	40 ppm	80 ppm
0 - 105	NO. OF EXAMINED ANIMALS		50	50	50	50
	NO. OF ANIMALS WITH TUMORS		50	50	50	49
	NO. OF ANIMALS WITH SINGLE TUMORS		14	13	12	11
	NO. OF ANIMALS WITH MULTIPLE TUMORS		36	37	38	38
	NO. OF BENIGN TUMORS		100	101	92	96
	NO. OF MALIGNANT TUMORS		12	14	9	14
	NO. OF TOTAL TUMORS		112	115	101	110

(HPT070)

BAIS3

APPENDIX M 2

NUMBER OF ANIMALS WITH TUMORS AND NUMBER OF TUMORS-TIME RELATED
RAT: FEMALE
(2-YEAR STUDY)

STUDY NO. : 0284
 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	20 ppm	40 ppm	80 ppm
0 - 52	NO. OF EXAMINED ANIMALS		1	1	0	0
	NO. OF ANIMALS WITH TUMORS		1	1	0	0
	NO. OF ANIMALS WITH SINGLE TUMORS		1	1	0	0
	NO. OF ANIMALS WITH MULTIPLE TUMORS		0	0	0	0
	NO. OF BENIGN TUMORS		0	1	0	0
	NO. OF MALIGNANT TUMORS		1	0	0	0
	NO. OF TOTAL TUMORS		1	1	0	0
53 - 78	NO. OF EXAMINED ANIMALS		1	1	1	8
	NO. OF ANIMALS WITH TUMORS		1	1	1	2
	NO. OF ANIMALS WITH SINGLE TUMORS		1	1	1	2
	NO. OF ANIMALS WITH MULTIPLE TUMORS		0	0	0	0
	NO. OF BENIGN TUMORS		0	1	1	2
	NO. OF MALIGNANT TUMORS		1	0	0	0
	NO. OF TOTAL TUMORS		1	1	1	2
79 - 104	NO. OF EXAMINED ANIMALS		8	9	5	13
	NO. OF ANIMALS WITH TUMORS		7	9	5	6
	NO. OF ANIMALS WITH SINGLE TUMORS		3	6	5	3
	NO. OF ANIMALS WITH MULTIPLE TUMORS		4	3	0	3
	NO. OF BENIGN TUMORS		10	6	4	5
	NO. OF MALIGNANT TUMORS		5	6	1	5
	NO. OF TOTAL TUMORS		15	12	5	10
105 - 105	NO. OF EXAMINED ANIMALS		40	39	44	29
	NO. OF ANIMALS WITH TUMORS		31	26	29	18
	NO. OF ANIMALS WITH SINGLE TUMORS		16	14	23	10
	NO. OF ANIMALS WITH MULTIPLE TUMORS		15	12	6	8
	NO. OF BENIGN TUMORS		48	42	33	26
	NO. OF MALIGNANT TUMORS		3	2	3	4
	NO. OF TOTAL TUMORS		51	44	36	30

STUDY NO. : 0284
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	20 ppm	40 ppm	80 ppm
0 - 105	NO. OF EXAMINED ANIMALS		50	50	50	50
	NO. OF ANIMALS WITH TUMORS		40	37	35	26
	NO. OF ANIMALS WITH SINGLE TUMORS		21	22	29	15
	NO. OF ANIMALS WITH MULTIPLE TUMORS		19	15	6	11
	NO. OF BENIGN TUMORS		58	50	38	33
	NO. OF MALIGNANT TUMORS		10	8	4	9
	NO. OF TOTAL TUMORS		68	58	42	42

(HPT070)

BAIS3

APPENDIX N 1

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

STUDY NO. : 0284
 ANIMAL : RAT F344/DuCrj
 REPORT TYPE : A1
 SEX : MALE

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

PAGE : 1

Organ	Findings	Group Name No. of animals on Study	Control 50	20 ppm 50	40 ppm 50	80 ppm 50
[Integumentary system/appandage]						
skin/app			<50>	<50>	<50>	<50>
	squamous cell papilloma		1 (2%)	0 (0%)	0 (0%)	0 (0%)
	trichoepithelioma		0 (0%)	1 (2%)	0 (0%)	0 (0%)
	keratoacanthoma		1 (2%)	0 (0%)	0 (0%)	2 (4%)
	sebaceous adenoma		1 (2%)	2 (4%)	0 (0%)	1 (2%)
	squamous cell carcinoma		1 (2%)	0 (0%)	1 (2%)	1 (2%)
subcutis			<50>	<50>	<50>	<50>
	fibroma		5 (10%)	7 (14%)	5 (10%)	4 (8%)
	lipoma		1 (2%)	1 (2%)	2 (4%)	0 (0%)
	fibrosarcoma		0 (0%)	2 (4%)	0 (0%)	0 (0%)
	osteosarcoma		0 (0%)	1 (2%)	0 (0%)	1 (2%)
	schwannoma:malignant		0 (0%)	1 (2%)	0 (0%)	0 (0%)
[Respiratory system]						
nasal cavit			<50>	<50>	<50>	<50>
	adenoma		0 (0%)	0 (0%)	0 (0%)	1 (2%)
lung			<50>	<50>	<50>	<50>
	bronchiolar-alveolar adenoma		3 (6%)	3 (6%)	3 (6%)	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. : 0284
ANIMAL : RAT F344/DuCrj
REPORT TYPE : A1
SEX : MALE

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

PAGE : 2

Organ	Findings	Group Name No. of animals on Study	Control 50	20 ppm 50	40 ppm 50	80 ppm 50
[Respiratory system]						
lung	squamous cell carcinoma		<50> 0 (0%)	<50> 0 (0%)	<50> 0 (0%)	<50> 1 (2%)
	bronchiolar-alveolar carcinoma		0 (0%)	3 (6%)	0 (0%)	0 (0%)
[Hematopoietic system]						
bone marrow	histiocytic sarcoma		<50> 0 (0%)	<50> 0 (0%)	<50> 2 (4%)	<50> 1 (2%)
lymph node	histiocytic sarcoma		<50> 0 (0%)	<50> 1 (2%)	<50> 0 (0%)	<50> 0 (0%)
thymus	thymoma:benign		<50> 1 (2%)	<50> 0 (0%)	<50> 0 (0%)	<50> 0 (0%)
spleen	fibrosarcoma		<50> 0 (0%)	<50> 0 (0%)	<50> 0 (0%)	<50> 1 (2%)
	histiocytic sarcoma		0 (0%)	0 (0%)	1 (2%)	1 (2%)
	mononuclear cell leukemia		5 (10%)	3 (6%)	1 (2%)	1 (2%)
[Digestive system]						
oral cavity	squamous cell papilloma		<50> 0 (0%)	<50> 0 (0%)	<50> 0 (0%)	<50> 1 (2%)
liver	hemangioma		<50> 0 (0%)	<50> 0 (0%)	<50> 1 (2%)	<50> 0 (0%)
	hepatocellular adenoma		0 (0%)	0 (0%)	0 (0%)	3 (6%)

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

STUDY NO. : 0284
ANIMAL : RAT F344/DuCrj
REPORT TYPE : A1
SEX : MALE

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

PAGE : 3

Organ	Findings	Group Name No. of animals on Study	Control 50	20 ppm 50	40 ppm 50	80 ppm 50
[Digestive system]						
Liver			<50>	<50>	<50>	<50>
	hepatocellular carcinoma		0 (0%)	0 (0%)	0 (0%)	1 (2%)
pancreas			<50>	<50>	<50>	<50>
	islet cell adenoma		1 (2%)	3 (6%)	1 (2%)	2 (4%)
	islet cell adenocarcinoma		0 (0%)	1 (2%)	0 (0%)	1 (2%)
[Urinary system]						
kidney			<50>	<50>	<50>	<50>
	transitional cell papilloma		0 (0%)	0 (0%)	1 (2%)	0 (0%)
[Endocrine system]						
pituitary			<50>	<50>	<50>	<50>
	adenoma		33 (66%)	21 (42%)	25 (50%)	21 (42%)
thyroid			<50>	<50>	<50>	<50>
	C-cell adenoma		5 (10%)	7 (14%)	5 (10%)	3 (6%)
	follicular adenoma		0 (0%)	1 (2%)	0 (0%)	0 (0%)
	C-cell carcinoma		2 (4%)	0 (0%)	0 (0%)	0 (0%)
	follicular adenocarcinoma		2 (4%)	0 (0%)	1 (2%)	0 (0%)
adrenal			<50>	<50>	<50>	<50>
	pheochromocytoma		8 (16%)	8 (16%)	4 (8%)	6 (12%)
	cortical adenoma		0 (0%)	0 (0%)	0 (0%)	1 (2%)

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

STUDY NO. : 0284
 ANIMAL : RAT F344/DuCrj
 REPORT TYPE : A1
 SEX : MALE

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

PAGE : 4

Organ_____	Findings_____	Group Name No. of animals on Study	Control 50	20 ppm 50	40 ppm 50	80 ppm 50
[Endocrine system]						
adrenal	pheochromocytoma:malignant		<50> 0 (0%)	<50> 0 (0%)	<50> 1 (2%)	<50> 0 (0%)
[Reproductive system]						
testis	interstitial cell tumor		<50> 37 (74%)	<50> 45 (90%)	<50> 43 (86%)	<50> 44 (88%)
mammary gl	fibroadenoma		<50> 1 (2%)	<50> 1 (2%)	<50> 0 (0%)	<50> 0 (0%)
prep/cli gl	adenoma		<50> 2 (4%)	<50> 1 (2%)	<50> 0 (0%)	<50> 3 (6%)
[Nervous system]						
brain	glioma:benign		<50> 0 (0%)	<50> 0 (0%)	<50> 2 (4%)	<50> 0 (0%)
	malignant reticulosis		<50> 0 (0%)	<50> 0 (0%)	<50> 0 (0%)	<50> 1 (2%)
[Special sense organs/appendage]						
Zymbal gl	adenoma		<50> 0 (0%)	<50> 0 (0%)	<50> 0 (0%)	<50> 2 (4%)
[Musculoskeletal system]						
bone	osteosarcoma		<50> 0 (0%)	<50> 1 (2%)	<50> 0 (0%)	<50> 0 (0%)
vertebra	chordoma		<50> 0 (0%)	<50> 0 (0%)	<50> 0 (0%)	<50> 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. : 0284
 ANIMAL : RAT F344/DuCrj
 REPORT TYPE : A1
 SEX : MALE

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

PAGE : 5

Organ	Findings	Group Name No. of animals on Study	Control 50	20 ppm 50	40 ppm 50	80 ppm 50
[Body cavities]						
mediastinum			<50>	<50>	<50>	<50>
	schwannoma:malignant		0 (0%)	0 (0%)	0 (0%)	1 (2%)
peritoneum			<50>	<50>	<50>	<50>
	mesothelioma		2 (4%)	1 (2%)	0 (0%)	2 (4%)
retroperit			<50>	<50>	<50>	<50>
	schwannoma:malignant		0 (0%)	0 (0%)	0 (0%)	1 (2%)
	sarcoma:NOS		0 (0%)	0 (0%)	1 (2%)	0 (0%)
	teratoma:malignant		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

(HPT085)

BAIS3

APPENDIX N 2

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

STUDY NO. : 0284
 ANIMAL : RAT F344/DuCrj
 REPORT TYPE : A1
 SEX : FEMALE

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

PAGE : 6

Organ	Findings	Group Name No. of animals on Study	Control 50	20 ppm 50	40 ppm 50	80 ppm 50
[Integumentary system/appandage]						
skin/app		<50>	<50>	<50>	<50>	
	squamous cell papilloma	0 (0%)	0 (0%)	0 (0%)	1 (2%)	
	trichoepithelioma	1 (2%)	0 (0%)	0 (0%)	0 (0%)	
	keratoacanthoma	1 (2%)	0 (0%)	0 (0%)	0 (0%)	
	sebaceous adenoma	1 (2%)	0 (0%)	0 (0%)	0 (0%)	
	squamous cell carcinoma	1 (2%)	0 (0%)	0 (0%)	0 (0%)	
subcutis		<50>	<50>	<50>	<50>	
	fibroma	1 (2%)	0 (0%)	0 (0%)	0 (0%)	
	fibrosarcoma	0 (0%)	1 (2%)	0 (0%)	0 (0%)	
	sarcoma:NOS	1 (2%)	0 (0%)	0 (0%)	1 (2%)	
[Respiratory system]						
nasal cavit		<50>	<50>	<50>	<50>	
	adenoma	0 (0%)	1 (2%)	0 (0%)	0 (0%)	
lung		<50>	<50>	<50>	<50>	
	bronchiolar-alveolar adenoma	1 (2%)	0 (0%)	1 (2%)	0 (0%)	
	bronchiolar-alveolar carcinoma	0 (0%)	1 (2%)	0 (0%)	0 (0%)	
[Hematopoietic system]						
lymph node		<50>	<50>	<50>	<50>	
	malignant lymphoma	1 (2%)	0 (0%)	0 (0%)	2 (4%)	

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

STUDY NO. : 0284
 ANIMAL : RAT F344/DuCrj
 REPORT TYPE : A1
 SEX : FEMALE

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

PAGE : 7

Organ	Findings	Group Name No. of animals on Study	Control 50	20 ppm 50	40 ppm 50	80 ppm 50
[Hematopoietic system]						
thymus			<50>	<50>	<50>	<50>
	thymoma:benign		0 (0%)	0 (0%)	0 (0%)	1 (2%)
spleen			<50>	<50>	<50>	<50>
	mononuclear cell leukemia		6 (12%)	3 (6%)	1 (2%)	1 (2%)
[Digestive system]						
large intes			<50>	<50>	<50>	<50>
	fibrosarcoma		0 (0%)	0 (0%)	0 (0%)	1 (2%)
liver			<50>	<50>	<50>	<50>
	hepatocellular adenoma		1 (2%)	0 (0%)	3 (6%)	4 (8%)
	cholangiocellular adenoma		2 (4%)	0 (0%)	0 (0%)	0 (0%)
	hepatocellular carcinoma		0 (0%)	0 (0%)	0 (0%)	4 (8%)
pancreas			<50>	<50>	<50>	<50>
	islet cell adenoma		1 (2%)	0 (0%)	0 (0%)	0 (0%)
	islet cell adenocarcinoma		0 (0%)	0 (0%)	1 (2%)	0 (0%)
[Urinary system]						
kidney			<50>	<50>	<50>	<50>
	transitional cell papilloma		0 (0%)	0 (0%)	1 (2%)	0 (0%)
	renal cell adenoma		0 (0%)	1 (2%)	0 (0%)	0 (0%)
[Endocrine system]						
pituitary			<50>	<50>	<48>	<50>
	adenoma		23 (46%)	26 (52%)	23 (48%)	16 (32%)

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

STUDY NO. : 0284
ANIMAL : RAT F344/DuCrj
REPORT TYPE : A1
SEX : FEMALE

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

PAGE : 8

Organ	Findings	Group Name No. of animals on Study	Control 50	20 ppm 50	40 ppm 50	80 ppm 50
[Endocrine system]						
thyroid	C-cell adenoma		<50> 7 (14%)	<50> 2 (4%)	<50> 1 (2%)	<50> 2 (4%)
	follicular adenoma		0 (0%)	0 (0%)	0 (0%)	2 (4%)
adrenal	pheochromocytoma		<50> 1 (2%)	<50> 3 (6%)	<50> 0 (0%)	<50> 0 (0%)
	pheochromocytoma:malignant		0 (0%)	1 (2%)	1 (2%)	0 (0%)
[Reproductive system]						
ovary	sertoli cell tumor		<50> 0 (0%)	<50> 1 (2%)	<50> 0 (0%)	<50> 0 (0%)
uterus	papillary adenoma		<50> 0 (0%)	<50> 1 (2%)	<50> 2 (4%)	<50> 0 (0%)
	endometrial stromal polyp		7 (14%)	6 (12%)	5 (10%)	4 (8%)
	adenocarcinoma		0 (0%)	1 (2%)	0 (0%)	0 (0%)
	schwannoma:malignant		0 (0%)	1 (2%)	0 (0%)	0 (0%)
mammary gl	fibroadenoma		<50> 9 (18%)	<50> 8 (16%)	<50> 0 (0%)	<50> 2 (4%)
	adenocarcinoma		1 (2%)	0 (0%)	0 (0%)	0 (0%)
prep/cli gl	adenoma		<50> 2 (4%)	<50> 1 (2%)	<50> 2 (4%)	<50> 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. : 0284
ANIMAL : RAT F344/DuCrj
REPORT TYPE : A1
SEX : FEMALE

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

PAGE : 9

Organ	Findings	Group Name No. of animals on Study	Control 50	20 ppm 50	40 ppm 50	80 ppm 50
[Body cavities]						
retroperit	schwannoma:malignant		<50> 0 (0%)	<50> 0 (0%)	<50> 1 (2%)	<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)

BA1S3

APPENDIX O 1

NEOPLASTIC LESIONS - INCIDENCE AND STATISTICAL ANALYSIS, RAT: MALE

(2-YEAR STUDY)

STUDY No. : 0284
ANIMAL : RAT F344/DuCrj
SEX : MALE

NEOPLASTIC LESIONS-INCIDENCE AND STATISTICAL ANALYSIS

PAGE : 1

Group Name	Control	20 ppm	40 ppm	80 ppm
SITE : subcutis TUMOR : fibroma				
Tumor rate				
Overall rates(a)	5/50(10.0)	7/50(14.0)	5/50(10.0)	4/50(8.0)
Adjusted rates(b)	10.81	15.56	9.09	10.26
Terminal rates(c)	4/37(10.8)	6/39(15.4)	4/44(9.1)	4/39(10.3)
Statistical analysis				
Peto test				
Standard method(d)	P = 0.7319			
Prevalence method(d)	P = 0.6208			
Combined analysis(d)	P = 0.7014			
Cochran-Armitage test(e)	P = 0.5587			
Fisher Exact test(e)		P = 0.3798	P = 0.3703	P = 0.5000
SITE : subcutis TUMOR : fibroma, fibrosarcoma				
Tumor rate				
Overall rates(a)	5/50(10.0)	8/50(16.0)	5/50(10.0)	4/50(8.0)
Adjusted rates(b)	10.81	15.91	9.09	10.26
Terminal rates(c)	4/37(10.8)	6/39(15.4)	4/44(9.1)	4/39(10.3)
Statistical analysis				
Peto test				
Standard method(d)	P = 0.7997			
Prevalence method(d)	P = 0.6201			
Combined analysis(d)	P = 0.7367			
Cochran-Armitage test(e)	P = 0.4917			
Fisher Exact test(e)		P = 0.2768	P = 0.3703	P = 0.5000
SITE : lung TUMOR : bronchiolar-alveolar adenoma				
Tumor rate				
Overall rates(a)	3/50(6.0)	3/50(6.0)	3/50(6.0)	1/50(2.0)
Adjusted rates(b)	8.11	7.69	6.82	2.56
Terminal rates(c)	3/37(8.1)	3/39(7.7)	3/44(6.8)	1/39(2.6)
Statistical analysis				
Peto test				
Standard method(d)	P = -----			
Prevalence method(d)	P = 0.8574			
Combined analysis(d)	P = -----			
Cochran-Armitage test(e)	P = 0.3236			
Fisher Exact test(e)		P = 0.3389	P = 0.3389	P = 0.3087

STUDY No. : 0284
ANIMAL : RAT F344/DuCrj
SEX : MALE

NEOPLASTIC LESIONS-INCIDENCE AND STATISTICAL ANALYSIS

PAGE : 2

Group Name	Control	20 ppm	40 ppm	80 ppm
SITE : lung TUMOR : bronchiolar-alveolar carcinoma				
Tumor rate				
Overall rates(a)	0/50(0.0)	3/50(6.0)	0/50(0.0)	0/50(0.0)
Adjusted rates(b)	0.0	7.14	0.0	0.0
Terminal rates(c)	0/37(0.0)	2/39(5.1)	0/44(0.0)	0/39(0.0)
Statistical analysis				
Peto test				
Standard method(d)	P = -----			
Prevalence method(d)	P = 0.7985			
Combined analysis(d)	P = -----			
Cochran-Armitage test(e)	P = 0.3762			
Fisher Exact test(e)		P = 0.1212	P = 0.5000	P = 0.5000
SITE : lung TUMOR : bronchiolar-alveolar adenoma,bronchiolar-alveolar carcinoma				
Tumor rate				
Overall rates(a)	3/50(6.0)	5/50(10.0)	3/50(6.0)	1/50(2.0)
Adjusted rates(b)	8.11	11.90	6.82	2.56
Terminal rates(c)	3/37(8.1)	4/39(10.3)	3/44(6.8)	1/39(2.6)
Statistical analysis				
Peto test				
Standard method(d)	P = -----			
Prevalence method(d)	P = 0.8875			
Combined analysis(d)	P = -----			
Cochran-Armitage test(e)	P = 0.2271			
Fisher Exact test(e)		P = 0.3575	P = 0.3389	P = 0.3087
SITE : spleen TUMOR : mononuclear cell leukemia				
Tumor rate				
Overall rates(a)	5/50(10.0)	3/50(6.0)	1/50(2.0)	1/50(2.0)
Adjusted rates(b)	5.41	2.56	2.27	0.0
Terminal rates(c)	2/37(5.4)	1/39(2.6)	1/44(2.3)	0/39(0.0)
Statistical analysis				
Peto test				
Standard method(d)	P = 0.8955			
Prevalence method(d)	P = 0.9285			
Combined analysis(d)	P = 0.9745			
Cochran-Armitage test(e)	P = 0.0622			
Fisher Exact test(e)		P = 0.3575	P = 0.1022	P = 0.1022

STUDY No. : 0284
ANIMAL : RAT F344/DuCrj
SEX : MALE

NEOPLASTIC LESIONS-INCIDENCE AND STATISTICAL ANALYSIS

PAGE : 3

Group Name	Control	20 ppm	40 ppm	80 ppm
SITE : Liver TUMOR : hepatocellular adenoma				
Tumor rate				
Overall rates(a)	0/50(0.0)	0/50(0.0)	0/50(0.0)	3/50(6.0)
Adjusted rates(b)	0.0	0.0	0.0	7.69
Terminal rates(c)	0/37(0.0)	0/39(0.0)	0/44(0.0)	3/39(7.7)
Statistical analysis				
Peto test				
Standard method(d)	P = -----			
Prevalence method(d)	P = 0.0038**?			
Combined analysis(d)	P = -----			
Cochran-Armitage test(e)	P = 0.0079**			
Fisher Exact test(e)		P = 0.5000	P = 0.5000	P = 0.1212
SITE : Liver TUMOR : hepatocellular adenoma,hepatocellular carcinoma				
Tumor rate				
Overall rates(a)	0/50(0.0)	0/50(0.0)	0/50(0.0)	4/50(8.0)
Adjusted rates(b)	0.0	0.0	0.0	10.26
Terminal rates(c)	0/37(0.0)	0/39(0.0)	0/44(0.0)	4/39(10.3)
Statistical analysis				
Peto test				
Standard method(d)	P = -----			
Prevalence method(d)	P = 0.0009**?			
Combined analysis(d)	P = -----			
Cochran-Armitage test(e)	P = 0.0021**			
Fisher Exact test(e)		P = 0.5000	P = 0.5000	P = 0.0587
SITE : pancreas TUMOR : islet cell adenoma				
Tumor rate				
Overall rates(a)	1/50(2.0)	3/50(6.0)	1/50(2.0)	2/50(4.0)
Adjusted rates(b)	2.70	7.69	2.27	5.13
Terminal rates(c)	1/37(2.7)	3/39(7.7)	1/44(2.3)	2/39(5.1)
Statistical analysis				
Peto test				
Standard method(d)	P = -----			
Prevalence method(d)	P = 0.4343			
Combined analysis(d)	P = -----			
Cochran-Armitage test(e)	P = 0.8453			
Fisher Exact test(e)		P = 0.3087	P = 0.2475	P = 0.5000

STUDY No. : 0284
ANIMAL : RAT F344/DuCrj
SEX : MALE

NEOPLASTIC LESIONS-INCIDENCE AND STATISTICAL ANALYSIS

PAGE : 4

Group Name	Control	20 ppm	40 ppm	80 ppm
SITE : pancreas TUMOR : islet cell adenoma, islet cell adenocarcinoma				
Tumor rate				
Overall rates(a)	1/50(2.0)	4/50(8.0)	1/50(2.0)	3/50(6.0)
Adjusted rates(b)	2.70	9.76	2.27	6.67
Terminal rates(c)	1/37(2.7)	3/39(7.7)	1/44(2.3)	2/39(5.1)
Statistical analysis				
Peto test	P = -----			
Standard method(d)	P = 0.2916			
Prevalence method(d)	P = -----			
Combined analysis(d)	P = 0.6038			
Cochran-Armitage test(e)		P = 0.1811	P = 0.2475	P = 0.3087
Fisher Exact test(e)				
SITE : pituitary gland TUMOR : adenoma				
Tumor rate				
Overall rates(a)	33/50(66.0)	21/50(42.0)	25/50(50.0)	21/50(42.0)
Adjusted rates(b)	64.10	46.51	50.00	50.00
Terminal rates(c)	23/37(62.2)	18/39(46.2)	22/44(50.0)	19/39(48.7)
Statistical analysis				
Peto test	P = 0.9984			
Standard method(d)	P = 0.8697			
Prevalence method(d)	P = 0.9824			
Combined analysis(d)	P = 0.0558			
Cochran-Armitage test(e)		P = 0.0134*	P = 0.0779	P = 0.0134*
Fisher Exact test(e)				
SITE : thyroid TUMOR : C-cell adenoma				
Tumor rate				
Overall rates(a)	5/50(10.0)	7/50(14.0)	5/50(10.0)	3/50(6.0)
Adjusted rates(b)	13.16	17.95	11.36	6.82
Terminal rates(c)	4/37(10.8)	7/39(17.9)	5/44(11.4)	2/39(5.1)
Statistical analysis				
Peto test	P = -----			
Standard method(d)	P = 0.8353			
Prevalence method(d)	P = -----			
Combined analysis(d)	P = 0.3390			
Cochran-Armitage test(e)		P = 0.3798	P = 0.3703	P = 0.3575
Fisher Exact test(e)				

STUDY No. : 0284
ANIMAL : RAT F344/DuCrj
SEX : MALE

NEOPLASTIC LESIONS-INCIDENCE AND STATISTICAL ANALYSIS

PAGE : 5

Group Name	Control	20 ppm	40 ppm	80 ppm
SITE : thyroid TUMOR : C-cell adenoma,C-cell carcinoma				
Tumor rate				
Overall rates(a)	7/50(14.0)	7/50(14.0)	5/50(10.0)	3/50(6.0)
Adjusted rates(b)	18.42	17.95	11.36	6.82
Terminal rates(c)	6/37(16.2)	7/39(17.9)	5/44(11.4)	2/39(5.1)
Statistical analysis				
Peto test				
Standard method(d)	P = -----			
Prevalence method(d)	P = 0.9344			
Combined analysis(d)	P = -----			
Cochran-Armitage test(e)	P = 0.1466			
Fisher Exact test(e)		P = 0.3871	P = 0.3798	P = 0.1589
SITE : adrenal gland TUMOR : pheochromocytoma				
Tumor rate				
Overall rates(a)	8/50(16.0)	8/50(16.0)	4/50(8.0)	6/50(12.0)
Adjusted rates(b)	21.05	18.60	8.33	13.95
Terminal rates(c)	7/37(18.9)	7/39(17.9)	3/44(6.8)	5/39(12.8)
Statistical analysis				
Peto test				
Standard method(d)	P = -----			
Prevalence method(d)	P = 0.7646			
Combined analysis(d)	P = -----			
Cochran-Armitage test(e)	P = 0.4343			
Fisher Exact test(e)		P = 0.3929	P = 0.1783	P = 0.3871
SITE : testis TUMOR : interstitial cell tumor				
Tumor rate				
Overall rates(a)	37/50(74.0)	45/50(90.0)	43/50(86.0)	44/50(88.0)
Adjusted rates(b)	85.37	91.84	87.23	93.62
Terminal rates(c)	31/37(83.8)	35/39(89.7)	38/44(86.4)	36/39(92.3)
Statistical analysis				
Peto test				
Standard method(d)	P = -----			
Prevalence method(d)	P = 0.0449*			
Combined analysis(d)	P = -----			
Cochran-Armitage test(e)	P = 0.1372			
Fisher Exact test(e)		P = 0.0332*	P = 0.1054	P = 0.0624

STUDY No. : 0284
ANIMAL : RAT F344/DuCrj
SEX : MALE

NEOPLASTIC LESIONS-INCIDENCE AND STATISTICAL ANALYSIS

PAGE : 6

Group Name	Control	20 ppm	40 ppm	80 ppm
SITE : preputial/clitoral gland TUMOR : adenoma				
Tumor rate				
Overall rates(a)	2/50(4.0)	1/50(2.0)	0/50(0.0)	3/50(6.0)
Adjusted rates(b)	2.70	2.56	0.0	7.69
Terminal rates(c)	1/37(2.7)	1/39(2.6)	0/44(0.0)	3/39(7.7)
Statistical analysis				
Peto test				
Standard method(d)	P = 0.9147 ?			
Prevalence method(d)	P = 0.1078			
Combined analysis(d)	P = 0.2519			
Cochran-Armitage test(e)	P = 0.4835			
Fisher Exact test(e)		P = 0.5000	P = 0.2475	P = 0.5000

(HPT360A)

BAIS3

(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 out comes can not estimated or this P-value is beyond the estimated P-value.

—— : There is no data which should be statistical analysis.

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

APPENDIX O 2

NEOPLASTIC LESIONS - INCIDENCE AND STATISTICAL ANALYSIS, RAT: FEMALE

(2-YEAR STUDY)

STUDY No. : 0284
ANIMAL : RAT F344/DuCrj
SEX : FEMALE

NEOPLASTIC LESIONS-INCIDENCE AND STATISTICAL ANALYSIS

PAGE : 7

Group Name	Control	20 ppm	40 ppm	80 ppm
SITE : spleen TUMOR : mononuclear cell leukemia				
Tumor rate				
Overall rates(a)	6/50(12.0)	3/50(6.0)	1/50(2.0)	1/50(2.0)
Adjusted rates(b)	9.52	2.56	2.27	0.0
Terminal rates(c)	3/40(7.5)	1/39(2.6)	1/44(2.3)	0/29(0.0)
Statistical analysis				
Peto test				
Standard method(d)	P = 0.7611			
Prevalence method(d)	P = 0.9865			
Combined analysis(d)	P = 0.9816			
Cochran-Armitage test(e)	P = 0.0316*			
Fisher Exact test(e)		P = 0.2435	P = 0.0559	P = 0.0559
SITE : liver TUMOR : hepatocellular adenoma				
Tumor rate				
Overall rates(a)	1/50(2.0)	0/50(0.0)	3/50(6.0)	4/50(8.0)
Adjusted rates(b)	2.50	0.0	6.82	10.81
Terminal rates(c)	1/40(2.5)	0/39(0.0)	3/44(6.8)	2/29(6.9)
Statistical analysis				
Peto test				
Standard method(d)	P = -----			
Prevalence method(d)	P = 0.0165*			
Combined analysis(d)	P = -----			
Cochran-Armitage test(e)	P = 0.0510			
Fisher Exact test(e)		P = 0.5000	P = 0.3087	P = 0.1811
SITE : liver TUMOR : hepatocellular carcinoma				
Tumor rate				
Overall rates(a)	0/50(0.0)	0/50(0.0)	0/50(0.0)	4/50(8.0)
Adjusted rates(b)	0.0	0.0	0.0	11.43
Terminal rates(c)	0/40(0.0)	0/39(0.0)	0/44(0.0)	2/29(6.9)
Statistical analysis				
Peto test				
Standard method(d)	P = -----			
Prevalence method(d)	P = 0.0004**?			
Combined analysis(d)	P = -----			
Cochran-Armitage test(e)	P = 0.0021**			
Fisher Exact test(e)		P = 0.5000	P = 0.5000	P = 0.0587

STUDY No. : 0284
ANIMAL : RAT F344/DuCrj
SEX : FEMALE

NEOPLASTIC LESIONS-INCIDENCE AND STATISTICAL ANALYSIS

PAGE : 8

Group Name	Control	20 ppm	40 ppm	80 ppm
SITE : liver TUMOR : hepatocellular adenoma, hepatocellular carcinoma				
Tumor rate				
Overall rates(a)	1/50(2.0)	0/50(0.0)	3/50(6.0)	6/50(12.0)
Adjusted rates(b)	2.50	0.0	6.82	16.22
Terminal rates(c)	1/40(2.5)	0/39(0.0)	3/44(6.8)	3/29(10.3)
Statistical analysis				
Peto test				
Standard method(d)	P = -----			
Prevalence method(d)	P = 0.0015**			
Combined analysis(d)	P = -----			
Cochran-Armitage test(e)	P = 0.0061**			
Fisher Exact test(e)		P = 0.5000	P = 0.3087	P = 0.0559
SITE : pituitary gland TUMOR : adenoma				
Tumor rate				
Overall rates(a)	23/50(46.0)	26/50(52.0)	23/48(47.9)	16/50(32.0)
Adjusted rates(b)	46.34	48.84	50.00	45.16
Terminal rates(c)	18/40(45.0)	19/39(48.7)	21/42(50.0)	13/29(44.8)
Statistical analysis				
Peto test				
Standard method(d)	P = 0.9219			
Prevalence method(d)	P = 0.6060			
Combined analysis(d)	P = 0.8157			
Cochran-Armitage test(e)	P = 0.0871			
Fisher Exact test(e)		P = 0.3447	P = 0.4951	P = 0.1092
SITE : thyroid TUMOR : C-cell adenoma				
Tumor rate				
Overall rates(a)	7/50(14.0)	2/50(4.0)	1/50(2.0)	2/50(4.0)
Adjusted rates(b)	15.22	5.13	2.27	6.90
Terminal rates(c)	6/40(15.0)	2/39(5.1)	1/44(2.3)	2/29(6.9)
Statistical analysis				
Peto test				
Standard method(d)	P = -----			
Prevalence method(d)	P = 0.9507			
Combined analysis(d)	P = -----			
Cochran-Armitage test(e)	P = 0.0700			
Fisher Exact test(e)		P = 0.0798	P = 0.0297*	P = 0.0798

STUDY No. : 0284
 ANIMAL : RAT F344/DuCrj
 SEX : FEMALE

NEOPLASTIC LESIONS-INCIDENCE AND STATISTICAL ANALYSIS

PAGE : 9

Group Name	Control	20 ppm	40 ppm	80 ppm
SITE : adrenal gland TUMOR : pheochromocytoma				
Tumor rate				
Overall rates(a)	1/50(2.0)	3/50(6.0)	0/50(0.0)	0/50(0.0)
Adjusted rates(b)	2.50	7.50	0.0	0.0
Terminal rates(c)	1/40(2.5)	2/39(5.1)	0/44(0.0)	0/29(0.0)
Statistical analysis				
Peto test				
Standard method(d)	P = -----			
Prevalence method(d)	P = 0.8992			
Combined analysis(d)	P = -----			
Cochran-Armitage test(e)	P = 0.1719			
Fisher Exact test(e)		P = 0.3087	P = 0.5000	P = 0.5000
SITE : uterus TUMOR : endometrial stromal polyp				
Tumor rate				
Overall rates(a)	7/50(14.0)	6/50(12.0)	5/50(10.0)	4/50(8.0)
Adjusted rates(b)	16.67	15.38	9.09	13.79
Terminal rates(c)	6/40(15.0)	6/39(15.4)	4/44(9.1)	4/29(13.8)
Statistical analysis				
Peto test				
Standard method(d)	P = 0.3595			
Prevalence method(d)	P = 0.7504			
Combined analysis(d)	P = 0.7240			
Cochran-Armitage test(e)	P = 0.3206			
Fisher Exact test(e)		P = 0.5000	P = 0.3798	P = 0.2623

(HPT360A)

BAIS3

STUDY No. : 0284
ANIMAL : RAT F344/DuCrj
SEX : FEMALE

NEOPLASTIC LESIONS-INCIDENCE AND STATISTICAL ANALYSIS

PAGE : 10

Group Name	Control	20 ppm	40 ppm	80 ppm
SITE : mammary gland TUMOR : fibroadenoma				
Tumor rate				
Overall rates(a)	9/50(18.0)	8/50(16.0)	0/50(0.0)	2/50(4.0)
Adjusted rates(b)	20.45	20.51	0.0	6.90
Terminal rates(c)	7/40(17.5)	8/39(20.5)	0/44(0.0)	2/29(6.9)
Statistical analysis				
Peto test				
Standard method(d)	P = -----			
Prevalence method(d)	P = 0.9973			
Combined analysis(d)	P = -----			
Cochran-Armitage test(e)	P = 0.0049**			
Fisher Exact test(e)		P = 0.5000	P = 0.0013**	P = 0.0256*

(HPT360A)

BAISS

(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 : * : $P \leq 0.05$ ** : $P \leq 0.01$

APPENDIX P 1

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

STUDY NO. : 0284
 ANIMAL : RAT F344/DuCrj
 REPORT TYPE : A1
 SEX : MALE

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

PAGE : 1

Organ	Findings	Group Name No. of Animals on Study	Control 50	20 ppm 50	40 ppm 50	80 ppm 50
[Respiratory system]						
nasal cavit	leukemic cell infiltration		<50> 0	<50> 1	<50> 0	<50> 0
lung	leukemic cell infiltration		<50> 3	<50> 3	<50> 0	<50> 1
	metastasis:thyroid tumor		1	0	0	0
	metastasis:subcutis tumor		0	1	0	1
	metastasis:bone tumor		0	1	0	0
	metastasis:skin/appendage tumor		0	0	1	0
[Hematopoietic system]						
bone marrow	leukemic cell infiltration		<50> 3	<50> 1	<50> 0	<50> 0
	metastasis:subcutis tumor		0	0	0	1
	metastasis:spleen tumor		0	0	1	1
lymph node	metastasis:thyroid tumor		<50> 1	<50> 0	<50> 0	<50> 0
	metastasis:spleen tumor		0	0	1	1
spleen	metastasis:pancreas tumor		<50> 0	<50> 1	<50> 0	<50> 0
[Circulatory system]						
heart	metastasis:subcutis tumor		<50> 0	<50> 0	<50> 0	<50> 1

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

STUDY NO. : 0284
 ANIMAL : RAT F344/DuCrj
 REPORT TYPE : A1
 SEX : MALE

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

PAGE : 2

Organ	Findings	Group Name No. of Animals on Study	Control 50	20 ppm 50	40 ppm 50	80 ppm 50
[Circulatory system]						
heart	metastasis:mediastinum tumor		<50> 0	<50> 0	<50> 0	<50> 1
[Digestive system]						
stomach	metastasis:subcutis tumor		<50> 0	<50> 0	<50> 0	<50> 1
liver	leukemic cell infiltration		<50> 3	<50> 3	<50> 0	<50> 1
	metastasis:subcutis tumor		0	0	0	1
	metastasis:spleen tumor		0	0	1	1
pancreas	metastasis:subcutis tumor		<50> 0	<50> 0	<50> 0	<50> 1
[Urinary system]						
kidney	leukemic cell infiltration		<50> 1	<50> 1	<50> 0	<50> 1
[Endocrine system]						
pituitary	leukemic cell infiltration		<50> 1	<50> 0	<50> 0	<50> 0
adrenal	leukemic cell infiltration		<50> 2	<50> 1	<50> 0	<50> 1
[Nervous system]						
brain	leukemic cell infiltration		<50> 1	<50> 1	<50> 0	<50> 0

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

STUDY NO. : 0284
ANIMAL : RAT F344/DuCrj
REPORT TYPE : A1
SEX : MALE

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

PAGE : 3

Group Name No. of Animals on Study		Control 50	20 ppm 50	40 ppm 50	80 ppm 50
Organ_____	Findings_____				
[Nervous system]					
spinal cord	leukemic cell infiltration	<50> 1	<50> 1	<50> 0	<50> 1
[Special sense organs/appendage]					
Harder gl	leukemic cell infiltration	<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)

BAIS3

APPENDIX P 2

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

STUDY NO. : 0284
 ANIMAL : RAT F344/DuCrj
 REPORT TYPE : A1
 SEX : FEMALE

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

PAGE : 4

Organ	Findings	Group Name No. of Animals on Study	Control 50	20 ppm 50	40 ppm 50	80 ppm 50
[Integumentary system/appandage]						
skin/app	leukemic cell infiltration		<50> 1	<50> 0	<50> 0	<50> 0
[Respiratory system]						
lung	leukemic cell infiltration		<50> 4	<50> 2	<50> 1	<50> 1
	metastasis:subcutis tumor		0	1	0	1
[Hematopoietic system]						
bone marrow	leukemic cell infiltration		<50> 2	<50> 1	<50> 0	<50> 1
lymph node	leukemic cell infiltration		<50> 1	<50> 0	<50> 0	<50> 0
	metastasis:retroperitoneum tumor		0	0	1	0
[Digestive system]						
tongue	leukemic cell infiltration		<50> 1	<50> 0	<50> 0	<50> 0
stomach	leukemic cell infiltration		<50> 2	<50> 0	<50> 0	<50> 0
liver	leukemic cell infiltration		<50> 5	<50> 2	<50> 1	<50> 1
	metastasis:subcutis tumor		0	1	0	0
< a >	a : Number of animals examined at the site					
b	b : Number of animals with lesion					

STUDY NO. : 0284
 ANIMAL : RAT F344/DuCrj
 REPORT TYPE : A1
 SEX : FEMALE

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

PAGE : 5

Organ	Findings	Group Name No. of Animals on Study	Control 50	20 ppm 50	40 ppm 50	80 ppm 50
[Digestive system]						
liver			<50>	<50>	<50>	<50>
	metastasis:retroperitoneum tumor		0	0	1	0
pancreas			<50>	<50>	<50>	<50>
	leukemic cell infiltration		1	0	0	0
[Urinary system]						
kidney			<50>	<50>	<50>	<50>
	leukemic cell infiltration		1	1	0	0
[Endocrine system]						
pituitary			<50>	<50>	<48>	<50>
	leukemic cell infiltration		1	0	0	0
adrenal			<50>	<50>	<50>	<50>
	leukemic cell infiltration		0	2	0	0
[Reproductive system]						
ovary			<50>	<50>	<50>	<50>
	leukemic cell infiltration		0	1	0	0
	metastasis:retroperitoneum tumor		0	0	1	0
uterus			<50>	<50>	<50>	<50>
	leukemic cell infiltration		1	0	0	0
[Nervous system]						
brain			<50>	<50>	<50>	<50>
	leukemic cell infiltration		3	0	0	0

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

STUDY NO. : 0284
ANIMAL : RAT F344/DuCrj
REPORT TYPE : A1
SEX : FEMALE

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

PAGE : 6

Group Name No. of Animals on Study		Control 50	20 ppm 50	40 ppm 50	80 ppm 50
Organ	Findings				
[Nervous system]					
spinal cord	leukemic cell infiltration	<50> 3	<50> 0	<50> 0	<50> 0
[Musculoskeletal system]					
muscle	leukemic cell infiltration	<50> 1	<50> 0	<50> 0	<50> 0
< a >	a : Number of animals examined at the site				
b	b : Number of animals with lesion				

(JPT150)

BAIS3

APPENDIX P 3

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

STUDY NO. : 0284
ANIMAL : RAT F344/DuCrj
REPORT TYPE : A1
SEX : MALE

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

PAGE : 1

Organ	Findings	Group Name No. of Animals on Study	Control 13	20 ppm 11	40 ppm 6	80 ppm 11
[Respiratory system]						
nasal cavit		<13>		<11>	< 6>	<11>
	leukemic cell infiltration	0	1	0	0	
lung		<13>		<11>	< 6>	<11>
	leukemic cell infiltration	2	2	0	1	
	metastasis:subcutis tumor	0	1	0	1	
	metastasis:bone tumor	0	1	0	0	
	metastasis:skin/appendage tumor	0	0	1	0	
[Hematopoietic system]						
bone marrow		<13>		<11>	< 6>	<11>
	leukemic cell infiltration	2	1	0	0	
	metastasis:subcutis tumor	0	0	0	1	
	metastasis:spleen tumor	0	0	1	1	
lymph node		<13>		<11>	< 6>	<11>
	metastasis:spleen tumor	0	0	1	1	
spleen		<13>		<11>	< 6>	<11>
	metastasis:pancreas tumor	0	1	0	0	
[Circulatory system]						
heart		<13>		<11>	< 6>	<11>
	metastasis:subcutis tumor	0	0	0	1	
	metastasis:mediastinum tumor	0	0	0	1	
< a >	a : Number of animals examined at the site					
b	b : Number of animals with lesion					

STUDY NO. : 0284
 ANIMAL : RAT F344/DuCrj
 REPORT TYPE : A1
 SEX : MALE

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

PAGE : 2

Organ	Findings	Group Name No. of Animals on Study	Control 13	20 ppm 11	40 ppm 6	80 ppm 11
[Digestive system]						
stomach	metastasis:subcutis tumor		<13> 0	<11> 0	< 6> 0	<11> 1
liver	leukemic cell infiltration		<13> 2	<11> 2	< 6> 0	<11> 1
	metastasis:subcutis tumor		0	0	0	1
	metastasis:spleen tumor		0	0	1	1
pancreas	metastasis:subcutis tumor		<13> 0	<11> 0	< 6> 0	<11> 1
[Urinary system]						
kidney	leukemic cell infiltration		<13> 1	<11> 1	< 6> 0	<11> 1
[Endocrine system]						
pituitary	leukemic cell infiltration		<13> 1	<11> 0	< 6> 0	<11> 0
adrenal	leukemic cell infiltration		<13> 2	<11> 1	< 6> 0	<11> 1
[Nervous system]						
brain	leukemic cell infiltration		<13> 1	<11> 1	< 6> 0	<11> 0
spinal cord	leukemic cell infiltration		<13> 1	<11> 1	< 6> 0	<11> 1
< a >	a : Number of animals examined at the site					
b	b : Number of animals with lesion					

STUDY NO. : 0284
ANIMAL : RAT F344/DuCrj
REPORT TYPE : A1
SEX : MALE

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

PAGE : 3

		Group Name	Control	20 ppm	40 ppm	80 ppm
		No. of Animals on Study	13	11	6	11
Organ_____	Findings_____					
<hr/>						
[Special sense organs/appendage]						
Harder gl		<13>	<11>	< 6>	<11>	
	leukemic cell infiltration	0	1	0	0	
<hr/>						
< a >	a : Number of animals examined at the site					
b	b : Number of animals with lesion					
<hr/>						
(JPT150)						

BAIS3

APPENDIX P 4

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

STUDY NO. : 0284
 ANIMAL : RAT F344/DuCrj
 REPORT TYPE : A1
 SEX : FEMALE

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

PAGE : 4

Organ	Findings	Group Name No. of Animals on Study	Control 10	20 ppm 11	40 ppm 6	80 ppm 21
[Integumentary system/appandage]						
skin/app	leukemic cell infiltration		<10> 1	<11> 0	< 6> 0	<21> 0
[Respiratory system]						
lung	leukemic cell infiltration		<10> 3	<11> 2	< 6> 0	<21> 1
	metastasis:subcutis tumor		0	1	0	1
[Hematopoietic system]						
bone marrow	leukemic cell infiltration		<10> 1	<11> 1	< 6> 0	<21> 1
lymph node	leukemic cell infiltration		<10> 1	<11> 0	< 6> 0	<21> 0
	metastasis:retroperitoneum tumor		0	0	1	0
[Digestive system]						
tongue	leukemic cell infiltration		<10> 1	<11> 0	< 6> 0	<21> 0
stomach	leukemic cell infiltration		<10> 1	<11> 0	< 6> 0	<21> 0
liver	leukemic cell infiltration		<10> 3	<11> 2	< 6> 0	<21> 1
	metastasis:subcutis tumor		0	1	0	0
< a >	a : Number of animals examined at the site					
b	b : Number of animals with lesion					

STUDY NO. : 0284
 ANIMAL : RAT F344/DuGrj
 REPORT TYPE : A1
 SEX : FEMALE

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

PAGE : 5

Organ	Findings	Group Name No. of Animals on Study	Control 10	20 ppm 11	40 ppm 6	80 ppm 21
[Digestive system]						
liver			<10>	<11>	< 6>	<21>
	metastasis:retroperitoneum tumor		0	0	1	0
[Urinary system]						
kidney			<10>	<11>	< 6>	<21>
	leukemic cell infiltration		1	1	0	0
[Endocrine system]						
adrenal			<10>	<11>	< 6>	<21>
	leukemic cell infiltration		0	2	0	0
[Reproductive system]						
ovary			<10>	<11>	< 6>	<21>
	leukemic cell infiltration		0	1	0	0
	metastasis:retroperitoneum tumor		0	0	1	0
uterus			<10>	<11>	< 6>	<21>
	leukemic cell infiltration		1	0	0	0
[Nervous system]						
brain			<10>	<11>	< 6>	<21>
	leukemic cell infiltration		2	0	0	0
spinal cord			<10>	<11>	< 6>	<21>
	leukemic cell infiltration		2	0	0	0
[Musculoskeletal system]						
muscle			<10>	<11>	< 6>	<21>
	leukemic cell infiltration		1	0	0	0

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

APPENDIX P 5

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

STUDY NO. : 0284
ANIMAL : RAT F344/DuCrj
REPORT TYPE : A1
SEX : MALE

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

PAGE : 1

		Group Name No. of Animals on Study	Control 37	20 ppm 39	40 ppm 44	80 ppm 39
Organ	Findings					
[Respiratory system]						
lung	leukemic cell infiltration		<37> 1	<39> 1	<44> 0	<39> 0
	metastasis:thyroid tumor		1	0	0	0
[Hematopoietic system]						
bone marrow	leukemic cell infiltration		<37> 1	<39> 0	<44> 0	<39> 0
	metastasis:thyroid tumor		<37> 1	<39> 0	<44> 0	<39> 0
[Digestive system]						
liver	leukemic cell infiltration		<37> 1	<39> 1	<44> 0	<39> 0

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

(JPT150)

BAIS3

APPENDIX P 6

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

STUDY NO. : 0284
 ANIMAL : RAT F344/DuCrj
 REPORT TYPE : A1
 SEX : FEMALE

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

PAGE : 2

Group Name No. of Animals on Study		Control 40	20 ppm 39	40 ppm 44	80 ppm 29
Organ	Findings				
[Respiratory system]					
lung	leukemic cell infiltration	<40> 1	<39> 0	<44> 1	<29> 0
[Hematopoietic system]					
bone marrow	leukemic cell infiltration	<40> 1	<39> 0	<44> 0	<29> 0
[Digestive system]					
stomach	leukemic cell infiltration	<40> 1	<39> 0	<44> 0	<29> 0
liver	leukemic cell infiltration	<40> 2	<39> 0	<44> 1	<29> 0
pancreas	leukemic cell infiltration	<40> 1	<39> 0	<44> 0	<29> 0
[Endocrine system]					
pituitary	leukemic cell infiltration	<40> 1	<39> 0	<42> 0	<29> 0
[Nervous system]					
brain	leukemic cell infiltration	<40> 1	<39> 0	<44> 0	<29> 0
spinal cord	leukemic cell infiltration	<40> 1	<39> 0	<44> 0	<29> 0
< a >	a : Number of animals examined at the site				
b	b : Number of animals with lesion				

APPENDIX Q 1

IDENTITY OF HYDRAZINE MONOHYDRATE IN THE 2-YEAR DRINKING WATER STUDY

IDENTITY OF HYDRAZINE MONOHYDRATE IN THE 2-YEAR DRINKING WATER STUDY

Test Substance : Hydrazine Monohydrate (Wako Pure Chemical Industries, LTD.)

A. Lot No. : KCJ4216

1. Spectral data

Mass Spectrometry

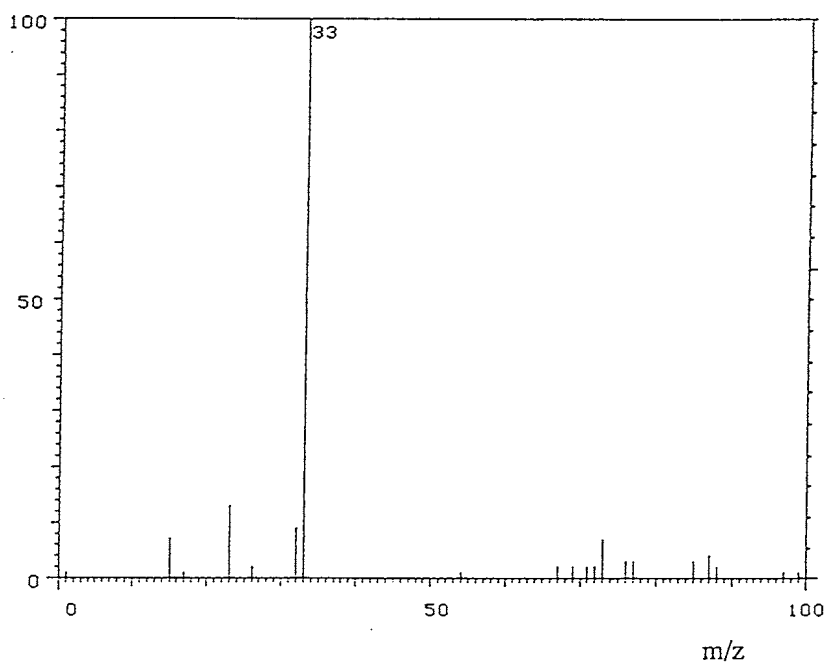
Instrument : Hitachi M-80B Mass Spectrometer

Ionization : SIMS (Secondary Ionization Mass Spectrometry)

Matrix : Glycerol

Primary Ion : Xenon⁺

Accelerating Voltage : 8kV



Mass Spectrum of Test Substance

Determined Value
Fragment Peak (m/z)

33

Calculated Value
Fragment Peak (m/z)

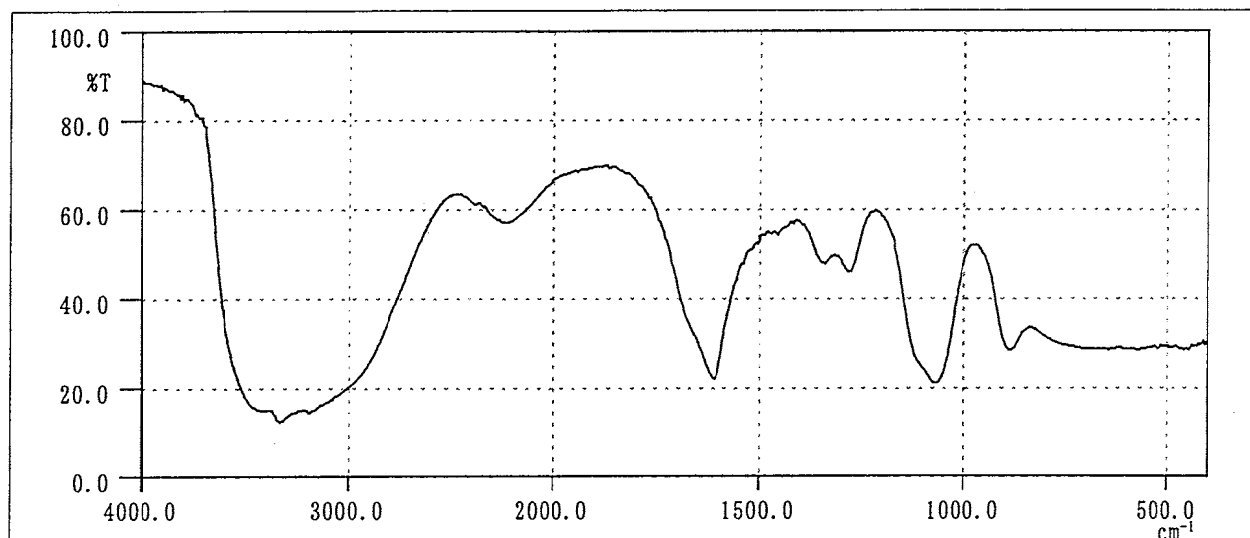
33 ($\text{NH}_2 \cdot \text{NH}_2 + \text{H}^+$)

Results: The mass spectrum was consistent with calculated spectrum.

Infrared Spectrometry

Instrument : Shimadzu FTIR-8200PC Infrared Spectrometer

Cell : KBr Liquid Cell

Resolution : 2.0 cm^{-1} 

Infrared Spectrum of Test Substance

<u>Determined Values</u>	<u>Literature Values</u> *
Wave Number (cm^{-1})	Wave Number (cm^{-1})
850~970	850~970
970~1220	970~1220
1220~1400	1220~1400
1500~1800	1500~1800
2000~2500	2000~2500
2500~3750	2500~3750

Results: The infrared spectrum was consistent with literature spectrum.

(*Performed by the Wako Pure Chemical Industries, LTD.)

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

B. Lot No. : DLL4042

1. Spectral data

Mass Spectrometry

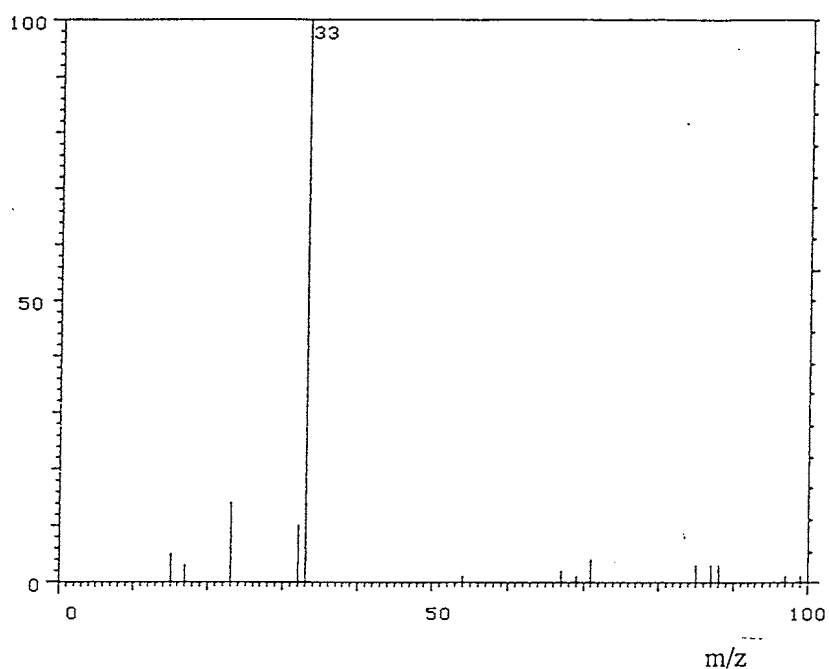
Instrument : Hitachi M-80B Mass Spectrometer

Ionization : SIMS (Secondary Ionization Mass Spectrometry)

Matrix : Glycerol

Primary Ion : Xenon⁺

Accelerating Voltage : 8kV



Mass Spectrum of Test Substance

Determined Value
Fragment Peak (m/z)

33

Calculated Value
Fragment Peak (m/z)

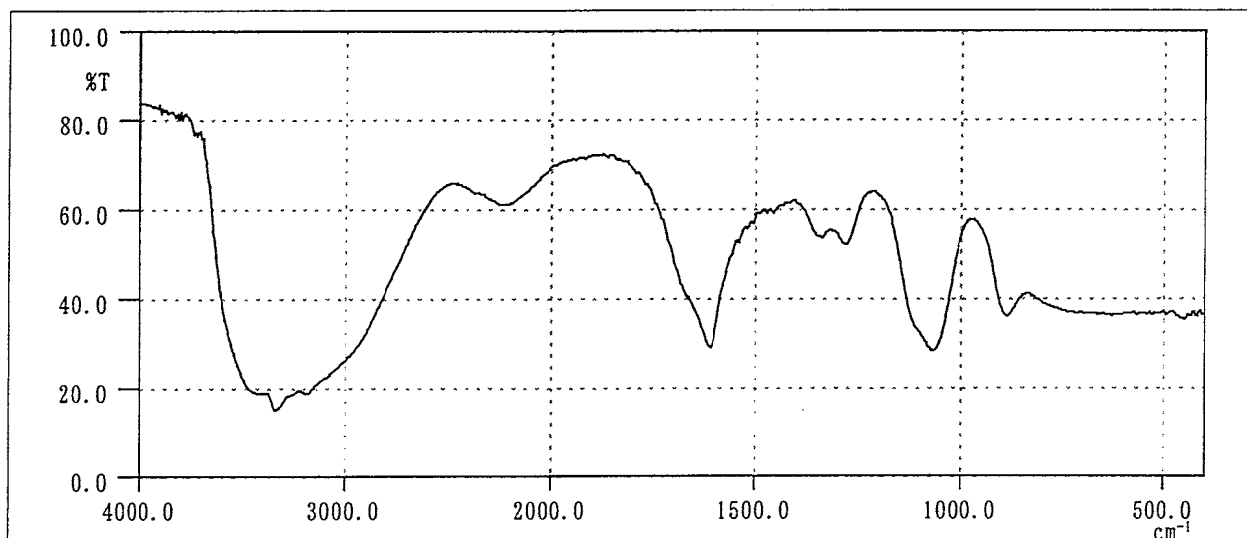
33 (NH₂·NH₂ + H⁺)

Results: The mass spectrum was consistent with calculated spectrum.

Infrared Spectrometry

Instrument : Shimadzu FTIR-8200PC Infrared Spectrometer

Cell : KBr Liquid Cell

Resolution : 2.0 cm^{-1} 

Infrared Spectrum of Test Substance

<u>Determined Values</u>	<u>Literature Values</u> *
Wave Number (cm^{-1})	Wave Number (cm^{-1})
850~970	850~970
970~1220	970~1220
1220~1400	1220~1400
1500~1800	1500~1800
2000~2500	2000~2500
2500~3750	2500~3750

Results: The infrared spectrum was consistent with literature spectrum.

(*Performed by the Wako Pure Chemical Industries, LTD.)

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

APPENDIX Q 2
STABILITY OF HYDRAZINE MONOHYDRATE IN THE 2-YEAR
DRINKING WATER STUDY

STABILITY OF HYDRAZINE MONOHYDRATE IN THE 2-YEAR DRINKING WATER STUDY

Test Substance : Hydrazine Monohydrate (Wako Pure Chemical Industries, LTD.)

A. Lot No. : KCJ4216

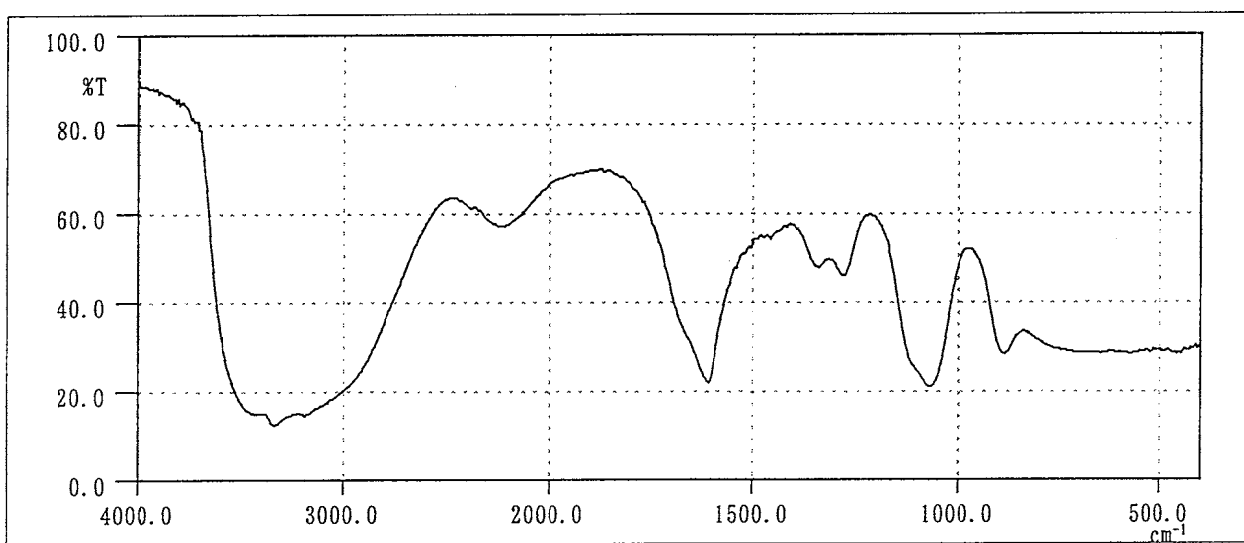
1. Sample : This lot was used from 1995.3.13 to 1997.1.13. Test substance was stored in a dark place at room temperature.

2. Infrared Spectrometry

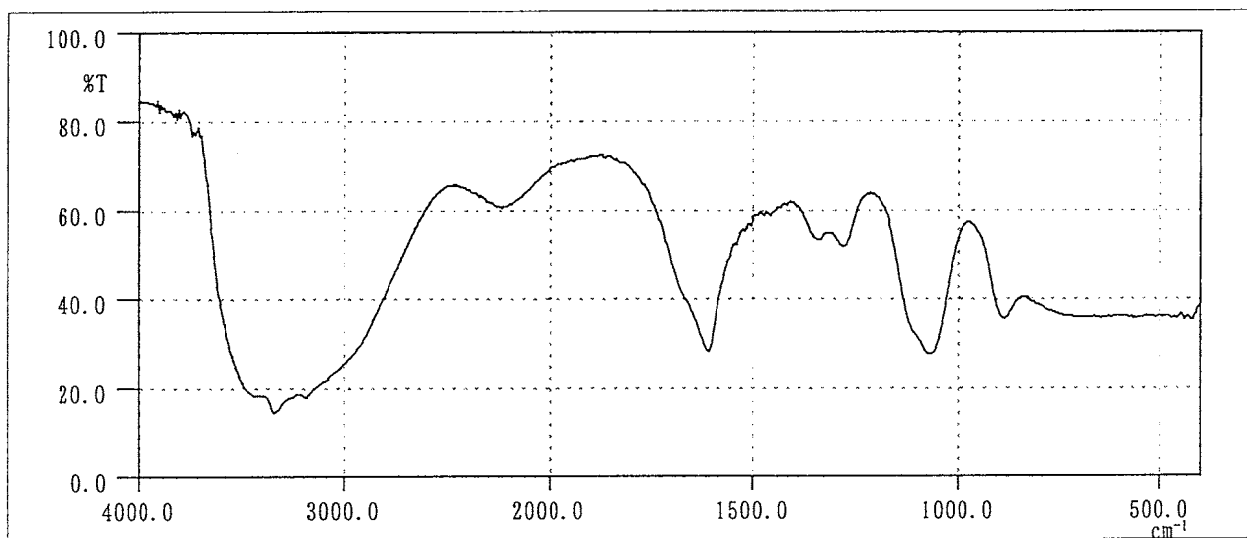
Instrument : Shimadzu FTIR-8200PC Infrared Spectrometer

Cell : KBr Liquid Cell

Resolution : 2.0 cm^{-1}



Infrared Spectrum of Test Substance (date analyzed : 1995.02.14)



Infrared Spectrum of Test Substance (date analyzed : 1997.01.13)

Results: The results of infrared spectrum did not change before and after the period.

3. High Performance Liquid Chromatography

Instrument : Hewlett Packard 1090 High Performance Liquid Chromatograph

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

Column Temperature : 50 °C

Flow Rate : 0.8 mL/min

Mobile Phase : Methanol : Distilled Water = 9 : 1

Detector : UV (313 nm)

Injection Volume : 10 μ L

Pre-Treatment : Hydrazine monohydrate was allowed to react with benzaldazine, and analyzed. Benzaldazine was reacted according to the method of Andersson K., et al.* based on the reaction of the appropriate hydrazine monohydrate and benzaldehyde with hydrochloric acid.

Date (date analyzed)	Peak No.	Retention Time (min)	Area (%)
1995.02.14	1	3.557	100
1997.01.13	1	3.555	100

Results: High performance liquid chromatography indicated one major peak (peak No.1) analyzed at 1995.2.14 and one major peak (peak No.1) analyzed at 1997.1.13. No new trace impurity peak in the test substance analyzed at 1997.1.13 was detected.

(* Andersson K., Hallgren C., Levin J. -O., and Nilsson C. -A. (1984) Liquid chromatographic determination of hydrazine at sub-parts-per-million levels in workroom air as benzaldazine with the use of chemisorption on benzaldehyde-coated amberlite XAD-2. American Chemical Society., 56, 1730-1731.)

4. Conclusions: The test substance was stable for about 23 months in a dark place at room temperature.

B. Lot No. : DLL4042

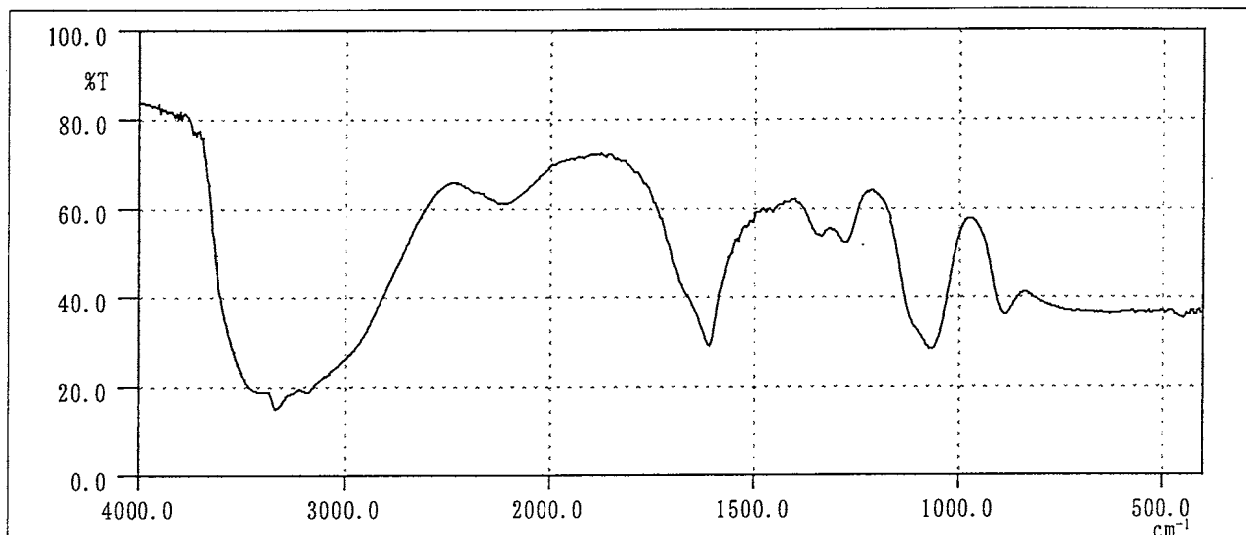
1. Sample : This lot was used from 1997.1.13 to 1997.3.17. Test substance was stored in a dark place at room temperature.

2. Infrared Spectrometry

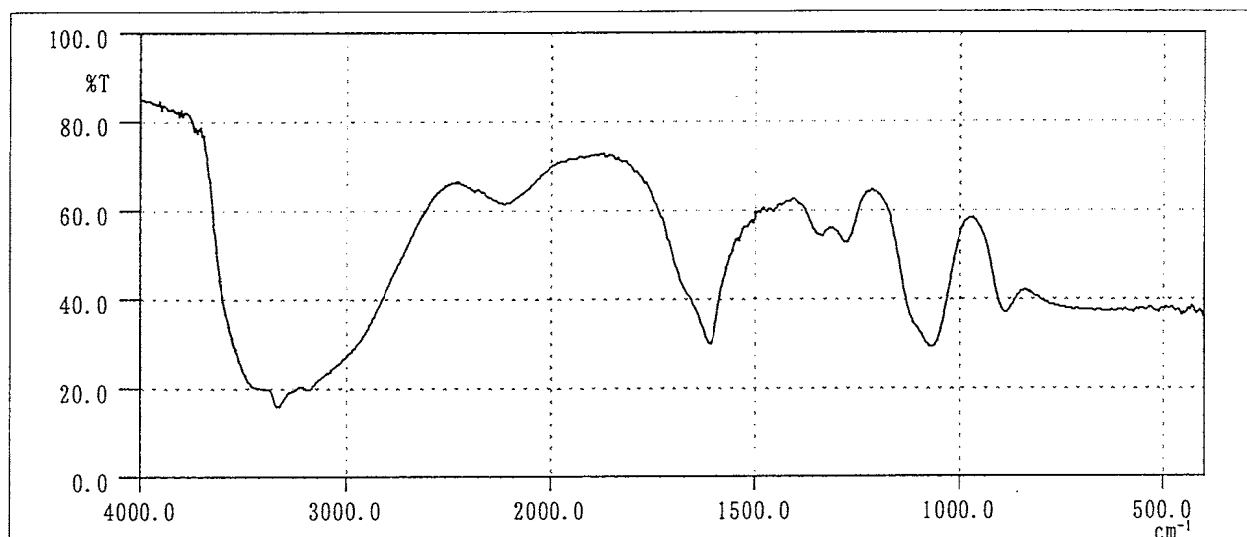
Instrument : Shimadzu FTIR-8200PC Infrared Spectrometer

Cell : KBr Liquid Cell

Resolution : 2.0 cm^{-1}



Infrared Spectrum of Test Substance (date analyzed : 1997.01.13)



Infrared Spectrum of Test Substance (date analyzed : 1997.04.25)

Results: The results of infrared spectrum did not change before and after the period.

3. High Performance Liquid Chromatography

Instrument : Hewlett Packard 1090 High Performance Liquid Chromatograph

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

Column Temperature : 50 °C

Flow Rate : 0.8 mL/min

Mobile Phase : Methanol : Distilled Water = 9 : 1

Detector : UV (313 nm)

Injection Volume : 10 μ L

Pre-Treatment : Hydrazine monohydrate was allowed to react with benzaldazine, and analyzed. Benzaldazine was reacted according to the method of Andersson K., et al.* based on the reaction of the appropriate hydrazine monohydrate and benzaldehyde with hydrochloric acid.

Date (date analyzed)	Peak No.	Retention Time (min)	Area (%)
1997.01.13	1	3.556	100
1997.04.25	1	3.555	100

Results: High performance liquid chromatography indicated one major peak (peak No.1) analyzed at 1997.1.13 and one major peak (peak No.1) analyzed at 1997.4.25. No new trace impurity peak in the test substance analyzed at 1997.4.25 was detected.

(* Andersson K., Hallgren C., Levin J. -O., and Nilsson C. -A. (1984) Liquid chromatographic determination of hydrazine at sub-parts-per-million levels in workroom air as benzaldazine with the use of chemisorption on benzaldehyde-coated amberlite XAD-2. American Chemical Society., 56, 1730-1731.)

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

APPENDIX Q 3

CONCENTRATION OF HYDRAZINE MONOHYDRATE IN FORMULATED WATER
IN THE 2-YEAR DRINKING WATER STUDY

CONCENTRATION OF HYDRAZINE MONOHYDRATE IN FORMULATED WATER IN THE 2-YEAR DRINKING WATER STUDY

Date Analyzed	Target Concentration		
	20 ^a	40	80
1995.03.13	20.3 (101.5) ^b	40.8 (102.0)	81.3 (101.6)
1995.06.05	20.9 (104.5)	40.3 (100.8)	80.4 (100.5)
1995.08.21	20.1 (100.5)	39.9 (99.8)	81.0 (101.3)
1995.11.20	20.1 (100.5)	39.4 (98.5)	80.6 (100.8)
1996.02.19	20.1 (100.5)	39.6 (99.0)	78.4 (98.0)
1996.05.13	19.4 (97.0)	40.8 (102.0)	82.0 (102.5)
1996.07.29	20.1 (100.5)	40.5 (101.3)	79.8 (99.8)
1996.10.21	20.1 (100.5)	39.1 (97.8)	79.4 (99.3)
1997.01.13	20.0 (100.0)	40.3 (100.8)	81.1 (101.4)

^a ppm

^b %

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

Instrument : Hewlett Packard 1090 High Performance Liquid Chromatograph

Column : TSK GEL ODS-80TM (4.6 mm ϕ \times 15 cm) Mobile Phase : Methanol : Distilled Water = 9 : 1

Column Temperature : 50 °C Detector : UV (313 nm)

Flow Rate : 0.8 mL/min Injection Volume : 10 μ L

Pre-Treatment : Hydrazine monohydrate was allowed to react with benzaldazine, and analyzed. Benzaldazine was reacted according to the method of Andersson K., et al.* based on the reaction of the appropriate hydrazine monohydrate and benzaldehyde with hydrochloric acid.

(* Andersson K., Hallgren C., Levin J. -O., and Nilsson C. -A. (1984) Liquid chromatographic determination of hydrazine at sub-parts-per-million levels in workroom air as benzaldazine with the use of chemisorption on benzaldehyde-coated amberlite XAD-2. American Chemical Society., 56, 1730-1731.)

APPENDIX Q 4

STABILITY OF HYDRAZINE MONOHYDRATE IN FORMULATED WATER IN THE 2-YEAR DRINKING WATER STUDY

STABILITY OF HYDRAZINE MONOHYDRATE IN FORMULATED WATER IN THE 2-YEAR DRINKING WATER STUDY

Date Prepared	Date Analyzed	Target Concentration	
		20 ^a	80
1995.02.20	1995.02.20	20.4 (100) ^b	83.0 (100)
	1995.02.24 ^c	16.1 (78.9)	62.0 (74.7)

^a ppm

^b % (Percentage was based on the concentration on date of preparation.)

^c Animal room samples

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

Instrument : Hewlett Packard 1090 High Performance Liquid Chromatograph

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

Column Temperature : 50 °C

Flow Rate : 0.8 mL/min

Mobile Phase : Methanol : Distilled Water = 9 : 1

Detector : UV (313 nm)

Injection Volume : 10 μ L

Pre-Treatment : Hydrazine monohydrate was allowed to react with benzaldazine, and analyzed.
Benzaldazine was reacted according to the method of Andersson K., et al.* based on the reaction of the appropriate hydrazine monohydrate and benzaldehyde with hydrochloric acid.

(* Andersson K., Hallgren C., Levin J. -O., and Nilsson C. -A. (1984) Liquid chromatographic determination of hydrazine at sub-parts-per-million levels in workroom air as benzaldazine with the use of chemisorption on benzaldehyde-coated amberlite XAD-2. American Chemical Society., 56, 1730-1731.)

APPENDIX R 1

METHODS FOR HEMATOLOGY, BIOCHEMISTRY AND URINALYSIS IN THE 2-YEAR DRINKING WATER STUDY OF HYDRAZINE MONOHYDRATE

METHODS FOR HEMATOLOGY, BIOCHEMISTRY AND URINALYSIS
IN THE 2-YEAR DRINKING WATER STUDY OF HYDRAZINE MONOHYDRATE

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

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

2) Automatic blood cell differential analyzer (Hitachi 8200 : Hitachi, Ltd.)

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

4) Ames reagent strips for urinalysis (Multistix : Bayer-Sankyo Co., Ltd.)

APPENDIX R 2

UNITS AND DECIMAL PLACE FOR HEMATOLOGY AND BIOCHEMISTRY
IN THE 2-YEAR DRINKING WATER STUDY OF HYDRAZINE MONOHYDRATE

UNITS AND DECIMAL PLACE FOR HEMATOLOGY AND BIOCHEMISTRY
IN THE 2-YEAR DRINKING WATER STUDY OF HYDRAZINE MONOHYDRATE

Item	Unit	Decimal place
Hematology		
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
Biochemistry		
Total protein	g/dL	1
Albumin	g/dL	1
A/G ratio	—	1
T-bilirubin	mg/dL	2
Glucose	mg/dL	0
T-cholesterol	mg/dL	0
Triglyceride	mg/dL	0
Phospholipid	mg/dL	0
Glutamic oxaloacetic transaminase (GOT)	IU/L	0
Glutamic pyruvic transaminase (GPT)	IU/L	0
Lactate dehydrogenase (LDH)	IU/L	0
Alkaline phosphatase (ALP)	IU/L	0
γ -Glutamyl transpeptidase (γ -GTP)	IU/L	0
Creatine phosphokinase (CPK)	IU/L	0
Urea nitrogen	mg/dL	1
Creatinine	mg/dL	1
Sodium	mEq/L	0
Potassium	mEq/L	1
Chloride	mEq/L	0
Calcium	mg/dL	1
Inorganic phosphorus	mg/dL	1